# Joint Base Pearl Harbor-Hickam (JBPHH) Public Water System No. HI00000360 & Aliamanu Military Reservation (AMR) Public Water System No. HI0000337

## Extended Drinking Water Monitoring Plan: Second Quarterly Report

## Sampling Results Report for the JBPHH System (July – September 2024)

21 July 2025

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## Acronyms and Abbreviations

| | |
|---|---|
| ACO | Administrative Consent Order |
| Army | United States Army |
| ATSDR | Agency for Toxic Substances and Disease Registry |
| CDCs | Child Development Centers |
| COA | Course of Action |
| CRI | Community Representative Initiative |
| DOH | State of Hawaii Department of Health |
| EDB | 1,2-Dibromoethane |
| EDWM | Extended Drinking Water Monitoring |
| EPA | United States Environmental Protection Agency |
| JBPHH | Joint Base Pearl Harbor-Hickam |
| JP-5 | Jet Propellant, Grade 5 |
| LTM | Long-Term Monitoring |
| MCLs | Maximum Contaminant Levels |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| MS | Matrix Spike |
| NAH | Navy-Aiea Halawa Shaft |
| Navy | United States Navy |
| PAHs | Polycyclic Aromatic Hydrocarbons |
| PE | Performance Evaluation |
| PIANO | Paraffins, Isoparaffins, Aromatics, Naphthalenes, and Olefin |
| PWS | Public Water System |
| QA/QC | Quality Assurance/Quality Control |
| RH | Red Hill Shaft |
| SDS | Safety Data Sheet |
| SME | Subject Matter Expert |
| System | Joint Base Pearl Harbor-Hickam Drinking Water Distribution System |
| TPH | Total Petroleum Hydrocarbon |
| TPH-D | Total Petroleum Hydrocarbon, Diesel Range Organics |
| TPH-G | Total Petroleum Hydrocarbon, Gasoline Range Organics |
| TPH-O | Total Petroleum Hydrocarbon, Oil Range Organics |
| TTHM | Total Trihalomethanes |
| U.S. | United States |
| WQAT | Water Quality Action Team |

# Section 1. Introduction

This report documents the results of the second quarter (i.e., July – September 2024) of Extended Drinking Water Monitoring (EDWM) of the Joint Base Pearl Harbor-Hickam (JBPHH) Drinking Water Distribution System (System). Drinking water sampling was conducted in accordance with the EDWM Plan developed by the United States (U.S.) Navy (Navy), U.S. Army (Army), and a team of technical and subject matter experts (SMEs).[1,2] The EDWM Plan was implemented immediately following the completion of long-term monitoring (LTM) of the Public Water System (PWS) #HI0000360 and PWS #HI0000337 in March 2024.[3]

The Navy is committed to providing safe drinking water to all JBPHH System users. As part of this commitment, the Navy voluntarily implemented the EDWM program to conduct enhanced drinking water monitoring and a more fuel-related investigatory approach to demonstrating JP-5 and other fuels are not impacting the System. The Navy intends to sample all residences that were not sampled under LTM, in order to thoroughly investigate the System. EDWM is one of several steps taken by the Navy to demonstrate the System is no longer impacted by the November 2021 Red Hill release of JP-5.

Data collected during the second quarter of EDWM show no evidence of JP-5 fuel or other fuels in or impacting the System. The System continues to meet all state and federal standards.

## 1.1 Background

The Navy voluntarily initiated the EDWM program and began sampling in April 2024, immediately following the completion of LTM, to ensure that it delivered on its commitment to investigate potential fuel-related contamination in the System. The U.S. Environmental Protection Agency (EPA) approved the final EDWM Plan on 01 November 2024. EDWM incorporates the lessons learned from LTM (e.g., refining analytical methods) and focuses on jet propellent, grade 5 (JP-5) and other fuel-related analytes in order to continue to demonstrate that the November 2021 Red Hill release or any fuel is not impacting the System and continue to ensure the System meets all state and federal standards and is safe for consumption.

In accordance with the EDWM Plan, the Navy will sample the following locations:

- Waiawa Shaft (entry point to the distribution system): every month for most parameters and quarterly for others. Samples of the source water will be collected pre- and post-chlorination prior to distribution into the System.
- Navy Aiea-Halawa (NAH) Shaft and Red Hill (RH) Shaft raw source water (pre-chlorination) quarterly. Note: These shafts do not provide drinking water to the JBPHH System and are inactive. These samples are collected for information purposes only.
- Houses that were not sampled during LTM will be sampled in each of the 20 Zones on the System (see Figure 1). The Navy will provide residents with the opportunity to have

[1] The EDWM Plan for the JBPHH PWS #HI0000360 and Aliamanu Military Reservation PWS #HI000037 is available at: https://jbphh-safewaters.org/public/JBPHH_EDWM_Plan_17Jun24.pdf.
[2] The EDWM Plan is an evergreen document and will continue to be updated based on field experience and the recommendations of SMEs, Navy and Army leadership, and EPA/Hawaii Department of Health (DOH). The EDWM Plan was finalized on 23 October 2024. This document reflects the changes in the latest version of the EDWM Plan, however, there may have been revisions to drinking water analyses not reflected in the first quarter dataset. Any discrepancies between the original version of the EDWM Plan and the newest version will be called out.
[3] For the purposes of this Plan, PWS #HI0000360 and PWS #HI0000337 will be considered a single distribution system divided into Zones.

their homes sampled to pursue 100% coverage of remaining residences by the end of the 12-month EDWM Plan. A single drinking water sample will be collected from each residence.

    - Approximately 65% of residences within each Zone were sampled during LTM, leaving approximately 35% to be sampled during EDWM. Note: 100% of the houses in Manana Housing will be sampled during EDWM in order to be consistent with all other Zones. 100% coverage is the overarching goal; however, the Navy will not force residents to have their homes sampled.

- Priority Buildings (i.e., schools, Child Development Centers [CDCs], medical clinics) in all Zones every month; and
- Hydrants in Zones where residences were sampled during the month (hydrants in Zones where residences were not sampled during the month will not be sampled).

EDWM is a surveillance tool intended to identify and evaluate potential JP-5 and other fuel-related impacts to continue to demonstrate that the November 2021 Red Hill release (or any other fuel-related concern) is not impacting the JBPHH System. EDWM is one of the drinking water surveillance efforts that the Navy is implementing to continue to ensure the JBPHH drinking water is safe by meeting all state and federal drinking water standards. At the start of EDWM, the Navy also implemented the Water Quality Action Team (WQAT; independent of and not required under EDWM) to expand the functionality of the previous Rapid Response Team in order to provide a more robust water quality concern response capability, complementary to EDWM. Additional information regarding EDWM is provided in Appendix A (Frequently Asked Questions).

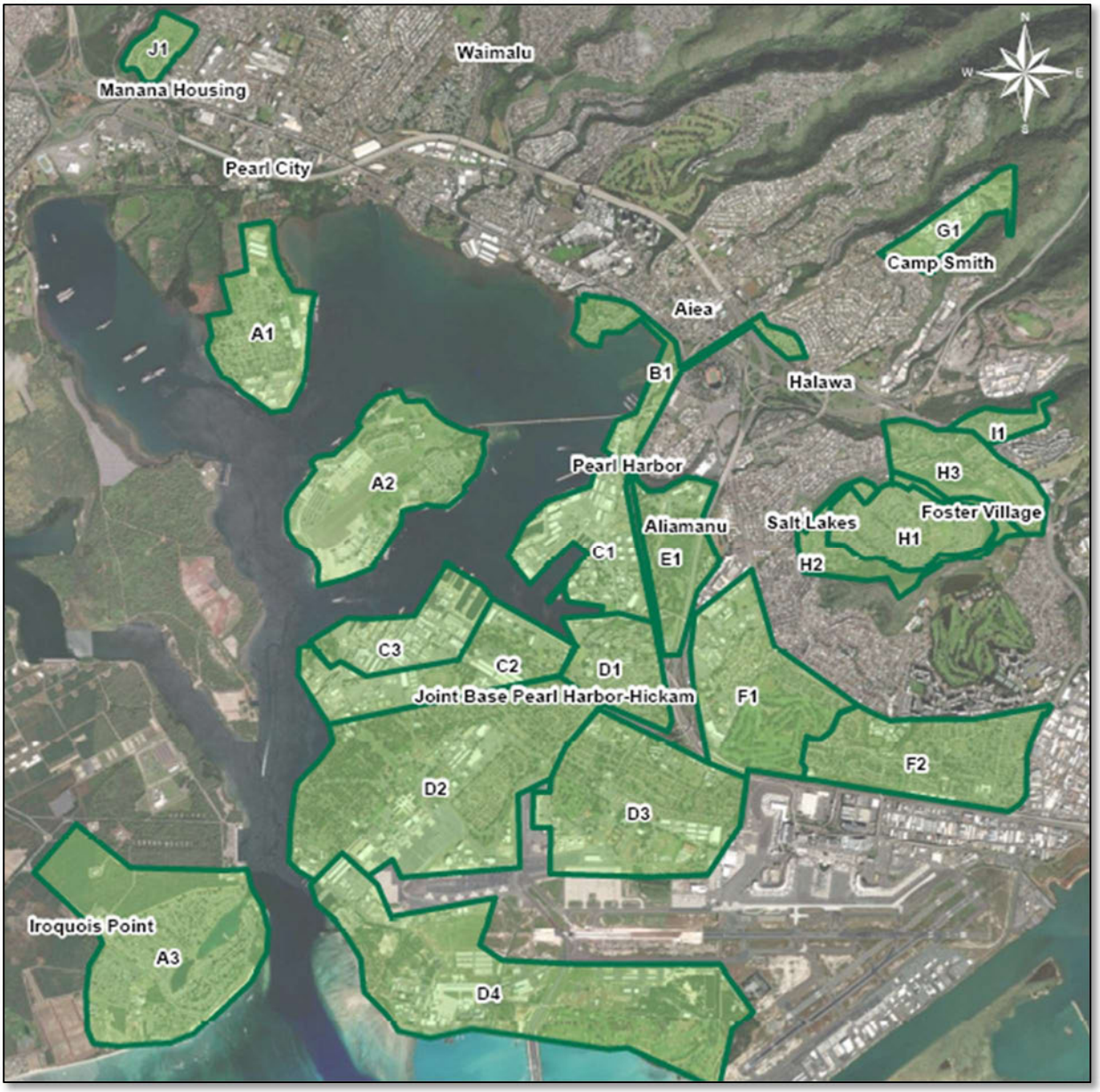


**Figure 1. EDWM Sampling Zones**

## 1.2 EDWM Schedule

The second quarter of EDWM sampling began in July 2024 following the conclusion of the first quarter of EDWM in June 2024. In accordance with the EDWM Plan, sampling is performed on a monthly basis and results are reported on a quarterly basis. Summaries of the EDWM sampling, including copies of the EDWM Quarterly Reports, will be posted on https://jbphh-safewaters.org/. Below is a summary of the drinking water sampling completed under EDWM.

**Table 1. EDWM Schedule Summary**

| Sampling Event | Summary of Sampling Activities | Completion Date |
|---|---|---|
| First Quarter | 25% of remaining houses, priority buildings, and distribution systems | June 2024 |
| Second Quarter | 25% of remaining houses, priority buildings, and distribution systems | September 2024 |
| Third Quarter | 25% of remaining houses, priority buildings, and distribution systems | December 2024 |
| Fourth Quarter | 25% of remaining houses, priority buildings, and distribution systems | March 2025 |

## Section 2. EDWM Sampling Locations

Under EDWM, 4,954 drinking water samples are scheduled to be collected and analyzed. During the second quarter of EDWM (i.e., July – September 2024), 1,689 drinking water samples were collected from residences, schools, CDCs, hydrants (e.g., distribution lines), and other priority buildings (e.g., medical clinics) in accordance with the EDWM Plan and the WQAT's protocol. This brings the total sample count to 3,330 for Quarters 1 and 2. Drinking water samples were collected from 20 of the 20 Zones in accordance with the EDWM Plan.[4] Drinking water samples were collected from 10 of the 20 Zones (i.e., A2, A3, C1, C2, D2, D3, F1, F2, H1, and H2) in accordance with the WQAT's protocol.

**Table 2. EDWM Sampling Location Summary**

| Location Type | Number of Samples Collected | | | | Total Number of Samples |
|---|---|---|---|---|---|
| | 1st Quarter (Apr – Jun 2024) | 2nd Quarter (Jul – Sept 2024) | 3rd Quarter (Oct – Dec 2024) | 4th Quarter (Jan – Mar 2025) | |
| Residences | 926 | 977 | Sampling to be completed October – December 2024 and reported in the Third Quarterly Report. | Sampling to be completed January – March 2025 and reported in the Fourth Quarterly Report. | 1,903 |
| Schools | 172 | 175 | | | 347 |
| CDCs | 126 | 134 | | | 260 |
| Other Locations | 41 | 43 | | | 84 |
| Hydrants | 376 | 360 | | | 736 |
| **Total Samples Collected To-Date** | | | | | **3,330** |

The EDWM sampling locations are shown on Figure 2.

[4] There are no residences in Zones C1 and D4; therefore, no drinking water samples were collected during the second quarter of EDWM. Residential sampling is not planned in these Zones under EDWM; however, residents may request sampling, through the WQAT, if they have water quality concerns.

**Figure 2. Second Quarter (July – September 2024) EDWM Sampling Locations**

There are 9,883 residences on the System. In LTM, 6,669 residences (67%) of were sampled, which left 3,214 residences to be sampled under EDWM. Between July and September 2024, 974 residences (30% of the residences not sampled during EDWM) on the System were sampled[5]. A total of 8,569 residences (87% of all residences on the System) have been sampled as of September 2024 (i.e., the total number of residences sampled during LTM + EDWM). The total number of samples collected as part of LTM and EDWM and a summary of EDWM completion is summarized in the following tables.

[5] Total number of residences samples sampled does not include any locations that were re-sampled during EDWM as part of additional investigations.

**Table 3. Summary of Samples Collected during LTM and EDWM by Location (as of September 2024)**

| Location Type | EDWM Sample Summary | | | Number of Samples Collected During LTM | Total Number of Samples Collected (LTM + EDWM) |
|---|---|---|---|---|---|
| | Number of Samples Collected During EDWM (Apr - Sep) | Estimated Number of Samples Scheduled for EDWM | EDWM Completion Percentage | | |
| Residences | 1,900 | 3,214 | 59% | 6,669 | 8,569 |
| Schools | 347 | 660[1] | 53% | 302 | 649 |
| CDCs | 260 | 504[1] | 52% | 405 | 665 |
| Other Locations | 84 | 156[1] | 54% | 688 | 772 |
| Hydrants | 736 | --[1] | -- | 845 | 1,581 |
| **Total Samples** | **3,330** | **--** | **--** | **8,909** | **12,236** |

**Notes:**

[1] In accordance with Table 2-1 of the EDWM Plan:
Five samples from 11 schools will be collected on a monthly basis.
Two samples from 21 CDCs will be collected on a monthly basis.
One sample from 13 other locations will be collected on a monthly basis.
There is no estimated number of hydrant samples. One sample will be collected from each hydrant each month where residential sampling is being conducted in that zone.

**Table 4. Summary of Residential Sampling Completed during LTM and EDWM (as of September 2024)**

| Zone | Total Number of Residences | Number of Residences Sampled in LTM | Number of Residence Sampled During Each Quarter of EDWM[1] | | | | Total Number of Residences Sampled (LTM + EDWM) | Completion Percentage |
|---|---|---|---|---|---|---|---|---|
| | | | Q1 | Q2 | Q3 | Q4 | | |
| A1 | 635 | 423 | 58 | 54 | TBD | TBD | 535 | 84% |
| A2 | 411 | 303 | 45 | 27 | TBD | TBD | 375 | 91% |
| A3 | 1,459 | 959 | 114 | 112 | TBD | TBD | 1,185 | 81% |
| B1 | 227 | 167 | 20 | 22 | TBD | TBD | 209 | 92% |
| C1 | - | - | - | - | TBD | TBD | - | - |
| C2 | 32 | 25 | 5 | 0 | TBD | TBD | 30 | 94% |
| C3 | 6 | 6 | - | 2 | TBD | TBD | 8[1] | 100% |
| D1 | 508 | 342 | 46 | 22 | TBD | TBD | 410 | 81% |
| D2 | 1,577 | 1,119 | 141 | 194 | TBD | TBD | 1,454 | 92% |
| D3 | 912 | 615 | 71 | 116 | TBD | TBD | 802 | 88% |
| D4 | - | - | - | - | TBD | TBD | - | - |
| E1 | 89 | 84 | 8 | 5 | TBD | TBD | 97[2] | 100% |
| F1 | 752 | 512 | 54 | 69 | TBD | TBD | 635 | 84% |
| F2 | 1,435 | 976 | 136 | 130 | TBD | TBD | 1,242 | 87% |
| G1 | 10 | 10 | - | - | TBD | TBD | 10 | 100% |
| H1 | 918 | 635 | 90 | 100 | TBD | TBD | 825 | 90% |
| H2 | 230 | 150 | 28 | 26 | TBD | TBD | 204 | 89% |
| H3 | 379 | 248 | 43 | 39 | TBD | TBD | 330 | 87% |
| I1 | 135 | 93 | 11 | 27 | TBD | TBD | 131 | 97% |
| J1 | 168 | 2 | 56 | 29 | TBD | TBD | 87 | 52% |
| **Total** | **9,883** | **6,669** | **926** | **974** | **TBD** | **TBD** | **8,569** | **87%** |

**Notes:**

[1] Quarterly sample counts include requested WQAT samples.

[2] In some instances, the total number of residences sampled during LTM and EDWM is greater than the total number of residences in that zone. Some residences have been sampled during LTM and EDWM. This could be for several reasons, such as the residence calling into the WQAT Call Center and requesting their residence be sampled by the WQAT or the residence was resampled as part of a water quality investigation (e.g., detection of TPH or other fuel indicator compounds in accordance with Section 5 of the EDWM Plan [if necessary], resampling locations where elevated TPH detections were reported in LTM, or bracket sampling when a TPH detection was reported at a nearby residence).

TBD: to be determined; Total counts will be reported in the future EDWM Third and Fourth Quarter Reports.

# Section 3. EDWM Sampling Results

This section summarizes the results of the EDWM drinking water samples collected and analyzed during the second quarter of EDWM (i.e., July – September 2024). The following tables summarize the contaminants detected in drinking water samples[6]:

- Table 5 Contaminants Detected in Drinking Water Samples Collected from Residences
- Table 6 Contaminants Detected in Drinking Water Samples Collected from Schools
- Table 7 Contaminants Detected in Drinking Water Samples Collected from CDCs
- Table 8 Contaminants Detected in Drinking Water Samples Collected from Non-Residences
- Table 9 Contaminants Detected in Drinking Water Samples Collected from Hydrants
- Table 10 Contaminants Detected in Drinking Water Samples Collected from Source Water (Waiawa Shaft – Post-Chlorination)

Note: due to size and formatting these tables are included at the end of the report.

## 3.1 Analyte Exceedances

There were no exceedances of maximum contaminant levels (MCLs) reported in drinking water samples collected during the second quarter of EDWM. There were no action level (AL) exceedances with the exception of one lead exceedance reported in one drinking water sample collected during the second quarter of EDWM.

The sample collected from 2417D Challenger Loop on 27 September 2024 resulted in a lead exceedance of 44 ppb, which exceeds the AL of 15 ppb (Field Sample ID D2-TW-0008333-24092-N). Investigation into this exceedance determined that although it was likely to be a premise plumbing issue, further investigation was warranted through additional sampling. At the time of sampling, the resident was in the process of a Permanent Change of Station (PCS) move. Once the Navy received the preliminary, unvalidated lead results, the Navy contacted the resident to schedule a site investigation and collect a re-sample. The resident requested the Navy wait to collect the re-samples until they were fully moved out of the unit. Once the resident had moved out, the unit's maintenance crew had shut off the water to the unit to accommodate on-going repairs. Water was restored to the unit in December 2024 and the Navy was able to conduct the site investigation and collect re-samples. All faucets at the residence were flushed and resampled on 16 December 2024. The re-samples collected on 16 December 2024 were below the AL. The unit maintenance team and property manager were notified of the re-sample results.

## 3.2 Total Petroleum Hydrocarbons Detections

Total petroleum hydrocarbons (TPHs) were detected in 0.30% (i.e., 5 of 1,689) drinking water samples collected during the second quarter (i.e., July – September 2024) of EDWM. A summary of TPH detections reported during EDWM are summarized in the tables below.

[6] These tables include the results from drinking water samples collected as part of the EDWM Plan as well as the results from drinking water samples collected by the WQAT.

**Table 11. Summary Statistics for Samples Analyzed during Second Quarter (July – September 2024) of EDWM**

| Summary Statistic | TPH-D | TPH-G | TPH-O | Total TPHs |
|---|---|---|---|---|
| Number of Samples Analyzed | 1,689 | 1,689 | 1,689 | 1,689 |
| Number of Detections | 2 | 1 | 4 | 5 |
| Detection Frequency (%) | 0.12% | 0.059% | 0.24% | 0.30% |
| Minimum Detected Concentration (ppb) | 62 | 64 | 47 | 64 |
| Maximum Detected Concentration (ppb) | 145 | 64 | 245 | 390 |
| Average Detected Concentration (ppb) | 104 | 64 | 130 | 158 |

**Notes:**
TPH-D: Total Petroleum Hydrocarbons, Diesel Range Organics
TPH-G: Total Petroleum Hydrocarbons, Gasoline Range Organics
TPH-O: Total Petroleum Hydrocarbons, Oil Range Organics

**Table 12. Summary of TPH Results by Location Type (July – September 2024) of EDWM**

| Sample Location Type | Contaminant | Units | Screening Level | Basis for Screening Level | EDWM Summary – Second Quarter | |
|---|---|---|---|---|---|---|
| | | | | | No. of Detects out of Samples | Minimum – Maximum (Average)[1] |
| Residences | Total Petroleum Hydrocarbons (Total) | ppb | --[2] | --[2] | 4/977 | 73 – 390 (182) |
| Schools | | | | | 0/175 | -- |
| Child Development Centers | | | | | 0/134 | -- |
| Non-Residences | | | | | 0/43 | -- |
| Hydrants | | | | | 1/360 | 64 – 64 (64) |
| Waiawa Shaft – Post Chlorination | | | | | 0/3 | -- |

**Notes:**
[1] These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number of results with detection only.
[2] There is no established MCL for TPHs. For the purposes of the EDWM Plan, all detections of TPH above the method detection limit (MDL) are investigated further to determine if JP-5/other fuel-related analytes are present in the System.

TPH results represent all hydrocarbons present in that sample and are not necessarily fuel-related (known as petrogenic). TPHs are also naturally occurring biogenic (e.g., bacteria, algae) or pyrogenic (e.g., produced by combustion). JP-5 (i.e., the fuel released from Red Hill in November 2021) contains no chemicals in the TPH-O range. A detection of TPH-O is likely associated with location-specific impacts, such as lubricants used to maintain a fire hydrant and not JP-5.

Consistent with industry standards, common food-grade lubricants (e.g., white mineral oil) are used to service hydrants throughout the JBPHH System. Food-grade, means they are safe for incidental contact with food or animal products as long as they do not exceed certain concentrations. As water passes through the hydrant, it may come in contact with any residual lubricants. These lubricants will be reported as TPH-O by the laboratory if they are present in the sample. The Safety Data Sheet (SDS) for the food-grade lubricants used on the JBPHH System are provided as Appendix B.

TPHs were detected at a higher detection frequency during LTM. TPHs were detected in 2,653 of 8,668 (31%) drinking water samples collected during LTM (i.e., March 2022 – March 2024).

Detected concentrations ranged between 50 ppb and 256 ppb with an average concentration of 73 ppb. During LTM Period 6, the frequency of TPH detections increased, primarily in the diesel-range organics (TPH-D). None of these detections has exceeded the DOH's incident-specific parameter (ISP) level of 266 ppb. Since October 2023, the Navy has proactively worked with EPA and DOH on actions to investigate these low-level TPH detections in drinking water samples collected from the JBPHH System. These actions have included inspection and sampling of hot water heaters and interior faucets to ensure there is no contaminant buildup, as well as collection of samples from various points throughout the System.

During the week of 29 January 2024, an interagency team comprised of SMEs from the EPA, DOH, Navy, and Navy contractors met to discuss low-level TPH detections reported in drinking water samples collected from the System. Investigation into the low-level TPH detections indicated these results were likely attributed to a reaction between chlorine in the water (from treatment) and a surrogate used in the lab when analyzing the samples. The Navy voluntarily developed the EDWM Plan to analyze drinking water samples using a revised analytical method following the completion of LTM.[7] TPH results are consistent between the First and Second Quarter of EDWM. Detection frequencies are between 0.24% (First Quarter) and 0.30% (Second Quarter) with most detections conclusively being related to cross-contamination from incidental contact in the field and/or lab or a food-grade lubricant associated with hydrants. There has been no indication of fuel-related impacts in the System. The table below compares TPH results between LTM and the first two quarters of EDWM.

**Table 13. Summary of TPH Detections Reported during EDWM and LTM**

| Sampling Period | Contaminant | Units | No. of Detects out of Samples | Minimum – Maximum (Average) | Detection Frequency | |
|---|---|---|---|---|---|---|
| | | | | | Detected Less than or Equal to MRL | Detected Greater than MRL |
| LTM | TPH | ppb | 2,653/8,668 (31%) | 50 – 256 (73) | 2,033/2,653 (77%) | 622/2,653 (23%) |
| First Quarter of EDWM | | | 4/1,641 (0.24%) | 49 – 1,552 (450) | 2/4 (50%) | 2/4 (50%) |
| Second Quarter of EDWM | | | 5/1,689 (0.30%) | 64 – 390 (158) | 2/5 (40%) | 3/5 (60%) |
| Third Quarter of EDWM | | | TBD | TBD | TBD | TBD |
| Fourth Quarter of EDWM | | | TBD | TBD | TBD | TBD |

**Notes:**
[1]These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.
[2] For additional information LTM period summary reports are available for review at jbphh-safewaters.org.

When TPH is detected at a concentration greater than the method detection limit (MDL), additional investigation (in accordance with Course of Action [COA] 3 in Section 5.2.3 of the EDWM Plan) is conducted. This investigation includes:

- An initial assessment to verify the TPH result reported by the laboratory is not associated with blank contamination (i.e., method blank, field blank, or blind blank). If the results are not associated with blank contamination, the evaluation proceeds to Tier 1.

[7] For more information on the low-level TPH detections observed during LTM and the results of the investigation into these results, see the Summary of Technical Memorandum Regarding Low-Level Hydrocarbon Detections Observed During Long-Term Monitoring at: https://jbphh-safewaters.org/public/Tech_Memo_JBPHH_LOE's_LTM_TPH_Detects_Redacted_Rev.pdf.

- A Tier 1 screening includes a detailed review of the laboratory report to determine if the detection is due to laboratory contamination, a petrogenic source (e.g., JP-5/other fuel-related analytes), a non-petrogenic source, or inconclusive. If the detection is not due to a JP-5/other fuel-related petrogenic source, then the Tiered evaluation will STOP at Tier 1. The results of this analysis will be documented in a Technical Memorandum.[8]

A summary of TPH detected reporting during the second quarter of EDWM is provided in the table below.

**Table 14. Summary of TPH Detections Reported during Second Quarter (July – September 2024) of EDWM**

| Zone | Location Type | Address | Sample Date | Analyte | Result (ppb) | Result of Initial Assessment/ Tier 1 Analysis |
|---|---|---|---|---|---|---|
| A1 | Residence | 297 Etcell Court | 22-Jul-24 | TPH-O | 73 | The detection is likely due to cross-contamination from incidental contact with the lab ORO calibration standard. A Tier 2 analysis was recommended to confirm this potential source. |
| A3 | Residence | 4917C Mokupea Place | 23-Jul-24 | TPH-O<br>TPH-D | 245<br>145 | The detection is likely due to cross-contamination from incidental contact in the lab with unrelated compounds during sample preparation. A Tier 2 analysis was recommended to confirm this potential source. |
| A3 | Residence | 6620 105th Street | 24-Jul-24 | TPH-O | 156 | The detection is likely due to cross-contamination from incidental contact in the field during sample collection with premise plumbing or household products. A Tier 2 analysis was recommended to confirm this potential source. |
| D3 | Residence | 223 Puapilo Court | 11-Jul-24 | TPH-O<br>TPH-D | 47 J<br>62 J | The detection is likely due to cross-contamination from incidental contact in the lab with unrelated compounds during sample preparation. A Tier 2 analysis was recommended to confirm this potential source. |
| H1 | Hydrant | Hydrant 1387 | 16-Jul-24 | TPH-G | 64 J | Isopropyl alcohol, which is the disinfectant used in the field prior to sample collection, was confirmed in the sample. Therefore, the detection is associated with field contamination. |

Each TPH detection was investigated further, to determine if the TPH result was related to JP-5 or other fuel-related analytes in the System. Below is a summary of the results of the additional investigation conducted for TPH detections reported during the second quarter (i.e., July – September 2024) of EDWM:

1. **297 Etcell Court (Zone A1)**
   - TPH-O was detected at 73 ppb in the sample collected from 297 Etcell Court (Zone A1) on 22 July 2024 (Field Sample ID No. A1-TW-0001250-24092-N). EPA was notified of the detection on 24 July 2024, when the Navy received preliminary results from the analytical laboratory. After the preliminary results were received, the Navy initiated a Tier 1 investigation. The Tier 1 evaluation for 297 Etcell Court is presented

[8] The Navy may elect to perform additional analysis (i.e., Tier 2 analysis) on some samples if the results of the Tier 1 assessment concludes that the Method 8015 TPH extract detection may be due to a JP-5/other fuel-related petrogenic source. The Tier 2 analysis is voluntary and is not part of the EDWM.

in Appendix C. Investigation into this detection confirmed it was due to incidental contact in the laboratory with the TPH-O calibration standard, but is not related to JP-5/other fuel-related analytes. On 24 July 2024, the Navy voluntarily initiated a Tier 2 analysis and the original sample was forwarded for Tier 2 analysis (i.e., Paraffins, Isoparaffins, Aromatics, Naphthalenes, and Olefin [PIANO] analysis). Further investigations into this detection confirmed incidental contamination of the sample. The residence was resampled on 25 July 2024, along with two sinks that bracket the original sample sink. The results of the resampling were non-detect for TPHs. Results of the Tier 2 analysis evaluation will be documented in a separate technical memorandum.

2. **4917C Mokupea Place (Zone A3)**
    - TPH-O and TPH-D were detected at 245 ppb and 145 ppb, respectively, in the samples collected from 4917C Mokupea Place (Zone A3) on 23 July 2024 (Field Sample ID No. A3-TW-0016716-24092-N). EPA was notified of the detection on 26 July 2024, when the Navy received preliminary results from the analytical laboratory. After the preliminary results were received, the Navy initiated a Tier 1 investigation. Results of the Tier 1 evaluation for 4917C Mokupea Place is summarized in Appendix C. Investigation into this detection confirmed it was associated with incidental contact with a glove either in the laboratory or at the time of sample collection, and not associated with JP-5 or other fuel-related analytes in the System. On 26 July 2024, the Navy voluntarily initiated a Tier 2 analysis and the sample was forwarded for Tier 2 analysis (i.e., PIANO analysis). Further investigations into this detection confirmed incidental contamination of the sample and confirmed the TPH detection at this location was not associated with JP-5/other fuel-related analytes. Results of the Tier 2 analysis evaluation will be documented in a separate technical memorandum for completeness.
3. **6620 105th Street (Zone A3)**
    - TPH-O was detected at 156 ppb in the sample collected from 6620 105th Street (Zone A3) on 24 July 2024 (Field Sample ID No. A3-TW-0017454-24092-N). EPA was notified of the detection on 29 July 2024, when the Navy received preliminary results from the analytical laboratory. After the preliminary results were received, the Navy initiated a Tier 1 investigation. Results of the Tier 1 investigation for 6620 105th Street is summarized in Appendix C. Investigation into this detection determined it was likely due to incidental contact during sampling due to presence in premise plumbing or household products in the area surrounding the sink the sample was taken from. On 28 July 2024, the Navy voluntarily initiated a Tier 2 analysis, and the sample was forwarded for Tier 2 analysis (i.e., PIANO analysis). Further investigations into this detection confirmed incidental contamination of the sample and confirmed the TPH detection at this location was not associated with JP-5 or other fuel-related analytes. Results of the Tier 2 analysis evaluation will be documented in a separate technical memorandum for completeness.
4. **223 Puapilo Court (Zone D3)**
    - TPH-O and TPH-D were detected at 47.4 ppb and 62.3 ppb, respectively, in the samples collected from 223 Puapilo Court (Zone D3) on 11 July 2024 (Field Sample ID No. D3-TW-0010607-24092-N). The EPA was notified of the detections on 17 July

2024, when the Navy received preliminary results from the analytical laboratory. After the preliminary results were received, the Navy initiated a Tier 1 investigation. The Tier 1 evaluation for 223 Puapilo Court is presented in Appendix C. Investigation into this detection confirmed it was due to incidental contact with a glove in the field or laboratory, most likely in the laboratory during sample preparation. The residence was resampled on 22 July 2024. The results of the resampling were non-detect for TPHs at the original fixture as well as two adjacent fixtures. The Navy voluntarily initiated a Tier 2 analysis on 17 July 2024 and forwarded the original sample from 11 July 2024. Further investigations (i.e., PIANO analysis) confirmed the TPH detections at this location were not associated with JP-5 or other fuel-related analytes. Results of the Tier 2 analysis evaluation will be documented in a separate technical memorandum.

5. **Hydrant 1387 (Zone H1)**
    - TPH-G was detected at 63.5 ppb in the sample collected from Hydrant 1387 (Zone H1) on 16 July 2024 (Field Sample ID No. H1-DL-0017756-24183-A). EPA was notified of the detection on 22 July 2024, when the Navy received preliminary results from the analytical laboratory. After the preliminary results were received, the Navy initiated a Tier 1 investigation. The Tier 1 evaluation for Hydrant 1387 is presented in Appendix C. Investigation into this detection confirmed it was associated with field contamination. Results of the Tier 1 analysis confirmed the detection of isopropyl alcohol, which was the disinfectant used prior to sampling. However, Hydrant 1387 was resampled and two additional hydrants (one upgradient and downgradient of the original hydrant) were sampled on 06 August 2024. The results of the resampling and additional samples were non-detect for TPH. The results of the Tier 1 analysis and additional sampling confirmed the TPH detection at this location was not associated with JP-5 or other fuel-related analytes.

Locations where TPH was detected during the second quarter (i.e., July – September 2024) of EDWM are shown on Figure 3.

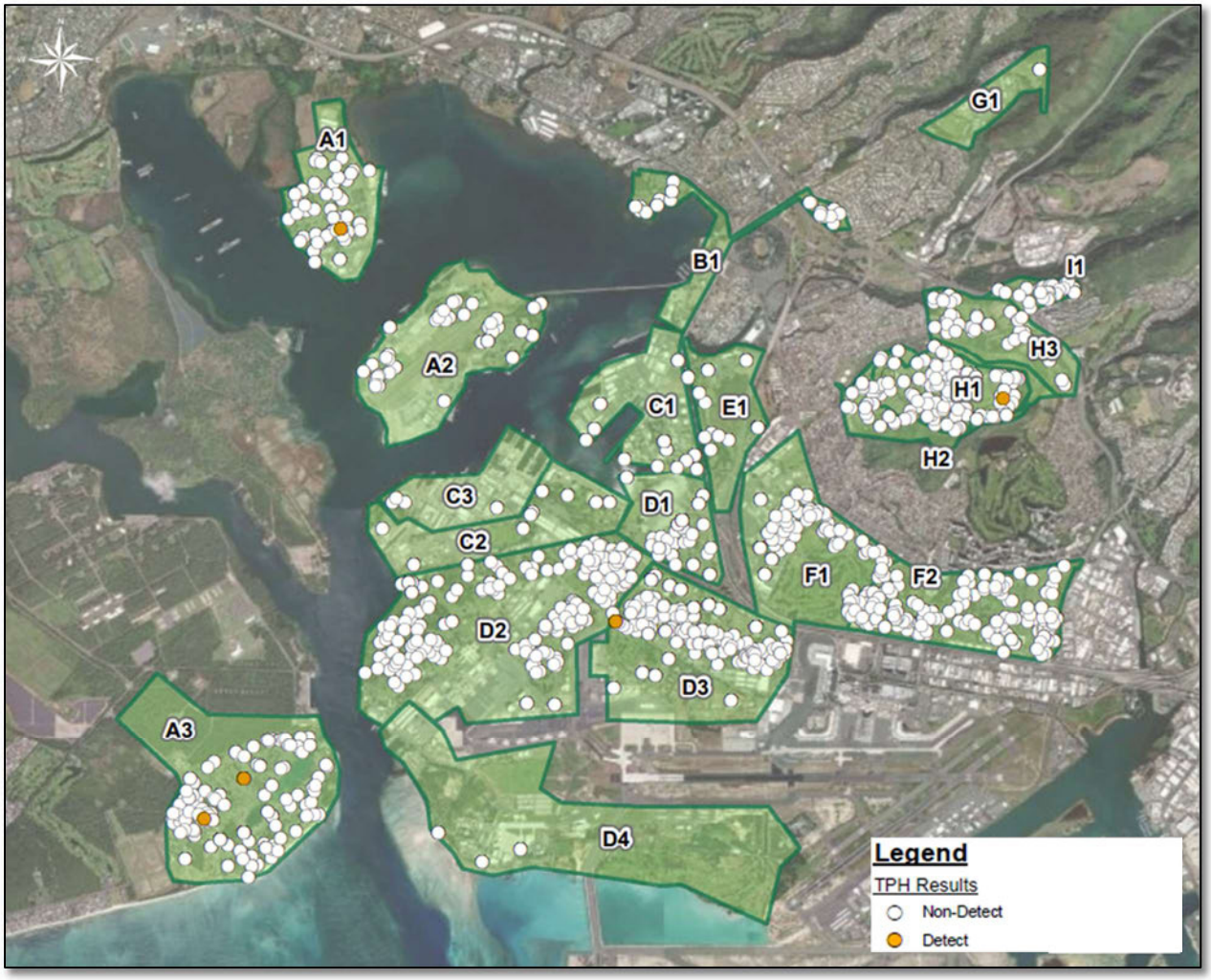


**Figure 3. Second Quarter (July – September 2024) EDWM TPH Detection Locations**

Five TPH detections occurred in Zones A1, A3, D3, and H1. These samples were not co-located and were surrounded by locations where TPHs were not detected. TPHs were not detected in other drinking water samples collected at similar dates and times at the five detections in the Zones.

One out of five detections occurred at hydrants, where common food-grade lubricants are used to service hydrants on the System. These lubricants, which are used throughout the JBPHH System, contain mineral oils that will be identified as TPH-O by the lab (see Appendix B for the SDS for the food-grade lubricants used throughout the JBPHH System). Further investigation into these detections concluded they are not associated with JP-5 or other fuel-related analytes in the System and are localized, location-specific incidents.

Four out of five detections occurred at residences. These detections were attributed to cross-contamination in the field and the lab rather than from JP-5/other fuel-related analytes. Field contamination was determined to be from incidental contact in the field with premise plumbing or household products. Lab contamination was determined to be from incidental contact with the lab TPH-O calibration standards or unrelated compounds during sample preparation. These incidents do not represent a systemic contamination issue in the laboratory, as laboratory contamination has been suspected in fewer than five of the more than 200 samples collected under EDWM to date.

## 3.3 Other Analyte Detections

Nine additional analytes were detected in drinking water samples collected during the second quarter of EDWM: copper, lead, mercury, benzo(a)pyrene, naphthalene, phenanthrene, toluene, 1,2-dibromoethane (EDB), and total trihalomethanes (TTHM). Results for these chemicals were compared to MCLs. All results were below their respective MCLs and ALs with the exception of one lead result reported at a residence (see Section 3.1 Analyte Exceedances).

A summary of detected analytes reported during the second quarter of EDWM is provided in the table below, with the exception of the lead exceedance.

**Table 15. Summary of Detections Reported during Second Quarter (July – September 2024) of EDWM**

| Contaminants | Units | Screening Level | No. Detects out of Samples | Minimum – Maximum (Average) |
|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ppb | 0.05 | 1/114 (0.88%) | 0.020 - 0.020 (0.020) |
| Toluene | ppb | 1,000 | 2/1,680 (0.12%) | 0.26 - 0.57 (0.42) |
| Benzo(a)pyrene | ppb | 0.2 | 91/1,680 (5.4%) | 0.010 - 0.033 (0.017) |
| Lead | ppb | 15 | 719/1,319 (55%) | 0.13 - 5.6 (0.32) |
| Mercury | ppb | 2 | 2/1,320 (0.15%) | 0.037 - 0.11 (0.074) |
| Copper | ppb | 1,300 | 1,314/1,320 (99%) | 0.81 – 374 (31) |
| Phenanthrene | ppb | --[2] | 2/978 (0.20%) | 0.27 - 0.41 (0.34) |
| Naphthalene | ppb | --[2] | 1/1,680 (0.06%) | 0.27 - 0.27 (0.27) |
| Total Trihalomethanes[1] | ppb | 80 | 710/1,680 (42%) | 0.25 – 29 (2.1) |

**Notes:**
[1] Total trihalomethanes (TTHM) include the following analytes: chloroform, bromoform, bromodichloromethane, dibromochloromethane.
[2] There is no established MCL for phenanthrene and naphthalene.

TTHMs are associated with drinking water disinfection and were included in EDWM to continue monitoring overall water quality in the System. No MCL exceedances have been reported for TTHMs. Copper and mercury are not associated with JP-5 fuel; however, these analytes were included in EDWM due to detections reported during LTM and to support the evaluation of overall drinking water quality and compliance with the Safe Drinking Water Act (SDWA). No MCL or AL exceedances have been reported for Mercury or Copper. No additional investigation into these analytes was warranted during EDWM. The Navy will continue sampling and analyzing for these analytes to ensure results are below the respective MCL and AL.

Six of the analytes (i.e., benzo[a]pyrene, lead, EDB, naphthalene, phenanthrene, and toluene) were evaluated further due to their potential association with JP-5 fuel or other fuels.

### Benzo(a)pyrene

Benzo(a)pyrene was added to the EDWM analytical list as a JP-5 fuel indicator compound. The presence (i.e., detection) of benzo(a)pyrene does not necessarily mean JP-5 fuel or other fuels are present in water, but benzo(a)pyrene, along with other chemicals, are commonly associated with fuel and could serve as an indicator for potential fuel-related impacts. Benzo(a)pyrene is not associated with JP-5. Benzo(a)pyrene is one of many polycyclic aromatic hydrocarbons (PAHs). PAHs are a commonly present chemical because they are often associated with many

human activities. Benzo(a)pyrene, and other PAHs, are formed during the burning of fossil fuels, motor vehicle exhaust, industrial processes, or the burning of organic matter. Benzo(a)pyrene is naturally occurring during forest fires and in volcanos which can impact groundwater used as a source of drinking water. The most common cause for benzo(a)pyrene in drinking water is adsorption from asphalt and coal tar linings in pipes and storage tanks within the distribution system. Benzo(a)pyrene results for the second quarter of EDWM are summarized in the table presented below and are shown in Figure 4.

**Table 16. Summary of Benzo(a)pyrene Results by Location Type (July – September 2024) of EDWM**

| Sample Location Type | Contaminant | Units | Screening Level | Basis for Screening Level | EDWM Summary – Second Quarter | |
|---|---|---|---|---|---|---|
| | | | | | No. of Detects out of Samples | Minimum – Maximum (Average)[1] |
| Residences | Benzo(a)pyrene | ppb | 0.2 | MCL | 56/968 | 0.011 – 0.032 (0.017) |
| Schools | | | | | 10/175 | 0.013 – 0.026 (0.018) |
| Child Development Centers | | | | | 9/134 | 0.012 – 0.026 (0.017) |
| Non-Residences | | | | | 1/43 | 0.018 – 0.018 (0.018) |
| Hydrants | | | | | 15/360 | 0.010 – 0.033 (0.018) |
| Waiawa Shaft – Post Chlorination | | | | | 0/3 | -- |

**Notes:**
[1]These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.

Benzo(a)pyrene was detected in 91 of the 1,680 (5.4%) drinking water samples collected during the second quarter of EDWM. Seventy-three of the 91 detections (80%) were reported at or below the method reporting limit (MRL; i.e., detected at or below 0.02 ppb) and 18 of the 91 detections (20%) were reported above the MRL (i.e., detected above 0.02 ppb). This is similar to the trend observed in the first quarter of EDWM. However, benzo(a)pyrene concentrations greater than the MRL were reported at a higher detection frequency (i.e., 97 of 234 [41%]) during LTM. A summary of benzo(a)pyrene detections for LTM and through EDWM is included in the table below.

**Table 17. Summary of Benzo(a)pyrene Detections Reported during EDWM and LTM**

| Sampling Period | Contaminant | Units | No. of Detects out of Samples | Minimum – Maximum (Average)[1] | Detection Frequency | |
|---|---|---|---|---|---|---|
| | | | | | Detected Less than or Equal to MRL | Detected Greater than MRL |
| LTM[2] | Benzo(a)pyrene | ppb | 234/8,636 (2.7%) | 0.010 – 0.13 (0.034) | 137/234 (59%) | 97/234 (41%) |
| First Quarter of EDWM | | | 95/1,641 (5.8%) | 0.011 – 0.036 (0.018) | 75/95 (80%) | 20/95 (21%) |
| Second Quarter of EDWM | | | 91/1,680 (5.4%) | 0.010 – 0.033 (0.017) | 73/91 (80%) | 18/91 (20%) |
| Third Quarter of EDWM | | | TBD | TBD | TBD | TBD |
| Fourth Quarter of EDWM | | | TBD | TBD | TBD | TBD |

**Notes:**
[1]These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.
[2] For additional information LTM period summary reports are available for review at jbphh-safewaters.org.

Detected concentrations were between 0.010 ppb and 0.033 ppb during the second quarter of EDWM with an average concentration of 0.017 ppb, similar to the reported detections in the first quarter of EDWM and in LTM. In both the first and second quarter of EDWM, detected concentrations were low (i.e., reported near the MRL) with 79% of detected samples during the first quarter of EDWM (i.e., 75 out of 95) and 82% of detected samples during second quarter (i.e., 75 out of 91) being flagged as 'J' by the lab (i.e., the concentrations reported are estimates). All detections of benzo(a)pyrene are below the MCL of 0.20 ppb, and no exceedances of benzo(a)pyrene have been reported during LTM, or either the first and second quarters of EDWM.

**Figure 4. Second Quarter (July – September 2024) EDWM Benzo(a)pyrene Detection Locations**

The detections are observed throughout the System and are not co-located to one Zone or general area. Detections of benzo(a)pyrene are surrounded by non-detects and do not indicate there is a system-wide impact. TPHs were non-detect at all locations where benzo(a)pyrene was detected. Benzo(a)pyrene was not detected in three pre-chlorination and post-chlorination samples collected from Waiawa Shaft (source water) on 11 July 2024, 05 August 2024, and 12 September 2024, respectively. Benzo(a)pyrene was not detected in the samples collected in 2023 as part of the JBPHH compliance monitoring program.[9] The Navy will continue to monitor benzo(a)pyrene concentrations in the System and investigate the cause or source of these detections. The results of this investigation will be documented in a technical memorandum and submitted to EPA/State of Hawaii, Department of Health (DOH) for review and discussion.

## Lead

Lead was detected during LTM; therefore, lead was added to the EDWM analytical list; however, lead is not associated with JP-5. The most common sources of lead in drinking water are pipes (e.g., cast iron or other metal pipes with lead solder), faucets, and fixtures in the home. Lead can also be naturally occurring leading to low-level concentrations of lead in drinking water.

[9] See the Consumer Confidence Reports, available at: https://cnrh.cnic.navy.mil/Operations-and-Management/Environmental/Water-Quality-Information/.

Naturally occurring lead is not considered a primary source of contamination in drinking water. Lead can enter drinking water when plumbing materials and fixtures that contain lead start to corrode. Lead results for the second quarter of EDWM are summarized in the table below and are shown in Figure 5.

**Table 18. Summary of Lead Results by Location Type (July – September 2024) of EDWM**

| Sample Location Type | Contaminant | Units | Screening Level | Basis for Screening Level | EDWM Summary – Second Quarter | |
|---|---|---|---|---|---|---|
| | | | | | No. of Detects out of Samples | Minimum – Maximum (Average)[1] |
| Residences | Lead | ppb | 15 | AL | 523/967[2] | 0.13 – 5.6[2] (0.33) |
| Schools | | | | | 117/175 | 0.13 – 1.4 (0.22) |
| Child Development Centers | | | | | 52/134 | 0.13 – 7.7 (0.52) |
| Non-Residences | | | | | 27/43 | 0.13 – 0.60 (0.32) |
| Hydrants | | | | | n/a[3] | n/a[3] |
| Waiawa Shaft – Post Chlorination | | | | | n/a | n/a |

**Notes:**
[1] These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.
[2] This does not include the 27 September 2024 (initial) lead result collected from 2417D Challenger Loop (Field Sample ID D2-TW-0008333-24092-N). The lead sample result collected from 2417D Challenger Loop on 27 September 2024 was 44.2 ppb. This was an exceedance of the AL of 15 ppb. The exceedance was determined to be associated with premise plumbing and is not associated with the System. This is discussed in more detail in Section 3.1 Analyte Exceedances of this EDWM Quarterly Report.
[3] In accordance with the EDWM Plan, hydrants are not analyzed for lead
n/a = Not analyzed.

Lead was detected in 719 of the 1,319 (55%) drinking water samples collected during the second quarter (i.e., July – September 2024) of EDWM.[10] During EDWM, 628 of the 719 detections (87%) were reported at or below the MRL (i.e., detected at or below 0.50 ppb) and 91 of the 719 detections (13%) were reported above the MRL (i.e., detected above 0.50 ppb). This is similar to the trend observed during the first quarter of EDWM and in LTM; however, during LTM there was a higher reported overall detection frequency (70%) and for detections above the MRL (23%). A summary of lead detections for LTM and through EDWM is included in the table below.

[10] In accordance with the EDWM Plan, hydrants are not analyzed for lead.

**Table 19. Summary of Lead Detections Reported during EDWM and LTM**

| Sampling Period | Contaminant | Units | No. of Detects out of Samples | Minimum – Maximum (Average)[1] | Detection Frequency | |
|---|---|---|---|---|---|---|
| | | | | | Detected Less than or Equal to MRL | Detected Greater than MRL |
| LTM[2,3] | Lead | ppb | 5,688/8,131 (70%) | 0.13 – 83 (0.59) | 4,362/5,688 (77%) | 1,326/5,688 (23%) |
| EDWM Q1 | | | 716/1,265 (57%) | 0.13 -12 (0.38) | 617/716 (86%) | 99/716 (14%) |
| EDWM Q2[4] | | | 719/1,319 (55%) | 0.13 – 5.6 (0.32) | 628/719 (87%) | 91/719 (13%) |
| EDWM Q3 | | | TBD | TBD | TBD | TBD |
| EDWM Q4 | | | TBD | TBD | TBD | TBD |

**Notes:**
[1] These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.
[2] For additional information LTM period summary reports are available for review at jbphh-safewaters.org
[3] Lead exceeded the AL of 15 ppb in 26 samples collected from 17 locations during LTM; however, during LTM, further investigation into those exceedances determined lead was associated with a premise plumbing issue and not associated with JP-5 fuel in the System. For additional information LTM period summary reports are available for review at jbphh-safewaters.org
[4] This does not include the 27 September 2024 (initial) lead result collected from 2417D Challenger Loop (Field Sample ID D2-TW-0008333-24092-N). The lead sample result collected from 2417D Challenger Loop on 27 September 2024 was 44.2 ppb. This was an exceedance of the AL of 15 ppb. The exceedance was determined to be associated with premise plumbing and is not associated with the System. This is discussed in more detail in Section 3.1 Analyte Exceedances of this EDWM Quarterly Report.

Detected concentrations during the second quarter of EDWM ranged from 0.13 ppb to 5.6 ppb, with an average detected concentration of 0.32 ppb, similar to the reported detections in the first quarter of EDWM and in LTM. Lead exceeded the AL of 15 ppb in 26 samples collected from 17 locations during LTM; however, during LTM, further investigation into those exceedances determined lead was associated with a premise plumbing issue and not associated with JP-5 fuel in the System. Remedial actions (e.g., replacing faucet fixtures, flushing) were performed at these locations to verify the location-specific premise plumbing was addressed. Once the remedial actions were completed, the Navy collected a re-sample from all 17 locations and the results were below the AL of 15 ppb. Additional information regarding these exceedances is available in the LTM summary reports.[11]

[11] LTM period summary reports are available for review at jbphh-safewaters.org.

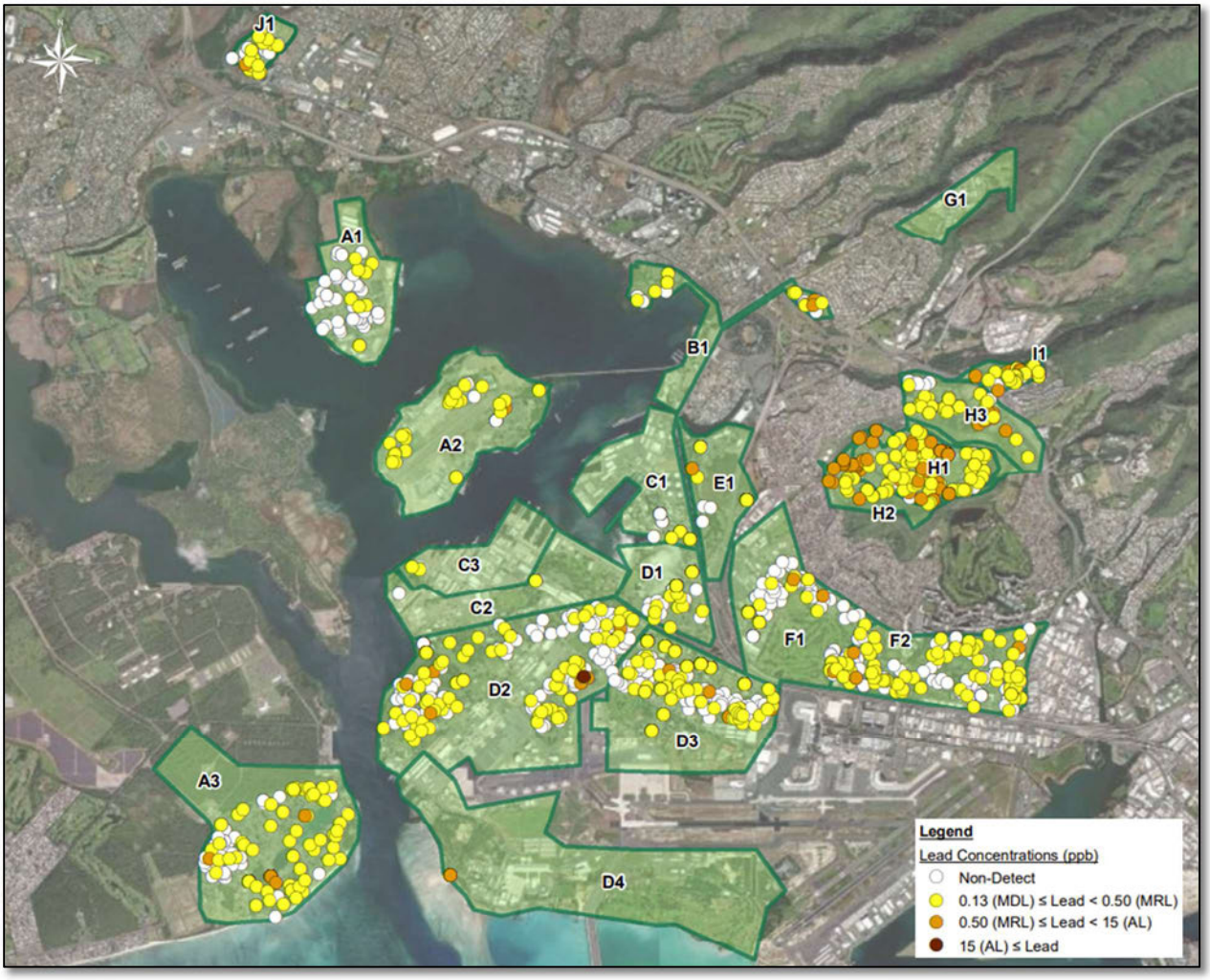


**Figure 5. Second Quarter (July – September 2024) EDWM Lead Detection Locations**

Lead is not associated with JP-5 and is not an indicator compound for JP-5 fuel. Lead, which is regulated under the SDWA, was not detected in the samples collected in 2023 as part of the JBPHH compliance monitoring program.[12] Lead in the System is likely not associated with natural background and is likely associated with premise plumbing issues throughout the System, similar to what was observed and documented during LTM.

The Navy administers a robust and layered monitoring approach for lead which includes EDWM, sampling in accordance with the Lead and Copper Rule, and sampling in accordance with the Lead in Priority Area Rule. The System has been and remains in full compliance with State and Federal standards. The Navy will continue to monitor lead concentrations in the System and is currently investigating the cause or source of these detections. This investigation includes: (1) reviewing construction information to determine the piping material used in residences and determine if metal piping (e.g., cast iron pipes) with lead solder were used, (2) conducting a spatial analysis to determine if there are spatial patterns to lead concentrations (i.e., is lead detected more frequently or at higher concentrations in certain zones), (3) conducting a temporal analysis to determine if there are patterns in the timing of lead detections

[12] See the Consumer Confidence Reports, available at: https://cnrh.cnic.navy.mil/Operations-and-Management/Environmental/Water-Quality-Information/.

(i.e., is lead detected more frequently or at higher concentration during certain weeks or months), and (4) comparing lead to water quality information (e.g., free chlorine concentrations, pH) to determine if there is a correlation. The results of this investigation will be documented in a technical memorandum and submitted to EPA/DOH for review and discussion.

### 1,2-Dibromoethane (EDB)

EDB was added to the EDWM analytical list as an indicator compound. The presence (i.e., detection) of EDB does not necessarily mean fuel is present in water, and while EDB is associated with other petroleum compounds utilized in fuels it is not a component of JP-5.[13] Historically, EDB has been utilized in leaded gasoline, and as a pesticide prior to being banned due to its toxicity. The most common cause for EDB in drinking water in the United States is through leaching from contaminated soil into the source water; however, this may not be the case at JBPHH. EDB results for the second quarter of EDWM are summarized in the table presented below and are shown in Figure 6.

**Table 20. Summary of 1,2-Dibromoethane (EDB) Results by Location Type (July – September 2024) of EDWM**

| Sample Location Type | Contaminant | Units | Screening Level | Basis for Screening Level | EDWM Summary – Second Quarter | |
|---|---|---|---|---|---|---|
| | | | | | No. of Detects out of Samples | Minimum – Maximum (Average)[1] |
| Residences | 1,2-Dibromoethane (EDB) | ppb | 0.05 | MCL | n/a | n/a |
| Schools | | | | | n/a | n/a |
| Child Development Centers | | | | | n/a | n/a |
| Non-Residences | | | | | n/a | n/a |
| Hydrants[2] | | | | | 1/114 | 0.02 |
| Waiawa Shaft – Post Chlorination | | | | | n/a | n/a |

**Notes:**
[1]These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.
[2] In accordance with the EDWM Plan, hydrants and Waiawa Shaft (source water) are the only location types analyzed for EDB.
n/a = Not analyzed.

EDB was detected in 1 out of 114 (0.87%) drinking water samples collected during the second quarter of EDWM[14]. All detections were less than the MCL of 0.05 ppb. EDB was detected at 0.020 ppb in the sample collected from Hydrant 37A (Field Sample ID No. F1-DL-0017724-24245-N) which is less than the MRL of 0.022 ppb and less than the MCL of 0.050 ppb. In the first quarter of EDWM, EDB was also detected (0.0085 J ppb) at this location. No exceedances of EDB have been reported during EDWM.

[13] Sixteen JP-5 fuel product samples were collected from Red Hill tanks in July 2023 and analyzed to determine the chemical makeup of JP-5 fuel that impacted the System. EDB was not detected in any of those samples (see Supplement A of the EDWM Plan).
[14] In accordance with the EDWM Plan, hydrants and Waiawa Shaft (source water) are the only location types analyzed for EDB.

**Figure 6. Second Quarter (July – September 2024) EDWM 1,2-Dibromoethane Detection Locations**

The detection of EDB is surrounded by non-detects and does not indicate that there is a system-wide impact. TPHs were non-detect at the locations where EDB was detected. EDB was non-detect in a pre-chlorination sample collected from Waiawa Shaft (source water) on 11 July 2024. EDB, which is regulated under the SDWA, was not detected in the samples collected in 2023 as part of the JBPHH compliance monitoring program.[15]

## Naphthalene

Naphthalene was added to the EDWM analytical list as an indicator compound. The presence (i.e., detection) of Naphthalene does not necessarily mean fuel is present in water, but naphthalene is a primary component of JP-5, and is a key indicator for the presence/absence of JP-5 in drinking water samples.[16] Naphthalene is one of many PAHs. PAHs are a commonly present chemical because they are often associated with many human activities. Naphthalene, and other PAHs, are formed during the burning of fossil fuels, motor vehicle exhaust, industrial processes, or the burning of organic matter. Naphthalene is a natural constituent of coal tar and

[15] See the Consumer Confidence Reports, available at: https://cnrh.cnic.navy.mil/Operations-and-Management/Environmental/Water-Quality-Information/.

[16] Sixteen JP-5 fuel product samples were collected from Red Hill tanks in July 2023 and analyzed to determine the chemical makeup of JP-5 fuel that impacted the System. Naphthalene was detected in all of those samples (see Supplement A of the EDWM Plan).

crude oil, and is used in a variety of different consumer products (i.e. toilet deodorizer and moth repellant). Similar to other PAHs, the most common cause for naphthalene in drinking water is from asphalt and coal tar linings in pipes and storage tanks leaching into the distribution system. Naphthalene results for the second quarter of EDWM are summarized in the table presented below and are shown in Figure 7.

**Table 21. Summary of Naphthalene Results by Location Type (July – September 2024) of EDWM**

| Sample Location Type | Contaminant | Units | Screening Level | Basis for Screening Level | EDWM Summary – Second Quarter | |
|---|---|---|---|---|---|---|
| | | | | | No. of Detects out of Samples | Minimum – Maximum (Average)[1] |
| Residences | Naphthalene | ppb | --[2] | --[2] | 0/968 | -- |
| Schools | | | | | 0/175 | -- |
| Child Development Centers | | | | | 0/134 | -- |
| Non-Residences | | | | | 0/43 | -- |
| Hydrants | | | | | 1/360 | 0.27 – 0.27 (0.27) |
| Waiawa Shaft – Post Chlorination | | | | | 0/3 | -- |

**Notes:**
[1]These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.
[2]There is no established MCL for Naphthalene.
n/a = Not analyzed.

Naphthalene was detected in 1 out of 1,680 (0.060%) drinking water samples collected during the second quarter of EDWM. Naphthalene was detected at 0.27 ppb in a sample collected from Hydrant 79 in Zone D2 (Field Sample ID No. D2-DL-0017712-24183-N) which is below the MRL of 0.50 ppb. There were no detections for naphthalene in the first quarter of EDWM. No exceedances of naphthalene have been reported during EDWM.

**Figure 7. Second Quarter (July – September 2024) EDWM Naphthalene Detection Locations**

The detection of naphthalene is surrounded by non-detects and does not indicate that there is a system-wide impact. TPHs were non-detect at the location where Naphthalene was detected. Naphthalene was not detected in three pre-chlorination and post-chlorination samples collected from Waiawa Shaft (source water) on 11 July 2024, 05 August 2024, and 12 September 2024, respectively. Naphthalene was not detected in the samples collected in 2023 as part of the JBPHH compliance monitoring program.[17]

## Phenanthrene

Phenanthrene was added to the EDWM analytical list as an indicator compound. The presence (i.e., detection) of phenanthrene does not necessarily mean fuel is present in water, but phenanthrene is associated with other petroleum compounds utilized in fuels.[18] Phenanthrene is one of many PAHs. PAHs are a commonly present chemical because they are often associated with many human activities. Phenanthrene, and other PAHs, are formed during the burning of fossil fuels, motor vehicle exhaust, industrial processes, or the burning of organic matter.

[17] See the Consumer Confidence Reports, available at: https://cnrh.cnic.navy.mil/Operations-and-Management/Environmental/Water-Quality-Information/.

[18] Sixteen JP-5 fuel product samples were collected from Red Hill tanks in July 2023 and analyzed to determine the chemical makeup of JP-5 fuel that impacted the System. Phenanthrene was detected in all of those samples (see Supplement A of the EDWM Plan).

Phenanthrene is a natural constituent of coal tar and crude oil. Similar to other PAHs, the most common cause for phenanthrene in drinking water is adsorption from asphalt and coal tar linings in pipes and storage tanks within the distribution system. Phenanthrene results for the second quarter of EDWM are summarized in the table presented below and are shown in Figure 8.

**Table 22. Summary of Phenanthrene Results by Location Type (July – September 2024) of EDWM**

| Sample Location Type | Contaminant | Units | Screening Level | Basis for Screening Level | EDWM Summary – Second Quarter | |
|---|---|---|---|---|---|---|
| | | | | | No. of Detects out of Samples | Minimum – Maximum (Average)[1] |
| Residences | Phenanthrene | ppb | --[2] | --[2] | 1/605 | 0.41 – 0.41 (0.41) |
| Schools | | | | | 1/79 | 0.27 – 0.27 (0.27) |
| Child Development Centers | | | | | 0/47 | -- |
| Non-Residences | | | | | 0/20 | -- |
| Hydrants | | | | | 0/227 | -- |
| Waiawa Shaft – Post Chlorination | | | | | 0/1 | -- |

**Notes:**
[1]These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.
[2]There is no established MCL for Phenanthrene.
n/a = Not analyzed.

Phenanthrene was detected in 2 out of 978 (0.020%) drinking water samples collected during the second quarter of EDWM. Phenanthrene was detected at 0.41 ppb from residence 2428A Challenger Loop (Field Sample ID No. D2-TW-0008082-24092-N) which is greater than the MDL of 0.25 ppb, but less than the MRL of 0.50 ppb. The second detection of phenanthrene at Hale Keiki School was 0.27 ppb (Field Sample ID No. E1-TW-0015244-24214-N-3) which is also greater than the MDL of 0.25 ppb, but less than the MRL of 0.50 ppb. There were no detections for phenanthrene in the first quarter of EDWM. No exceedances of phenanthrene have been reported during EDWM.

**Figure 8. Second Quarter (July – September 2024) EDWM Phenanthrene Detection Locations**

The detections are observed throughout the System and are not co-located to one Zone or general area. Detections of phenanthrene are surrounded by non-detects and do not indicate there is a system-wide impact. TPHs were non-detect at all locations where phenanthrene was detected; however, benzo(a)pyrene was detected in the same sample collected from Hale Keiki School and a field duplicate collected from 2428A Challenger Loop. Phenanthrene was not detected in the pre-chlorination and post-chlorination samples collected from Waiawa Shaft (source water) on 12 September 2024. Phenanthrene was not detected in the samples collected in 2023 as part of the JBPHH compliance monitoring program.[19]

### Toluene

Toluene was added to the EDWM analytical list as a JP-5 indicator compound. The presence (i.e., detection) of toluene does not necessarily mean fuel is present in water, but toluene is associated with other petroleum compounds utilized in fuels.[20] Toluene is a volatile organic compound (VOC). VOCs are a commonly present chemical because they are often associated

[19] See the Consumer Confidence Reports, available at: https://cnrh.cnic.navy.mil/Operations-and-Management/Environmental/Water-Quality-Information/.

[20] Sixteen JP-5 fuel product samples were collected from Red Hill tanks in July 2023 and analyzed to determine the chemical makeup of JP-5 fuel that impacted the System. Toluene was detected in all of those samples (see Supplement A of the EDWM Plan).

with many commercial, industrial, and residential products. Toluene is utilized as a solvent and in the process of making other chemicals. The most common cause for toluene in drinking water is from industrial discharge and leaching from drinking water storage tank linings. Toluene results for the second quarter of EDWM are summarized in the table presented below and are shown in Figure 9.

**Table 23. Summary of Toluene Results by Location Type (July – September 2024) of EDWM**

| Sample Location Type | Contaminant | Units | Screening Level | Basis for Screening Level | EDWM Summary – Second Quarter | |
|---|---|---|---|---|---|---|
| | | | | | No. of Detects out of Samples | Minimum – Maximum (Average)[1] |
| Residences | Toluene | ppb | 1000 | MCL | 1/968 | 0.57 – 0.57 (0.57) |
| Schools | | | | | 0/175 | -- |
| Child Development Centers | | | | | 1/134 | 0.26 – 0.26 (0.26) |
| Non-Residences | | | | | 0/43 | -- |
| Hydrants | | | | | 0/360 | -- |
| Waiawa Shaft – Post Chlorination | | | | | 0/3 | -- |

**Notes:**
[1]These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.
n/a = Not analyzed.

Toluene was detected in 2 out of 1,680 (0.020%) drinking water samples collected during the second quarter of EDWM. Toluene was detected at 0.57 ppb from residence 648 Meyerkord Loop (Field Sample ID No. F2-TW-0009968-24092-N) which is greater than the MDL of 0.25 ppb, and MRL of 0.5 ppb. Toluene was detected at 0.26 ppb from a CDC in Zone D3 (Field Sample ID No. D3-TW-0017510-24183-N-2), which is greater than the MDL of 0.25 ppb, but less than the MRL of 0.5 ppb. In accordance with the EDWM Plan, two samples are collected from each CDC. Toluene was non-detect in the second sample collected at this CDC. There were no detections for toluene in the first quarter of EDWM. No exceedances of toluene have been reported during EDWM.

**Figure 9. Second Quarter (July – September 2024) EDWM Toluene Detection Locations**

The detections are observed throughout the System and are not co-located to one Zone or general area. Detections of toluene are surrounded by non-detects and do not indicate there is a system-wide impact. TPHs were non-detect at all locations where toluene was detected. Toluene was not detected in three pre-chlorination and post-chlorination samples collected from Waiawa Shaft (source water) on 11 July 2024, 05 August 2024, and 12 September 2024, respectively. Toluene was not detected in the samples collected in 2023 as part of the JBPHH compliance monitoring program.[21]

[21] See the Consumer Confidence Reports, available at: https://cnrh.cnic.navy.mil/Operations-and-Management/Environmental/Water-Quality-Information/.

# Section 4. Quality Assurance/Quality Control Sampling

This section summarizes the results of quality assurance/quality control (QA/QC) samples collected by the Navy and EPA to assess the results of drinking water samples. These samples are important for ensuring the data reported by the laboratory is accurate and can be used to evaluate the overall protectiveness of drinking water supplied by the System.

## 4.1 Monthly Performance Evaluation Monitoring

In accordance with the EDWM Plan, monthly performance evaluation (PE) samples were collected. The PE samples are samples that were spiked with a known concentration of JP-5 (i.e., 80 ppb and 266 ppb) and submitted to the laboratory for analysis. These are "blind" samples (i.e., the laboratory does not know that they were spiked with JP-5) and are analyzed as normal samples. The results of the monthly PE samples collected during the second quarter (i.e., July – September 2024) of EDWM are summarized in the following table.

**Table 24. Summary of Monthly PE Monitoring Sample Results (July – September 2024)**

| Sample ID | Sample Date | Spike Concentration (ppb) | Laboratory Result (ppb) | Percent Difference (%) |
|---|---|---|---|---|
| I1-TW-0016032-24122-N-1-R2 | 7/10/2024 | 80 | 52.9 | 34% |
| I1-TW-0016032-24122-N-2-R2 | 7/10/2024 | 266 | 215 | 19% |
| I1-TW-0016032-24122-N-1-R3 | 8/6/2024 | 80 | 26.3 | 67% |
| I1-TW-0016032-24122-N-2-R3 | 8/6/2024 | 266 | 231 | 13% |
| I1-TW-0016032-24122-N-1-R4 | 9/11/2024 | 80 | 63.3 | 21% |
| I1-TW-0016032-24122-N-2-R4 | 9/11/2024 | 266 | 178 | 33% |

**Notes:**
Lab Result for I1-TW-0016032-24122-N-1-R3 is J qualifier, biased low
Lab Result for I1-TW-0016032-24122-N-2-R3 is J qualifier, biased high

The PE sample results indicate the lab is getting good recoveries and the EDWM analytical results are reliable. The Navy will continue to collect monthly PE samples as part of EDWM.

## 4.2 Matrix Spike

In accordance with the EDWM Plan, matrix spike (MS) samples were analyzed at an increased frequency compared to LTM. A MS sample is when the sampling crew collects extra volume of drinking water sample in the field and sends it to the lab. The lab then spikes the sample with a known quantity of TPH and analyzes the sample along with the other samples in the batch. The lab then compares the results of the MS sample to the known quantity they added to the sample. MS samples were spiked with JP-5 near the MRL of 80 ppb and analyzed for TPHs using EPA Method 8015. A total of 20 MS samples were collected and analyzed between 03 July 2024 and 30 September 2024 and analyzed for TPHs. The MS results are presented in Appendix D. The majority of the MS results were within the acceptance criteria of +/- 30%, indicating the lab is getting acceptable recoveries.

## 4.3 EPA Co-Sampling

In June 2024, EPA began analyzing co-samples for TPHs. The purpose of the co-sampling is to serve as an independent QA/QC measure for assessing the Navy's drinking water results. The co-sampling (referred to as split sampling in the EDWM Plan) involves the duplicate collection of a drinking water sample at the same time, from the same location, but sending the samples to two different laboratories (i.e., the Navy's contracted laboratory and EPA's laboratory) for

analysis. The results are compared to determine if additional investigation or action is warranted. The Navy did not conduct a co-sampling event in conjunction with the EPA in the second quarter of EDWM.

### 4.4 DOH Split Sampling

In September 2024, DOH began analyzing co-samples for SVOCs, TTHMs, and PFAS chemicals. The DOH Split Sampling was conducted independent of EDWM and did not include all analytes outlined in the EDWM Plan. Results of the split sampling could serve as an independent QA/QC measure for assessing the Navy's drinking water results. The co-sampling (referred to as split sampling in the EDWM Plan) involves the duplicate collection of a drinking water sample at the same time, from the same location, but sending the samples to two different laboratories (i.e., the Navy's contracted laboratory and the laboratory used by DOH) for analysis. The results are compared to determine if additional investigation or action is warranted. DOH co-samples were not analyzed for TPH. At the time of this report, DOH's results have not been published; therefore, a comparison could not be conducted at this time. Once DOH's results are finalized and available to the public, the Navy will compare the results to ensure the results are consistent between the two labs or determine if additional investigation/action is warranted. Three samples were collected on 30 September 2024 from the Waiawa Shaft (pre- and post-chlorination). The Navy's results of the co-sampling (Sample IDs SHAFT-HW-0018383-24274-N, SHAFT-HW-0017916-24274-N, and SHAFT-HW-0016021-24274-N) are available on https://jbphh-safewaters.org/.

### 4.5 Non-Source Water Shaft Samples

In accordance with the EDWM plan, drinking water samples are not collected from the NAH Shaft and RH Shaft. The shafts are sampled quarterly for general water quality parameters. During the first quarter of EDWM however, the Navy voluntarily collected drinking water samples from the NAH and RH shafts and analyzed them for TPH, select fuel indicator compounds and metals. **The NAH and RH Shafts are offline and do not provide drinking water to the System.**

The NAH Shaft and RH Shaft were not analyzed for TPH, fuel indicator compounds, metals, or other drinking water related analytes during the second quarter of EDWM. The NAH Shaft and RH Shaft are evaluated as part of a separate monitoring program, independent of EDWM. A summary of the results for the NAH and RH Shafts (collected as part of EDWM to date) are summarized in the tables below.

**Table 25. Summary of Navy Aiea-Halawa Shaft (Pre-Chlorination) Results (July – September 2024)**

| Contaminant | Units | Screening Level | Basis for Screening Level | EDWM Summary – First Quarter | | EDWM Summary – Second Quarter | |
|---|---|---|---|---|---|---|---|
| | | | | No. of Detects out of Samples | Minimum – Maximum (Average) | No. of Detects out of Samples | Minimum – Maximum (Average) |
| *Contaminants of Concern* | | | | | | | |
| Benzene | ppb | 5 | MCL | 0/1 | -- | --[2] | -- |
| Ethylbenzene | ppb | 700 | MCL | 0/1 | -- | --[2] | -- |
| Toluene | ppb | 1,000 | MCL | 0/1 | -- | --[2] | -- |
| Xylenes (Total) | ppb | 10,000 | MCL | 0/1 | -- | --[2] | -- |
| 1-Methylnaphthalene | ppb | --[1] | -- | 0/1 | -- | --[2] | -- |
| 2-Methylnaphthalene | ppb | --[1] | -- | 0/1 | -- | --[2] | -- |
| Naphthalene | ppb | --[1] | -- | 0/1 | -- | --[2] | -- |
| Total Petroleum Hydrocarbon (TPH) | ppb | --[1] | -- | 0/1 | -- | --[2] | -- |
| *Metals* | | | | | | | |
| Copper | ppb | 1,300 | AL | 1/1 | 124 – 124 (124) | --[2] | -- |
| Lead | ppb | 15 | AL | 1/1 | 0.33 – 0.33 (0.33) | --[2] | -- |

**Notes:**
[1] No established MCL from EPA
[2] Contaminant not analyzed

**Table 26. Summary of Red Hill Shaft (Pre-Chlorination) Results (July – September 2024)**

| Contaminant | Units | Screening Level | Basis for Screening Level | EDWM Summary – First Quarter | | EDWM Summary – Second Quarter | |
|---|---|---|---|---|---|---|---|
| | | | | No. of Detects out of Samples | Minimum – Maximum (Average) | No. of Detects out of Samples | Minimum – Maximum (Average) |
| *Contaminants of Concern* | | | | | | | |
| Benzene | ppb | 5 | MCL | 0/1 | -- | --[2] | -- |
| Ethylbenzene | ppb | 700 | MCL | 0/1 | -- | --[2] | -- |
| Toluene | ppb | 1,000 | MCL | 0/1 | -- | --[2] | -- |
| Xylenes (Total) | ppb | 10,000 | MCL | 0/1 | -- | --[2] | -- |
| 1-Methylnaphthalene | ppb | --[1] | -- | 0/1 | -- | --[2] | -- |
| 2-Methylnaphthalene | ppb | --[1] | -- | 0/1 | -- | --[2] | -- |
| Naphthalene | ppb | --[1] | -- | 0/1 | -- | --[2] | -- |
| Total Petroleum Hydrocarbon (TPH) | ppb | --[1] | -- | 0/1 | -- | --[2] | -- |

**Notes:**
[1] No established MCL from EPA
[2] Contaminant not analyzed

# Section 5. Water Quality Action Team

In addition to the EDWM Plan, the Navy has established the WQAT (predated by the Rapid Response Team) to address consumer water quality concerns.

The WQAT works independently of the EDWM Plan to collect samples at locations with consumer concerns. The WQAT is one piece of the overall effort taken by the Navy to continue to demonstrate that the System is no longer impacted by the November 2021 Red Hill release and that water provided by the System is safe for consumption. Although the WQAT is a separate program, independent of EDWM, and is not a requirement under the EDWM Plan, the results of the WQAT drinking water samples are included in this report to support the evaluation of drinking water in the System.

System users are encouraged to contact the WQAT Call Center and report any water quality and/or health-related concerns associated with their tap water. The WQAT will then work with the consumer to launch a drinking water investigation and determine if JP-5/other fuel-related analytes are impacting the System; as well as identify any water quality concerns with the premise and communicate the results to the resident/occupant. This section summarizes the results of the WQAT samples collected by the Navy to address consumer water quality concerns.

## 5.1 Summary of Calls Received by the WQAT

During the second quarter of EDWM, a total of 25 concerns were reported to the WQAT. Water quality concerns were reported by 22 residences and 3 non-residences. The total calls per month varied, with 6 concerns reported in July, 5 reported in August, and 14 reported in September. Additionally, water quality concerns were reported in 9 Zones on the System. Figure 10 below summarizes the total number of calls received between July 2024 and September 2024. Additional information is also available on the https://jbphh-safewaters.org under the "Concern Log Archive".

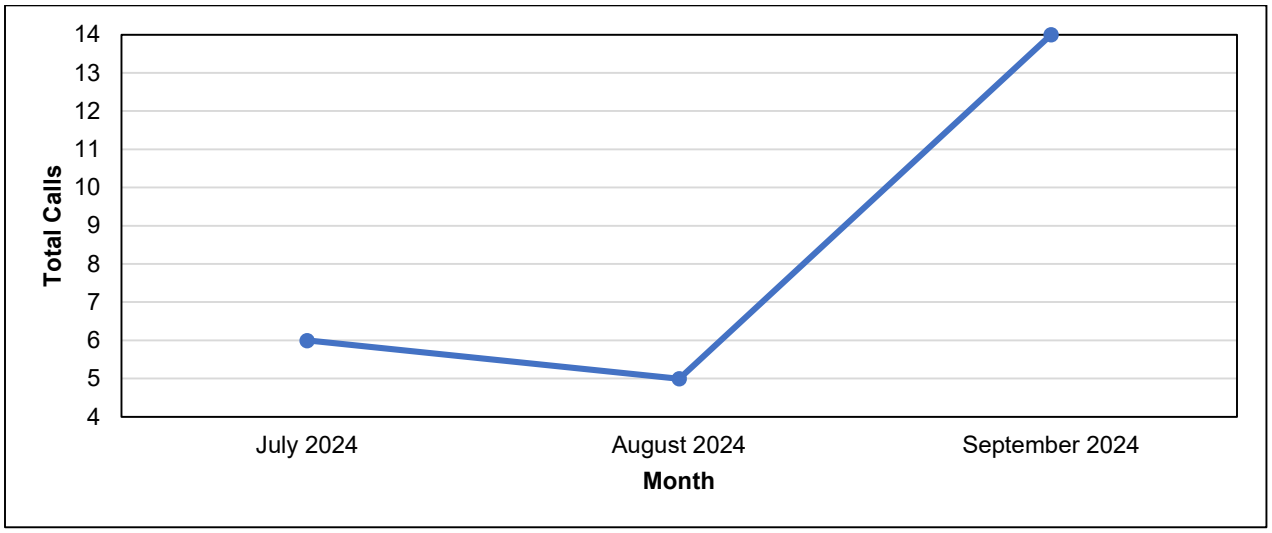


**Figure 10. Total Water Quality Concerns (July – September 2024)**

The following table summarizes the total number of calls, by Zone, received between July 2024 and September 2024.

**Table 27. Summary of Resident Calls to WQAT Call Center (July – September 2024)**

| Zone[1] | Number of Calls (July 2024) | Number of Calls (August 2024) | Number of Calls (September 2024) | Total Calls |
|---|---|---|---|---|
| A1 | 1 | 0 | 0 | 1 |
| A3 | 0 | 1 | 3 | 4 |
| C1 | 1 | 0 | 0 | 1 |
| D2 | 2 | 3 | 4 | 9 |
| D3 | 0 | 0 | 4 | 4 |
| F1 | 0 | 1 | 0 | 1 |
| F2 | 1 | 0 | 0 | 1 |
| H1 | 0 | 0 | 1 | 1 |
| H2 | 1 | 0 | 2 | 3 |
| **Total** | **6** | **5** | **14** | **25** |

**Notes:**
[1] Zones not listed in this table did not have any residents call into the WQAT during the second quarter (i.e., July – September 2024) of EDWM.

In July 2024, five residences and one non-residence from five Zones (i.e., A1, C1, D2, F2, and H2) reported water quality concerns to the WQAT. In August 2024, five residences from 3 Zones (i.e., A3, D2, and F1) reported water quality concerns to the WQAT. In September 2024, 12 residences and two non-residences from five Zones (i.e., A3, D2, D3, H1, and H2) reported water quality concerns to the WQAT. In the second quarter, September experienced the highest volume of concerns, followed closely by July, and then August, which experienced the lowest volume of concerns. During the second quarter, there was an observable dip in the number of calls to WQAT in August, but otherwise remained consistent in terms of the number of calls from each Zone throughout the second quarter of EDWM. Locations where the WQAT completed WQAT investigations (e.g., inspections, sampling) during the second quarter of EDWM are shown in Figures 11 through 13.

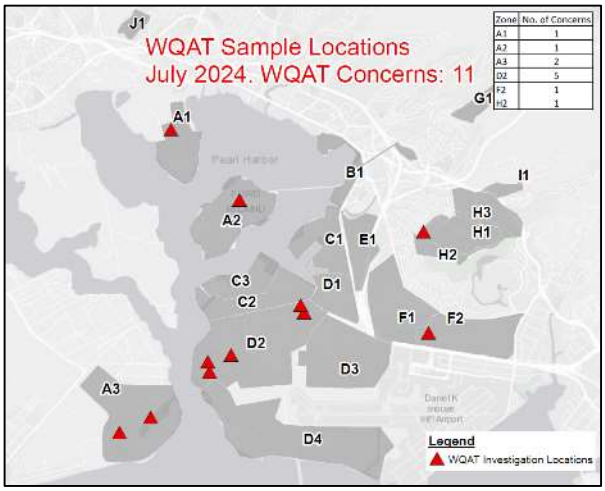


**Figure 11. July 2024 Customer Call Locations**

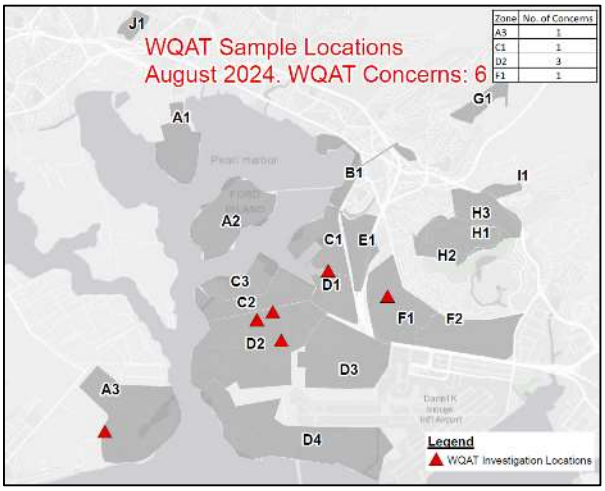


**Figure 12. August 2024 Customer Call Locations**

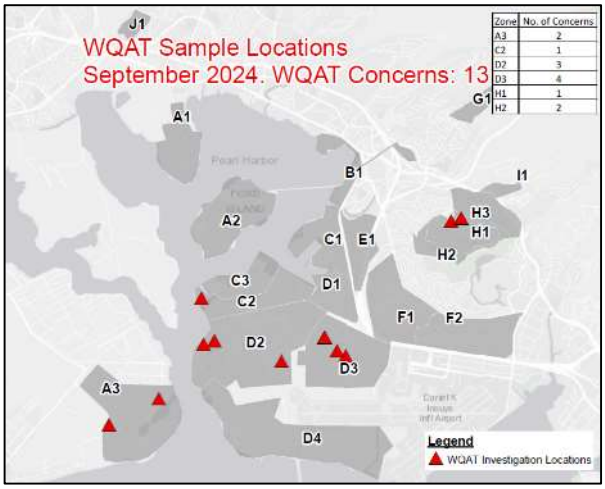


**Figure 13. September 2024 Customer Call Locations**

Other factors, such as public events and media coverage, also impact the number of calls the WQAT call center received. It is important to acknowledge that ongoing events, such as new residents, the finalization of the Administrative Consent Order (ACO), establishment of the Community Representative Initiative (CRI), door-to-door surveys conducted by EPA and Agency for Toxic Substances and Disease Registry (ATSDR), the defueling of the Red Hill Bulk Storage Facility, a lawsuit brought against the US government, and media coverage can raise public awareness and amplify the concerns regarding water quality and safety of their drinking water. The Navy takes every call and water quality concern received by the WQAT Call Center seriously and is committed to ensuring drinking water provided by the System is no longer impacted by JP-5 fuel.

## 5.2 Summary of Water Quality Action Team Investigation

WQAT investigations (e.g., home inspection, drinking water sampling) were performed at 25 of the 25 locations where a water quality concern was reported to the WQAT. In some cases, the WQAT sample was performed in a different quarter of EDWM due to scheduling conflicts with the resident. For example, a resident may have called into the WQAT in September 2024 (Q2) to report an issue, but the resident was not available to have their residence sampled until October 2024 (Q3). In that instance, the results of the WQAT investigation (e.g., home inspection, drinking water sampling) will be reported in the third quarterly report. This section summarizes the results of WQAT investigations performed during the second quarter of EDWM (i.e., results of investigations and sampling performed between July 2024 and September 2024).

Thirty-one drinking water samples were collected by the WQAT during the second quarter of EDWM. All drinking water samples were collected and analyzed in accordance with the EDWM Plan. In addition to collecting a drinking water sample in accordance with the EDWM Plan, the WQAT:

- Conducts a site inspection for all locations that call the WQAT and request to be sampled;
- Measures water quality parameters, including pH, conductivity, turbidity, free chlorine, and temperature, in the field (these measurements are collected from cold and hot water);
- Investigates tap water at each location to determine if a sheen, odor, or other visible indicators of fuel are present;

- Conducts rapid TPH screening and collects a drinking water sample to be collected in accordance with the WQAT protocols and sends the sample to the lab for analysis;
- Offers alternative water supply to the concerned resident; and
- Follows up with the resident/facility regarding the results of the site inspection and sample results.

All observations and results of the WQAT investigation are documented in a technical memorandum (see Appendix E). This information is important for evaluating overall water quality in the System and ensuring the System is not impacted by JP-5/other fuel-related analytes. A summary of the WQAT's investigation conducted during the second quarter of EDWM is provided in the following table.

**Table 28. Summary of WQAT Observations and TPH Results (July – September 2024)**

| Zone | Sample ID | Fuel Sheen Observed by WQAT? | Fuel Odor Observed by WQAT? | Petroleum Impacts Observed by WQAT? | TPH Result (ppb) |
|---|---|---|---|---|---|
| A1 | A1-TW-0001252-24092-N-WQI | No | No | No | Non-Detect |
| A2 | A2-TW-0001857-24092-N-WQI[1] | No | No | No | Non-Detect |
| A3 | A3-TW-0016717-24092-N-WQI[1] | No | No | No | Non-Detect |
| A3 | A3-TW-0016742-24092-N-WQI | No | No | No | Non-Detect |
| A3 | A3-TW-0016833-24092-N-WQI | No | No | No | Non-Detect |
| A3 | A3-TW-0017138-24092-N-WQI[1] | No | No | No | Non-Detect |
| A3 | A3-TW-0017239-24092-N-WQI | No | No | No | Non-Detect |
| C1 | C1-TW-0014745-24092-N-WQI | No | No | No | Non-Detect |
| C2 | C2-TW-0014842-24092-N-WQI | No | No | No | Non-Detect |
| D2 | D2-TW-0007083-24092-N-WQI | No | No | No | Non-Detect |
| D2 | D2-TW-0007182-24092-N-WQI[1] | No | No | No | Non-Detect |
| D2 | D2-TW-0007212-24092-N-WQI | No | No | No | Non-Detect |
| D2 | D2-TW-0007265-24092-N-WQI | No | No | No | Non-Detect |
| D2 | D2-TW-0007403-24092-N-WQI | No | No | No | Non-Detect |
| D2 | D2-TW-0007730-24092-N-WQI[1] | No | No | No | Non-Detect |
| D2 | D2-TW-0007740-24092-N-WQI | No | No | No | Non-Detect |
| D2 | D2-TW-0007823-24092-N-WQI | No | No | No | Non-Detect |
| D2 | D2-TW-0007890-24092-N-WQI | No | No | No | Non-Detect |
| D2 | D2-TW-0007932-24092-N-WQI[1] | No | No | No | Non-Detect |
| D2 | D2-TW-0008395-24092-N-WQI[2] | No | No | No | Non-Detect |
| D3 | D3-TW-0010236-24092-N-WQI | No | No | No | Non-Detect |
| D3 | D3-TW-0010621-24092-N-WQI | No | No | No | Non-Detect |
| D3 | D3-TW-0010622-24092-N-WQI | No | No | No | Non-Detect |
| D3 | D3-TW-0018379-24092-N-WQI | No | No | No | Non-Detect |
| F1 | F1-TW-0008844-24092-N-WQI | No | No | No | Non-Detect |
| F2 | F2-TW-0011732-24092-N-WQI | No | No | No | Non-Detect |
| H1 | H1-TW-0013033-24092-A-1-WQI | No | No | No | Non-Detect |
| H2 | H2-TW-0013481-24092-A-WQI | No | No | No | Non-Detect |
| H2 | H2-TW-0013482-24092-A-WQI | No | No | No | Non-Detect |
| H2 | H2-TW-0013581-24092-A-WQI | No | No | No | Non-Detect |

**Notes:**
[1] This sample is associated with a call reported during Q1.
[2] An additional sample was collected at this location (Field Sample ID No. D2-TW-0008395-24092-N-1-WQI) at a different faucet within the residence. TPH was non-detect in this sample. Additionally, fuel sheen, odor, and petroleum-impacts were not observed at this location.

Total TPHs have not been detected in any of the drinking water samples collected by the WQAT during the second quarter of EDWM. Additionally, the WQAT has not observed any fuel-related sheen, odor, or other JP-5/other fuel-related analytes impacts to drinking water at the 31 locations visited between July and September 2024.

## Section 6. Conclusions

The results of the second quarter of EDWM demonstrate that JP-5 and other fuel-related analytes are not impacting the System. This is supported by the following:

- TPHs were not detected in the source water (i.e., Waiawa Shaft) in July, August, or September 2024.
- TPHs were detected in less than 0.30% (i.e., 5 of 1,689) of drinking water samples collected from 16 Zones throughout the System.
    - Three of the TPH detections at residences were likely due to cross-contamination from incidental contact in the lab with unrelated compounds or a calibration standard during sample preparation. A Tier 2 sample has been collected, and subsequent Tier 2 analysis will be performed to confirm this potential source.
    - One of the TPH detections at a residence was likely due to cross-contamination from incidental contact in the field during sample collection with premise plumbing or household products. A Tier 2 sample has been collected, and a subsequent Tier 2 analysis will be performed to confirm this potential source.
    - One of the TPH detections at a hydrant was associated with isopropyl alcohol used to service and clean the hydrants. A Tier 2 analysis will not be performed based on the confirmation of the disinfectant in the Tier 1 analysis.
- Nine additional analytes were detected in drinking water samples collected during second quarter of EDWM: copper, lead, mercury, benzo(a)pyrene, naphthalene, phenanthrene, toluene, 1,2-dibromoethane (EDB), and total trihalomethanes (TTHM). Results for these chemicals were compared to MCLs. All results were below their respective MCLs with the exception of lead. Three of the analytes: copper, mercury and TTHMs are related to water quality and were not evaluated further as these analytes are not associated with JP-5/other fuels. Additionally, during LTM copper was found to be related to premise plumbing, with an expectation of a high frequency of detections. TTHM, is a byproduct of drinking water disinfection, and is not a JP-5/other fuel-related analyte. Six of the analytes (i.e., benzo[a]pyrene, EDB, lead, naphthalene, phenanthrene, and toluene) were evaluated in further detail due to their potential associate with fuels and the results are summarized below.
    - Benzo(a)pyrene was detected in 5.4% (i.e., 91 of the 1,680) of the drinking water samples collected during the second quarter of EDWM. All detections were less than the MCL of 0.2 ppb. Detected concentrations ranged from 0.011 to 0.033 with an average detected concentration of 0.017 ppb. The detections were observed throughout the System and are not limited to one Zone or general area. Detections of benzo(a)pyrene are surrounded by non-detects and do not indicate there is a system-wide impact or source.
    - Lead was detected in 55% (i.e., 719 of the 1,319) of the drinking water samples collected during the second quarter of EDWM. One detection of 44 ppb exceeded the AL of 15 ppb. All other detected concentrations ranged from 0.13 to 5.6 ppb, with an average detected concentration of 0.32 ppb. The detections were observed throughout the System and are not limited to one Zone or general area. Lead in the System is likely associated with premise plumbing.
    - EDB was detected in 0.87% (i.e.,1 of the 114) of the drinking water samples collected during the second quarter of EDWM. The detected concentration was

0.02 ppb. Results were compared to the MCL of 0.050 ppb for 1,2-dibromoethane. No MCL exceedances were reported during the second quarter of EDWM. TPH, and other fuel indicator compounds, were not detected at this location. The result was reported at a concentration greater than the MDL, but less than the MRL. Detections of EDB were surrounded by non-detects and do not indicate there is a system-wide impact or source.

- Naphthalene was detected in 0.060% (i.e.,1 of the 1,680) of the drinking water samples collected during the second quarter of EDWM. The detected concentration was 0.27 ppb at a hydrant. There is no MCL for Naphthalene. TPH, and other fuel indicator compounds, were not detected at this location. This result was reported at a concentration greater than the MDL, but less than the MRL. Detections of naphthalene were surrounded by non-detects and do not indicate there is a system-wide impact or source.
- Phenanthrene was detected in 0.02% (i.e., 2 of the 978) of the drinking water samples collected during the second quarter of EDWM. There is no MCL for phenanthrene. Detections occurred at a residence and school with concentrations of 0.41 and 0.25 ppb respectively. TPH was not detected; however, benzo(a)pyrene was detected at both the residence and school. Both phenanthrene results were reported at concentrations greater than the MDL, but less than the MRL. Detections of phenanthrene were surrounded by non-detects and do not indicate there is a system-wide impact or source.
- Toluene was detected in 0.02% (i.e.,2 of the 1,680) of the drinking water samples collected during the second quarter of EDWM. Both detections were less than the MCL of 1000 ppb. One detection occurred at a residence with a concentration of 0.57 ppb which is above both the MDL and MRL. The second detection occurred at a CDC with a concentration of 0.26 ppb which is above the MDL and MRL. TPH, and other fuel indicator compounds, were not detected at these locations. Detections of toluene were surrounded by non-detects and do not indicate there is a system-wide impact or source.

After the Navy voluntarily initiated EDWM in April 2024, the EDWM Plan has gone through various revisions. The EDWM Plan is a “living” document which means it will be updated and amended based on new information or field conditions. In June 2024, the Navy revised the EDWM analyte list (Table 2-1 of the EDWM Plan) to include 16 additional fuel indicator compounds. As a result, samples collected before June 2024 were not analyzed for these chemicals. Additionally, the Navy, with input from EPA, revised the four COAs in Section 5 of the EDWM Plan to ensure proper investigation and action was taken based on EDWM results. For example, COA 3 was revised to include additional investigation for all locations where JP-5 or other fuel-related indicator compounds were detected above the MRL. These revisions do not impact the conclusions of this report.

The results of the second quarter of EDWM demonstrate that JP-5/other fuel-related analytes are not impacting the System. Additional investigations, triggered by the conditions established in Section 5 of the EDWM Plan, will be documented in tech memos (e.g., initial assessments, Tier 1 analysis, etc.). The Navy has voluntarily established a program for conducting a forensics analysis (called Tier 2) at locations where TPH or JP-5/other fuel-related compounds are detected and the results of the initial assessment and Tier 1 analysis were inconclusive. This Tier 2 analysis is not required under the EDWM Plan, but is another tool the Navy uses, where appropriate, to ensure that drinking water in the System continues to meet all state and federal standards and is safe for consumption.

## Table 5. Contaminants Detected in Drinking Water Samples Collected from Residences

| Contaminant[1] | Typical Source of Contaminant | Units[2] | Screening Level[3] | Basis for Screening Level | EDWM Summary – First Quarter Apr – Jun 2024 | | EDWM Summary – Second Quarter Jul – Sept 2024 | | EDWM Summary – Third Quarter Oct – Dec 2024 | | EDWM Summary – Fourth Quarter Jan – Mar 2025 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] |
| **Contaminants of Concern** | | | | | | | | | | | | |
| Benzene | Discharge from factories; Leaching from gas storage tanks and landfills | ppb | 5.0 | MCL | 0/926 | -- | 0/968 | -- | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| Ethylbenzene | Discharge from petroleum refineries | ppb | 700 | MCL | 0/926 | -- | 0/968 | -- | | | | |
| Toluene | Discharge from petroleum factories | ppb | 1,000 | MCL | 0/926 | -- | 1/968 | 0.57 – 0.57 (0.57) | | | | |
| Xylenes (Total) | Discharge from petroleum factories; Discharge from chemical factories | ppb | 10,000 | MCL | 0/926 | -- | 0/968 | -- | | | | |
| 1-Methylnaphthalene | Used to make other chemicals such as dyes, and resins; also, present in cigarette smoke, wood smoke, tar, asphalt, and at some hazardous waste sites | ppb | --[8] | --[8] | 0/926 | -- | 0/968 | -- | | | | |
| 2-Methylnaphthalene | Used to make other chemicals such as dyes, and resins; also used to make vitamin K; and is present in cigarette smoke, wood smoke, tar, asphalt, and at some hazardous waste sites | ppb | --[8] | --[8] | 0/926 | -- | 0/968 | -- | | | | |
| Naphthalene | Naphthalene is found in coal tar or crude oil and is used in the manufacture of plastics, resins, fuels, and dyes, and as a fumigant | ppb | --[8] | --[8] | 0/926 | -- | 0/968 | -- | | | | |
| Total Petroleum Hydrocarbons (Total) | TPH is petroleum and can contaminate drinking water through spills and other releases into the environment | ppb | --[5] | --[5] | 1/926 | 62 – 62 (62) | 4/977 | 73 – 390 (182) | | | | |
| Total Organic Carbon (TOC) | Naturally present in the environment, but also can be an indicator of contamination, including petroleum or other sources | ppb | 4,000[6] | ISP | 6/926 | 200 – 500 (308) | 2/968 | 240 – 290 (260) | | | | |
| Free Chlorine[7] | Water additive used to control microbes | ppb | 4,000 | ISP | 1,263/1,268 | 10 – 1,050 (497) | 1,864/1,868 | 10 – 1,700 (440) | | | | |
| **Metals** | | | | | | | | | | | | |
| Copper | Corrosion of household plumbing systems; Erosion of natural deposits | ppb | 1,300 | AL | 924/926 | 0.68 – 244 (25) | 962/968 | 0.81 – 208 (23) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| Lead | Corrosion of household plumbing systems; Erosion of natural deposits | ppb | 15 | AL | 531/926 | 0.13 – 8.2 (0.36) | 523/967[10] | 0.13 – 5.6 (0.32) | | | | |
| Mercury | Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland | ppb | 2.0 | MCL | 1/926 | 0.028 – 0.028 (0.028) | 1/968 | 0.11 – 0.11 (0.11) | | | | |
| **Volatile Organic Compounds (VOCs)** | | | | | | | | | | | | |
| Total trihalomethanes (sum of chloroform, bromoform, bromodichloromethane, and di-bromochloromethane) | By-product of drinking water disinfection | ppb | 80 | MCL | 316/926 | 0.25 – 14 (1.2) | 328/968 | 0.25 – 25 (1.3) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| **Semi-Volatile Organic Compounds (SVOCs)** | | | | | | | | | | | | |
| Benzo(a)pyrene | Leaching from linings of water storage tanks and distribution lines | ppb | 0.20 | MCL | 61/926 | 0.011 – 0.034 (0.017) | 56/968 | 0.011 – 0.032 (0.017) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| Phenanthrene | Phenanthrene is found in heavy oils, coal tar, and is used in the preservation of wood as well as in the manufacture of dyes, plastics and pesticides | ppb | --[8] | --[8] | --[9] | -- | 1/605 | 0.41 – 0.41 (0.41) | | | | |

**Notes:**

[1] This table focuses on JP-5/other fuel-related analytes detected in drinking water samples collected during this period from drinking water samples collected as part of the EDWM Plan as well as the results from drinking water samples collected by the WQAT. Samples were also tested for water quality parameters (see Table A-1 in Appendix A) which provide additional information for the evaluation of overall water quality in the System. This information is available for review on the Safe Waters Webpage (https://jbphh-safewaters.org/).

[2] All results are reported in parts per billion (ppb). This refers to the amount (or concentration) of a contaminant in the water.

[3] Results of the drinking water samples will be compared to EPA's Safe Drinking Water Act (SDWA) maximum contaminant level (MCLs), SDWA action levels (ALs), and DOH incident specific parameters (ISPs) - where indicated.

[4] These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.

[5] There is no established MCL for TPHs. For the purposes of the EDWM Plan, all detections of TPH will be investigated further to determine if JP-5/other fuel-related analytes are present in the System

[6] Total Organic Carbon (TOC) test results report any constituent containing carbon, many of which are naturally occurring and some of which may be man-made.

[7] Chlorine is used as an additive to drinking water for disinfection purposes.

[8] No established MCL from EPA.

[9] This analyte was added to the EDWM Plan in August 2024; therefore, this analyte was not for during Q1 of EDWM and or during July 2024 (first month of Q2 of EDWM).

[10] This does not include the lead sample results collected from 2417D Challenger Loop (Sample ID: D2-TW-0008333-24092-N) collected on 27 September 2024 (initial). The lead sample result collected from 2417D Challenger Loop on 27 September 2024 was 44.2 ppb which is above the AL of 15 pb. This exceedance was associated with premise plumbing and is not associated with the JBPHH water distribution system. Therefore, it was not included in this table. Investigation into this exceedance determined that although it was likely to be a premise plumbing issue, further investigation was warranted through additional sampling. All faucets at the residence were flushed and resampled on 16 December 2024 (see additional information available in Section 3.1). All results were below the AL of 15 ppb.

Cells highlighted in green indicate the water sample results were below their respective MCL, AL, or ISP.

Acronyms and explanation of terms used in this table are presented in Appendix A.

## Table 6. Contaminants Detected in Drinking Water Samples Collected from Schools

| Contaminant[1] | Typical Source of Contaminant | Units[2] | Screening Level[3] | Basis for Screening Level | EDWM Summary – First Quarter Apr – Jun 2024 | | EDWM Summary – Second Quarter Jul – Sept 2024 | | EDWM Summary – Third Quarter Oct – Dec 2024 | | EDWM Summary – Fourth Quarter Jan – Mar 2025 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] |
| **Contaminants of Concern** | | | | | | | | | | | | |
| Benzene | Discharge from factories; Leaching from gas storage tanks and landfills | ppb | 5.0 | MCL | 0/172 | -- | 0/175 | -- | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| Ethylbenzene | Discharge from petroleum refineries | ppb | 700 | MCL | 0/172 | -- | 0/175 | -- | | | | |
| Toluene | Discharge from petroleum factories | ppb | 1,000 | MCL | 0/172 | -- | 0/175 | -- | | | | |
| Xylenes (Total) | Discharge from petroleum factories; Discharge from chemical factories | ppb | 10,000 | MCL | 0/172 | -- | 0/175 | -- | | | | |
| 1-Methylnaphthalene | Used to make other chemicals such as dyes, and resins; also, present in cigarette smoke, wood smoke, tar, asphalt, and at some hazardous waste sites | ppb | --[8] | --[8] | 0/172 | -- | 0/175 | -- | | | | |
| 2-Methylnaphthalene | Used to make other chemicals such as dyes, and resins; also used to make vitamin K; and is present in cigarette smoke, wood smoke, tar, asphalt, and at some hazardous waste sites | ppb | --[8] | --[8] | 0/172 | -- | 0/175 | -- | | | | |
| Naphthalene | Naphthalene is found in coal tar or crude oil and is used in the manufacture of plastics, resins, fuels, and dyes, and as a fumigant | ppb | --[8] | --[8] | 0/172 | -- | 0/175 | -- | | | | |
| Total Petroleum Hydrocarbons (Total) | TPH is petroleum and can contaminate drinking water through spills and other releases into the environment | ppb | --[5] | --[5] | 0/172 | -- | 0/175 | -- | | | | |
| Total Organic Carbon (TOC) | Naturally present in the environment, but also can be an indicator of contamination, including petroleum or other sources | ppb | 4,000[6] | ISP | 0/172 | -- | 0/175 | -- | | | | |
| Free Chlorine[7] | Water additive used to control microbes | ppb | 4,000 | ISP | 182/187 | 10 – 910 (348) | 223/223 | 10 – 1,000 (330) | | | | |
| **Metals** | | | | | | | | | | | | |
| Copper | Corrosion of household plumbing systems; Erosion of natural deposits | ppb | 1,300 | AL | 172/172 | 4.4 – 388 (61) | 175/175 | 6.7 – 374 (54) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| Lead | Corrosion of household plumbing systems; Erosion of natural deposits | ppb | 15 | AL | 103/172 | 0.13 – 12 (0.35) | 117/175 | 0.13 – 1.4 (0.22) | | | | |
| **Volatile Organic Compounds (VOCs)** | | | | | | | | | | | | |
| Total trihalomethanes (sum of chloroform, bromoform, bromodichloromethane, and di-bromochloromethane) | By-product of drinking water disinfection | ppb | 80 | MCL | 118/172 | 0.26 – 22 (2.2) | 102/175 | 0.26 – 18 (2.4) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| **Semi-Volatile Organic Compounds (SVOCs)** | | | | | | | | | | | | |
| Benzo(a)pyrene | Leaching from linings of water storage tanks and distribution lines | ppb | 0.20 | MCL | 3/172 | 0.013 – 0.026 (0.021) | 10/175 | 0.013 – 0.026 (0.018) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| Phenanthrene | Phenanthrene is found in heavy oils, coal tar, and is used in the preservation of wood as well as in the manufacture of dyes, plastics and pesticides | ppb | --[8] | --[8] | --[9] | -- | 1/79 | 0.27 – 0.27 (0.27) | | | | |

**Notes:**
[1] This table focuses on JP-5/other fuel-related analytes detected in drinking water samples collected during this period from drinking water samples collected as part of the EDWM Plan as well as the results from drinking water samples collected by the WQAT. Samples were also tested for water quality parameters (see Table A-1 in Appendix A) which provide additional information for the evaluation of overall water quality in the System. This information is available for review on the Safe Waters Webpage (https://jbphh-safewaters.org/).
[2] All results are reported in parts per billion (ppb). This refers to the amount (or concentration) of a contaminant in the water.
[3] Results of the drinking water samples will be compared to EPA's Safe Drinking Water Act (SDWA) maximum contaminant level (MCLs), SDWA action levels (ALs), and DOH incident specific parameters (ISPs) - where indicated.
[4] These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.
[5] There is no established MCL for TPHs. For the purposes of the EDWM Plan, all detections of TPH will be investigated further to determine if JP-5/other fuel-related analytes are present in the System.
[6] Total Organic Carbon (TOC) test results report any constituent containing carbon, many of which are naturally occurring and some of which may be man-made.
[7] Chlorine is used as an additive to drinking water for disinfection purposes.
[8] No established MCL from EPA.
[9] This analyte was added to the EDWM Plan in August 2024; therefore, this analyte was not for during Q1 of EDWM and or during July 2024 (first month of Q2 of EDWM).
Cells highlighted in green indicate the water sample results were below their respective MCL, AL, or ISP.
Acronyms and explanation of terms used in this table are presented in Appendix A.

## Table 7. Contaminants Detected in Drinking Water Samples Collected from Child Development Centers

| Contaminant[1] | Typical Source of Contaminant | Units[2] | Screening Level[3] | Basis for Screening Level | EDWM Summary – First Quarter Apr – Jun 2024 | | EDWM Summary – Second Quarter Jul – Sept 2024 | | EDWM Summary – Third Quarter Oct – Dec 2024 | | EDWM Summary – Fourth Quarter Jan – Mar 2025 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] |
| **Contaminants of Concern** | | | | | | | | | | | | |
| Benzene | Discharge from factories; Leaching from gas storage tanks and landfills | ppb | 5.0 | MCL | 0/126 | -- | 0/134 | -- | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| Ethylbenzene | Discharge from petroleum refineries | ppb | 700 | MCL | 0/126 | -- | 0/134 | -- | | | | |
| Toluene | Discharge from petroleum factories | ppb | 1,000 | MCL | 0/126 | -- | 1/134 | 0.26 – 0.26 (0.26) | | | | |
| Xylenes (Total) | Discharge from petroleum factories; Discharge from chemical factories | ppb | 10,000 | MCL | 0/126 | -- | 0/134 | -- | | | | |
| 1-Methylnaphthalene | Used to make other chemicals such as dyes, and resins; also, present in cigarette smoke, wood smoke, tar, asphalt, and at some hazardous waste sites | ppb | --[8] | --[8] | 0/126 | -- | 0/134 | -- | | | | |
| 2-Methylnaphthalene | Used to make other chemicals such as dyes, and resins; also used to make vitamin K; and is present in cigarette smoke, wood smoke, tar, asphalt, and at some hazardous waste sites | ppb | --[8] | --[8] | 0/126 | -- | 0/134 | -- | | | | |
| Naphthalene | Naphthalene is found in coal tar or crude oil and is used in the manufacture of plastics, resins, fuels, and dyes, and as a fumigant | ppb | --[8] | --[8] | 0/126 | -- | 0/134 | -- | | | | |
| Total Petroleum Hydrocarbons (Total) | TPH is petroleum and can contaminate drinking water through spills and other releases into the environment | ppb | --[5] | --[5] | 0/126 | -- | 0/134 | -- | | | | |
| Total Organic Carbon (TOC) | Naturally present in the environment, but also can be an indicator of contamination, including petroleum or other sources | ppb | 4,000[6] | ISP | 0/126 | -- | 0/134 | -- | | | | |
| Free Chlorine[7] | Water additive used to control microbes | ppb | 4,000 | ISP | 150/150 | 40 – 950 (455) | 198/200 | 20 – 1,200 (420) | | | | |
| **Metals** | | | | | | | | | | | | |
| Copper | Corrosion of household plumbing systems; Erosion of natural deposits | ppb | 1,300 | AL | 126/126 | 5.2 – 228 (53) | 134/134 | 3.5 – 372 (48) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| Lead | Corrosion of household plumbing systems; Erosion of natural deposits | ppb | 15 | AL | 60/126 | 0.13 – 7.7 (0.52) | 52/134 | 0.13 – 1.8 (0.39) | | | | |
| Mercury | Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland | ppb | 2.0 | MCL | 2/126 | 0.059 – 0.075 (0.067) | 1/134 | 0.037 – 0.037 (0.037) | | | | |
| **Volatile Organic Compounds (VOCs)** | | | | | | | | | | | | |
| Total trihalomethanes (sum of chloroform, bromoform, bromodichloromethane, and di-bromochloromethane) | By-product of drinking water disinfection | ppb | 80 | MCL | 55/126 | 0.25 – 4.8 (1.3) | 55/134 | 0.36 – 4.8 (1.4) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| **Semi-Volatile Organic Compounds (SVOCs)** | | | | | | | | | | | | |
| Benzo(a)pyrene | Leaching from linings of water storage tanks and distribution lines | ppb | 0.20 | MCL | 1/126 | 0.019 – 0.019 (0.019) | 9/134 | 0.012 – 0.026 (0.017) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |

**Notes:**
[1] This table focuses on JP-5/other fuel-related analytes detected in drinking water samples collected during this period from drinking water samples collected as part of the EDWM Plan as well as the results from drinking water samples collected by the WQAT. Samples were also tested for water quality parameters (see Table A-1 in Appendix A) which provide additional information for the evaluation of overall water quality in the System. This information is available for review on the Safe Waters Webpage (https://jbphh-safewaters.org/).
[2] All results are reported in parts per billion (ppb). This refers to the amount (or concentration) of a contaminant in the water.
[3] Results of the drinking water samples will be compared to EPA's Safe Drinking Water Act (SDWA) maximum contaminant level (MCLs), SDWA action levels (ALs), and DOH incident specific parameters (ISPs) - where indicated.
[4] These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.
[5] There is no established MCL for TPHs. For the purposes of the EDWM Plan, all detections of TPH will be investigated further to determine if JP-5/other fuel-related analytes are present in the System.
[6] Total Organic Carbon (TOC) test results report any constituent containing carbon, many of which are naturally occurring and some of which may be man-made.
[7] Chlorine is used as an additive to drinking water for disinfection purposes.
[8] No established MCL from EPA.
Cells highlighted in green indicate the water sample results were below their respective MCL, AL, or ISP.
Acronyms and explanation of terms used in this table are presented in Appendix A.

## Table 8. Contaminants Detected in Drinking Water Samples Collected from Non-Residences

| Contaminant[1] | Typical Source of Contaminant | Units[2] | Screening Level[3] | Basis for Screening Level | EDWM Summary – First Quarter Apr – Jun 2024 | | EDWM Summary – Second Quarter Jul – Sept 2024 | | EDWM Summary – Third Quarter Oct – Dec 2024 | | EDWM Summary – Fourth Quarter Jan – Mar 2025 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] |
| **Contaminants of Concern** | | | | | | | | | | | | |
| Benzene | Discharge from factories; Leaching from gas storage tanks and landfills | ppb | 5.0 | MCL | 0/41 | -- | 0/43 | -- | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| Ethylbenzene | Discharge from petroleum refineries | ppb | 700 | MCL | 0/41 | -- | 0/43 | -- | | | | |
| Toluene | Discharge from petroleum factories | ppb | 1,000 | MCL | 0/41 | -- | 0/43 | -- | | | | |
| Xylenes (Total) | Discharge from petroleum factories; Discharge from chemical factories | ppb | 10,000 | MCL | 0/41 | -- | 0/43 | -- | | | | |
| 1-Methylnaphthalene | Used to make other chemicals such as dyes, and resins; also, present in cigarette smoke, wood smoke, tar, asphalt, and at some hazardous waste sites | ppb | --[8] | --[8] | 0/41 | -- | 0/43 | -- | | | | |
| 2-Methylnaphthalene | Used to make other chemicals such as dyes, and resins; also used to make vitamin K; and is present in cigarette smoke, wood smoke, tar, asphalt, and at some hazardous waste sites | ppb | --[8] | --[8] | 0/41 | -- | 0/43 | -- | | | | |
| Naphthalene | Naphthalene is found in coal tar or crude oil and is used in the manufacture of plastics, resins, fuels, and dyes, and as a fumigant | ppb | --[8] | --[8] | 0/41 | -- | 0/43 | -- | | | | |
| Total Petroleum Hydrocarbons (Total) | TPH is petroleum and can contaminate drinking water through spills and other releases into the environment | ppb | --[5] | --[5] | 0/41 | -- | 0/43 | -- | | | | |
| Total Organic Carbon (TOC) | Naturally present in the environment, but also can be an indicator of contamination, including petroleum or other sources | ppb | 4,000[6] | ISP | 0/41 | -- | 1/43 | 200 – 200 (200) | | | | |
| Free Chlorine[7] | Water additive used to control microbes | ppb | 4,000 | ISP | 54/54 | 10 – 1,050 (421) | 68/68 | 20 – 1,900 (320) | | | | |
| **Metals** | | | | | | | | | | | | |
| Copper | Corrosion of household plumbing systems; Erosion of natural deposits | ppb | 1,300 | AL | 41/41 | 4.0 – 250 (57) | 43/43 | 3.5 – 254 (64) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| Lead | Corrosion of household plumbing systems; Erosion of natural deposits | ppb | 15 | AL | 22/41 | 0.13 – 0.60 (0.32) | 27/43 | 0.13 – 1.2 (0.34) | | | | |
| **Volatile Organic Compounds (VOCs)** | | | | | | | | | | | | |
| Total trihalomethanes (sum of chloroform, bromoform, bromodichloromethane, and di-bromochloromethane) | By-product of drinking water disinfection | ppb | 80 | MCL | 25/41 | 0.26 – 8.0 (1.8) | 27/43 | 0.35 – 6.5 (1.7) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| **Semi-Volatile Organic Compounds (SVOCs)** | | | | | | | | | | | | |
| Benzo(a)pyrene | Leaching from linings of water storage tanks and distribution lines | ppb | 0.20 | MCL | 5/41 | 0.018 – 0.036 (0.025) | 1/43 | 0.018 – 0.018 (0.018) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |

**Notes:**
[1] This table focuses on JP-5/other fuel-related analytes detected in drinking water samples collected during this period from drinking water samples collected as part of the EDWM Plan as well as the results from drinking water samples collected by the WQAT. Samples were also tested for water quality parameters (see Table A-1 in Appendix A) which provide additional information for the evaluation of overall water quality in the System. This information is available for review on the Safe Waters Webpage (https://jbphh-safewaters.org/).
[2] All results are reported in parts per billion (ppb). This refers to the amount (or concentration) of a contaminant in the water.
[3] Results of the drinking water samples will be compared to EPA's Safe Drinking Water Act (SDWA) maximum contaminant level (MCLs), SDWA action levels (ALs), and DOH incident specific parameters (ISPs) - where indicated..
[4] These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.
[5] There is no established MCL for TPHs. For the purposes of the EDWM Plan, all detections of TPH will be investigated further to determine if JP-5/other fuel-related analytes are present in the System.
[6] Total Organic Carbon (TOC) test results report any constituent containing carbon, many of which are naturally occurring and some of which may be man-made.
[7] Chlorine is used as an additive to drinking water for disinfection purposes.
[8] No established MCL from EPA.
Cells highlighted in green indicate the water sample results were below their respective MCL, AL, or ISP.
Acronyms and explanation of terms used in this table are presented in Appendix A.

## Table 9. Contaminants Detected in Drinking Water Samples Collected from Hydrants

| Contaminant[1] | Typical Source of Contaminant | Units[2] | Screening Level[3] | Basis for Screening Level | EDWM Summary – First Quarter Apr – Jun 2024 | | EDWM Summary – Second Quarter Jul – Sept 2024 | | EDWM Summary – Third Quarter Oct – Dec 2024 | | EDWM Summary – Fourth Quarter Jan – Mar 2025 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] | No. of Detects out of Samples | Minimum – Maximum (Average)[4] |
| **Contaminants of Concern** | | | | | | | | | | | | |
| Benzene | Discharge from factories; Leaching from gas storage tanks and landfills | ppb | 5.0 | MCL | 0/376 | -- | 0/360 | -- | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| Ethylbenzene | Discharge from petroleum refineries | ppb | 700 | MCL | 0/376 | -- | 0/360 | -- | | | | |
| Toluene | Discharge from petroleum factories | ppb | 1,000 | MCL | 0/376 | -- | 0/360 | -- | | | | |
| Xylenes (Total) | Discharge from petroleum factories; Discharge from chemical factories | ppb | 10,000 | MCL | 0/376 | -- | 0/360 | -- | | | | |
| 1-Methylnaphthalene | Used to make other chemicals such as dyes, and resins; also, present in cigarette smoke, wood smoke, tar, asphalt, and at some hazardous waste sites | ppb | --[9] | --[9] | 0/376 | -- | 0/360 | -- | | | | |
| 2-Methylnaphthalene | Used to make other chemicals such as dyes, and resins; also used to make vitamin K; and is present in cigarette smoke, wood smoke, tar, asphalt, and at some hazardous waste sites | ppb | --[9] | --[9] | 0/376 | -- | 0/360 | -- | | | | |
| Naphthalene | Naphthalene is found in coal tar or crude oil and is used in the manufacture of plastics, resins, fuels, and dyes, and as a fumigant | ppb | --[9] | --[9] | 0/376 | -- | 1/360 | 0.27 – 0.27 (0.27) | | | | |
| Total Petroleum Hydrocarbons (Total) | TPH is petroleum and can contaminate drinking water through spills and other releases into the environment | ppb | --[5] | --[5] | 3/376 | 48 – 1,552 (579) | 1/360 | 64 – 64 (64) | | | | |
| Total Organic Carbon (TOC) | Naturally present in the environment, but also can be an indicator of contamination, including petroleum or other sources | ppb | 4,000[6] | ISP | 34/376 | 200 – 1,800 (375) | 19/360 | 200 – 1,000 (357) | | | | |
| Free Chlorine[7] | Water additive used to control microbes | ppb | 4,000 | ISP | 382/382 | 20 – 1,100 (429) | 340/340 | 20 – 1,000 (440) | | | | |
| **Metals – Not Analyzed** | | | | | | | | | | | | |
| **Volatile Organic Compounds (VOCs)** | | | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | Pesticide for felled logs and beehives; chemical intermediate for dyes, resins, waxes, and gums | ppb | 0.050 | MCL | 1/121[8] | 0.0085 – 0.0085 (0.0085) | 1/114 | 0.020 – 0.020 (0.020) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |
| Total trihalomethanes (sum of chloroform, bromoform, bromodichloromethane, and di-bromochloromethane) | By-product of drinking water disinfection | ppb | 80 | MCL | 211/376 | 0.25 – 32 (3.5) | 198/360 | 0.25 – 29 (3.6) | | | | |
| **Semi-Volatile Organic Compounds (SVOCs)** | | | | | | | | | | | | |
| Benzo(a)pyrene | Leaching from linings of water storage tanks and distribution lines | ppb | 0.20 | MCL | 25/368 | 0.013 – 0.027 (0.017) | 15/360 | 0.010 – 0.033 (0.018) | These samples will be collected between October and December 2024. Results will be reported in the Third EDWM Quarterly Report. | | These samples will be collected between January and March 2025. Results will be reported in the Fourth EDWM Quarterly Report. | |

**Notes:**
[1] This table focuses on JP-5/other fuel-related analytes detected in drinking water samples collected during this period from drinking water samples collected as part of the EDWM Plan as well as the results from drinking water samples collected by the WQAT. Samples were also tested for water quality parameters (see Table A-1 in Appendix A) which provide additional information for the evaluation of overall water quality in the System. This information is available for review on the Safe Waters Webpage (https://jbphh-safewaters.org/).
[2] All results are reported in parts per billion (ppb). This refers to the amount (or concentration) of a contaminant in the water.
[3] Results of the drinking water samples will be compared to EPA's Safe Drinking Water Act (SDWA) maximum contaminant level (MCLs), SDWA action levels (ALs), and DOH incident specific parameters (ISPs) - where indicated.
[4] These numbers are the minimum and maximum values from all the sample test results. The average (or mathematical mean) includes all sample test results with a detectable contaminant. An average is the sum of the results (excluding non-detects) divided by the total number results with detection only.
[5] There is no established MCL for TPHs. For the purposes of the EDWM Plan, all detections of TPH will be investigated further to determine if JP-5/other fuel-related analytes are present in the System.
[6] Total Organic Carbon (TOC) test results report any constituent containing carbon, many of which are naturally occurring and some of which may be man-made.
[7] Chlorine is used as an additive to drinking water for disinfection purposes.
[8] 1,2-Dibromoethane (EDB) was not included in the first draft of the EDWM Plan. After consultation with EPA and DOH, this chemical, along with other VOCs/SVOCs, were added to the list of chemicals analyzed during EDWM beginning in June 2024.
[9] No established MCL from EPA.
Cells highlighted in green indicate the water sample results were below their respective MCL, AL, or ISP.
Acronyms and explanation of terms used in this table are presented in Appendix.

## Table 10. Contaminants Detected in Drinking Water Samples Collected from Source Water (Waiawa Shaft – Post-Chlorination)

| Contaminant[1] | Typical Source of Contaminant | Units[2] | Screening Level | Basis for Screening Level[3] | Sample Period: July 2024 | | | Sample Period: August 2024 | | | Sample Period: September 2024 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | No. of Detects out of Samples | Level Detected | Meets Screening Level? (Yes / No) | No. of Detects out of Samples | Level Detected | Meets Screening Level? (Yes / No) | No. of Detects out of Samples | Level Detected | Meets Screening Level? (Yes / No) |
| **Contaminants of Concern** | | | | | | | | | | | | | |
| Benzene | Discharge from factories; Leaching from gas storage tanks and landfills | ppb | 5.0 | MCL | 0/1 | -- | Yes | 0/1 | -- | Yes | 0/1 | -- | Yes |
| Ethylbenzene | Discharge from petroleum refineries | ppb | 700 | MCL | 0/1 | -- | Yes | 0/1 | -- | Yes | 0/1 | -- | Yes |
| Toluene | Discharge from petroleum factories | ppb | 1,000 | MCL | 0/1 | -- | Yes | 0/1 | -- | Yes | 0/1 | -- | Yes |
| Xylenes (Total) | Discharge from petroleum factories; Discharge from chemical factories | ppb | 10,000 | MCL | 0/1 | -- | Yes | 0/1 | -- | Yes | 0/1 | -- | Yes |
| 1-Methylnaphthalene | Used to make other chemicals such as dyes, and resins; also, present in cigarette smoke, wood smoke, tar, asphalt, and at some hazardous waste sites. | ppb | --[4] | --[4] | 0/1 | -- | -- | 0/1 | -- | -- | 0/1 | -- | -- |
| 2-Methylnaphthalene | Used to make other chemicals such as dyes, and resins; also used to make vitamin K; and is present in cigarette smoke, wood smoke, tar, asphalt, and at some hazardous waste sites | ppb | --[4] | --[4] | 0/1 | -- | -- | 0/1 | -- | -- | 0/1 | -- | -- |
| Naphthalene | Naphthalene is found in coal tar or crude oil and is used in the manufacture of plastics, resins, fuels, and dyes, and as a fumigant | ppb | --[4] | --[4] | 0/1 | -- | -- | 0/1 | -- | -- | 0/1 | -- | -- |
| Total TPH | TPH is petroleum and can contaminate drinking water through spills and other releases into the environment | ppb | --[5] | --[5] | 0/1 | -- | -- | 0/1 | -- | -- | 0/1 | -- | -- |
| Total Organic Carbon (TOC)[6] | Naturally present in the environment, but also can be an indicator of contamination, including petroleum or other sources | ppb | --[4] | --[4] | 0/1 | -- | -- | 0/1 | -- | -- | 0/1 | -- | -- |
| Free Chlorine[7] | Water additive used to control microbes | ppb | 4,000 | ISP | 2/2 | 560 – 820 (690) | Yes | 2/2 | 750 – 880 (815) | Yes | 3/3 | 700 – 790 (760) | Yes |
| **Metals – Not Analyzed** | | | | | | | | | | | | | |
| **Volatile Organic Compounds (VOCs) – ND** | | | | | | | | | | | | | |
| **Synthetic Organic Compounds (SOCs) or Semi-Volatile Organic Compounds (SVOCs) – ND** | | | | | | | | | | | | | |

**Notes:**
[1] This table focuses on JP-5/other fuel-related analytes detected in drinking water samples collected during this period from drinking water samples collected as part of the EDWM Plan as well as the results from drinking water samples collected by the WQAT. Samples were also tested for water quality parameters (see Table A-1 in Appendix A) which provide additional information for the evaluation of overall water quality in the System. This information is available for review on the Safe Waters Webpage (https://jbphh-safewaters.org/).
[2] All results are reported in parts per billion (ppb). This refers to the amount (or concentration) of a contaminant in the water.
[3] Results of the drinking water samples will be compared to EPA's Safe Drinking Water Act (SDWA) maximum contaminant level (MCLs), SDWA action levels (ALs), and DOH incident specific parameters (ISPs) - where indicated.
[4] This chemical does not have an MCL.
[5] There is no established MCL for TPHs. For the purposes of the EDWM Plan, all detections of TPH will be investigated further to determine if JP-5/other fuel-related analytes are present in the System.
[6] Total Organic Carbon (TOC) test results report any constituent containing carbon, many of which are naturally occurring and some of which may be man-made
[7] Chlorine is used as an additive to drinking water for disinfection purposes.
Cells highlighted in green indicate the water sample results were below their respective MCL, AL, or ISP.
Acronyms and explanation of terms used in this table are presented in Appendix A.

# Appendix A

## Extended Drinking Water Monitoring
## Frequently Asked Questions

### What is the purpose of this EDWM Quarterly Sampling Results Report?

This Report presents the testing results from drinking water samples that were collected from residences, schools, CDCs, other non-residential buildings, hydrants, and source water (i.e., Waiawa Shaft) to continue to demonstrate that the November 2021 release of JP-5 or other fuels are not impacting the JBPHH drinking water system and ensure that the water meets all state and federal standards. The Hawaii Department of Health (DOH) health advisory was amended after the first four stages of the Drinking Water Distribution System Recovery Plan were completed in each Zone[22] and the health advisory on the System was lifted as of 26 October 2022. As of March 2024, two years of the LTM were completed. The JBPHH PWS #HI0000360 and AMR PWS #HI0000337 is committed to ensuring tap water continues to be safe for human consumption.

We are sharing this information with you to keep you updated on your community's water quality.

### What was found?

The tables on the previous pages present all chemicals of concern that were detected in drinking water samples collected during EDWM. This report, together with the data collected, demonstrates that the drinking water provided by the System meets U.S. EPA and DOH drinking water standards and JP-5 or other fuels are not impacting the System. To assess drinking water results, the Navy used EPA and DOH MCL standards for drinking water. Results of the drinking water samples are analyzed in accordance with the final EDWM Plan finalized on 23 October 2024.

### What did the Navy test for?

Drinking water, including bottled water, can contain small amounts of some contaminants. The presence of these analytes does not necessarily indicate that water poses a health risk. More information about the analytes tested can be obtained by calling the Hawaii DOH Safe Drinking Water Branch at: (**808) 586 – 4258**.

In order to ensure that drinking water is safe to drink, EPA and Hawaii DOH regulate the number of certain constituents in water provided by public water systems. For this incident, the primary categories of monitored constituents include TPHs, VOCs, SOCs/SVOCs, metals, and TOC, as listed in Table A-1. A description of these contaminant categories can be found under *Explanation of Terms* located at the end of this report. The full list of analytes that were tested are summarized in the table below and the results are presented in the laboratory reports that are located at: https://jbphh-safewaters.org.

**Table A-1: EDWM ANALYTICAL LIST (as of October 2024)**

| Analytical Method | Analyte | CASRN | Residential Priority Buildings Sampling | Hydrant Sampling | Waiawa Shaft Sampling Source (Raw) Water / Post Chlorination | NAH Shaft Sampling Source (Raw) Water | Red Hill Shaft Sampling Source (Raw) Water |
|---|---|---|---|---|---|---|---|
| EPA 524.2 | Benzene[1] | 71-43-2 | All | M | M/M | n/a | n/a |

[22] Drinking Water Distribution System Recovery Plan: https://www.cpf.navy.mil/Portals/52/Drinking-Water-Distribution- System-Recovery-Plan.pdf.

| Analytical Method | Analyte | CASRN | Residential Priority Buildings Sampling | Hydrant Sampling | Waiawa Shaft Sampling Source (Raw) Water / Post Chlorination | NAH Shaft Sampling Source (Raw) Water | Red Hill Shaft Sampling Source (Raw) Water |
|---|---|---|---|---|---|---|---|
| EPA 524.2 | n-Butylbenzene[1] | 104-51-8 | All | M | M/M | n/a | n/a |
| EPA 524.2 | sec-Butylbenzene[1] | 135-98-8 | All | M | M/M | n/a | n/a |
| EPA 524.2 | Tert-Butylbenzene[1] | 98-06-6 | All | M | M/M | n/a | n/a |
| EPA 524.2 | Ethyl Benzene[1] | 100-41-4 | All | M | M/M | n/a | n/a |
| EPA 524.2 | Isopropylbenzene[1] | 98-82-8 | All | M | M/M | n/a | n/a |
| EPA 524.2 | n-Propylbenzene[1] | 103-65-1 | All | M | M/M | n/a | n/a |
| EPA 524.2 | Toluene[1] | 108-88-3 | All | M | M/M | n/a | n/a |
| EPA 524.2 | 1,2,4-Trimethylbenzene[1] | 95-63-6 | All | M | M/M | n/a | n/a |
| EPA 524.2 | 1,3,5-Trimethylbenzene[1] | 108-67-8 | All | M | M/M | n/a | n/a |
| EPA 524.2 | Xylenes (Total) [1]<br>• m,p-Xylenes<br>• o-Xylenes | <br>1330-20-7<br>95-47-6 | All | M | M/M | n/a | n/a |
| EPA 524.2 | Total trihalomethanes(TTHM):<br>• Chloroform<br>• Bromoform<br>• Bromodichloromethane<br>• Dibromochloromethane | TTHMs<br>67-66-3<br>75-25-2<br>75-27-4<br>124-48-1 | All | M | n/a/M | n/a | n/a |
| EPA 525.2 | 1-Methylnaphthalene[1] | 90-12-0 | All | M | M/M | n/a | n/a |
| EPA 525.2 | 2-Methylnaphthalene[1] | 91-57-6 | All | M | M/M | n/a | n/a |
| EPA 525.2 | Naphthalene[1] | 91-20-3 | All | M | M/M | n/a | n/a |
| EPA 525.2 | Acenaphthylene[2] | 208-96-8 | All | M | M/M | n/a | n/a |
| EPA 525.2 | Anthracene[2] | 120-12-7 | All | M | M/M | n/a | n/a |
| EPA 525.2 | Benzo[a]pyrene[2] | 50-32-8 | All | M | M/M | n/a | n/a |
| EPA 525.2 | Benzo[b]fluoranthene[2] | 205-82-3 | All | M | M/M | n/a | n/a |
| EPA 525.2 | Benzo[k]fluoranthene[2] | 207-08-9 | All | M | M/M | n/a | n/a |
| EPA 525.2 | Benzo[g,h,i]perylene[2] | 191-24-2 | All | M | M/M | n/a | n/a |
| EPA 525.2 | Chrysene[2] | 218-01-9 | All | M | M/M | n/a | n/a |
| EPA 525.2 | Dibenz[a,h]anthracene[2] | 53-70-3 | All | M | M/M | n/a | n/a |
| EPA 525.2 | Fluorene[2] | 86-73-7 | All | M | M/M | n/a | n/a |
| EPA 525.2 | Indeno[1,2,3-cd]pyrene[2] | 193-39-5 | All | M | M/M | n/a | n/a |
| EPA 525.2 | Phenanthrene[2] | 85-01-8 | All | M | M/M | n/a | n/a |
| EPA 525.2 | Pyrene2 | 129-00-0 | All | M | M/M | n/a | n/a |
| EPA 8260<br>EPA 8015<br>EPA 8015 | JP-5 as Combined Total Petroleum Hydrocarbons (TPH)- Gasoline, Diesel, and Oil Ranges | PCHG PCHD MOIL | All | M | M/M | n/a | n/a |
| EPA 200.8 | Copper | 7440-50-8 | All | n/a | n/a | n/a | n/a |
| EPA 200.8 | Lead | 7439-92-1 | All | n/a | n/a | n/a | n/a |
| EPA 245.1 | Mercury | 7439-94-7 | All | n/a | n/a | n/a | n/a |
| SM 5310 B, C or D, or EPA 415.3, Rev 1.2 | Total Organic Carbon (TOC) | TOC | All | M | M/M | n/a | n/a |
| HACH 8021 (Based on SM 4500-Cl G) | Chlorine, Free (Field Test):<br>• Sample Hot Water<br>• Sample Cold Water | 7782-50-5 | All | M | n/a/M | n/a | n/a |
| EPA 170.1 | Temperature (Field Test):<br>• Sample Hot Water<br>• Sample Cold Water | TMP | All | M | M/M | Q | Q |
| EPA 150.3 | pH (Field Test) | pH | All | M | M/M | Q | Q |
| SM 2510 B | Conductivity (Field Test) | CONDUCT | All | M | M/M | Q | Q |
| SM 2130 B | Turbidity (Field Test) | TURBID | All | M | M/M | Q | Q |
| SM 2320 B | Total Alkalinity | TOTAL_AL | All | M | M/M | Q | Q |

| Analytical Method | Analyte | CASRN | Residential Priority Buildings Sampling | Hydrant Sampling | Waiawa Shaft Sampling Source (Raw) Water / Post Chlorination | NAH Shaft Sampling Source (Raw) Water | Red Hill Shaft Sampling Source (Raw) Water |
|---|---|---|---|---|---|---|---|
| | | K | | | | | |
| EPA 200.7 | Cations:<br>• Sodium<br>• Potassium<br>• Calcium<br>• Magnesium<br>• Iron<br>• Manganese | <br>7440-23-5<br>7440-09-7<br>7440-70-2<br>7439-95-4<br>7439-89-6<br>7439-96-5 | n/a | n/a | M/M | Q | Q |
| EPA 200.7 | Silica | 7631-86-9 | n/a | n/a | M/M | Q | Q |
| EPA method 300.0 Rev. 2.1 | **Anions**:<br>• Chloride<br>• Sulfate<br>• Fluoride<br>• Ortho-Phosphate-P<br>• Bromide | <br>16887-00-6<br>14808-79-8<br>16984-48-8<br>14265-44-2<br>24959-67-9 | n/a | n/a | M/M | Q | Q |
| EPA method 300.1 Rev. 1.0 | **Anions**:<br>• Chlorite<br>• Bromate<br>Chlorate | <br>14998-27-7<br>15541-45-4<br>14866-68-3 | n/a | n/a | M/M | Q | Q |
| EPA 504.1 | Ethylene Dibromide | 106-93-4 | n/a | Q | Q | n/a | n/a |
| EPA 8270SIM | 2-(2-Methoxyethoxy)-Ethanol | 111-77-3 | n/a | Q | Q | n/a | n/a |

**Notes:**
All: Indicates every location will be sampled, M: Indicates monthly sampling, Q: Indicates quarterly sampling, n/a: Indicates not applicable. The analytical laboratory will report non-detected results to the MDL. Values between the MDL and MRL will be flagged as estimates ('J' flag).
[1] These analytes are primary components of JP-5 (i.e., these analytes comprise a significant amount [based on their molar fraction in JP-5 samples obtained from Red Hill on July 5, 2023, and their solubility in water] of the composition of JP-5 dissolved in water) and are key indicators of the presence/absence of JP-5 in drinking water samples.
[2] These analytes are potentially associated with other petroleum compounds (e.g., other fuels, oils, and lubricants).
[3] Lead and copper concentrations in drinking water regulations do not have MCL's, only Action Levels. Lead and copper are regulated by a treatment technique that requires systems to control the corrosiveness of their water. For the purposes of EDWM sampling, lead and copper concentrations in drinking water will be screened at the regulatory Action Levels, though these are not samples collected for the purposes of compliance with federal and state lead and copper regulations.

## What happened leading up to the implementation of the EDWM Plan?

On November, 2021, jet fuel was released at the Red Hill Bulk Fuel Storage Facility. Subsequent reporting of fuel-like smell or visual sheen in addition to complaints of health issues from ingestion or dermal contact with the Navy and Army system water were received by the Navy and DOH. On November 28, 2021, the Navy reported that a chemical release of petroleum, which is a hazardous substance, entered the JBPHH drinking water distribution system from the Red Hill Shaft. This release triggered an emergency response and DOH issuance of a public health advisory on November 29, 2021, for the entire JBPHH Public Water System No. HI0000360 (JBPHH System).

The Hawaii DOH, EPA, Navy, and Army formed the Interagency Drinking Water Systems Team (IDWST) to work on a coordinated effort to restore safe drinking water to all Navy Water System users. LTM began in March 2022, immediately following the amendment of the health advisories in each Zone. During LTM Period 6, the frequency of TPH detections increased, primarily in the diesel-range organics (TPH-D). None of these detections has exceeded the DOH's incident-specific parameter (ISP) level of 266 micrograms per liter (µg/L). Since October 2023, the Navy has proactively worked with EPA and DOH on actions to investigate these low-level TPH detections in drinking water samples collected from the JBPHH System. These actions have included inspection and sampling of hot water heaters and interior faucets to ensure there is no

contaminant buildup, as well as collection of samples from various points throughout the System.

During the week of 29 January 2024, an interagency team comprised of SMEs from the EPA, DOH, Navy, and Navy contractors met to discuss low-level TPH detections reported in drinking water samples collected from the System. Investigation into the low-level TPH detections indicated these results were likely attributed to a reaction between chlorine in the water (from treatment) and a surrogate used in the lab when analyzing the samples. The Navy voluntarily committed to extend enhanced monitoring beyond the end of LTM, and developed the EDWM Plan to analyze drinking water samples using a revised analytical method following the completion of LTM.[23]

LTM of the PWS #HI0000360 and PWS #HI0000337 was completed by April 2024. EDWM incorporates lessons learned from LTM (including refinements to analytical methods) and focuses on JP-5 and other fuel-related analytes. EDWM sampling took place for one year after the completion of LTM (i.e., April 2024 – March 2025), and focus on locations not previously tested during LTM.

**Where does our water come from?**

As of the time of this report, the source of water for the Navy Water System solely comes from the Navy Waiawa Shaft, which was not impacted by the release of JP-5 that occurred at Red Hill in November 2021. The Waiawa Shaft has been sampled, and the EPA and the DOH confirmed that it meets all State and Federal drinking water standards. The Waiawa Shaft will be sampled (in subsequent months during EDWM) in accordance with EPA and the DOH requirements.

**What has the Navy done to ensure drinking water is safe for human consumption?**

Working closely with the DOH, EPA, and other regulatory bodies, the Navy is working to ensure compliance with all state and federal Standards. The Navy has taken several steps to ensure drinking water continues to be safe for human consumption. These steps have included:

- Completing two years of LTM (March 2022 – March 2024). LTM was implemented as a method of surveillance to continuously ensure that the water is safe to drink, meets all State and Federal drinking water standards, and confirms the System is not being impacted by JP-5 or other fuel-related analytes.
- Implementing the EDWM Plan (April 2024 – March 2025). The purpose of EDWM is to continue to ensure drinking water provided by the System is safe for human consumption by implementing lessons learned from LTM, sampling more residences, and enhancing the ongoing sampling efforts.
- Establishing the Navy Closure Task Force-Red Hill (NCTF-RH) to oversee the safe and deliberate decommissioning of the Red Hill Bulk Fuel Storage Facility, which was the original source of the fuel release. NCTF-RH is dedicated to protecting the environment and public health during the decommissioning process. For more information on the decommissioning of Red Hill, please visit: https://www.navyclosuretaskforce.navy.mil.
- Expanding the availability of the Red Hill Clinic. The goal of the Red Hill Clinic is to offer assessments and care for individuals who may have been exposed to contaminated water. This clinic provides support to those experiencing symptoms related to contamination. For more information on medical assistance, please visit: https://nhchawaii.tricare.mil/Clinics/BHC-Makalapa/Red-Hill-Clinic.

[23] For more information on the low-level TPH detections observed during LTM and the results of the investigation into these results, see the Summary of Technical Memorandum Regarding Low-Level Hydrocarbon Detections Observed During Long-Term Monitoring at: https://jbphh-safewaters.org/public/Tech_Memo_JBPHH_LOE's_LTM_TPH_Detects_Redacted_Rev.pdf.

- Establishing the WQAT, made up of experts to focus on the quality of drinking water. The team is available to collect drinking water samples to test for the presence of TPH and conduct a water quality investigation. To dispatch the WQAT, residents can call the JBPHH Drinking Water Call Center at **(808) 210 – 6968**.
- Updating the Safe Waters Webpage to include up-to-date sampling results and findings, available to all residents at JBPHH. The Safe Waters Webpage provides accurate information about the current status of water and ongoing sampling efforts to ensure public safety. For more information, visit: https://jbphh-safewaters.org.
- Conducting extensive per- and polyfluoroalkyl substances (PFAS) sampling of the Navy's drinking water wells (June 2024 – June 2025). The results of these sampling efforts are available online at https://jbphh-safewaters.org.

**When was EDWM sampling conducted?**

EDWM began in April 2024. Per the approved EDWM Plan, drinking water samples will continue to be collected from residences, schools, CDCs, non-residences, and hydrants on a monthly basis for one year (i.e., April 2024 – March 2025). The results of EDWM sampling will be summarized on a quarterly basis.

**Where were EDWM samples taken?**

Per the approved EDWM Plan, samples will be collected at houses that were not previously sampled within LTM, with the goal of sampling 100% of the un-sampled houses on the System by the end of EDWM. Approximately 65% of residences within each Zone were sampled during LTM, which leaves approximately 35% remaining to be sampled during EDWM.

For more information on where samples were taken, please visit the Safe Waters Website at: https://jbphh-safewaters.org

**Where can I get more information about the potential health effects associated with these contaminants?**

Hawaii Department of Health (DOH)

https://health.hawaii.gov/about/navy-water-system-quality-updates/.

Call the DOH Safe Drinking Water Branch at 808-586-4258

US Environmental Protection Agency (EPA)

https://www.epa.gov/ground-water-and-drinking-water/forms/online-form-epas-office-ground-water-and-drinking-water.

Call EPA Region 9's Environmental Information Center at 1-866-372-9378

## Explanation of Terms and Acronyms used in this Report

**Action Level (AL).** This AL is for Lead and Copper. The AL is a measure of the effectiveness of the corrosion control treatment in water systems. The AL is not a standard for establishing a safe level of lead or copper. The AL is the point at which certain provisions of the proposed standards must be initiated.

**Contaminant.** Contaminant is any physical, chemical, biological, or radiological substance or matter in water, and can be either healthy or unhealthy, depending on the particular substance and concentration. It could also be a physical parameter monitored such as pH or temperature.

**DOH.** Hawaii Department of Health

**DOH Environmental Action Level (EAL).** The DOH Environmental Action Levels (EALs) are concentrations of contaminants in drinking water and other media (e.g., soil, soil gas, and groundwater) below which the contaminants are assumed not to pose a significant threat to human health or the environment. Exceeding these EAL does not necessarily indicate that contamination at the site poses environmental hazards but generally warrants additional investigation.

**EPA** U.S. Environmental Protection Agency

**Free Chlorine**. Chlorine is added to drinking water as part of the treatment process. Adding chlorine is the most common way to disinfect drinking water. Disinfection kills bacteria, viruses, and other microorganisms that could cause disease or illness. Chlorine is effective and continues to keep the water safe as it travels from the treatment plant to the consumer's tap. Chlorine measurements provide another line of evidence for evaluating drinking water quality.

**Incident Specific Parameter (ISP).** To more comprehensively monitor and respond to this specific petroleum contamination of drinking water, the DOH identified contaminants that require additional action prior to amending the Health Advisory. The ISPs are used as a line of evidence to evaluate the data generated in each Zone during the investigation conducted by the IDWST.

**Maximum Contaminant Level (MCL)**. An MCL is the maximum permissible level of a contaminant in water which is delivered to any user of a public water system. The MCL is set to protect the public from acute and chronic health risks associated with consuming water containing these contaminants.

**Metals**. Metals are not derived from living sources and in general do not contain carbon. Metals include antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, copper, cyanide, fluoride, lead, mercury, nitrate, nitrite, selenium, and thallium. These contaminants get into drinking water supplies through industrial discharge or spills, erosion of natural deposits, corrosion, sewage discharge, fertilizer runoff, and other sources.

**ND.** Non-Detect

**Project Specific Screening Level.** DOH uses multiple criteria to assess the safety of the drinking water including maximum contaminant levels (MCLs) previously established environmental action levels (EALs) and incident specific parameters (ISPs).

**Synthetic Organic Compounds (SOCs)/Semi-Volatile Organic Compounds (SVOCs).** SOCs and SVOCs may be used interchangeably and are man-made, organic (carbon-based) chemicals that are less volatile than Volatile Organic Contaminants (VOCs). They are used as pesticides, defoliants, fuel additives, and as ingredients for other organic chemicals.

**Total Organic Carbon (TOC).** TOC is naturally present in the environment, but also can be an indicator of contamination, including petroleum or other sources.

**Total Petroleum Hydrocarbons (TPH).** TPH is a term used to describe a large family of several hundred chemical compounds that come from crude oil. Crude oil is used to make petroleum products, which can contaminate the environment. TPH is comprised of detected results from TPH-D, TPH-G, and TPH-O. TPHs are analyzed using EPA Method 8015D and 8260. These methods are not fuel-specific. TPH results reported using these methods represent the total concentration (or amount) of hydrocarbons present in the sample. Hydrocarbons can be petroleum (e.g., crude oil, JP-5, and other fuels), biogenic (i.e., organic compounds produced by living organisms such as algae or bacteria), or pyrogenic (i.e., produced via combustion). Many hydrocarbons are naturally occurring and are present in drinking water.

**Total Trihalomethanes (TTHM)**. TTHM is the sum of the concentration in milligrams per liter of the trihalomethane compounds (trichloromethane [chloroform], dibromochloromethane, bromodichloromethane and tribromomethane [bromoform]).

**Units.** A unit is the concentration of contaminant found in the water. For this report, the units are expressed in U.S. Standard Units.

| U.S. Standard Unit (Name) | Acronym | Equivalent International System of Units (Name) | Acronym |
|---|---|---|---|
| parts per billion | ppb | micrograms per liter | mg/L |

**Volatile Organic Compounds (VOCs).** VOCs are a class of chemicals that contain carbon and evaporate, or volatilize, easily into air at room temperature. VOCs are found in a variety of commercial, industrial, and residential products, including gasoline, solvents, cleaners and degreasers, paints, inks and dyes, and pesticides.

# Pollardwater Food Grade Anti-Seize

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 1/30/2024 Version: 1.0

## SECTION 1: Identification

### 1.1. Identification

| | | |
|---|---|---|
| Product form | : | Mixture |
| Product name | : | Pollardwater Food Grade Anti-Seize |
| Product code | : | P67751 |

### 1.2. Recommended use and restrictions on use

| | | |
|---|---|---|
| Use of the substance/mixture | : | Lubricant where there may be incidental food contact |

### 1.3. Supplier

Pollardwater
200 Atlantic Avenue
New York, NY 11040
T 800-437-1146

### 1.4. Emergency telephone number

| | | |
|---|---|---|
| Emergency number | : | Infotrac: North America 1-800-535-5053\| Australia 1-300-366-961 \| Germany 0800-181-2926 \| International 011-1-352-323-3500 (collect) \| China 400-120-076 |

## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

**GHS US classification**

| | | |
|---|---|---|
| Reproductive toxicity Category 2 | H361 | Suspected of damaging fertility or the unborn child |

Full text of H statements : see section 16

### 2.2. GHS Label elements, including precautionary statements

**GHS US labeling**

Hazard pictograms (GHS US) :

| | | |
|---|---|---|
| Signal word (GHS US) | : | Warning |
| Hazard statements (GHS US) | : | H361 - Suspected of damaging fertility or the unborn child |
| Precautionary statements (GHS US) | : | P201 - Obtain special instructions before use.<br>P202 - Do not handle until all safety precautions have been read and understood.<br>P280 - Wear protective gloves/protective clothing/eye protection/face protection.<br>P308+P313 - If exposed or concerned: Get medical advice/attention.<br>P405 - Store locked up.<br>P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

37.33% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
52.13% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
36.73% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name | Product identifier | % |
|---|---|---|
| white mineral oil (petroleum) | CAS-No.: 8042-47-5 | 40-60 |
| benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene | CAS-No.: 68411-46-1 | <2.5 |
| zinc oxide | CAS-No.: 1314-13-2 | 1-3 |

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact : None under normal conditions.
Symptoms/effects after eye contact : None under normal conditions.
Symptoms/effects after ingestion : None under normal conditions.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Do not use a heavy water stream. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

| | | |
|---|---|---|
| Firefighting instructions | : | Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. |
| Protection during firefighting | : | Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

| | | |
|---|---|---|
| General measures | : | Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage. |

#### 6.1.1. For non-emergency personnel

| | | |
|---|---|---|
| Protective equipment | : | Wear recommended personal protective equipment. |
| Emergency procedures | : | Ventilate spillage area. |

#### 6.1.2. For emergency responders

| | | |
|---|---|---|
| Protective equipment | : | Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
| Emergency procedures | : | Evacuate unnecessary personnel. Stop leak if safe to do so. |

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

| | | |
|---|---|---|
| For containment | : | Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk. |
| Methods for cleaning up | : | Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters. |
| Other information | : | Dispose of materials or solid residues at an authorized site. |

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

| | | |
|---|---|---|
| Additional hazards when processed | : | Not expected to present a significant hazard under anticipated conditions of normal use. |
| Precautions for safe handling | : | Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. |
| Hygiene measures | : | Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |

### 7.2. Conditions for safe storage, including any incompatibilities

| | | |
|---|---|---|
| Technical measures | : | Keep in a cool, well-ventilated place away from heat. |
| Storage conditions | : | Store locked up. |
| Packaging materials | : | Store always product in container of same material as original container. |

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| **white mineral oil (petroleum) (8042-47-5)** | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| ACGIH OEL TWA | 5 mg/m³ (Inhalable fraction) |

| **zinc oxide (1314-13-2)** | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| Local name | Zinc oxide |
| ACGIH OEL TWA | 2 mg/m³ (Respirable fraction) |
| ACGIH OEL STEL | 10 mg/m³ (Respirable fraction) |
| Remark (ACGIH) | TLV® Basis: Metal fume fever |
| Regulatory reference | ACGIH 2022 |
| **USA - OSHA - Occupational Exposure Limits** | |
| Local name | Zinc oxide |
| OSHA PEL TWA | 5 mg/m³ (Fume)<br>15 mg/m³ (Total dust)<br>5 mg/m³ (Respirable fraction) |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

**Personal protective equipment:**

Wear recommended personal protective equipment.

| **Hand protection:** |
|---|
| Protective gloves |

| **Eye protection:** |
|---|
| Safety glasses |

| **Skin and body protection:** |
|---|
| Wear suitable protective clothing |

| **Respiratory protection:** |
|---|
| [In case of inadequate ventilation] wear respiratory protection. |

**Personal protective equipment symbol(s):**

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | | |
|---|---|---|
| Physical state | : | Liquid |
| Color | : | light brown |
| Odor | : | No data available |
| Odor threshold | : | No data available |
| pH | : | No data available |
| Melting point | : | No data available |
| Freezing point | : | No data available |
| Boiling point | : | No data available |
| Flash point | : | 478 °F (248°C), ASTM D 92 |
| Relative evaporation rate (butyl acetate=1) | : | No data available |
| Flammability (solid, gas) | : | Not applicable. |
| Vapor pressure | : | No data available |
| Relative vapor density at 20°C | : | No data available |
| Relative density | : | No data available |
| Solubility | : | No data available |
| Partition coefficient n-octanol/water (Log Pow) | : | No data available |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity, kinematic | : | No data available |
| Viscosity, dynamic | : | No data available |
| Explosion limits | : | No data available |
| Explosive properties | : | No data available |
| Oxidizing properties | : | No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

| **Pollardwater Food Grade Anti-Seize** | |
|---|---|
| Unknown acute toxicity (GHS US) | 37.33% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)<br>52.13% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)<br>36.73% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist)) |

| **white mineral oil (petroleum) (8042-47-5)** | |
|---|---|
| LD50 oral rat | > 5000 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Read-across, Oral, 14 day(s)) |
| LD50 dermal rabbit | > 2000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Read-across, Dermal, 14 day(s)) |
| LC50 Inhalation - Rat | > 5 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Read-across, Inhalation (aerosol), 14 day(s)) |

| **benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)** | |
|---|---|
| LD50 oral rat | > 5000 mg/kg (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s)) |
| LD50 dermal rat | > 2000 mg/kg body weight (Equivalent or similar to OECD 402, Rat, Male / female, Experimental value, Skin) |

| **zinc oxide (1314-13-2)** | |
|---|---|
| LD50 oral rat | > 5000 mg/kg (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s)) |
| LD50 dermal rat | > 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s)) |
| LC50 Inhalation - Rat | > 5.7 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s)) |

Skin corrosion/irritation : Not classified

| **white mineral oil (petroleum) (8042-47-5)** | |
|---|---|
| pH | No data available in the literature |

| **benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)** | |
|---|---|
| pH | 5.1 – 6.2 (1 %, 20 - 25 °C) |

| **zinc oxide (1314-13-2)** | |
|---|---|
| pH | 6.07 – 6.55 (2.9E-4 %, 20 °C, OECD 105: Water Solubility) |

Serious eye damage/irritation : Not classified

| **white mineral oil (petroleum) (8042-47-5)** | |
|---|---|
| pH | No data available in the literature |

| benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1) | |
|---|---|
| pH | 5.1 – 6.2 (1 %, 20 - 25 °C) |

| zinc oxide (1314-13-2) | |
|---|---|
| pH | 6.07 – 6.55 (2.9E-4 %, 20 °C, OECD 105: Water Solubility) |

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified.
Reproductive toxicity : Suspected of damaging fertility or the unborn child.
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified.

| benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1) | |
|---|---|
| NOAEL (oral,rat,90 days) | 25 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. |

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

| white mineral oil (petroleum) (8042-47-5) | |
|---|---|
| Viscosity, kinematic | 3 – 20.5 mm²/s (40 °C, ISO 3104: Determination of kinematic viscosity and calculation of dynamic viscosity, Niet experimenteel bepaald; afgeleid van de indeling) |

| benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1) | |
|---|---|
| Viscosity, kinematic | 353 mm²/s (40 °C, OECD 114: Viscosity of Liquids) |

| zinc oxide (1314-13-2) | |
|---|---|
| Viscosity, kinematic | Not applicable (solid) |

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact : None under normal conditions.
Symptoms/effects after eye contact : None under normal conditions.
Symptoms/effects after ingestion : None under normal conditions.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

| white mineral oil (petroleum) (8042-47-5) | |
|---|---|
| LC50 - Fish [1] | > 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Nominal concentration) |

| benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1) | |
|---|---|
| LC50 - Fish [1] | > 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Experimental value, Nominal concentration) |
| EC50 - Crustacea [1] | 51 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect) |

| benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1) | |
|---|---|
| EC50 72h - Algae [1] | > 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |
| ErC50 algae | > 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration) |

| zinc oxide (1314-13-2) | |
|---|---|
| LC50 - Fish [1] | 1.55 mg/l (96 h, Danio rerio, Static system, Fresh water, Experimental value, Lethal) |
| EC50 - Crustacea [1] | 1 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Zinc ion) |

### 12.2. Persistence and degradability

| Pollardwater Food Grade Anti-Seize | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| white mineral oil (petroleum) (8042-47-5) | |
|---|---|
| Persistence and degradability | Not readily biodegradable in water. |

| benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1) | |
|---|---|
| Persistence and degradability | Not readily biodegradable in water. |

| zinc oxide (1314-13-2) | |
|---|---|
| Persistence and degradability | Biodegradability in soil: not applicable,Biodegradability: not applicable. |
| Chemical oxygen demand (COD) | Not applicable (inorganic) |
| ThOD | Not applicable (inorganic) |

### 12.3. Bioaccumulative potential

| white mineral oil (petroleum) (8042-47-5) | |
|---|---|
| BCF - Other aquatic organisms [1] | 1216 l/kg (BCFBAF v3.01, Estimated value, Fresh weight) |
| Partition coefficient n-octanol/water (Log Pow) | 5.18 (Experimental value) |
| Bioaccumulative potential | Potential for bioaccumulation (500 ≤ BCF ≤ 5000). |

| benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1) | |
|---|---|
| BCF - Fish [1] | 1730 (42 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP) |
| Partition coefficient n-octanol/water (Log Pow) | 6.66 (Experimental value, OECD 123: Partition Coefficient (1-Octanol/Water): Slow-Stirring Method, 23 °C) |
| Bioaccumulative potential | Potential for bioaccumulation (500 ≤ BCF ≤ 5000). |

| zinc oxide (1314-13-2) | |
|---|---|
| BCF - Fish [1] | 78 – 2060 (14 day(s), Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value) |
| Partition coefficient n-octanol/water (Log Pow) | 1.53 (Estimated value) |
| Bioaccumulative potential | Not bioaccumulative. |

### 12.4. Mobility in soil

| | |
|---|---|
| **white mineral oil (petroleum) (8042-47-5)** | |
| Surface tension | No data available in the literature, Data waiving |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.64 (log Koc, SRC PCKOCWIN v2.0, Calculated value) |
| Ecology - soil | Low potential for adsorption in soil. |
| **benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)** | |
| Mobility in soil | 60460 Source: EPISUITE |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 3.754 – 8.947 (log Koc, SRC PCKOCWIN v2.0, QSAR) |
| Ecology - soil | Adsorbs into the soil. |
| **zinc oxide (1314-13-2)** | |
| Surface tension | Not applicable (solid) |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.2 (log Koc, Literature study) |
| Ecology - soil | Low potential for adsorption in soil. |

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Regional legislation (waste) : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector’s sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

## SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

| DOT | TDG | IMDG | IATA |
|---|---|---|---|
| **14.1. UN number** | | | |
| Not regulated for transport | | | |
| **14.2. Proper Shipping Name** | | | |
| Not regulated | Not regulated | Not regulated | Not regulated |
| **14.3. Transport hazard class(es)** | | | |
| Not regulated | Not regulated | Not regulated | Not regulated |

| DOT | TDG | IMDG | IATA |
|---|---|---|---|
| **14.4. Packing group** | | | |
| Not regulated | Not regulated | Not regulated | Not regulated |
| **14.5. Environmental hazards** | | | |
| Not regulated | Not regulated | Not regulated | Not regulated |
| No supplementary information available | | | |

### 14.6. Special precautions for user

**DOT**
Not regulated

**TDG**
Not regulated

**IMDG**
Not regulated

**IATA**
Not regulated

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

### 15.2. International regulations

**CANADA**

**white mineral oil (petroleum) (8042-47-5)**

Listed on the Canadian DSL (Domestic Substances List)

**benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)**

Listed on the Canadian DSL (Domestic Substances List)

**zinc oxide (1314-13-2)**

Listed on the Canadian DSL (Domestic Substances List)

**EU-Regulations**

No additional information available

**National regulations**

**white mineral oil (petroleum) (8042-47-5)**

Listed on INSQ (Mexican National Inventory of Chemical Substances)

**benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)**

Listed on INSQ (Mexican National Inventory of Chemical Substances)

**zinc oxide (1314-13-2)**

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

| Component | State or local regulations |
|---|---|
| Benzenesulfonicacid,dodecyl-,calciumsalt(26264-06-2) | U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List |
| zinc oxide(1314-13-2) | U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List |
| chalk(1317-65-3) | U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List |

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Full text of H-phrases | |
|---|---|
| H361 | Suspected of damaging fertility or the unborn child |

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

AECOM
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Suite 1600
Honolulu, HI 96813
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August 9, 2024

CDR Benjamin Dunn, P.E.
NAVFAC Hawaii
400 Marshall Road
JBPHH HI 96860-3139

**Subject: Joint Base Pearl Harbor-Hickam Drinking Water**
**EDWM TPH Detection Investigation**
**Sample A1-TW-0001250-24092-N**

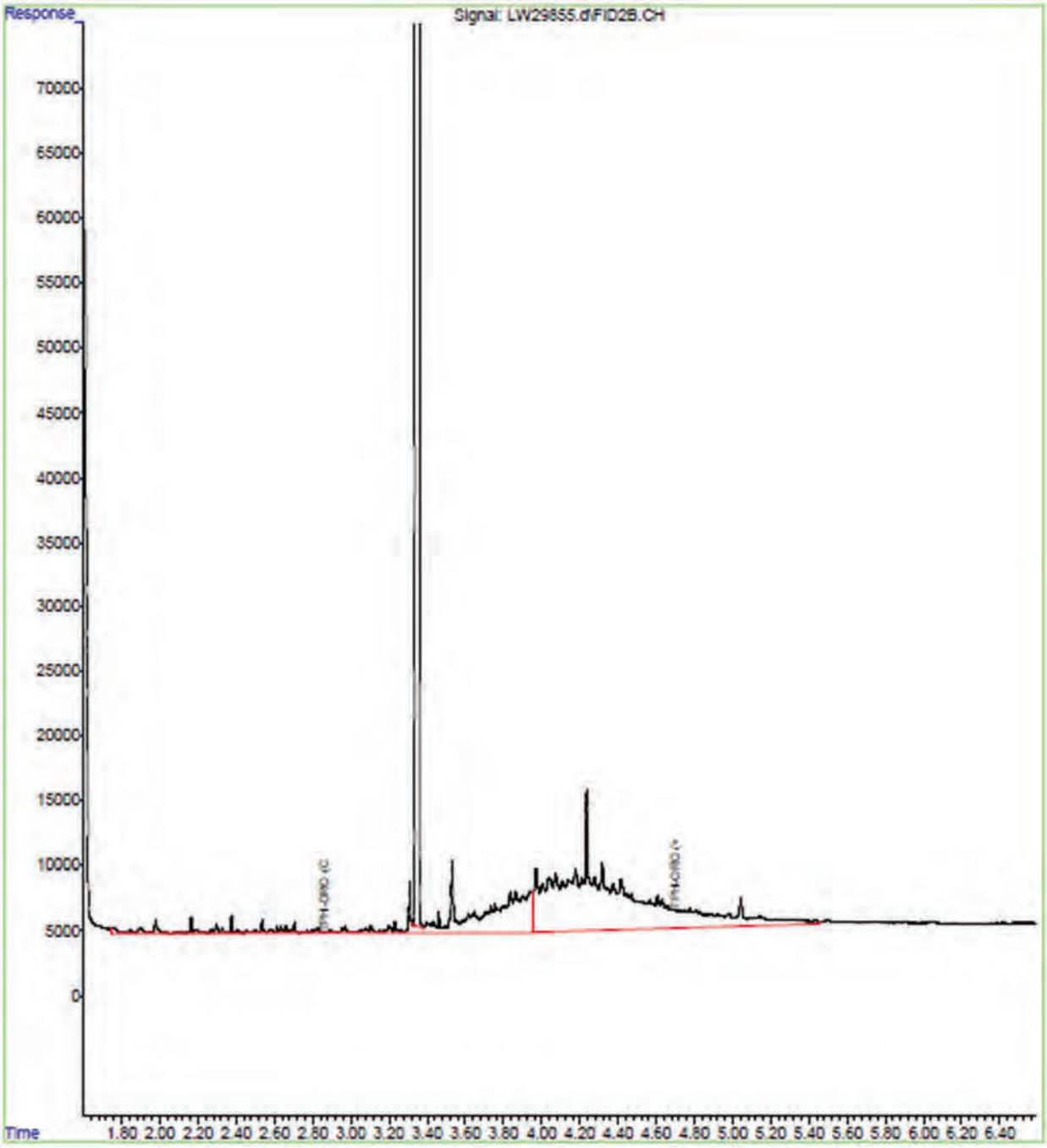
Attention CDR Dunn:

On Wednesday, July 24, 2024, AECOM Technical Services, Inc. (AECOM) was notified of an oil range organics (ORO) detection of 73.0 micrograms per liter (µg/L) in sample A1-TW-0001250-24092-N, collected from the residence at 297 Etcell Court in Zone A1 on July 22, 2024. **This TPH detection was determined to be cross-contamination of a non-fuel related lubricant material, introduced during either sampling or analysis.** The sample was analyzed at (b) (4) [redacted] Colorado, for total petroleum hydrocarbons (TPH) via EPA SW-846 Method 8015D following micro-extraction by SW-846 Method 3511. Reported TPH values are the sum of diesel range organics (DRO) and ORO. DRO was reported as not detected at the method detection limit of 47 µg/L. The sample chromatogram was reviewed to determine if the reported detection was likely from a fuel-related petrogenic source, particularly the November 2021 release of Jet Propellant-5 (JP-5), and if not, to assign a probable reason for the detection. All evidence points to the conclusion that this detection is unrelated to JP-5 and is likely due to contamination with a high molecular weight hydrocarbon consistent with an oil or lubricating grease that may have been introduced at the time of sample collection or in the laboratory. In this instance, it appears most likely that the detection originated from incidental contact with the laboratory's ORO standard.

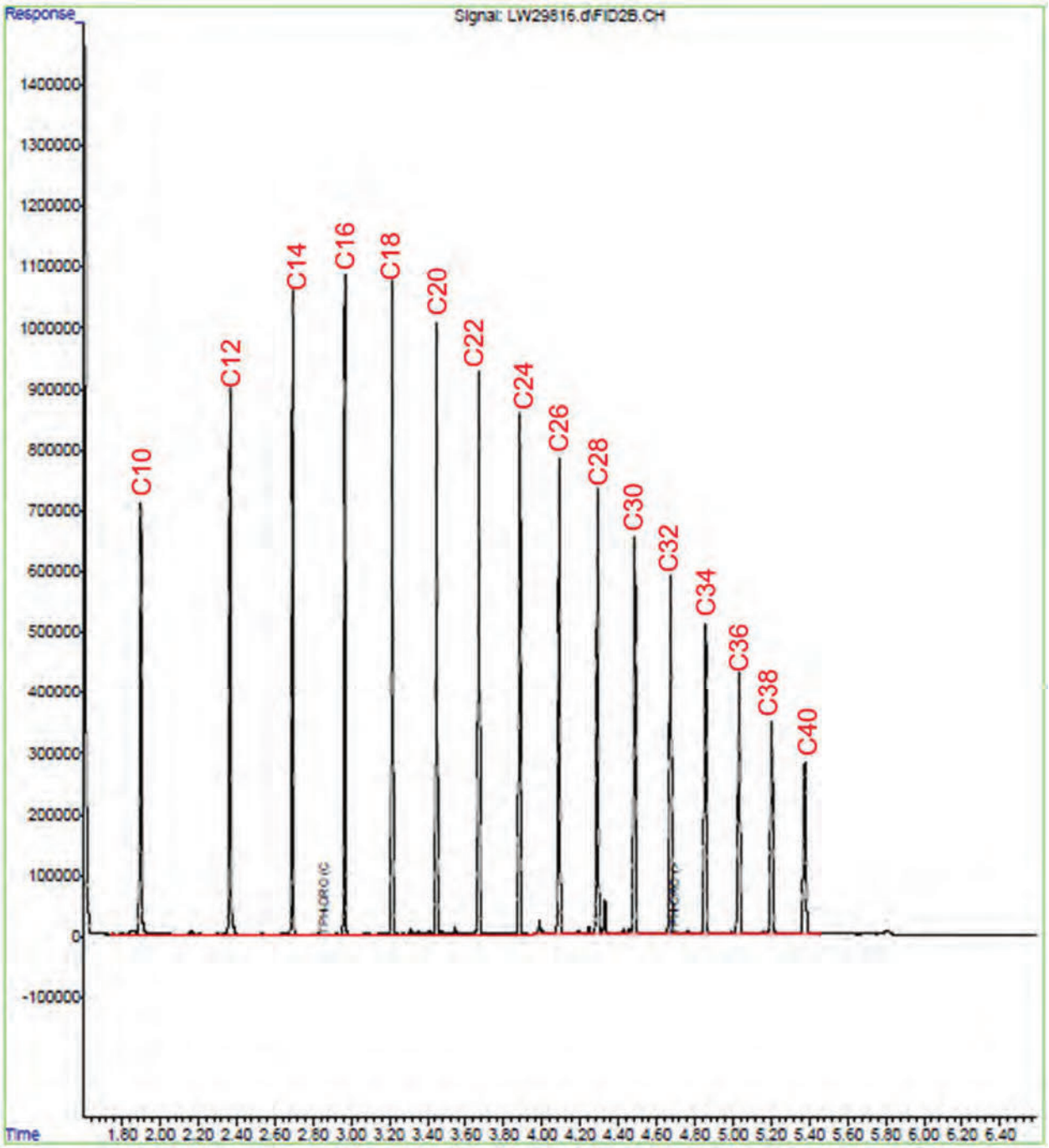
The chromatogram for this sample is shown on Figure 1. Figure 2 displays the retention time (RT) marker reference standard with each of the carbon numbers labeled. The sample chromatogram shows an unresolved complex mixture that begins to come out (elute) at approximately the C20 range and extends slightly beyond C40. Since JP-5 elutes in the C10 to C16 range (Figure 3), there is no overlap with the substance found in the sample, and therefore is not related.

The observed lubricating grease may have originated in the premise plumbing or household supplies in the vicinity of the sampling point and introduced into the sample through incidental contact. It is also possible that it is a laboratory artifact that was introduced during preparation or analysis of the sample. Figure 4 presents the sample chromatogram (black) overlayed with the RT marker standard (blue). Figure 5 presents the sample chromatogram (black) overlayed with the laboratory's low-level ORO calibration standard (blue). The similarity between the sample and the laboratory standard is sufficiently strong that it is reasonable to conclude that the observed ORO detection was likely the result of incidental contact with the laboratory's ORO standard solution. The laboratory prepares blank spikes (laboratory water spiked with a known quantity of target compounds) for JP-5, DRO, and ORO with each batch, providing an opportunity for incidental contact.

## Figure 1. Sample A1-TW-0001250-24092-N, Laboratory ID DA65827-1



## Figure 2. Retention Time (RT) Marker Standard with Carbon Numbers



## Figure 3. JP-5 Standard

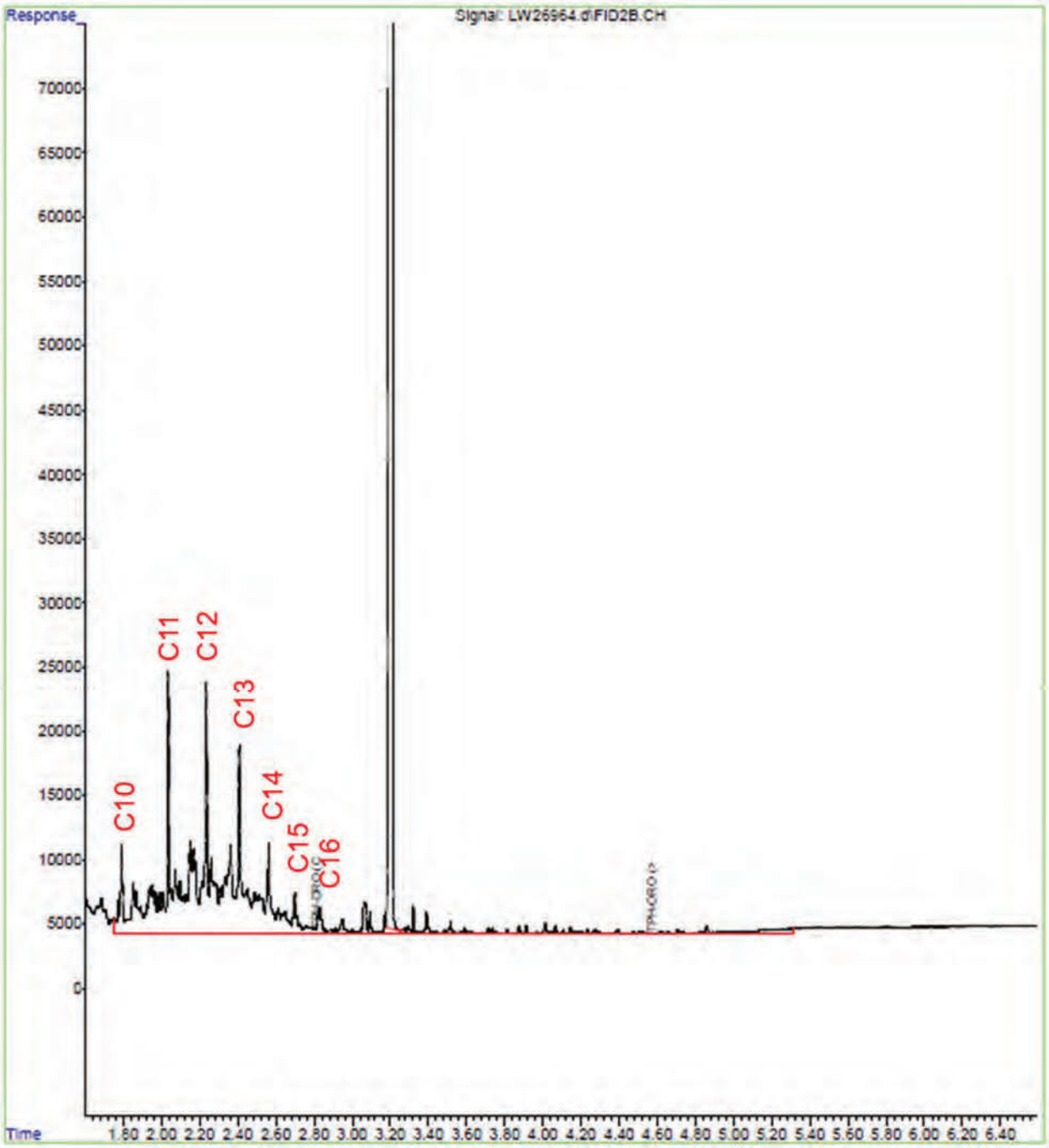


**Figure 4. Sample A1-TW-0001250-24092-N (black), Overlayed with RT Standard (blue)**

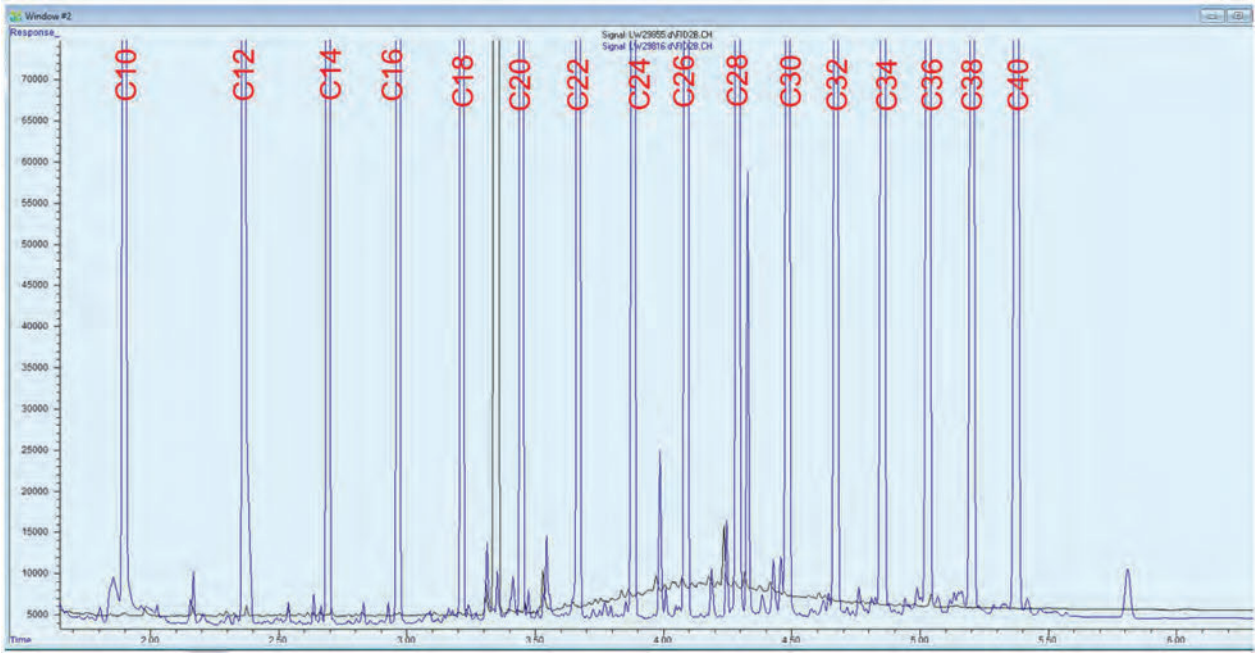
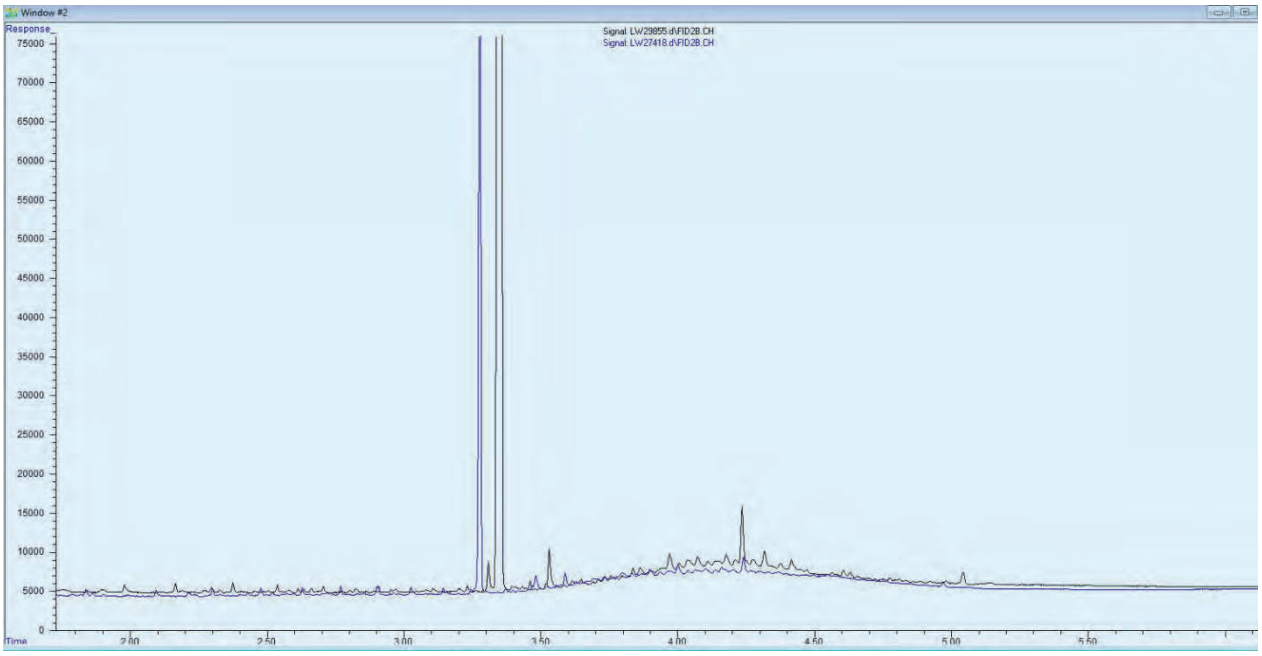



**Figure 5. Sample A1-TW-0001250-24092-N (black), Overlayed with ORO Standard (blue)**



The sample was submitted to (b) (4) [redacted], Massachusetts, for the Tier 2 analyses identified in the extended drinking water monitoring plan, specifically PIANO Volatile Organics by SW-846 Method 8260D, parent and alkylated polyaromatic hydrocarbons by SW-846 Method 8270E with selected ion monitoring, and saturated hydrocarbons by SW-846 Method 8015D (modified). All results were non-detect except for a 1.7 µg/L detection of n-hexane (six carbon n-alkane). In the absence of any other hydrocarbon detections, this detection is of no consequence, and is likely due to a laboratory artifact or instrument noise. The complete lack of any other C20-C40 hydrocarbon detections or unresolved complex mixture

supports the conclusion that the original detection was the result of incidental contamination in the field or laboratory.

In addition, the original sink at 297 Etcell Court was resampled on July 25, 2024, and two bracketing sinks were sampled as well. Results for all samples were non-detect for DRO and ORO.

AECOM has concluded that the chromatographic evidence from the original, resample, and Tier 2 analyses points to incidental contamination of the original sample with a heavy, lubricating oil-type hydrocarbon mixture unrelated to JP-5 or any other fuel product. It is not known with certainty whether the artifact was introduced in the field or in the laboratory; however, AECOM concludes that the most likely source was incidental contact in the laboratory with the ORO calibration standard or spiking solution.

There is no evidence of a systematic contamination issue in the laboratory. Method blanks have been consistently free of ORO detections. Therefore, no additional action is recommended at this time.

Questions regarding this letter should be addressed to the AECOM project manager, (b) (6)

Yours sincerely,

(b) (6)

(b) (6)
Senior Project Chemist
(b) (6)

CLEAN Program Manager

AECOM
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Suite 1600
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August 13, 2024

CDR Benjamin Dunn, P.E.
NAVFAC Hawaii
400 Marshall Road
JBPHH HI 96860-3139

**Subject:** **Joint Base Pearl Harbor-Hickam Drinking Water**
**EDWM TPH Detection Investigation**
**Sample D3-TW-0010607-24092-N**

Attention CDR Dunn:

On Thursday, July 25, 2024, AECOM Technical Services, Inc. (AECOM) was notified of a diesel range organics (DRO) detection of 145 micrograms per liter (µg/L) and an oil range organics (ORO) detection of 245 µg/L in sample A3-TW-0016716-24092-N, collected from the residence at 4917C Mokupea Place in Zone A3 on July 23, 2024. The sample was analyzed at (b) (4), Colorado, for total petroleum hydrocarbons (TPH) via EPA SW-846 Method 8015D following micro-extraction by SW-846 Method 3511. This analysis is not specific and may not equate to the presence of petroleum hydrocarbons, and a more detailed evaluation of the results is needed when a positive result is noted. The sample chromatogram was reviewed to determine if the reported detection was likely to be related to a fuel-related petrogenic source, particularly the November 2021 release of Jet Propellant 5 (JP-5), and if not, to assign a probable reason for the detection. **All evidence points to the conclusion that this detection is unrelated to JP-5 and is likely due to contamination via incidental contact with a glove at the time of sample collection or in the laboratory.**

The chromatogram for this sample is shown on Figure 1. Figure 2 displays the chromatogram of the laboratory's retention time (RT) marker reference standard[1] with each of the carbon numbers labeled, and Figure 3 displays the laboratory's JP-5 standard chromatogram. As it can be difficult to compare peak patterns on separate chromatograms, the laboratory provided overlays of the sample with the RT marker standard (Figure 4), JP-5 (Figure 5), the laboratory's DRO standard (Figure 6), and the laboratory's ORO standard (Figure 7).

The sample chromatogram shows a complex mixture of resolved and unresolved discrete peaks in the C17-C40 carbon range. Since JP-5 elutes in the C10 to C16 range (Figure 3), there is no overlap with the pattern of substances found in the sample, which are therefore not related to JP-5.

The observed pattern may have originated in the premise plumbing or household supplies in the vicinity of the sampling point and introduced into the sample through incidental contact with one of these substances or the sampler's glove. It is also possible that it is a laboratory artifact that was introduced during preparation or analysis of the sample.

The sample chromatogram does not exactly match the chromatographic patterns seen in any of the laboratory standards, but there are many peaks present in the ranges covered by these standards. Therefore, visual inspection of the chromatogram cannot be relied upon alone to rule out a fuel-related source.

[1] RT marker reference standards are standards containing n-alkanes with different numbers of carbon atoms and are analyzed with each run for the purpose of determining the beginning and end of carbon ranges of interest. The DRO area is defined as the total area of all peaks that come out (elute) between the retention time of C10 (decane, the 10 carbon, straight chain alkane) and the retention time of C24 (tetracosane, the 24 carbon, straight chain alkane); the ORO area is defined as the total area of peaks that elute between the retention times of C24 and C40.

**Figure 1. Sample DA65858-5, A3-TW-0016716-24092-N**

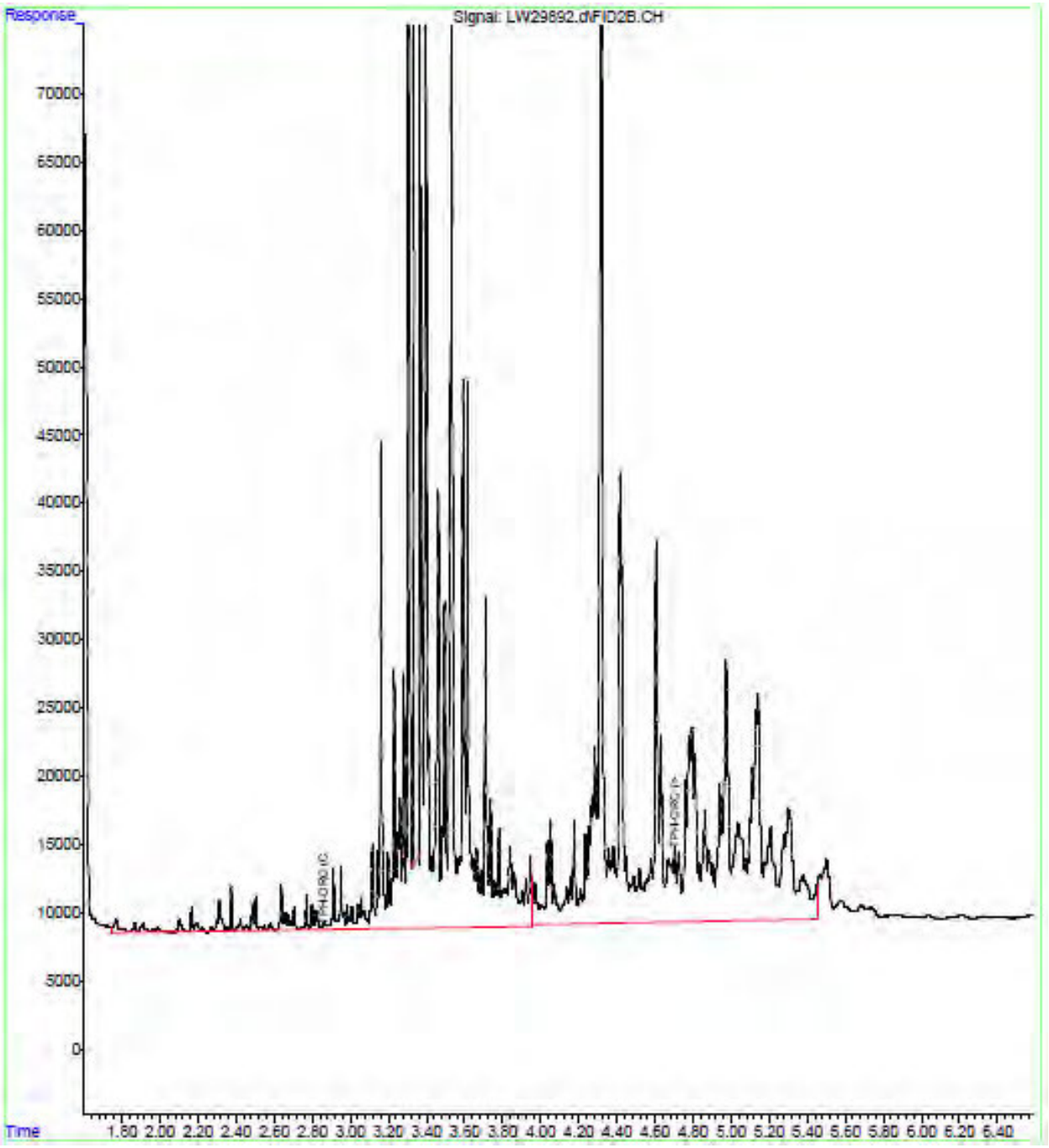


**Figure 2. Retention Time Marker Standard with Carbon Numbers**

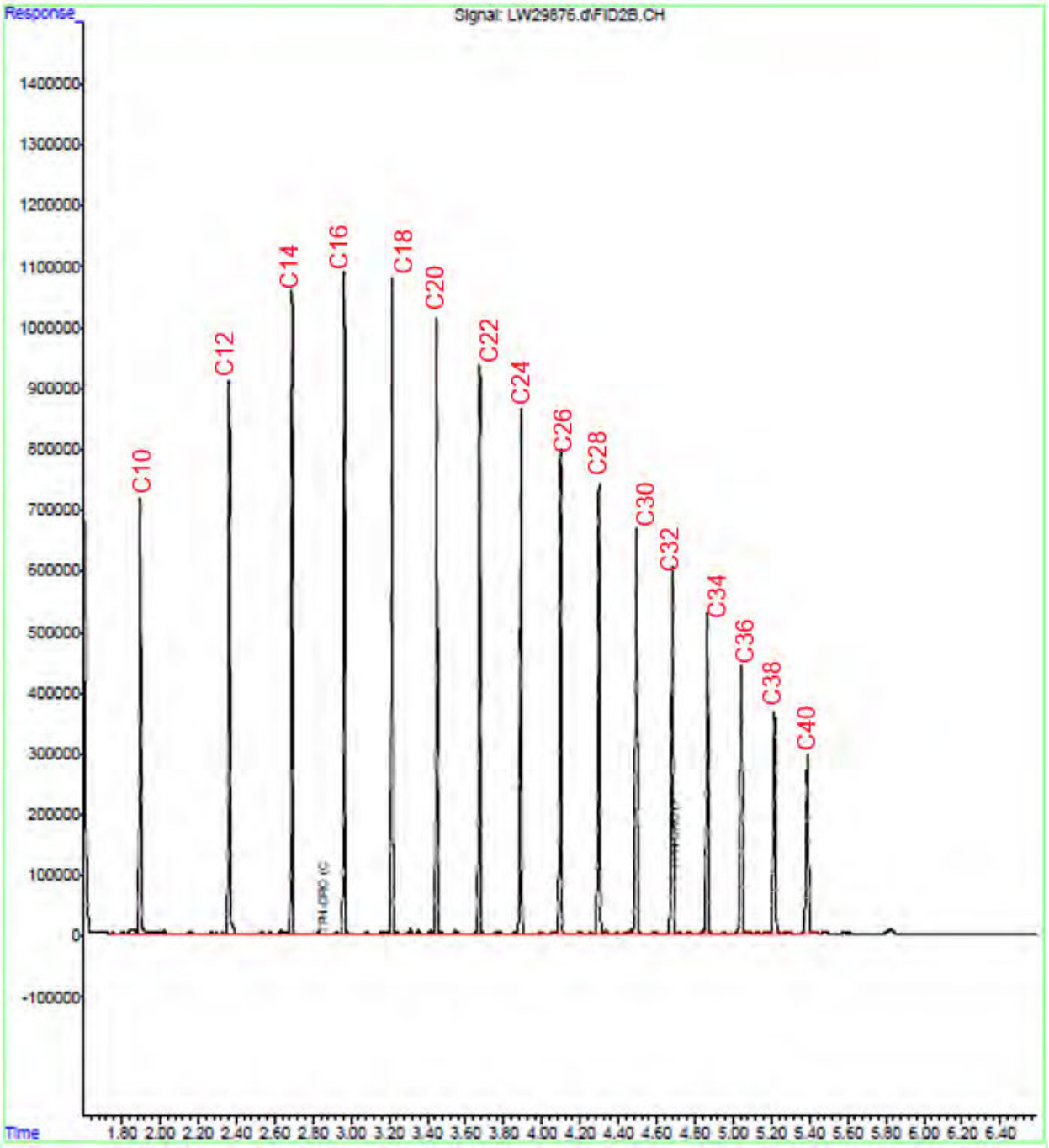


**Figure 3. JP-5 Standard**

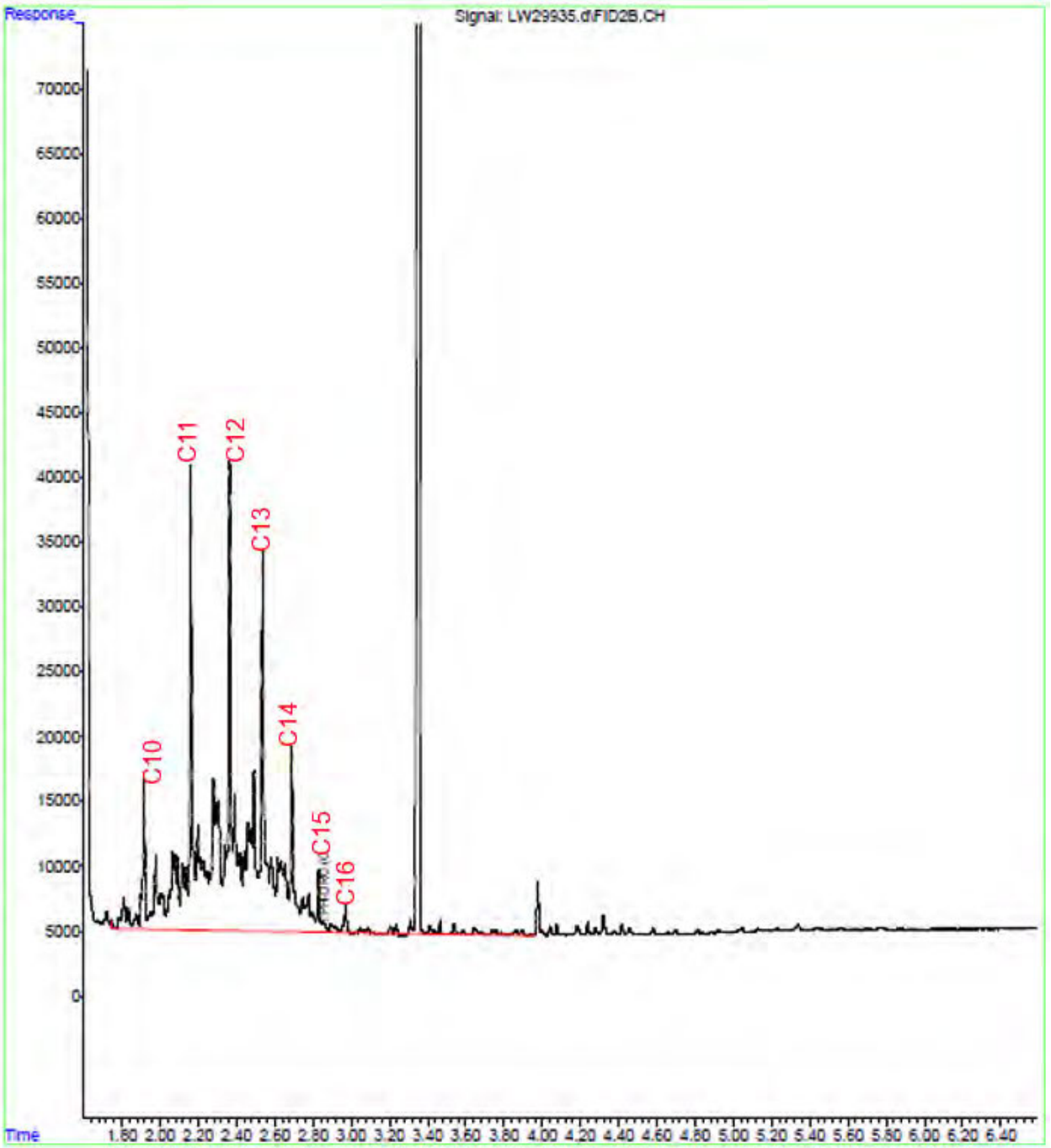


**Figure 4. Sample DA65858-5, A3-TW-0016716-24092-N (black), Overlayed with RT Standard (blue)**

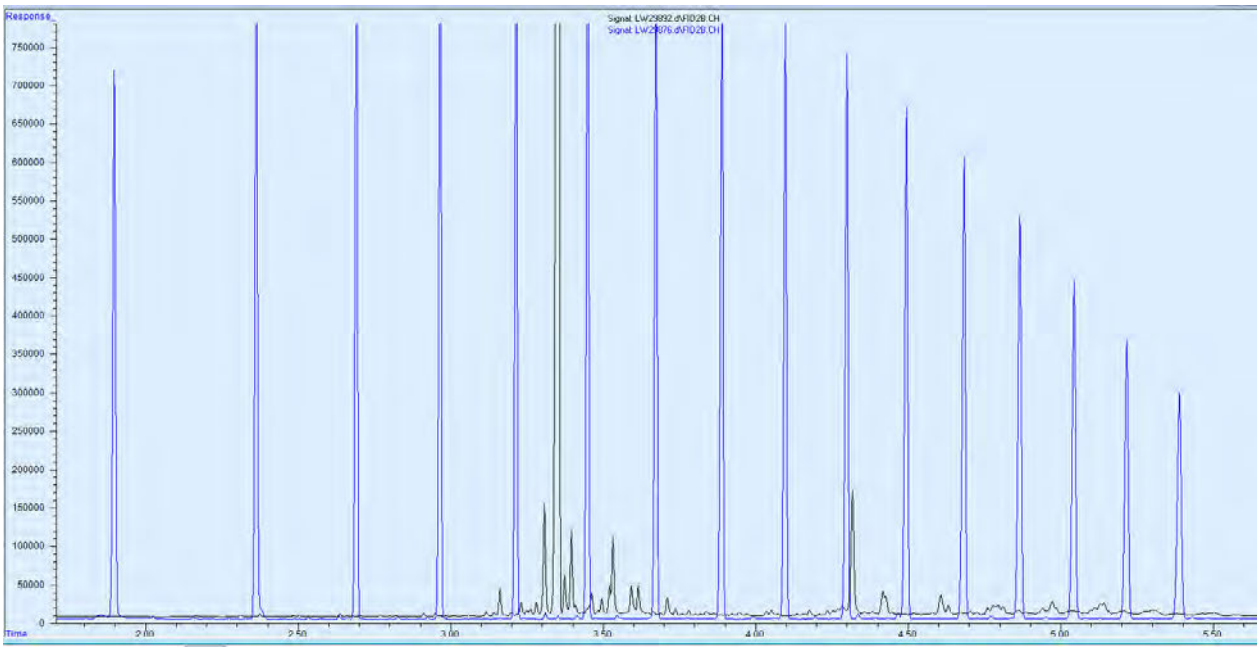



**Figure 5. Sample DA65858-5, A3-TW-0016716-24092-N (black), Overlayed with JP-5 Standard (blue)**

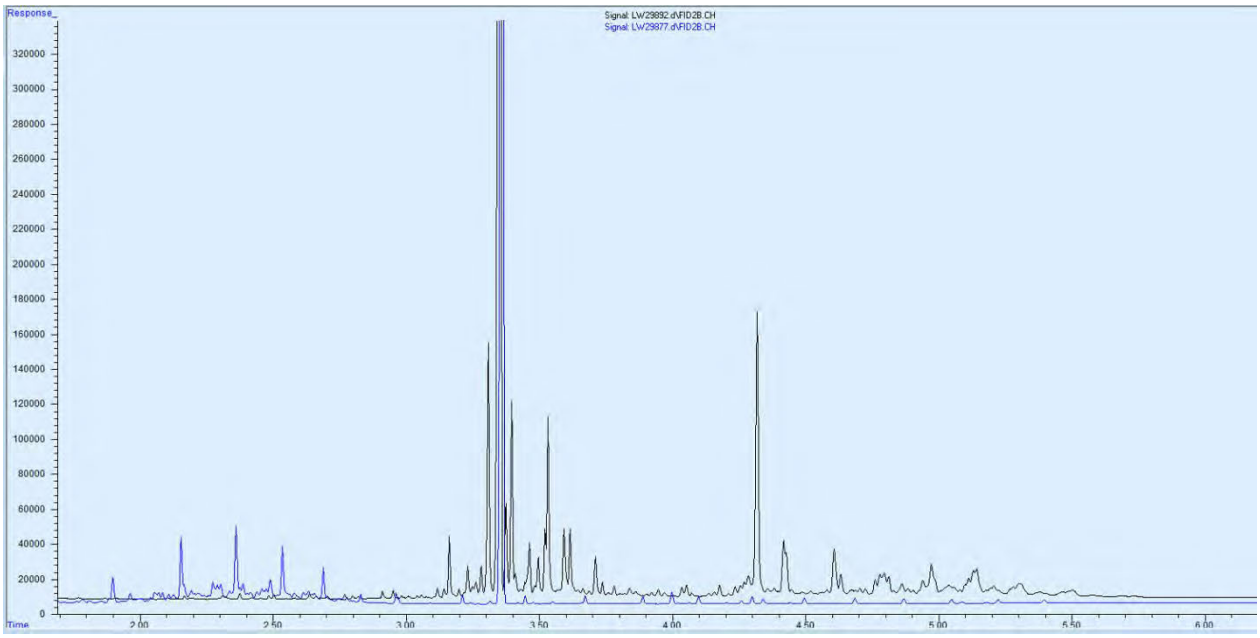


**Figure 6. Sample DA65858-5, A3-TW-0016716-24092-N (black), Overlayed with DRO Standard (blue)**

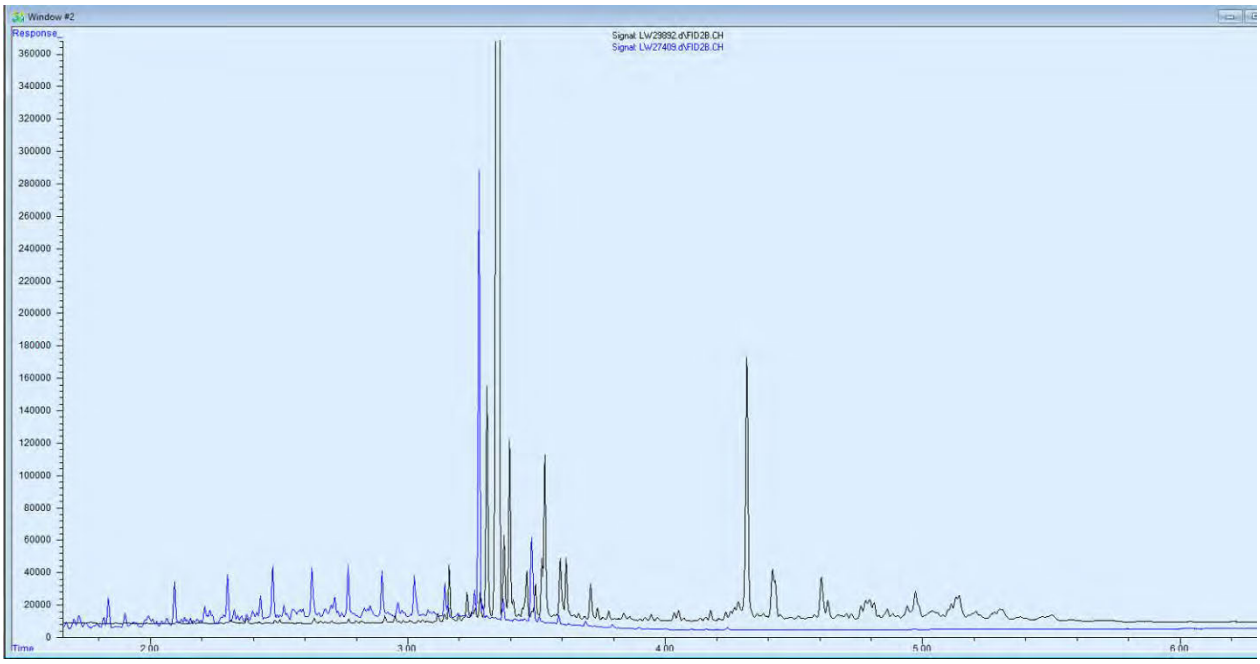
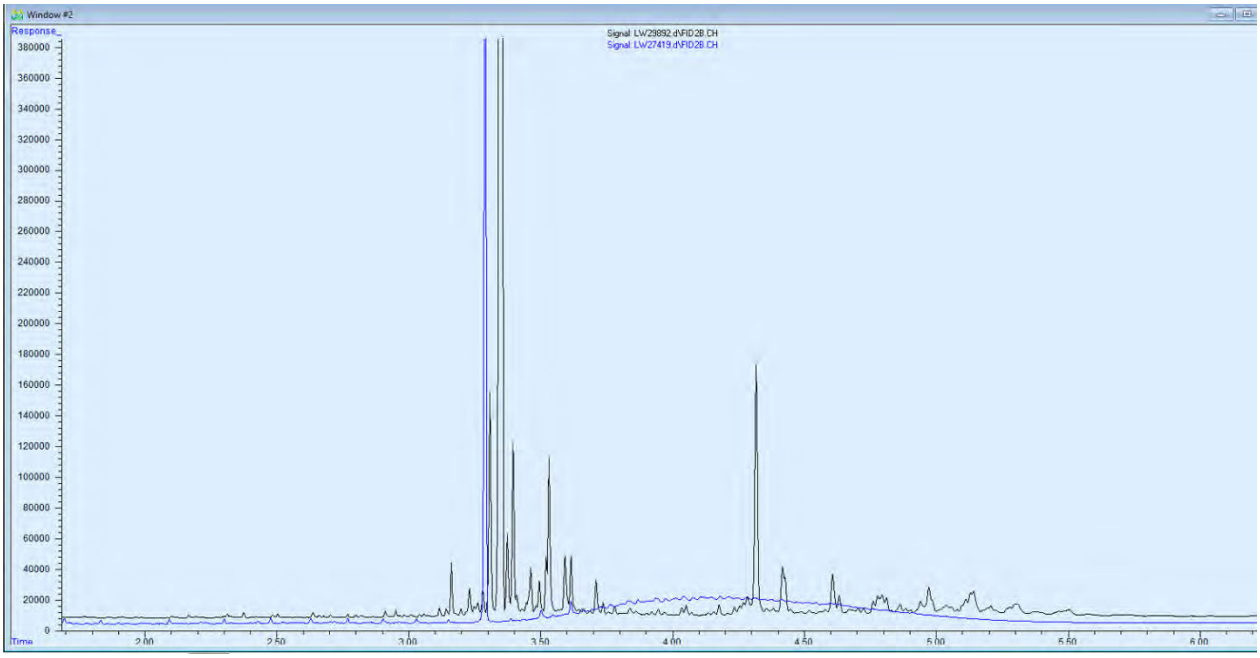



**Figure 7. Sample DA65858-5, A3-TW-0016716-24092-N (black), Overlayed with ORO Standard (blue)**



The sample extract was further evaluated using the Tier 1 mass spectral confirmation procedure outlined in the extended drinking water monitoring (EDWM) plan. The procedure entails analyzing the sample and associated method blank extracts obtained from the original extraction using full scan gas chromatography-mass spectrometry via Method 8270. The resulting total ion chromatograms are evaluated as follows:

1. For the sample, retain all peaks that are above a 3:1 signal-to-noise (S:N) ratio.
2. For peaks retained from Step 1, retain all peaks that have a response greater than five times that found in the method blank.
3. Obtain the mass spectrum and perform a background subtraction (including all blank contamination present below the method reporting limit/method detection limit) for each peak retained from Step 2.
4. Perform a Tentatively Identified Compound (TIC) search evaluation on each peak retained from Step 3 by comparing the corrected mass spectrum to a National Institute of Standards and Technology mass spectral library. Retain the top five probability matches for each. Retain a list of all TICs with an 80 percent probability match or higher.
5. Evaluate chromatograms, Extraction Limited Ion Profile Screening (ELIPS), and additional chemistry data from the laboratory to determine if the detected TPH is JP-5/other fuel-related analytes or is associated TPH-O, and/or with “naturally occurring” hydrocarbons.

The results of this evaluation further support the conclusion that the TPH detection is due to the presence of artifacts introduced in the laboratory. The ELIPS-selected ion chromatogram reviews did not indicate the presence of specific known petroleum-related chemicals at concentrations confirming the presence of fresh or weathered petroleum-derived fuel products. The presence of identified phthalates, squalene, fatty acids (from tetradecanoic to heptadecanoic, plus 7ctadic-8-enoic acid) and many siloxanes indicates that accidental contamination from skin or laboratory glove contact during laboratory sample preparation is the most likely cause of the DRO and ORO detections.

Sample volume was submitted to (b) (4) , Massachusetts, for the Tier 2 analyses identified in the EDWM plan, specifically paraffins, isoparaffins, aromatics, naphthenes, and olefins (PIANO) volatile organics by SW-846 Method 8260D, parent and alkylated polynuclear aromatic hydrocarbons (P&A PAHs) by SW-846 Method 8270E with selected ion monitoring, and saturated hydrocarbons by SW-846 Method 8015D (modified). All results were non-detect except for a single detection of 4.31 µg/L of tertiary butanol in the PIANO fraction. This result is well below the laboratory’s reporting limit of 25 µg/L and only slightly above the method detection limit of 3.24 µg/L. Its detection is within the range of instrument noise and is not significant. The complete lack of any C9-C40 hydrocarbon detections or unresolved complex mixture supports the conclusion that the original detection was the result of incidental contamination in the field or laboratory, and not from the sampled tap water.

AECOM has concluded that the chromatographic evidence from the original, Tier 1, and Tier 2 analyses points to incidental contamination of the original sample with a mixture of compounds unrelated to JP-5 or any other fuel product. It is not known with certainty whether the artifact was introduced in the field or in the laboratory; however, AECOM concludes that the most likely source was incidental contact in the laboratory during sample preparation.

There is no evidence of a systematic contamination issue in the laboratory. Method blanks have been free of DRO and ORO detections, and laboratory contamination has been suspected in fewer than five of the more than 2000 samples collected under EDWM to date. SGS laboratory management regularly reviews good laboratory practices, including steps necessary to minimize incidental contamination, with laboratory personnel. On August 8, 2024, AECOM requested that the laboratory again review these practices with all staff. SGS agreed and will provide AECOM with documentation of attendance. No additional action is recommended at this time.

Questions regarding this letter should be addressed to the AECOM project manager, (b) (6)

Yours sincerely,

(b) (6)

(b) (6)
Senior Project Chemist
(b) (6)

CLEAN Program Manager

Attachments
Attachment 1 Tier 1 Evaluation, Sample DA65858-5, A3-TW-0016716-24092-N

AECOM

August 13, 2024

# Appendix A Attachment 1 Tier 1 Evaluation, Sample DA65858-5, A3-TW-0016716-24092-N

# Appendix C. Tier 1 Analysis Tech Memos

**Attachment 1:**

**Tier 1 Evaluation, Sample A3-TW-0016716-24092-N**

**(Laboratory ID: DA65858-5)**

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\Users\J[redacted]\Desktop\AECOM\AECOM screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : [redacted]
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 26 19:34:33 2024
Quant Method : C:\Users[redacted]\Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration

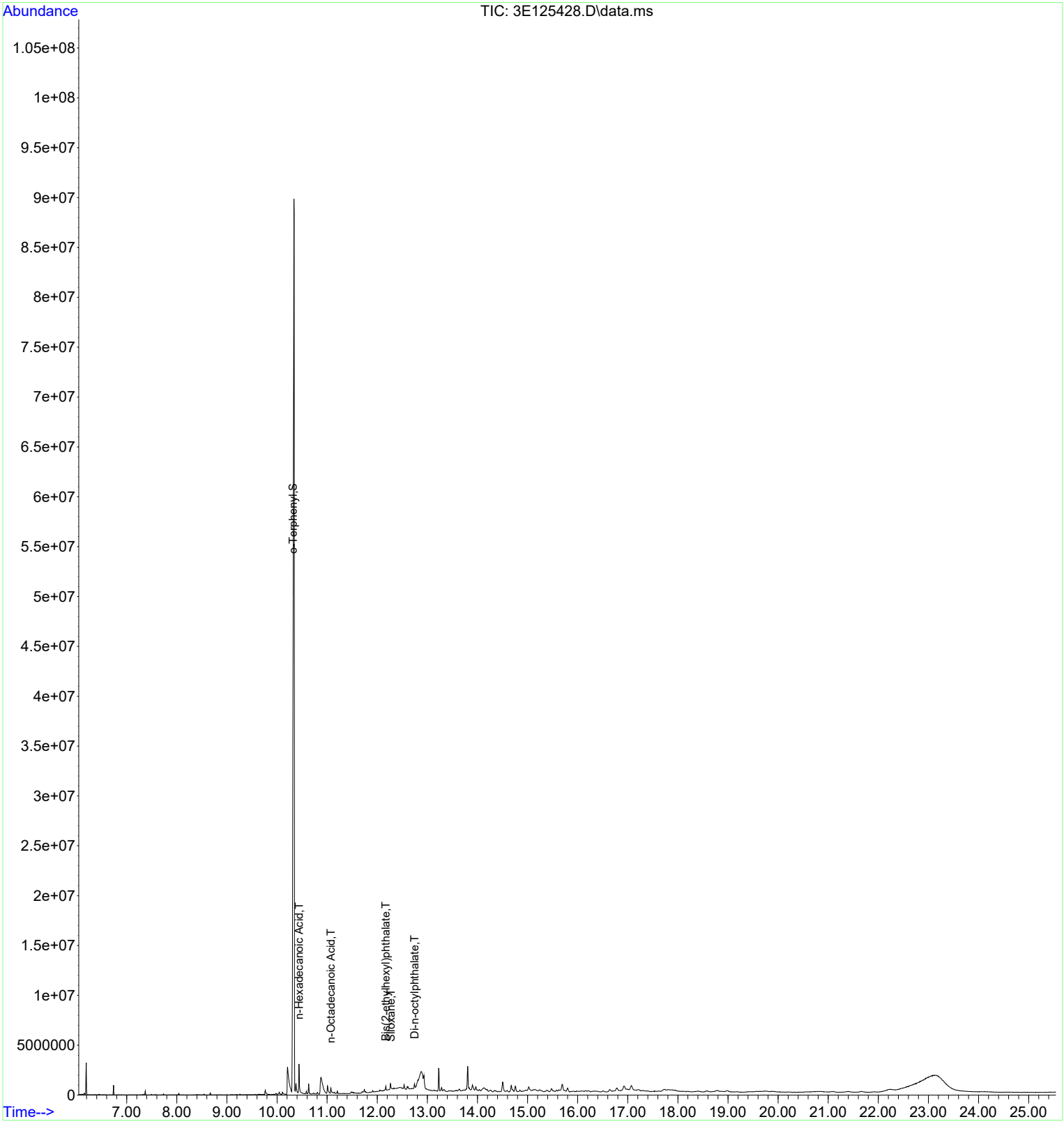
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 17) o-Terphenyl | 10.321 | 230 | 18481051m | 18481051.00 | | -0.13 |
| Target Compounds | | | | | | Qvalue |
| 1) Undecane (C11) | 0.000 | | 0 | N.D. | d | |
| 2) Diethylnaphthalene | 0.000 | | 0 | N.D. | | |
| 3) 1-Methylnaphthalene | 0.000 | | 0 | N.D. | | |
| 4) 1-Ethylpropylbenzene | 0.000 | | 0 | N.D. | | |
| 5) Cyclohexane | 0.000 | | 0 | N.D. | | |
| 6) Tridecane (C13) | 0.000 | | 0 | N.D. | d | |
| 7) Dodecane (C12) | 0.000 | | 0 | N.D. | d | |
| 8) Sesquiterpanes | 0.000 | | 0 | N.D. | | |
| 9) Benzocyclohexane | 0.000 | | 0 | N.D. | | |
| 10) Propylbutylbenzene | 0.000 | | 0 | N.D. | | |
| 11) Cyclic Isoprenoid | 0.000 | | 0 | N.D. | | |
| 12) Trimethylbenzene | 0.000 | | 0 | N.D. | | |
| 13) Bromo-Xa | 0.000 | | 0 | N.D. | | |
| 14) Bromo-Xb | 0.000 | | 0 | N.D. | | |
| 15) n-Hexadecanoic Acid | 10.439 | 256 | 31901m | 31901.00 | | |
| 16) n-Octadecanoic Acid | 11.075 | 284 | 12666m | 12666.00 | | |
| 18) Bromo-o-Terphenyl | 0.000 | | 0 | N.D. | | |
| 19) Chloro-o-Terphenyl | 0.000 | | 0 | N.D. | | |
| 20) n-Alkane | 0.000 | | 0 | N.D. | d | |
| 21) n-Octane (C8) | 0.000 | | 0 | N.D. | d | |
| 22) n-Nonane (C9) | 0.000 | | 0 | N.D. | d | |
| 23) n-Decane (C10) | 0.000 | | 0 | N.D. | d | |
| 24) n-Dodecane (C12) | 0.000 | | 0 | N.D. | d | |
| 25) n-Tetradecane (C14) | 0.000 | | 0 | N.D. | d | |
| 26) n-Hexadecane (C16) | 0.000 | | 0 | N.D. | d | |
| 27) n-Octadecane (C18) | 0.000 | | 0 | N.D. | d | |
| 28) n-Eicosane (C20) | 0.000 | | 0 | N.D. | d | |
| 29) n-Heneicosane (C21) | 0.000 | | 0 | N.D. | d | |
| 30) n-Docosane (C22) | 0.000 | | 0 | N.D. | d | |
| 31) n-Tricosane (C23) | 0.000 | | 0 | N.D. | d | |
| 32) n-Tetracosane (C24) | 0.000 | | 0 | N.D. | d | |
| 33) n-Pentacosane (C25) | 0.000 | | 0 | N.D. | d | |
| 34) n-Hexacosane (C26) | 0.000 | | 0 | N.D. | d | |
| 35) n-Heptacosane (C27) | 0.000 | | 0 | N.D. | d | |
| 36) n-Octacosane (C28) | 0.000 | | 0 | N.D. | d | |
| 37) n-Nonacosane (C29) | 0.000 | | 0 | N.D. | d | |
| 38) n-Triacontane (C30) | 0.000 | | 0 | N.D. | d | |
| 39) n-Doatriacontane (C32) | 0.000 | | 0 | N.D. | d | |
| 40) n-Tetratriacontane (C34) | 0.000 | | 0 | N.D. | d | |
| 41) n-Hexatriacontane (C36) | 0.000 | | 0 | N.D. | d | |
| 42) n-Octatriacontane (C38) | 0.000 | | 0 | N.D. | d | |
| 43) n-Tetracontane (C40) | 0.000 | | 0 | N.D. | d | |
| 44) Siloxane | 12.273 | 429 | 778026m | 778026.00 | | |
| 45) Butyl benzyl phthalate | 0.000 | | 0 | N.D. | d | |
| 46) Bis(2-ethylhexyl)phtha... | 12.172 | 149 | 129114m | 129114.00 | | |
| 47) Di-n-octylphthalate | 12.744 | 149 | 39654m | 39654.00 | | |
| 48) Diethyl Phthalate | 0.000 | | 0 | N.D. | | |

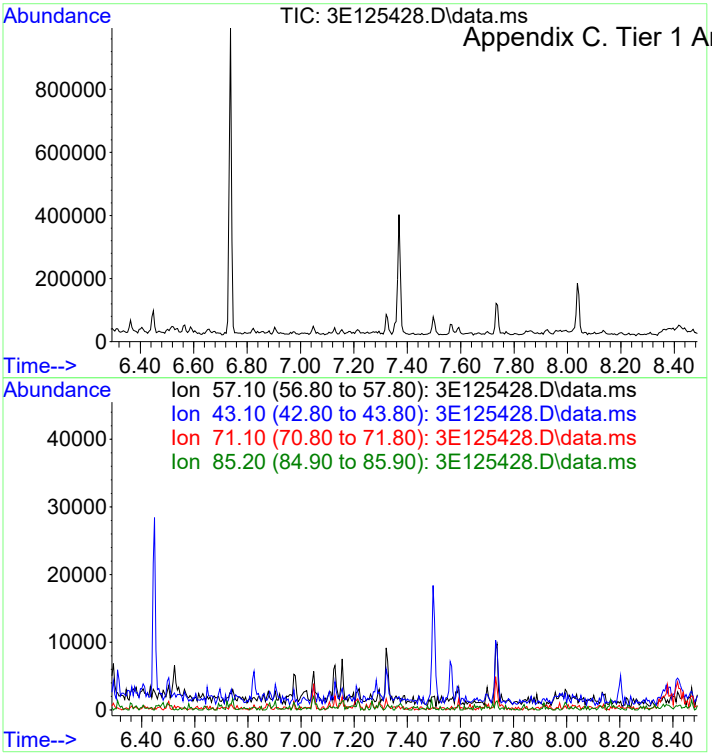
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\Users\(b) (6) \Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 26 19:34:33 2024
Quant Method : C:\Users\(b) (6) \Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration



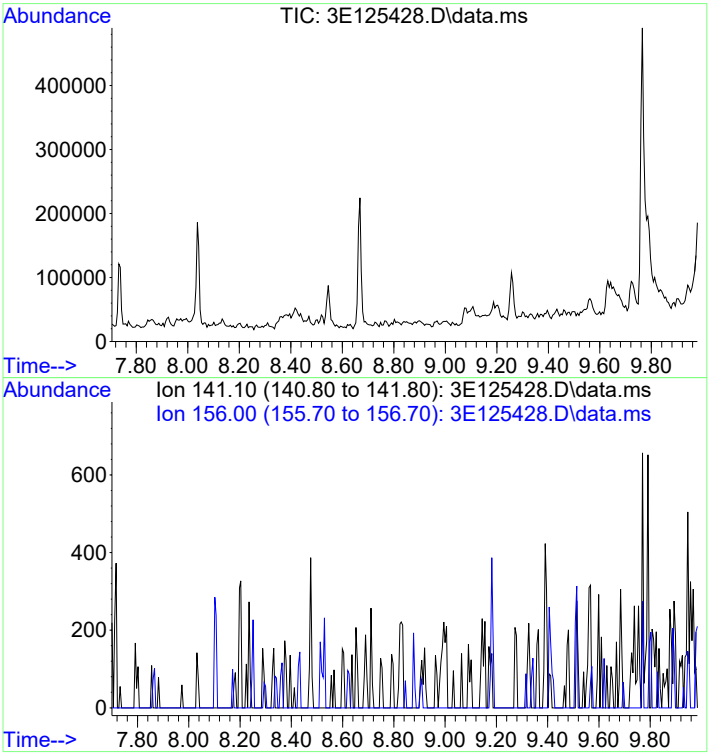



#1
Undecane (C11)
Concen: N.D.
Expected RT: 7.39 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 15.7 |
| 71 | 6.9 |
| 85 | 0.0 |

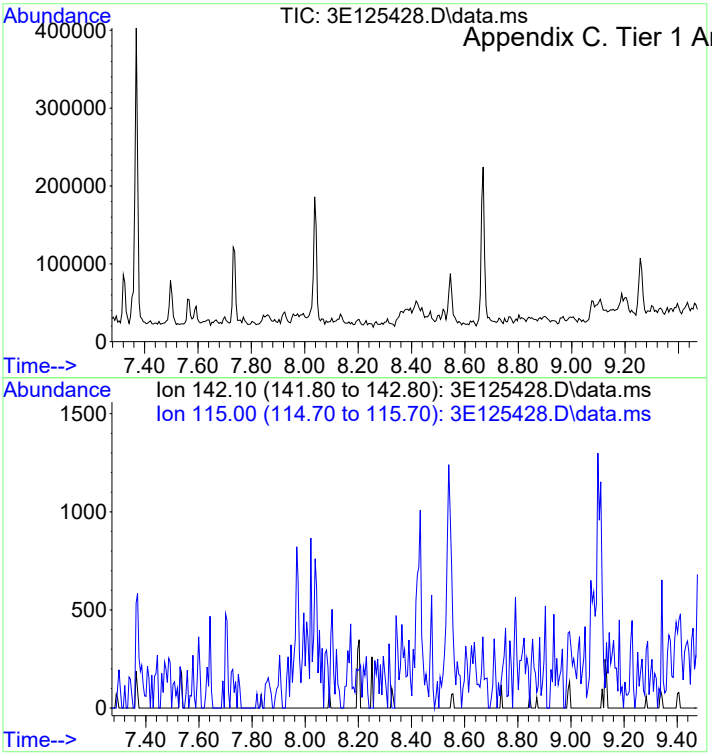



#2
Diethylnaphthalene
Concen: N.D.
Expected RT: 8.80 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 141

| Sig | Exp Ratio |
|---|---|
| 141 | 100 |
| 156 | 0.0 |

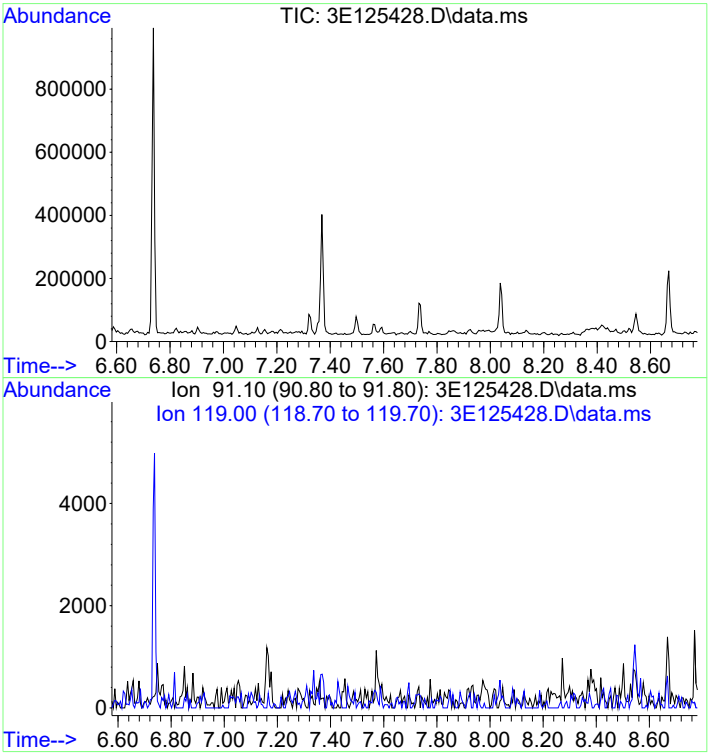



#3
1-Methylnaphthalene
Concen: N.D.
Expected RT: 8.37 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 142

| Sig | Exp Ratio |
|---|---|
| 142 | 100 |
| 115 | 0.0 |

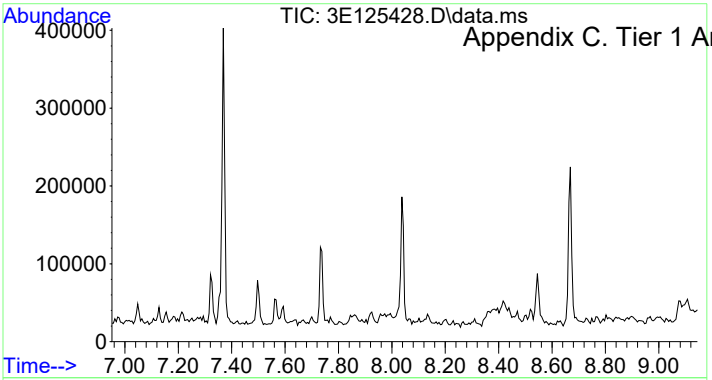


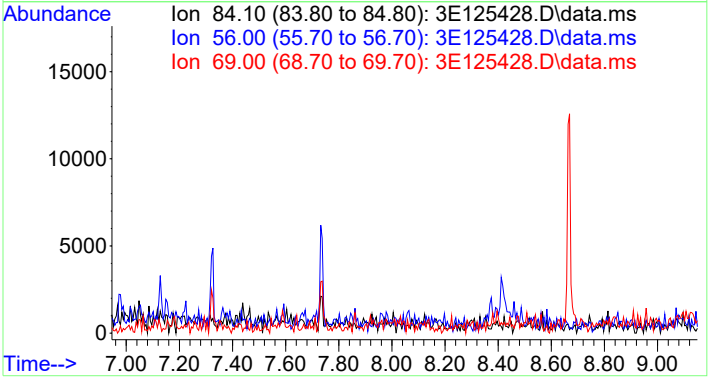

#4
1-Ethylpropylbenzene
Concen: N.D.
Expected RT: 7.68 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 91

| Sig | Exp Ratio |
|---|---|
| 91 | 100 |
| 119 | 0.0 |



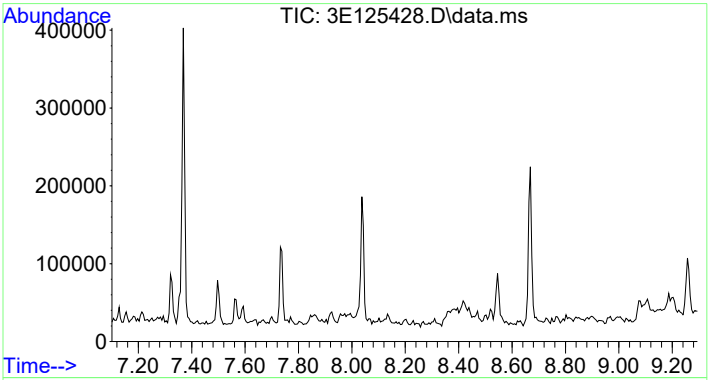



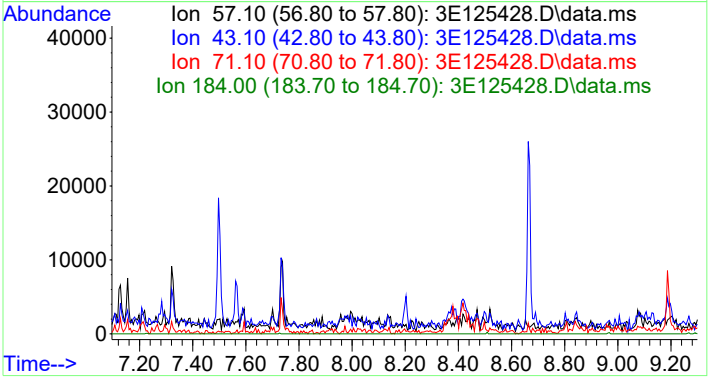

#5
cyclohexane
Concen: N.D.
Expected RT: 8.05 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 84

| Sig | Exp Ratio |
|---|---|
| 84 | 100 |
| 56 | 0.0 |
| 69 | 0.0 |



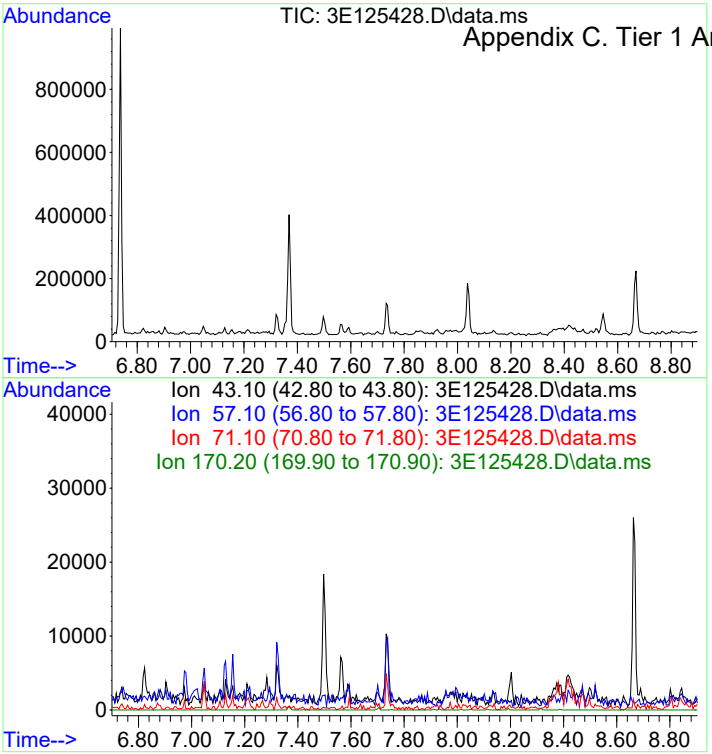




#6
Tridecane (C13)
Concen: N.D.
Expected RT: 8.20 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 6.1 |
| 71 | 0.0 |
| 184 | 0.0 |

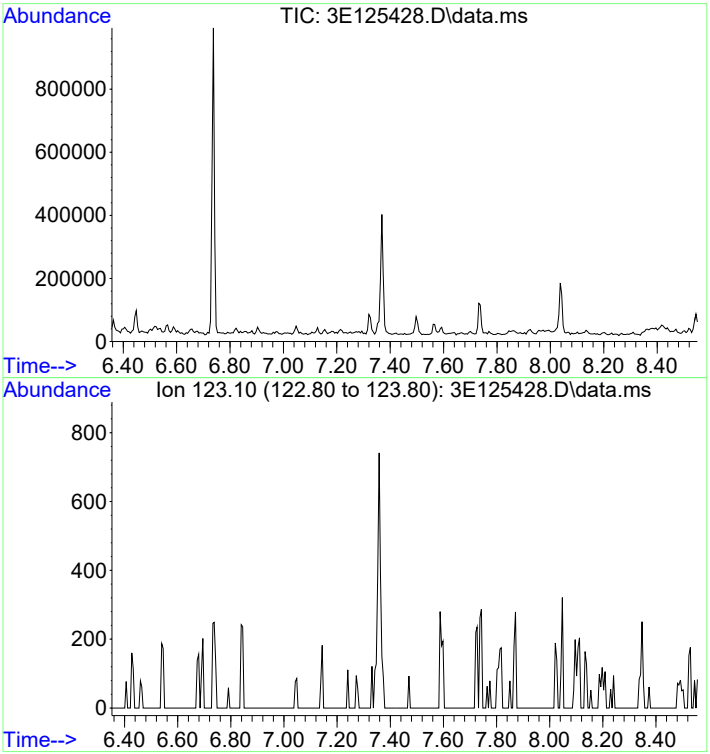



#7
Dodecane (C12)
Concen: N.D.
Expected RT: 7.80 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 43

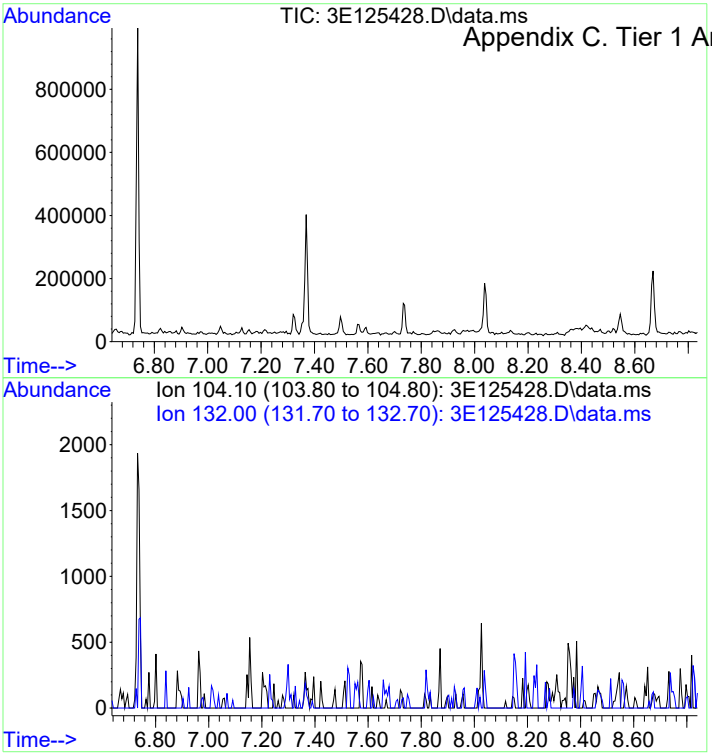
| Sig | Exp Ratio |
|---|---|
| 43 | 100 |
| 57 | 165.0 |
| 71 | 64.9 |
| 170 | 0.0 |




#8
Sesquiterpanes
Concen: N.D.
Expected RT: 7.45 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 123

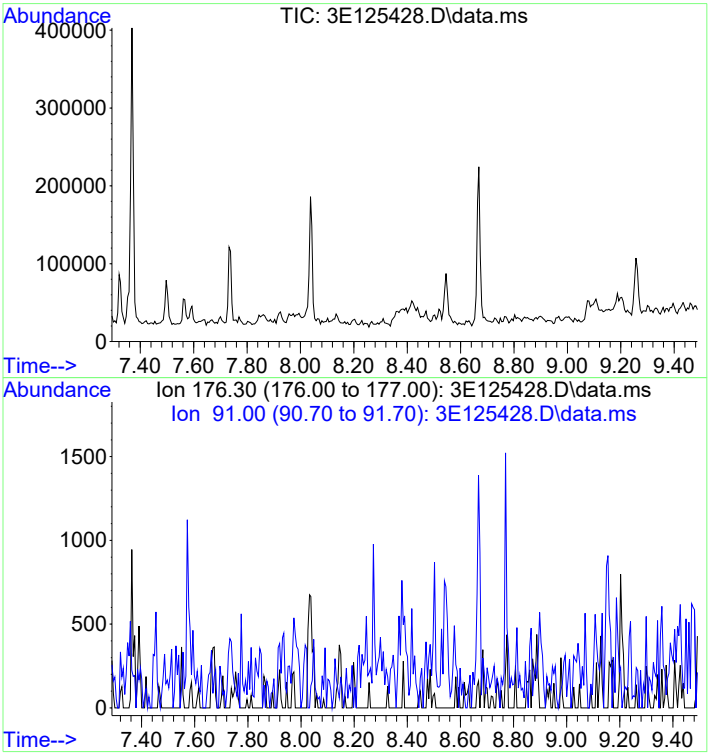



#9
Benzocyclohexane
Concen: N.D.
Expected RT: 7.74 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 104

| Sig | Exp Ratio |
|---|---|
| 104 | 100 |
| 132 | 0.0 |

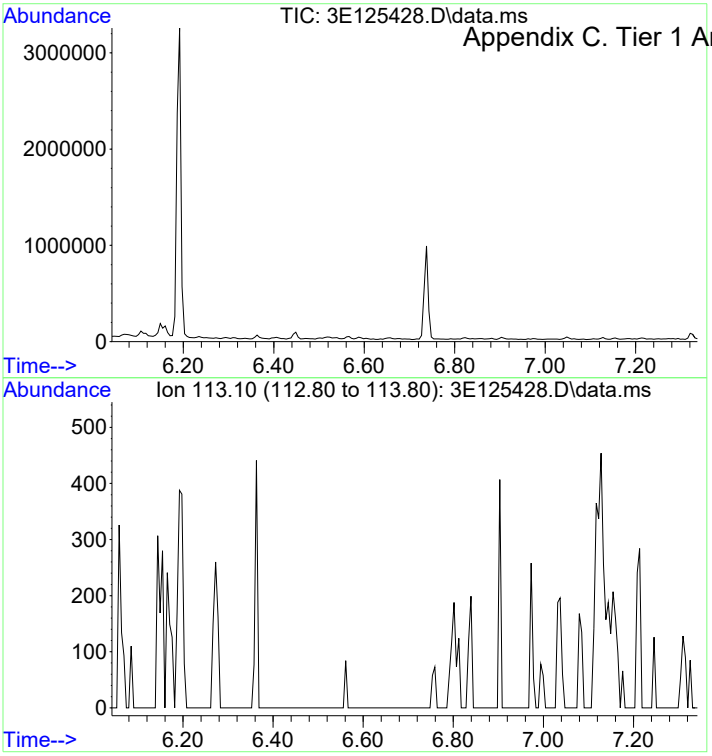



#10
Propylbutylbenzene
Concen: N.D.
Expected RT: 8.39 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 176

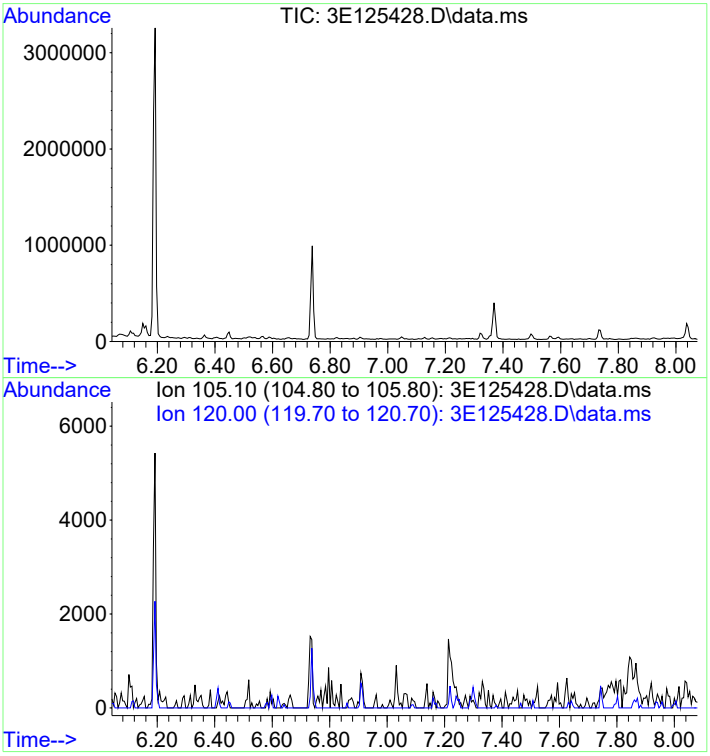
| Sig | Exp Ratio |
|---|---|
| 176 | 100 |
| 91 | 0.0 |




#11
Cyclic Isoprenoid
Concen: N.D.
Expected RT: 6.24 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 113

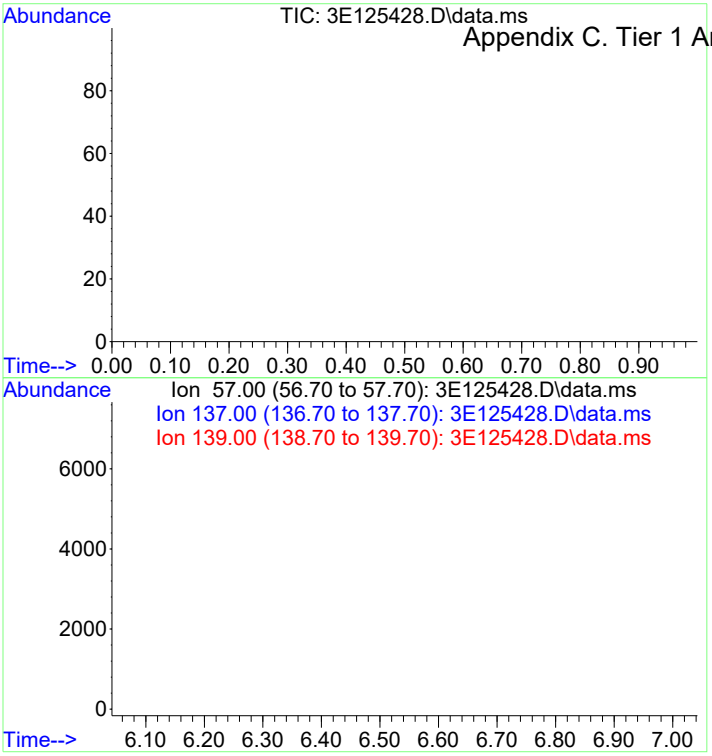



#12
Trimethylbenzene
Concen: N.D.
Expected RT: 6.98 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 105

| Sig | Exp Ratio |
|---|---|
| 105 | 100 |
| 120 | 0.0 |

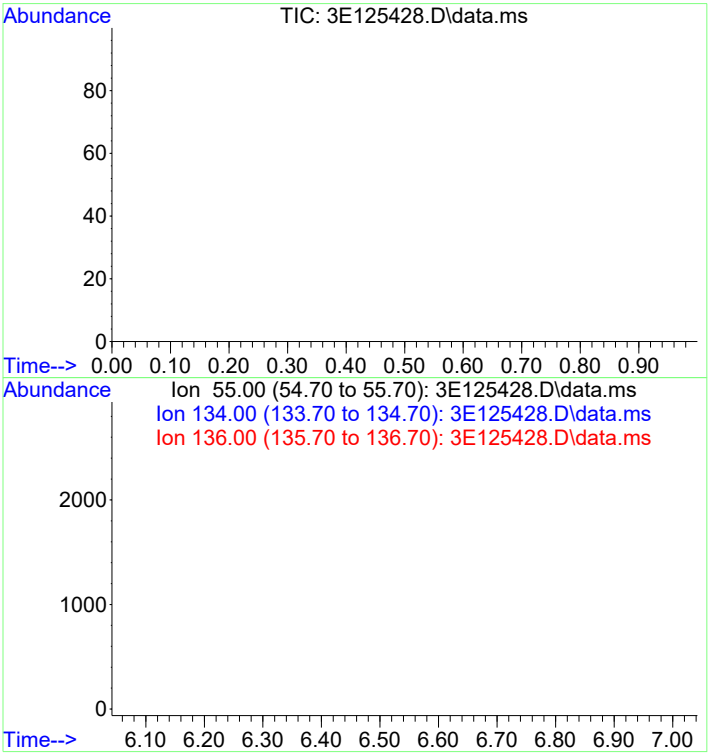



#13
Bromo-Xa
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 137 | 0.0 |
| 139 | 0.0 |

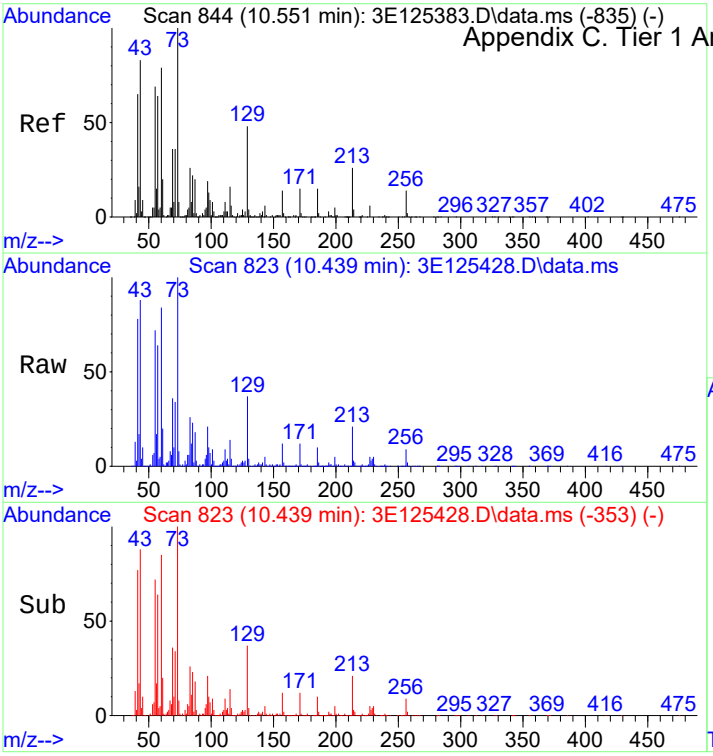



#14
Bromo-Xb
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 55

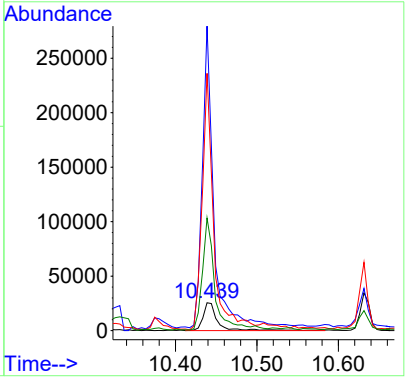
| Sig | Exp Ratio |
|---|---|
| 55 | 100 |
| 134 | 0.0 |
| 136 | 0.0 |

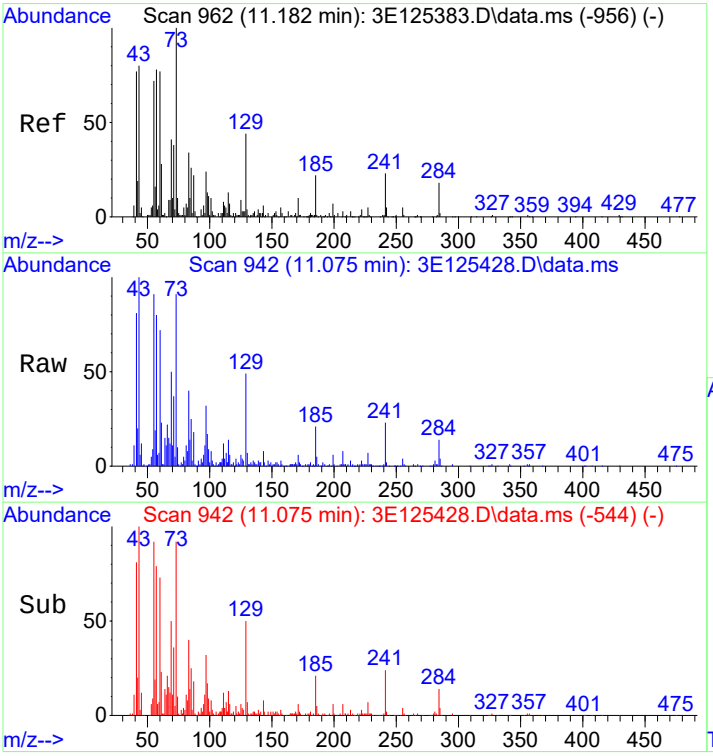



#15
n-Hexadecanoic Acid
Concen: 31901.00 m
RT: 10.439 min Scan# 823
Delta R.T. 2.412 min
Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion:256 Resp: 31901

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 256 | 100 | | |
| 73 | 0.0 | 97.8 | 137.8# |
| 60 | 0.0 | 30.7 | 70.7# |
| 129 | 0.0 | 16.1 | 56.1# |

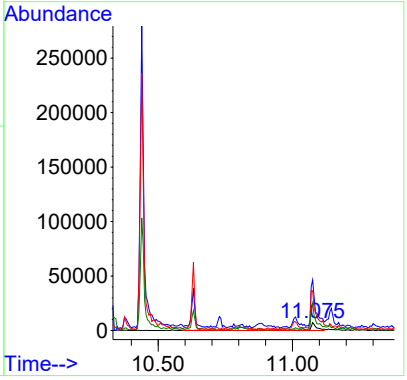


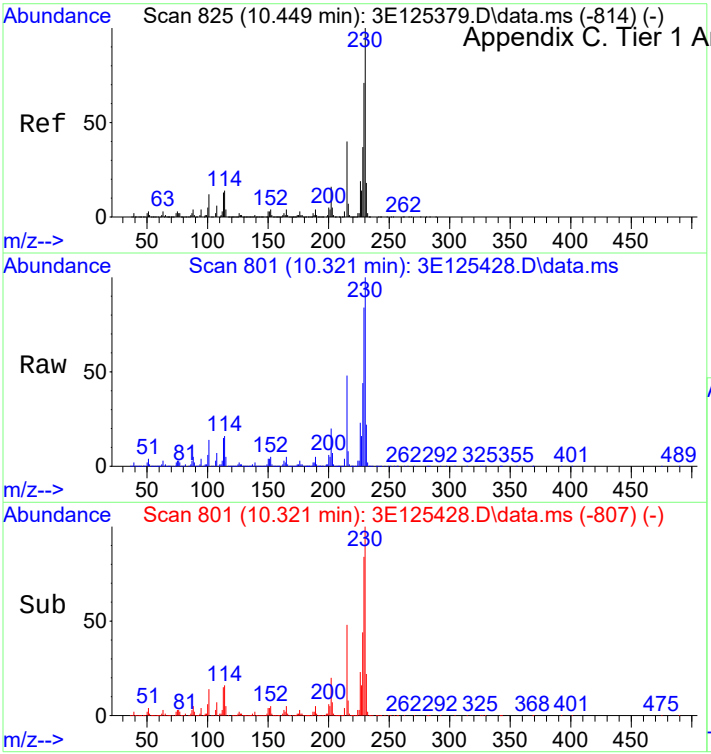




#16
n-Octadecanoic Acid
Concen: 12666.00 m
RT: 11.075 min Scan# 942
Delta R.T. 2.026 min
Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion:284 Resp: 12666

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 284 | 100 | | |
| 73 | 0.0 | 42.7 | 82.7# |
| 60 | 0.0 | 26.4 | 66.4# |
| 129 | 0.0 | 30.0 | 70.0# |

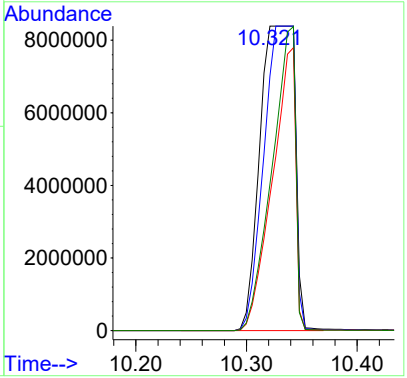


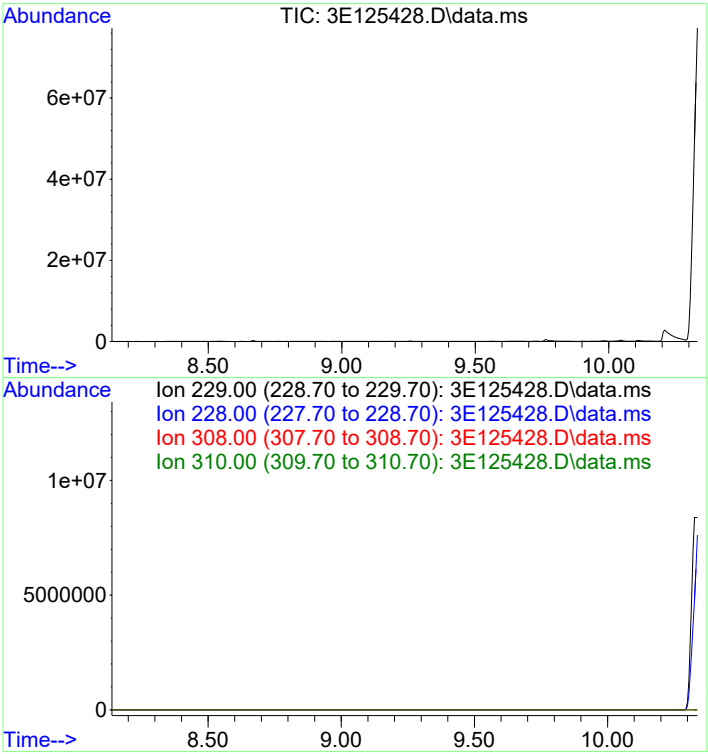



#17
o-Terphenyl
Concen: 18481051.00 m
RT: 10.321 min Scan# 801
Delta R.T. -0.134 min
Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion:230 Resp:18481051

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 230 | 100 | | |
| 229 | 0.0 | 43.0 | 83.0# |
| 228 | 0.0 | 27.3 | 67.3# |
| 215 | 0.0 | 30.0 | 70.0# |



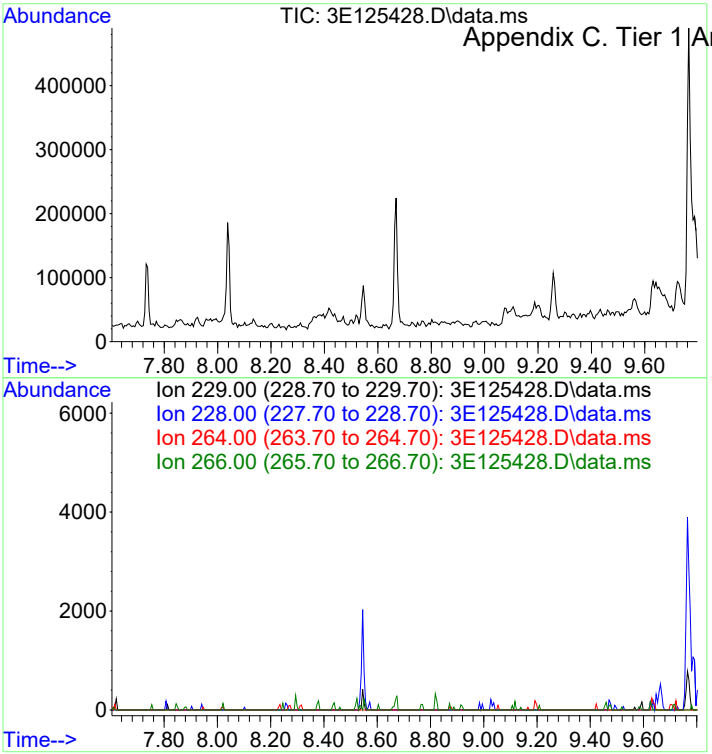




#18
Bromo-o-Terphenyl
Concen: N.D.
Expected RT: 9.24 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 229

| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 135.4 |
| 308 | 79.5 |
| 310 | 0.0 |

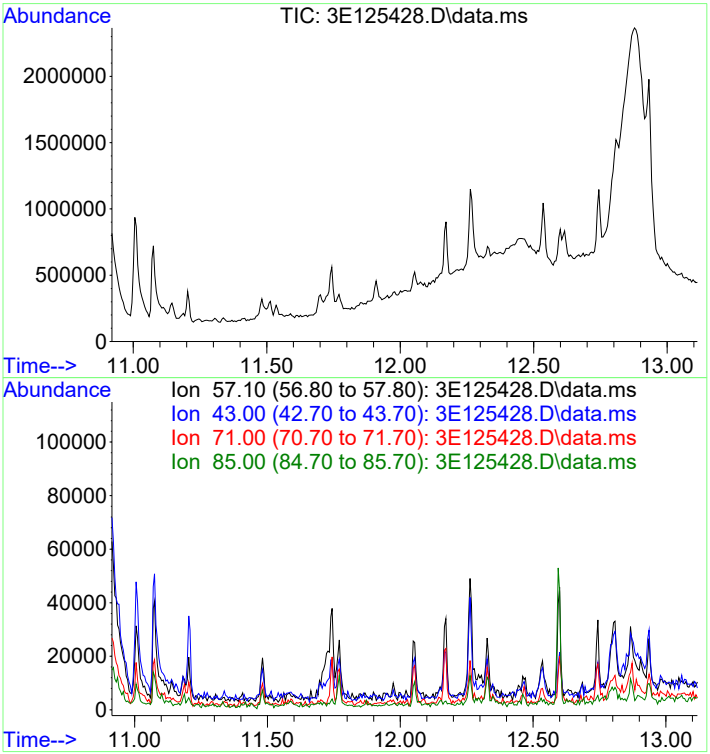



#19
Chloro-o-Terphenyl
Concen: N.D.
Expected RT: 8.70 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 229

| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 63.1 |
| 264 | 48.7 |
| 266 | 0.0 |

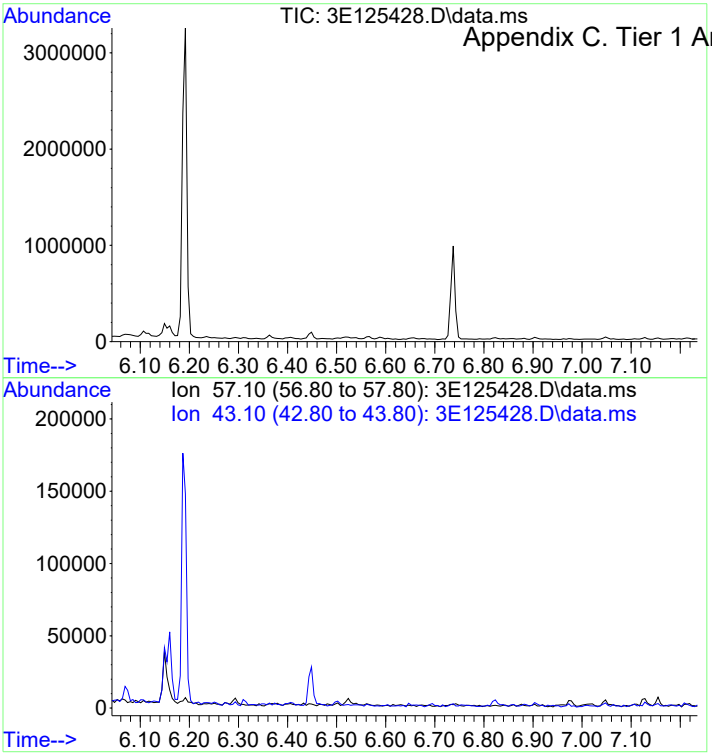



#20
n-Alkane
Concen: N.D.
Expected RT: 12.02 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 0.0 |
| 71 | 182.1 |
| 85 | 0.0 |

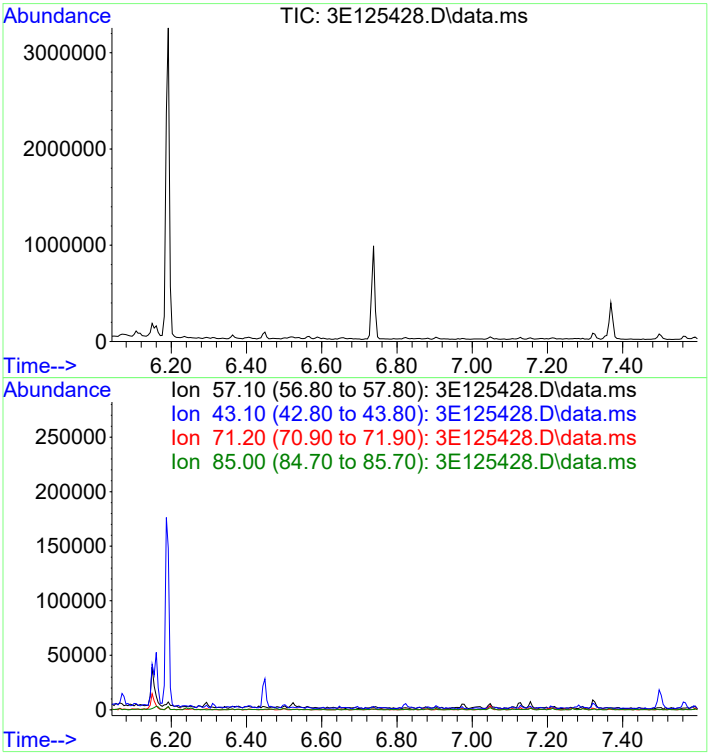



#21
n-Octane (C8)
Concen: N.D.
Expected RT: 6.14 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 235.9 |

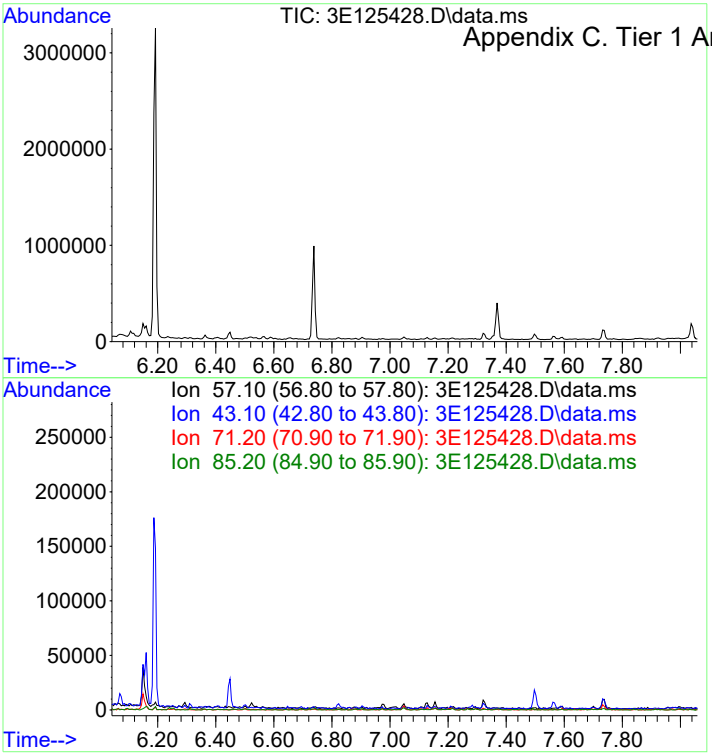



#22
n-Nonane (C9)
Concen: N.D.
Expected RT: 6.50 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 0.1 |
| 71 | 0.1 |
| 85 | 0.0 |

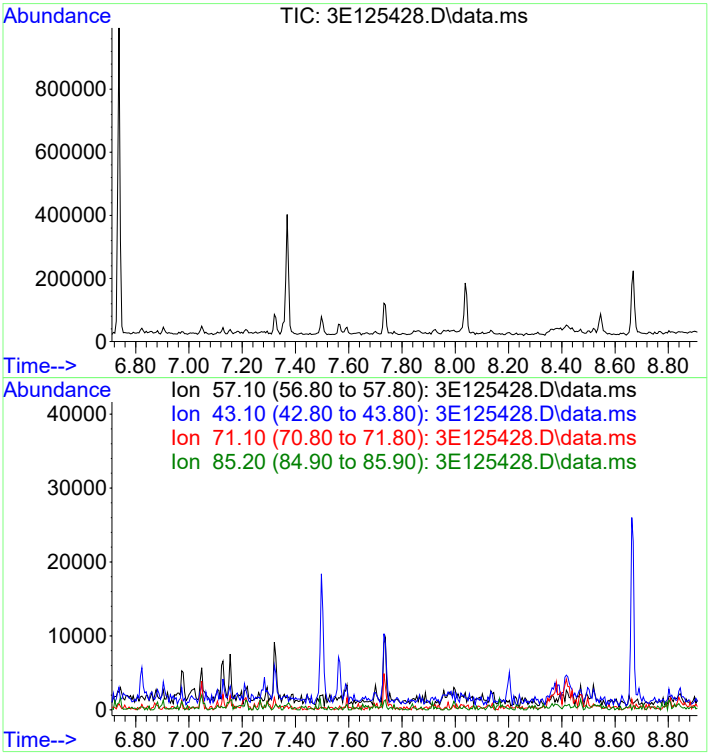



#23
n-Decane (C10)
Concen: N.D.
Expected RT: 6.96 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 90.4 |
| 71 | 39.1 |
| 85 | 27.8 |

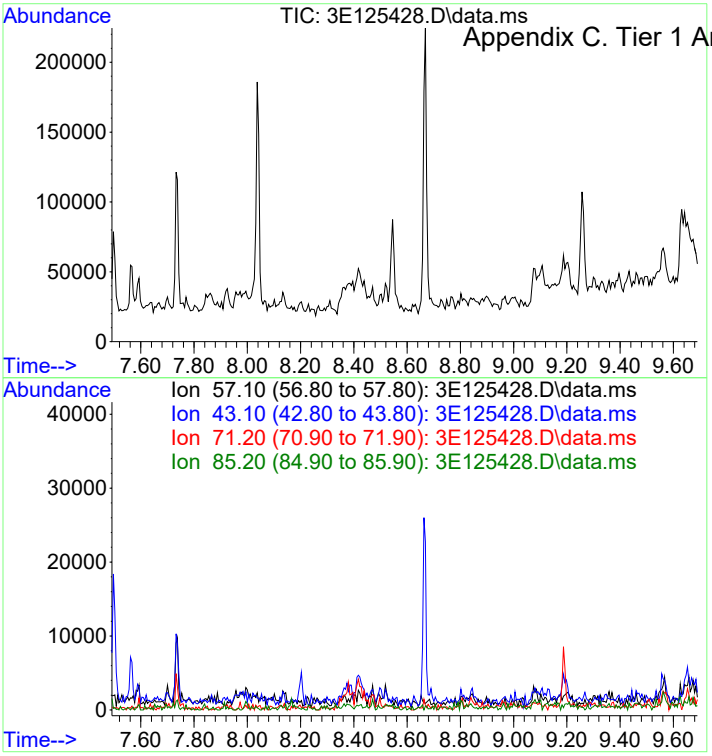



#24
n-Dodecane (C12)
Concen: N.D.
Expected RT: 7.81 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 77.7 |
| 71 | 53.0 |
| 85 | 32.4 |

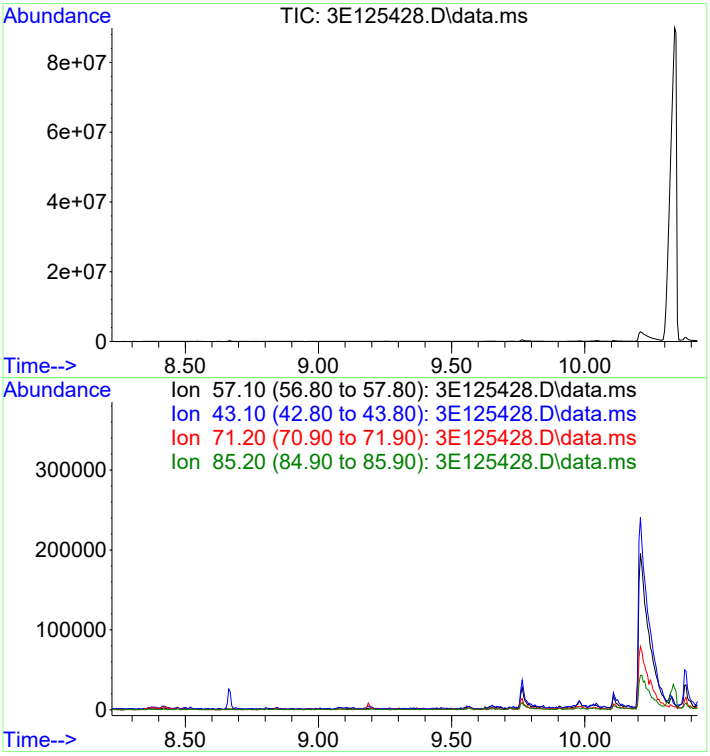



#25
n-Tetradecane (C14)
Concen: N.D.
Expected RT: 8.59 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 72.0 |
| 71 | 60.8 |
| 85 | 40.6 |

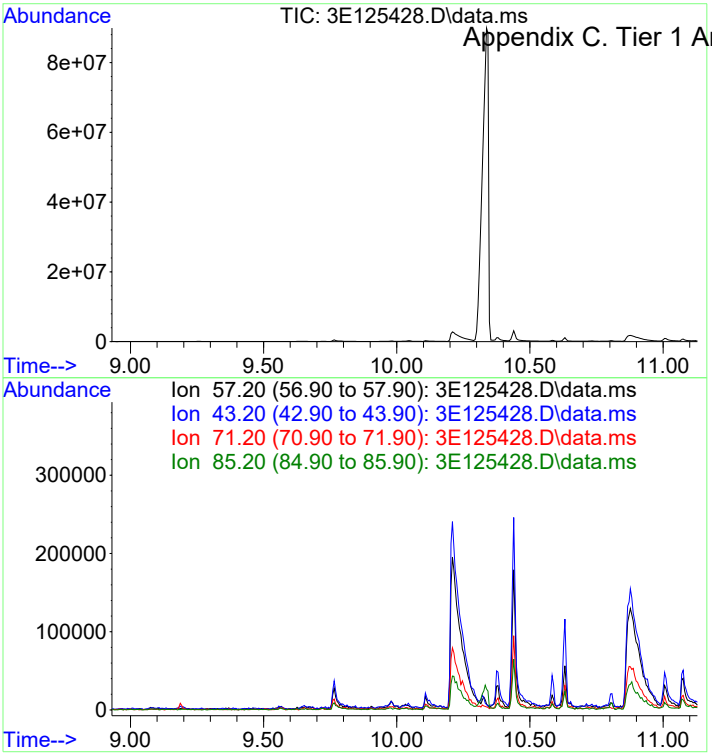



#26
n-Hexadecane (C16)
Concen: N.D.
Expected RT: 9.32 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 68.5 |
| 71 | 65.4 |
| 85 | 46.0 |

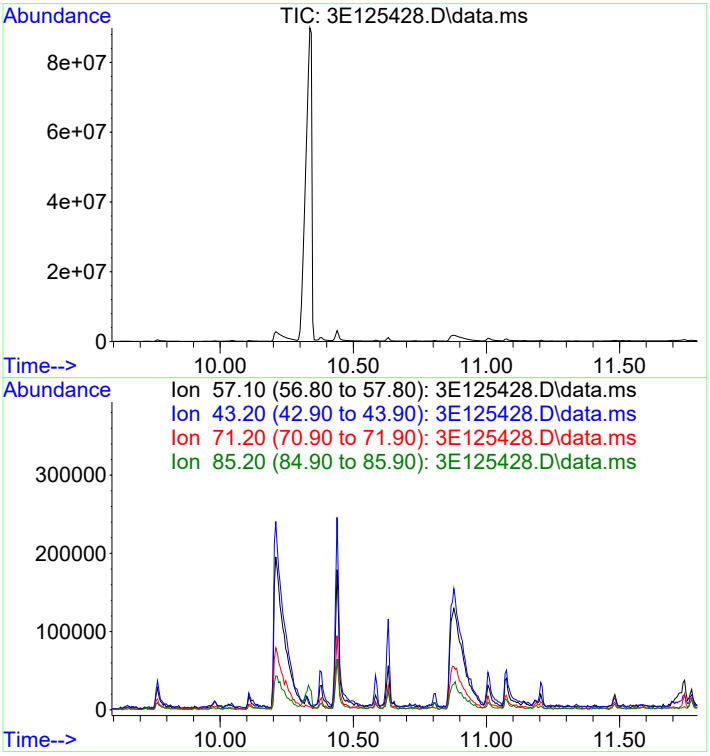



#27
n-Octadecane (C18)
Concen: N.D.
Expected RT: 10.03 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.7 |
| 71 | 68.9 |
| 85 | 49.4 |

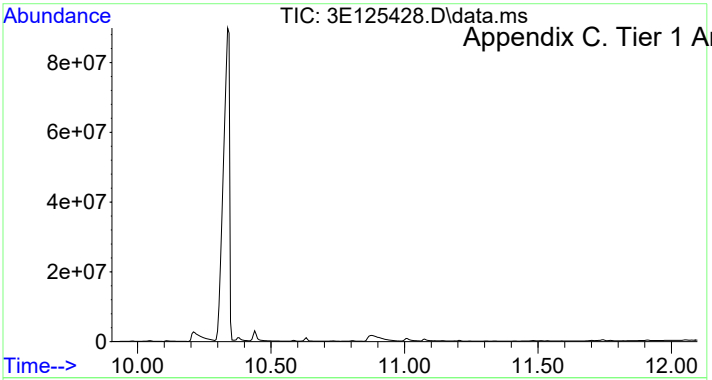


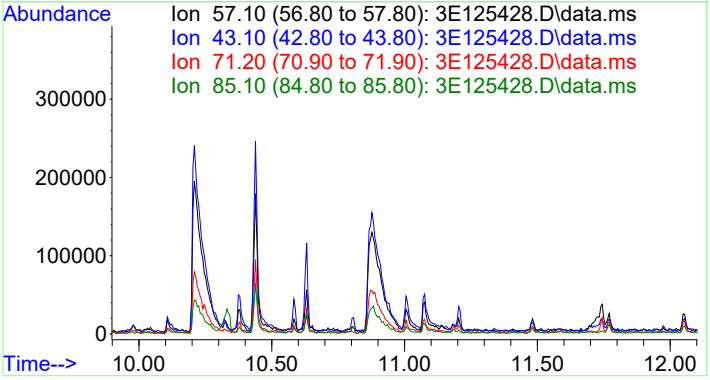

#28
n-Eicosane (C20)
Concen: N.D.
Expected RT: 10.69 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 65.8 |
| 71 | 70.2 |
| 85 | 51.9 |



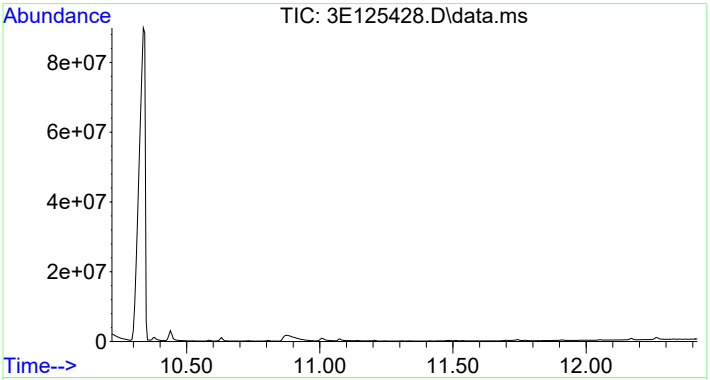



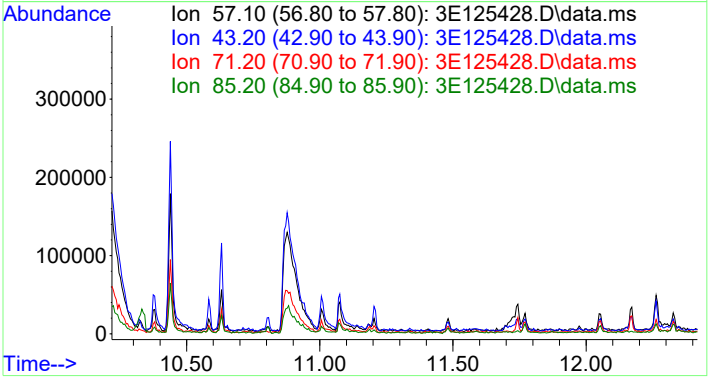

#29
n-Heneicosane (C21)
Concen: N.D.
Expected RT: 11.00 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 65.1 |
| 85 | 51.7 |



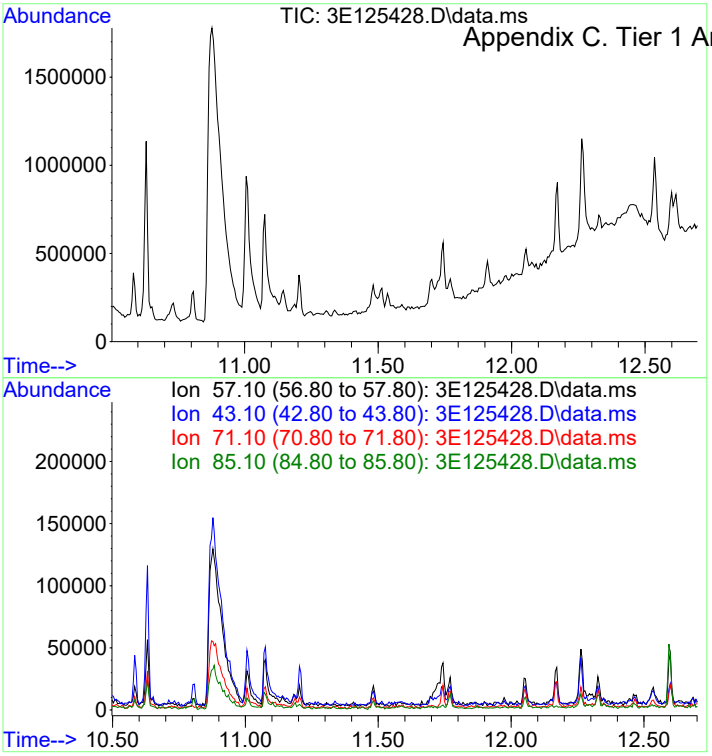




#30
n-Docosane (C22)
Concen: N.D.
Expected RT: 11.32 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.5 |
| 71 | 71.3 |
| 85 | 53.9 |

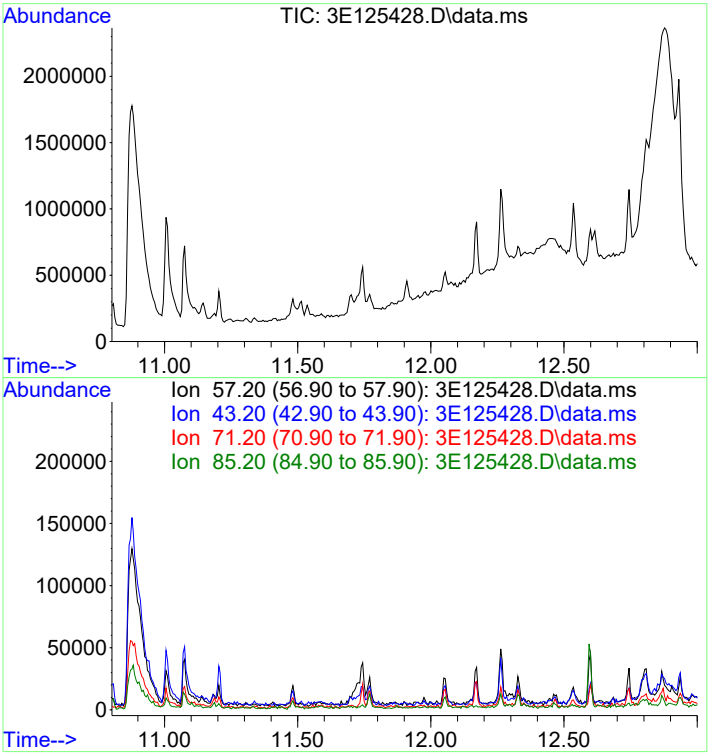



#31
n-Tricosane (C23)
Concen: N.D.
Expected RT: 11.60 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 62.0 |
| 71 | 53.9 |
| 85 | 45.7 |

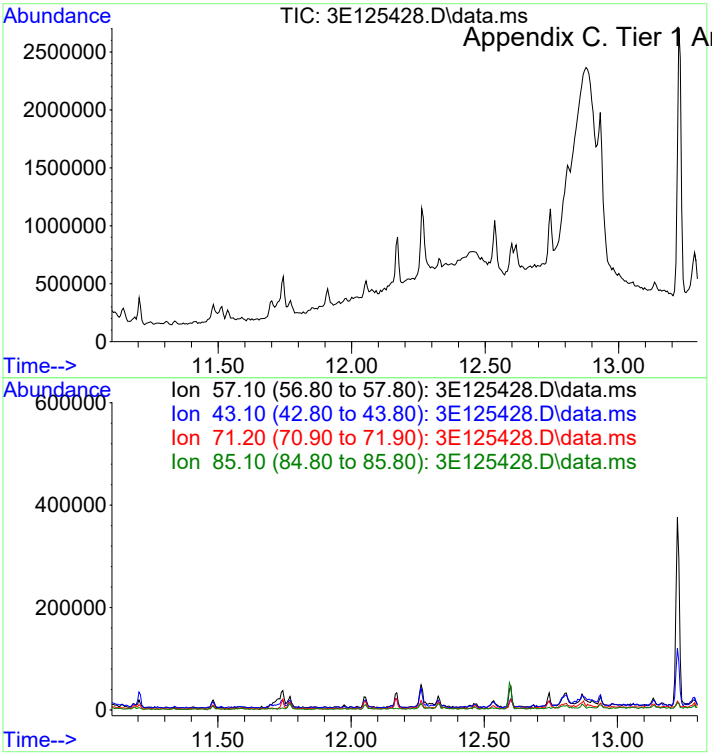



#32
n-Tetracosane (C24)
Concen: N.D.
Expected RT: 11.90 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.4 |
| 71 | 72.3 |
| 85 | 55.2 |

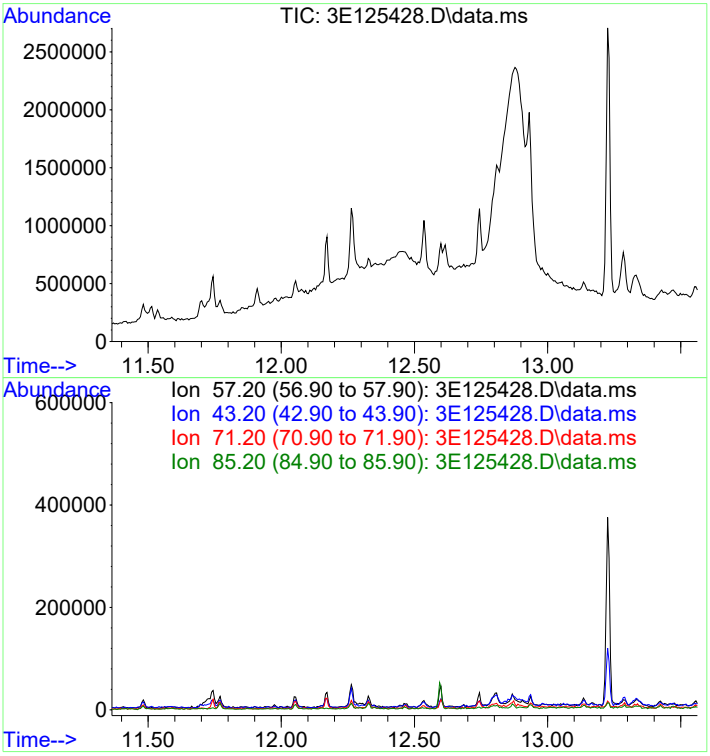



#33
n-Pentacosane (C25)
Concen: N.D.
Expected RT: 12.20 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 79.9 |
| 71 | 70.5 |
| 85 | 42.5 |

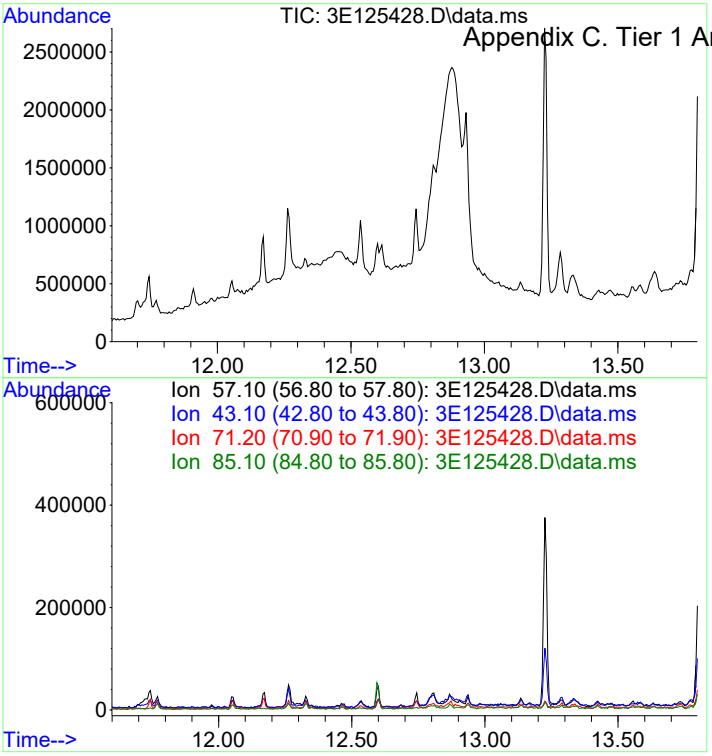



#34
n-Hexacosane (C26)
Concen: N.D.
Expected RT: 12.46 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.1 |
| 71 | 73.2 |
| 85 | 56.6 |

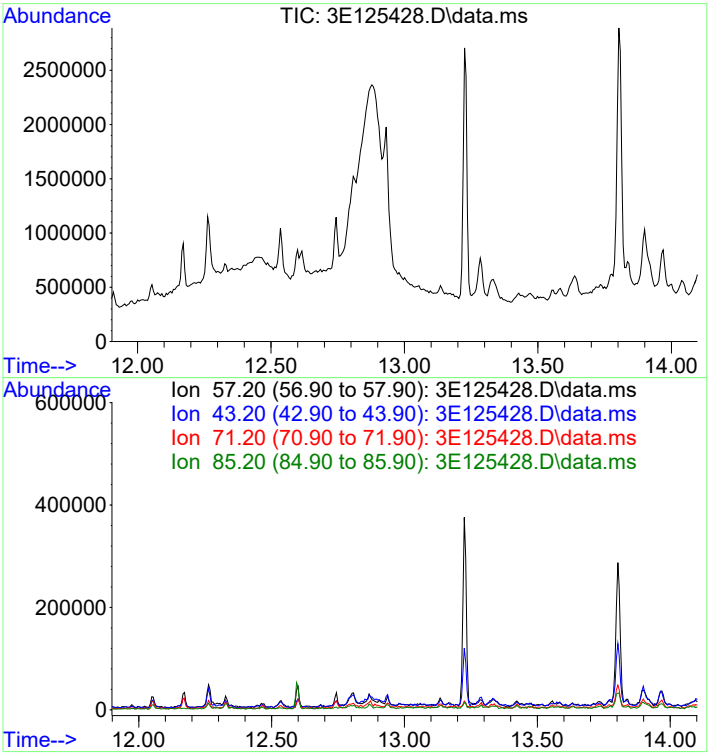



#35
n-Heptacosane (C27)
Concen: N.D.
Expected RT: 12.70 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 76.1 |
| 71 | 90.4 |
| 85 | 86.7 |

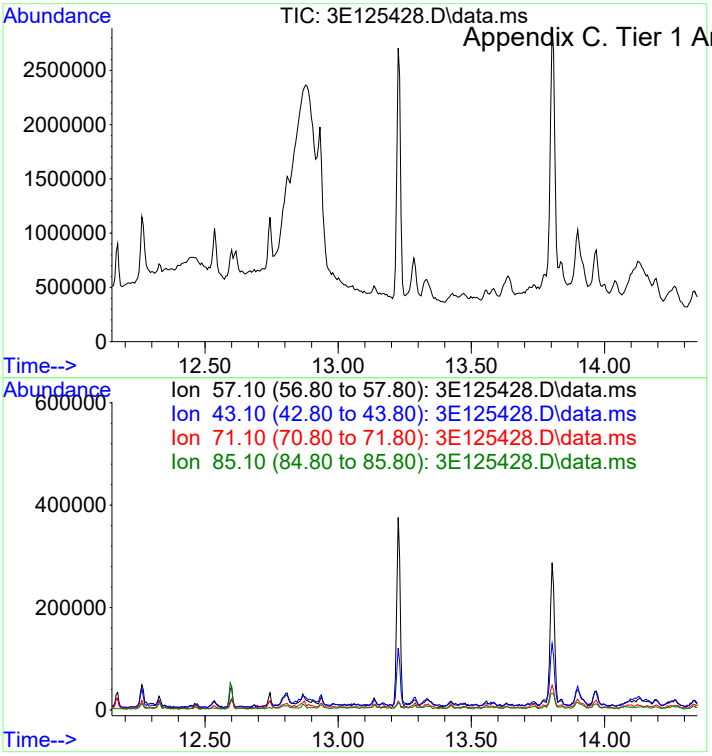



#36
n-Octacosane (C28)
Concen: N.D.
Expected RT: 13.00 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 60.8 |
| 71 | 72.9 |
| 85 | 56.3 |

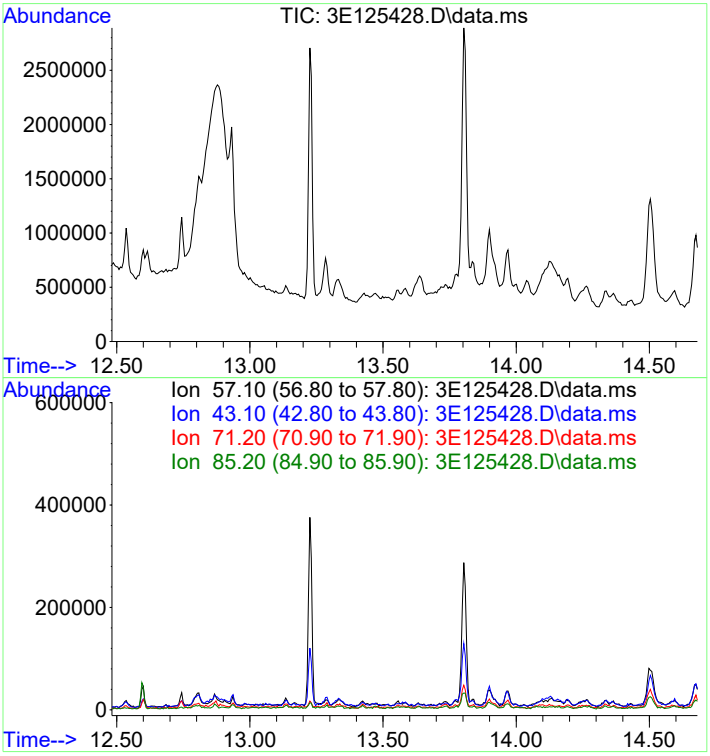



#37
n-Nonacosane (C29)
Concen: N.D.
Expected RT: 13.25 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.1 |
| 71 | 78.4 |
| 85 | 67.7 |

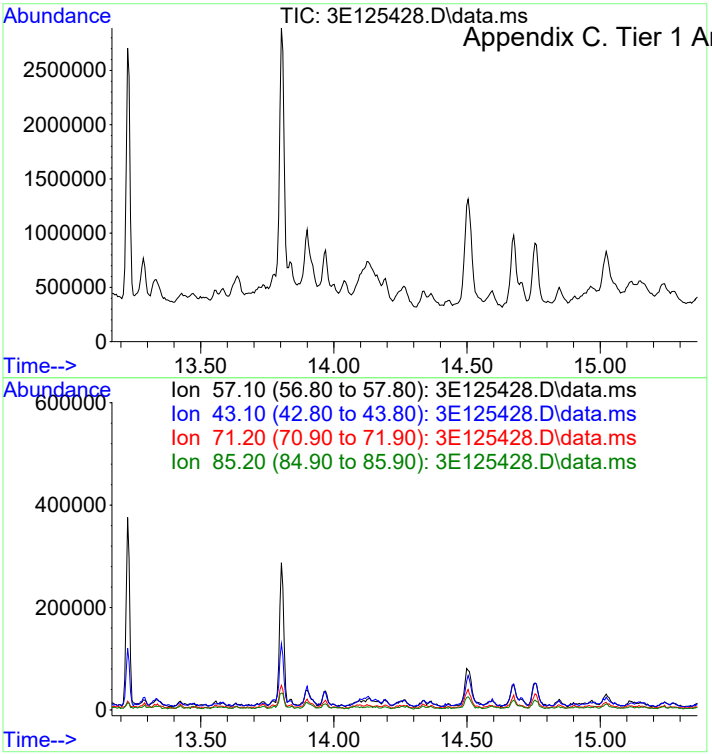



#38
n-Triacontane (C30)
Concen: N.D.
Expected RT: 13.58 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 59.6 |
| 71 | 72.8 |
| 85 | 56.9 |

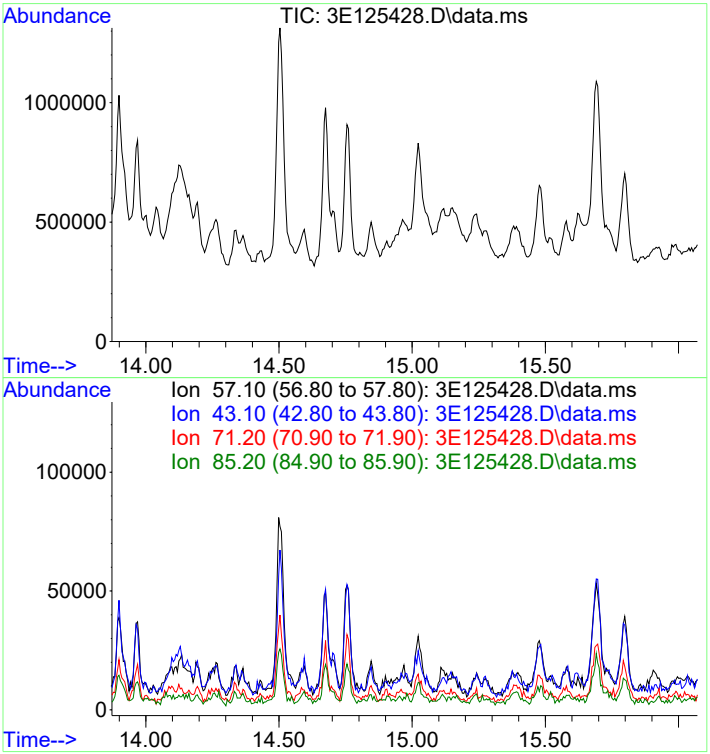



#39
n-Dotriacontane (C32)
Concen: N.D.
Expected RT: 14.27 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 58.6 |
| 71 | 71.7 |
| 85 | 55.6 |

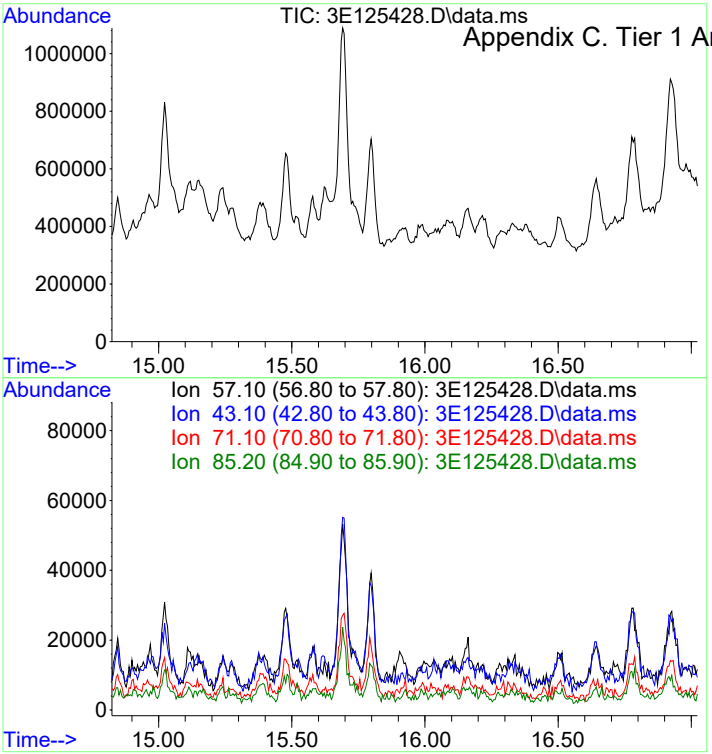



#40
n-Tetratriacontane (C34)
Concen: N.D.
Expected RT: 14.97 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 57.4 |
| 71 | 71.0 |
| 85 | 54.6 |

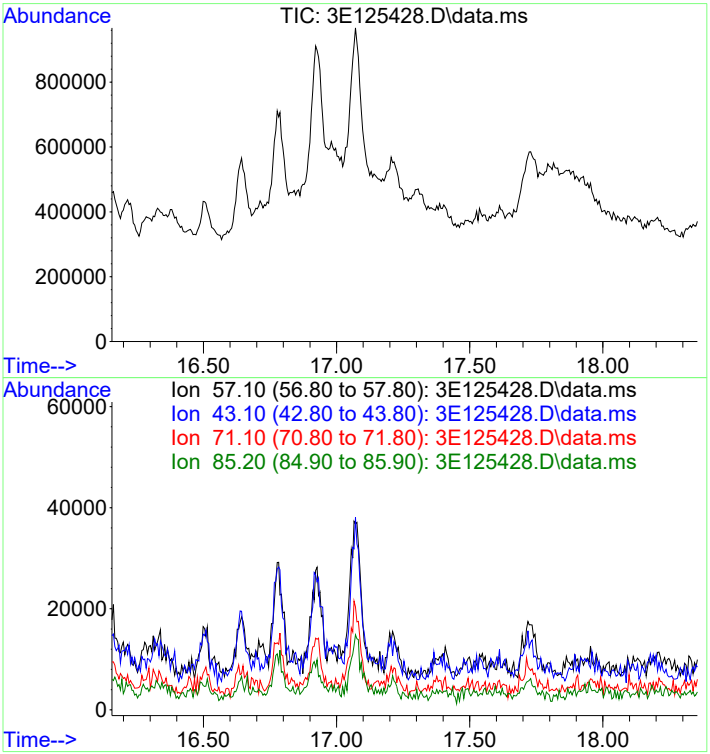



#41
n-Hexatriacontane (C36)
Concen: N.D.
Expected RT: 15.92 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 56.3 |
| 71 | 71.0 |
| 85 | 54.4 |

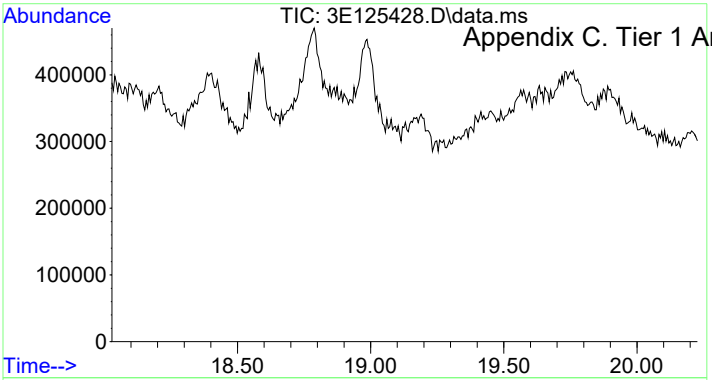



#42
n-Octatriacontane (C38)
Concen: N.D.
Expected RT: 17.26 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 55.0 |
| 71 | 70.8 |
| 85 | 53.9 |

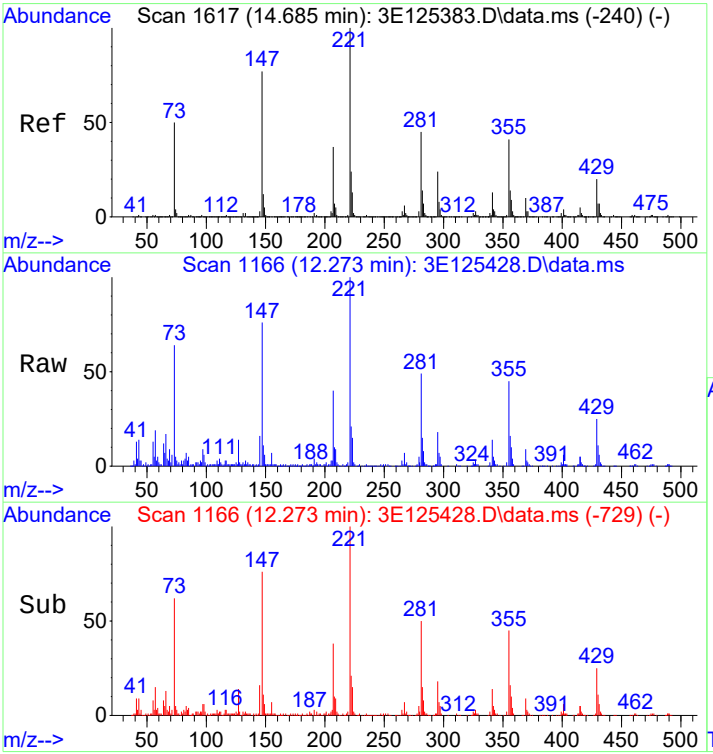



#43
n-Tetracontane (C40)
Concen: N.D.
Expected RT: 19.13 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 57

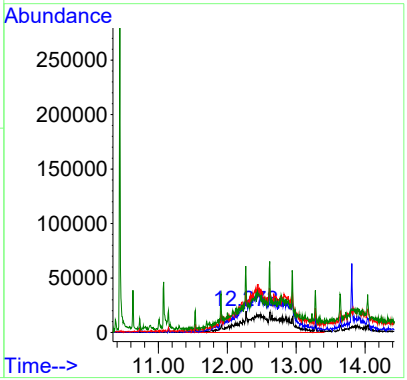
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 70.6 |
| 85 | 53.9 |

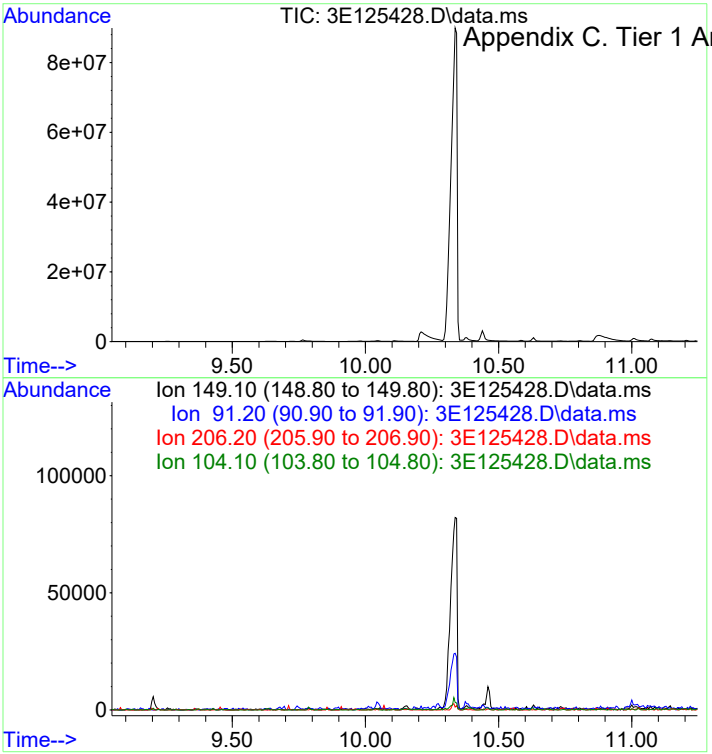



#44
Siloxane
Concen: 778026.00 m
RT: 12.273 min Scan# 1166
Delta R.T. 2.237 min
Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion:429 Resp: 778026

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 429 | 100 | | |
| 355 | 0.0 | 0.0 | 20.0 |
| 281 | 0.0 | 0.0 | 20.0 |
| 73 | 0.0 | 0.0 | 20.0 |



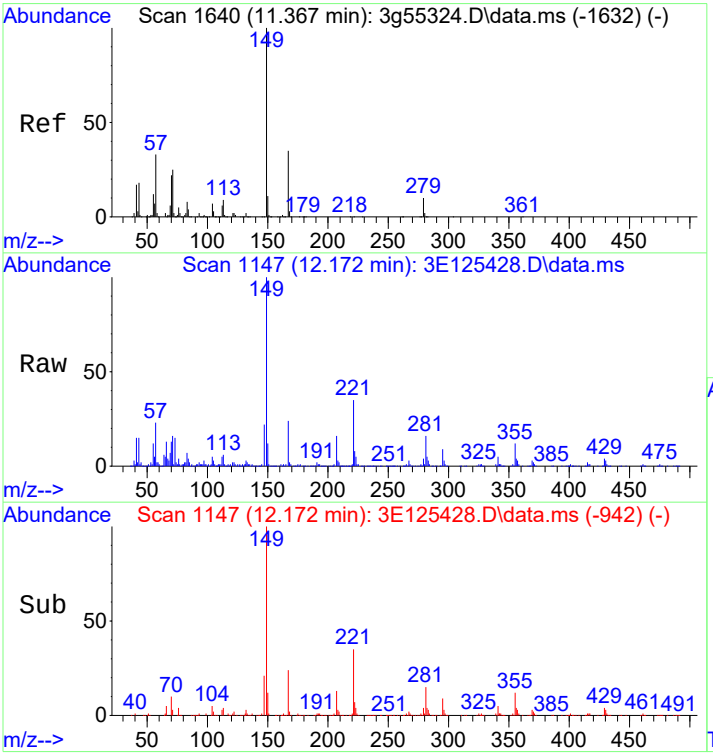



#45
Butyl benzyl phthalate
Concen: N.D.
Expected RT: 10.15 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 149

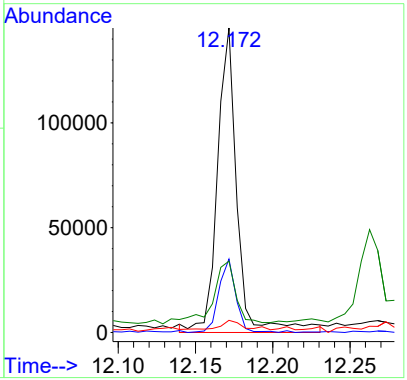
| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 91 | 97.4 |
| 206 | 28.9 |
| 104 | 19.1 |

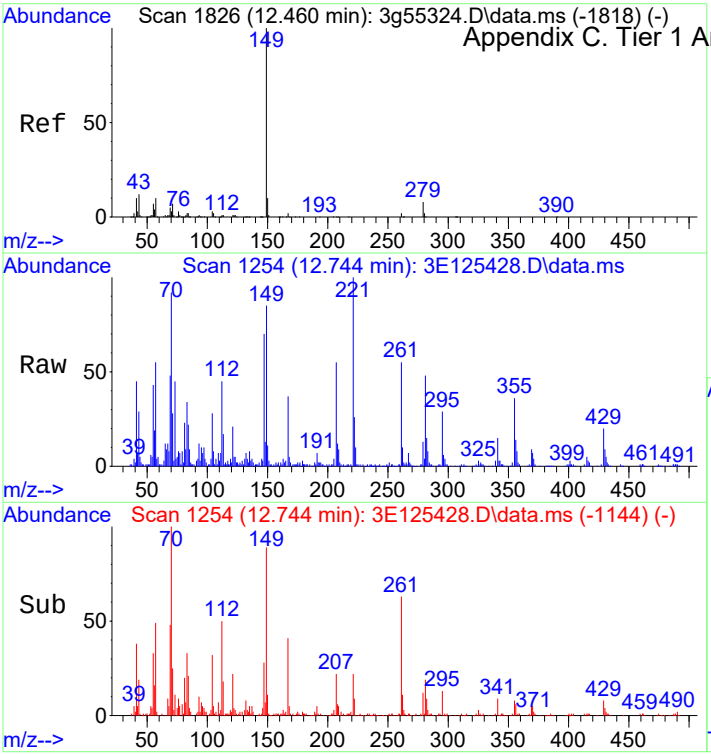



#46
Bis(2-ethylhexyl)phthalate
Concen: 129114.00 m
RT: 12.172 min Scan# 1147
Delta R.T. 0.996 min
Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion:149 Resp: 129114

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 149 | 100 | | |
| 167 | 0.0 | 14.3 | 54.3# |
| 279 | 0.0 | 0.0 | 30.6 |
| 57 | 0.0 | 14.0 | 54.0# |

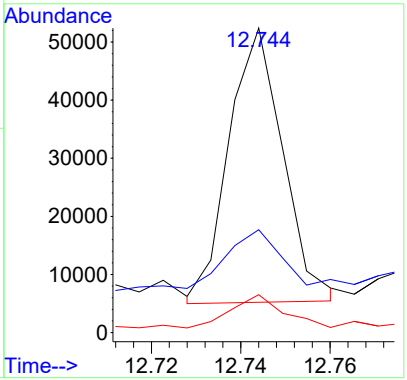


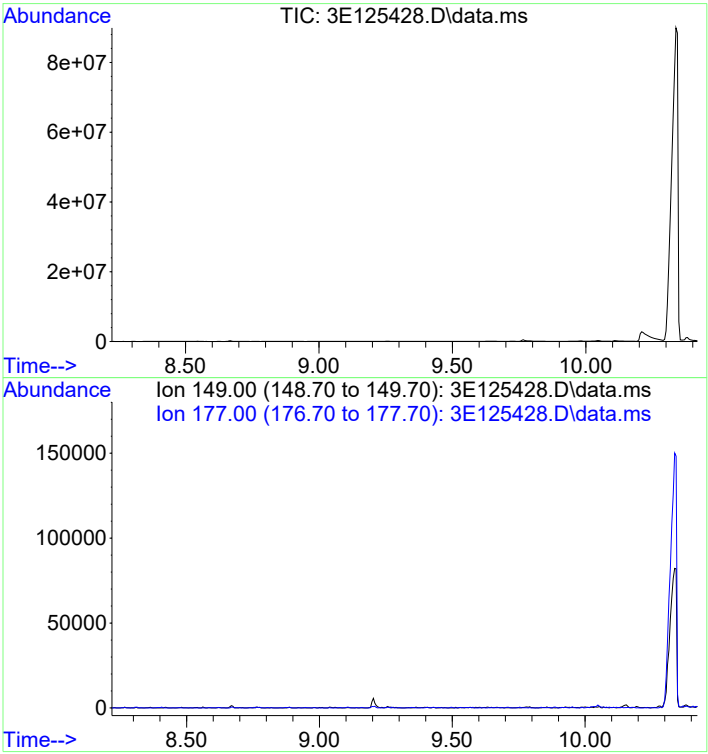



#47
Di-n-octylphthalate
Concen: 39654.00 m
RT: 12.744 min Scan# 1254
Delta R.T. 0.487 min
Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion:149 Resp: 39654

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 149 | 100 | | |
| 43 | 101.6 | 0.0 | 32.1# |
| 150 | 0.0 | 0.0 | 30.0 |




#48
Diethyl Phthalate
Concen: N.D.
Expected RT: 9.32 min

Lab File: 3E125428.D
Acq: 26 Jul 2024 6:16 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 177 | 21.3 |

LSC Area Percent Report

Data Path : C:\Users\(b) (6)\Desktop\AECOM\AECOM screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\Users\(b) (6)\Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Title : 8270C Calibration

Signal : TIC: 3E125428.D\data.ms

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.069 | 4 | 6 | 11 | rBV3 | 23365 | 34576 | 0.02% | 0.017% |
| 2 | 6.106 | 11 | 13 | 18 | rVV2 | 60929 | 61931 | 0.04% | 0.031% |
| 3 | 6.149 | 18 | 21 | 25 | rVV2 | 142440 | 156702 | 0.11% | 0.078% |
| 4 | 6.192 | 25 | 29 | 35 | rVV | 3218295 | 2050995 | 1.43% | 1.021% |
| 5 | 6.235 | 35 | 37 | 43 | rVB7 | 18394 | 19756 | 0.01% | 0.010% |
| 6 | 6.363 | 58 | 61 | 66 | rVB3 | 40156 | 30812 | 0.02% | 0.015% |
| 7 | 6.406 | 66 | 69 | 73 | rVB5 | 18637 | 21190 | 0.01% | 0.011% |
| 8 | 6.449 | 73 | 77 | 80 | rBV | 71201 | 53581 | 0.04% | 0.027% |
| 9 | 6.518 | 85 | 90 | 96 | rBV9 | 21807 | 43691 | 0.03% | 0.022% |
| 10 | 6.566 | 96 | 99 | 101 | rVV | 24240 | 18112 | 0.01% | 0.009% |
| 11 | 6.588 | 101 | 103 | 111 | rVB7 | 24060 | 28609 | 0.02% | 0.014% |
| 12 | 6.657 | 111 | 116 | 118 | rBV6 | 17131 | 21048 | 0.01% | 0.010% |
| 13 | 6.738 | 125 | 131 | 139 | rBV | 972965 | 602836 | 0.42% | 0.300% |
| 14 | 6.823 | 143 | 147 | 151 | rVV6 | 15482 | 14283 | 0.01% | 0.007% |
| 15 | 6.903 | 160 | 162 | 165 | rBV4 | 21805 | 15981 | 0.01% | 0.008% |
| 16 | 7.048 | 186 | 189 | 194 | rBV5 | 25523 | 22116 | 0.02% | 0.011% |
| 17 | 7.128 | 197 | 204 | 206 | rBV4 | 21880 | 20951 | 0.01% | 0.010% |
| 18 | 7.214 | 218 | 220 | 225 | rVB6 | 12302 | 11490 | 0.01% | 0.006% |
| 19 | 7.321 | 238 | 240 | 244 | rVB | 62391 | 48285 | 0.03% | 0.024% |
| 20 | 7.369 | 244 | 249 | 256 | rVV | 380038 | 283185 | 0.20% | 0.141% |
| 21 | 7.497 | 267 | 273 | 279 | rVB | 56602 | 47184 | 0.03% | 0.023% |
| 22 | 7.561 | 282 | 285 | 288 | rBV | 32246 | 28185 | 0.02% | 0.014% |
| 23 | 7.593 | 288 | 291 | 294 | rVB5 | 21214 | 16642 | 0.01% | 0.008% |
| 24 | 7.732 | 314 | 317 | 321 | rBV | 97553 | 78551 | 0.05% | 0.039% |
| 25 | 7.861 | 335 | 341 | 345 | rBV8 | 11943 | 23703 | 0.02% | 0.012% |
| 26 | 7.925 | 348 | 353 | 357 | rVB4 | 13776 | 14919 | 0.01% | 0.007% |
| 27 | 7.957 | 357 | 359 | 361 | rBV3 | 11400 | 11649 | 0.01% | 0.006% |
| 28 | 8.037 | 368 | 374 | 381 | rVB | 163619 | 148952 | 0.10% | 0.074% |
| 29 | 8.133 | 388 | 392 | 397 | rVV7 | 12602 | 14307 | 0.01% | 0.007% |
| 30 | 8.310 | 419 | 425 | 430 | rVB9 | 9668 | 14205 | 0.01% | 0.007% |
| 31 | 8.396 | 430 | 441 | 442 | rBV9 | 23481 | 67915 | 0.05% | 0.034% |
| 32 | 8.417 | 442 | 445 | 453 | rVV10 | 28561 | 59767 | 0.04% | 0.030% |
| 33 | 8.470 | 453 | 455 | 458 | rVV4 | 15332 | 12189 | 0.01% | 0.006% |
| 34 | 8.519 | 462 | 464 | 466 | rVV3 | 17575 | 14514 | 0.01% | 0.007% |
| 35 | 8.545 | 466 | 469 | 477 | rVB | 65785 | 65727 | 0.05% | 0.033% |
| 36 | 8.668 | 487 | 492 | 501 | rBV2 | 204396 | 187667 | 0.13% | 0.093% |
| 37 | 8.765 | 506 | 510 | 513 | rBV6 | 8944 | 11033 | 0.01% | 0.005% |
| 38 | 8.802 | 513 | 517 | 522 | rBV8 | 10628 | 15140 | 0.01% | 0.008% |
| 39 | 8.840 | 522 | 524 | 530 | rVV7 | 6318 | 11102 | 0.01% | 0.006% |
| 40 | 8.898 | 530 | 535 | 539 | rVB8 | 7343 | 13072 | 0.01% | 0.007% |

LSC Area Percent Report

Data Path : C:\Users\(b) (6)\Desktop\AECOM\AECOM screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\Users\(b) (6)\Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Title : 8270C Calibration

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 41 | 9.005 | 550 | 555 | 558 | rVB7 | 6922 | 11194 | 0.01% | 0.006% |
| 42 | 9.075 | 564 | 568 | 570 | rBV5 | 27156 | 30264 | 0.02% | 0.015% |
| 43 | 9.187 | 585 | 589 | 599 | rVB4 | 27730 | 53806 | 0.04% | 0.027% |
| 44 | 9.257 | 599 | 602 | 606 | rBV | 73236 | 71782 | 0.05% | 0.036% |
| 45 | 9.396 | 625 | 628 | 631 | rVB5 | 13010 | 12493 | 0.01% | 0.006% |
| 46 | 9.433 | 631 | 635 | 637 | rBV5 | 14577 | 16097 | 0.01% | 0.008% |
| 47 | 9.562 | 656 | 659 | 664 | rVB7 | 24680 | 30830 | 0.02% | 0.015% |
| 48 | 9.631 | 669 | 672 | 686 | rBV7 | 51255 | 154312 | 0.11% | 0.077% |
| 49 | 9.722 | 686 | 689 | 694 | rVV6 | 46195 | 66729 | 0.05% | 0.033% |
| 50 | 9.765 | 694 | 697 | 718 | rVB2 | 439572 | 682630 | 0.48% | 0.340% |
| 51 | 9.941 | 727 | 730 | 732 | rBV4 | 28313 | 28688 | 0.02% | 0.014% |
| 52 | 9.979 | 732 | 737 | 743 | rVV3 | 123405 | 177490 | 0.12% | 0.088% |
| 53 | 10.048 | 743 | 750 | 758 | rVV | 233512 | 327647 | 0.23% | 0.163% |
| 54 | 10.107 | 759 | 761 | 776 | rBV2 | 221510 | 347495 | 0.24% | 0.173% |
| 55 | 10.209 | 776 | 780 | 795 | rBV | 2743401 | 7051107 | 4.92% | 3.511% |
| 56 | 10.337 | 795 | 804 | 809 | rVV4 | 89795763 | 143210771 | 100.00% | 71.315% |
| 57 | 10.380 | 809 | 812 | 819 | rVV2 | 1041695 | 1490210 | 1.04% | 0.742% |
| 58 | 10.439 | 819 | 823 | 844 | rVV | 3009207 | 3478202 | 2.43% | 1.732% |
| 59 | 10.583 | 847 | 850 | 855 | rVV | 273263 | 252412 | 0.18% | 0.126% |
| 60 | 10.631 | 855 | 859 | 867 | rVB | 1012547 | 845265 | 0.59% | 0.421% |
| 61 | 10.733 | 872 | 878 | 883 | rVB7 | 102343 | 157141 | 0.11% | 0.078% |
| 62 | 10.808 | 888 | 892 | 899 | rVB | 172510 | 173316 | 0.12% | 0.086% |
| 63 | 10.877 | 899 | 905 | 925 | rBV2 | 1666270 | 5816516 | 4.06% | 2.896% |
| 64 | 11.006 | 926 | 929 | 939 | rVV | 772613 | 1123747 | 0.78% | 0.560% |
| 65 | 11.075 | 939 | 942 | 952 | rVV | 550381 | 750513 | 0.52% | 0.374% |
| 66 | 11.145 | 952 | 955 | 959 | rVB3 | 114550 | 122242 | 0.09% | 0.061% |
| 67 | 11.204 | 964 | 966 | 970 | rVB | 232158 | 177022 | 0.12% | 0.088% |
| 68 | 11.337 | 989 | 991 | 994 | rBV4 | 32260 | 29093 | 0.02% | 0.014% |
| 69 | 11.482 | 1014 | 1018 | 1021 | rBV3 | 129475 | 139972 | 0.10% | 0.070% |
| 70 | 11.701 | 1055 | 1059 | 1061 | rBV3 | 142708 | 172134 | 0.12% | 0.086% |
| 71 | 11.744 | 1063 | 1067 | 1070 | rVB2 | 268217 | 267634 | 0.19% | 0.133% |
| 72 | 11.910 | 1095 | 1098 | 1102 | rBV4 | 147700 | 133171 | 0.09% | 0.066% |
| 73 | 12.054 | 1122 | 1125 | 1128 | rBV2 | 144258 | 155265 | 0.11% | 0.077% |
| 74 | 12.172 | 1143 | 1147 | 1150 | rVB | 394953 | 309099 | 0.22% | 0.154% |
| 75 | 12.263 | 1160 | 1164 | 1173 | rBV2 | 587696 | 780614 | 0.55% | 0.389% |
| 76 | 12.535 | 1212 | 1215 | 1222 | rVB3 | 469450 | 493499 | 0.34% | 0.246% |
| 77 | 12.600 | 1224 | 1227 | 1237 | rVV3 | 240711 | 466604 | 0.33% | 0.232% |
| 78 | 12.744 | 1250 | 1254 | 1257 | rBV2 | 478015 | 462107 | 0.32% | 0.230% |
| 79 | 12.878 | 1260 | 1279 | 1286 | rBV5 | 1493593 | 7788449 | 5.44% | 3.878% |
| 80 | 13.225 | 1340 | 1344 | 1349 | rBV | 2311104 | 2204819 | 1.54% | 1.098% |
| 81 | 13.284 | 1351 | 1355 | 1360 | rVV2 | 386039 | 516620 | 0.36% | 0.257% |
| 82 | 13.332 | 1360 | 1364 | 1376 | rVB9 | 209380 | 434561 | 0.30% | 0.216% |
| 83 | 13.637 | 1416 | 1421 | 1426 | rVB5 | 171694 | 286874 | 0.20% | 0.143% |
| 84 | 13.803 | 1444 | 1452 | 1457 | rBV | 2380898 | 2973776 | 2.08% | 1.481% |
| 85 | 13.899 | 1466 | 1470 | 1477 | rVB5 | 522230 | 819832 | 0.57% | 0.408% |

LSC Area Percent Report

Data Path : C:\Users\(b) (6)\Desktop\AECOM\AECOM screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\Users\(b) (6)Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Title : 8270C Calibration

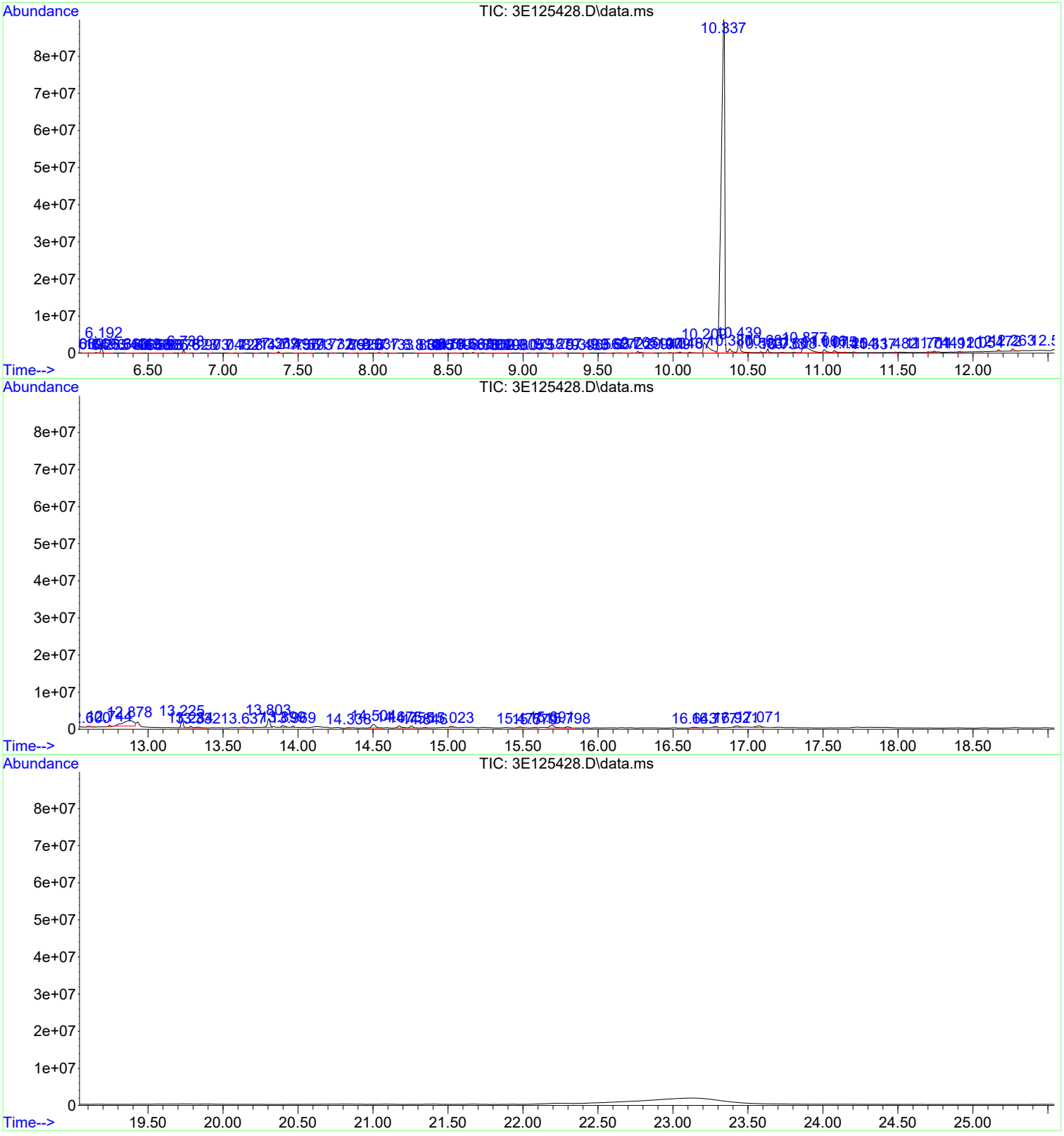
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 86 | 13.969 | 1479 | 1483 | 1487 | rVB5 | 334420 | 368195 | 0.26% | 0.183% |
| 87 | 14.338 | 1548 | 1552 | 1554 | rBV4 | 114688 | 141428 | 0.10% | 0.070% |
| 88 | 14.504 | 1576 | 1583 | 1594 | rBV4 | 957320 | 1789274 | 1.25% | 0.891% |
| 89 | 14.675 | 1609 | 1615 | 1624 | rBV3 | 622584 | 1126469 | 0.79% | 0.561% |
| 90 | 14.755 | 1625 | 1630 | 1638 | rVB2 | 546967 | 822594 | 0.57% | 0.410% |
| 91 | 14.846 | 1644 | 1647 | 1653 | rVB7 | 144195 | 203658 | 0.14% | 0.101% |
| 92 | 15.023 | 1675 | 1680 | 1691 | rVB5 | 375498 | 711526 | 0.50% | 0.354% |
| 93 | 15.477 | 1760 | 1765 | 1771 | rBV6 | 260851 | 438237 | 0.31% | 0.218% |
| 94 | 15.579 | 1780 | 1784 | 1788 | rBV6 | 113716 | 163821 | 0.11% | 0.082% |
| 95 | 15.691 | 1799 | 1805 | 1819 | rVB3 | 709148 | 1656681 | 1.16% | 0.825% |
| 96 | 15.798 | 1819 | 1825 | 1834 | rVB4 | 371563 | 713006 | 0.50% | 0.355% |
| 97 | 16.643 | 1977 | 1983 | 1990 | rBV6 | 195238 | 429602 | 0.30% | 0.214% |
| 98 | 16.777 | 2003 | 2008 | 2018 | rVB9 | 252134 | 534675 | 0.37% | 0.266% |
| 99 | 16.921 | 2029 | 2035 | 2044 | rBV8 | 385619 | 964007 | 0.67% | 0.480% |
| 100 | 17.071 | 2057 | 2063 | 2081 | rVB8 | 473274 | 1241873 | 0.87% | 0.618% |

Sum of corrected areas: 200815643

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

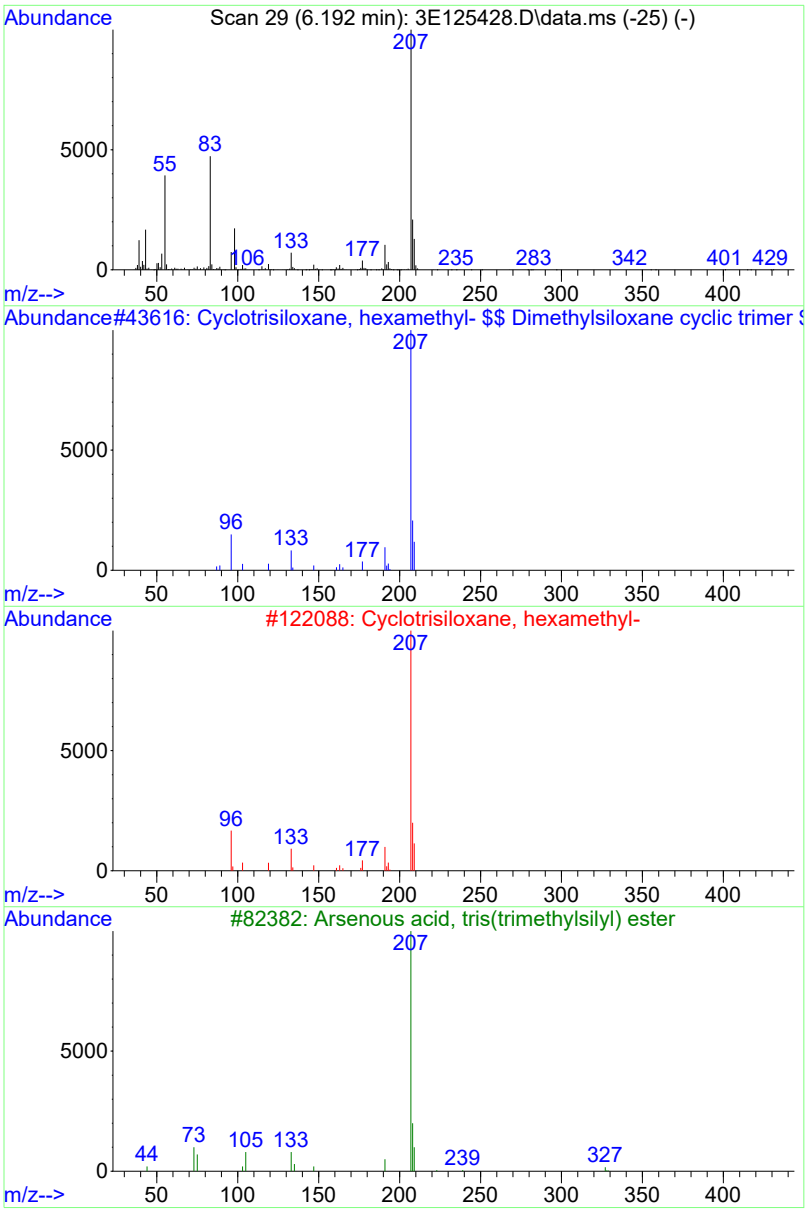
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

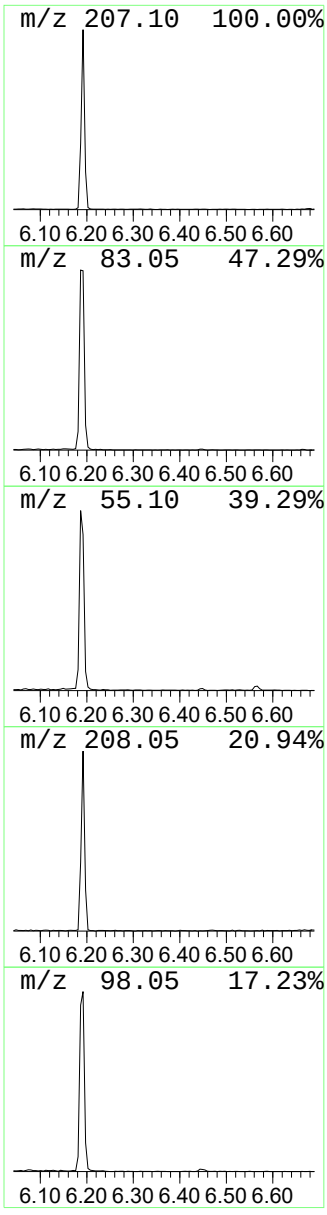
**********

Peak Number 1 Cyclotrisiloxane, hexamethy... Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.192 | 20510.00 | 2051000 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclotrisiloxane, hexamethyl- $$... | 222 | C6H18O3Si3 | 000541-05-9 | 58 |
| 2 | Cyclotrisiloxane, hexamethyl- | 222 | C6H18O3Si3 | 000541-05-9 | 58 |
| 3 | Arsenous acid, tris(trimethylsil... | 342 | C9H27AsO3Si3 | 055429-29-3 | 50 |
| 4 | Cyclotrisiloxane, hexamethyl- | 222 | C6H18O3Si3 | 000541-05-9 | 38 |
| 5 | 2-Ethylacridine | 207 | C15H13N | 000000-00-0 | 37 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

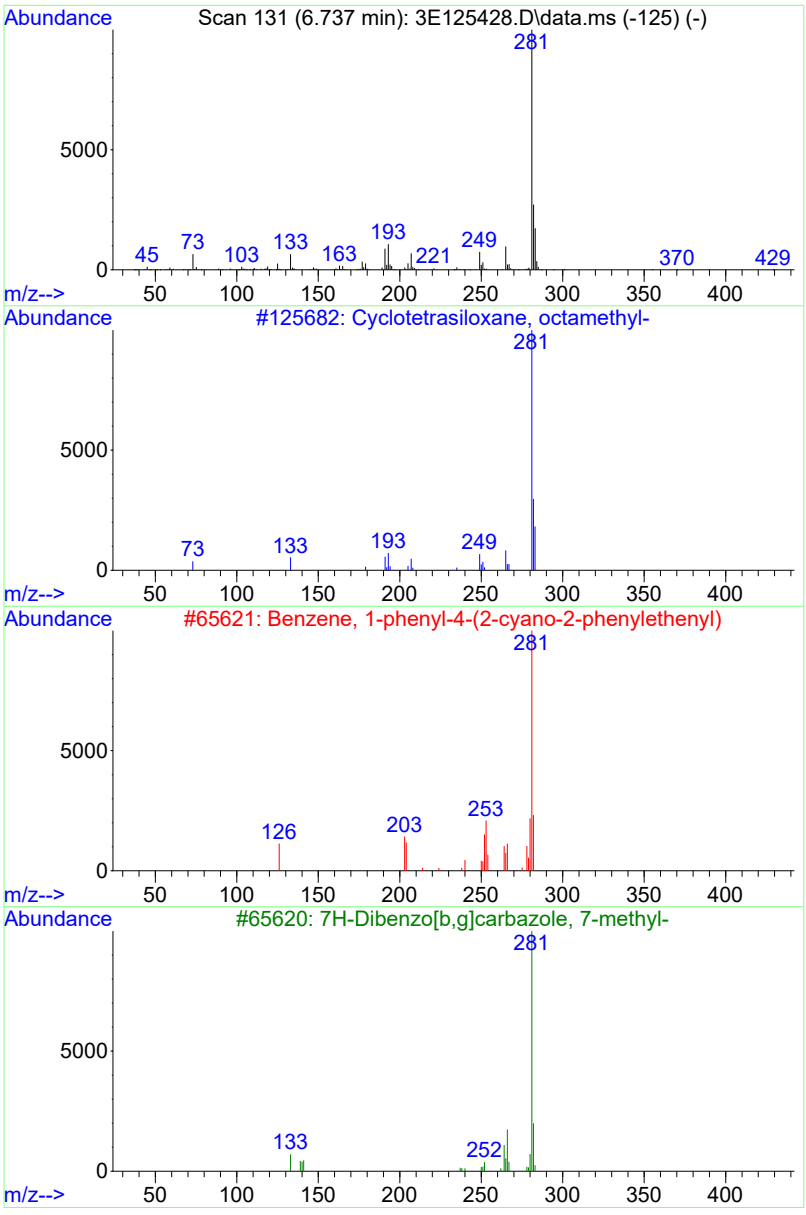
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

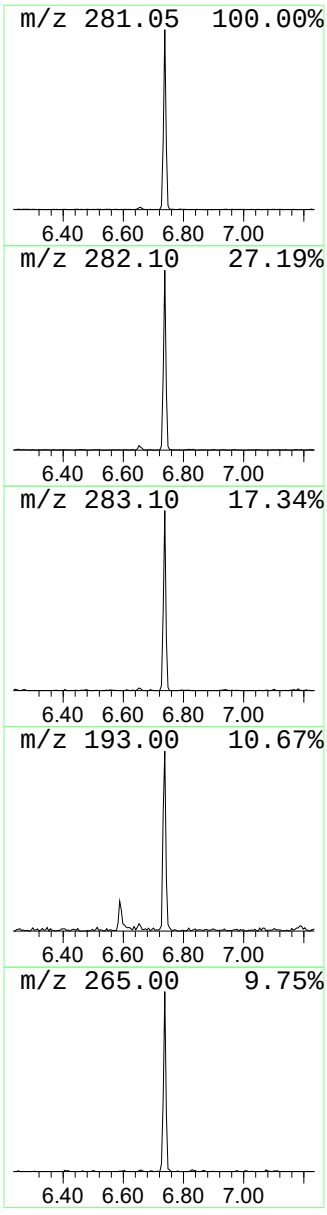
**********

Peak Number 2 Cyclotetrasiloxane, octamet... Concentration Rank 20

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.737 | 6028.36 | 602836 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclotetrasiloxane, octamethyl- | 296 | C8H24O4Si4 | 000556-67-2 | 91 |
| 2 | Benzene, 1-phenyl-4-(2-cyano-2-p... | 281 | C21H15N | 027869-56-3 | 59 |
| 3 | 7H-Dibenzo[b,g]carbazole, 7-methyl- | 281 | C21H15N | 003557-49-1 | 53 |
| 4 | 5H-Naphtho[2,3-c]carbazole, 5-me... | 281 | C21H15N | 100025-44-3 | 53 |
| 5 | 2,6-Dimethyl-5-methylphenylamino... | 281 | C16H15N3O2 | 000000-00-0 | 53 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

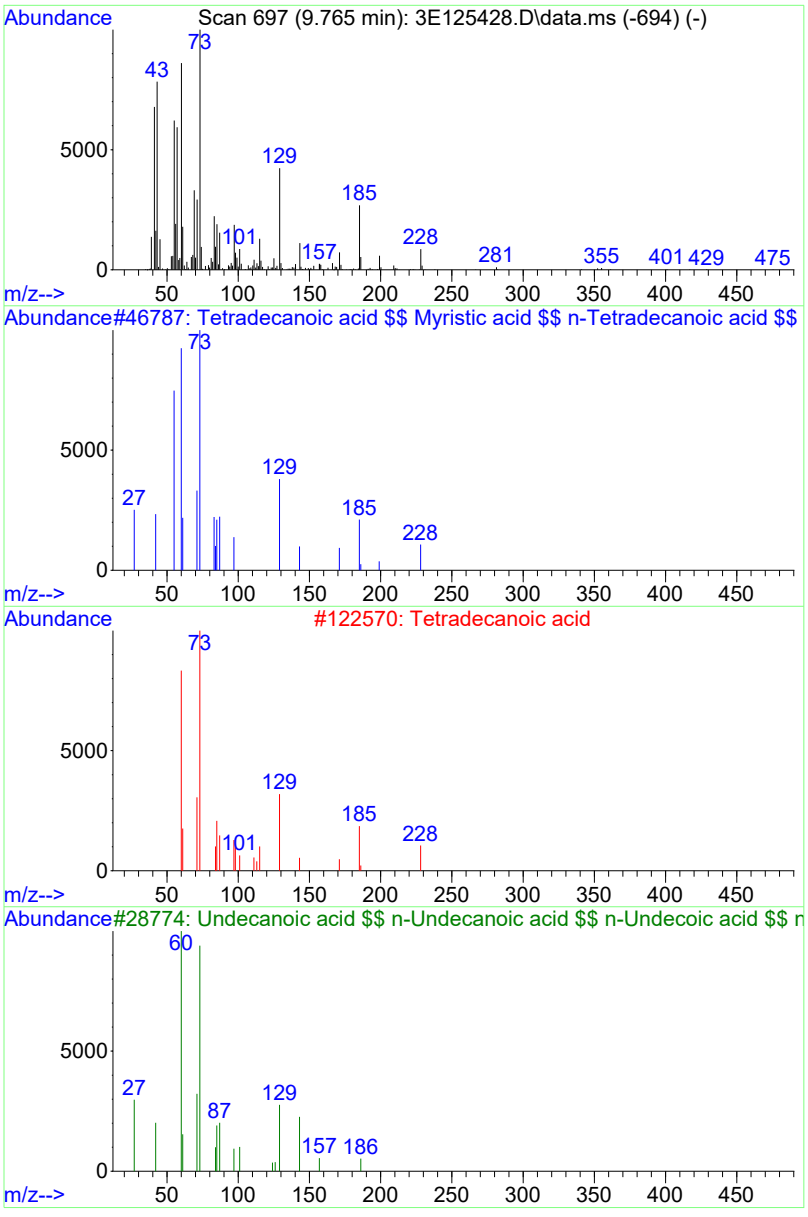
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

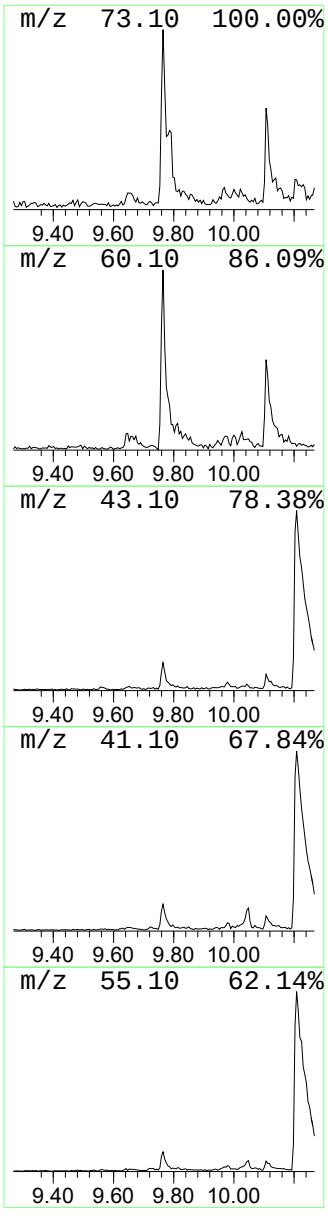
**********

Peak Number 3 Tetradecanoic acid Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.765 | 6826.30 | 682630 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Tetradecanoic acid $$ Myristic a... | 228 | C14H28O2 | 000544-63-8 | 97 |
| 2 | Tetradecanoic acid | 228 | C14H28O2 | 000544-63-8 | 96 |
| 3 | Undecanoic acid $$ n-Undecanoic ... | 186 | C11H22O2 | 000112-37-8 | 89 |
| 4 | Pentadecanoic acid $$ Pentadecyl... | 242 | C15H30O2 | 001002-84-2 | 72 |
| 5 | Tetradecanoic acid | 228 | C14H28O2 | 000544-63-8 | 70 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

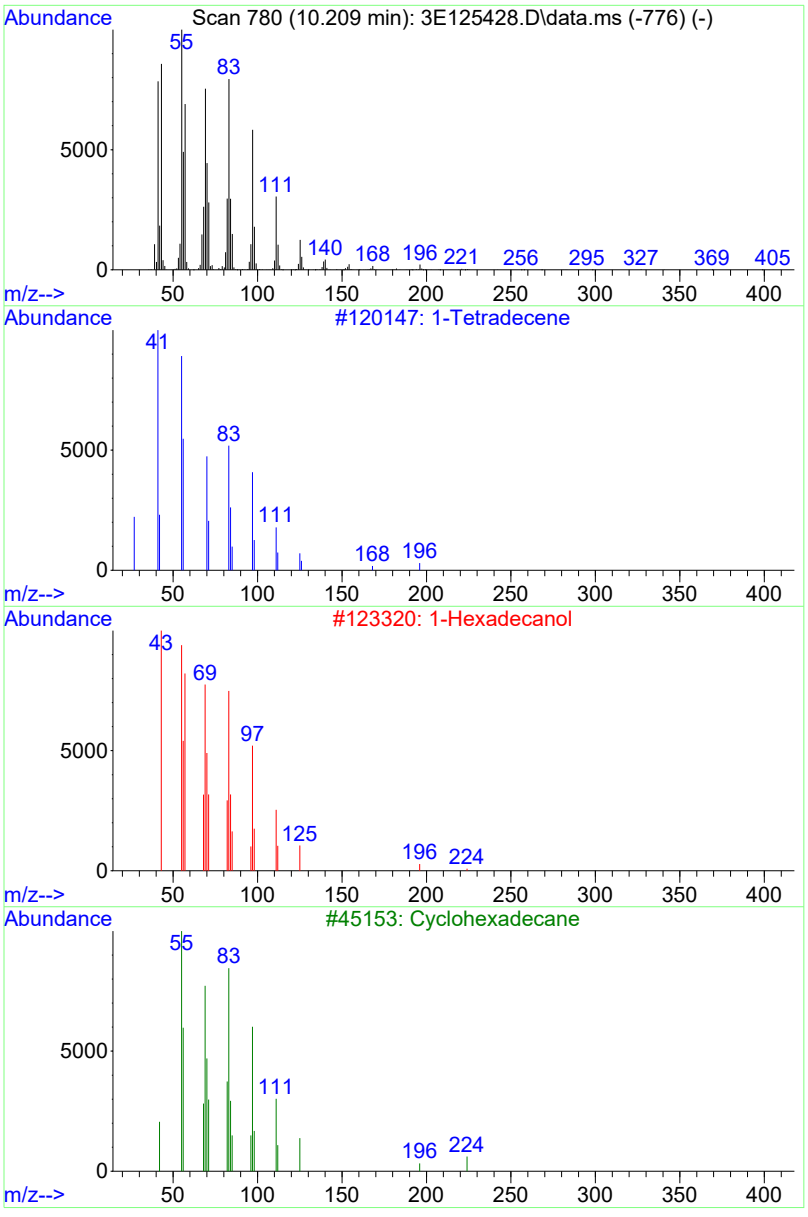
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

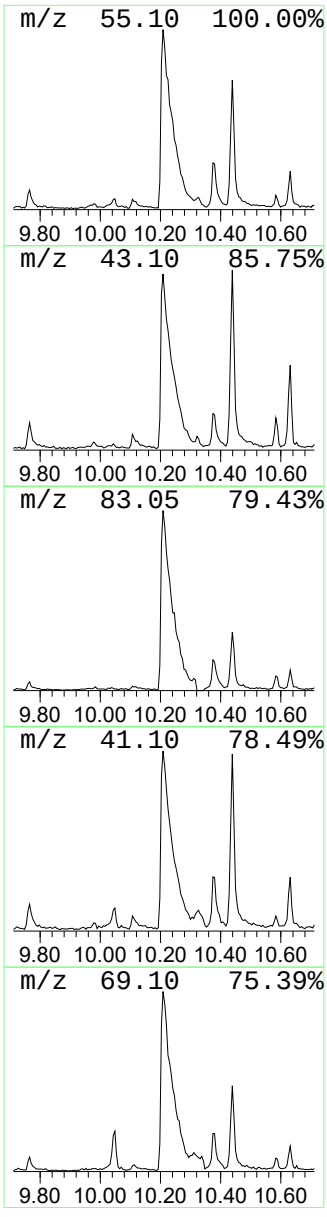
**********

Peak Number 4 1-Hexadecanol Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.209 | 70511.10 | 7051110 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1-Tetradecene | 196 | C14H28 | 001120-36-1 | 98 |
| 2 | 1-Hexadecanol | 242 | C16H34O | 036653-82-4 | 95 |
| 3 | Cyclohexadecane | 224 | C16H32 | 000295-65-8 | 94 |
| 4 | Cyclotetradecane | 196 | C14H28 | 000295-17-0 | 94 |
| 5 | 1-Pentadecanol | 228 | C15H32O | 000629-76-5 | 91 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

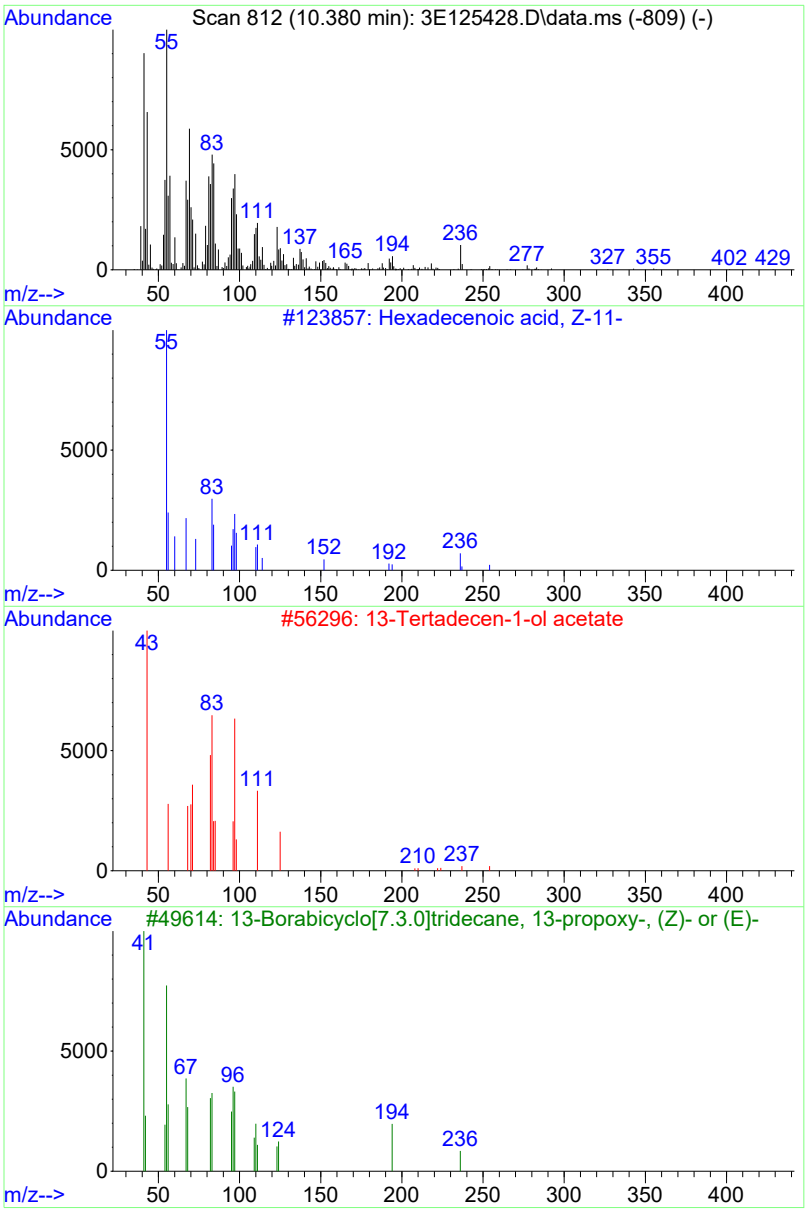
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

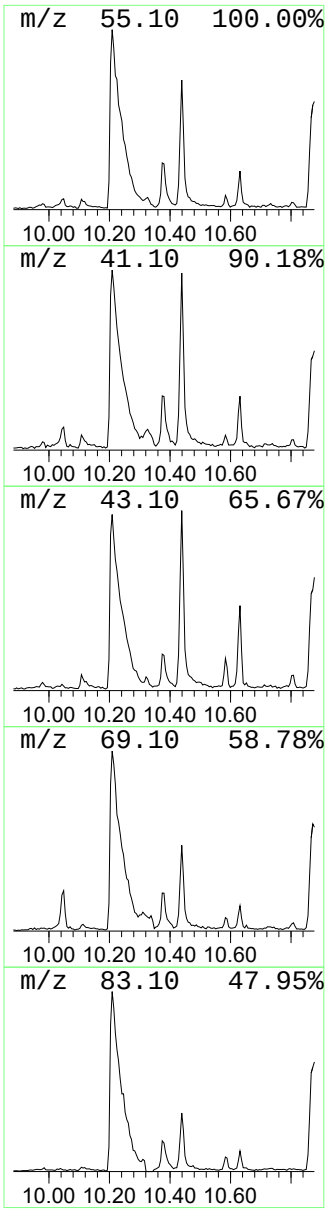
**********

Peak Number 5 Unknown Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.380 | 14902.10 | 1490210 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hexadecenoic acid, Z-11- | 254 | C16H30O2 | 002416-20-8 | 93 |
| 2 | 13-Tertadecen-1-ol acetate | 254 | C16H30O2 | 000000-00-0 | 91 |
| 3 | 13-Borabicyclo[7.3.0]tridecane, ... | 236 | C15H29BO | 000000-00-0 | 86 |
| 4 | 10-Nonadecenoic acid, methyl ester | 310 | C20H38O2 | 056599-83-8 | 86 |
| 5 | Z-9-Tetradecenol | 210 | C14H26O | 000000-00-0 | 86 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

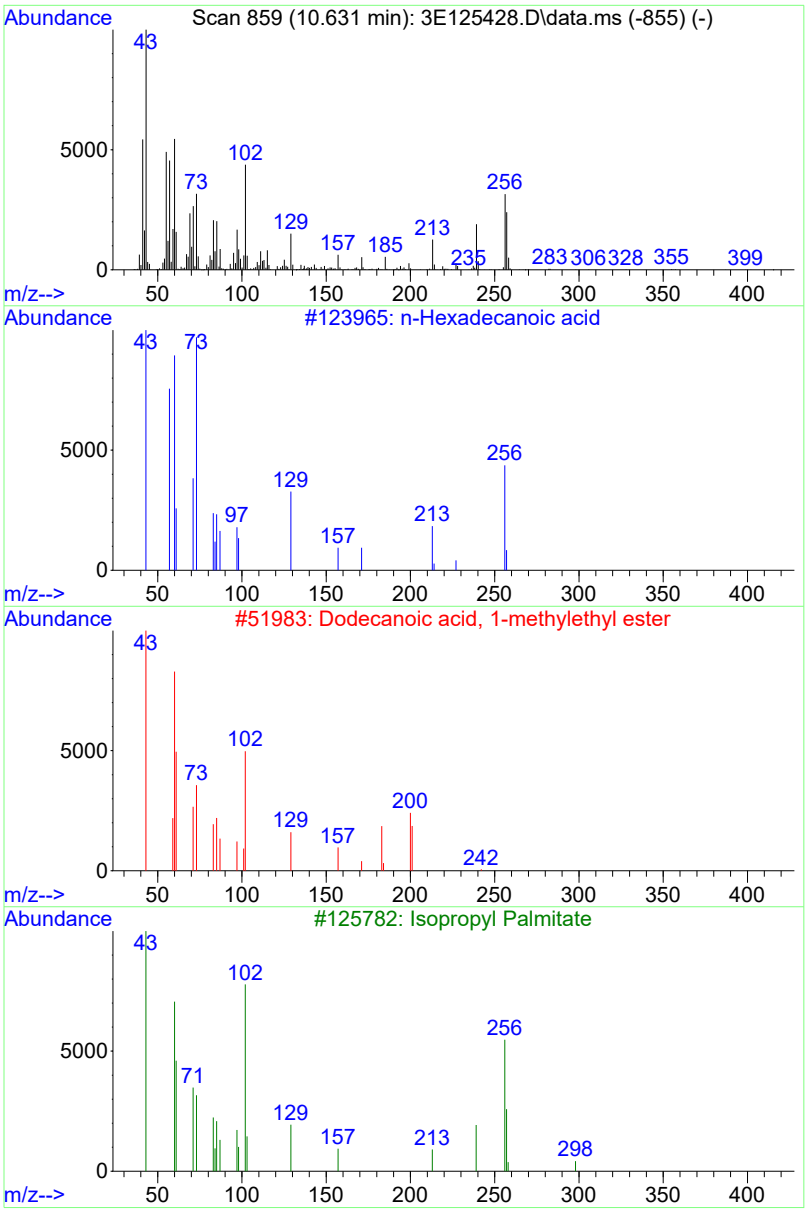
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

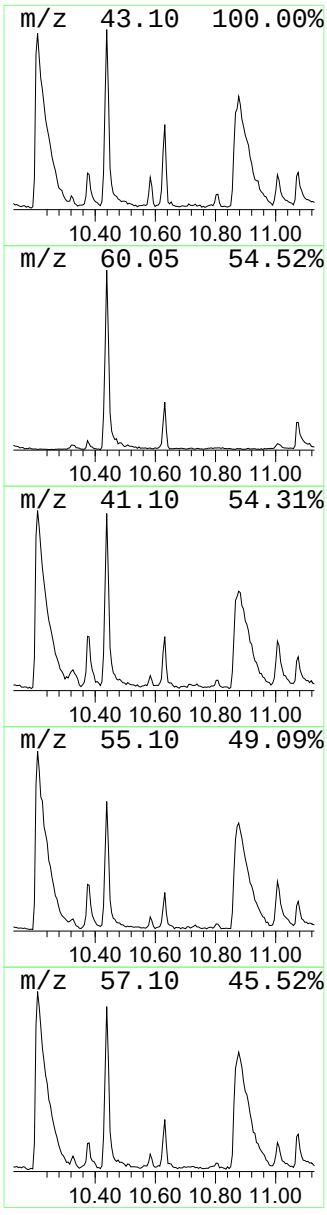
**********

Peak Number 6 n-Hexadecanoic acid Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.631 | 8452.65 | 845265 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 60 |
| 2 | Dodecanoic acid, 1-methylethyl e... | 242 | C15H30O2 | 010233-13-3 | 49 |
| 3 | Isopropyl Palmitate | 298 | C19H38O2 | 000142-91-6 | 42 |
| 4 | n-Hexadecanoic acid | 256 | C16H32O2 | 000057-10-3 | 38 |
| 5 | Isopropyl Palmitate $$ Hexadecan... | 298 | C19H38O2 | 000142-91-6 | 38 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

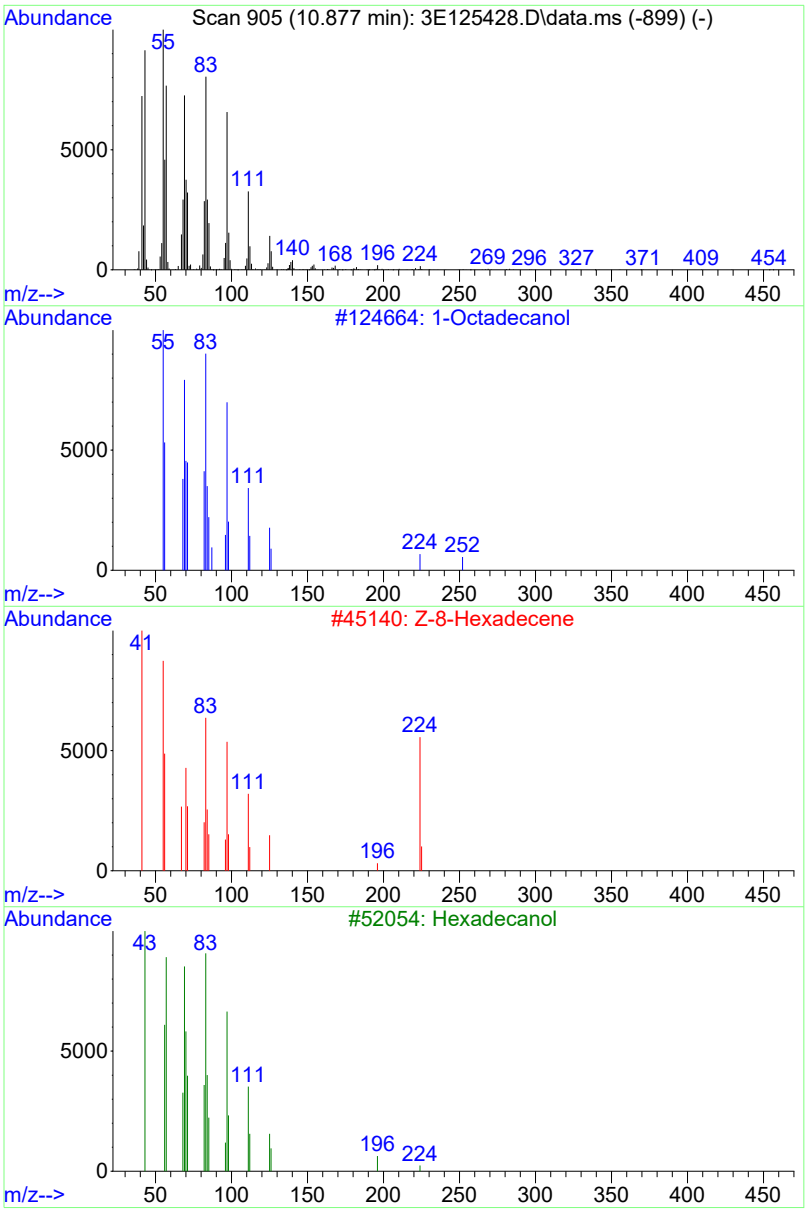
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

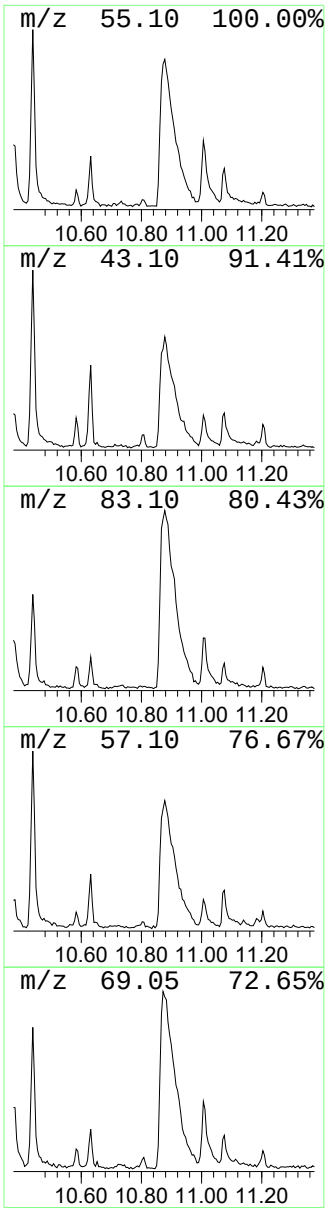
**********

Peak Number 7 Hexadecanol Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.877 | 58165.20 | 5816520 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1-Octadecanol | 270 | C18H38O | 000112-92-5 | 94 |
| 2 | Z-8-Hexadecene | 224 | C16H32 | 000000-00-0 | 94 |
| 3 | Hexadecanol | 242 | C16H34O | 029354-98-1 | 94 |
| 4 | Phosphonic acid, dioctadecyl est... | 587 | C36H75O3P | 019047-85-9 | 93 |
| 5 | 1-Octadecanol $$ n-Octadecanol $... | 270 | C18H38O | 000112-92-5 | 93 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

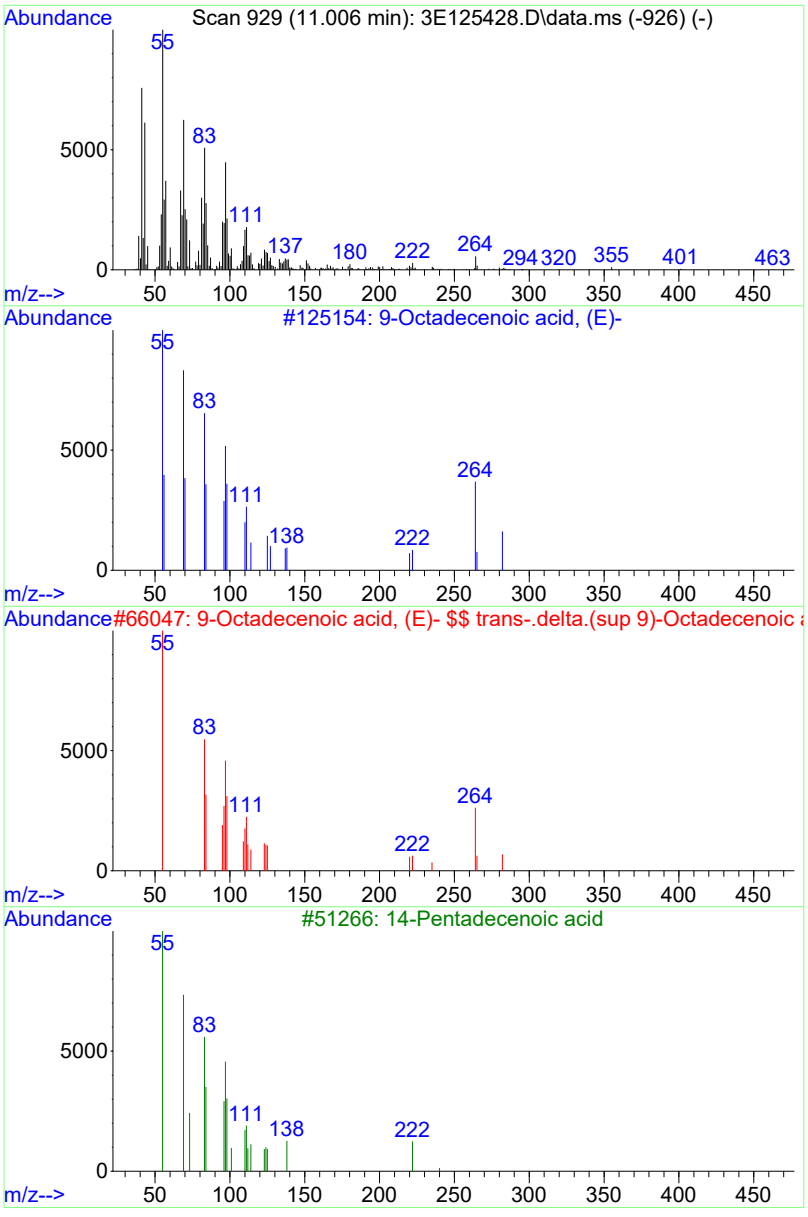
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

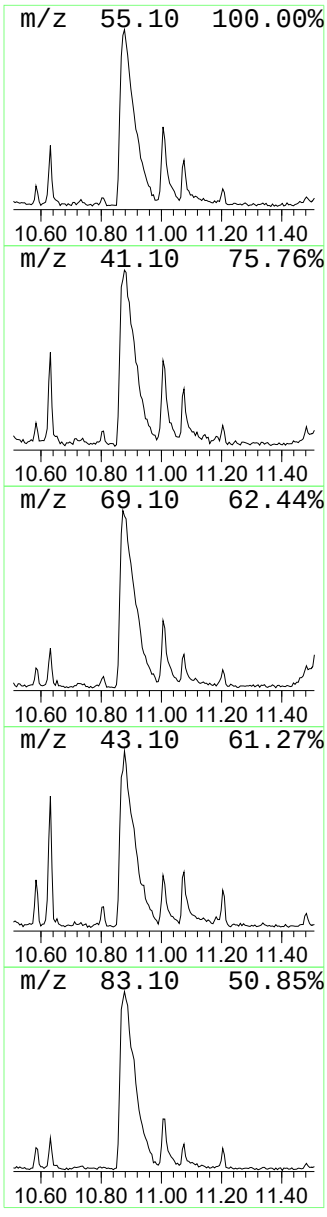
**********

Peak Number 8 9-Octadecenoic acid, (E)- Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.006 | 11237.50 | 1123750 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9-Octadecenoic acid, (E)- | 282 | C18H34O2 | 000112-79-8 | 98 |
| 2 | 9-Octadecenoic acid, (E)- $$ tra... | 282 | C18H34O2 | 000112-79-8 | 98 |
| 3 | 14-Pentadecenoic acid | 240 | C15H28O2 | 017351-34-7 | 91 |
| 4 | 9-Octadecenoic acid, (E)- | 282 | C18H34O2 | 000112-79-8 | 91 |
| 5 | 15-Tetracosenoic acid, methyl es... | 380 | C25H48O2 | 002733-88-2 | 90 |



Library Search Compound Report

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Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

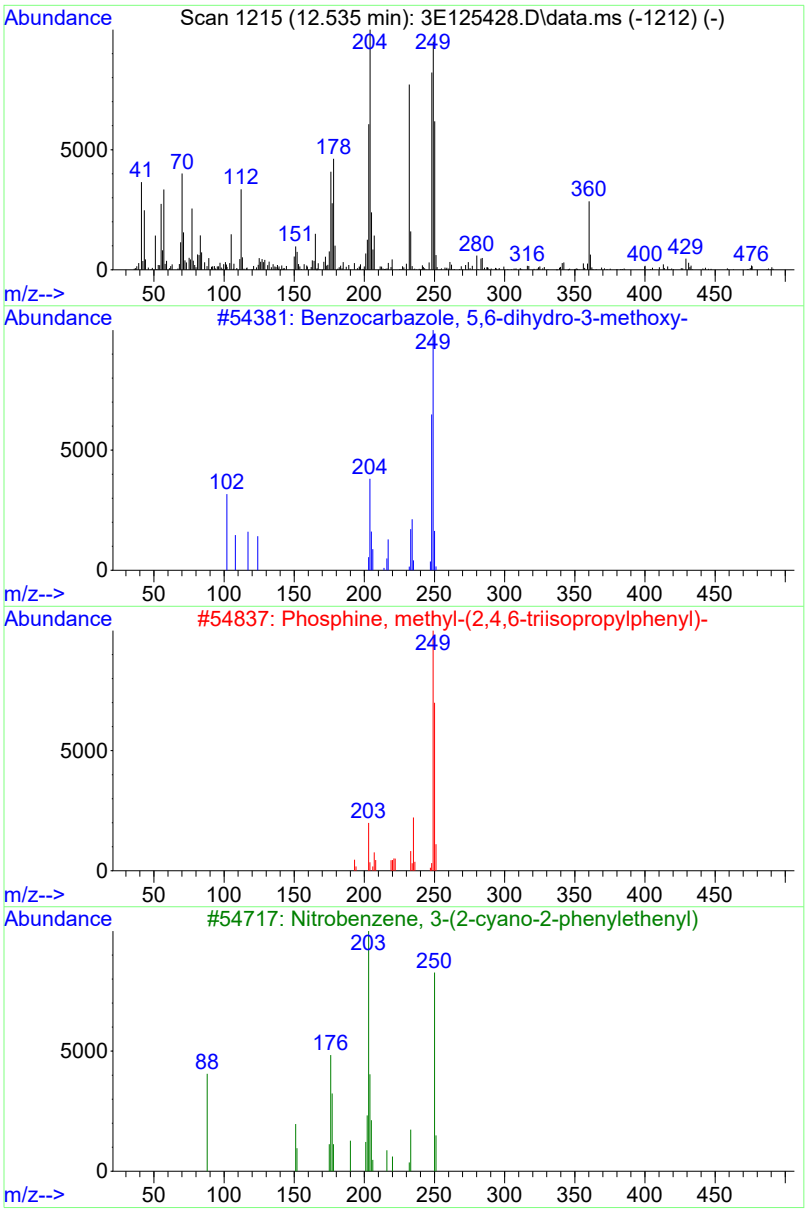
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

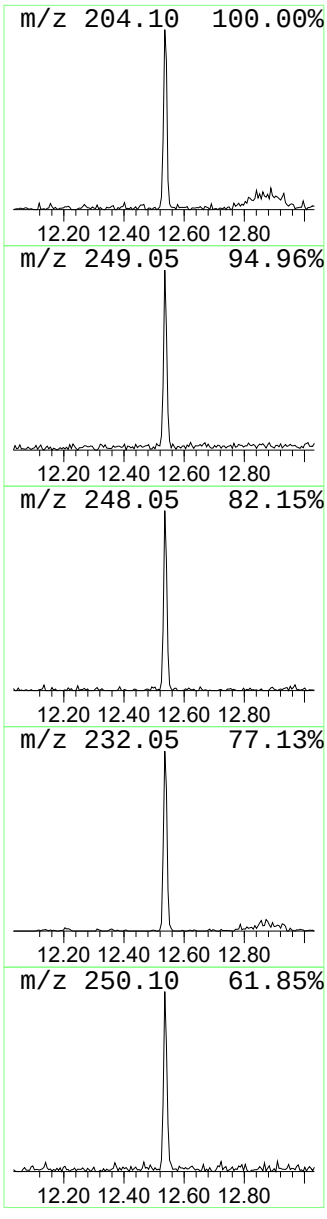
**********

Peak Number 9 Unknown Concentration Rank 23

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.535 | 4934.99 | 493499 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzocarbazole, 5,6-dihydro-3-me... | 249 | C17H15NO | 000000-00-0 | 27 |
| 2 | Phosphine, methyl-(2,4,6-triisop... | 250 | C16H27P | 000000-00-0 | 12 |
| 3 | Nitrobenzene, 3-(2-cyano-2-pheny... | 250 | C15H10N2O2 | 006720-37-2 | 10 |
| 4 | 8,9,10,11-Tetrahydrobenz[A]anthr... | 232 | C18H16 | 067064-62-4 | 10 |
| 5 | [1,1'-Biphenyl]-4,4'-dicarbonitrile | 204 | C14H8N2 | 001591-30-6 | 10 |



Library Search Compound Report

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Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

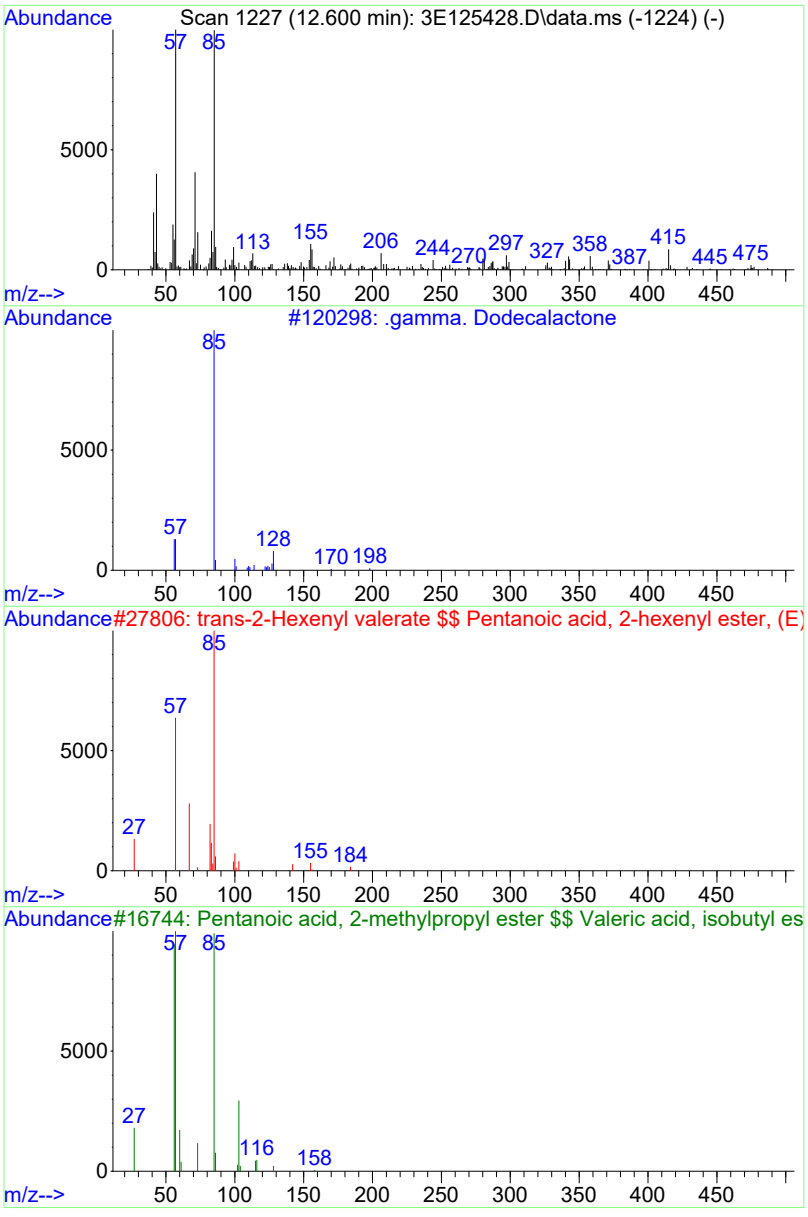
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

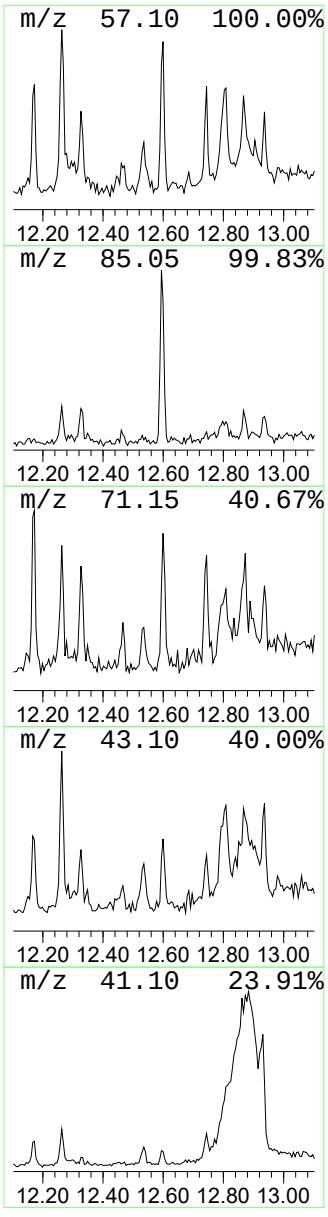
**********

Peak Number 10 Unknown Concentration Rank 24

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.600 | 4666.04 | 466604 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | .gamma. Dodecalactone | 198 | C12H22O2 | 002305-05-7 | 46 |
| 2 | trans-2-Hexenyl valerate $$ Pent... | 184 | C11H20O2 | 056922-74-8 | 43 |
| 3 | Pentanoic acid, 2-methylpropyl e... | 158 | C9H18O2 | 010588-10-0 | 43 |
| 4 | 2(3H)-Furanone, 5-butyldihydro- | 142 | C8H14O2 | 000104-50-7 | 43 |
| 5 | 2(3H)-Furanone, 5-butyldihydro- | 142 | C8H14O2 | 000104-50-7 | 43 |



Library Search Compound Report

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Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

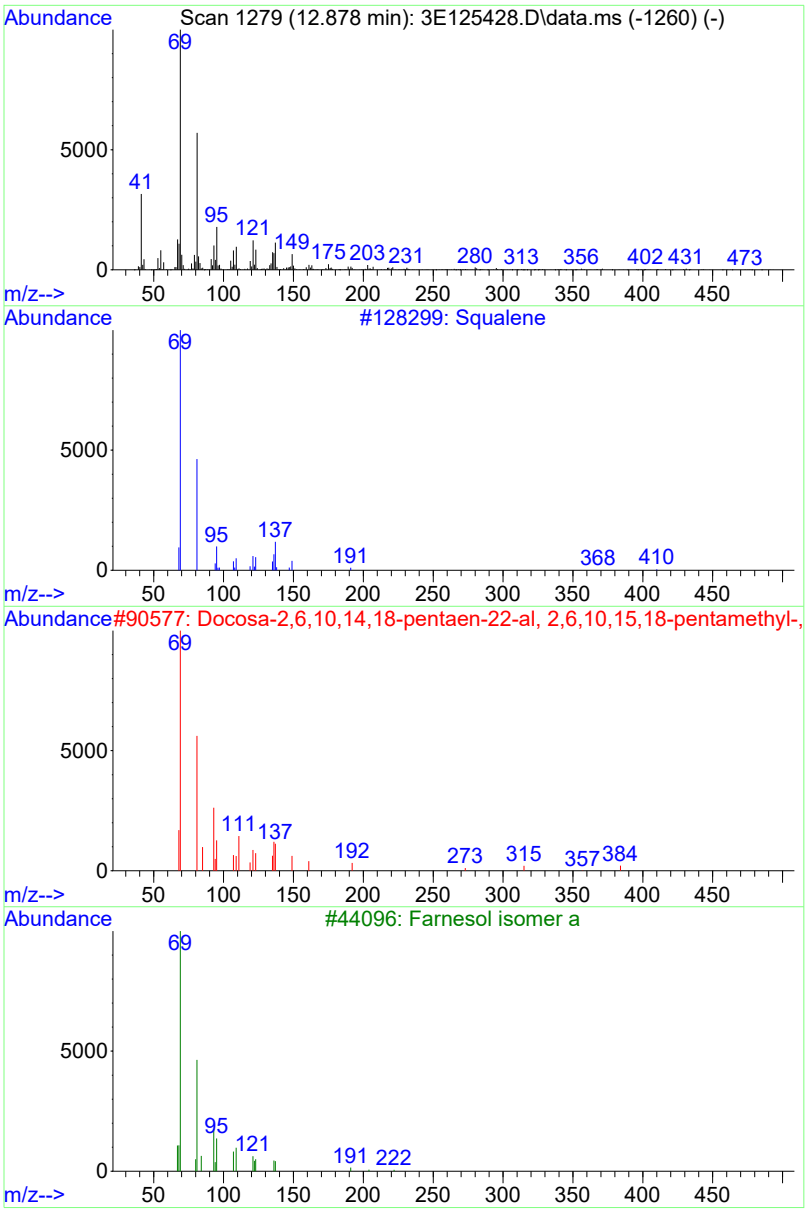
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

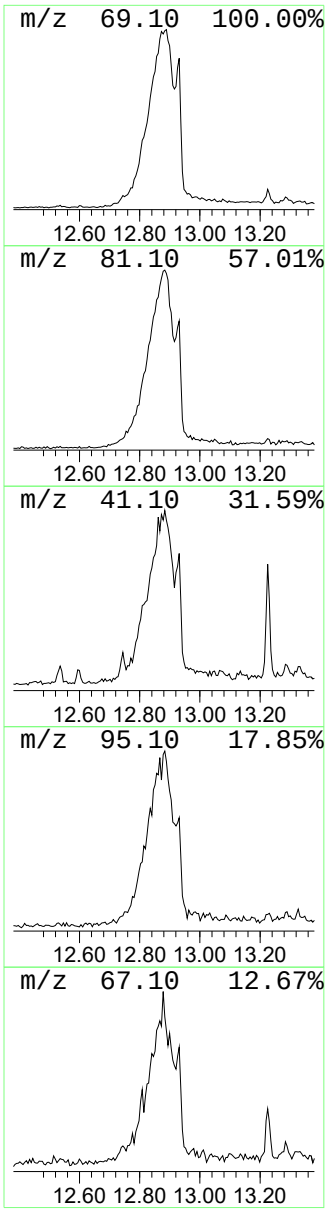
**********

Peak Number 11 Squalene Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.878 | 77884.50 | 7788450 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Squalene | 410 | C30H50 | 007683-64-9 | 81 |
| 2 | Docosa-2,6,10,14,18-pentaen-22-a... | 384 | C27H44O | 000000-00-0 | 78 |
| 3 | Farnesol isomer a | 222 | C15H26O | 000000-00-0 | 72 |
| 4 | 2,6,10-Dodecatrien-1-ol, 3,7,11-... | 222 | C15H26O | 004602-84-0 | 72 |
| 5 | 7,11-Dimethyldodeca-2,6,10-trien... | 208 | C14H24O | 125529-10-4 | 64 |



Library Search Compound Report

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Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

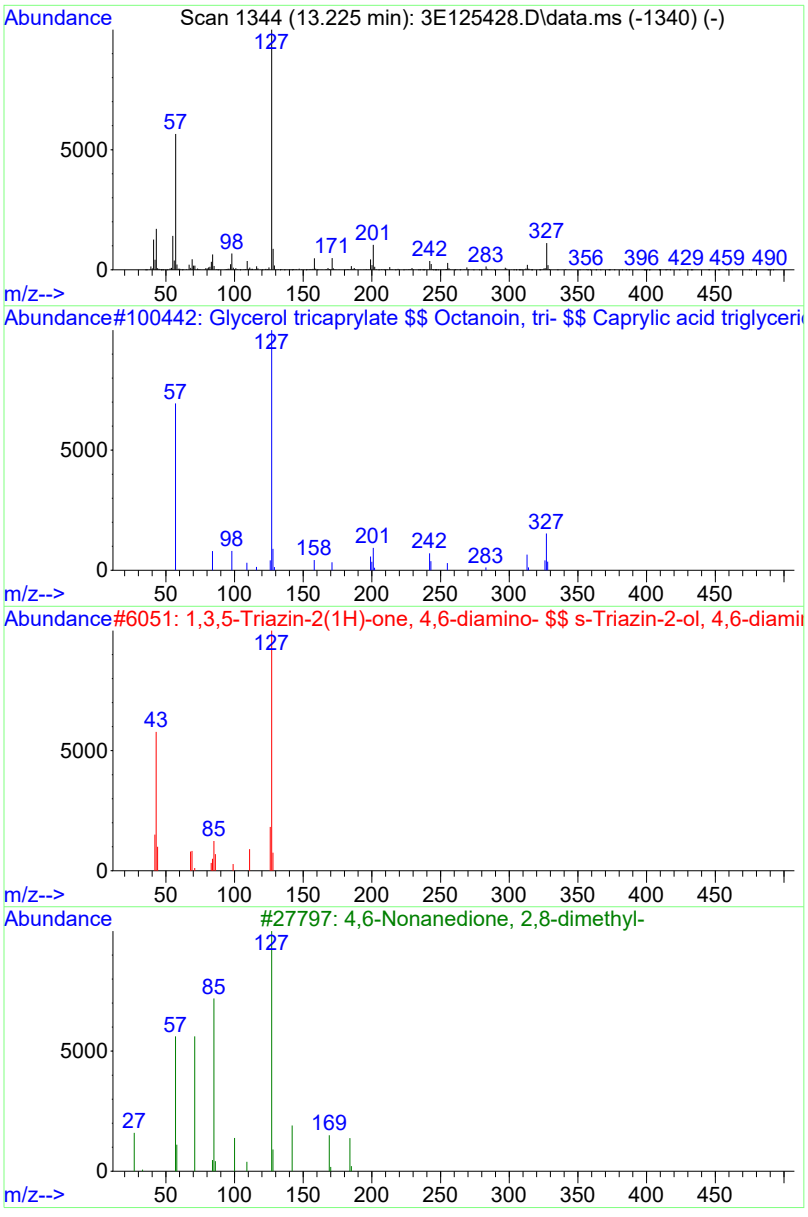
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

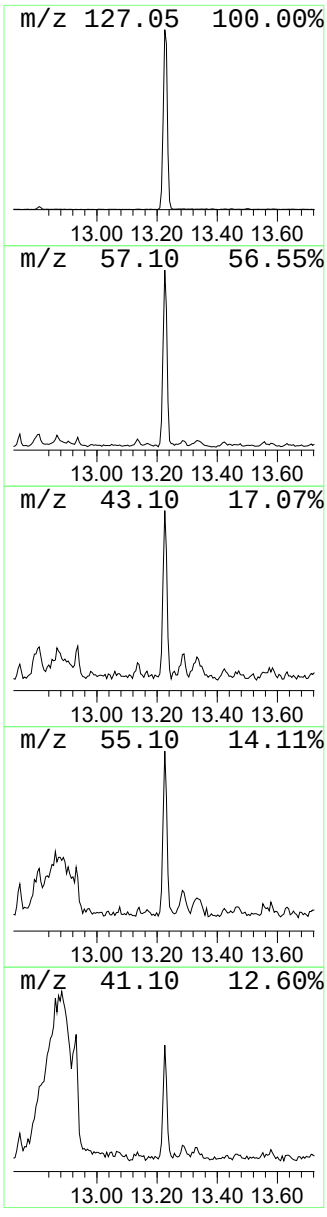
**********

Peak Number 12 Glycerol tricaprylate $$ Oc... Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.225 | 22048.20 | 2204820 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Glycerol tricaprylate $$ Octanoi... | 470 | C27H50O6 | 000538-23-8 | 50 |
| 2 | 1,3,5-Triazin-2(1H)-one, 4,6-dia... | 127 | C3H5N5O | 000645-92-1 | 40 |
| 3 | 4,6-Nonanedione, 2,8-dimethyl- | 184 | C11H20O2 | 007307-08-6 | 33 |
| 4 | Pyrazole, 1-methyl-4-nitro- $$ 1... | 127 | C4H5N3O2 | 003994-50-1 | 9 |
| 5 | 2-Hydroxy-4-hydroxylaminopyrimidine | 127 | C4H5N3O2 | 020555-88-8 | 9 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

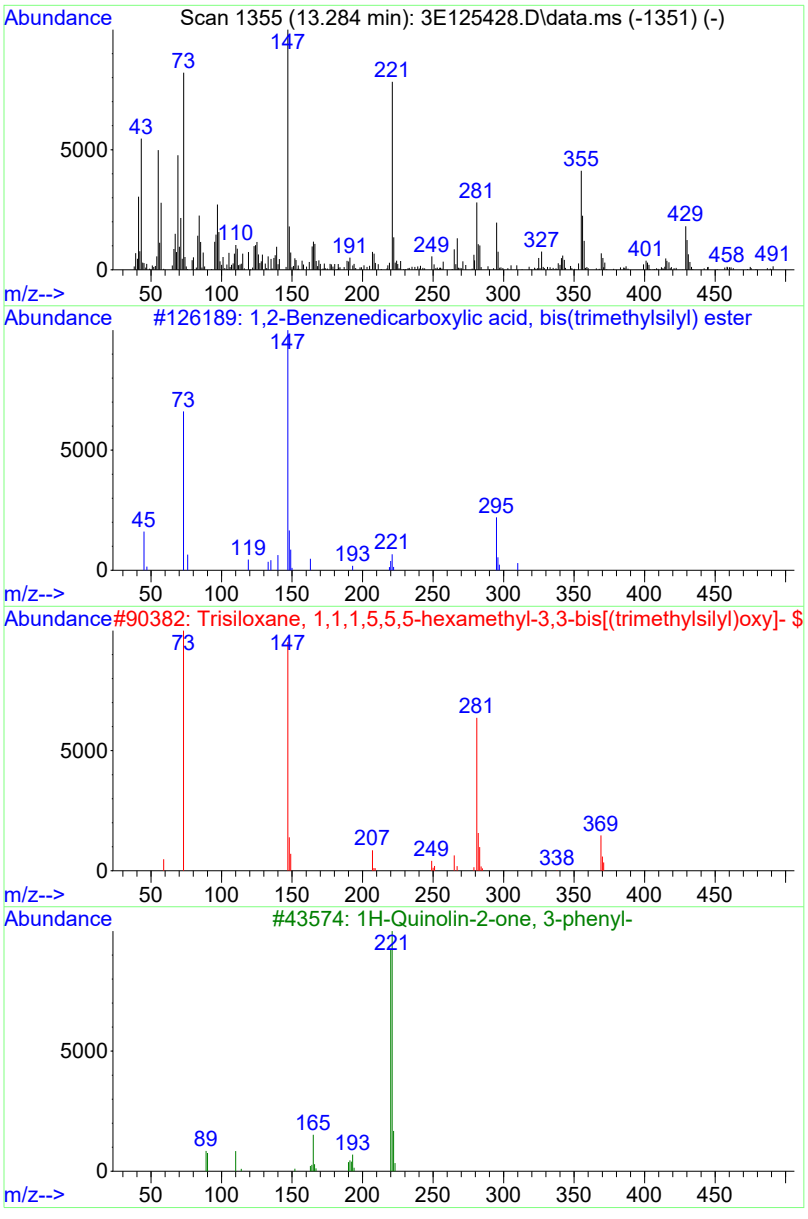
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

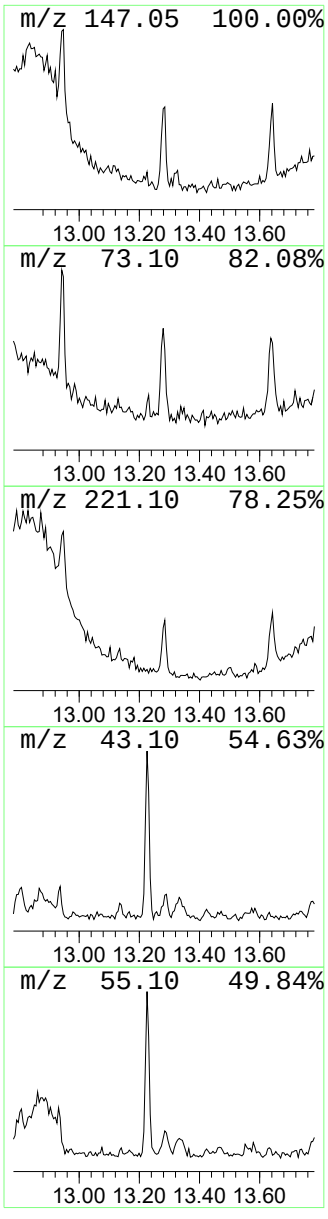
**********

Peak Number 13 1,2-Benzenedicarboxylic aci... Concentration Rank 22

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.284 | 5166.20 | 516620 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1,2-Benzenedicarboxylic acid, bi... | 310 | C14H22O4Si2 | 002078-22-0 | 22 |
| 2 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 12 |
| 3 | 1H-Quinolin-2-one, 3-phenyl- | 221 | C15H11NO | 038035-81-3 | 11 |
| 4 | Methyl 2-methyl-2-benzylideneami... | 221 | C12H15NO3 | 000000-00-0 | 11 |
| 5 | 3-Methoxy-5-nitrobenzotrifluoride | 221 | C8H6F3NO3 | 000328-79-0 | 11 |



Library Search Compound Report

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Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

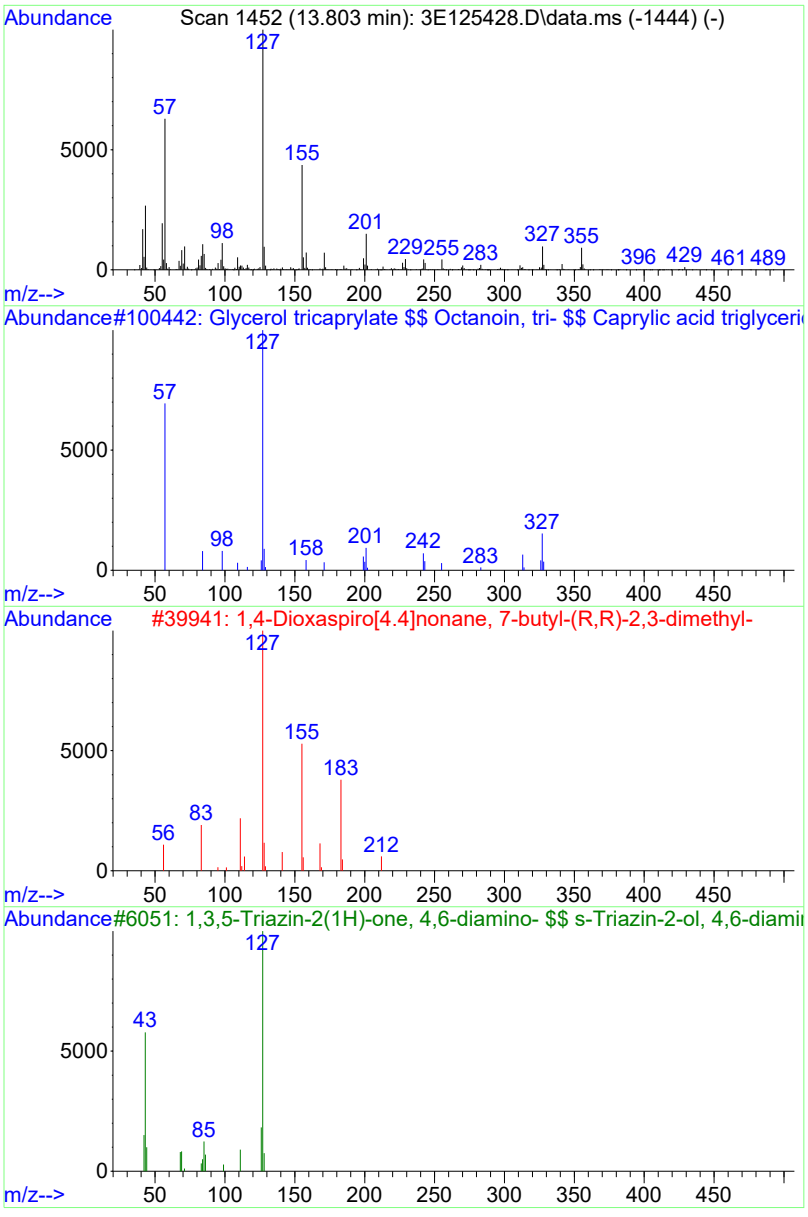
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

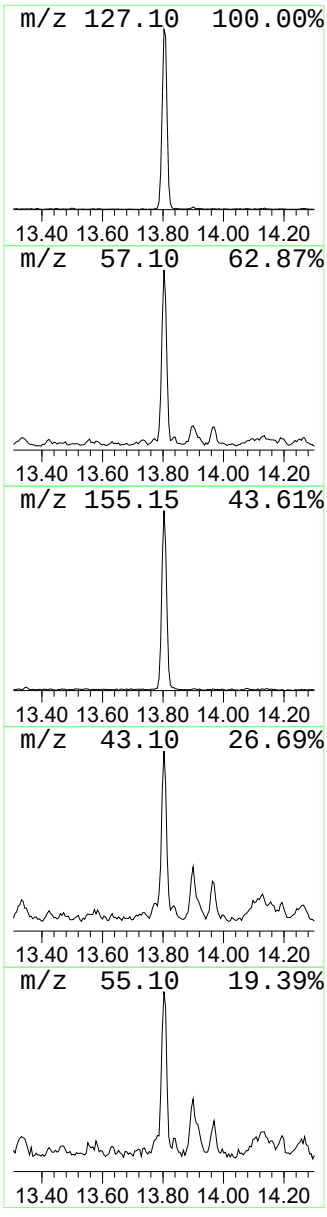
**********

Peak Number 14 Glycerol tricaprylate $$ Oc... Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.803 | 29737.80 | 2973780 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Glycerol tricaprylate $$ Octanoi... | 470 | C27H50O6 | 000538-23-8 | 42 |
| 2 | 1,4-Dioxaspiro[4.4]nonane, 7-but... | 212 | C13H24O2 | 104807-77-4 | 42 |
| 3 | 1,3,5-Triazin-2(1H)-one, 4,6-dia... | 127 | C3H5N5O | 000645-92-1 | 38 |
| 4 | 2,3,4-Trimethyl-isoxazol-5(2H)-one | 127 | C6H9NO2 | 000000-00-0 | 32 |
| 5 | Pyrazole, 1-methyl-4-nitro- $$ 1... | 127 | C4H5N3O2 | 003994-50-1 | 25 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

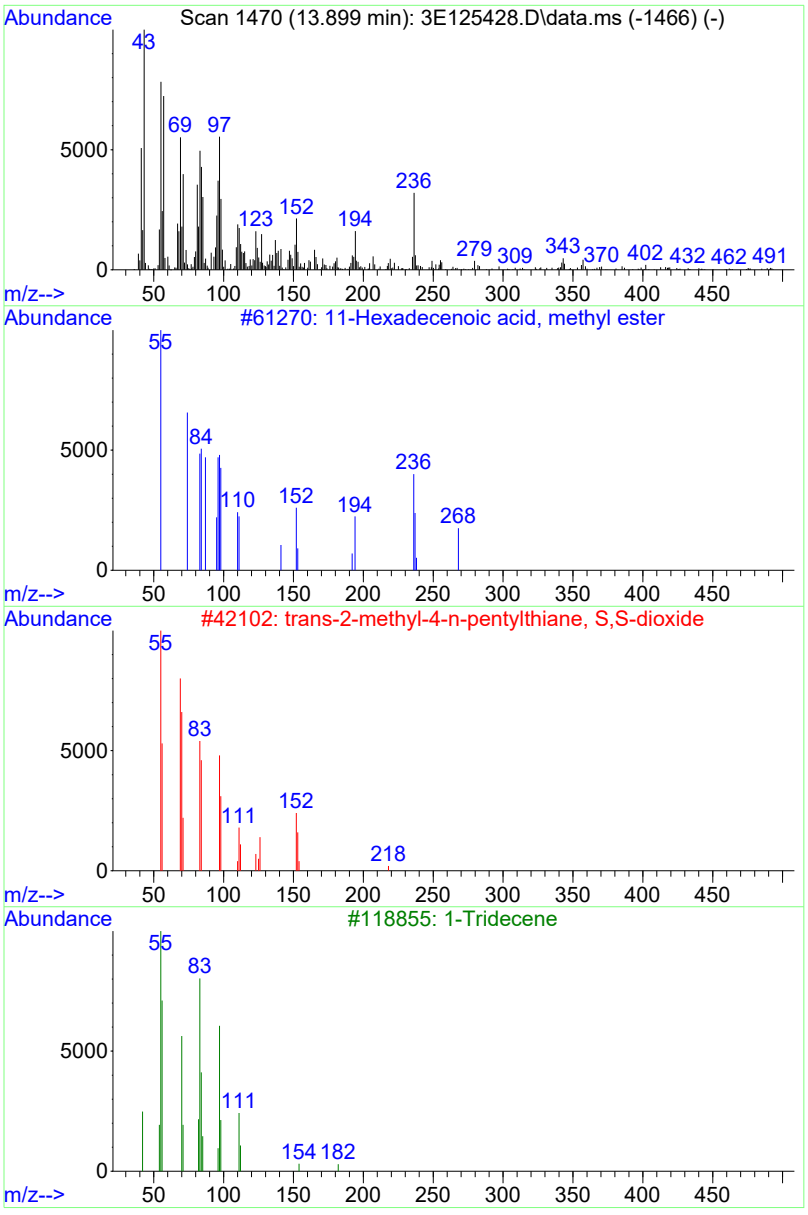
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

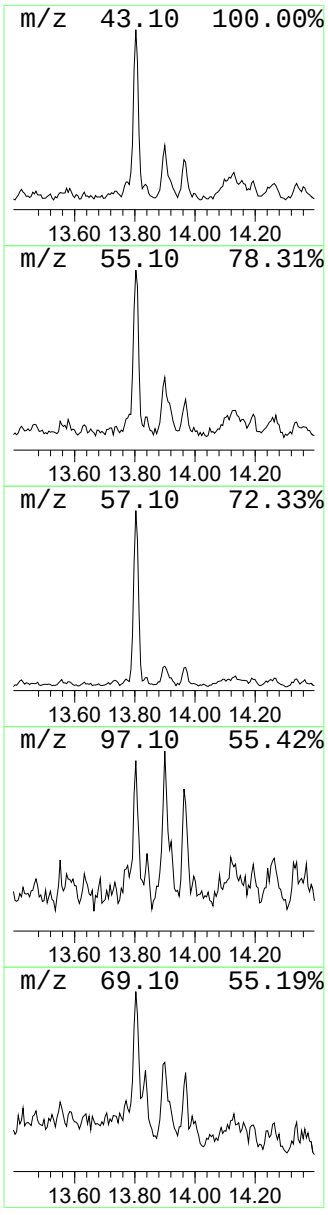
**********

Peak Number 15 11-Hexadecenoic acid, methy... Concentration Rank 16

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.899 | 8198.32 | 819832 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 11-Hexadecenoic acid, methyl ester | 268 | C17H32O2 | 055000-42-5 | 74 |
| 2 | trans-2-methyl-4-n-pentylthiane,... | 218 | C11H22O2S | 000000-00-0 | 60 |
| 3 | 1-Tridecene | 182 | C13H26 | 002437-56-1 | 43 |
| 4 | Cyclohexane, 1-(cyclohexylmethyl... | 194 | C14H26 | 054823-98-2 | 41 |
| 5 | 1-Heptadecene $$ Hexahydroaplota... | 238 | C17H34 | 006765-39-5 | 38 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

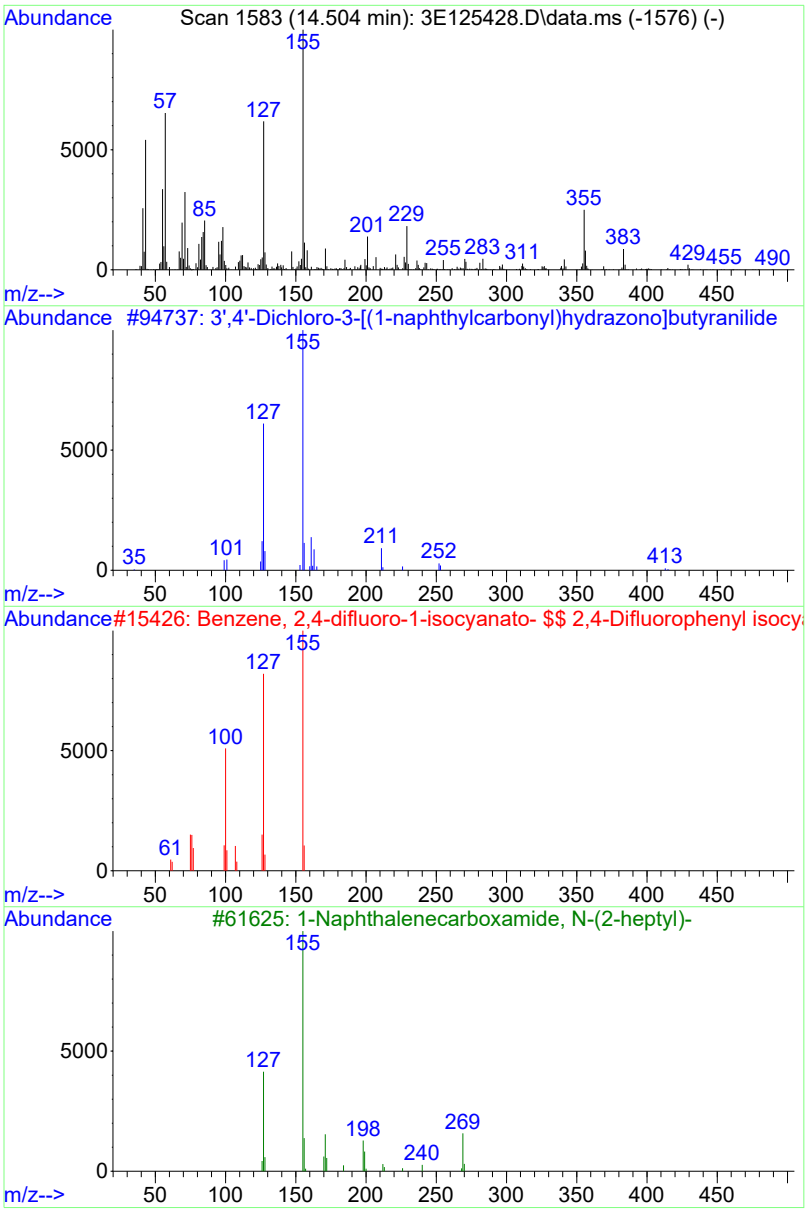
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

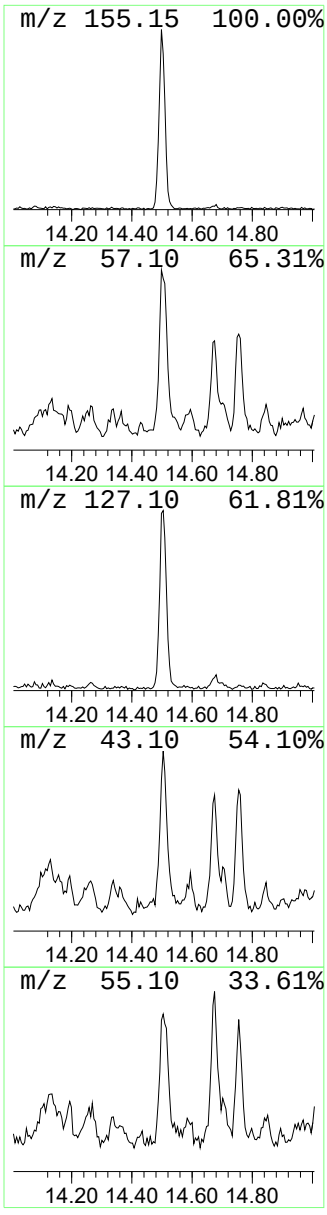
**********

Peak Number 16 3',4'-Dichloro-3-[(1-naphth... Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.504 | 17892.70 | 1789270 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3',4'-Dichloro-3-[(1-naphthylcar... | 413 | C21H17Cl2N3O2 | 000000-00-0 | 50 |
| 2 | Benzene, 2,4-difluoro-1-isocyana... | 155 | C7H3F2NO | 059025-55-7 | 40 |
| 3 | 1-Naphthalenecarboxamide, N-(2-h... | 269 | C18H23NO | 000000-00-0 | 38 |
| 4 | Naphthalene-2-carboxylic acid, 1... | 326 | C16H13F3O4 | 000000-00-0 | 37 |
| 5 | Ethyl 2-butyramido-3,3,3-trifluo... | 298 | C12H21F3N2O3 | 000000-00-0 | 35 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

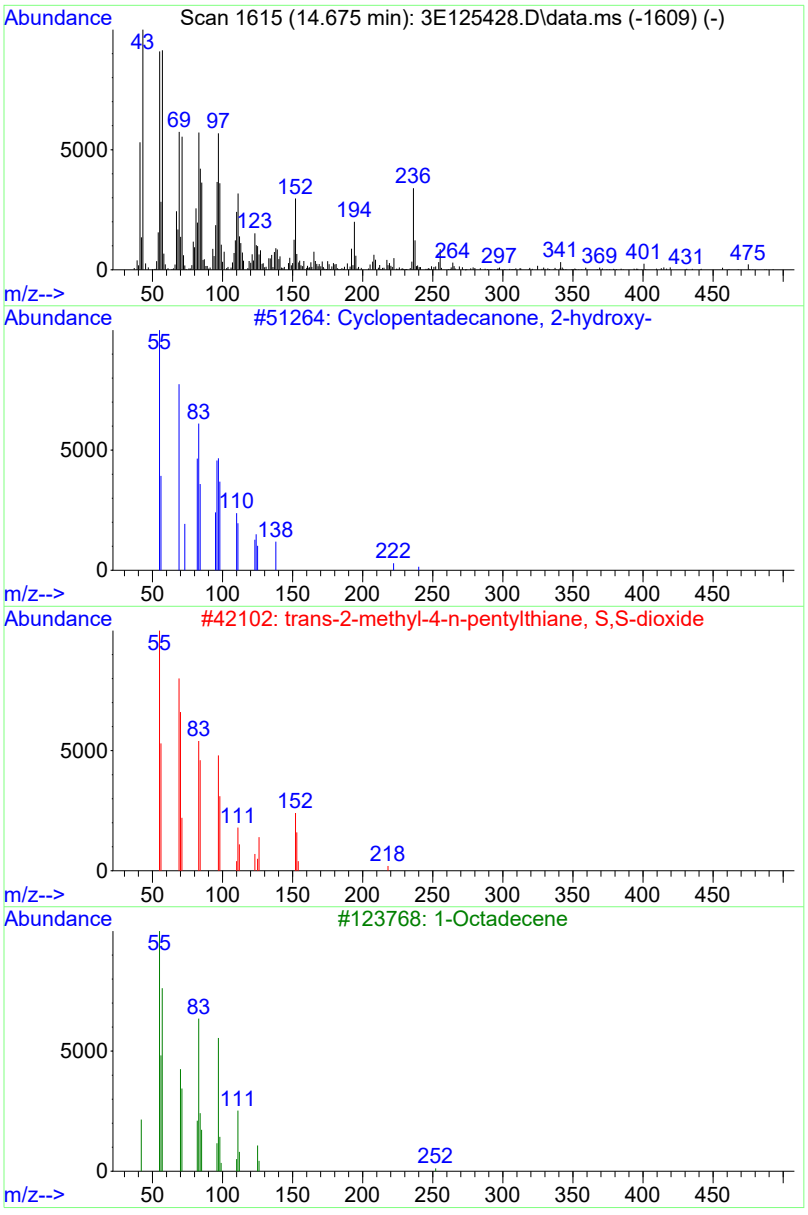
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

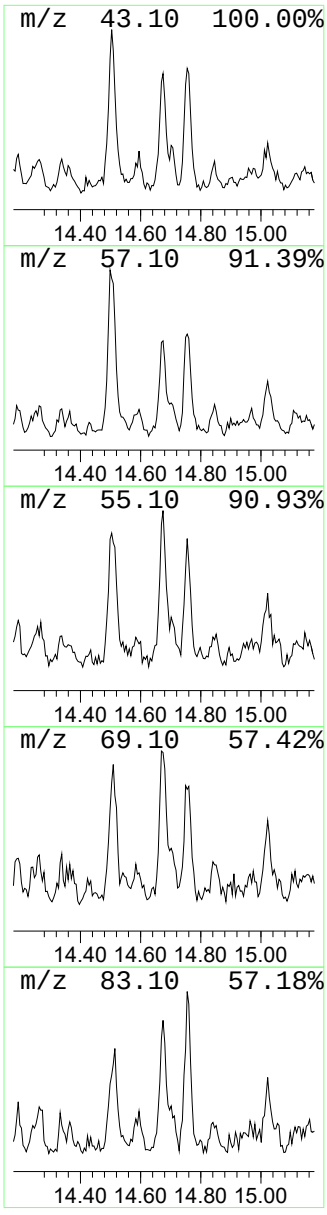
**********

Peak Number 17 Cyclopentadecanone, 2-hydroxy- Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.675 | 11264.70 | 1126470 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclopentadecanone, 2-hydroxy- | 240 | C15H28O2 | 004727-18-8 | 84 |
| 2 | trans-2-methyl-4-n-pentylthiane,... | 218 | C11H22O2S | 000000-00-0 | 49 |
| 3 | 1-Octadecene | 252 | C18H36 | 000112-88-9 | 41 |
| 4 | 1-Heptadecene | 238 | C17H34 | 006765-39-5 | 38 |
| 5 | 1-Hexadecanol, 2-methyl- $$ 2-Me... | 256 | C17H36O | 002490-48-4 | 38 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

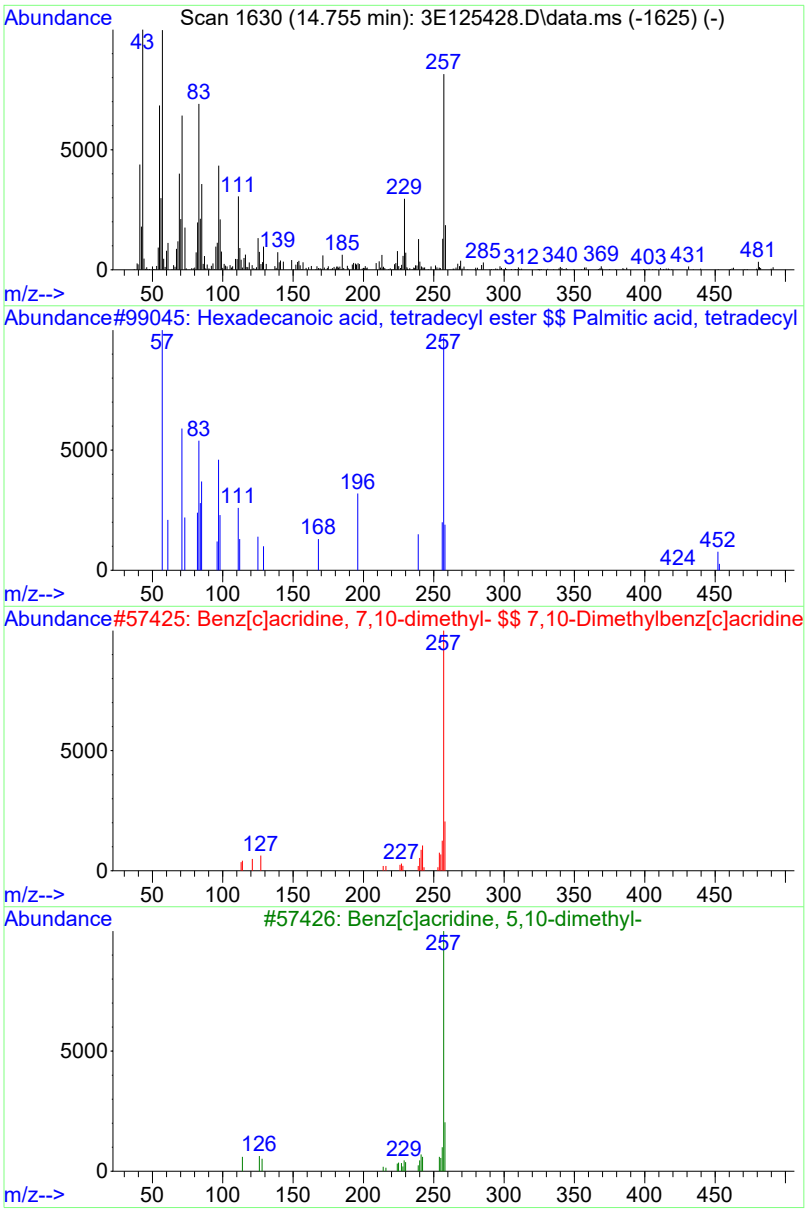
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

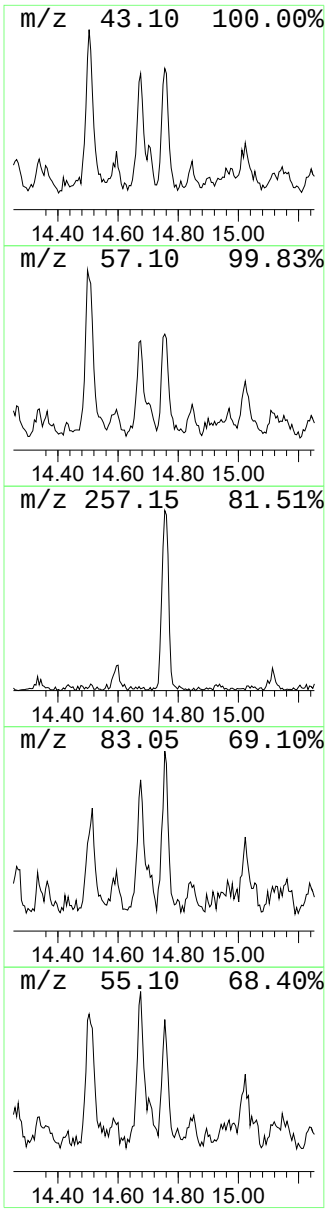
**********

Peak Number 18 Hexadecanoic acid, tetradec... Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.755 | 8225.94 | 822594 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hexadecanoic acid, tetradecyl es... | 452 | C30H60O2 | 004536-26-9 | 64 |
| 2 | Benz[c]acridine, 7,10-dimethyl- ... | 257 | C19H15N | 002381-40-0 | 52 |
| 3 | Benz[c]acridine, 5,10-dimethyl- | 257 | C19H15N | 003518-04-5 | 50 |
| 4 | Benz[c]acridine, 5,9-dimethyl- | 257 | C19H15N | 003518-03-4 | 40 |
| 5 | Nordextromethorphan | 257 | C17H23NO | 051195-74-5 | 38 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

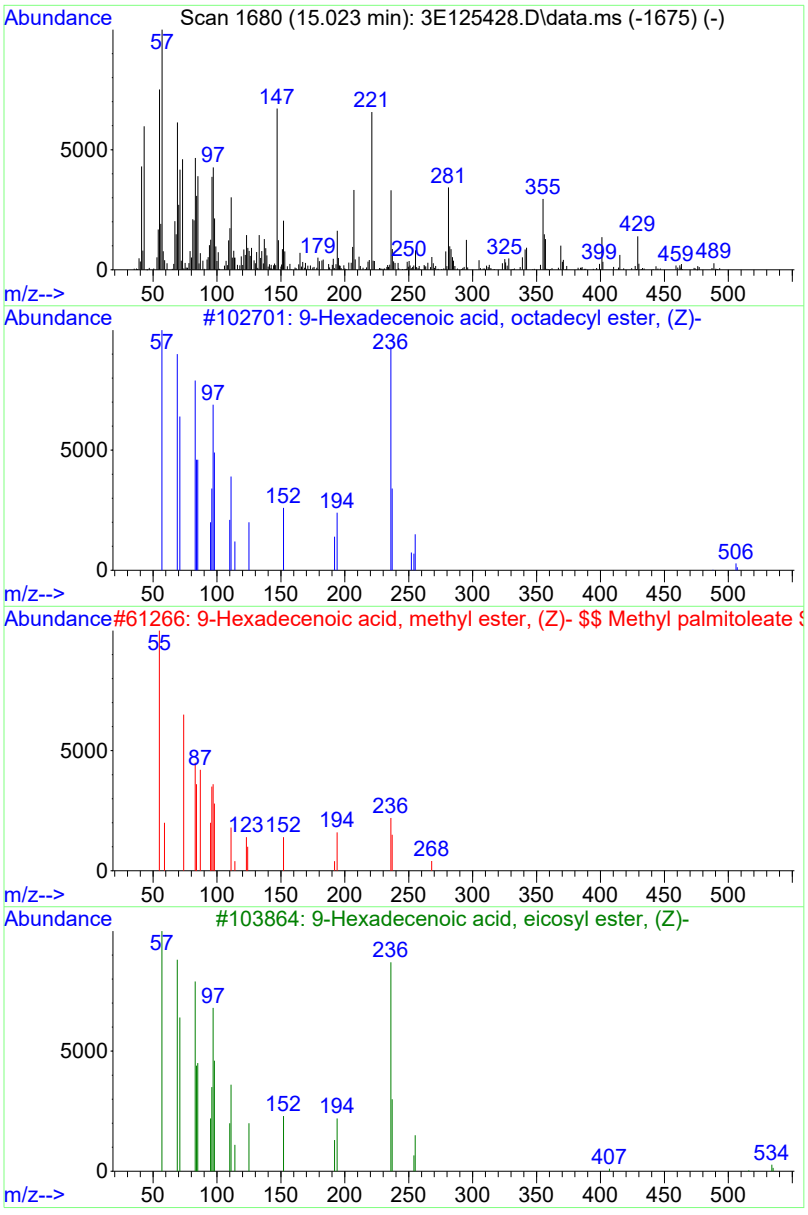
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

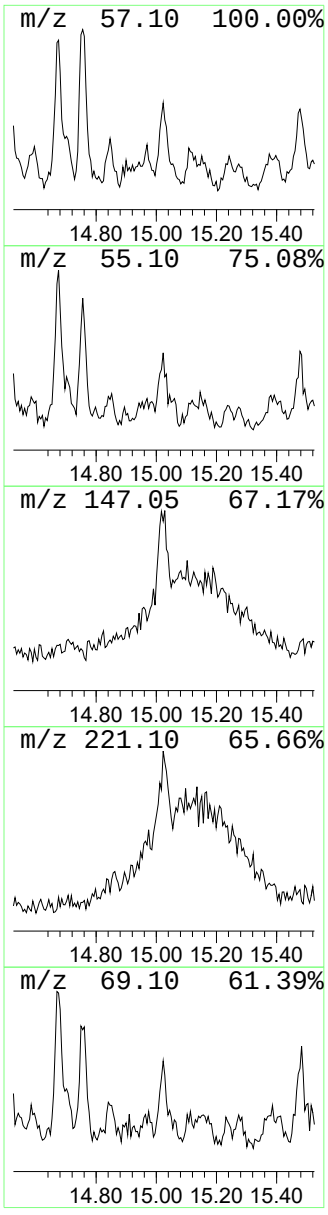
**********

Peak Number 19 9-Hexadecenoic acid, octade... Concentration Rank 18

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.023 | 7115.26 | 711526 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9-Hexadecenoic acid, octadecyl e... | 507 | C34H66O2 | 022393-84-6 | 25 |
| 2 | 9-Hexadecenoic acid, methyl este... | 268 | C17H32O2 | 001120-25-8 | 25 |
| 3 | 9-Hexadecenoic acid, eicosyl est... | 535 | C36H70O2 | 022522-34-5 | 14 |
| 4 | (E)-2-Hydroxy-4'-cyano-stilbene | 221 | C15H11NO | 000000-00-0 | 14 |
| 5 | Cyclotetradecane, 1,7,11-trimeth... | 280 | C20H40 | 001786-12-5 | 11 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

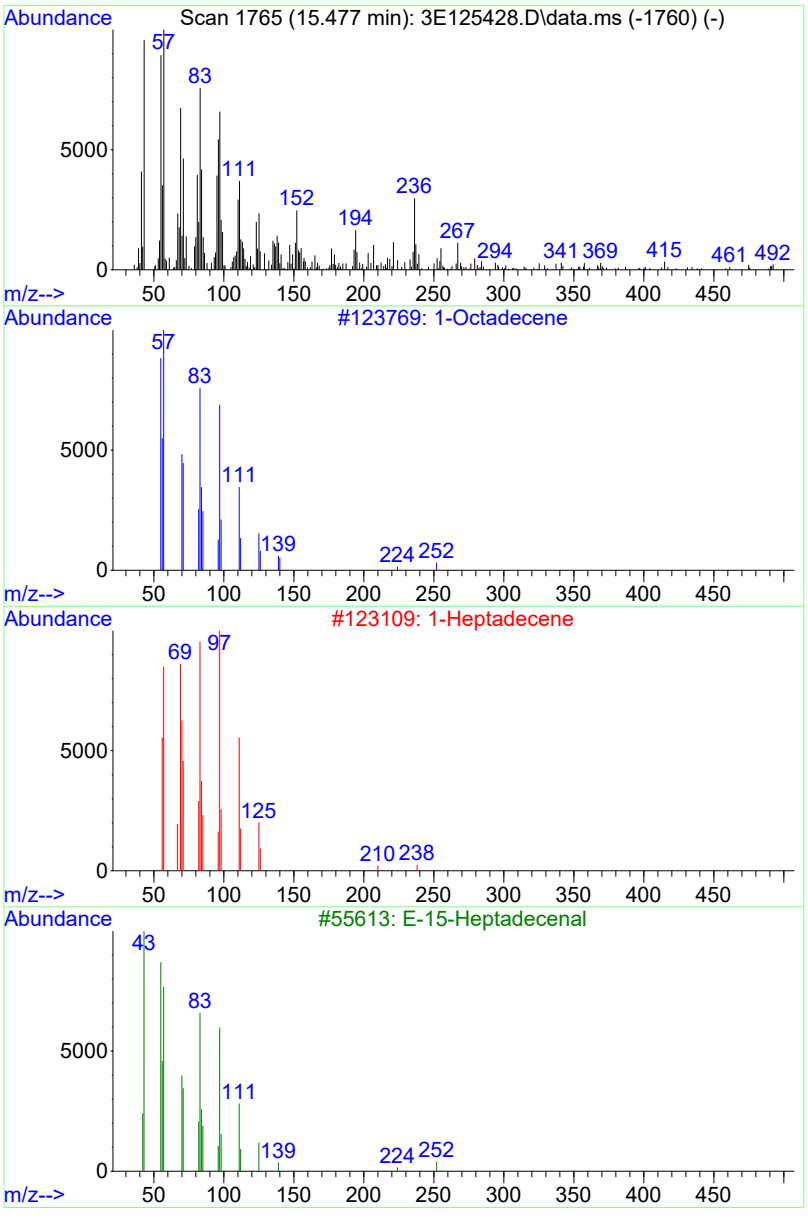
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

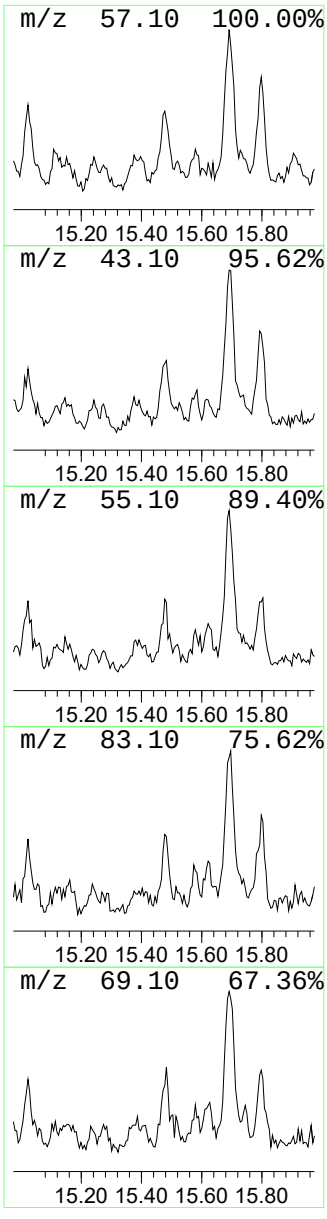
**********

Peak Number 20 1-Octadecene Concentration Rank 25

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.477 | 4382.37 | 438237 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1-Octadecene | 252 | C18H36 | 000112-88-9 | 87 |
| 2 | 1-Heptadecene | 238 | C17H34 | 006765-39-5 | 87 |
| 3 | E-15-Heptadecenal | 252 | C17H32O | 000000-00-0 | 64 |
| 4 | Cyclopentane, (4-octyldodecyl)- | 350 | C25H50 | 005638-09-5 | 58 |
| 5 | 2-Heptadecenal | 252 | C17H32O | 000000-00-0 | 58 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

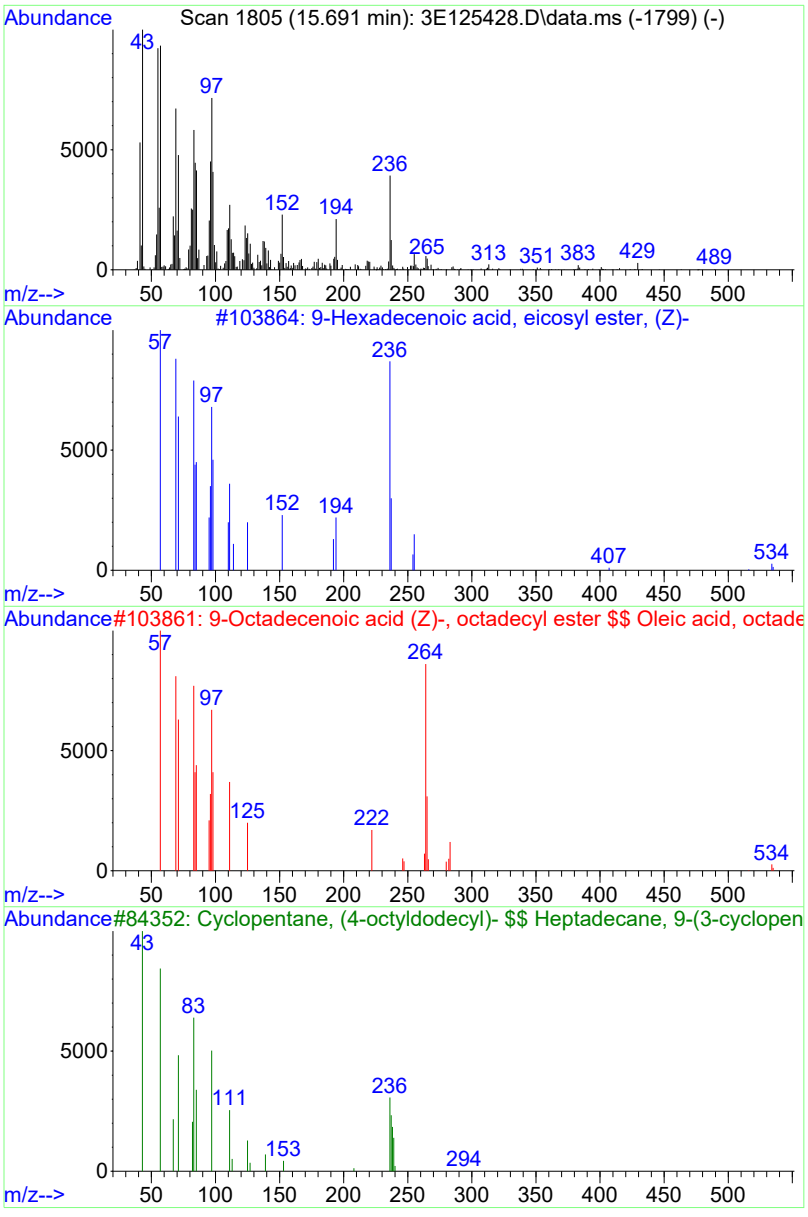
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

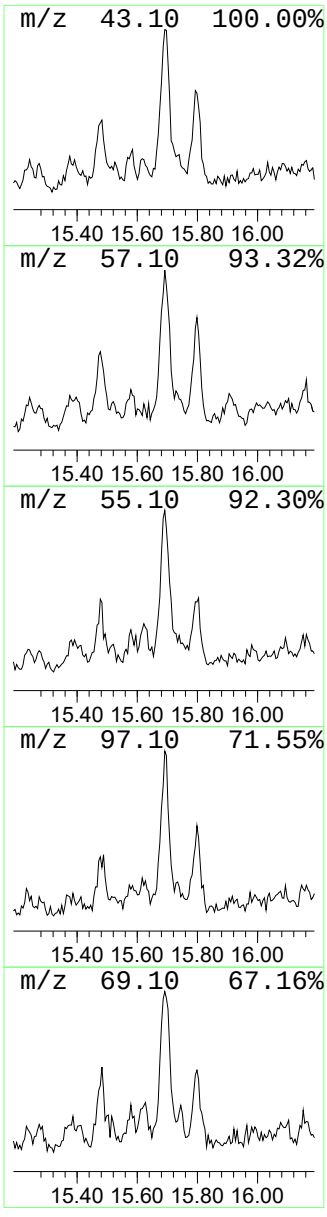
**********

Peak Number 21 9-Octadecenoic acid (Z)-, o... Concentration Rank 8

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.691 | 16566.80 | 1656680 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 9-Hexadecenoic acid, eicosyl est... | 535 | C36H70O2 | 022522-34-5 | 80 |
| 2 | 9-Octadecenoic acid (Z)-, octade... | 535 | C36H70O2 | 017673-49-3 | 58 |
| 3 | Cyclopentane, (4-octyldodecyl)- ... | 350 | C25H50 | 005638-09-5 | 41 |
| 4 | 1-Hexadecene $$ .alpha.-Hexadece... | 224 | C16H32 | 000629-73-2 | 38 |
| 5 | 1,2-Octadecanediol $$ 1,12-Dihyd... | 286 | C18H38O2 | 020294-76-2 | 38 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

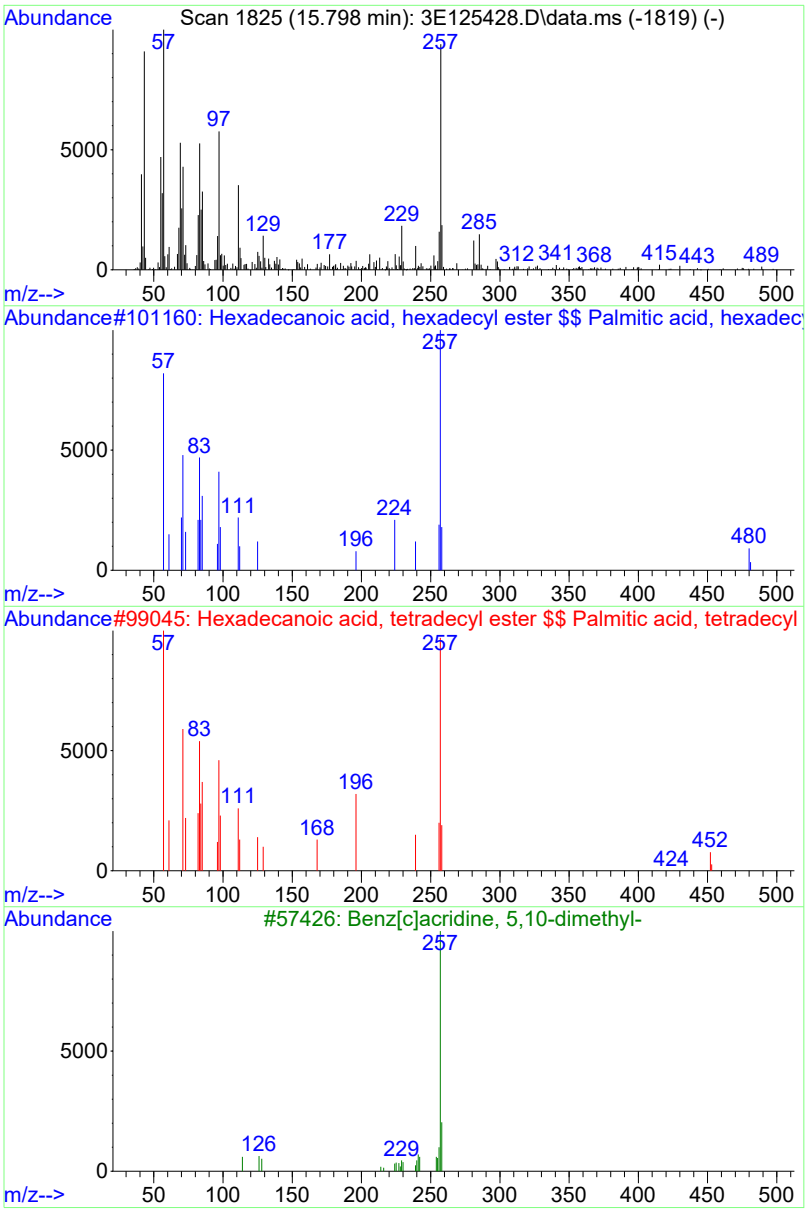
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

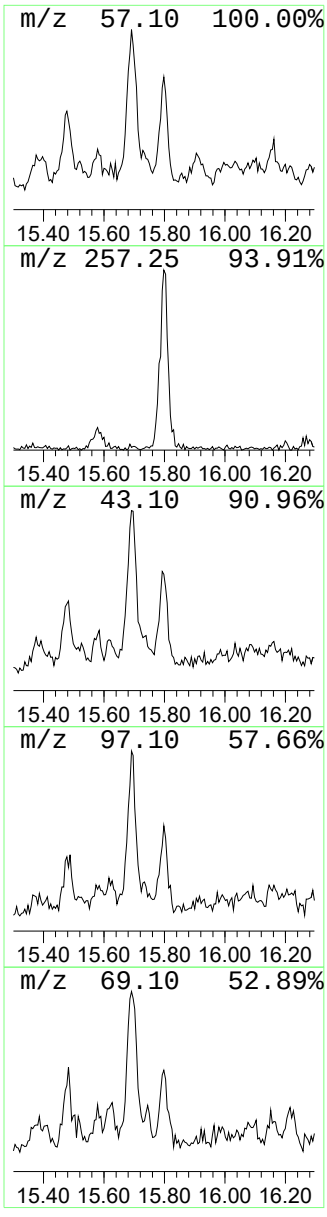
**********

Peak Number 22 Hexadecanoic acid, hexadecy... Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.798 | 7130.06 | 713006 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hexadecanoic acid, hexadecyl est... | 480 | C32H64O2 | 000540-10-3 | 72 |
| 2 | Hexadecanoic acid, tetradecyl es... | 452 | C30H60O2 | 004536-26-9 | 72 |
| 3 | Benz[c]acridine, 5,10-dimethyl- | 257 | C19H15N | 003518-04-5 | 53 |
| 4 | Benz[c]acridine, 7,8-dimethyl- | 257 | C19H15N | 003518-01-2 | 53 |
| 5 | Benz[c]acridine, 7,10-dimethyl- ... | 257 | C19H15N | 002381-40-0 | 42 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

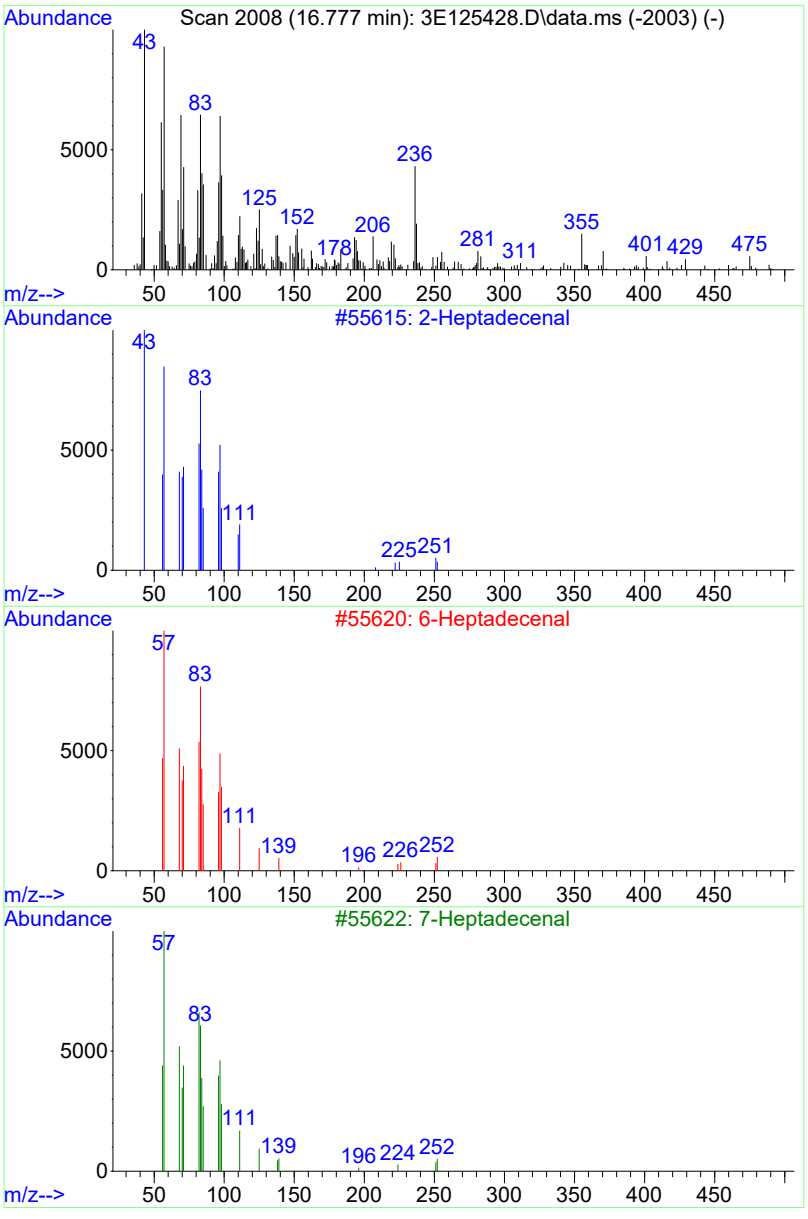
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

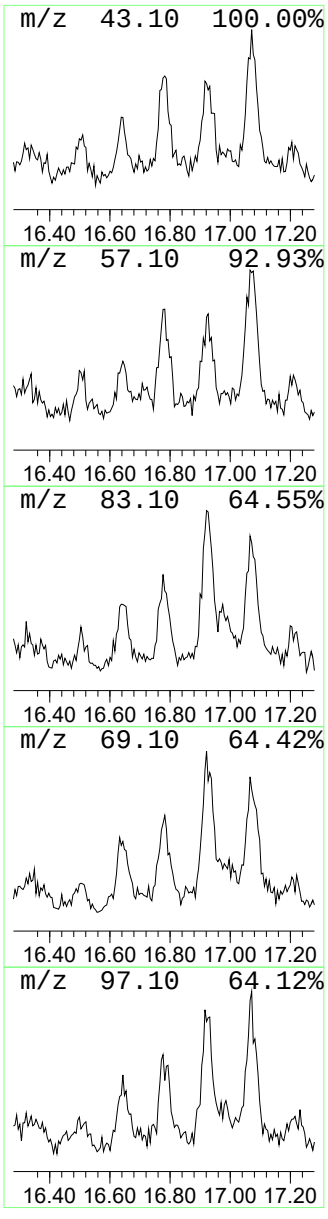
**********

Peak Number 23 2-Heptadecenal Concentration Rank 21

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 16.777 | 5346.75 | 534675 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-Heptadecenal | 252 | C17H32O | 000000-00-0 | 84 |
| 2 | 6-Heptadecenal | 252 | C17H32O | 000000-00-0 | 70 |
| 3 | 7-Heptadecenal | 252 | C17H32O | 000000-00-0 | 60 |
| 4 | 11-Hexadecenoic acid, methyl ester | 268 | C17H32O2 | 055000-42-5 | 49 |
| 5 | 5-Heptadecenal | 252 | C17H32O | 000000-00-0 | 46 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

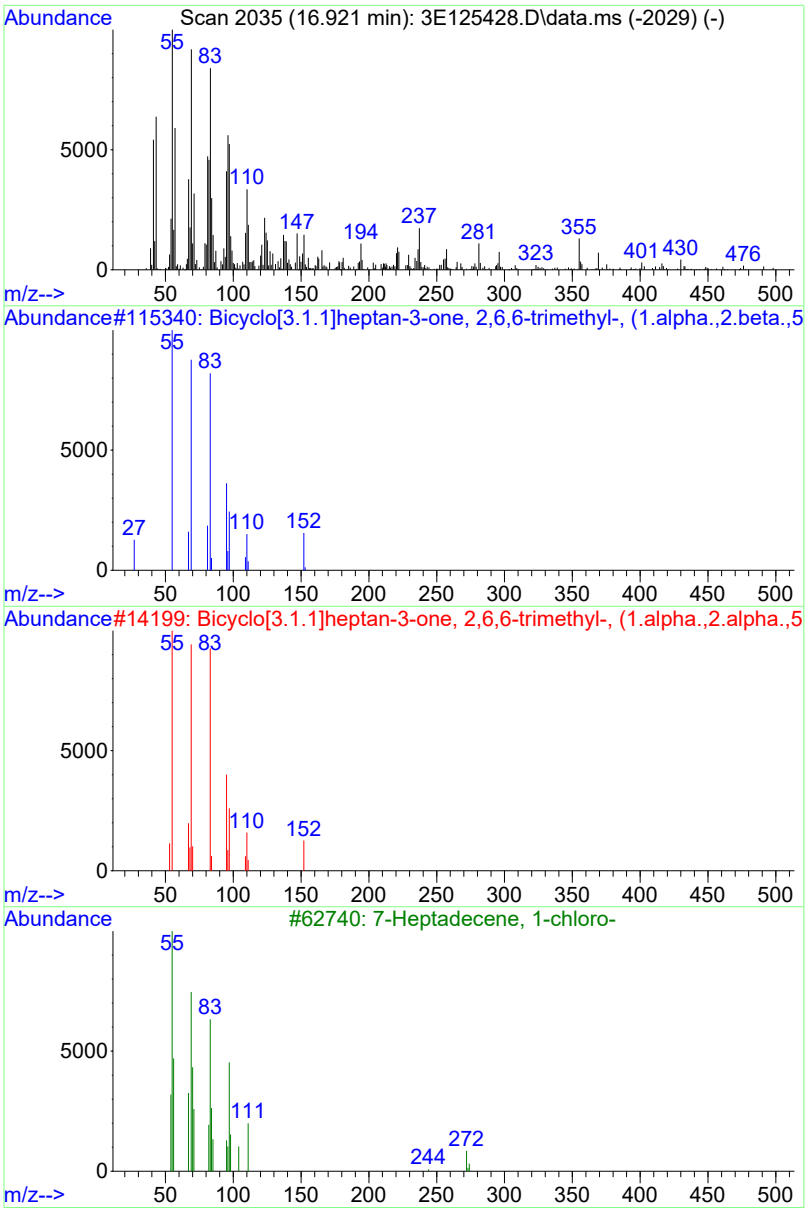
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

**********

Peak Number 24 Octadecanal Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 16.921 | 9640.07 | 964007 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Bicyclo[3.1.1]heptan-3-one, 2,6,... | 152 | C10H16O | 015358-88-0 | 58 |
| 2 | Bicyclo[3.1.1]heptan-3-one, 2,6,... | 152 | C10H16O | 000547-60-4 | 58 |
| 3 | 7-Heptadecene, 1-chloro- | 272 | C17H33Cl | 056554-78-0 | 52 |
| 4 | 9-Octadecene, (E)- | 252 | C18H36 | 007206-25-9 | 49 |
| 5 | Octadecanal | 268 | C18H36O | 000638-66-4 | 43 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

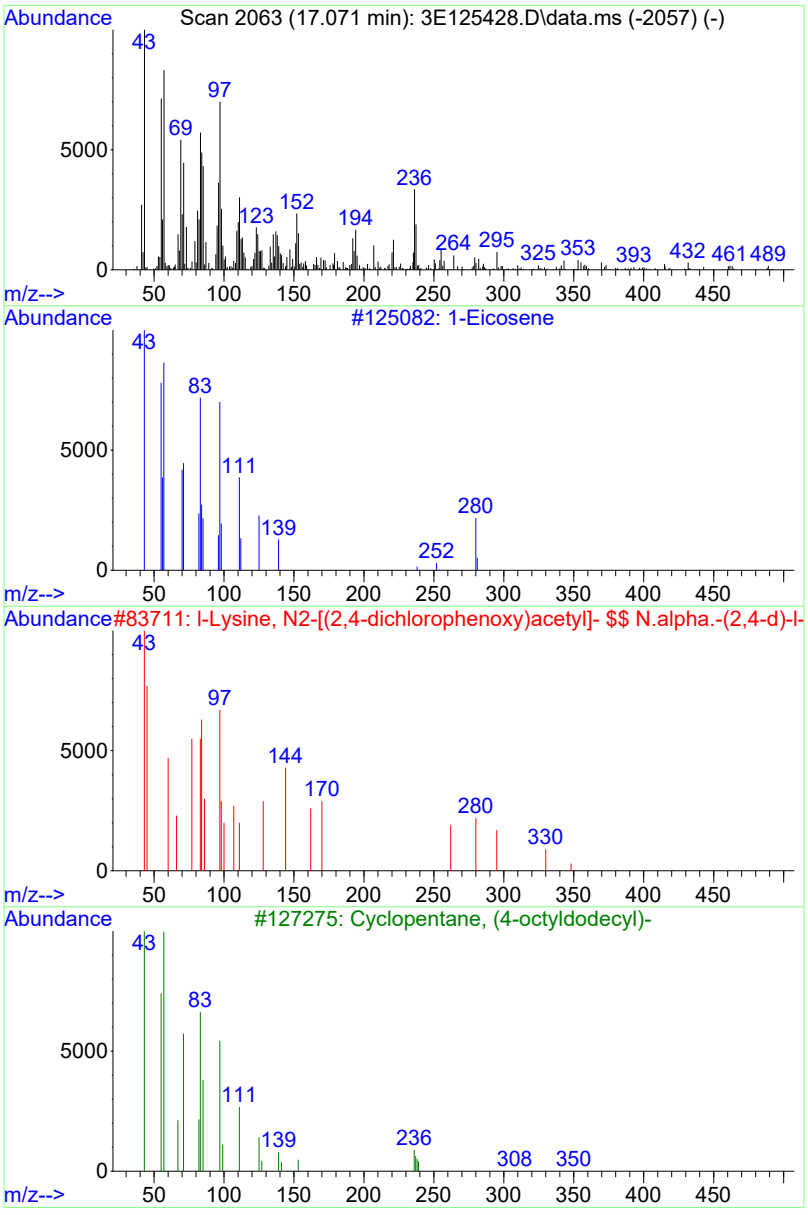
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

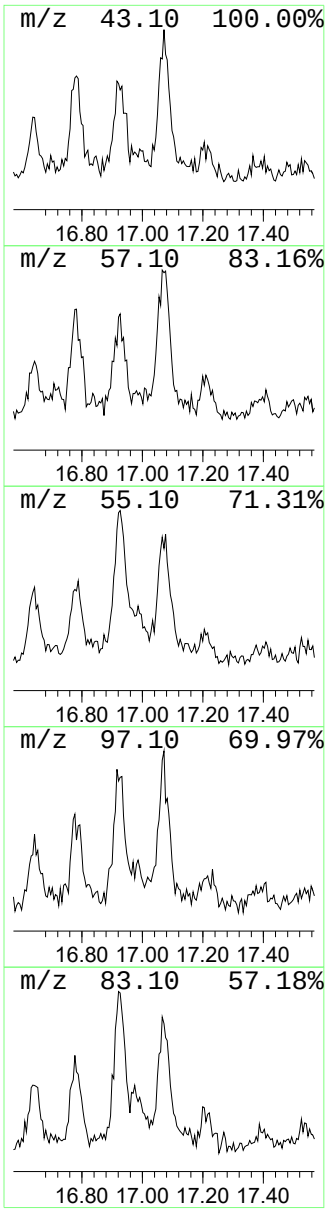
**********

Peak Number 25 Unknown Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 17.071 | 12418.70 | 1241870 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1-Eicosene | 280 | C20H40 | 003452-07-1 | 47 |
| 2 | l-Lysine, N2-[(2,4-dichloropheno... | 348 | C14H18Cl2N2O4 | 050649-08-6 | 42 |
| 3 | Cyclopentane, (4-octyldodecyl)- | 350 | C25H50 | 005638-09-5 | 42 |
| 4 | Nonadecanenitrile | 279 | C19H37N | 028623-46-3 | 38 |
| 5 | Z-12-Pentacosene | 350 | C25H50 | 000000-00-0 | 35 |



Tentatively Identified Compound (LSC) summary

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screems\
Data File : 3E125428.D
Acq On : 26 Jul 2024 6:16 pm
Operator : (b) (6)
Sample : DA65858-5D
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| Cyclotrisiloxan... | 6.192 | 20510.0 | | 2051000 | 0 | 0.000 | 100 | 1.0 |
| Cyclotetrasilox... | 6.737 | 6028.4 | | 602836 | 0 | 0.000 | 100 | 1.0 |
| Tetradecanoic acid | 9.765 | 6826.3 | | 682630 | 0 | 0.000 | 100 | 1.0 |
| 1-Hexadecanol | 10.209 | 70511.1 | | 7051110 | 0 | 0.000 | 100 | 1.0 |
| Unknown | 10.380 | 14902.1 | | 1490210 | 0 | 0.000 | 100 | 1.0 |
| n-Hexadecanoic ... | 10.631 | 8452.6 | | 845265 | 0 | 0.000 | 100 | 1.0 |
| Hexadecanol | 10.877 | 58165.2 | | 5816520 | 0 | 0.000 | 100 | 1.0 |
| 9-Octadecenoic ... | 11.006 | 11237.5 | | 1123750 | 0 | 0.000 | 100 | 1.0 |
| Unknown | 12.535 | 4935.0 | | 493499 | 0 | 0.000 | 100 | 1.0 |
| Unknown | 12.600 | 4666.0 | | 466604 | 0 | 0.000 | 100 | 1.0 |
| Squalene | 12.878 | 77884.5 | | 7788450 | 0 | 0.000 | 100 | 1.0 |
| Glycerol tricap... | 13.225 | 22048.2 | | 2204820 | 0 | 0.000 | 100 | 1.0 |
| 1,2-Benzenedica... | 13.284 | 5166.2 | | 516620 | 0 | 0.000 | 100 | 1.0 |
| Glycerol tricap... | 13.803 | 29737.8 | | 2973780 | 0 | 0.000 | 100 | 1.0 |
| 11-Hexadecenoic... | 13.899 | 8198.3 | | 819832 | 0 | 0.000 | 100 | 1.0 |
| 3',4'-Dichloro-... | 14.504 | 17892.7 | | 1789270 | 0 | 0.000 | 100 | 1.0 |
| Cyclopentadecan... | 14.675 | 11264.7 | | 1126470 | 0 | 0.000 | 100 | 1.0 |
| Hexadecanoic ac... | 14.755 | 8225.9 | | 822594 | 0 | 0.000 | 100 | 1.0 |
| 9-Hexadecenoic ... | 15.023 | 7115.3 | | 711526 | 0 | 0.000 | 100 | 1.0 |
| 1-Octadecene | 15.477 | 4382.4 | | 438237 | 0 | 0.000 | 100 | 1.0 |
| 9-Octadecenoic ... | 15.691 | 16566.8 | | 1656680 | 0 | 0.000 | 100 | 1.0 |
| Hexadecanoic ac... | 15.798 | 7130.1 | | 713006 | 0 | 0.000 | 100 | 1.0 |
| 2-Heptadecenal | 16.777 | 5346.8 | | 534675 | 0 | 0.000 | 100 | 1.0 |
| Octadecanal | 16.921 | 9640.1 | | 964007 | 0 | 0.000 | 100 | 1.0 |
| Unknown | 17.071 | 12418.7 | | 1241870 | 0 | 0.000 | 100 | 1.0 |

Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 19:51:06 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration

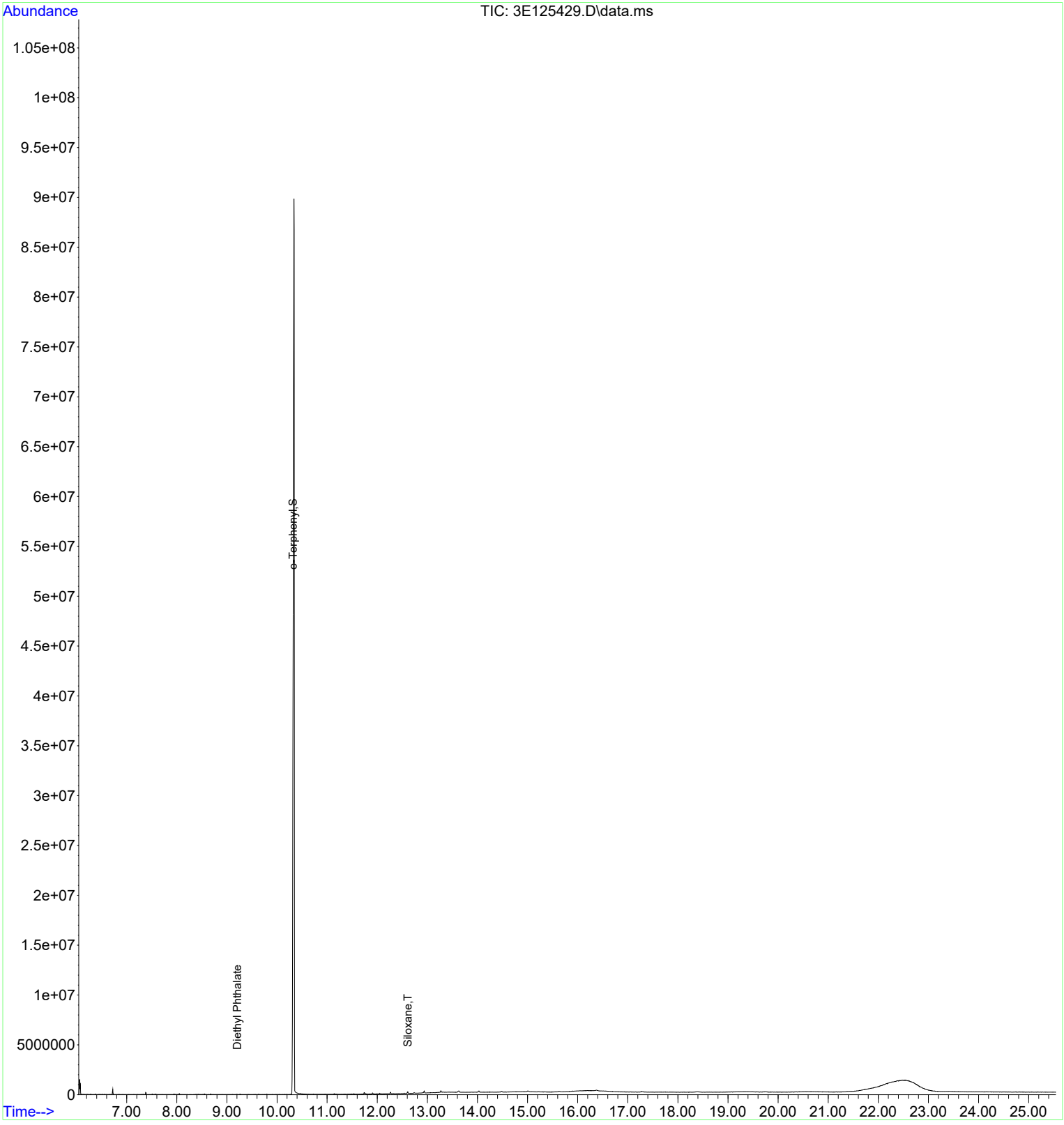
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 17) o-Terphenyl | 10.321 | 230 | 17884716m | 17884716.00 | | -0.13 |
| Target Compounds | | | | | | Qvalue |
| 1) Undecane (C11) | 0.000 | | 0 | N.D. | d | |
| 2) Diethylnaphthalene | 0.000 | | 0 | N.D. | | |
| 3) 1-Methylnaphthalene | 0.000 | | 0 | N.D. | | |
| 4) 1-Ethylpropylbenzene | 0.000 | | 0 | N.D. | | |
| 5) Cyclohexane | 0.000 | | 0 | N.D. | | |
| 6) Tridecane (C13) | 0.000 | | 0 | N.D. | d | |
| 7) Dodecane (C12) | 0.000 | | 0 | N.D. | d | |
| 8) Sesquiterpanes | 0.000 | | 0 | N.D. | | |
| 9) Benzocyclohexane | 0.000 | | 0 | N.D. | | |
| 10) Propylbutylbenzene | 0.000 | | 0 | N.D. | | |
| 11) Cyclic Isoprenoid | 0.000 | | 0 | N.D. | | |
| 12) Trimethylbenzene | 0.000 | | 0 | N.D. | | |
| 13) Bromo-Xa | 0.000 | | 0 | N.D. | | |
| 14) Bromo-Xb | 0.000 | | 0 | N.D. | | |
| 15) n-Hexadecanoic Acid | 0.000 | | 0 | N.D. | | |
| 16) n-Octadecanoic Acid | 0.000 | | 0 | N.D. | | |
| 18) Bromo-o-Terphenyl | 0.000 | | 0 | N.D. | | |
| 19) Chloro-o-Terphenyl | 0.000 | | 0 | N.D. | | |
| 20) n-Alkane | 0.000 | | 0 | N.D. | d | |
| 21) n-Octane (C8) | 0.000 | | 0 | N.D. | d | |
| 22) n-Nonane (C9) | 6.475 | 57 | 5794 | No Calib | # | |
| 23) n-Decane (C10) | 0.000 | | 0 | N.D. | d | |
| 24) n-Dodecane (C12) | 0.000 | | 0 | N.D. | d | |
| 25) n-Tetradecane (C14) | 0.000 | | 0 | N.D. | d | |
| 26) n-Hexadecane (C16) | 0.000 | | 0 | N.D. | d | |
| 27) n-Octadecane (C18) | 0.000 | | 0 | N.D. | d | |
| 28) n-Eicosane (C20) | 0.000 | | 0 | N.D. | d | |
| 29) n-Heneicosane (C21) | 0.000 | | 0 | N.D. | d | |
| 30) n-Docosane (C22) | 0.000 | | 0 | N.D. | d | |
| 31) n-Tricosane (C23) | 0.000 | | 0 | N.D. | d | |
| 32) n-Tetracosane (C24) | 0.000 | | 0 | N.D. | d | |
| 33) n-Pentacosane (C25) | 0.000 | | 0 | N.D. | d | |
| 34) n-Hexacosane (C26) | 0.000 | | 0 | N.D. | d | |
| 35) n-Heptacosane (C27) | 0.000 | | 0 | N.D. | d | |
| 36) n-Octacosane (C28) | 0.000 | | 0 | N.D. | d | |
| 37) n-Nonacosane (C29) | 0.000 | | 0 | N.D. | d | |
| 38) n-Triacontane (C30) | 0.000 | | 0 | N.D. | d | |
| 39) n-Doatriacontane (C32) | 0.000 | | 0 | N.D. | d | |
| 40) n-Tetratriacontane (C34) | 0.000 | | 0 | N.D. | d | |
| 41) n-Hexatriacontane (C36) | 0.000 | | 0 | N.D. | d | |
| 42) n-Octatriacontane (C38) | 0.000 | | 0 | N.D. | d | |
| 43) n-Tetracontane (C40) | 0.000 | | 0 | N.D. | d | |
| 44) Siloxane | 12.610 | 429 | 209213m | 209213.00 | | |
| 45) Butyl benzyl phthalate | 0.000 | | 0 | N.D. | d | |
| 46) Bis(2-ethylhexyl)phtha... | 0.000 | | 0 | N.D. | d | |
| 47) Di-n-octylphthalate | 0.000 | | 0 | N.D. | d | |
| 48) Diethyl Phthalate | 9.209 | 149 | 3658m | 3658.00 | | |

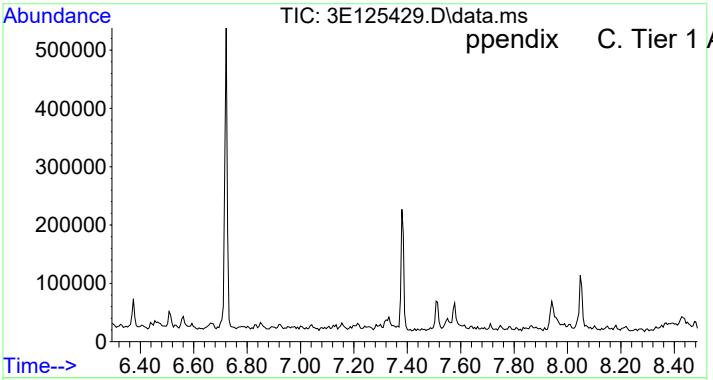
(#) = qualifier out of range (m) = manual integration (+) = signals summed

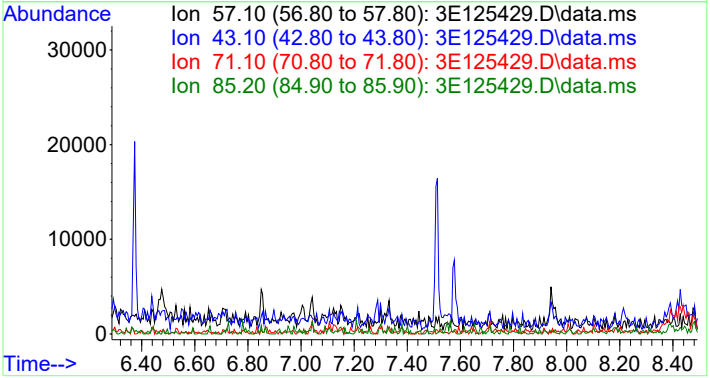
Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 26 19:51:06 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration





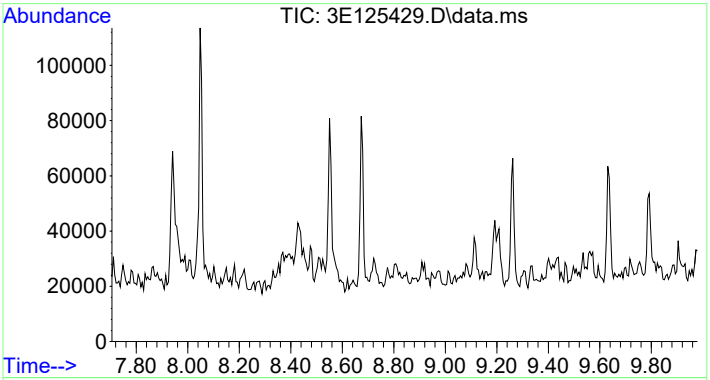



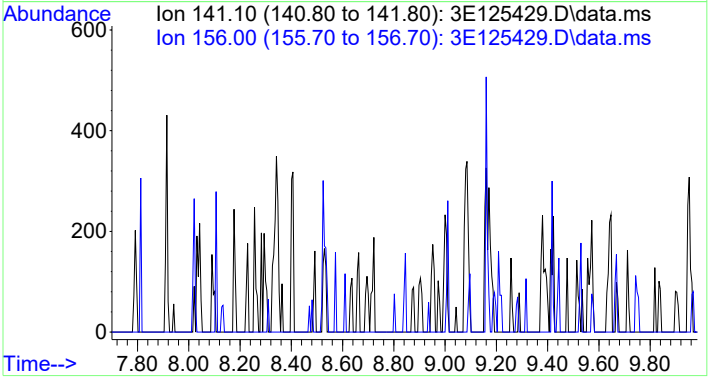

#1
Undecane (C11)
Concen: N.D.
Expected RT: 7.39 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 15.7 |
| 71 | 6.9 |
| 85 | 0.0 |



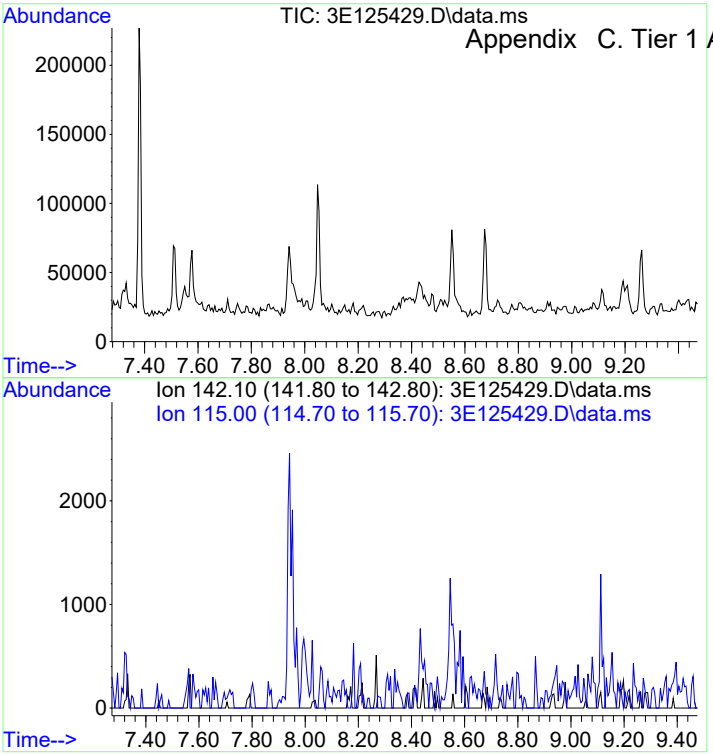




#2
Diethylnaphthalene
Concen: N.D.
Expected RT: 8.80 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 141

| Sig | Exp Ratio |
|---|---|
| 141 | 100 |
| 156 | 0.0 |

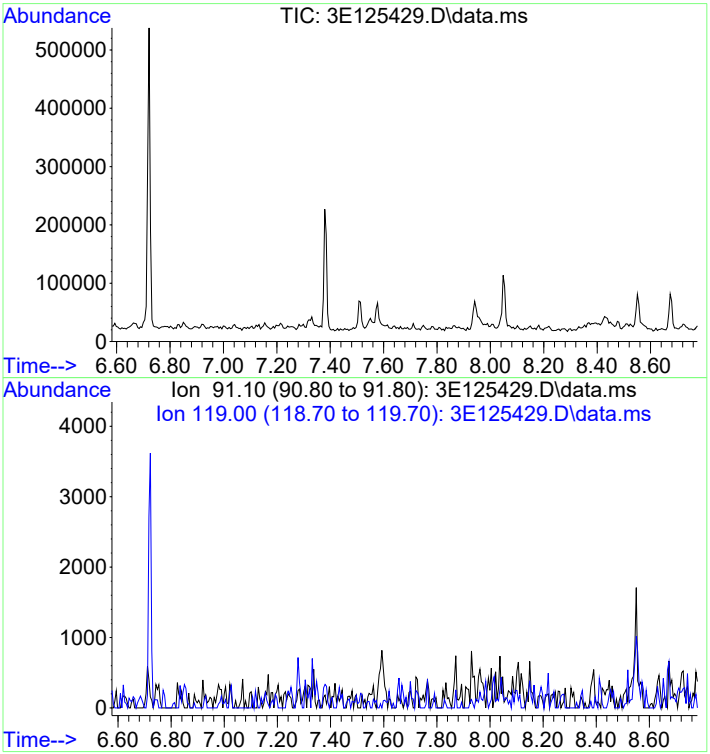



#3
1-Methylnaphthalene
Concen: N.D.
Expected RT: 8.37 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 142

| Sig | Exp Ratio |
|---|---|
| 142 | 100 |
| 115 | 0.0 |

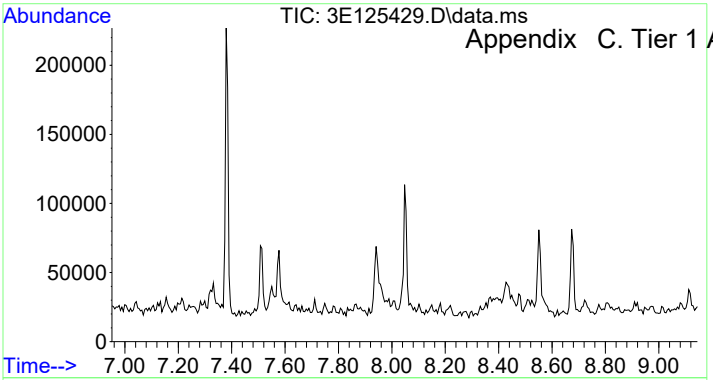


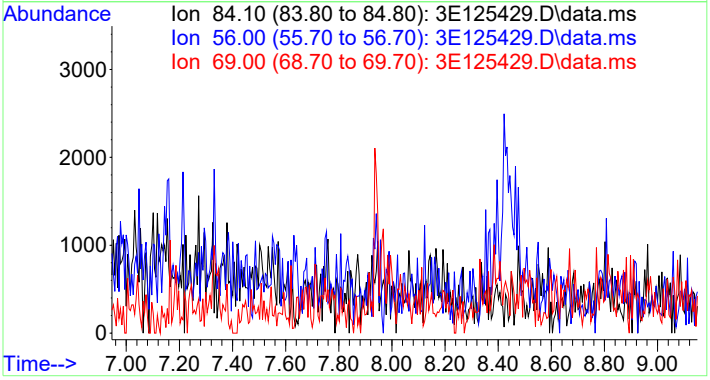

#4
1-Ethylpropylbenzene
Concen: N.D.
Expected RT: 7.68 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 91

| Sig | Exp Ratio |
|---|---|
| 91 | 100 |
| 119 | 0.0 |



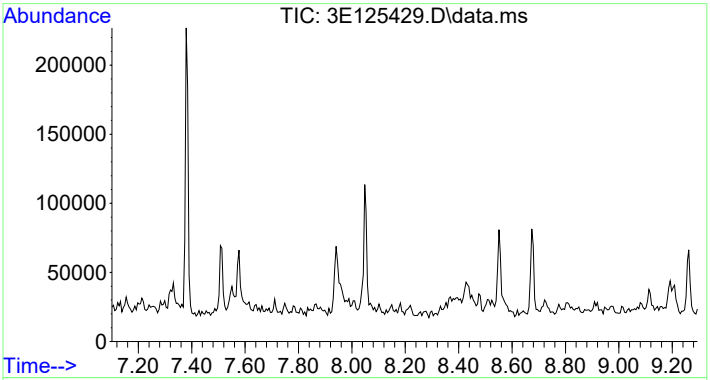



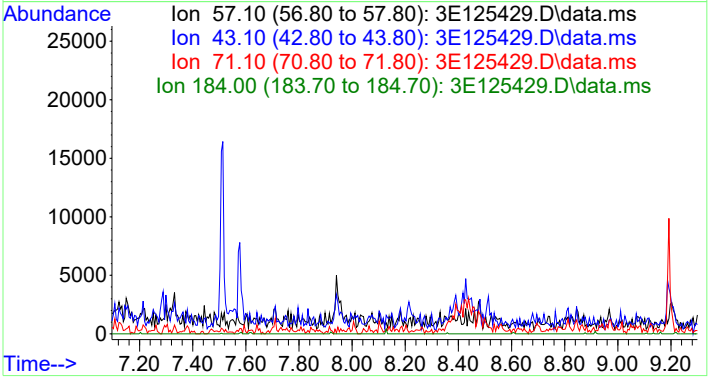

#5
Cyclohexane
Concen: N.D.
Expected RT: 8.05 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 84

| Sig | Exp Ratio |
|---|---|
| 84 | 100 |
| 56 | 0.0 |
| 69 | 0.0 |



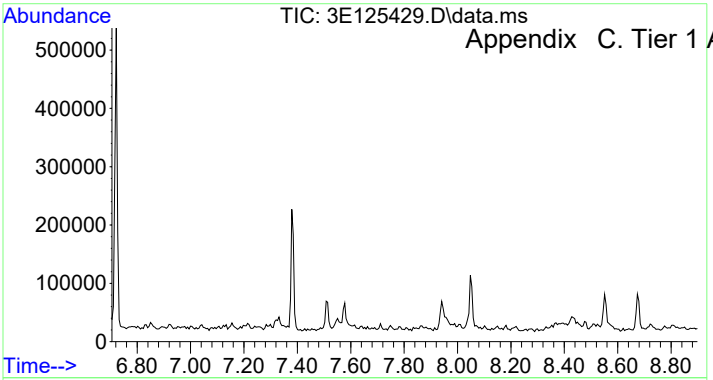



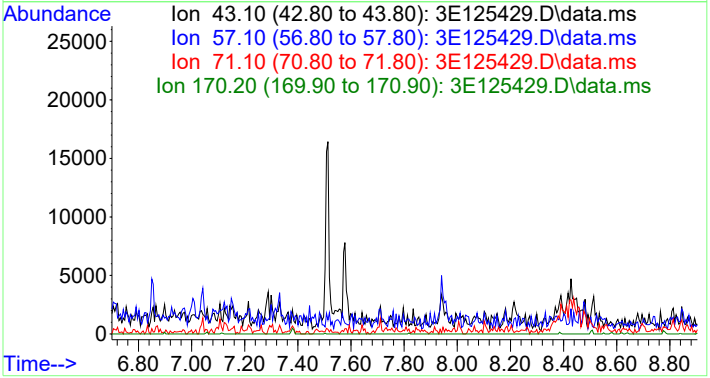

#6
Tridecane (C13)
Concen: N.D.
Expected RT: 8.20 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 6.1 |
| 71 | 0.0 |
| 184 | 0.0 |



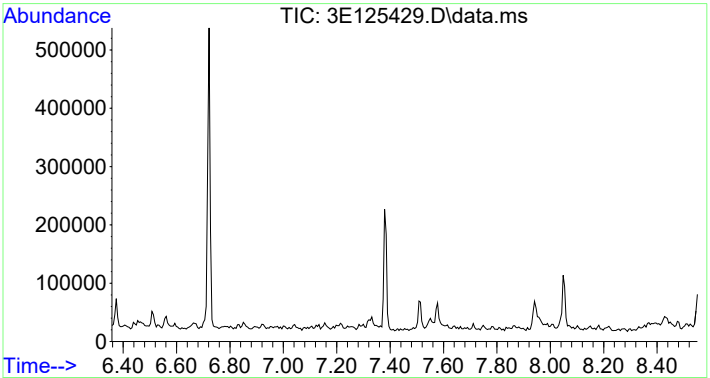



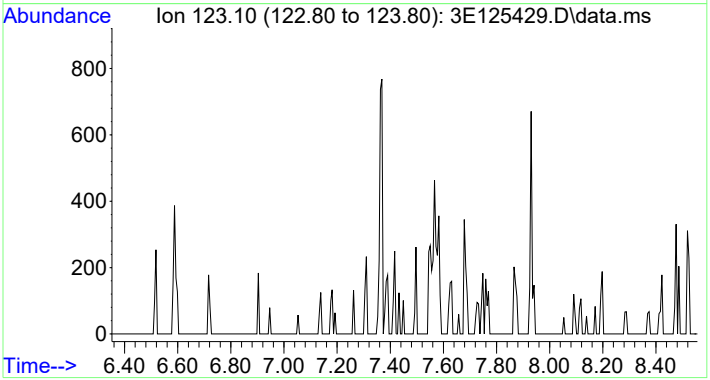

#7
Dodecane (C12)
Concen: N.D.
Expected RT: 7.80 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 43

| Sig | Exp Ratio |
|---|---|
| 43 | 100 |
| 57 | 165.0 |
| 71 | 64.9 |
| 170 | 0.0 |

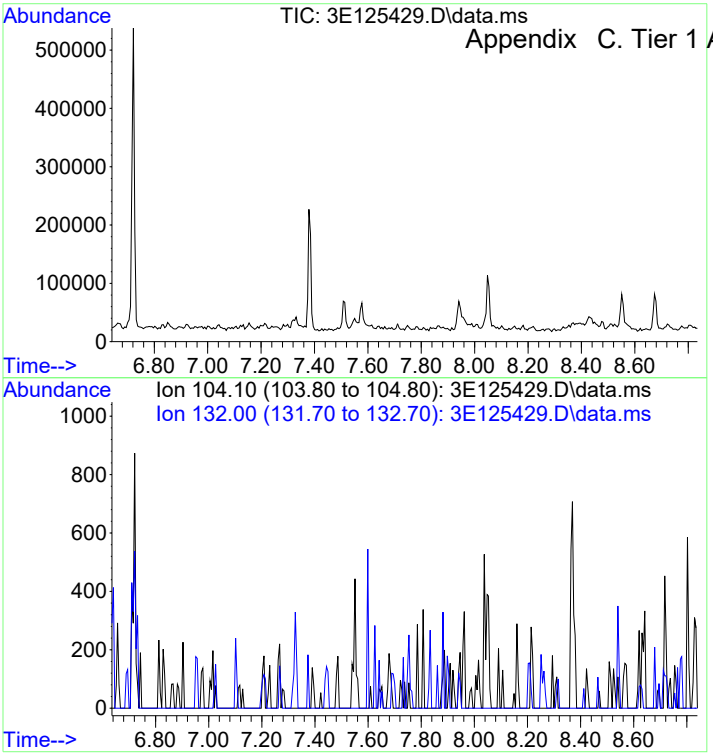



#8
Sesquiterpanes
Concen: N.D.
Expected RT: 7.45 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 123

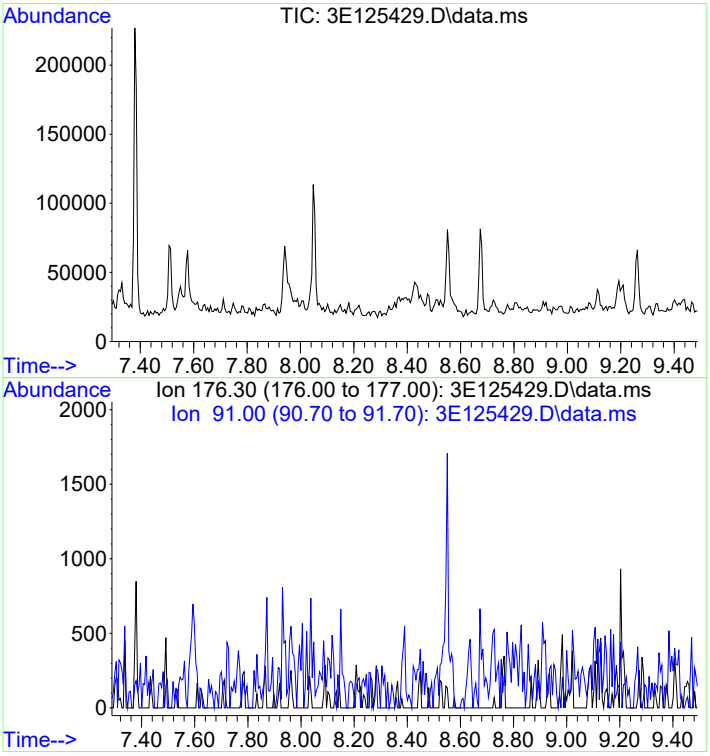



#9
Benzocyclohexane
Concen: N.D.
Expected RT: 7.74 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 104

| Sig | Exp Ratio |
|---|---|
| 104 | 100 |
| 132 | 0.0 |

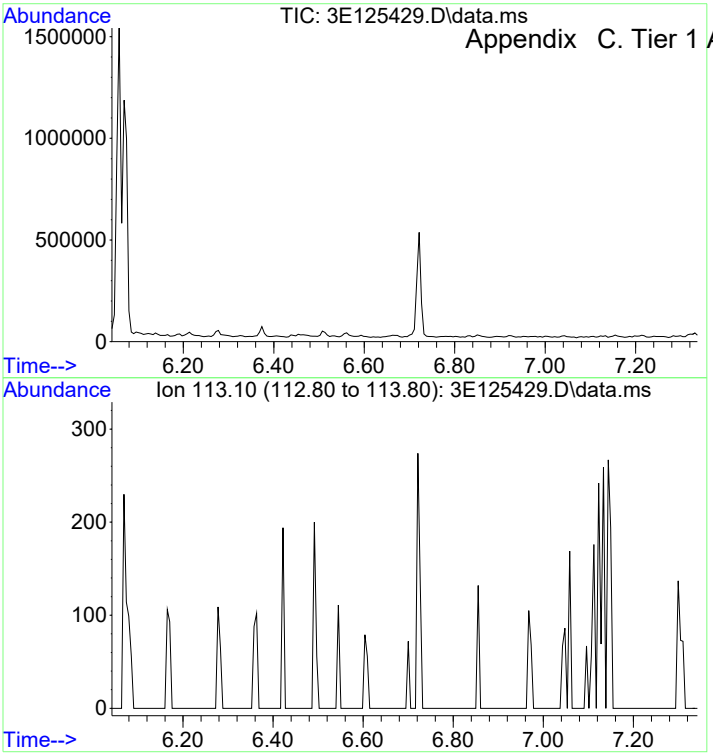



#10
Propylbutylbenzene
Concen: N.D.
Expected RT: 8.39 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 176

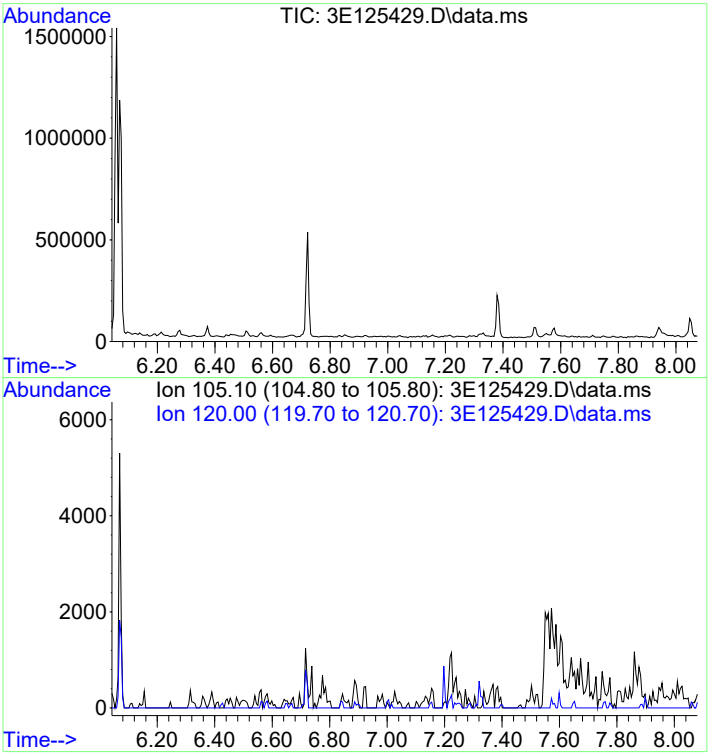
| Sig | Exp Ratio |
|---|---|
| 176 | 100 |
| 91 | 0.0 |




#11
Cyclic Isoprenoid
Concen: N.D.
Expected RT: 6.24 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 113

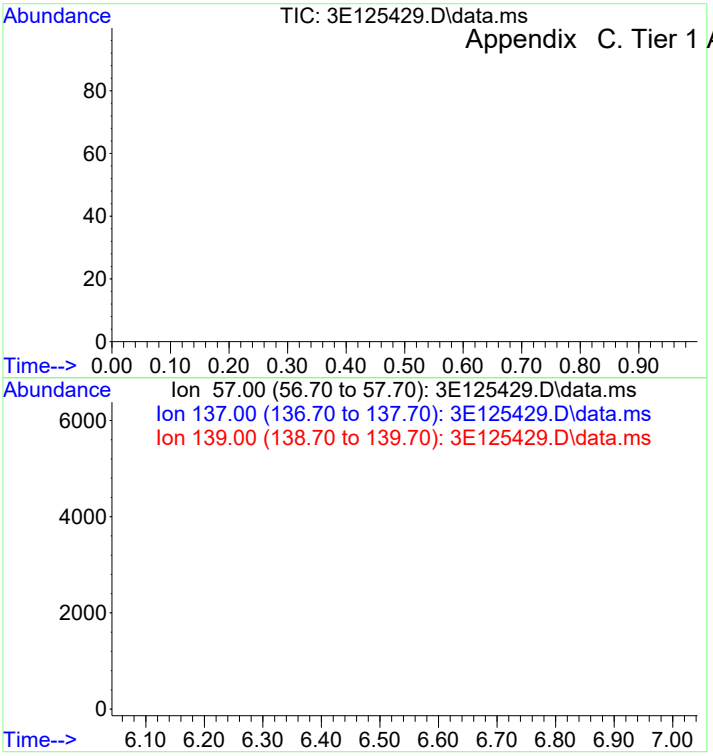



#12
Trimethylbenzene
Concen: N.D.
Expected RT: 6.98 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 105

| Sig | Exp Ratio |
|---|---|
| 105 | 100 |
| 120 | 0.0 |

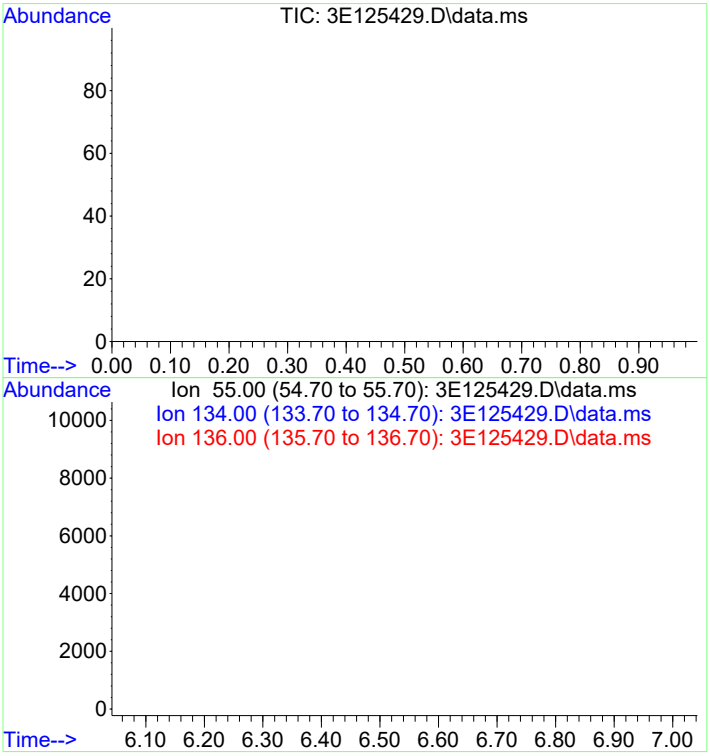



#13
Bromo-Xa
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 137 | 0.0 |
| 139 | 0.0 |

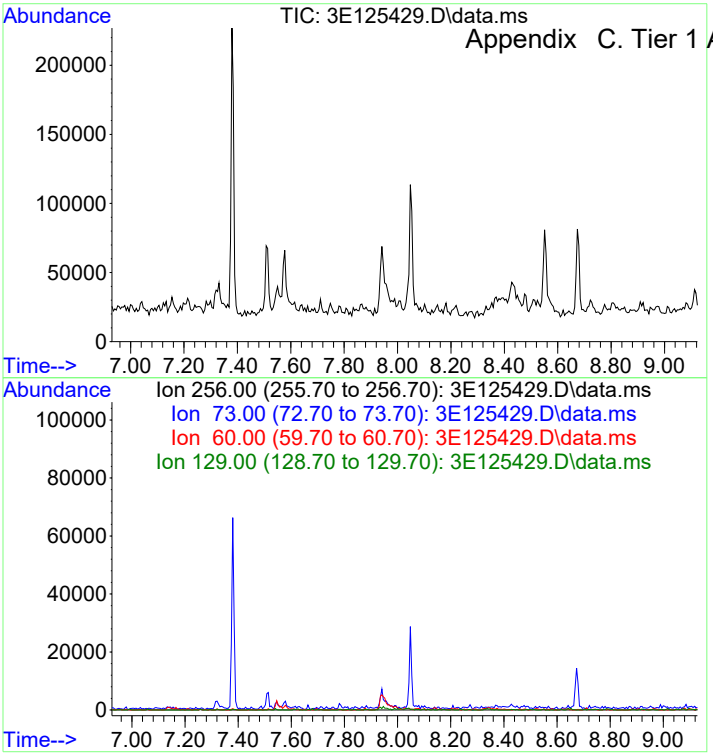



#14
Bromo-Xb
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 55

| Sig | Exp Ratio |
|---|---|
| 55 | 100 |
| 134 | 0.0 |
| 136 | 0.0 |

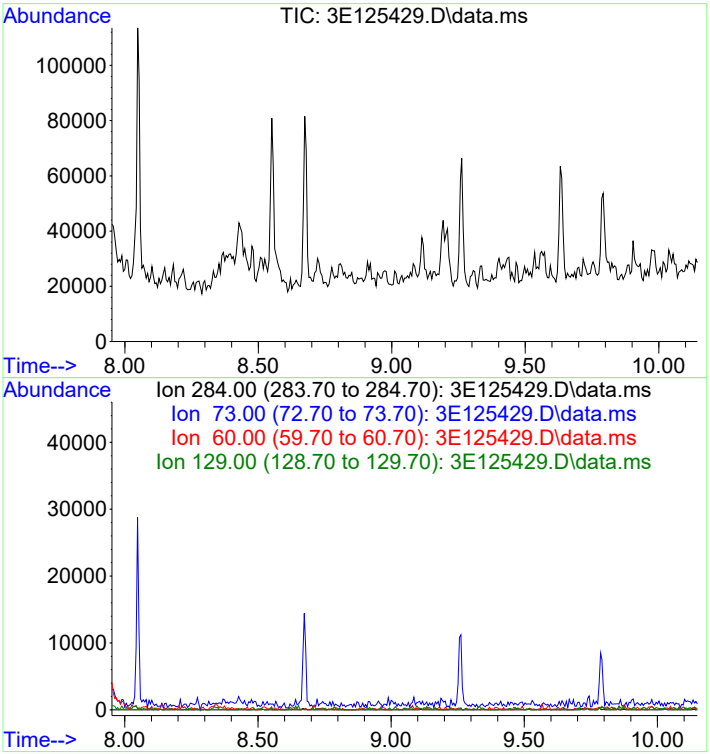



#15
n-Hexadecanoic Acid
Concen: N.D.
Expected RT: 8.03 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 256

| Sig | Exp Ratio |
|---|---|
| 256 | 100 |
| 73 | 117.8 |
| 60 | 50.7 |
| 129 | 36.1 |

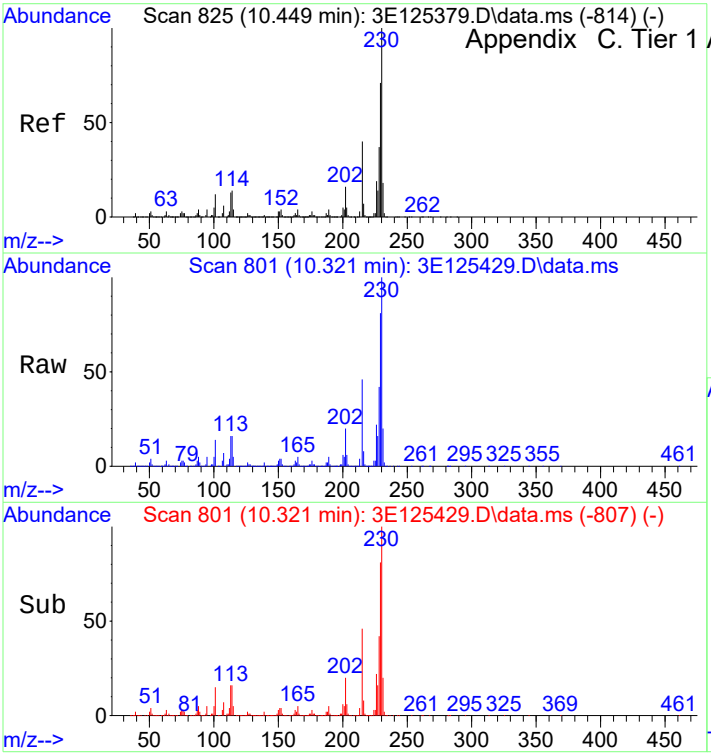



#16
n-Octadecanoic Acid
Concen: N.D.
Expected RT: 9.05 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 284

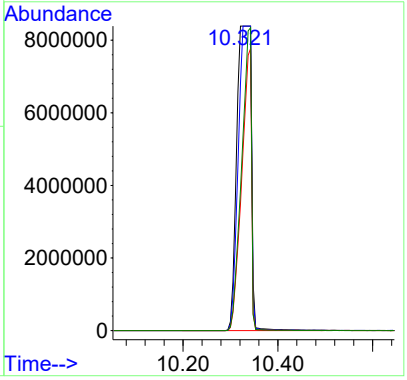
| Sig | Exp Ratio |
|---|---|
| 284 | 100 |
| 73 | 62.7 |
| 60 | 46.4 |
| 129 | 50.0 |

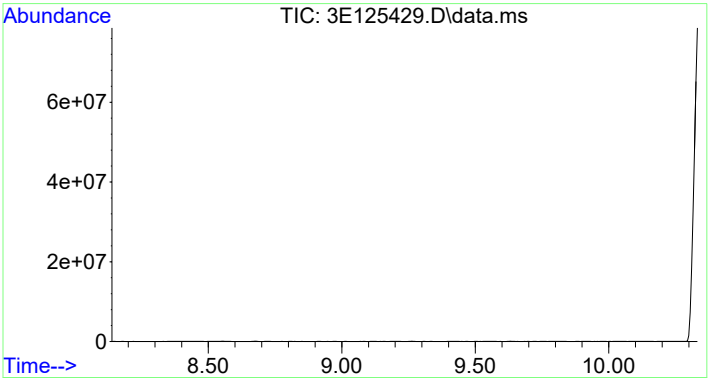


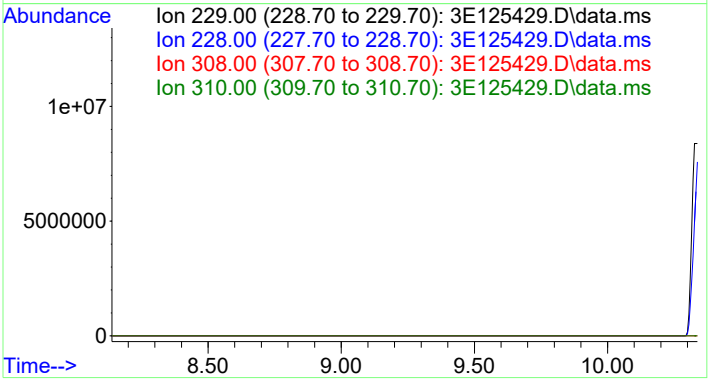

#17
o-Terphenyl
Concen: 17884716.00 m
RT: 10.321 min Scan# 801
Delta R.T. -0.134 min
Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion:230 Resp:17884716

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 230 | 100 | | |
| 229 | 0.0 | 43.0 | 83.0# |
| 228 | 0.0 | 27.3 | 67.3# |
| 215 | 0.0 | 30.0 | 70.0# |



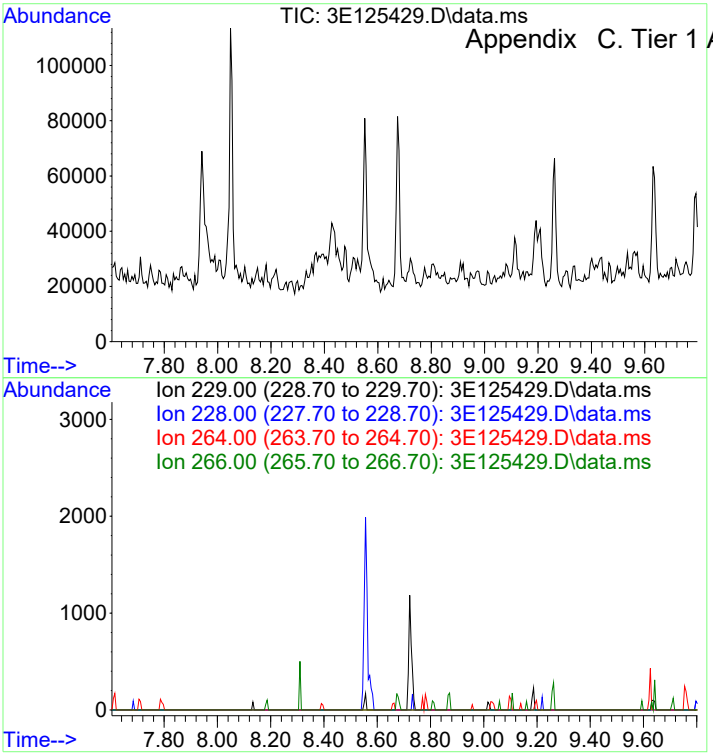




#18
Bromo-o-Terphenyl
Concen: N.D.
Expected RT: 9.24 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 229

| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 135.4 |
| 308 | 79.5 |
| 310 | 0.0 |

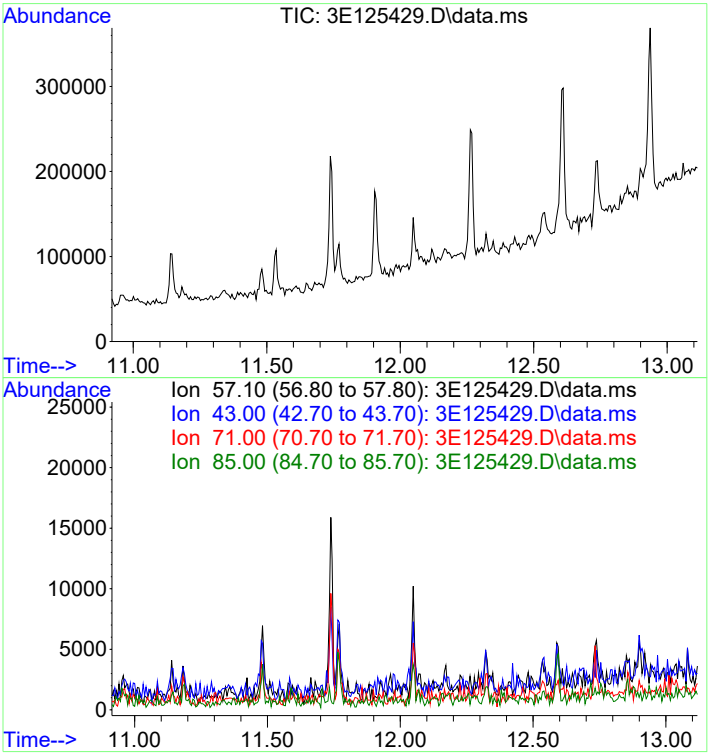



#19
Chloro-o-Terphenyl
Concen: N.D.
Expected RT: 8.70 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 229

| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 63.1 |
| 264 | 48.7 |
| 266 | 0.0 |

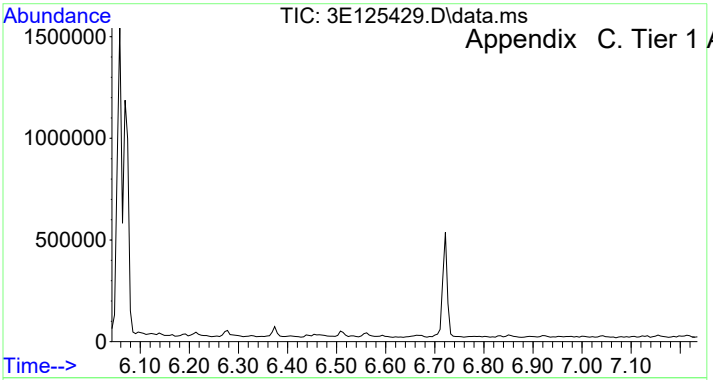


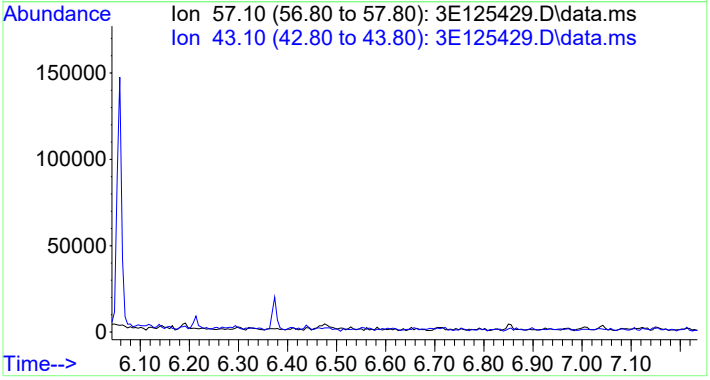

#20
n-Alkane
Concen: N.D.
Expected RT: 12.02 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 0.0 |
| 71 | 182.1 |
| 85 | 0.0 |



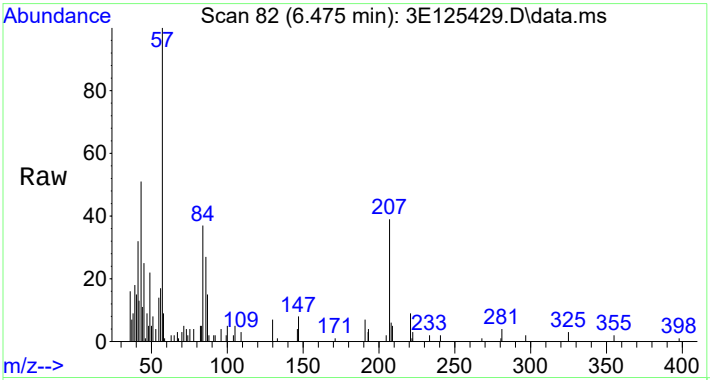



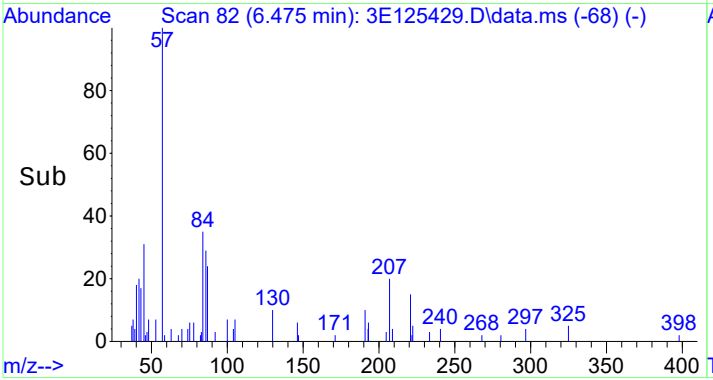

#21
n-Octane (C8)
Concen: N.D.
Expected RT: 6.14 min

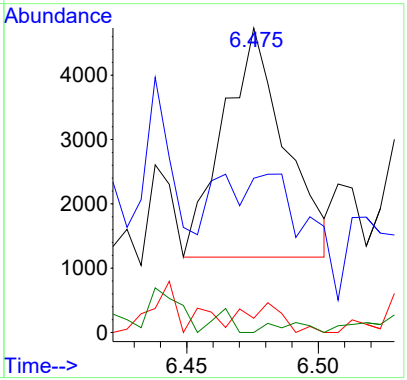
Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 235.9 |



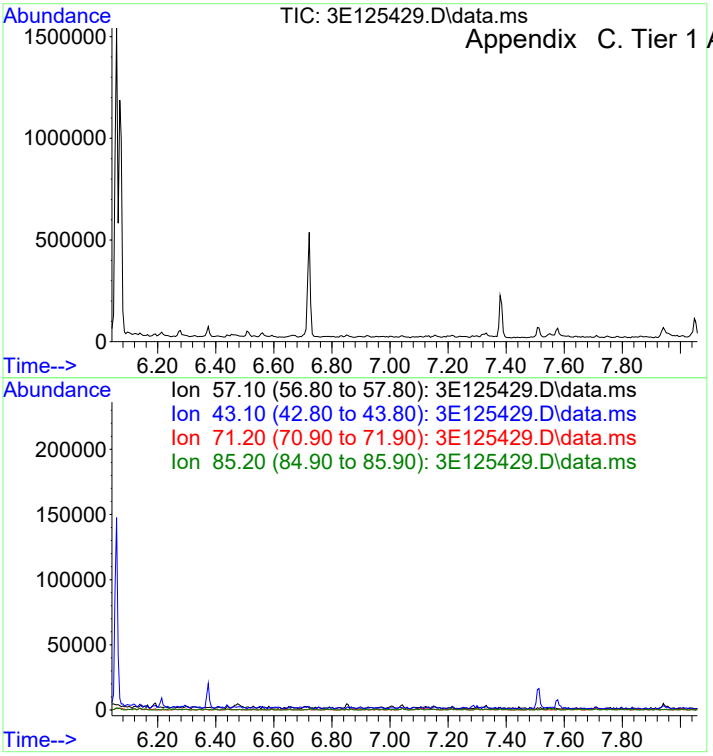




#22
n-Nonane (C9)
Concen: N.D.
RT: 6.475 min Scan# 82
Delta R.T. -0.025 min
Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57 Resp: 5794

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 23.9 | 0.1 | 0.1# |
| 71 | 0.0 | 0.1 | 0.1# |
| 85 | 0.0 | 0.0 | 0.0 |

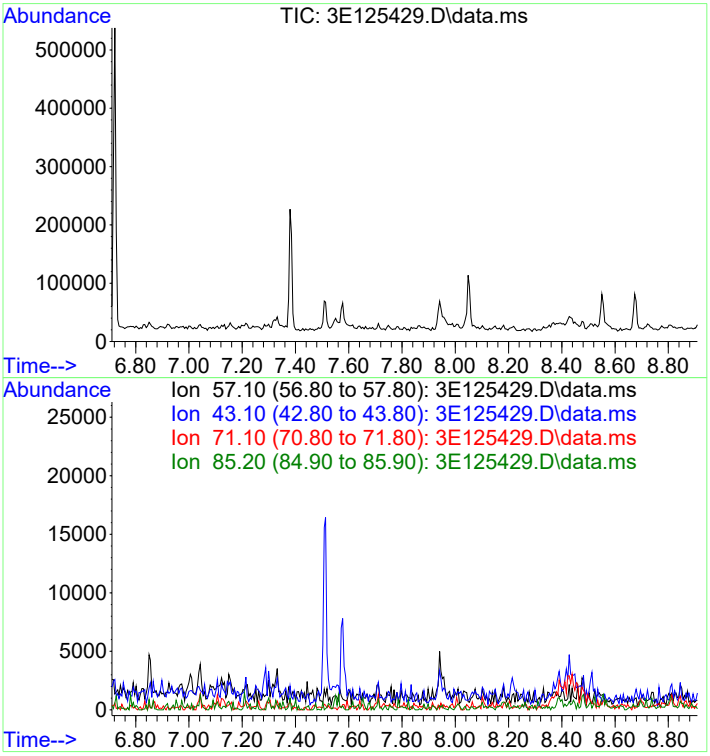



#23
n-Decane (C10)
Concen: N.D.
Expected RT: 6.96 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 90.4 |
| 71 | 39.1 |
| 85 | 27.8 |

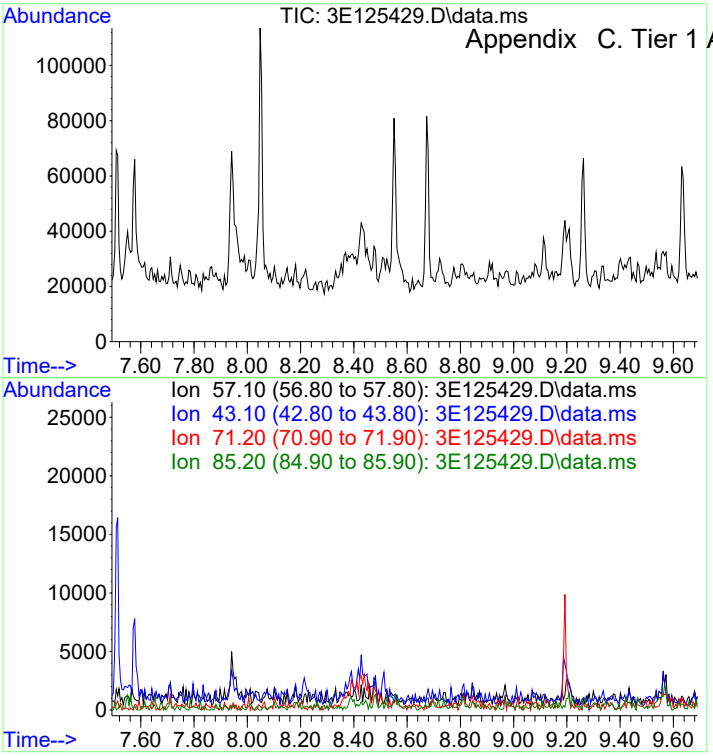



#24
n-Dodecane (C12)
Concen: N.D.
Expected RT: 7.81 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 77.7 |
| 71 | 53.0 |
| 85 | 32.4 |

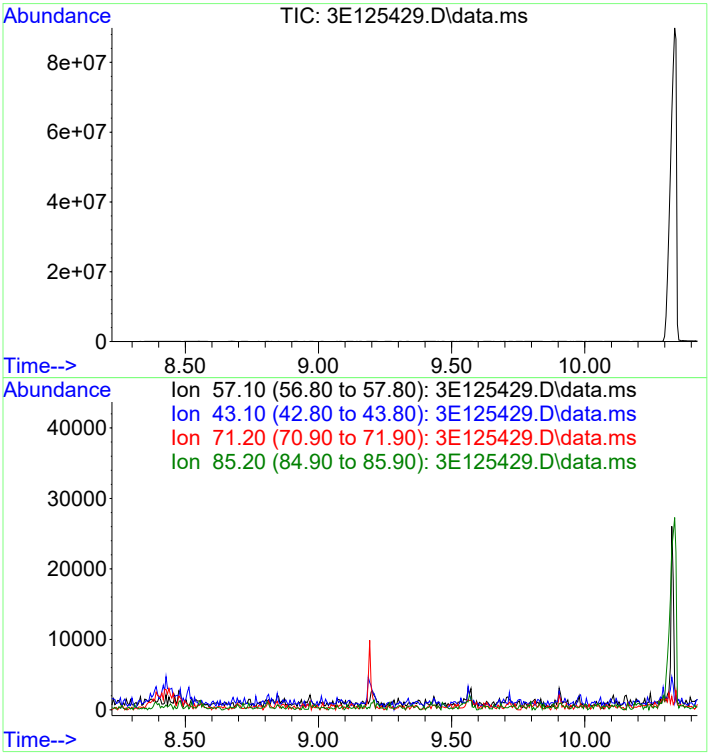



#25
n-Tetradecane (C14)
Concen: N.D.
Expected RT: 8.59 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 72.0 |
| 71 | 60.8 |
| 85 | 40.6 |

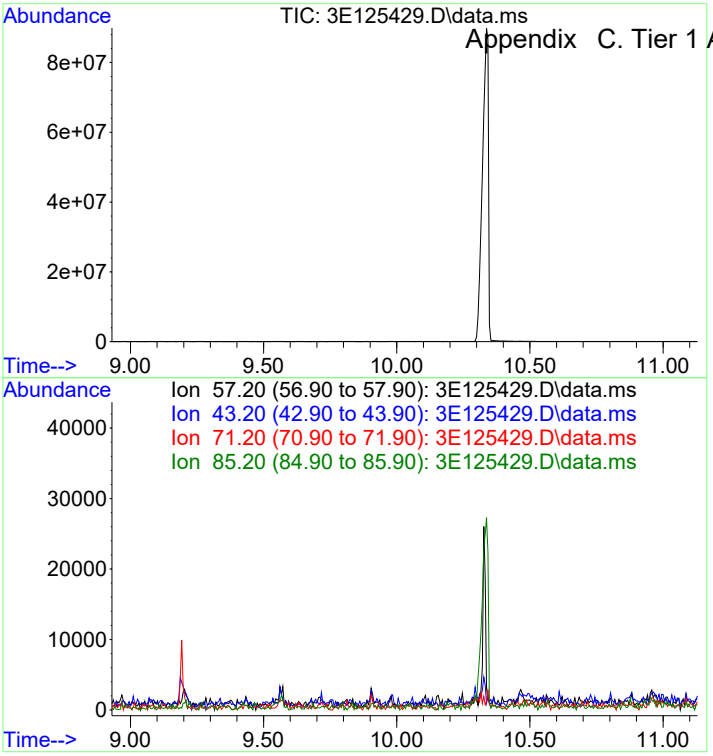



#26
n-Hexadecane (C16)
Concen: N.D.
Expected RT: 9.32 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 68.5 |
| 71 | 65.4 |
| 85 | 46.0 |

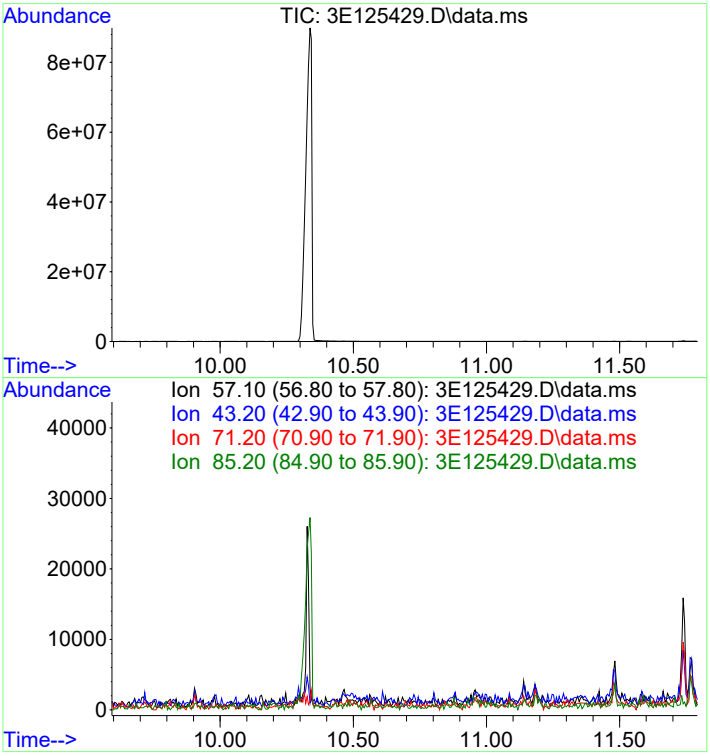



#27
n-Octadecane (C18)
Concen: N.D.
Expected RT: 10.03 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.7 |
| 71 | 68.9 |
| 85 | 49.4 |

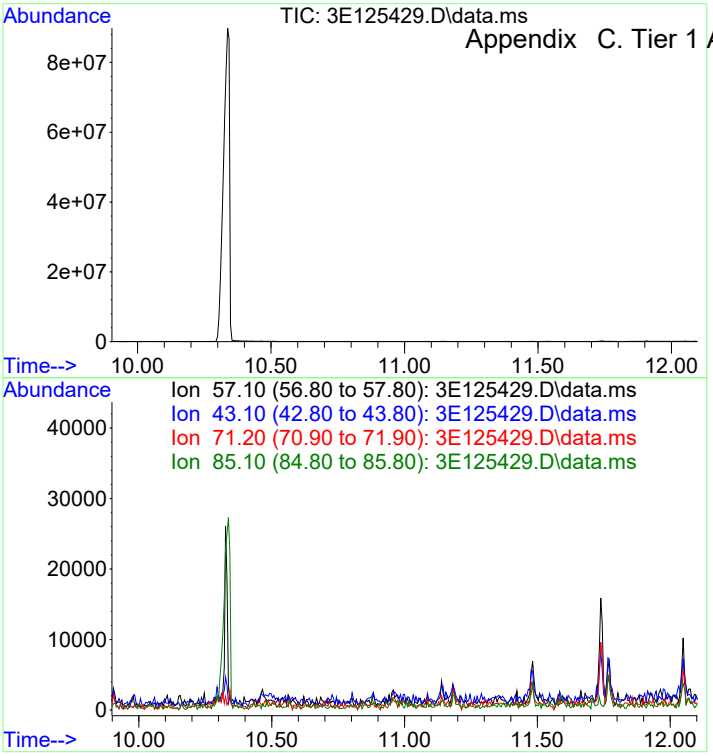



#28
n-Eicosane (C20)
Concen: N.D.
Expected RT: 10.69 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 65.8 |
| 71 | 70.2 |
| 85 | 51.9 |

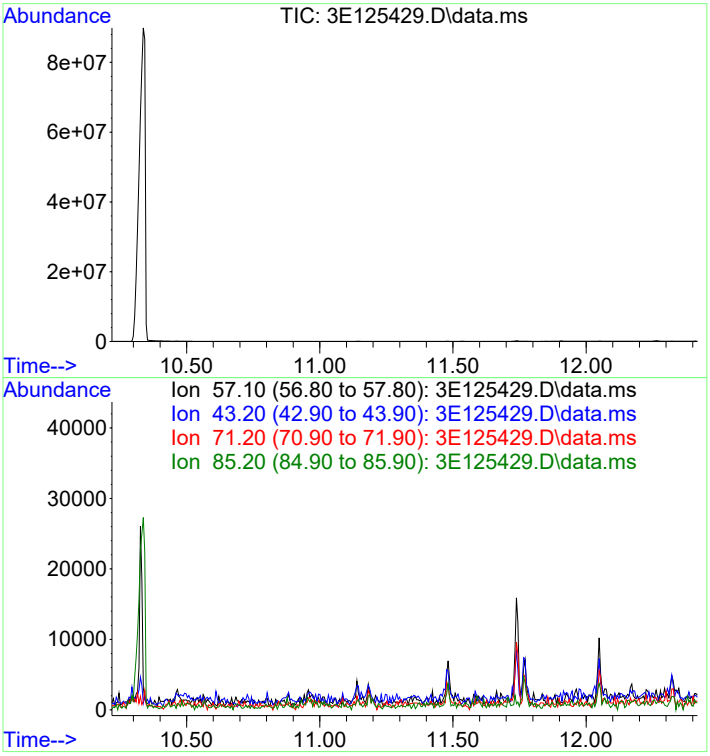



#29
n-Heneicosane (C21)
Concen: N.D.
Expected RT: 11.00 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 65.1 |
| 85 | 51.7 |

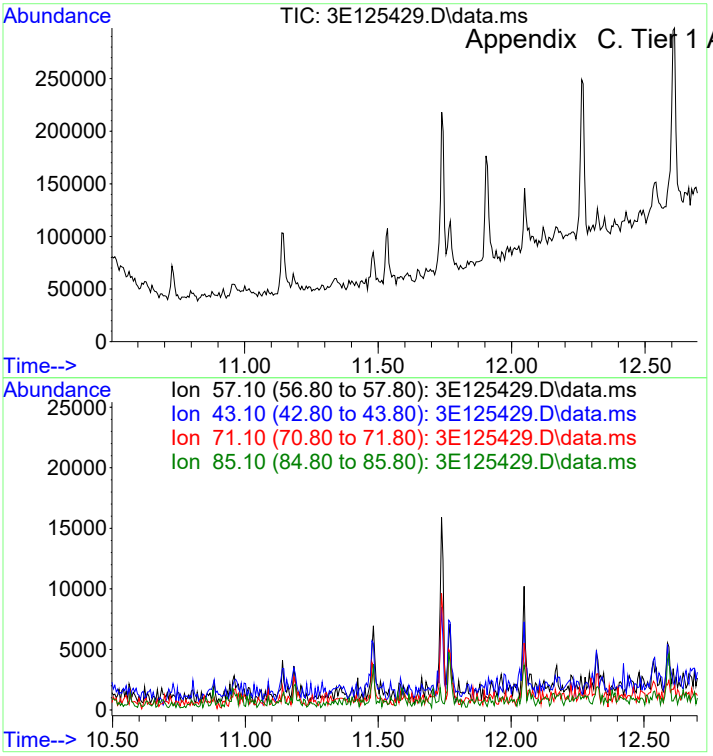



#30
n-Docosane (C22)
Concen: N.D.
Expected RT: 11.32 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.5 |
| 71 | 71.3 |
| 85 | 53.9 |

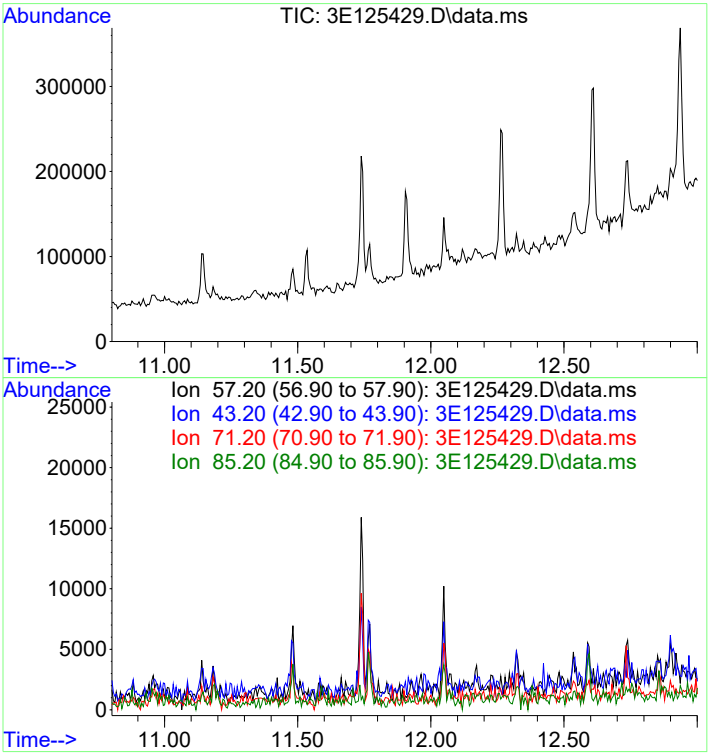



#31
n-Pentacosane (C25)
Concen: N.D.
Expected RT: 11.60 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 62.0 |
| 71 | 53.9 |
| 85 | 45.7 |

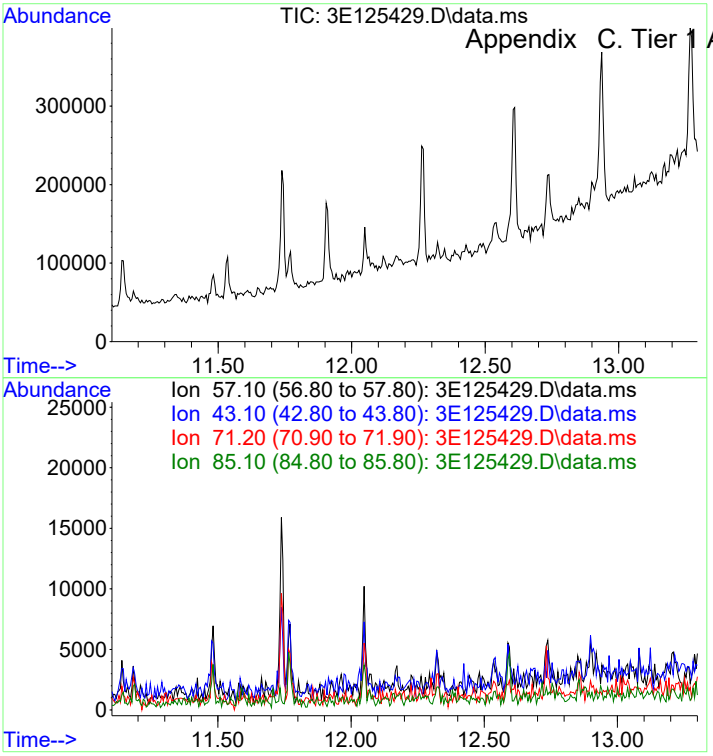



#32
n-Tetracosane (C24)
Concen: N.D.
Expected RT: 11.90 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.4 |
| 71 | 72.3 |
| 85 | 55.2 |

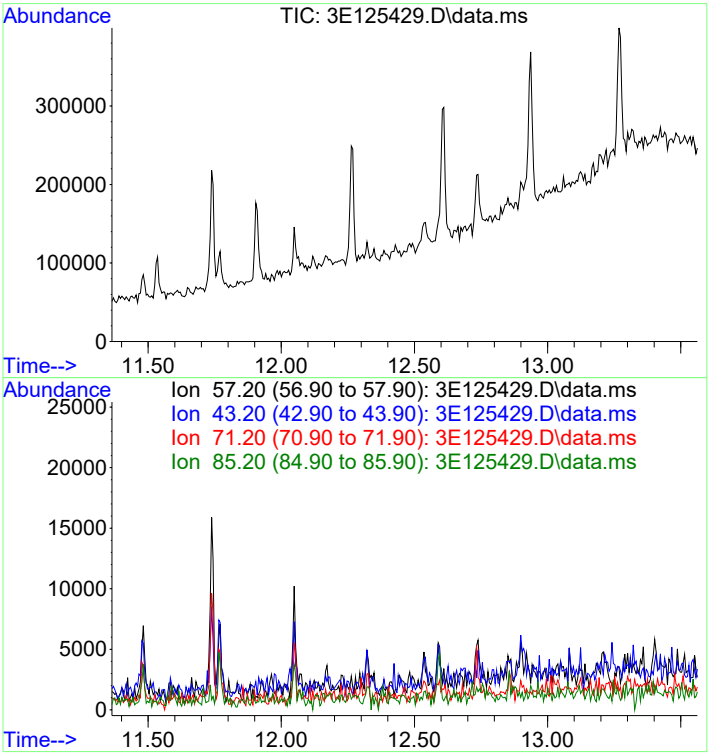



#33
n-Pentacosane (C25)
Concen: N.D.
Expected RT: 12.20 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 79.9 |
| 71 | 70.5 |
| 85 | 42.5 |

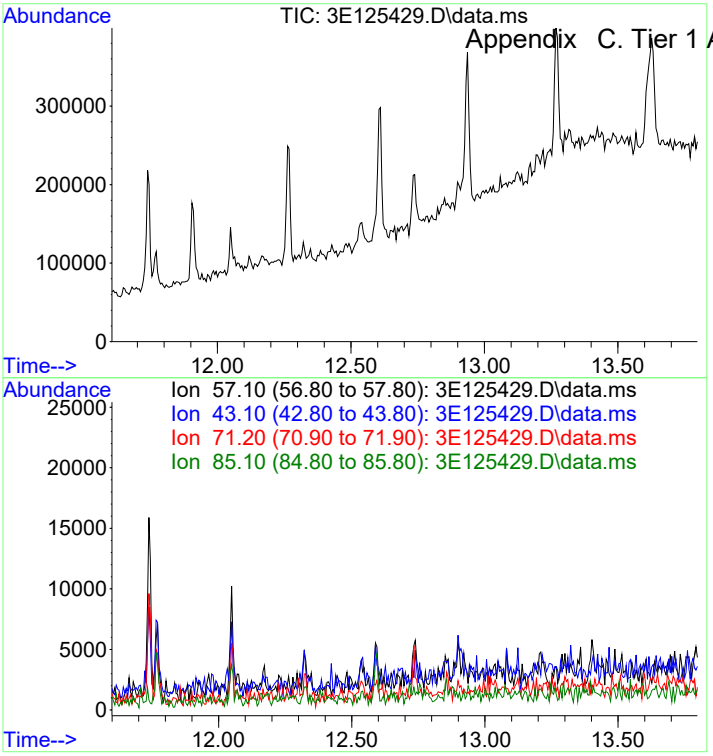



#34
n-Hexacosane (C26)
Concen: N.D.
Expected RT: 12.46 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.1 |
| 71 | 73.2 |
| 85 | 56.6 |

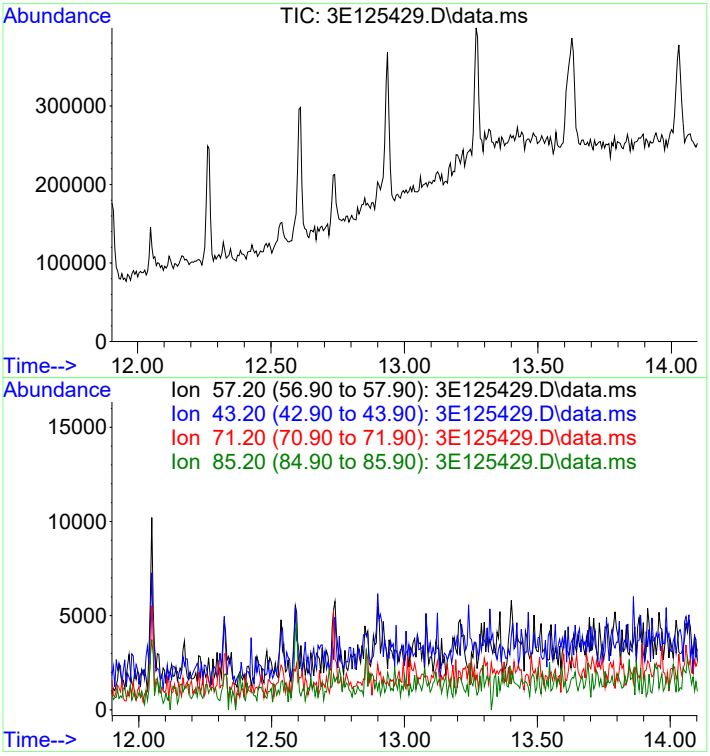



#35
n-Heptacosane (C27)
Concen: N.D.
Expected RT: 12.70 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 76.1 |
| 71 | 90.4 |
| 85 | 86.7 |

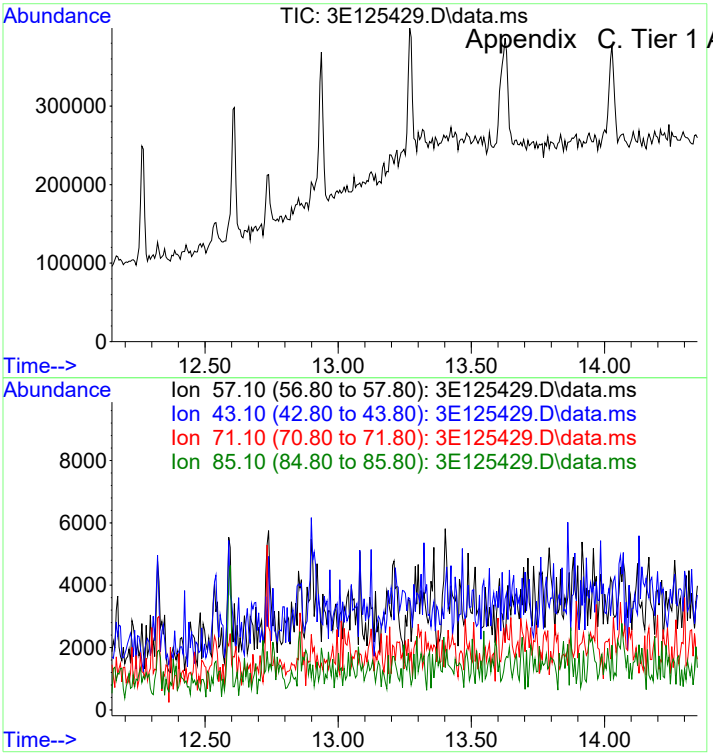



#36
n-Octacosane (C28)
Concen: N.D.
Expected RT: 13.00 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 60.8 |
| 71 | 72.9 |
| 85 | 56.3 |

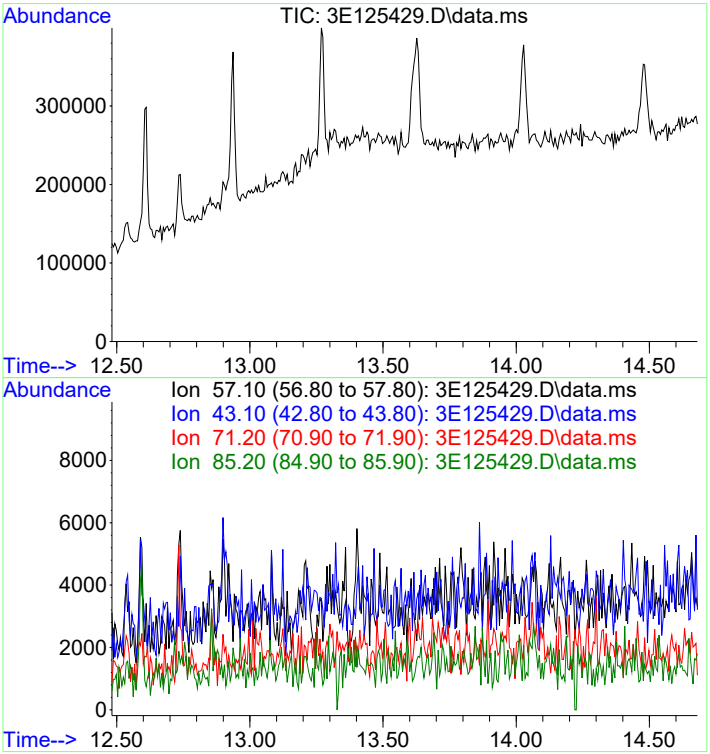



#37
n-Nonacosane (C29)
Concen: N.D.
Expected RT: 13.25 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.1 |
| 71 | 78.4 |
| 85 | 67.7 |

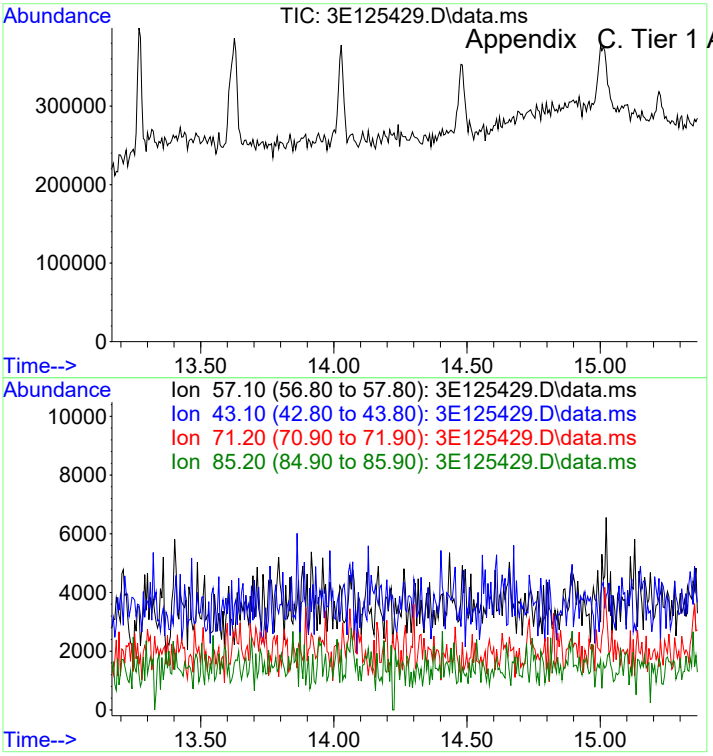



#38
n-Triacontane (C30)
Concen: N.D.
Expected RT: 13.58 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 59.6 |
| 71 | 72.8 |
| 85 | 56.9 |

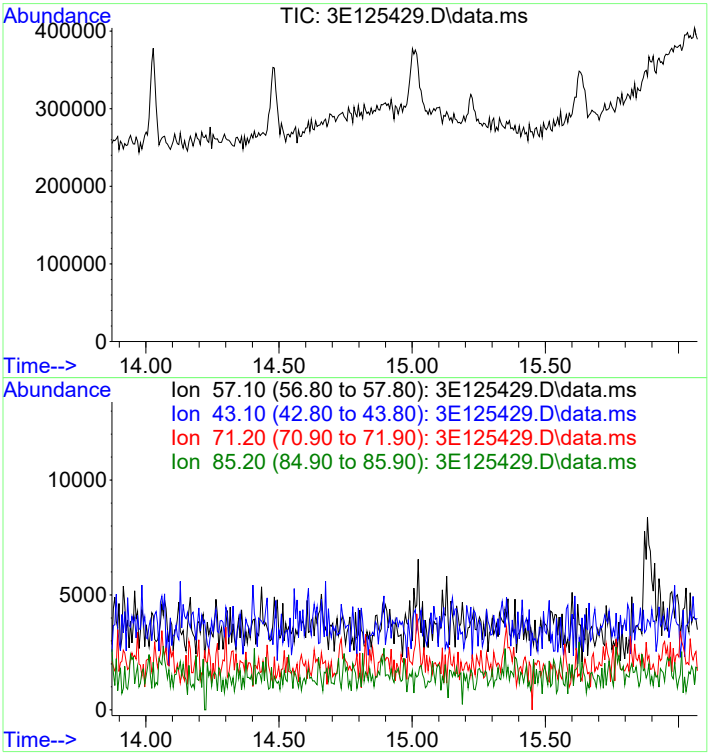



#39
n-Dotriacontane (C32)
Concen: N.D.
Expected RT: 14.27 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 58.6 |
| 71 | 71.7 |
| 85 | 55.6 |

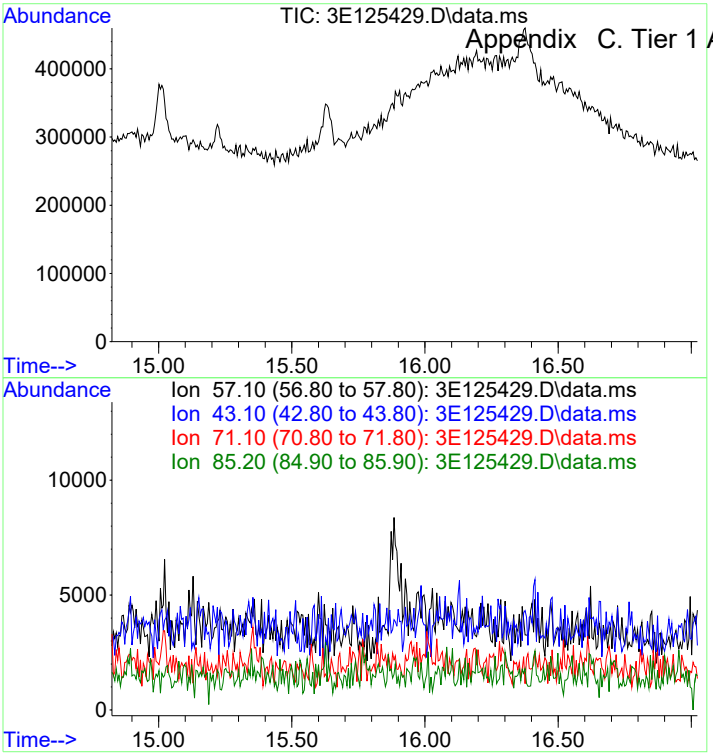



#40
n-Tetratriacontane (C34)
Concen: N.D.
Expected RT: 14.97 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 57.4 |
| 71 | 71.0 |
| 85 | 54.6 |

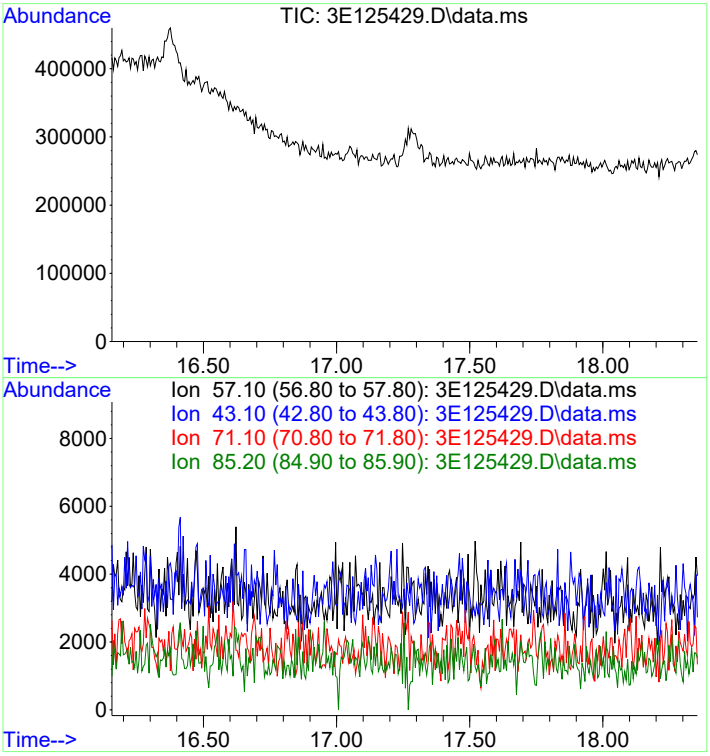



#41
n-Hexatriacontane (C36)
Concen: N.D.
Expected RT: 15.92 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 56.3 |
| 71 | 71.0 |
| 85 | 54.4 |

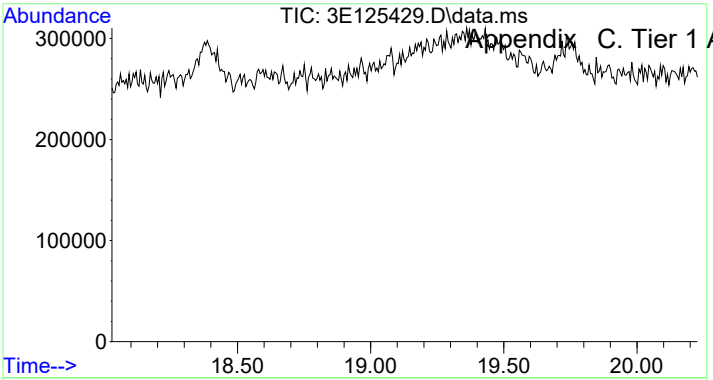


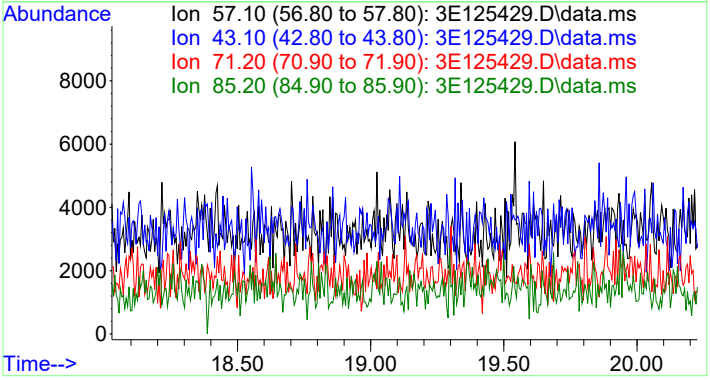

#42
n-Octatriacontane (C38)
Concen: N.D.
Expected RT: 17.26 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 55.0 |
| 71 | 70.8 |
| 85 | 53.9 |



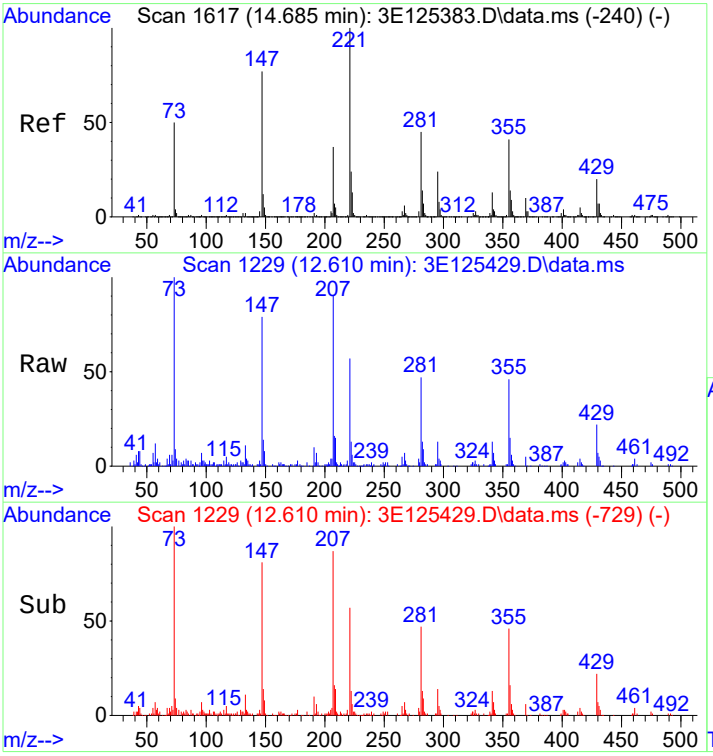




#43
n-Tetracontane (C40)
Concen: N.D.
Expected RT: 19.13 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 57

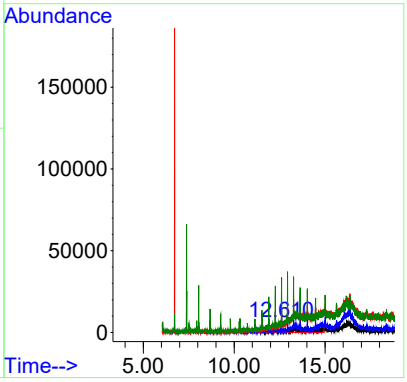
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 70.6 |
| 85 | 53.9 |

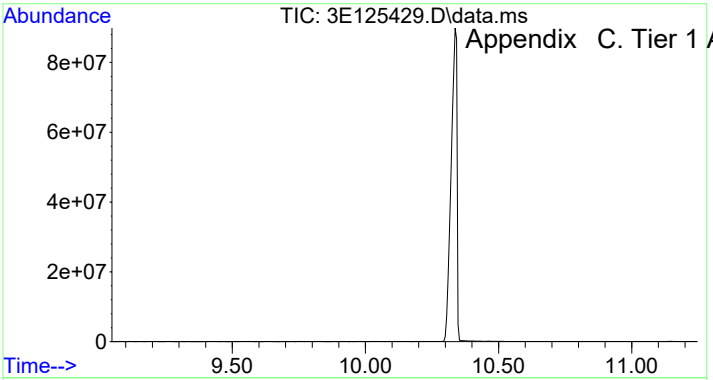


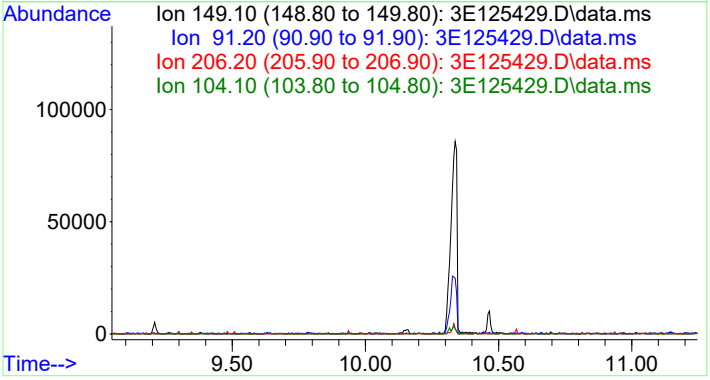

#44
Siloxane
Concen: 209213.00 m
RT: 12.610 min Scan# 1229
Delta R.T. 2.574 min
Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion:429 Resp: 209213

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 429 | 100 | | |
| 355 | 0.0 | 0.0 | 20.0 |
| 281 | 0.0 | 0.0 | 20.0 |
| 73 | 0.0 | 0.0 | 20.0 |





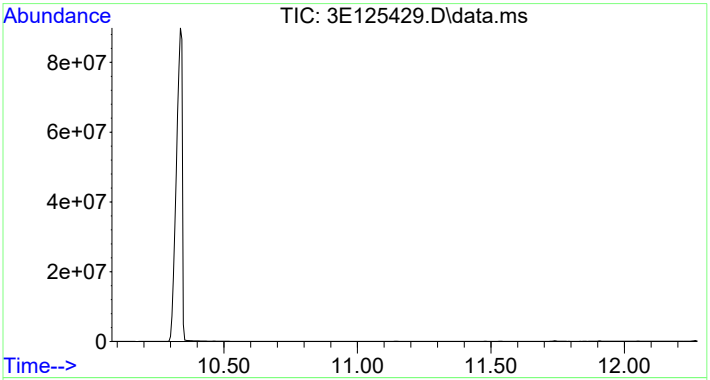



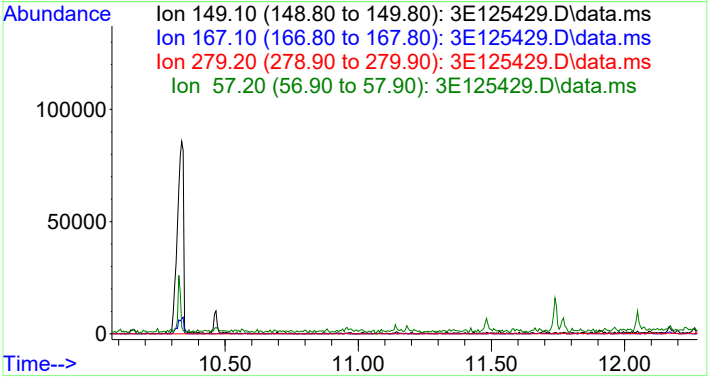

#45
Butyl benzyl phthalate
Concen: N.D.
Expected RT: 10.15 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 91 | 97.4 |
| 206 | 28.9 |
| 104 | 19.1 |



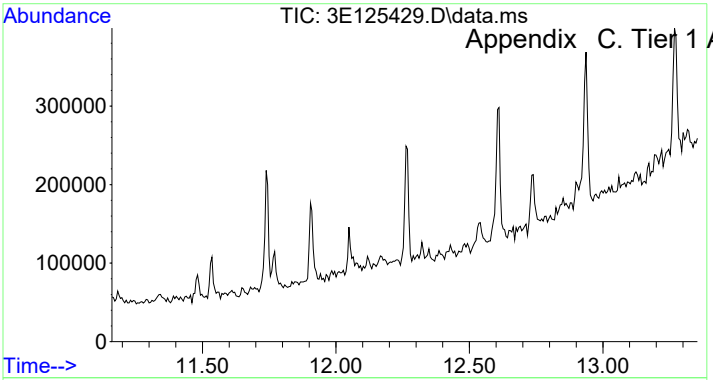




#46
Bis(2-ethylhexyl)phthalate
Concen: N.D.
Expected RT: 11.18 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 167 | 34.3 |
| 279 | 10.6 |
| 57 | 34.0 |

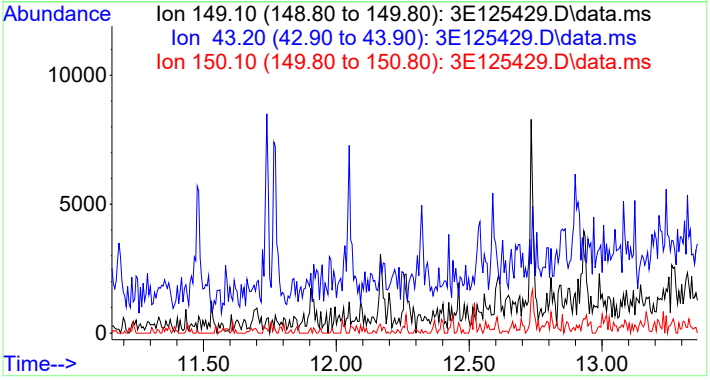


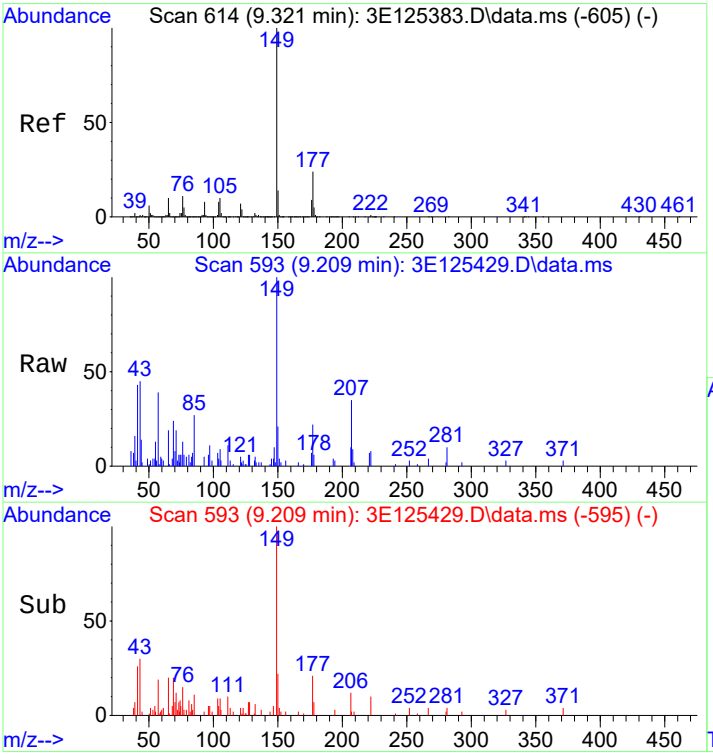

#47
Di-n-octylphthalate
Concen: N.D.
Expected RT: 12.26 min

Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 43 | 12.1 |
| 150 | 10.0 |

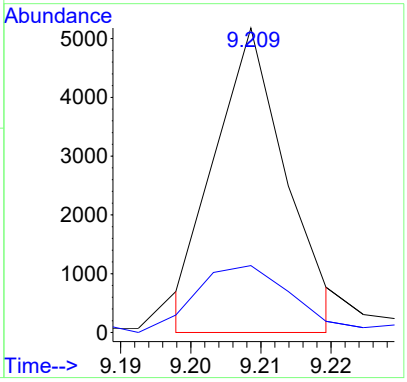



#48
Diethyl Phthalate
Concen: 3658.00 m
RT: 9.209 min Scan# 593
Delta R.T. -0.112 min
Lab File: 3E125429.D
Acq: 26 Jul 2024 6:50 pm

Tgt Ion:149 Resp: 3658

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 149 | 100 | | |
| 177 | 0.0 | 17.0 | 25.6# |



LSC Area Percent Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Title : 8270C Calibration

Signal : TIC: 3E125429.D\data.ms

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.058 | 3 | 4 | 10 | rVB2 | 1502973 | 1371325 | 0.98% | 0.945% |
| 2 | 6.192 | 26 | 29 | 30 | rBV2 | 9721 | 6692 | 0.00% | 0.005% |
| 3 | 6.213 | 30 | 33 | 39 | rVB | 22382 | 24907 | 0.02% | 0.017% |
| 4 | 6.278 | 40 | 45 | 51 | rVB10 | 30778 | 32488 | 0.02% | 0.022% |
| 5 | 6.374 | 59 | 63 | 66 | rBV | 48800 | 31080 | 0.02% | 0.021% |
| 6 | 6.406 | 67 | 69 | 73 | rVB5 | 6443 | 7300 | 0.01% | 0.005% |
| 7 | 6.454 | 73 | 78 | 84 | rBV10 | 14078 | 30631 | 0.02% | 0.021% |
| 8 | 6.508 | 86 | 88 | 95 | rVB | 28351 | 26047 | 0.02% | 0.018% |
| 9 | 6.561 | 95 | 98 | 102 | rBV2 | 19802 | 19485 | 0.01% | 0.013% |
| 10 | 6.593 | 102 | 104 | 108 | rVB5 | 9725 | 7691 | 0.01% | 0.005% |
| 11 | 6.663 | 112 | 117 | 121 | rBV7 | 10447 | 16294 | 0.01% | 0.011% |
| 12 | 6.721 | 121 | 128 | 135 | rVB | 515724 | 339901 | 0.24% | 0.234% |
| 13 | 6.802 | 135 | 143 | 145 | rVB8 | 4637 | 9785 | 0.01% | 0.007% |
| 14 | 6.834 | 145 | 149 | 150 | rBV4 | 7261 | 6084 | 0.00% | 0.004% |
| 15 | 6.850 | 150 | 152 | 157 | rVB6 | 11348 | 10393 | 0.01% | 0.007% |
| 16 | 6.893 | 157 | 160 | 163 | rBV5 | 4193 | 4678 | 0.00% | 0.003% |
| 17 | 6.919 | 163 | 165 | 168 | rVB4 | 7543 | 6630 | 0.00% | 0.005% |
| 18 | 7.042 | 185 | 188 | 193 | rVB7 | 9737 | 12295 | 0.01% | 0.008% |
| 19 | 7.080 | 193 | 195 | 196 | rBV2 | 4871 | 3852 | 0.00% | 0.003% |
| 20 | 7.133 | 201 | 205 | 206 | rVB4 | 7636 | 6626 | 0.00% | 0.005% |
| 21 | 7.155 | 206 | 209 | 213 | rVB6 | 10969 | 10159 | 0.01% | 0.007% |
| 22 | 7.214 | 213 | 220 | 223 | rBV7 | 10110 | 15316 | 0.01% | 0.011% |
| 23 | 7.240 | 223 | 225 | 231 | rVB7 | 5852 | 9277 | 0.01% | 0.006% |
| 24 | 7.299 | 231 | 236 | 238 | rBV6 | 8836 | 12464 | 0.01% | 0.009% |
| 25 | 7.331 | 238 | 242 | 247 | rVV7 | 18870 | 24423 | 0.02% | 0.017% |
| 26 | 7.379 | 247 | 251 | 258 | rVB | 208491 | 156076 | 0.11% | 0.108% |
| 27 | 7.508 | 268 | 275 | 279 | rBV | 50319 | 50244 | 0.04% | 0.035% |
| 28 | 7.550 | 279 | 283 | 285 | rBV4 | 17017 | 18910 | 0.01% | 0.013% |
| 29 | 7.577 | 285 | 288 | 298 | rVB | 43849 | 46799 | 0.03% | 0.032% |
| 30 | 7.641 | 298 | 300 | 303 | rVB4 | 5064 | 4226 | 0.00% | 0.003% |
| 31 | 7.711 | 311 | 313 | 316 | rBV3 | 9642 | 4891 | 0.00% | 0.003% |
| 32 | 7.748 | 318 | 320 | 323 | rBV4 | 7891 | 6463 | 0.00% | 0.004% |
| 33 | 7.780 | 323 | 326 | 330 | rVB6 | 5323 | 4172 | 0.00% | 0.003% |
| 34 | 7.834 | 335 | 336 | 339 | rBV3 | 5962 | 5950 | 0.00% | 0.004% |
| 35 | 7.866 | 340 | 342 | 350 | rVB9 | 8227 | 14097 | 0.01% | 0.010% |
| 36 | 7.941 | 350 | 356 | 366 | rBV3 | 49984 | 86779 | 0.06% | 0.060% |
| 37 | 8.005 | 367 | 368 | 371 | rVB3 | 6691 | 4643 | 0.00% | 0.003% |
| 38 | 8.048 | 371 | 376 | 384 | rVB | 91891 | 81833 | 0.06% | 0.056% |
| 39 | 8.101 | 384 | 386 | 390 | rVB5 | 7439 | 5747 | 0.00% | 0.004% |
| 40 | 8.150 | 390 | 395 | 397 | rBV6 | 7017 | 7600 | 0.01% | 0.005% |

LSC Area Percent Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Title : 8270C Calibration

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 41 | 8.182 | 399 | 401 | 404 | rVB3 | 8491 | 5843 | 0.00% | 0.004% |
| 42 | 8.219 | 404 | 408 | 411 | rVB6 | 7336 | 8351 | 0.01% | 0.006% |
| 43 | 8.278 | 416 | 419 | 421 | rVB4 | 4569 | 4924 | 0.00% | 0.003% |
| 44 | 8.299 | 421 | 423 | 425 | rBV3 | 4691 | 4104 | 0.00% | 0.003% |
| 45 | 8.369 | 431 | 436 | 437 | rBV5 | 9054 | 10025 | 0.01% | 0.007% |
| 46 | 8.428 | 444 | 447 | 454 | rVB8 | 17087 | 26726 | 0.02% | 0.018% |
| 47 | 8.476 | 454 | 456 | 459 | rVB4 | 12682 | 9698 | 0.01% | 0.007% |
| 48 | 8.508 | 459 | 462 | 467 | rBV7 | 8662 | 14882 | 0.01% | 0.010% |
| 49 | 8.551 | 467 | 470 | 481 | rVB4 | 62964 | 72636 | 0.05% | 0.050% |
| 50 | 8.674 | 490 | 493 | 499 | rBV2 | 61623 | 52949 | 0.04% | 0.036% |
| 51 | 8.722 | 499 | 502 | 509 | rVB9 | 10224 | 13784 | 0.01% | 0.010% |
| 52 | 8.775 | 509 | 512 | 514 | rBV4 | 6976 | 6151 | 0.00% | 0.004% |
| 53 | 8.807 | 516 | 518 | 523 | rVB6 | 5290 | 5843 | 0.00% | 0.004% |
| 54 | 8.909 | 534 | 537 | 543 | rVB7 | 8743 | 11799 | 0.01% | 0.008% |
| 55 | 8.946 | 543 | 544 | 546 | rBV2 | 4800 | 3689 | 0.00% | 0.003% |
| 56 | 8.973 | 546 | 549 | 554 | rVB7 | 5226 | 6323 | 0.00% | 0.004% |
| 57 | 9.080 | 566 | 569 | 572 | rVV4 | 5288 | 4682 | 0.00% | 0.003% |
| 58 | 9.112 | 572 | 575 | 579 | rVB6 | 14935 | 13605 | 0.01% | 0.009% |
| 59 | 9.193 | 585 | 590 | 597 | rVB5 | 23727 | 43601 | 0.03% | 0.030% |
| 60 | 9.262 | 597 | 603 | 608 | rVB | 46366 | 43176 | 0.03% | 0.030% |
| 61 | 9.305 | 608 | 611 | 614 | rVB5 | 6310 | 7345 | 0.01% | 0.005% |
| 62 | 9.337 | 614 | 617 | 619 | rBV3 | 8095 | 8249 | 0.01% | 0.006% |
| 63 | 9.401 | 625 | 629 | 631 | rVV4 | 8087 | 8400 | 0.01% | 0.006% |
| 64 | 9.439 | 633 | 636 | 640 | rVB6 | 8798 | 9562 | 0.01% | 0.007% |
| 65 | 9.465 | 640 | 641 | 645 | rBV4 | 6792 | 3989 | 0.00% | 0.003% |
| 66 | 9.497 | 645 | 647 | 650 | rBV4 | 5139 | 5280 | 0.00% | 0.004% |
| 67 | 9.535 | 652 | 654 | 657 | rVV4 | 9020 | 7559 | 0.01% | 0.005% |
| 68 | 9.562 | 657 | 659 | 664 | rVB6 | 9529 | 12036 | 0.01% | 0.008% |
| 69 | 9.594 | 664 | 665 | 669 | rVB4 | 5910 | 3692 | 0.00% | 0.003% |
| 70 | 9.631 | 669 | 672 | 679 | rBV6 | 41936 | 42598 | 0.03% | 0.029% |
| 71 | 9.717 | 687 | 688 | 691 | rBV3 | 6232 | 4260 | 0.00% | 0.003% |
| 72 | 9.754 | 692 | 695 | 698 | rVB5 | 4874 | 4255 | 0.00% | 0.003% |
| 73 | 9.792 | 698 | 702 | 707 | rBV | 29602 | 32485 | 0.02% | 0.022% |
| 74 | 9.888 | 716 | 720 | 721 | rVV4 | 5308 | 5236 | 0.00% | 0.004% |
| 75 | 9.904 | 721 | 723 | 730 | rVB7 | 14420 | 15799 | 0.01% | 0.011% |
| 76 | 9.973 | 730 | 736 | 741 | rBV10 | 11125 | 19360 | 0.01% | 0.013% |
| 77 | 10.016 | 743 | 744 | 746 | rVV2 | 5883 | 4223 | 0.00% | 0.003% |
| 78 | 10.038 | 746 | 748 | 754 | rVB7 | 10013 | 14660 | 0.01% | 0.010% |
| 79 | 10.112 | 759 | 762 | 766 | rVB6 | 3727 | 4689 | 0.00% | 0.003% |
| 80 | 10.155 | 766 | 770 | 773 | rVB6 | 8906 | 11372 | 0.01% | 0.008% |
| 81 | 10.193 | 773 | 777 | 778 | rBV4 | 6425 | 6669 | 0.00% | 0.005% |
| 82 | 10.246 | 785 | 787 | 789 | rBV2 | 5892 | 3908 | 0.00% | 0.003% |
| 83 | 10.337 | 789 | 804 | 824 | rBV3 | 89854543 | 140085672 | 100.00% | 96.563% |
| 84 | 10.728 | 874 | 877 | 883 | rVB7 | 31927 | 31067 | 0.02% | 0.021% |
| 85 | 10.958 | 917 | 920 | 925 | rBV7 | 11284 | 19439 | 0.01% | 0.013% |

LSC Area Percent Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Title : 8270C Calibration

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 86 | 11.139 | 951 | 954 | 960 | rBV6 | 57984 | 70378 | 0.05% | 0.049% |
| 87 | 11.482 | 1014 | 1018 | 1023 | rBV4 | 35466 | 47192 | 0.03% | 0.033% |
| 88 | 11.535 | 1025 | 1028 | 1034 | rVB2 | 53655 | 58253 | 0.04% | 0.040% |
| 89 | 11.648 | 1047 | 1049 | 1053 | rBV5 | 11697 | 12422 | 0.01% | 0.009% |
| 90 | 11.738 | 1061 | 1066 | 1069 | rBV | 154447 | 152685 | 0.11% | 0.105% |
| 91 | 11.771 | 1070 | 1072 | 1078 | rVB7 | 46750 | 44162 | 0.03% | 0.030% |
| 92 | 11.904 | 1093 | 1097 | 1103 | rBV2 | 99809 | 100775 | 0.07% | 0.069% |
| 93 | 12.049 | 1121 | 1124 | 1133 | rBV6 | 61061 | 75918 | 0.05% | 0.052% |
| 94 | 12.263 | 1160 | 1164 | 1168 | rBV | 151491 | 157060 | 0.11% | 0.108% |
| 95 | 12.610 | 1223 | 1229 | 1235 | rBV3 | 169893 | 203477 | 0.15% | 0.140% |
| 96 | 12.739 | 1249 | 1253 | 1258 | rBV4 | 77408 | 110085 | 0.08% | 0.076% |
| 97 | 12.937 | 1286 | 1290 | 1295 | rVB2 | 189472 | 192590 | 0.14% | 0.133% |
| 98 | 13.268 | 1349 | 1352 | 1357 | rBV | 161643 | 178176 | 0.13% | 0.123% |
| 99 | 13.627 | 1413 | 1419 | 1425 | rVB5 | 135711 | 242755 | 0.17% | 0.167% |
| 100 | 14.028 | 1490 | 1494 | 1499 | rVB2 | 118998 | 146563 | 0.10% | 0.101% |

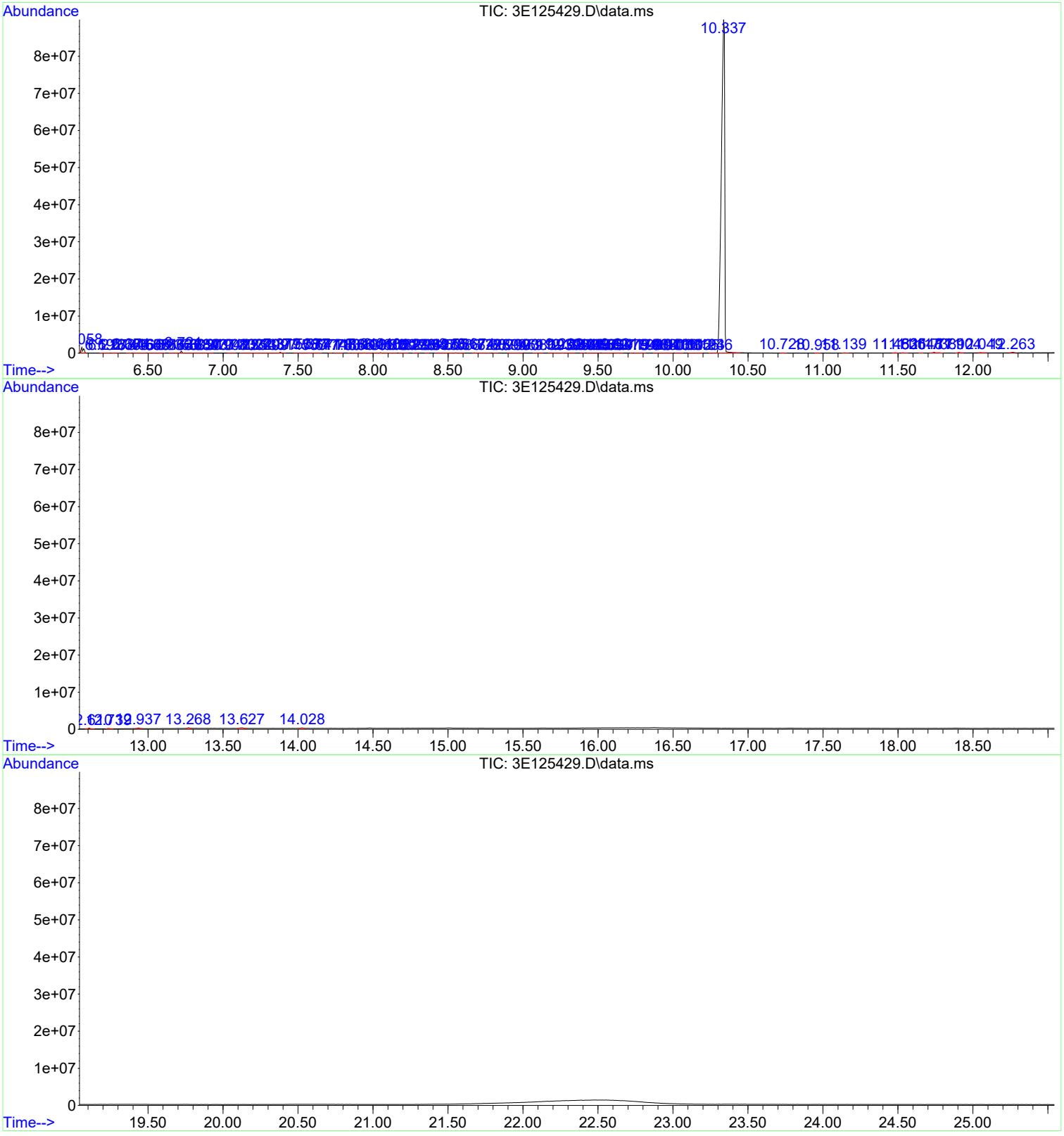
Sum of corrected areas: 145071339

LSC Report - Integrated Chromatogram

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

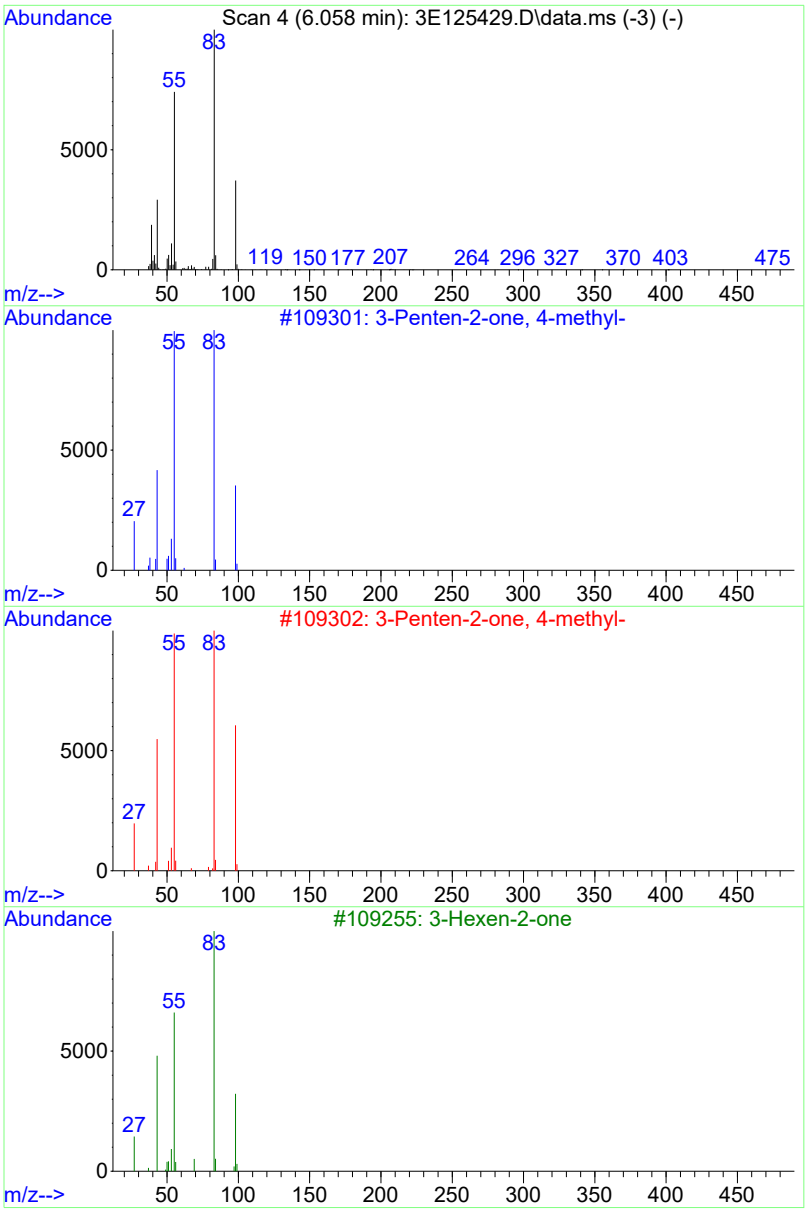
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

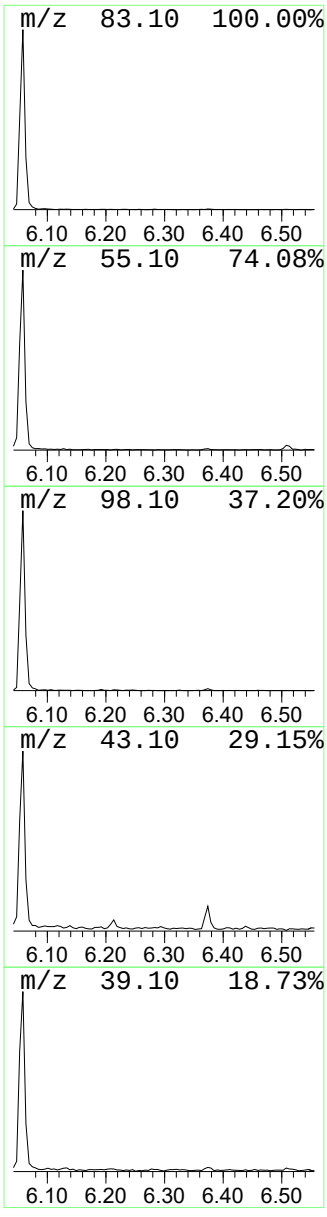
**********

Peak Number 1 3-Penten-2-one, 4-methyl- Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.058 | 13713.30 | 1371330 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3-Penten-2-one, 4-methyl- | 98 | C6H10O | 000141-79-7 | 87 |
| 2 | 3-Penten-2-one, 4-methyl- | 98 | C6H10O | 000141-79-7 | 86 |
| 3 | 3-Hexen-2-one | 98 | C6H10O | 000763-93-9 | 86 |
| 4 | 2-Pentene, 2,4-dimethyl- | 98 | C7H14 | 000625-65-0 | 80 |
| 5 | 2-Pentene, 3,4-dimethyl-, (E)- $... | 98 | C7H14 | 004914-92-5 | 78 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

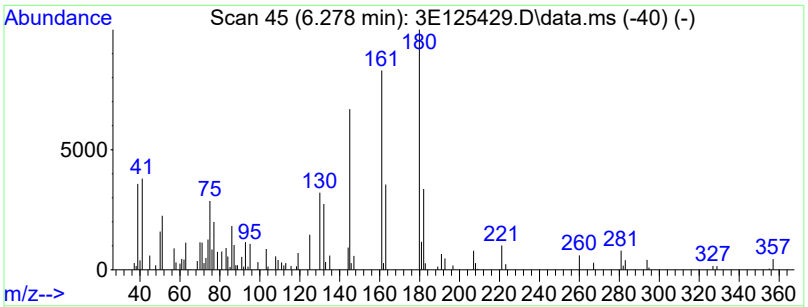
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

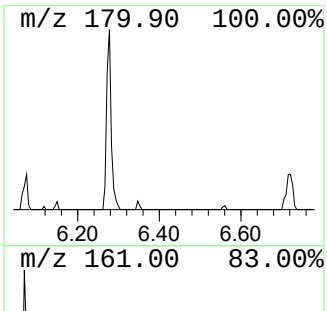
**********

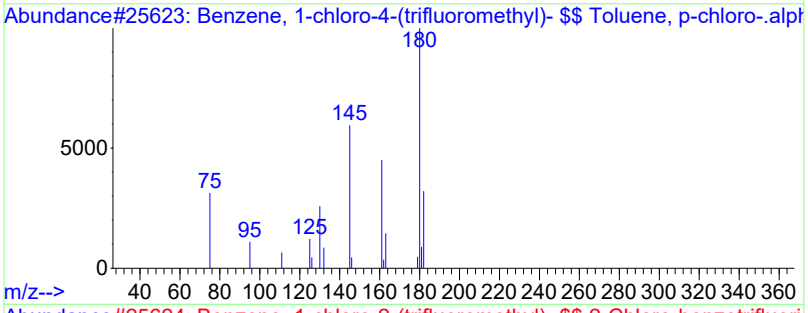
Peak Number 2 Benzene, 1-chloro-3-(triflu... Concentration Rank 25

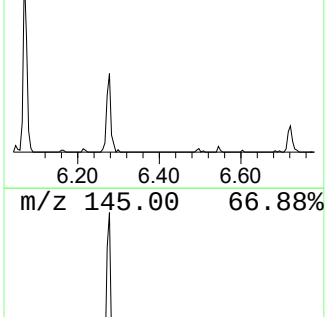
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.278 | 324.88 | 32488 | External Standard | 0.000 |

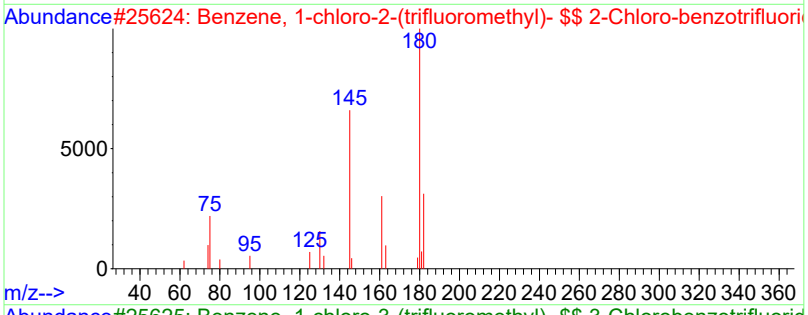
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzene, 1-chloro-4-(trifluorome... | 180 | C7H4ClF3 | 000098-56-6 | 62 |
| 2 | Benzene, 1-chloro-2-(trifluorome... | 180 | C7H4ClF3 | 000088-16-4 | 60 |
| 3 | Benzene, 1-chloro-3-(trifluorome... | 180 | C7H4ClF3 | 000098-15-7 | 49 |
| 4 | Benzene, 1-chloro-3-(trifluorome... | 180 | C7H4ClF3 | 000098-15-7 | 49 |
| 5 | Benzene, 1-chloro-4-(trifluorome... | 180 | C7H4ClF3 | 000098-56-6 | 46 |

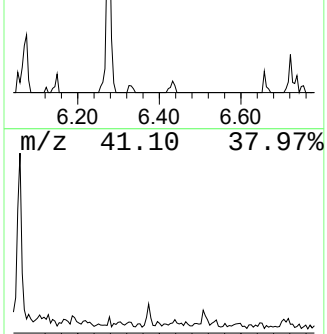


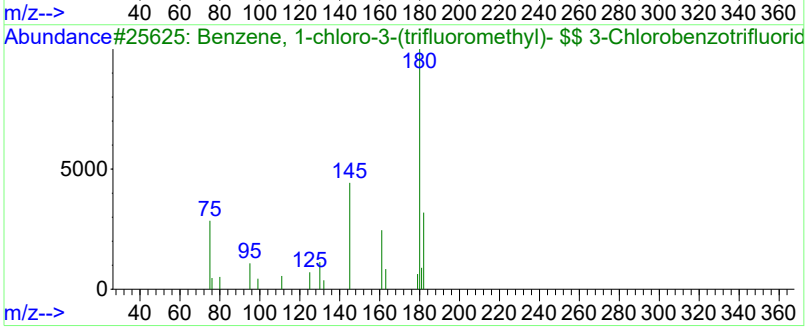



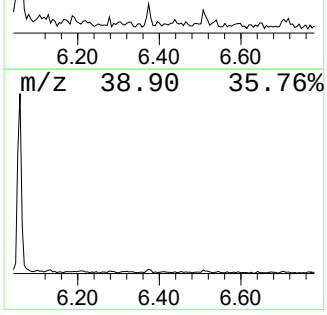



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

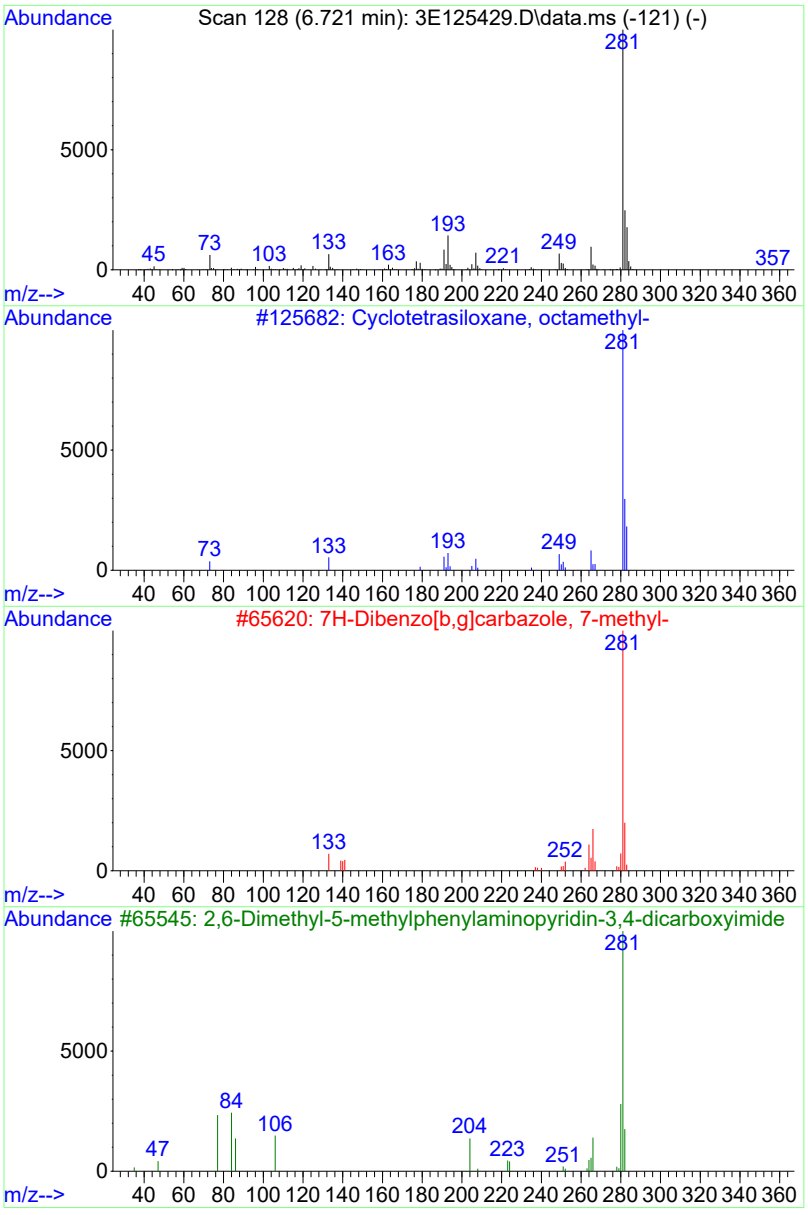
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

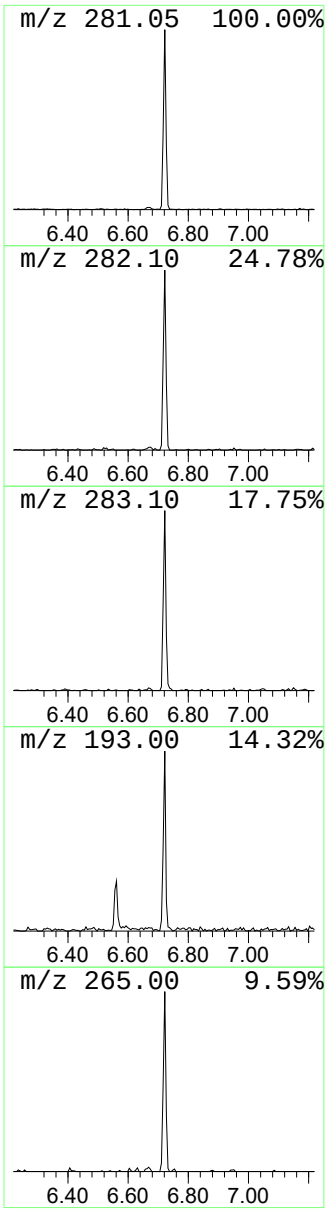
**********

Peak Number 3 Cyclotetrasiloxane, octamet... Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 6.721 | 3399.01 | 339901 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclotetrasiloxane, octamethyl- | 296 | C8H24O4Si4 | 000556-67-2 | 86 |
| 2 | 7H-Dibenzo[b,g]carbazole, 7-methyl- | 281 | C21H15N | 003557-49-1 | 59 |
| 3 | 2,6-Dimethyl-5-methylphenylamino... | 281 | C16H15N3O2 | 000000-00-0 | 59 |
| 4 | Benzoic acid, 4-methyl-2-trimeth... | 296 | C14H24O3Si2 | 000000-00-0 | 53 |
| 5 | 5H-Naphtho[2,3-c]carbazole, 5-me... | 281 | C21H15N | 100025-44-3 | 45 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

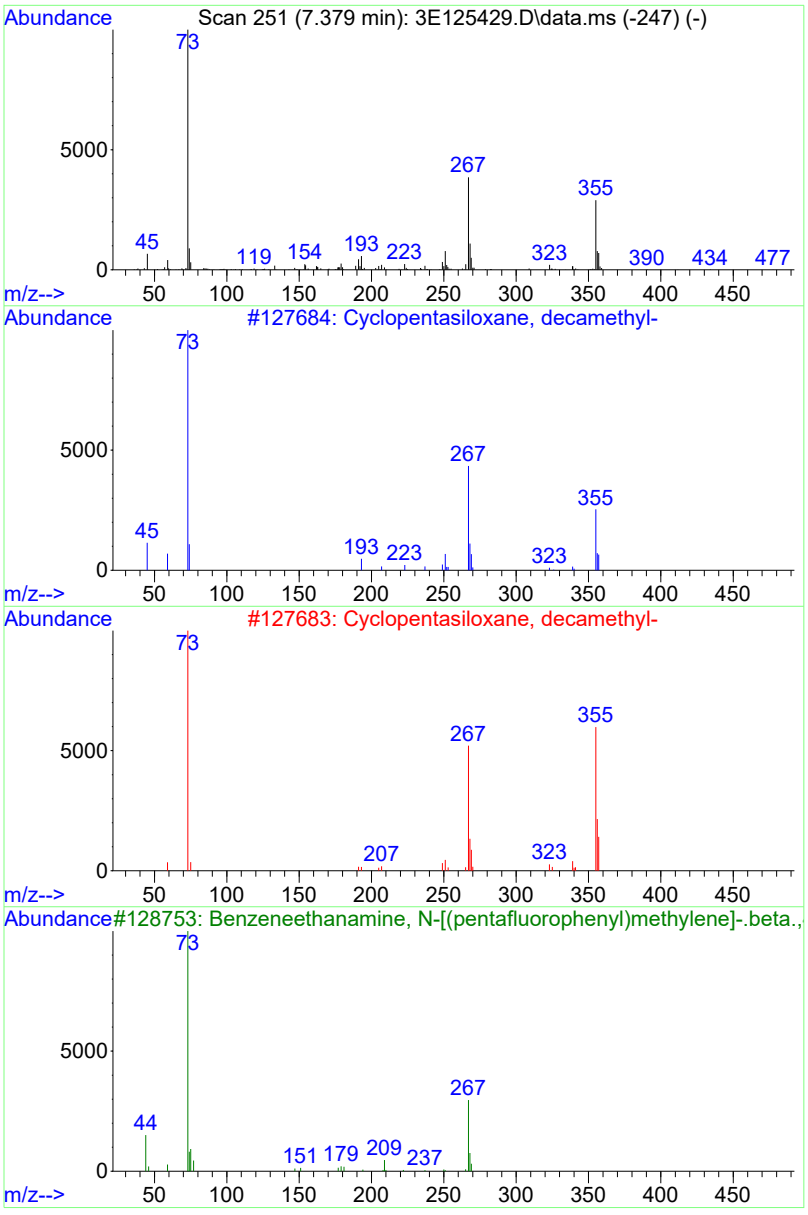
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

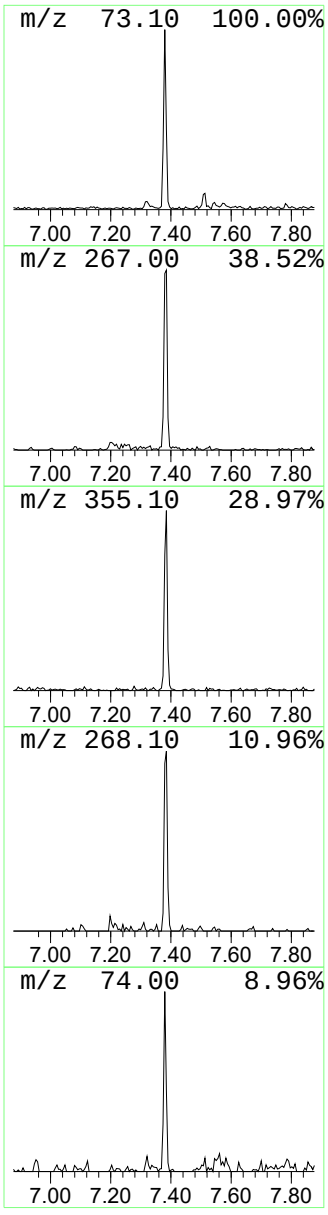
**********

Peak Number 4 Cyclopentasiloxane, decamet... Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.379 | 1560.76 | 156076 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclopentasiloxane, decamethyl- | 370 | C10H30O5Si5 | 000541-02-6 | 90 |
| 2 | Cyclopentasiloxane, decamethyl- | 370 | C10H30O5Si5 | 000541-02-6 | 38 |
| 3 | Benzeneethanamine, N-[(pentafluo... | 475 | C21H26F5NO2Si2 | 055429-85-1 | 38 |
| 4 | N-(Trifluoracetyl)-O,O',O''-tris... | 495 | C20H36F3NO4Si3 | 054135-51-2 | 35 |
| 5 | Benzeneethanamine, N-[(pentafluo... | 563 | C24H34F5NO3Si3 | 055429-13-5 | 35 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

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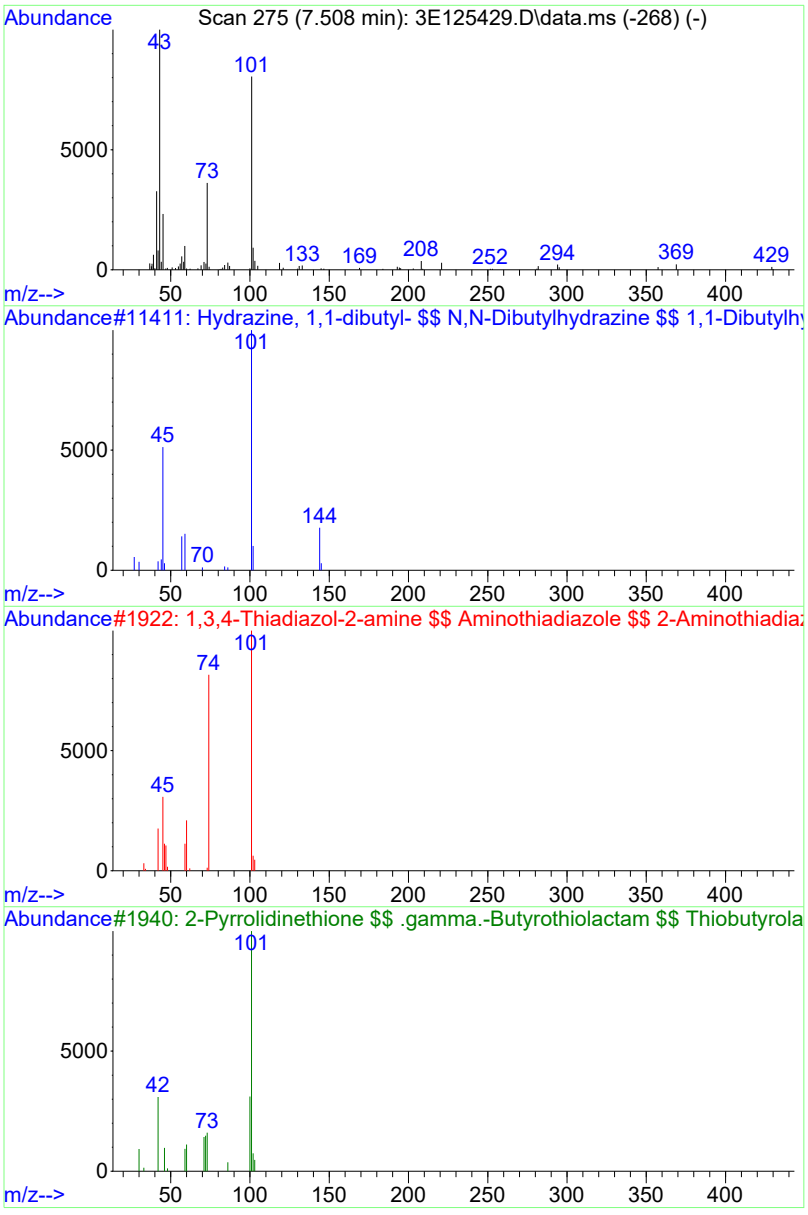
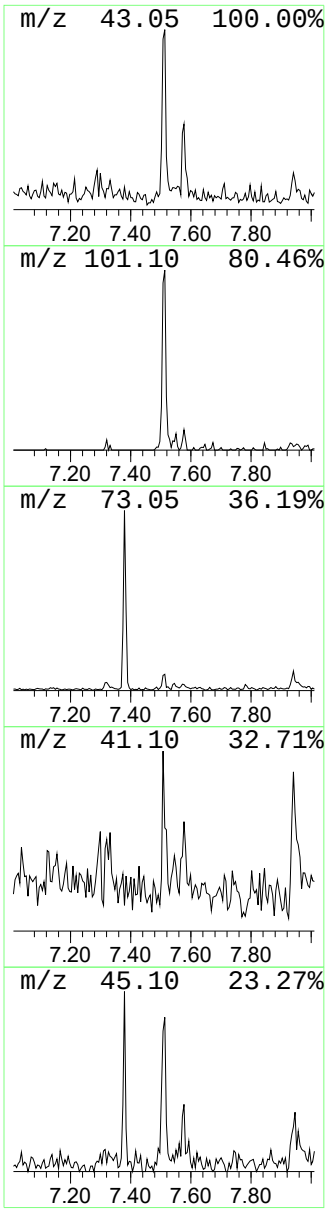
Peak Number 5 Unknown Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.508 | 502.44 | 50244 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hydrazine, 1,1-dibutyl- $$ N,N-D... | 144 | C8H20N2 | 007422-80-2 | 45 |
| 2 | 1,3,4-Thiadiazol-2-amine $$ Amin... | 101 | C2H3N3S | 004005-51-0 | 45 |
| 3 | 2-Pyrrolidinethione $$ .gamma.-B... | 101 | C4H7NS | 002295-35-4 | 42 |
| 4 | Propane, 1-isothiocyanato- $$ Is... | 101 | C4H7NS | 000628-30-8 | 40 |
| 5 | Thiocyanic acid, propyl ester $$... | 101 | C4H7NS | 004251-16-5 | 40 |



Library Search Compound Report

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Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

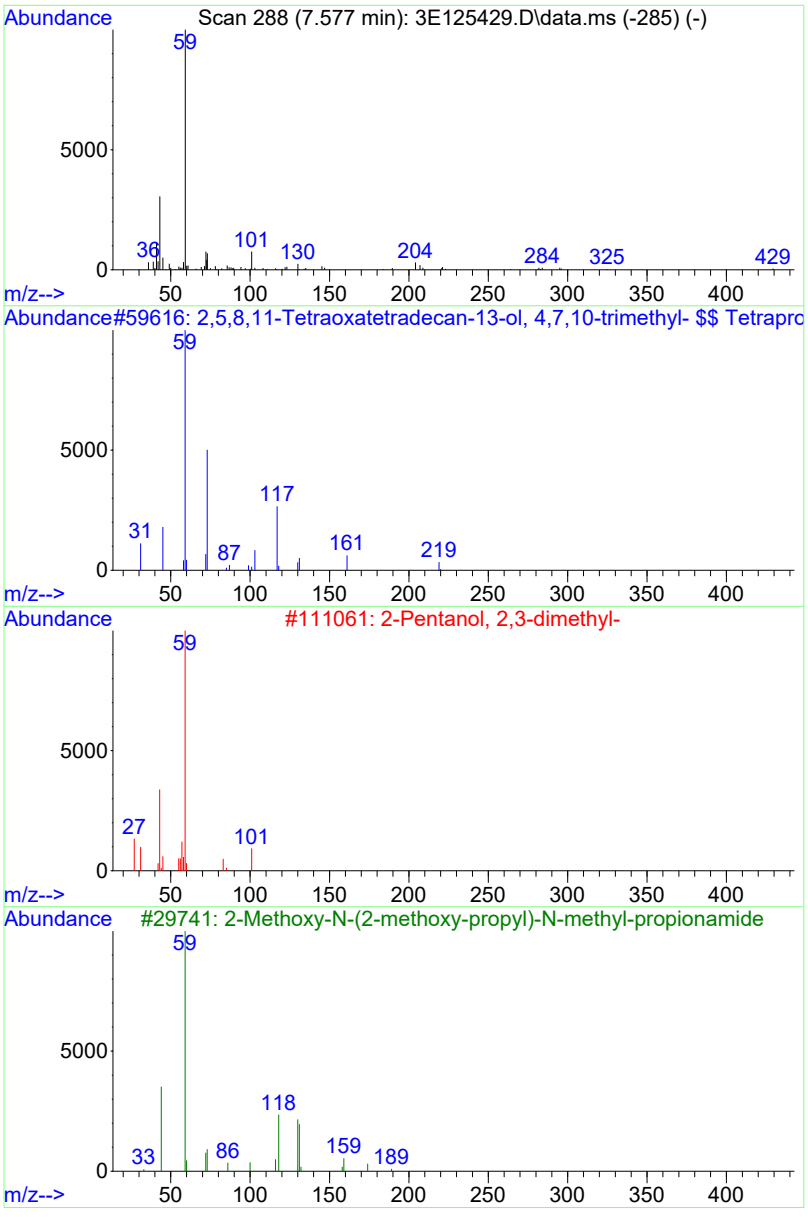
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

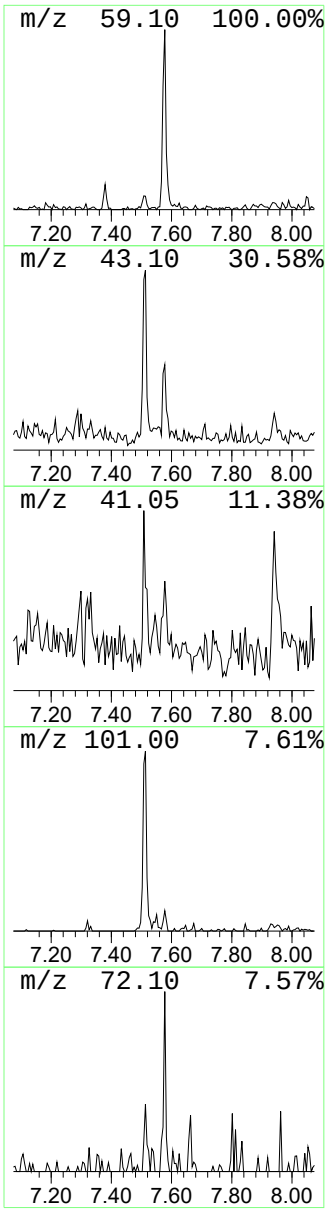
**********

Peak Number 6 Unknown Concentration Rank 21

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.577 | 467.99 | 46799 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2,5,8,11-Tetraoxatetradecan-13-o... | 264 | C13H28O5 | 020324-34-9 | 38 |
| 2 | 2-Pentanol, 2,3-dimethyl- | 116 | C7H16O | 004911-70-0 | 36 |
| 3 | 2-Methoxy-N-(2-methoxy-propyl)-N... | 189 | C9H19NO3 | 000000-00-0 | 9 |
| 4 | Butane, 2-methoxy- $$ Ether, sec... | 88 | C5H12O | 006795-87-5 | 9 |
| 5 | 2-Hydroxy-2-methylhept-6-en-3-one | 142 | C8H14O2 | 000996-61-2 | 9 |



Library Search Compound Report

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Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

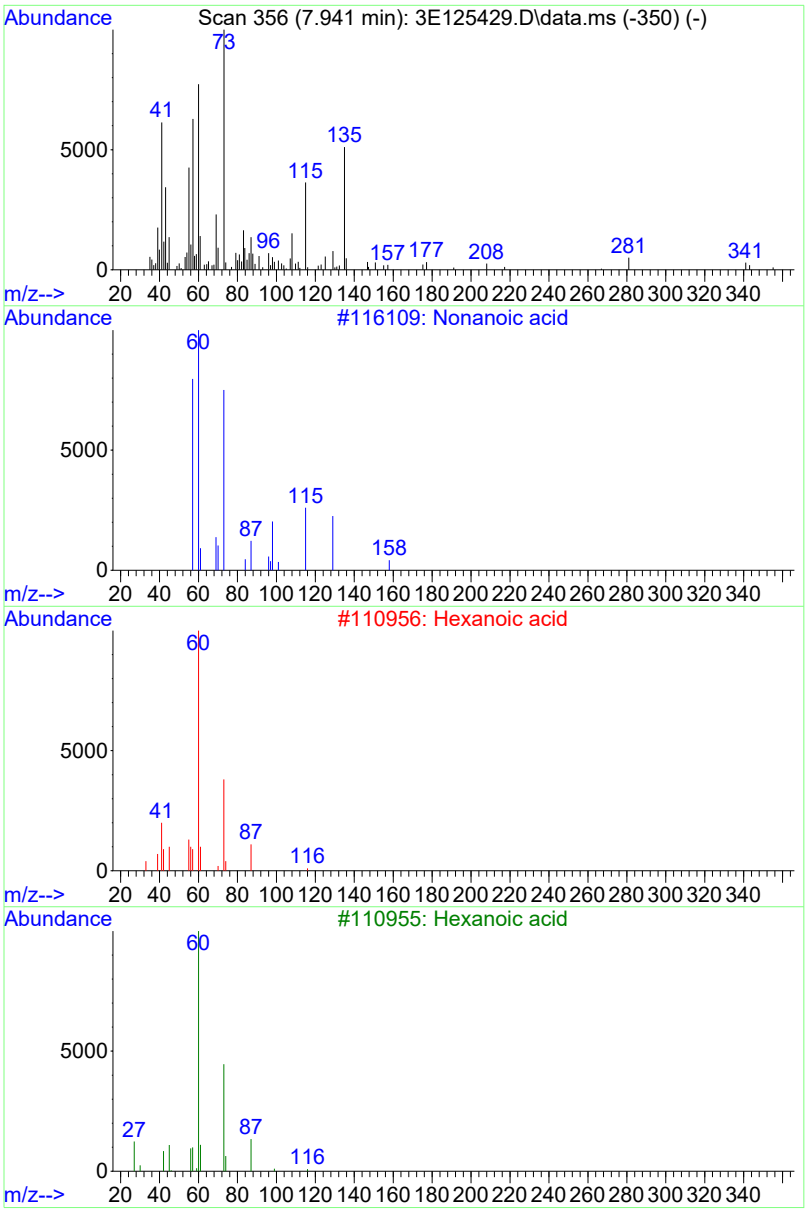
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

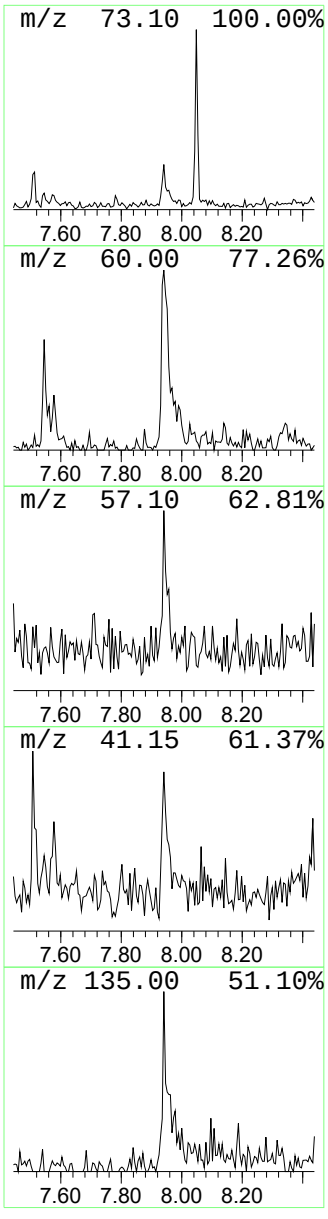
**********

Peak Number 7 Unknown Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 7.941 | 867.79 | 86779 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Nonanoic acid | 158 | C9H18O2 | 000112-05-0 | 47 |
| 2 | Hexanoic acid | 116 | C6H12O2 | 000142-62-1 | 46 |
| 3 | Hexanoic acid | 116 | C6H12O2 | 000142-62-1 | 46 |
| 4 | 11-Bromoundecanoic acid | 264 | C11H21BrO2 | 002834-05-1 | 43 |
| 5 | Tetradecanoic acid $$ Myristic a... | 228 | C14H28O2 | 000544-63-8 | 43 |



Library Search Compound Report

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Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

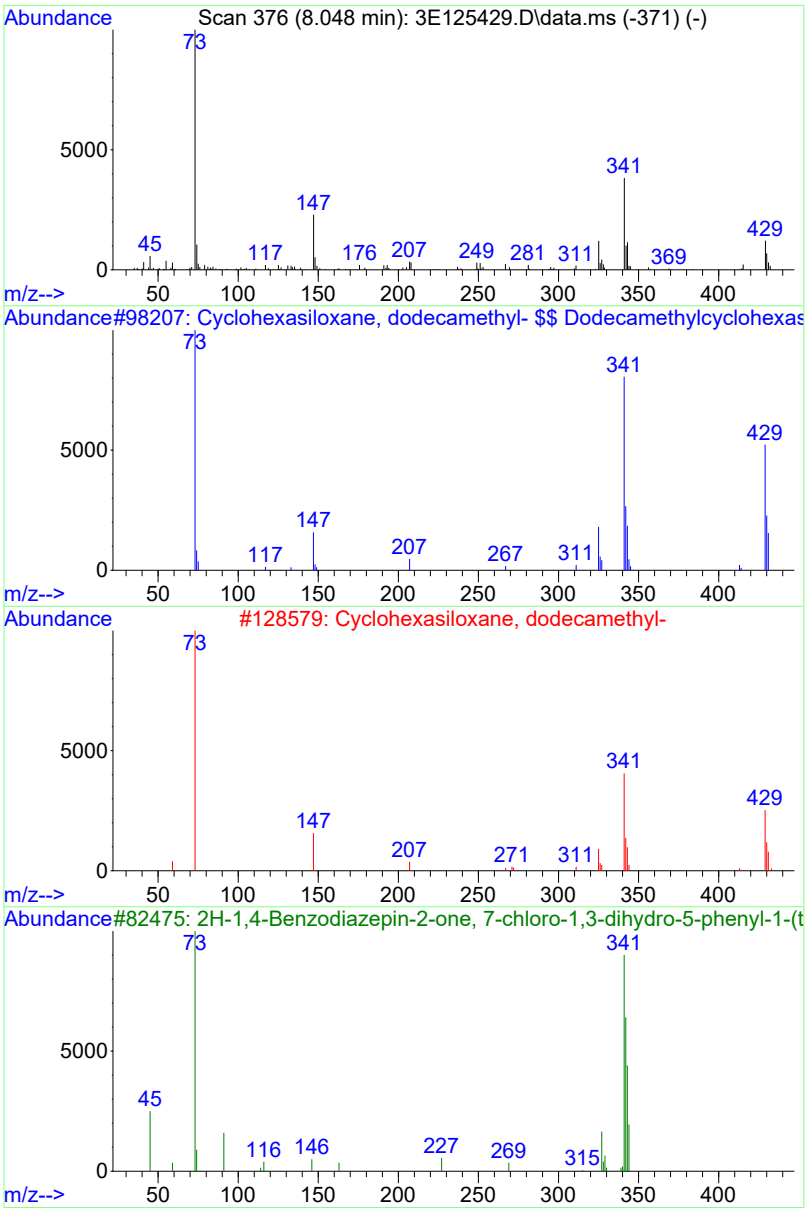
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

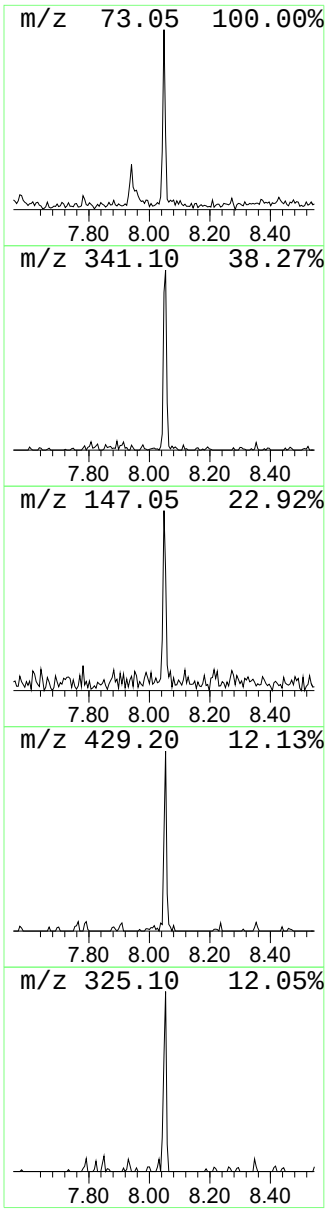
**********

Peak Number 8 Cyclohexasiloxane, dodecame... Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.048 | 818.33 | 81833 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclohexasiloxane, dodecamethyl-... | 444 | C12H36O6Si6 | 000540-97-6 | 87 |
| 2 | Cyclohexasiloxane, dodecamethyl- | 444 | C12H36O6Si6 | 000540-97-6 | 64 |
| 3 | 2H-1,4-Benzodiazepin-2-one, 7-ch... | 342 | C18H19ClN2OSi | 055299-24-6 | 14 |
| 4 | Morphinan, 7,8-didehydro-4,5-epo... | 429 | C23H35NO3Si2 | 055449-66-6 | 10 |
| 5 | Guaifenesin di-tms derivative | 342 | C16H30O4Si2 | 000000-00-0 | 9 |



Library Search Compound Report

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Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

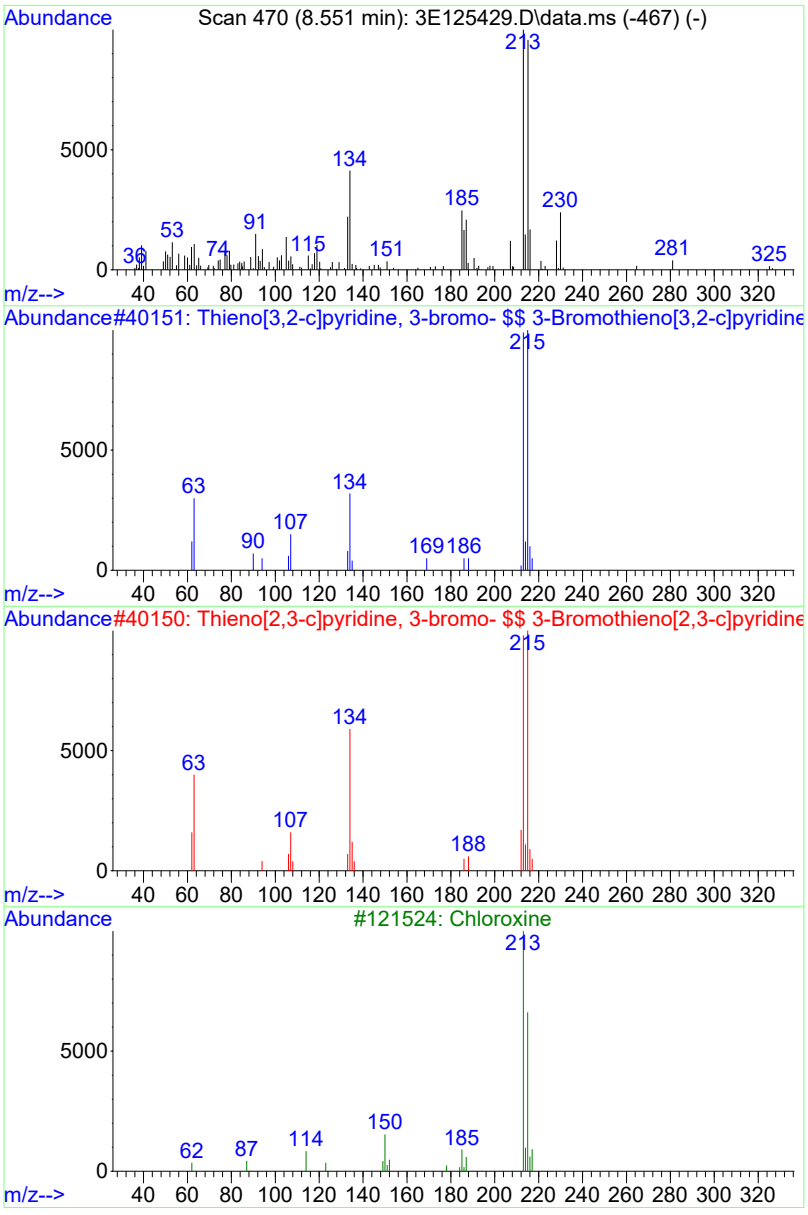
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

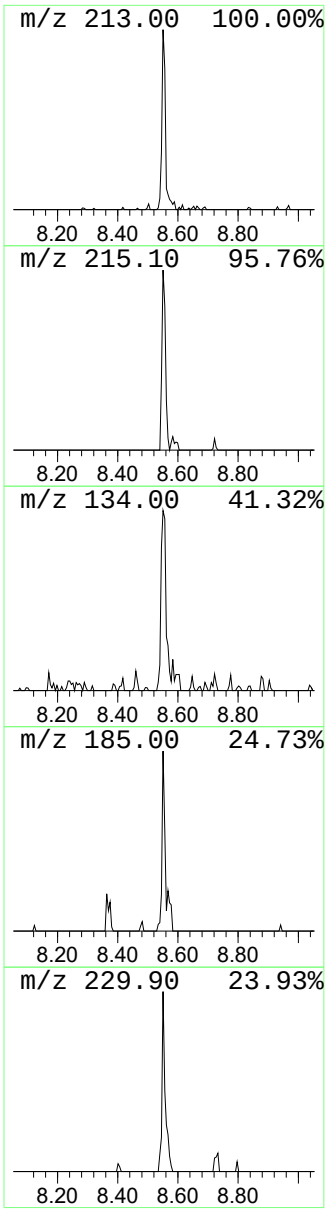
**********

Peak Number 9 Thieno[3,2-c]pyridine, 3-br... Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.551 | 726.36 | 72636 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Thieno[3,2-c]pyridine, 3-bromo- ... | 213 | C7H4BrNS | 028783-18-8 | 42 |
| 2 | Thieno[2,3-c]pyridine, 3-bromo- ... | 213 | C7H4BrNS | 028783-17-7 | 40 |
| 3 | Chloroxine | 213 | C9H5Cl2NO | 000773-76-2 | 38 |
| 4 | 2H,8H-Benzo[1,2-b:3,4-b']dipyran... | 228 | C14H12O3 | 000523-59-1 | 38 |
| 5 | Phenol, 2-bromo-4-(1,1-dimethyle... | 228 | C10H13BrO | 002198-66-5 | 38 |



Library Search Compound Report

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Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

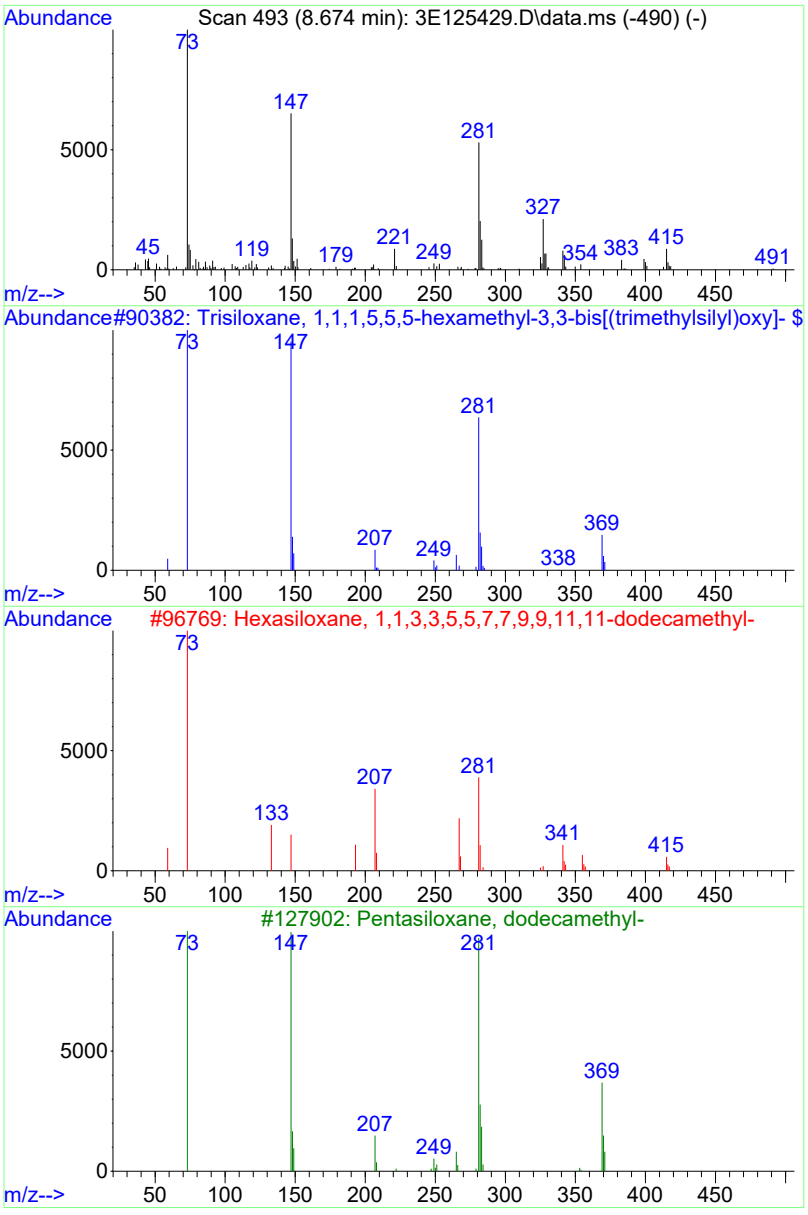
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

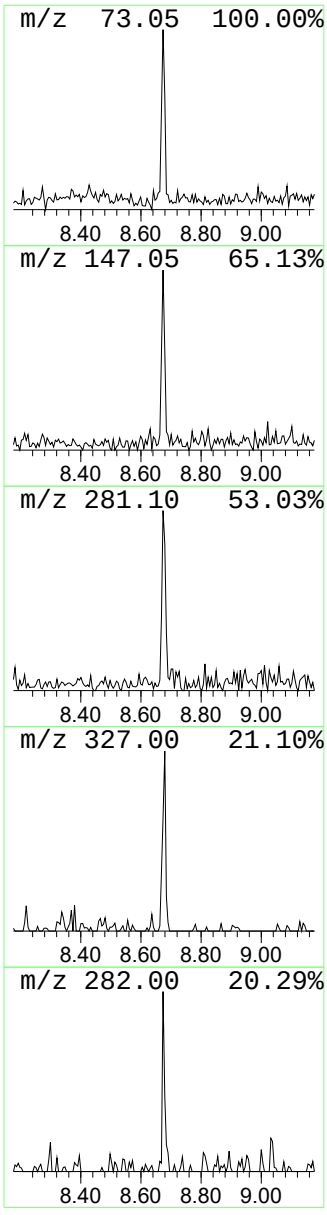
**********

Peak Number 10 Trisiloxane, 1,1,1,5,5,5-he... Concentration Rank 18

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 8.674 | 529.49 | 52949 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 43 |
| 2 | Hexasiloxane, 1,1,3,3,5,5,7,7,9,... | 430 | C12H38O5Si6 | 000995-82-4 | 38 |
| 3 | Pentasiloxane, dodecamethyl- | 384 | C12H36O4Si5 | 000141-63-9 | 37 |
| 4 | Pentasiloxane, dodecamethyl- $$ ... | 384 | C12H36O4Si5 | 000141-63-9 | 25 |
| 5 | 3-Isopropoxy-1,1,1,7,7,7-hexamet... | 576 | C18H52O7Si7 | 071579-69-6 | 25 |



Library Search Compound Report

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Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

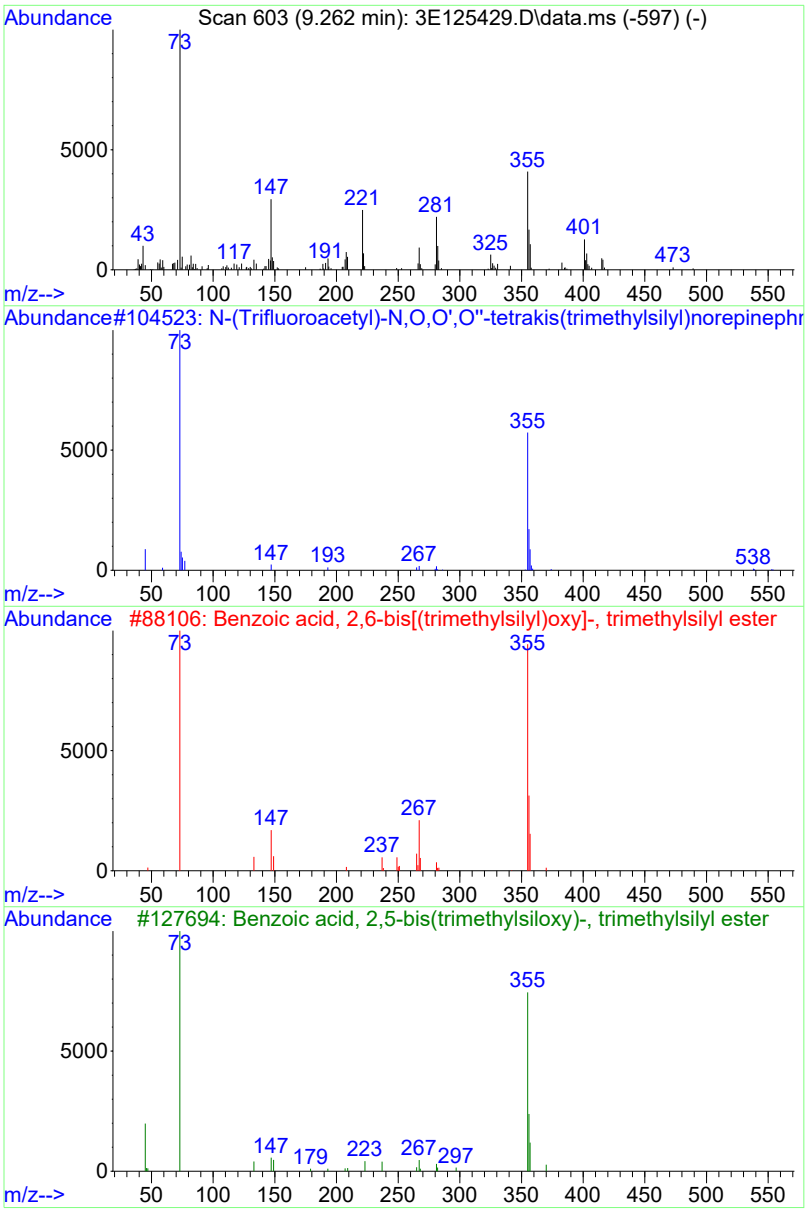
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

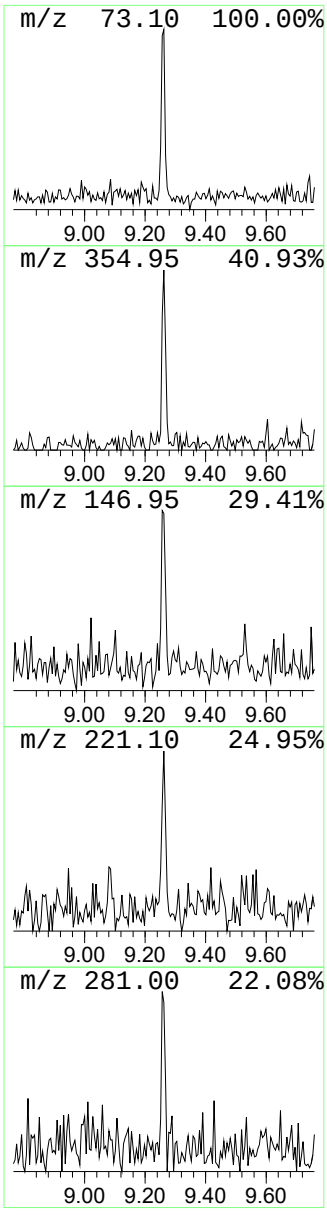
**********

Peak Number 11 Hexasiloxane, 1,1,3,3,5,5,7... Concentration Rank 23

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.262 | 431.76 | 43176 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | N-(Trifluoroacetyl)-N,O,O',O''-t... | 553 | C22H42F3NO4Si4 | 000000-00-0 | 37 |
| 2 | Benzoic acid, 2,6-bis[(trimethyl... | 370 | C16H30O4Si3 | 003782-85-2 | 32 |
| 3 | Benzoic acid, 2,5-bis(trimethyls... | 370 | C16H30O4Si3 | 003618-20-0 | 25 |
| 4 | Noradrenaline tetraTMS | 457 | C20H43NO3Si4 | 068595-65-3 | 23 |
| 5 | Hexasiloxane, 1,1,3,3,5,5,7,7,9,... | 430 | C12H38O5Si6 | 000995-82-4 | 10 |



Library Search Compound Report

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Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

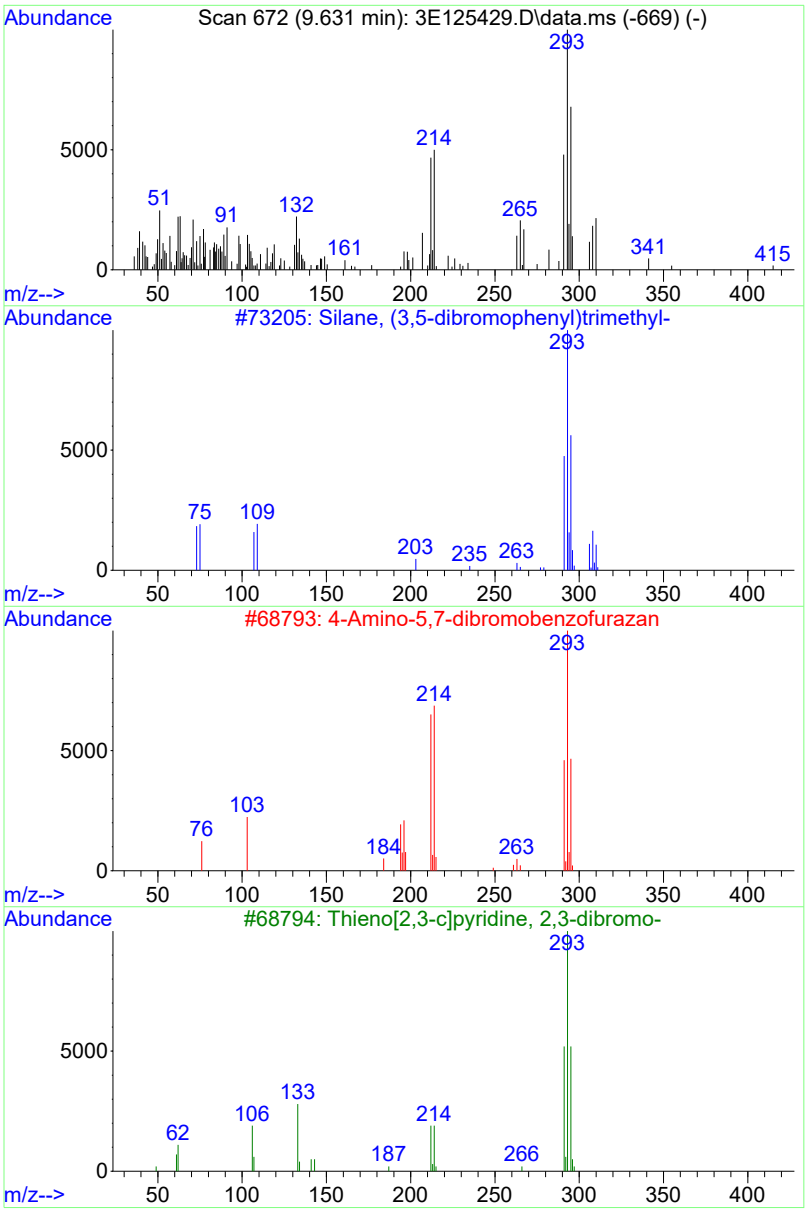
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

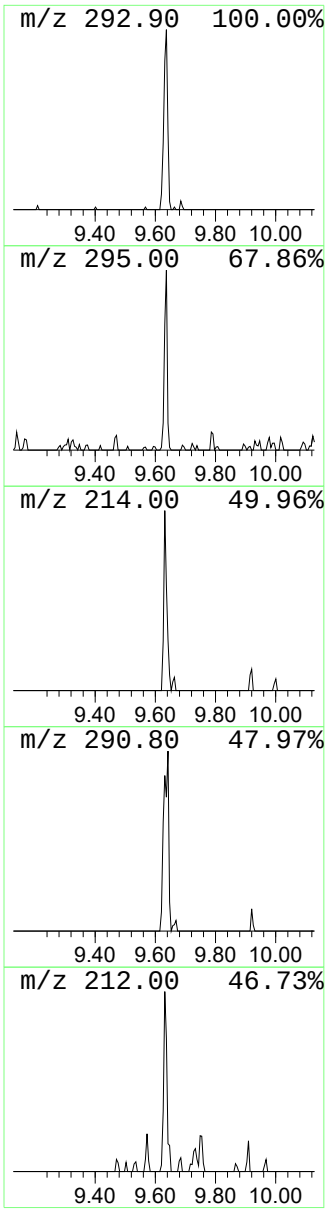
**********

Peak Number 12 Unknown Concentration Rank 24

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.631 | 425.98 | 42598 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Silane, (3,5-dibromophenyl)trime... | 306 | C9H12Br2Si | 017878-23-8 | 50 |
| 2 | 4-Amino-5,7-dibromobenzofurazan | 291 | C6H3Br2N3O | 000000-00-0 | 49 |
| 3 | Thieno[2,3-c]pyridine, 2,3-dibromo- | 291 | C7H3Br2NS | 028783-19-9 | 46 |
| 4 | Thieno[3,2-c]pyridine, 2,3-dibromo- | 291 | C7H3Br2NS | 028783-20-2 | 25 |
| 5 | Clofoctol $$ Phenol, 2-[(2,4-dic... | 364 | C21H26Cl2O | 037693-01-9 | 22 |



Library Search Compound Report

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Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

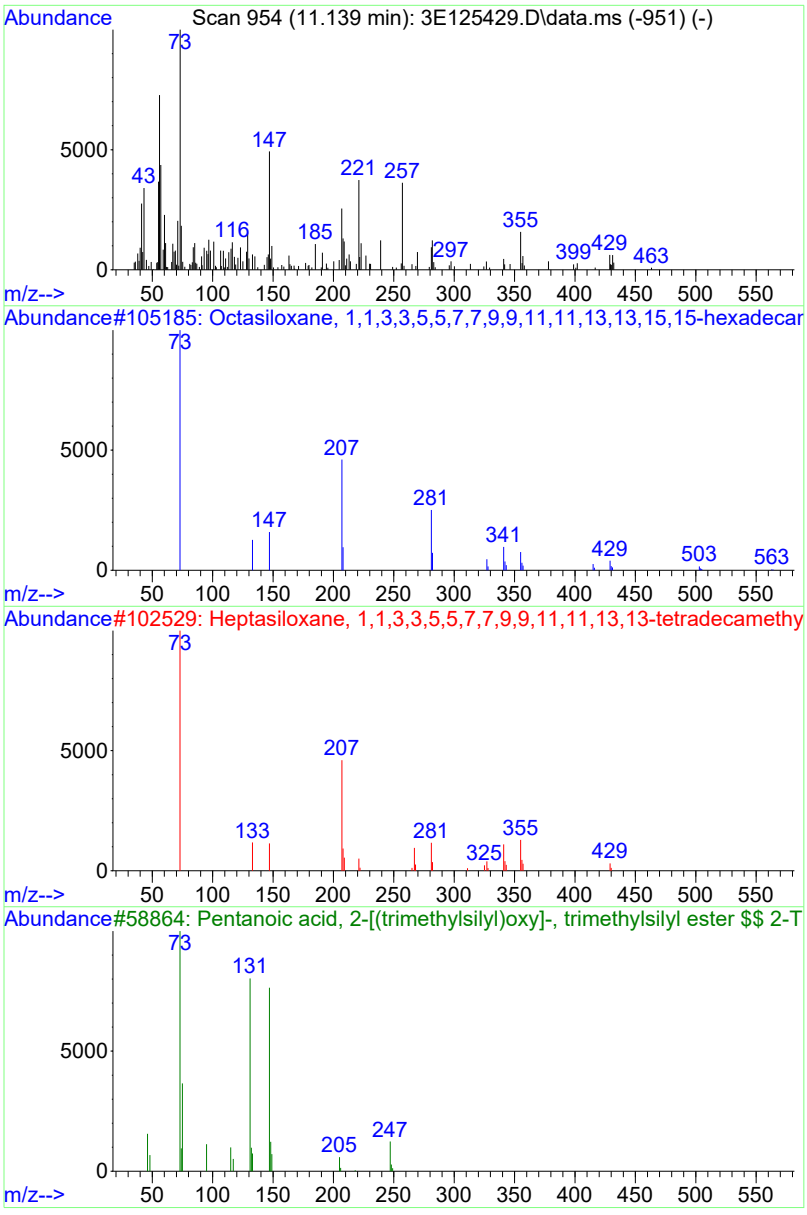
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

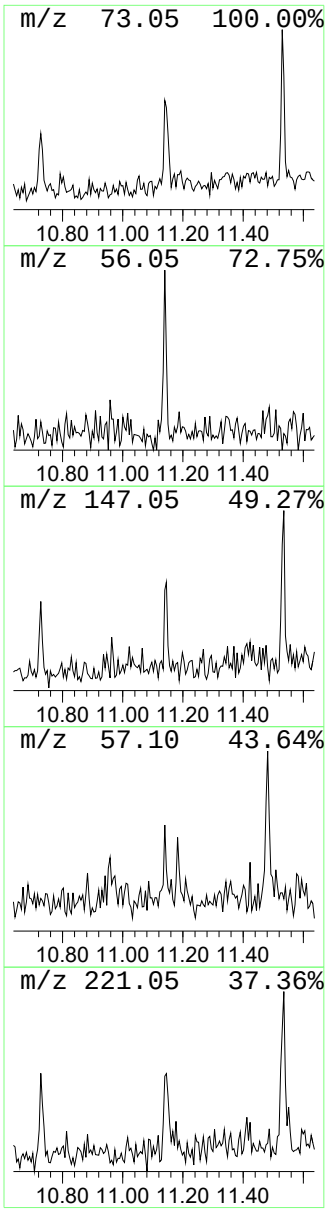
**********

Peak Number 13 Octasiloxane, 1,1,3,3,5,5,7... Concentration Rank 16

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.139 | 703.78 | 70378 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Octasiloxane, 1,1,3,3,5,5,7,7,9,... | 578 | C16H50O7Si8 | 019095-24-0 | 12 |
| 2 | Heptasiloxane, 1,1,3,3,5,5,7,7,9... | 504 | C14H44O6Si7 | 019095-23-9 | 10 |
| 3 | Pentanoic acid, 2-[(trimethylsil... | 262 | C11H26O3Si2 | 055887-46-2 | 10 |
| 4 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 9 |
| 5 | 3-Methoxyphenyllactic acid, di-TMS | 340 | C16H28O4Si2 | 000000-00-0 | 9 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

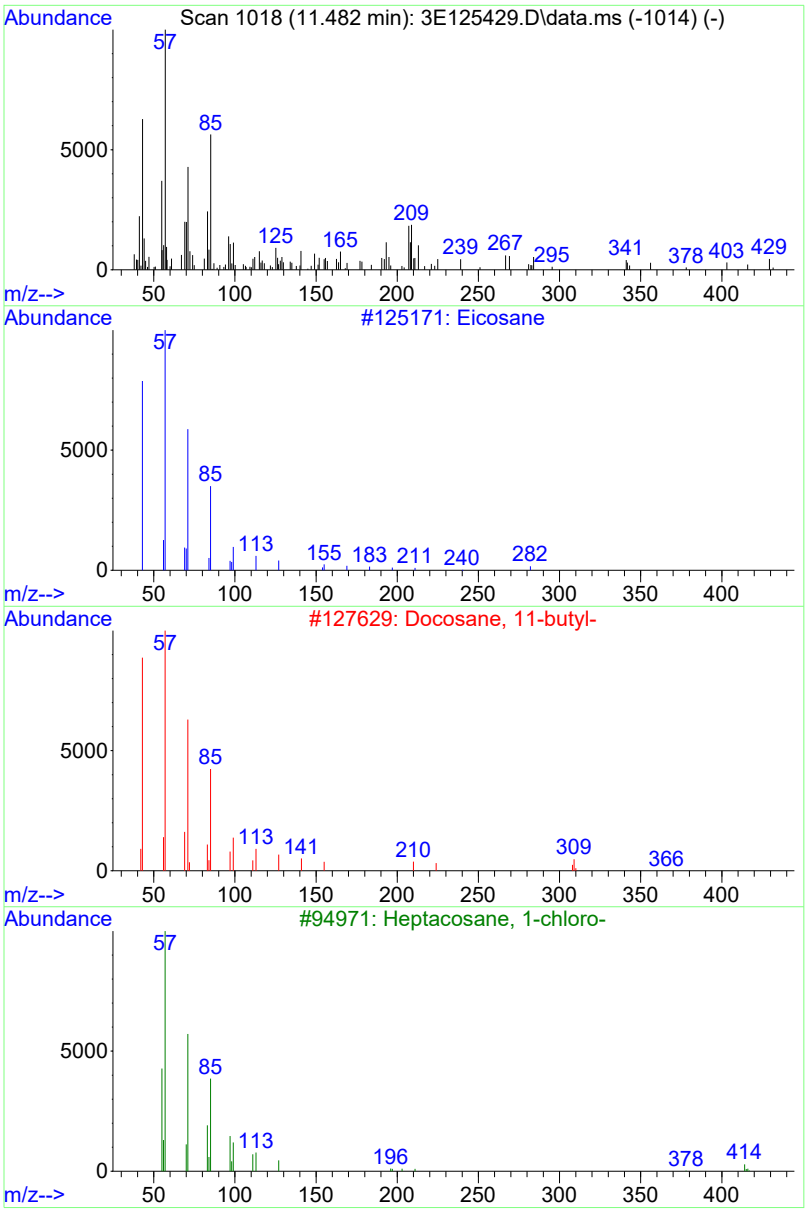
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

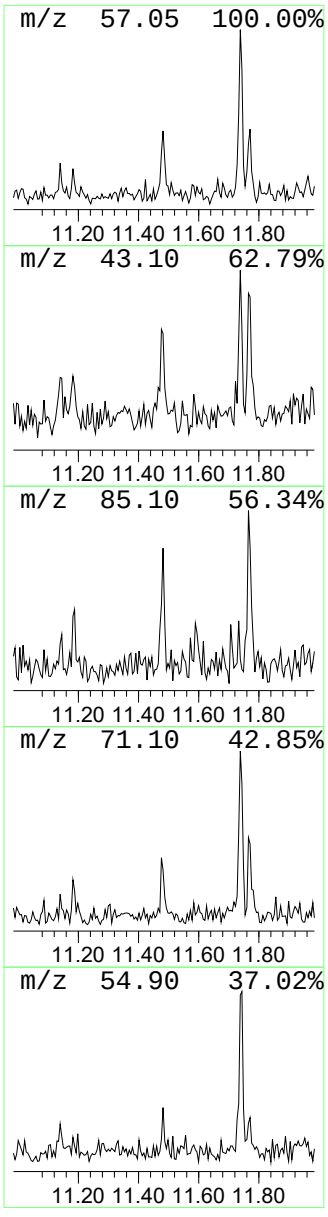
**********

Peak Number 14 Eicosane Concentration Rank 20

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.482 | 471.92 | 47192 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Eicosane | 282 | C20H42 | 000112-95-8 | 38 |
| 2 | Docosane, 11-butyl- | 366 | C26H54 | 013475-76-8 | 38 |
| 3 | Heptacosane, 1-chloro- | 414 | C27H55Cl | 062016-79-9 | 35 |
| 4 | Eicosane, 9-octyl- $$ 9-n-Octyle... | 394 | C28H58 | 013475-77-9 | 35 |
| 5 | 10-Methylnonadecane | 282 | C20H42 | 056862-62-5 | 35 |



Library Search Compound Report

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Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

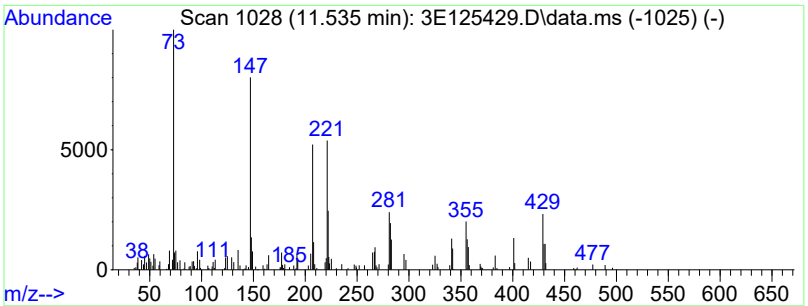
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

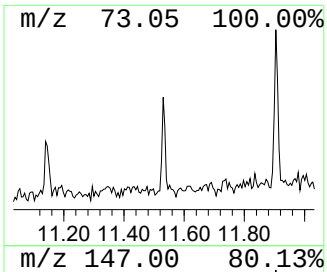
**********

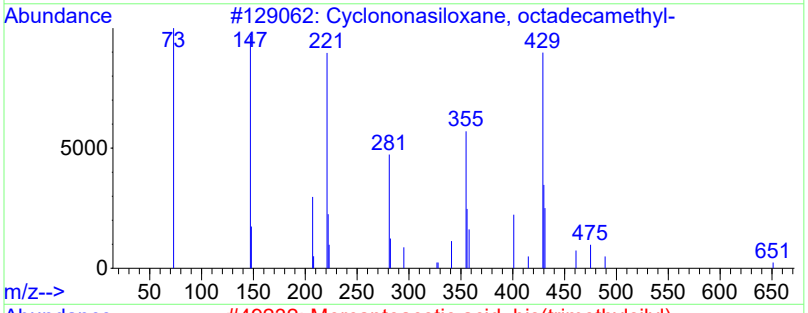
Peak Number 15 Cyclononasiloxane, octadeca... Concentration Rank 17

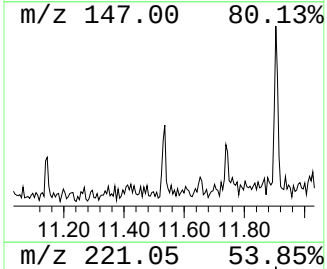
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.535 | 582.53 | 58253 | External Standard | 0.000 |

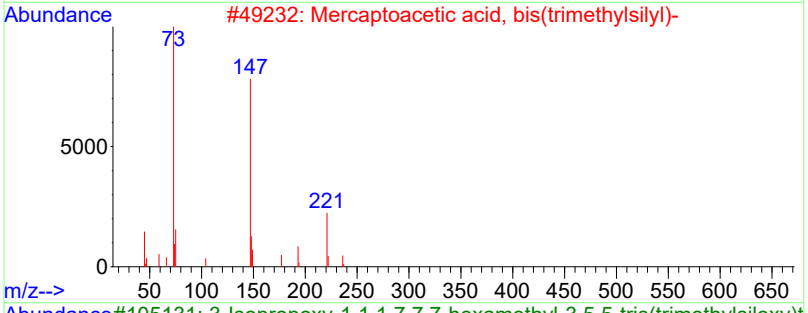
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 87 |
| 2 | Mercaptoacetic acid, bis(trimeth... | 236 | C8H20O2SSi2 | 006398-62-5 | 32 |
| 3 | 3-Isopropoxy-1,1,1,7,7,7-hexamet... | 576 | C18H52O7Si7 | 071579-69-6 | 32 |
| 4 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 27 |
| 5 | 3,6-Dioxa-2,4,5,7-tetrasilaoctan... | 294 | C10H30O2Si4 | 004342-25-0 | 23 |

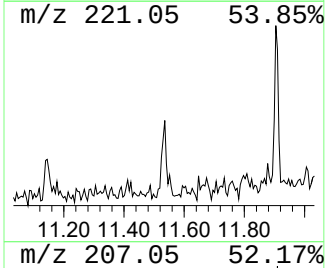


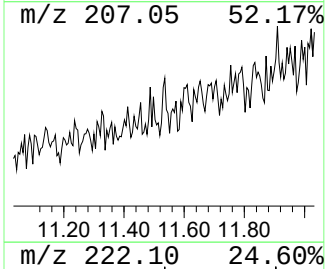



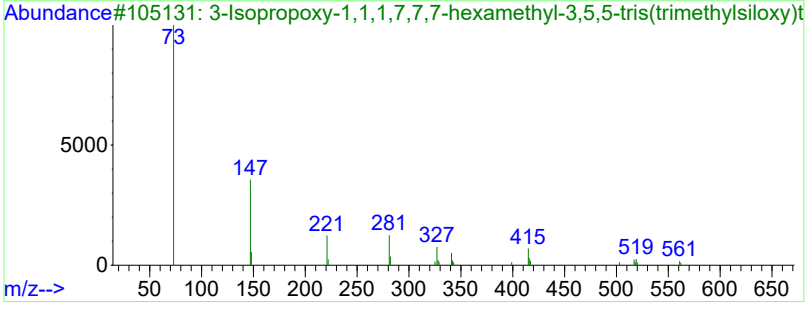



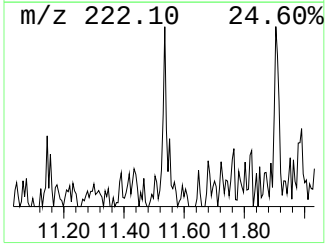



# Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

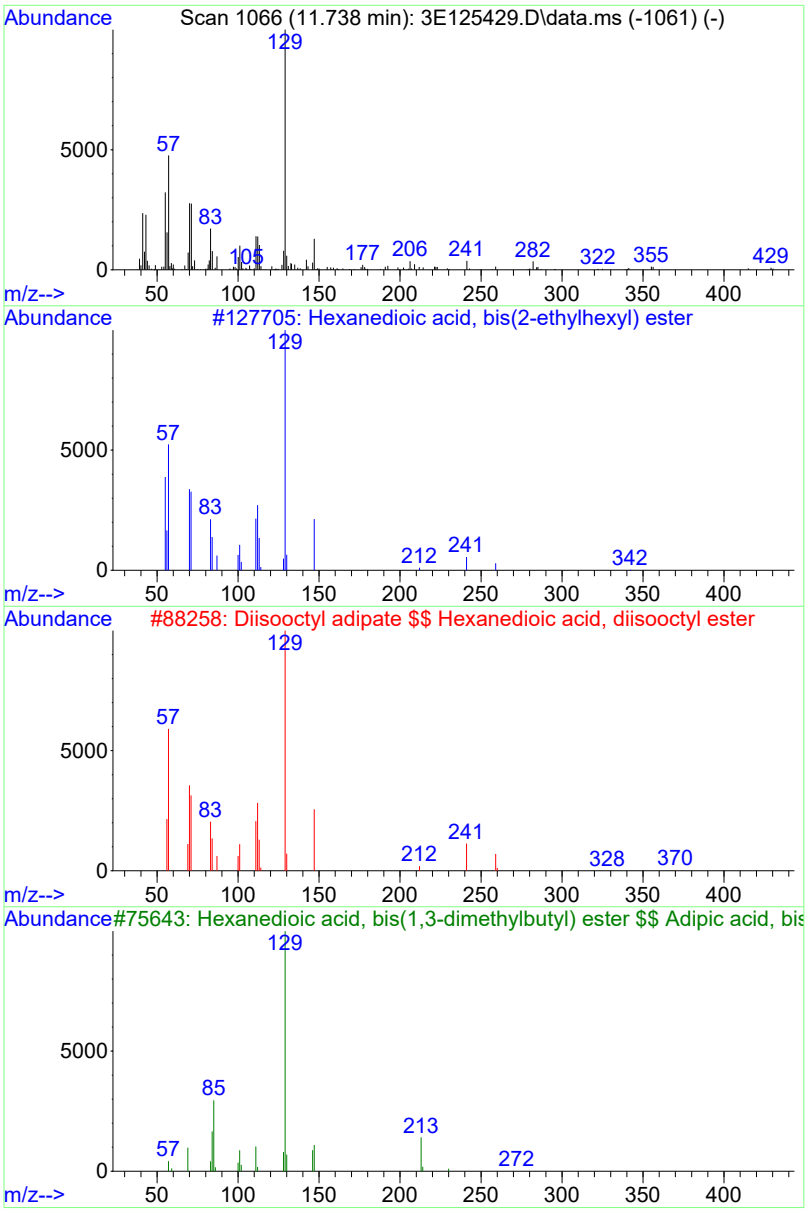
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

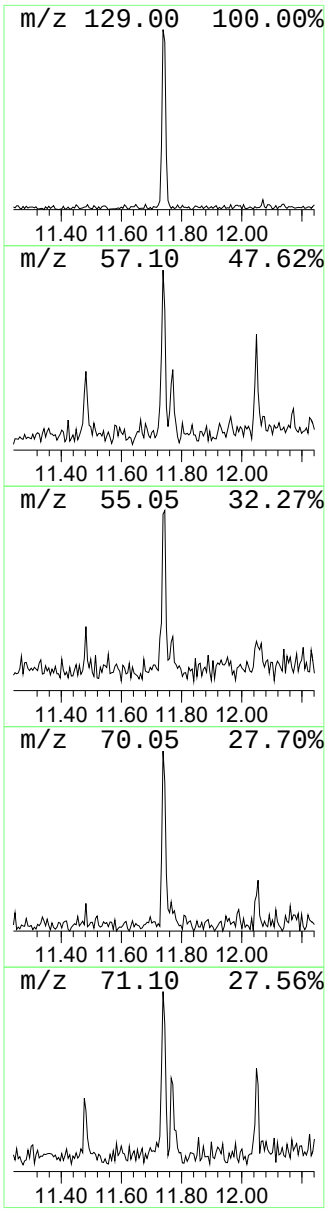
**********

Peak Number 16 Hexanedioic acid, bis(2-eth... Concentration Rank 8

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.739 | 1526.85 | 152685 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hexanedioic acid, bis(2-ethylhex... | 370 | C22H42O4 | 000103-23-1 | 49 |
| 2 | Diisooctyl adipate $$ Hexanedioi... | 370 | C22H42O4 | 001330-86-5 | 47 |
| 3 | Hexanedioic acid, bis(1,3-dimeth... | 314 | C18H34O4 | 055125-22-9 | 47 |
| 4 | Hexanedioic acid, bis(2-ethylhex... | 370 | C22H42O4 | 000103-23-1 | 43 |
| 5 | Adipic acid, di(oct-4-yl ester) | 370 | C22H42O4 | 000000-00-0 | 35 |



Library Search Compound Report

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Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

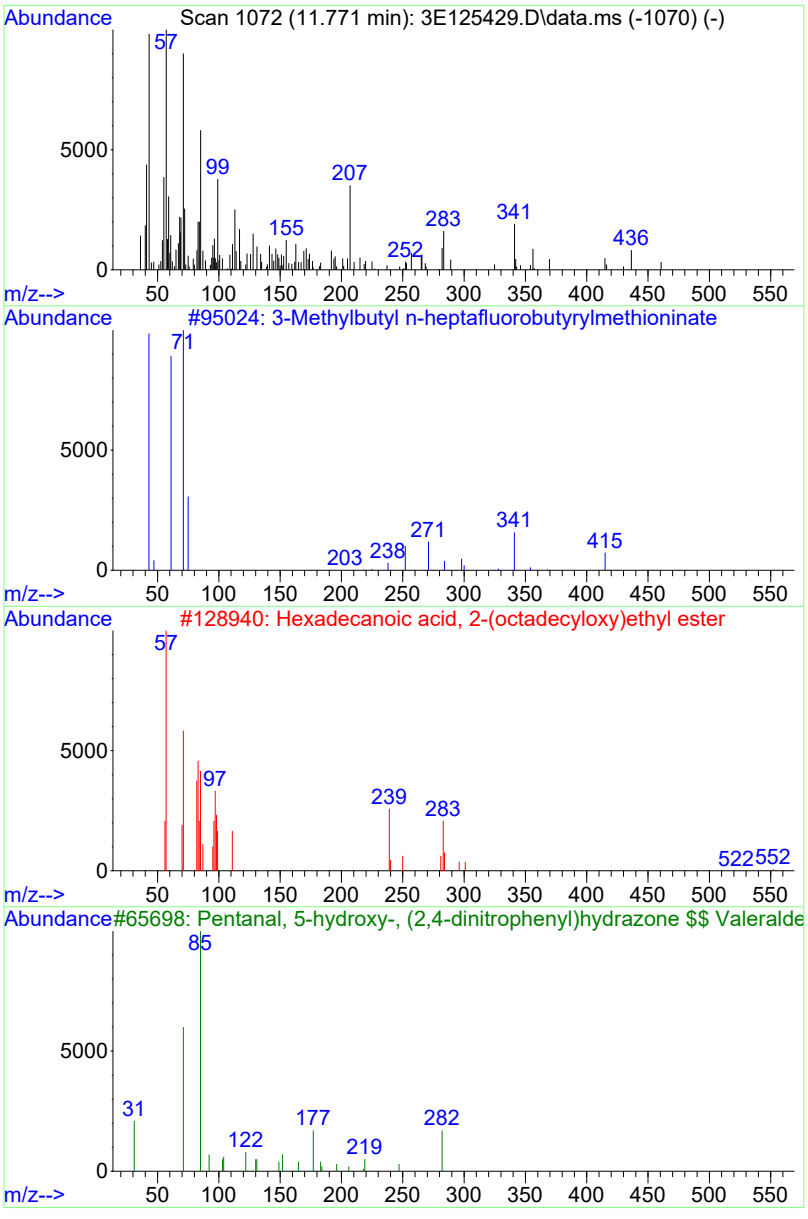
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

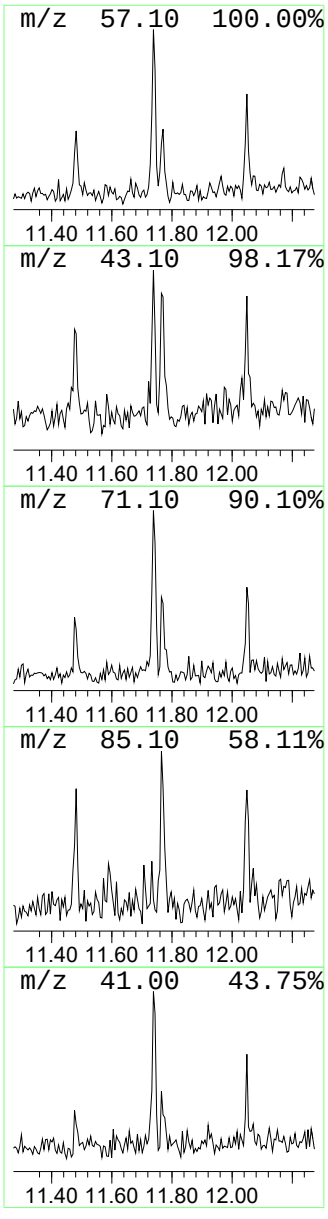
**********

Peak Number 17 Unknown Concentration Rank 22

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.771 | 441.62 | 44162 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3-Methylbutyl n-heptafluorobutyr... | 415 | C14H20F7NO3S | 075742-96-0 | 12 |
| 2 | Hexadecanoic acid, 2-(octadecylo... | 553 | C36H72O3 | 029899-13-6 | 10 |
| 3 | Pentanal, 5-hydroxy-, (2,4-dinit... | 282 | C11H14N4O5 | 003638-33-3 | 10 |
| 4 | 9-Octadecene, 1,1-dimethoxy-, (Z)- | 312 | C20H40O2 | 015677-71-1 | 10 |
| 5 | p-Nitrophenyl nonyl ether | 265 | C15H23NO3 | 086702-46-7 | 9 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

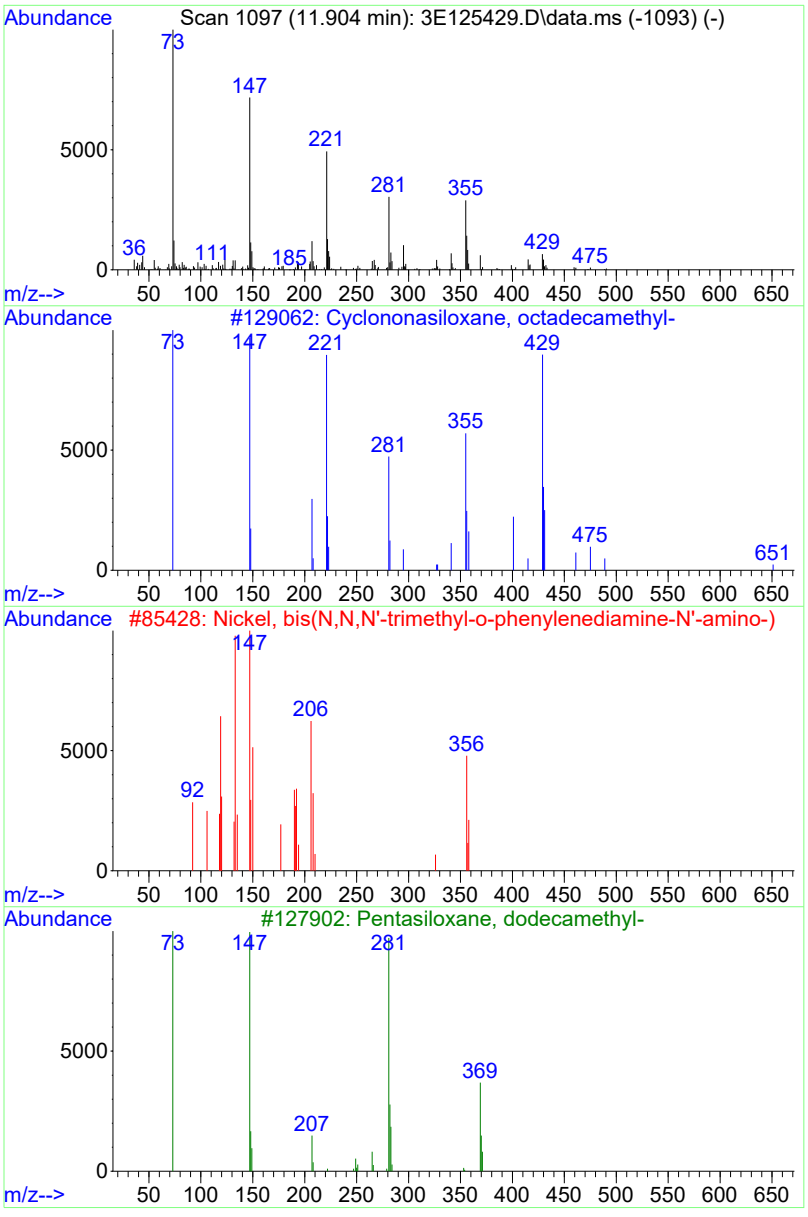
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

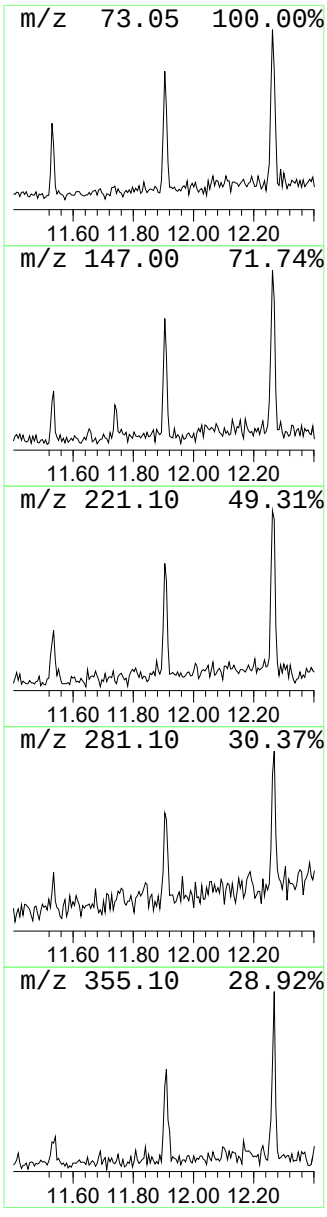
**********

Peak Number 18 Cyclononasiloxane, octadeca... Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.904 | 1007.75 | 100775 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 64 |
| 2 | Nickel, bis(N,N,N'-trimethyl-o-p... | 356 | C18H26N4Ni | 000000-00-0 | 14 |
| 3 | Pentasiloxane, dodecamethyl- | 384 | C12H36O4Si5 | 000141-63-9 | 12 |
| 4 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 12 |
| 5 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 12 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

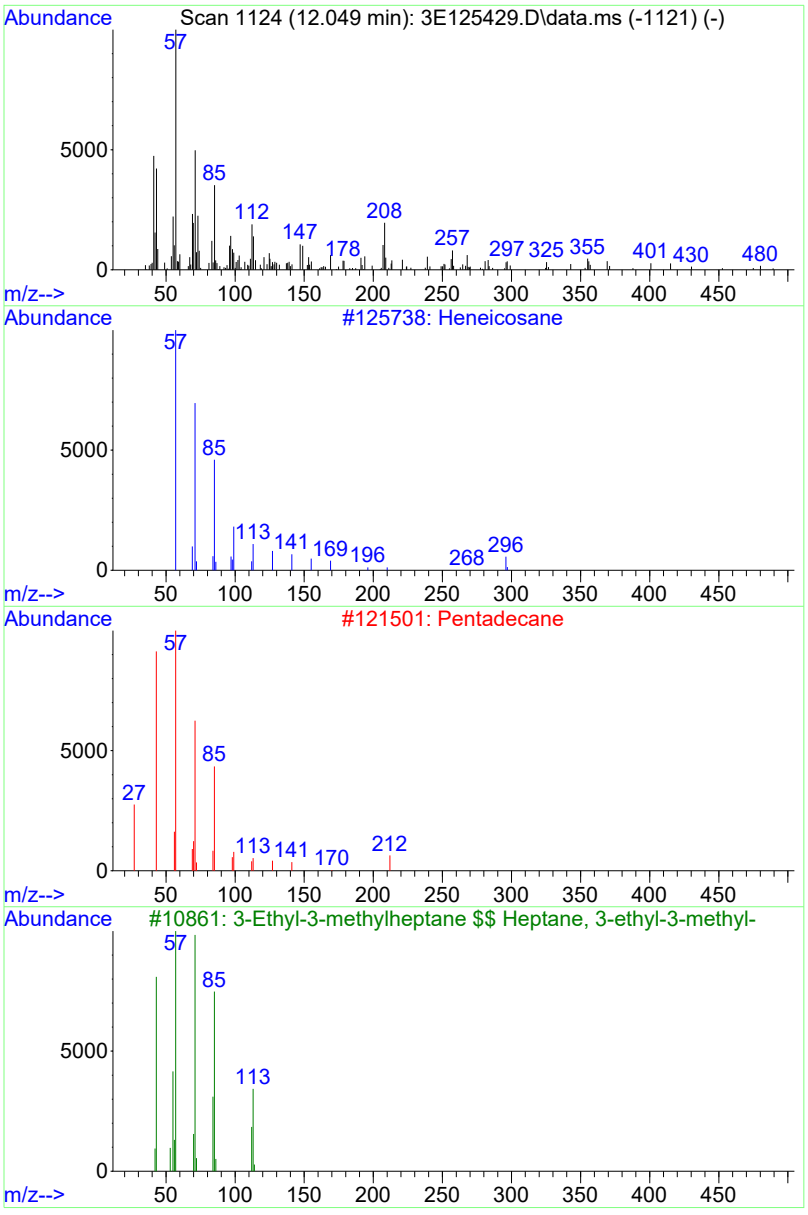
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

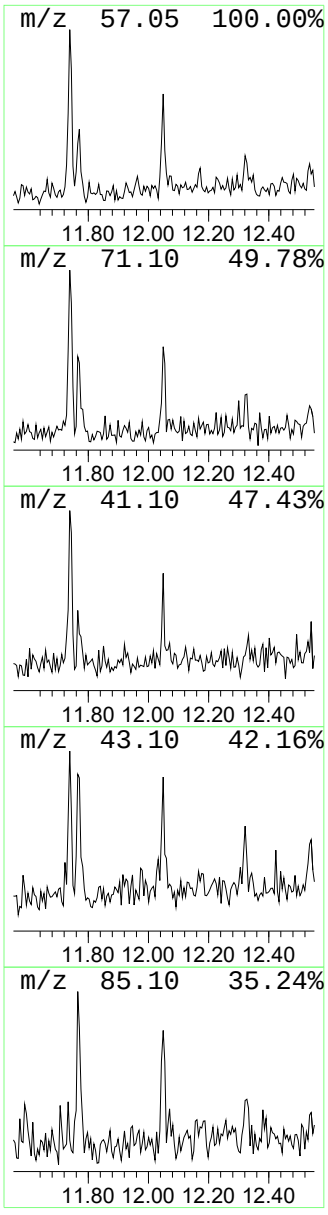
**********

Peak Number 19 Unknown Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.049 | 759.18 | 75918 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Heneicosane | 296 | C21H44 | 000629-94-7 | 43 |
| 2 | Pentadecane | 212 | C15H32 | 000629-62-9 | 38 |
| 3 | 3-Ethyl-3-methylheptane $$ Hepta... | 142 | C10H22 | 017302-01-1 | 38 |
| 4 | Tridecane | 184 | C13H28 | 000629-50-5 | 38 |
| 5 | Tetradecane, 1-iodo- $$ Tetradec... | 324 | C14H29I | 019218-94-1 | 38 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

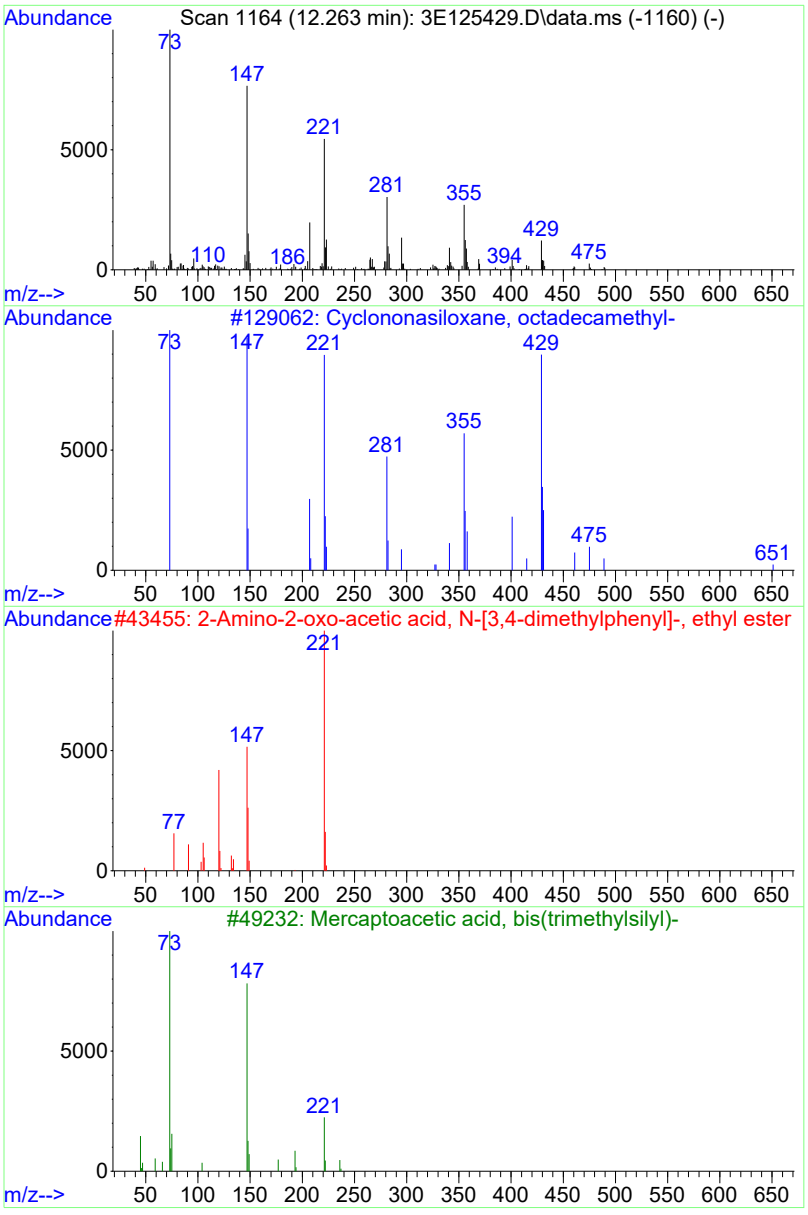
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

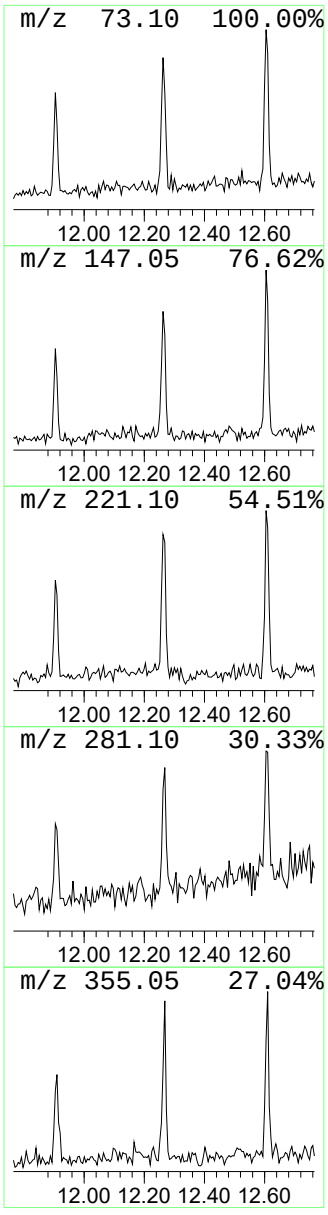
**********

Peak Number 20 Cyclononasiloxane, octadeca... Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.263 | 1570.60 | 157060 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 43 |
| 2 | 2-Amino-2-oxo-acetic acid, N-[3,... | 221 | C12H15NO3 | 000000-00-0 | 37 |
| 3 | Mercaptoacetic acid, bis(trimeth... | 236 | C8H20O2SSi2 | 006398-62-5 | 37 |
| 4 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 35 |
| 5 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 35 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

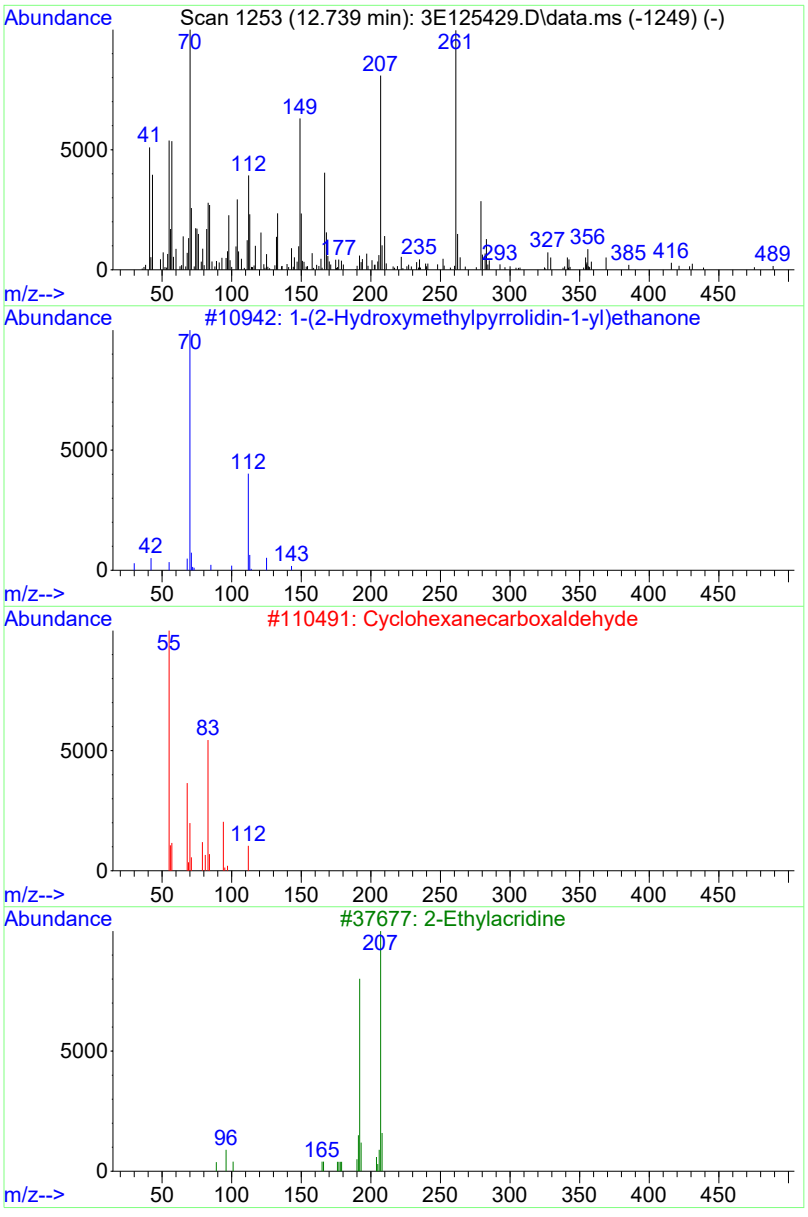
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

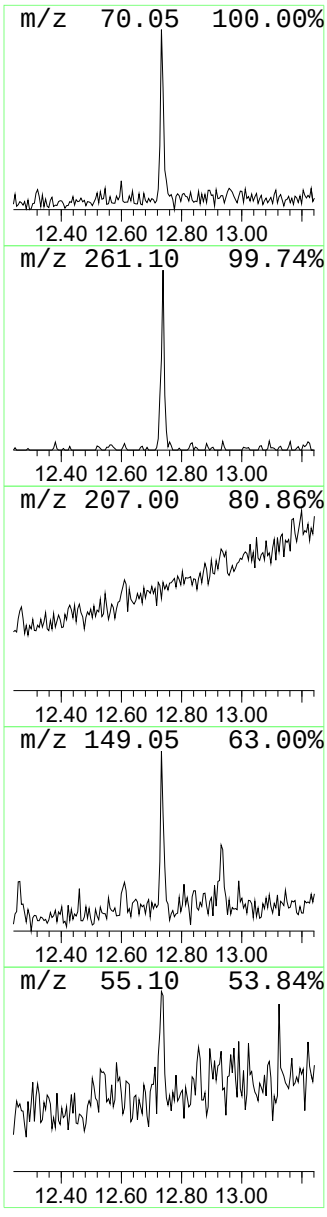
**********

Peak Number 21 Unknown Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.739 | 1100.85 | 110085 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1-(2-Hydroxymethylpyrrolidin-1-y... | 143 | C7H13NO2 | 000000-00-0 | 14 |
| 2 | Cyclohexanecarboxaldehyde | 112 | C7H12O | 002043-61-0 | 14 |
| 3 | 2-Ethylacridine | 207 | C15H13N | 000000-00-0 | 11 |
| 4 | 1H-Purine-2,6-dione, 7-ethyl-3,7... | 279 | C11H13N5O2S | 027042-75-7 | 11 |
| 5 | 8-Hydroxynorloxapine | 329 | C17H16ClN3O2 | 061443-78-5 | 10 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

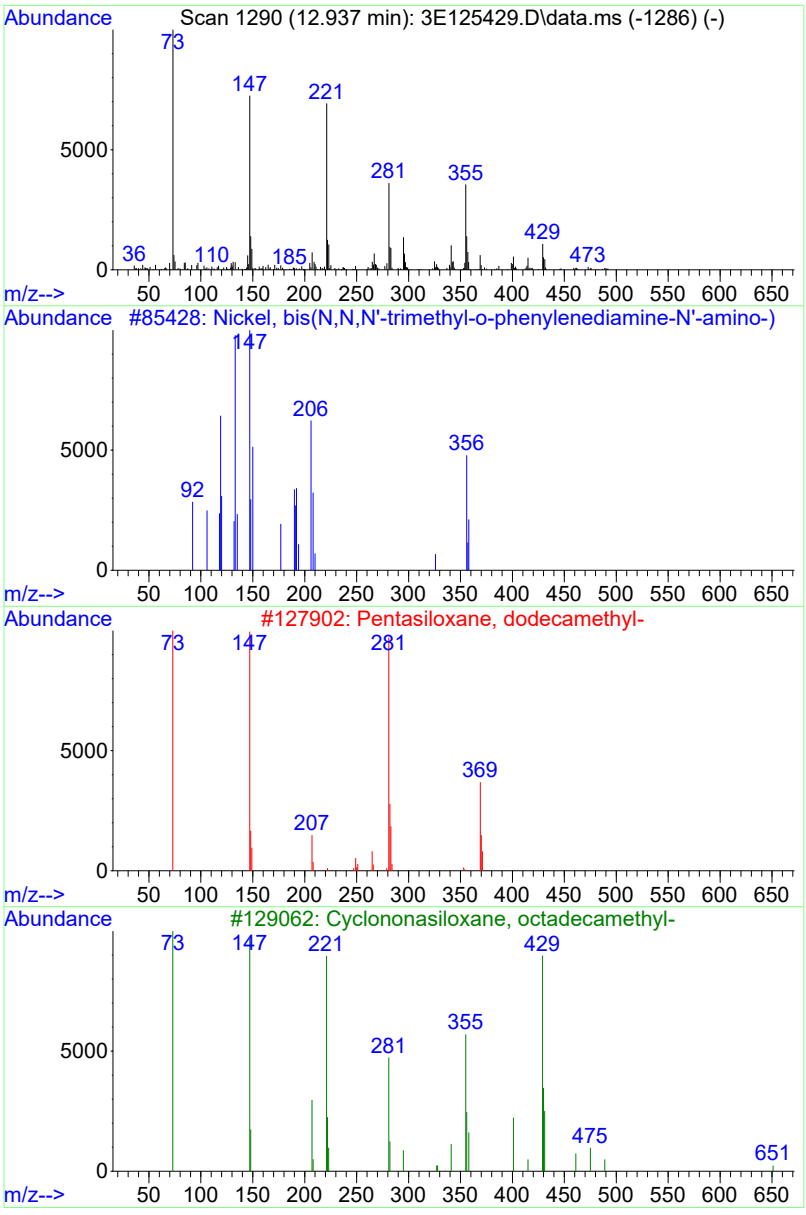
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

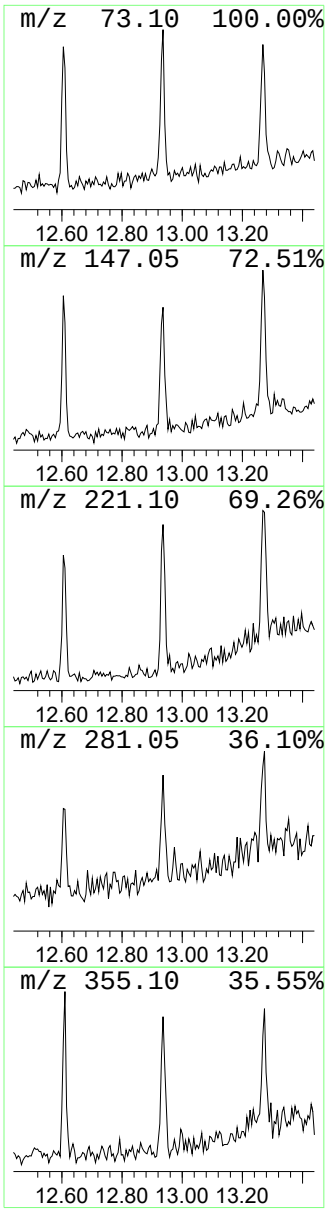
**********

Peak Number 22 Cyclononasiloxane, octadeca... Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.937 | 1925.90 | 192590 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Nickel, bis(N,N,N'-trimethyl-o-p... | 356 | C18H26N4Ni | 000000-00-0 | 14 |
| 2 | Pentasiloxane, dodecamethyl- | 384 | C12H36O4Si5 | 000141-63-9 | 12 |
| 3 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 12 |
| 4 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 12 |
| 5 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 12 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : jackleey
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

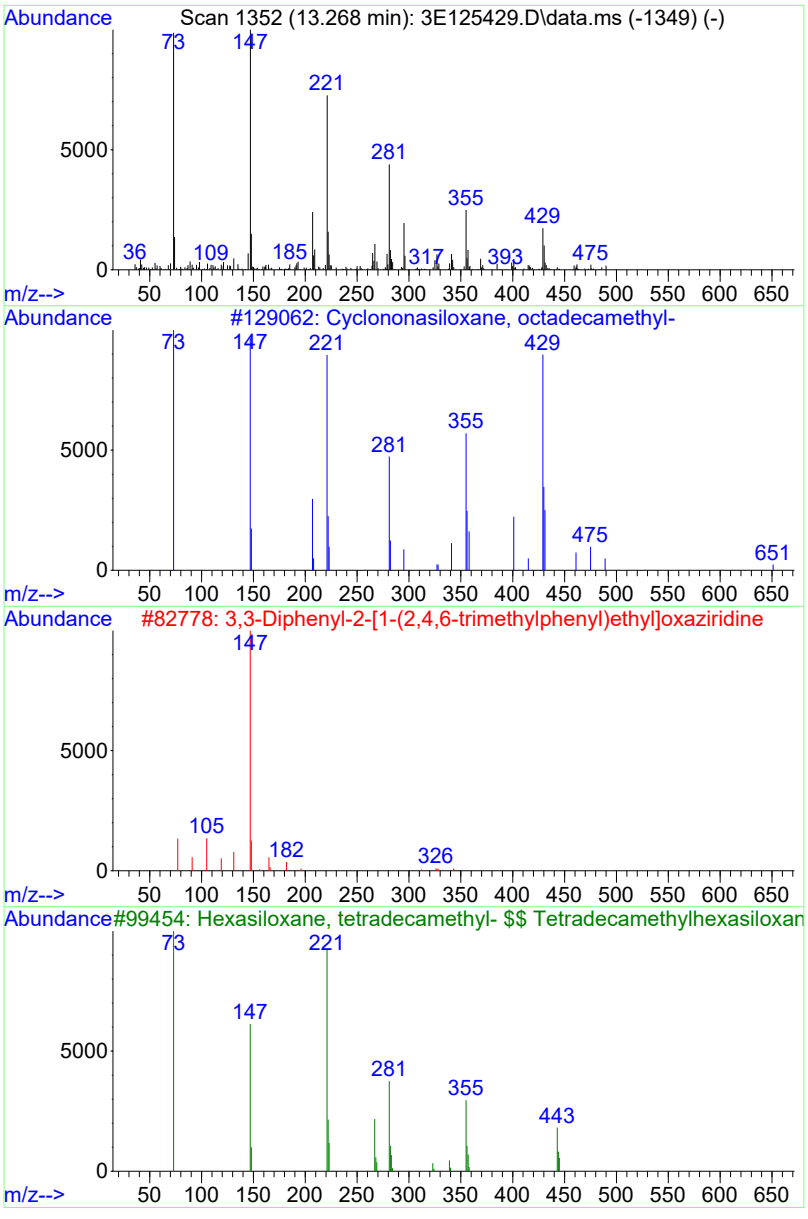
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

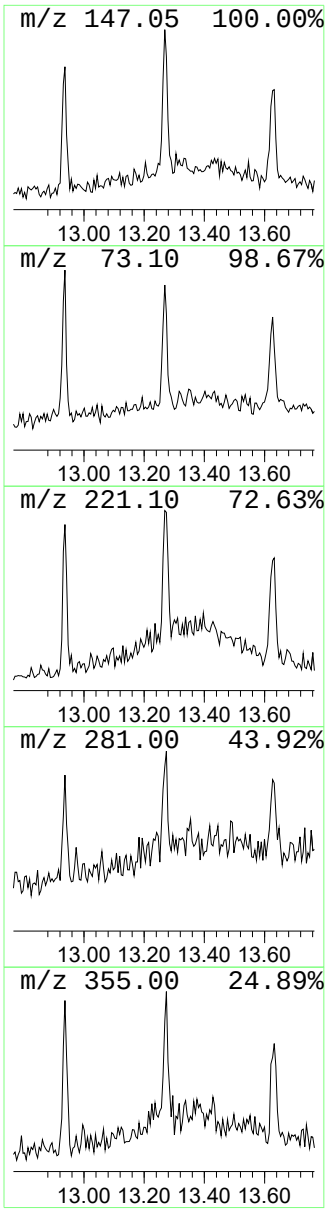
**********

Peak Number 23 Cyclononasiloxane, octadeca... Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.268 | 1781.76 | 178176 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 40 |
| 2 | 3,3-Diphenyl-2-[1-(2,4,6-trimeth... | 343 | C24H25NO | 075326-12-4 | 14 |
| 3 | Hexasiloxane, tetradecamethyl- $... | 458 | C14H42O5Si6 | 000107-52-8 | 14 |
| 4 | 1-Pentamethyldisilyloxytetradecane | 344 | C19H44OSi2 | 000000-00-0 | 14 |
| 5 | dl-Xylitol, cyclic 2,3-(phenylbo... | 238 | C11H15BO5 | 074793-46-7 | 14 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

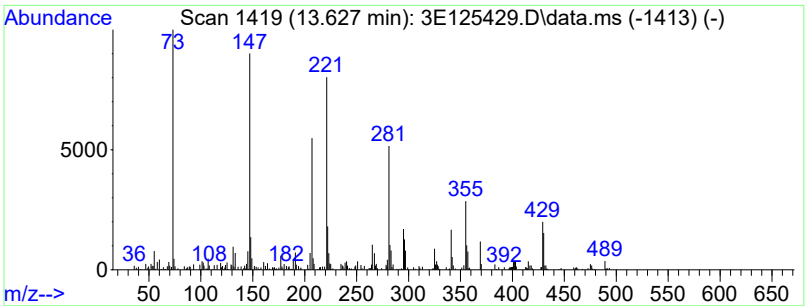
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

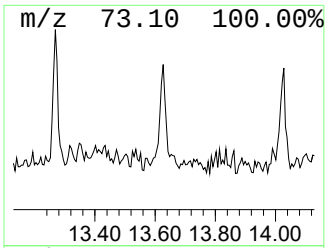
**********

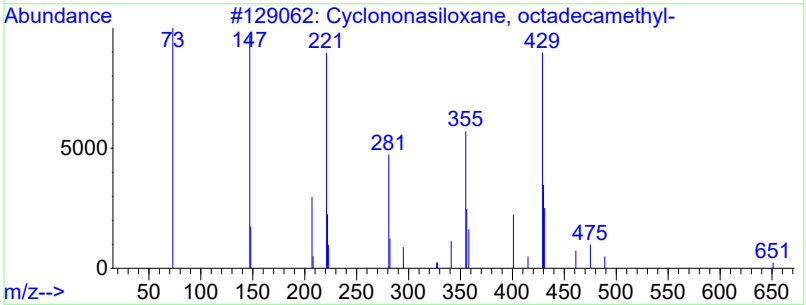
Peak Number 24 Cyclononasiloxane, octadeca... Concentration Rank 3

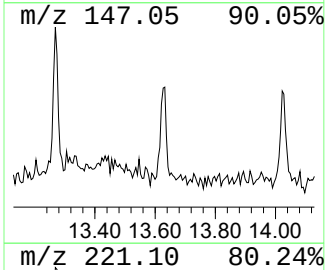
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.627 | 2427.55 | 242755 | External Standard | 0.000 |

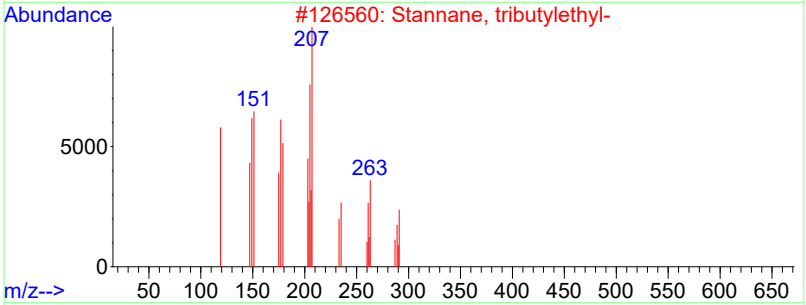
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 50 |
| 2 | Stannane, tributylethyl- | 320 | C14H32Sn | 019411-60-0 | 42 |
| 3 | 3,6-Dioxa-2,4,5,7-tetrasilaoctan... | 294 | C10H30O2Si4 | 004342-25-0 | 38 |
| 4 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 16 |
| 5 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 12 |

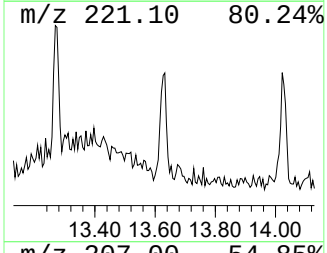


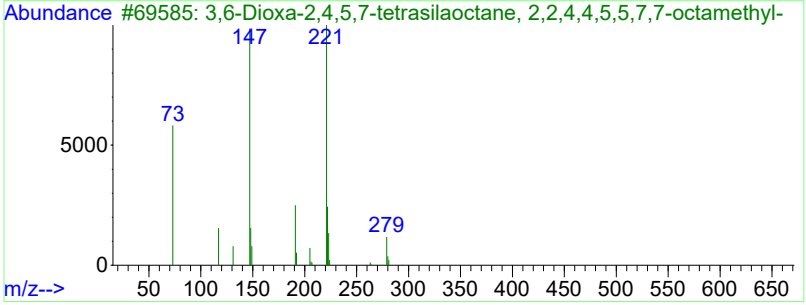



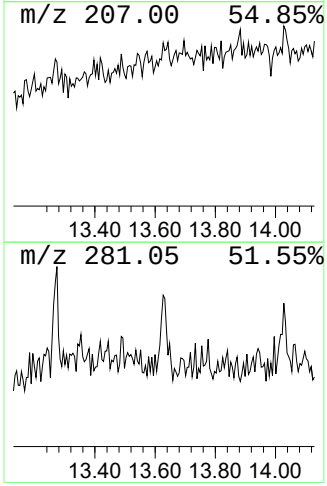



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

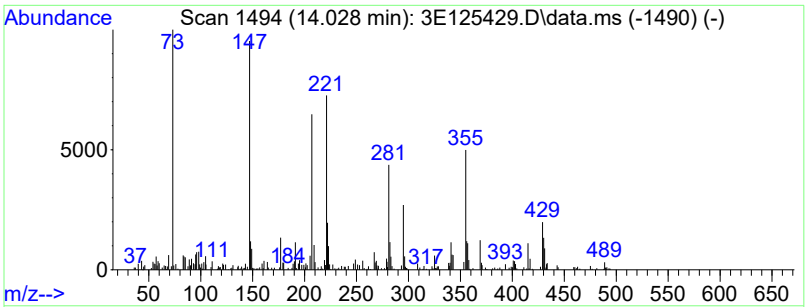
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

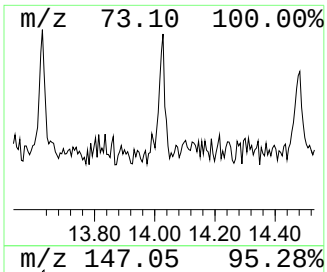
**********

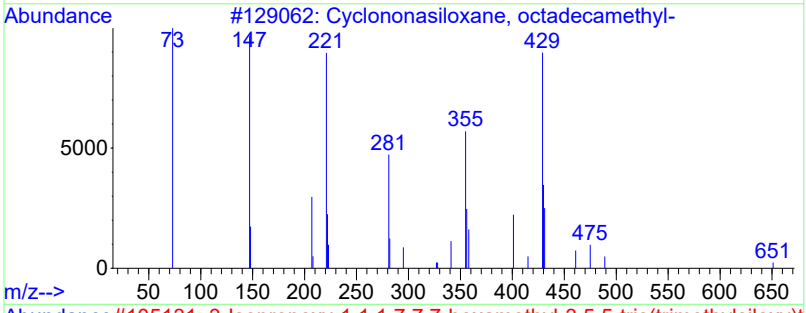
Peak Number 25 Cyclononasiloxane, octadeca... Concentration Rank 9

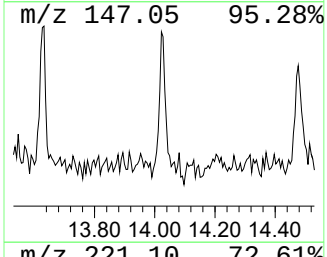
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.028 | 1465.63 | 146563 | External Standard | 0.000 |

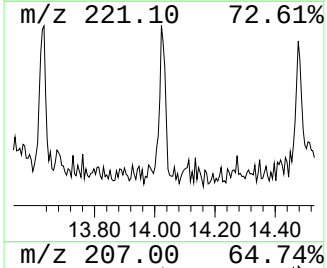
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 37 |
| 2 | 3-Isopropoxy-1,1,1,7,7,7-hexamet... | 576 | C18H52O7Si7 | 071579-69-6 | 25 |
| 3 | 3,6-Dioxa-2,4,5,7-tetrasilaoctan... | 294 | C10H30O2Si4 | 004342-25-0 | 17 |
| 4 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 11 |
| 5 | Heptasiloxane, 1,1,3,3,5,5,7,7,9... | 504 | C14H44O6Si7 | 019095-23-9 | 10 |

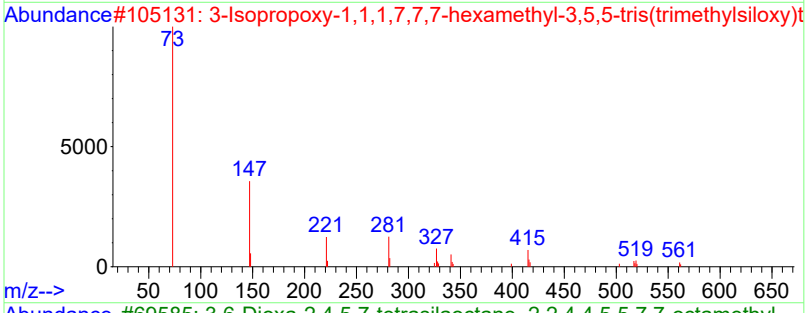


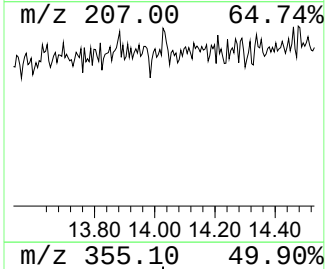



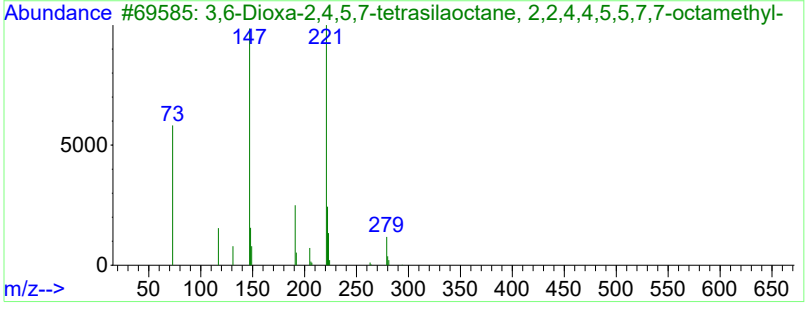



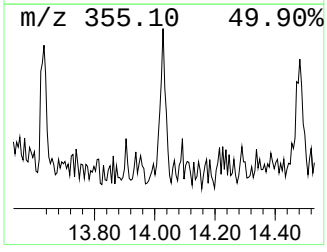



Tentatively Identified Compound (LSC) summary

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Data File : 3E125429.D
Acq On : 26 Jul 2024 6:50 pm
Operator : (b) (6)
Sample : OP26079-MB
Misc : op26079,e3e5837,1000,,,1,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| 3-Penten-2-one,... | 6.058 | 13713.3 | | 1371330 | 0 | 0.000 | 100 | 1.0 |
| Benzene, 1-chlo... | 6.278 | 324.9 | | 32488 | 0 | 0.000 | 100 | 1.0 |
| Cyclotetrasilox... | 6.721 | 3399.0 | | 339901 | 0 | 0.000 | 100 | 1.0 |
| Cyclopentasilox... | 7.379 | 1560.8 | | 156076 | 0 | 0.000 | 100 | 1.0 |
| Unknown | 7.508 | 502.4 | | 50244 | 0 | 0.000 | 100 | 1.0 |
| Unknown | 7.577 | 468.0 | | 46799 | 0 | 0.000 | 100 | 1.0 |
| Unknown | 7.941 | 867.8 | | 86779 | 0 | 0.000 | 100 | 1.0 |
| Cyclohexasiloxa... | 8.048 | 818.3 | | 81833 | 0 | 0.000 | 100 | 1.0 |
| Thieno[3,2-c]py... | 8.551 | 726.4 | | 72636 | 0 | 0.000 | 100 | 1.0 |
| Trisiloxane, 1,... | 8.674 | 529.5 | | 52949 | 0 | 0.000 | 100 | 1.0 |
| Hexasiloxane, 1... | 9.262 | 431.8 | | 43176 | 0 | 0.000 | 100 | 1.0 |
| Unknown | 9.631 | 426.0 | | 42598 | 0 | 0.000 | 100 | 1.0 |
| Octasiloxane, 1... | 11.139 | 703.8 | | 70378 | 0 | 0.000 | 100 | 1.0 |
| Eicosane | 11.482 | 471.9 | | 47192 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 11.535 | 582.5 | | 58253 | 0 | 0.000 | 100 | 1.0 |
| Hexanedioic aci... | 11.739 | 1526.8 | | 152685 | 0 | 0.000 | 100 | 1.0 |
| Unknown | 11.771 | 441.6 | | 44162 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 11.904 | 1007.8 | | 100775 | 0 | 0.000 | 100 | 1.0 |
| Unknown | 12.049 | 759.2 | | 75918 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 12.263 | 1570.6 | | 157060 | 0 | 0.000 | 100 | 1.0 |
| Unknown | 12.739 | 1100.8 | | 110085 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 12.937 | 1925.9 | | 192590 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 13.268 | 1781.8 | | 178176 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 13.627 | 2427.6 | | 242755 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 14.028 | 1465.6 | | 146563 | 0 | 0.000 | 100 | 1.0 |

# Appendix C. Tier 1 Analysis Tech Memos

AECOM
1001 Bishop Street
Suite 1600
Honolulu, HI 96813
aecom.com

August 27, 2024

CDR Benjamin Dunn, P.E.
NAVFAC Hawaii
400 Marshall Road
JBPHH HI 96860-3139

**Subject: Joint Base Pearl Harbor-Hickam Drinking Water**
**EDWM TPH Detection Investigation**
**Sample A3-TW-0017454-24092-N**

Attention CDR Dunn:

On Sunday, July 27, 2024, AECOM Technical Services, Inc. (AECOM) was notified of an oil range organics (ORO) detection of 165 micrograms per liter (µg/L) in sample A3-TW-0017454-24092-N, collected from the kitchen sink at the residence at 6620 105th Street in Zone A3 on July 24, 2024. **This TPH detection was determined to be cross-contamination of a non-fuel-related lubricant material, introduced during either sampling or analysis.** The sample was analyzed at (b) (4), Colorado, for total petroleum hydrocarbons (TPH) via EPA SW-846 Method 8015D following micro-extraction by SW-846 Method 3511. Reported TPH values are the sum of diesel range organics (DRO) and ORO. DRO was reported as not detected at the method detection limit of 47 µg/L. This analysis is not specific and may not equate to the presence of petroleum hydrocarbons, and a more detailed evaluation of the results are needed when a positive result is noted. The sample chromatogram was reviewed to determine if the reported detection was likely from a fuel-related petrogenic source, particularly the November 2021 release of Jet Propellant 5 (JP-5), and if not, to assign a probable reason for the detection. All evidence points to the conclusion that this detection is unrelated to JP-5 and is likely due to contamination with a high-molecular weight hydrocarbon consistent with an oil or lubricating grease that may have been introduced at the time of sample collection or in the laboratory.

The chromatogram for this sample is shown on Figure 1. Figure 2 displays the retention time (RT) marker reference standard[1] with each of the carbon numbers labeled. The sample chromatogram shows an unresolved complex mixture that begins to come out (elute) at approximately the C24 range and extends beyond C40. Since JP-5 elutes in the C10 to C16 range (Figure 3), there is no overlap with the substance found in the sample, and therefore is not related.

The observed lubricating grease may have originated in the premise plumbing or household supplies in the vicinity of the sampling point and may have been introduced into the sample through incidental contact. It is also possible that it is a laboratory artifact that was introduced during preparation or analysis of the sample. The laboratory extracted and analyzed the second bottle collected for this sample yielding a non-detect result. The fact that the detection was seen in only one of two sample containers provides additional evidence that there was incidental contamination of a particular sample aliquot and ORO was not present in the tap water itself.

[1] RT marker reference standards are standards containing n-alkanes with different numbers of carbon atoms and are analyzed with each run for the purpose of determining the beginning and end of carbon ranges of interest. The DRO area is defined as the total area of all peaks that come out (elute) between the retention time of C10 (decane, the 10 carbon, straight chain alkane) and the retention time of C24 (tetracosane, the 24 carbon, straight chain alkane); the ORO area is defined as the total area of peaks that elute between the retention times of C24 and C40.

**Figure 1. Sample A3-TW-0017454-24092-N, Laboratory ID DA65889-3**

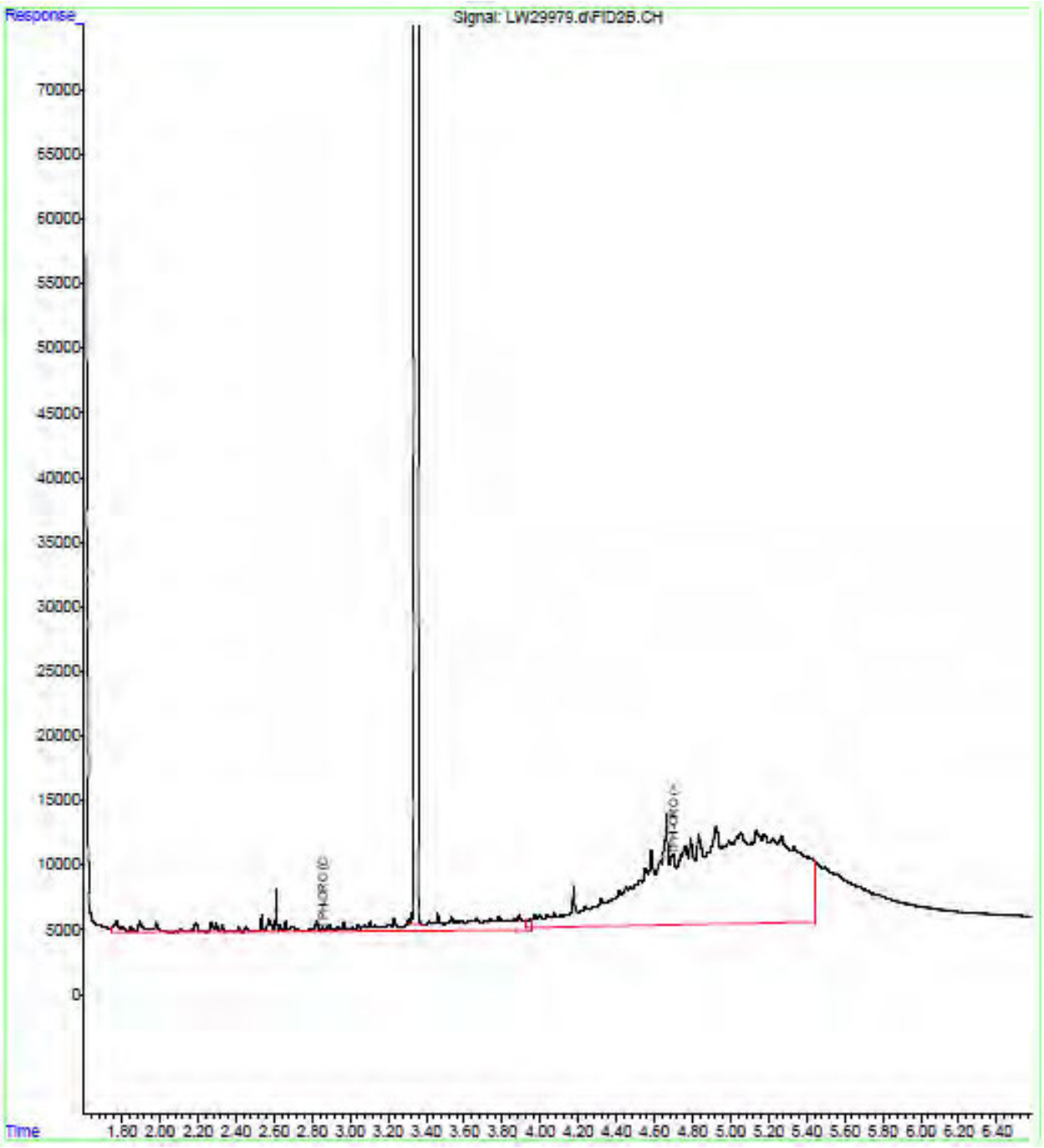


**Figure 2. Retention Time (RT) Marker Standard with Carbon Numbers**

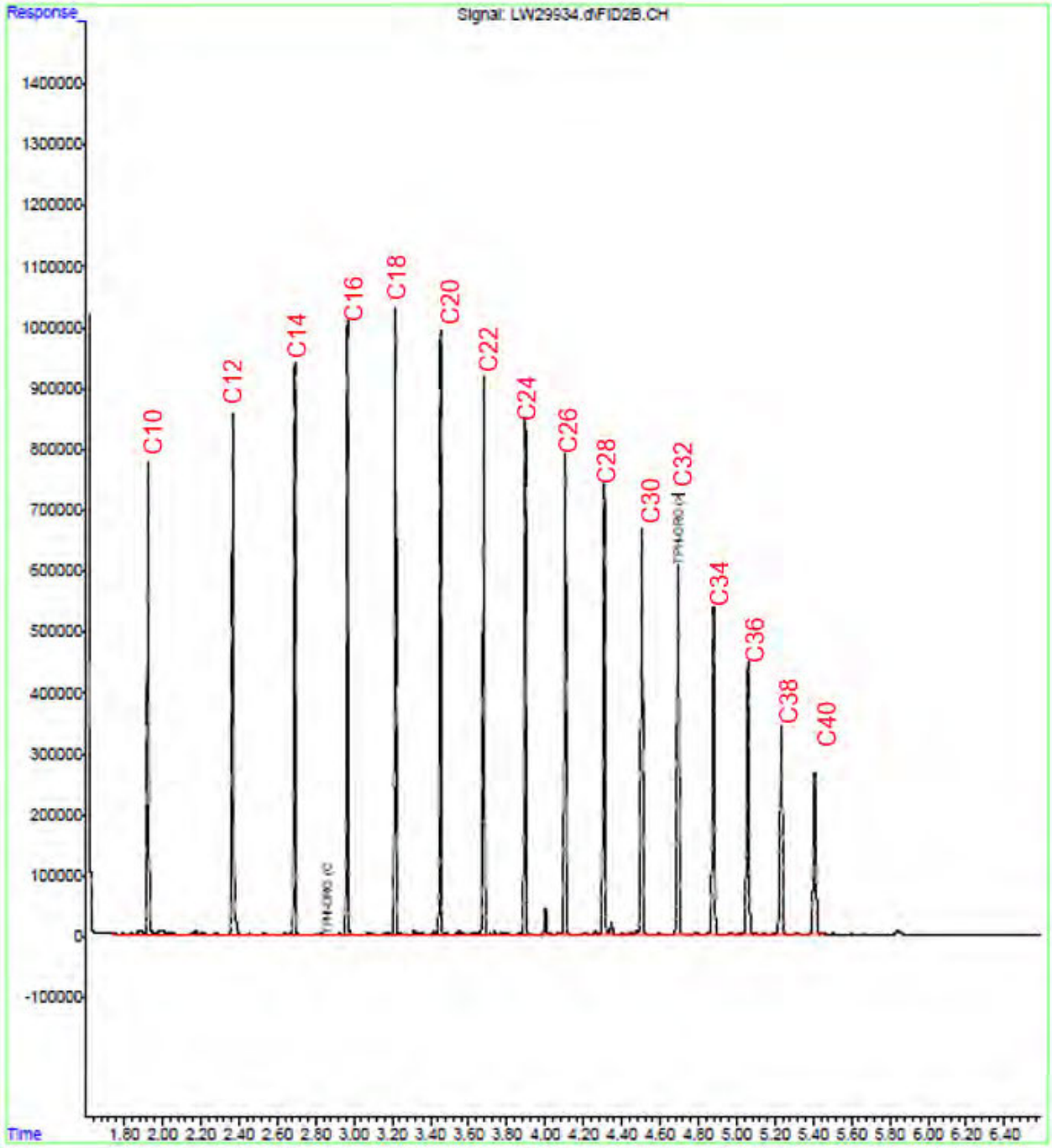


**Figure 3. JP-5 Standard**

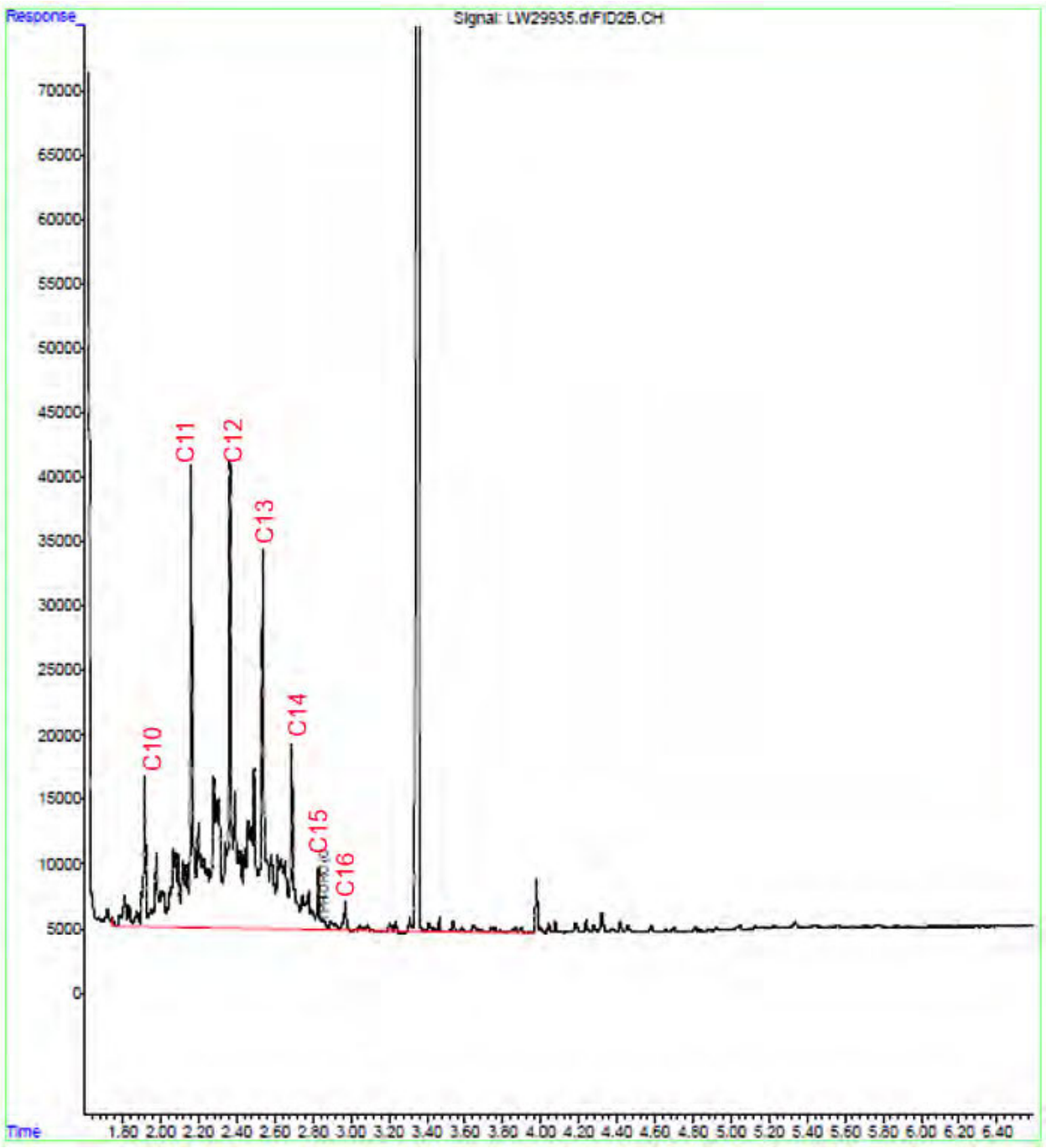


Figure 4 presents the sample chromatogram (black) overlayed with the RT marker standard (blue) with carbon numbers labeled. Figure 5 presents the sample chromatogram (black) overlayed with JP-5 standard (blue). Figure 6 presents the sample chromatogram (black) overlayed with the laboratory's low-level ORO calibration standard (blue).

**Figure 4. Sample A3-TW-0017454-24092-N (black), Overlayed with RT Standard (blue)**

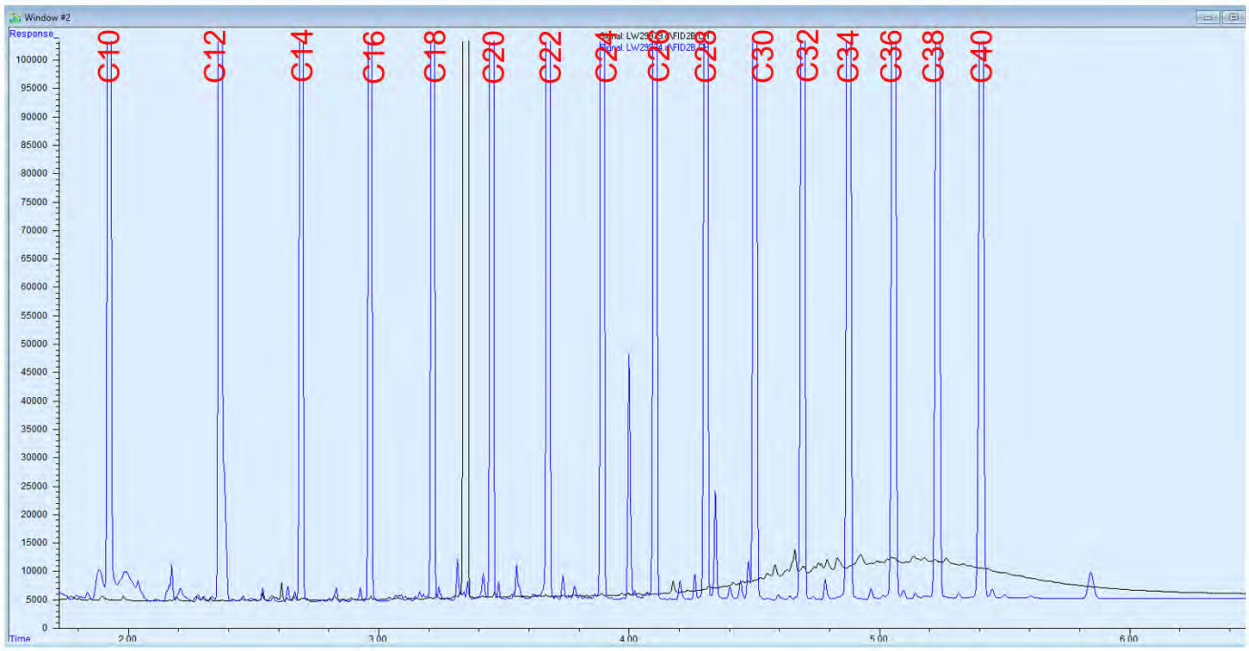



**Figure 5. Sample A3-TW-0017454-24092-N (black), Overlayed with JP-5 Standard (blue)**

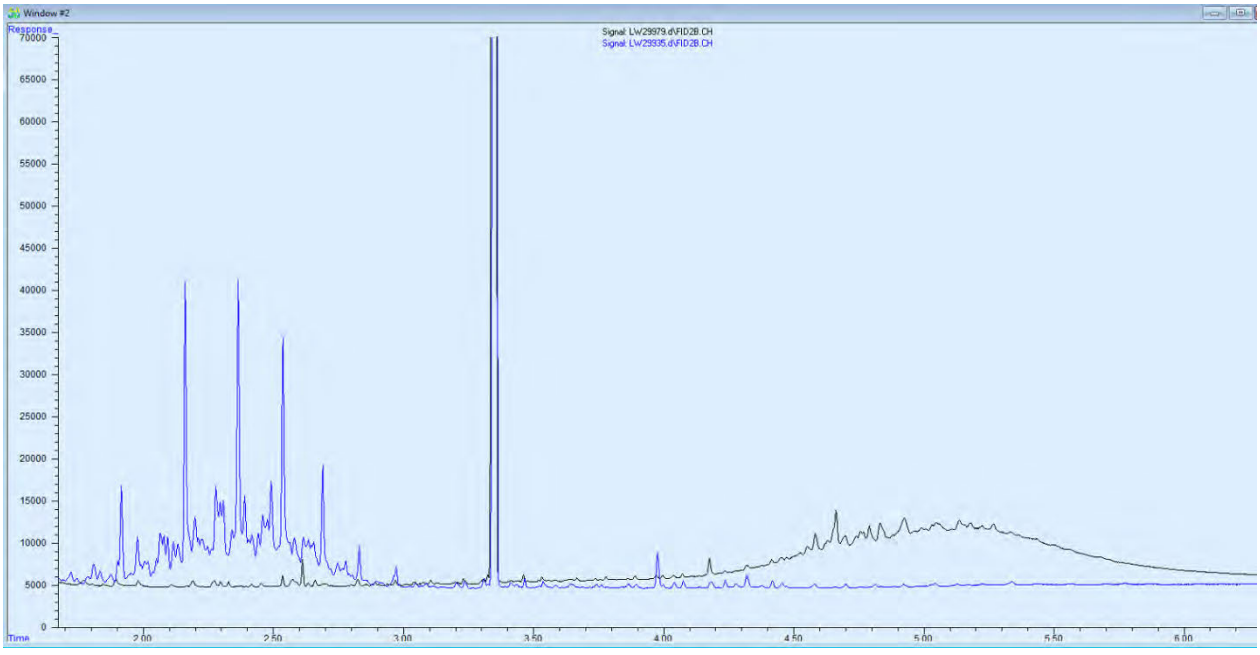
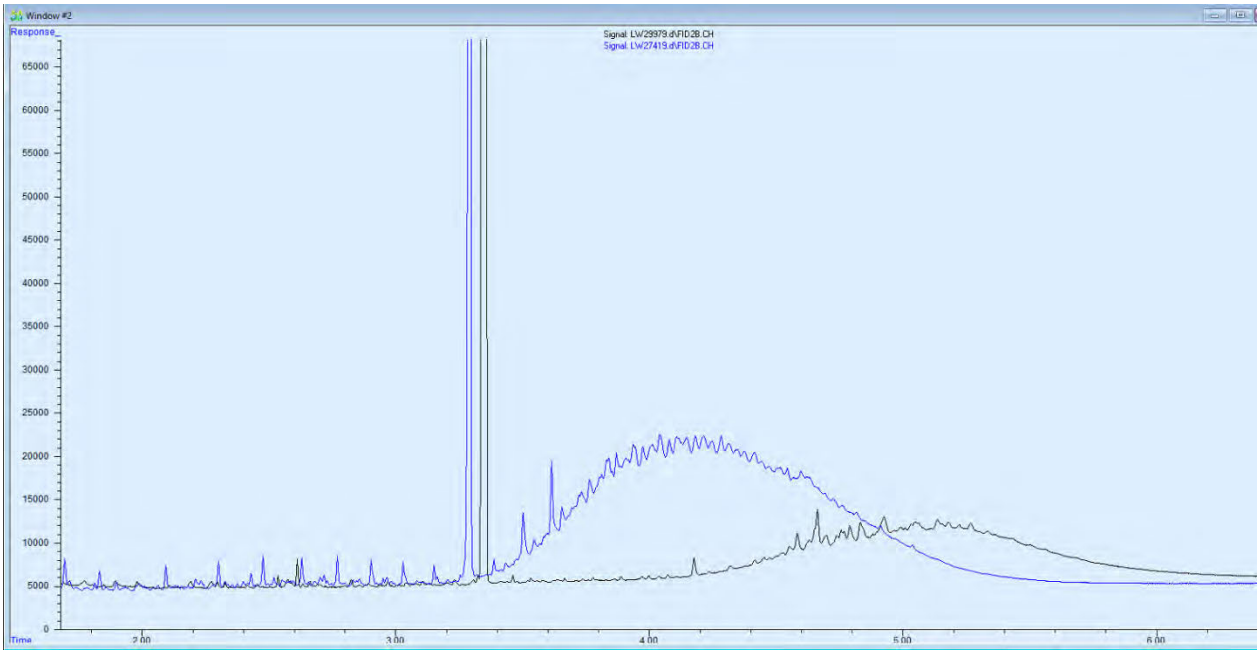


**Figure 6. Sample A3-TW-0017454-24092-N (black), Overlayed with ORO Standard (blue)**




Examination of Figure 6 shows that the substance in the sample begins eluting later than the ORO standard and has a broader shape. The lack of similarity between the sample and the laboratory standard makes it unlikely that the observed ORO detection resulted from incidental contact with the laboratory's ORO standard solution. Since the laboratory standard is the most likely source of potential laboratory contamination, it is more likely that the artifact was introduced at the time of sampling. This sample was collected from a kitchen sink. Kitchens are a common site for the use and storage of household cleaning products, many of which may contain high-molecular weight hydrocarbons.

The sample extract was further evaluated using the Tier 1 mass spectral confirmation procedure outlined in the extended drinking water monitoring (EDWM) plan. The procedure entails analyzing the sample and associated method blank extracts obtained from the original extraction using full scan gas chromatography-mass spectrometry via Method 8270. The resulting total ion chromatograms are evaluated as follows:

1. For the sample, retain all peaks that are above a 3:1 signal-to-noise (S:N) ratio.
2. For peaks retained from Step 1, retain all peaks that have a response greater than five times that found in the method blank.
3. Obtain the mass spectrum and perform a background subtraction (including all blank contamination present below the method reporting limit/method detection limit) for each peak retained from Step 2.
4. Perform a Tentatively Identified Compound (TIC) search evaluation on each peak retained from Step 3 by comparing the corrected mass spectrum to a National Institute of Standards and Technology (NIST) mass spectral library. Retain the top five probability matches for each. Retain a list of all TICs with an 80 percent probability match or higher.
5. Evaluate chromatograms, extraction limited ion profile screening (ELIPS), and additional chemistry data from the laboratory to determine if the detected TPH is JP-5/other fuel-related analytes or is associated with TPH-oil, and/or with "naturally occurring" hydrocarbons.

The results of this evaluation further support the conclusion that the TPH detection is due to the presence of artifacts introduced in either the sampling location or the laboratory. The ELIPS selected ion chromatogram reviews did not indicate the presence of specific known petroleum-related chemicals at concentrations confirming the presence of fresh or weathered petroleum-derived fuel products.

The sample was also submitted to (b) (4) Massachusetts, for the Tier 2 analyses identified in the EDWM plan, specifically paraffins, isoparaffins, aromatics, naphthenes, and olefins (PIANO) volatile organics by SW-846 Method 8260D, parent and alkylated polycyclic aromatic hydrocarbons (PAHs) by SW-846 Method 8270E with selected ion monitoring, and saturated hydrocarbons by SW-846 Method 8015D (modified). The pattern of high-molecular weight compounds from the original analysis was not seen in the Tier 2 analyses, further supporting the hypothesis that the original detection was the result of incidental contact with a high-molecular weight hydrocarbon consistent with an oil or lubricating grease that may have been introduced at the time of sample collection or in the laboratory. There were, however, selected detections in the Tier 2 analyses that are discussed in the sections below.

No parent and alkylated PAHs were detected. Table 1 below summarizes the detections in the PIANO and saturated hydrocarbon analyses.

**Table 1. PIANO and Saturated Hydrocarbon Results**

| Method | Analyte | Reported Concentration (µg/L) | MDL (µg/L) | Reporting Limit (µg/L) |
|---|---|---|---|---|
| 8260D (PIANO) | n-hexane (C6) | 0.455 | 0.329 | 2.00 |
| 8015D (Saturated Hydrocarbons) | n-tricosane (C23) | 0.0002 | 0.0002 | 0.001 |
| 8015D (Saturated Hydrocarbons) | n-tetracosane (C24) | 0.0004 | 0.0003 | 0.001 |
| 8015D (Saturated Hydrocarbons) | n-hexacosane (C26) | 0.001 | 0.0004 | 0.001 |
| 8015D (Saturated Hydrocarbons) | n-heptacosane (C27) | 0.001 | 0.0004 | 0.001 |
| 8015D (Saturated Hydrocarbons) | n-triacontane (C30) | 0.0003 | 0.0002 | 0.001 |

All results were below their respective reporting limits and were all less than 50 percent higher than the minimum detection limit (MDL), when evaluated prior to rounding. The hexane result from the PIANO result is not discussed further as it is a negligible detection in the gasoline range and is not relevant to the original ORO detection.

The 8015D sample results were compared to the associated method blank (MB). The analytes reported in the sample were all present in the MB. Since the concentrations in the MB were below the MDL, all compounds were reported as non-detect in the MB. However, as shown in Table 2 below, the concentrations in the sample were all less than five times those found in the MB.

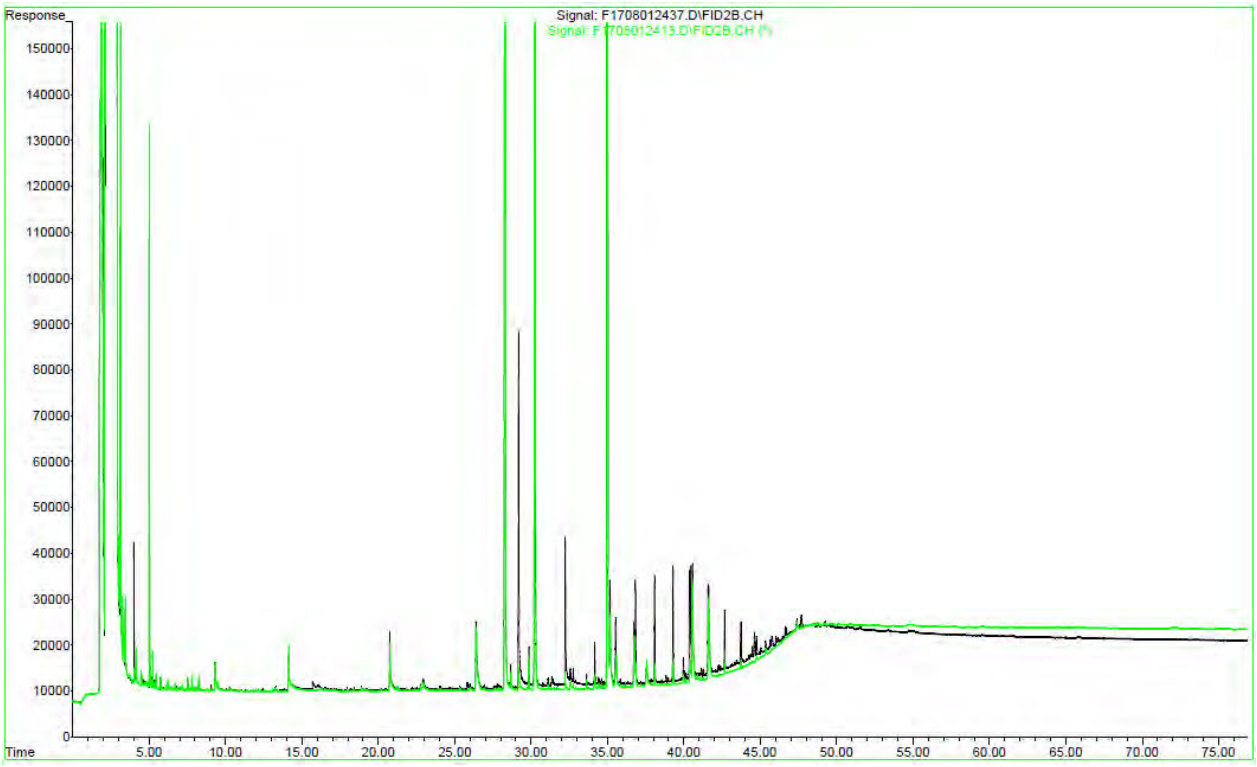
**Table 2. Sample Results Compared to Method Blank**

| Analyte | Sample Concentration Before Rounding (µg/L) | Blank (µg/L) | MDL (µg/L) | Ratio Sample/Blank |
|---|---|---|---|---|
| n-tricosane (C23) | 0.000206 | 0.000091 | 0.0002 | 2.27 |
| n-tetracosane (C24) | 0.000358 | 0.000116 | 0.0003 | 3.08 |
| n-hexacosane (C26) | 0.000501 | 0.000123 | 0.0004 | 4.07 |
| n-heptacosane (C27) | 0.000542 | 0.000146 | 0.0004 | 3.71 |
| n-triacontane (C30) | 0.000294 | 0.000073 | 0.0002 | 4.02 |

Furthermore, the pattern seen in both the sample and the method blank is characteristic of paraffins, which are used in the production of laboratory gloves and are known potential contaminants. The laboratory tested this hypothesis by extracting a glove and detected all of the peaks seen in the sample and method blank as well as additional compounds. The laboratory believes that the analyst contacted the sample, glassware, or other equipment with their glove after it contacted solvent. All laboratory personnel have been reminded to change gloves immediately following direct contact with any samples or reagents to minimize the possibility of cross-contamination.

Figure 7 displays the sample chromatogram (black) overlayed with the associated method blank chromatogram (green). There is no qualitative difference between the sample and the method blank. All peaks attributable to the paraffin wax contamination are present in both chromatograms and differ only in relative concentration.

**Figure 7. Sample A3-TW-0017454-24092-N (black), Overlayed with Method Blank (green)**



AECOM has concluded that the chromatographic evidence from the original Method 8015D analysis, Tier 1 evaluation, and Tier 2 analyses points to incidental contamination of the original sample with a heavy, lubricating oil-type hydrocarbon mixture unrelated to JP-5 or any other fuel product. It is not known with certainty whether the artifact was introduced in the field or in the laboratory; however, AECOM concludes that the most likely source was incidental contact during sampling due to presence in premise plumbing or household products in the area immediately surrounding the kitchen sink.

There is no evidence of a systematic contamination issue at (b) (4) laboratory. Method blanks have been consistently free of ORO detections. Therefore, no additional action is recommended at this time.

The hydrocarbons detected in the sample volume sent for Tier 2 analyses are believed to have come from incidental contact with analyst gloves in the laboratory. There is no evidence of systematic contamination issues at (b) (4). Method blanks have been consistently free of detections above the MDL. Laboratory personnel have been reminded of the need to change gloves frequently. No additional action is recommended at this time.

Questions regarding this letter should be addressed to the AECOM project manager, (b) (6)

Yours sincerely,

(b) (6)

(b) (6)
Senior Project Chemist
(b) (6)

CLEAN Program Manager

Attachments

Attachment 1. Tier 1 Evaluation, Sample A3-TW-0017454-24092-N

# Appendix C. Tier 1 Analysis Tech Memos

## Attachment 1. Tier 1 Evaluation, Sample A3-TW-0017454-24092-N

# Appendix C. Tier 1 Analysis Tech Memos

**Attachment 1:**

**Tier 1 Evaluation, Sample A3-TW-0017454-24092-N**

**(Laboratory ID: DA65889-3)**

Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
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Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 22:31:14 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration

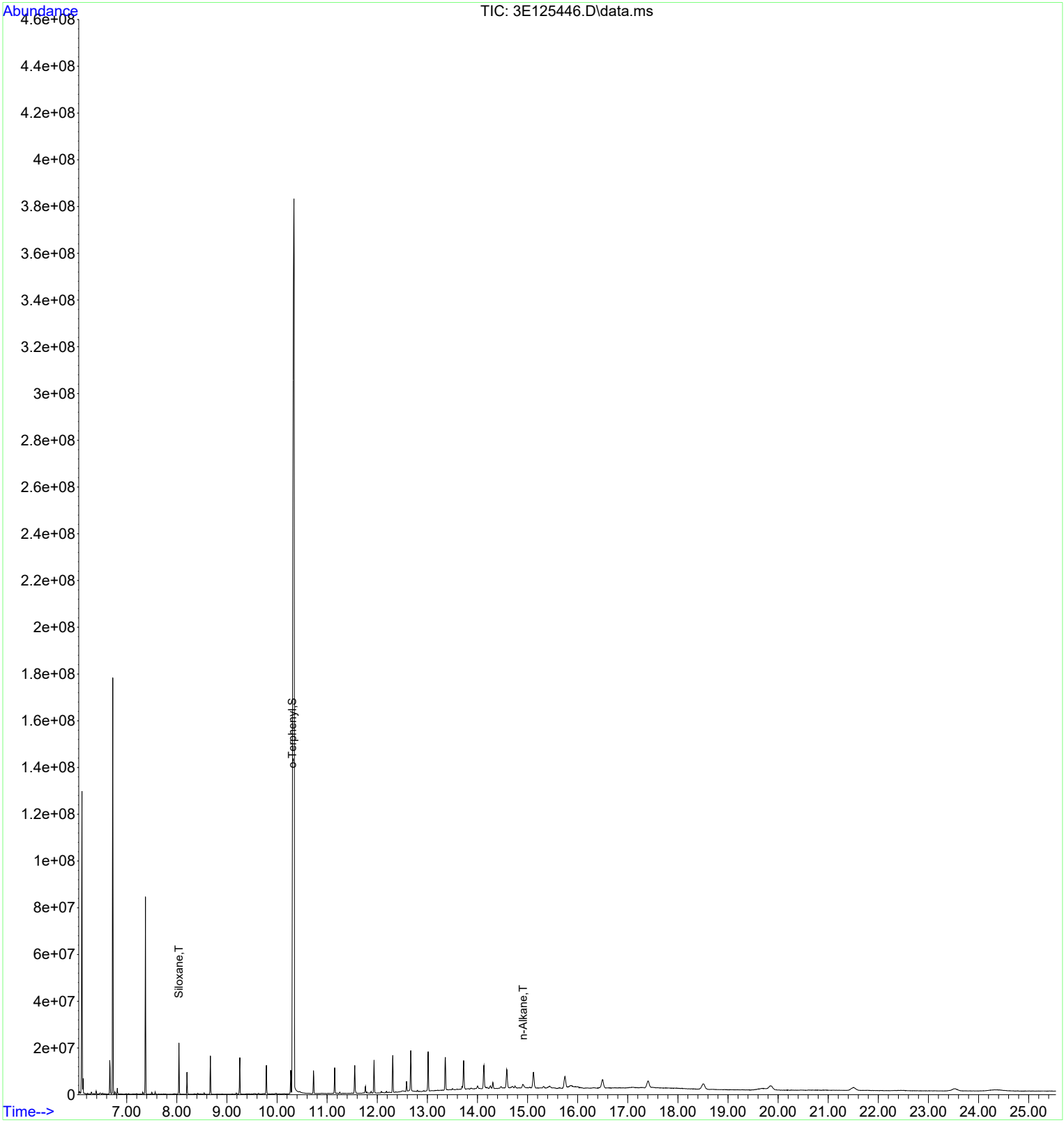
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 17) o-Terphenyl | 10.305 | 230 | 28146944m | 28146944.00 | | -0.15 |
| Target Compounds | | | | | | Qvalue |
| 1) Undecane (C11) | 0.000 | | 0 | N.D. | d | |
| 2) Diethylnaphthalene | 0.000 | | 0 | N.D. | d | |
| 3) 1-Methylnaphthalene | 0.000 | | 0 | N.D. | d | |
| 4) 1-Ethylpropylbenzene | 0.000 | | 0 | N.D. | d | |
| 5) Cyclohexane | 0.000 | | 0 | N.D. | d | |
| 6) Tridecane (C13) | 0.000 | | 0 | N.D. | d | |
| 7) Dodecane (C12) | 0.000 | | 0 | N.D. | d | |
| 8) Sesquiterpanes | 0.000 | | 0 | N.D. | | |
| 9) Benzocyclohexane | 0.000 | | 0 | N.D. | d | |
| 10) Propylbutylbenzene | 0.000 | | 0 | N.D. | d | |
| 11) Cyclic Isoprenoid | 0.000 | | 0 | N.D. | d | |
| 12) Trimethylbenzene | 0.000 | | 0 | N.D. | d | |
| 13) Bromo-Xa | 0.000 | | 0 | N.D. | | |
| 14) Bromo-Xb | 0.000 | | 0 | N.D. | | |
| 15) n-Hexadecanoic Acid | 0.000 | | 0 | N.D. | | |
| 16) n-Octadecanoic Acid | 0.000 | | 0 | N.D. | | |
| 18) Bromo-o-Terphenyl | 0.000 | | 0 | N.D. | | |
| 19) Chloro-o-Terphenyl | 0.000 | | 0 | N.D. | | |
| 20) n-Alkane | 14.910 | 57 | 44963904m | 44963904.00 | | |
| 21) n-Octane (C8) | 0.000 | | 0 | N.D. | d | |
| 22) n-Nonane (C9) | 0.000 | | 0 | N.D. | d | |
| 23) n-Decane (C10) | 0.000 | | 0 | N.D. | d | |
| 24) n-Dodecane (C12) | 0.000 | | 0 | N.D. | d | |
| 25) n-Tetradecane (C14) | 0.000 | | 0 | N.D. | d | |
| 26) n-Hexadecane (C16) | 0.000 | | 0 | N.D. | d | |
| 27) n-Octadecane (C18) | 0.000 | | 0 | N.D. | d | |
| 28) n-Eicosane (C20) | 0.000 | | 0 | N.D. | d | |
| 29) n-Heneicosane (C21) | 0.000 | | 0 | N.D. | d | |
| 30) n-Docosane (C22) | 0.000 | | 0 | N.D. | d | |
| 31) n-Tricosane (C23) | 0.000 | | 0 | N.D. | d | |
| 32) n-Tetracosane (C24) | 0.000 | | 0 | N.D. | d | |
| 33) n-Pentacosane (C25) | 0.000 | | 0 | N.D. | d | |
| 34) n-Hexacosane (C26) | 0.000 | | 0 | N.D. | d | |
| 35) n-Heptacosane (C27) | 0.000 | | 0 | N.D. | d | |
| 36) n-Octacosane (C28) | 0.000 | | 0 | N.D. | d | |
| 37) n-Nonacosane (C29) | 0.000 | | 0 | N.D. | d | |
| 38) n-Triacontane (C30) | 0.000 | | 0 | N.D. | d | |
| 39) n-Doatriacontane (C32) | 0.000 | | 0 | N.D. | d | |
| 40) n-Tetratriacontane (C34) | 0.000 | | 0 | N.D. | d | |
| 41) n-Hexatriacontane (C36) | 0.000 | | 0 | N.D. | d | |
| 42) n-Octatriacontane (C38) | 0.000 | | 0 | N.D. | d | |
| 43) n-Tetracontane (C40) | 0.000 | | 0 | N.D. | d | |
| 44) Siloxane | 8.043 | 429 | 10042749m | 10042749.00 | | |
| 45) Butyl benzyl phthalate | 0.000 | | 0 | N.D. | d | |
| 46) Bis(2-ethylhexyl)phtha... | 0.000 | | 0 | N.D. | d | |
| 47) Di-n-octylphthalate | 0.000 | | 0 | N.D. | d | |
| 48) Diethyl Phthalate | 0.000 | | 0 | N.D. | d | |

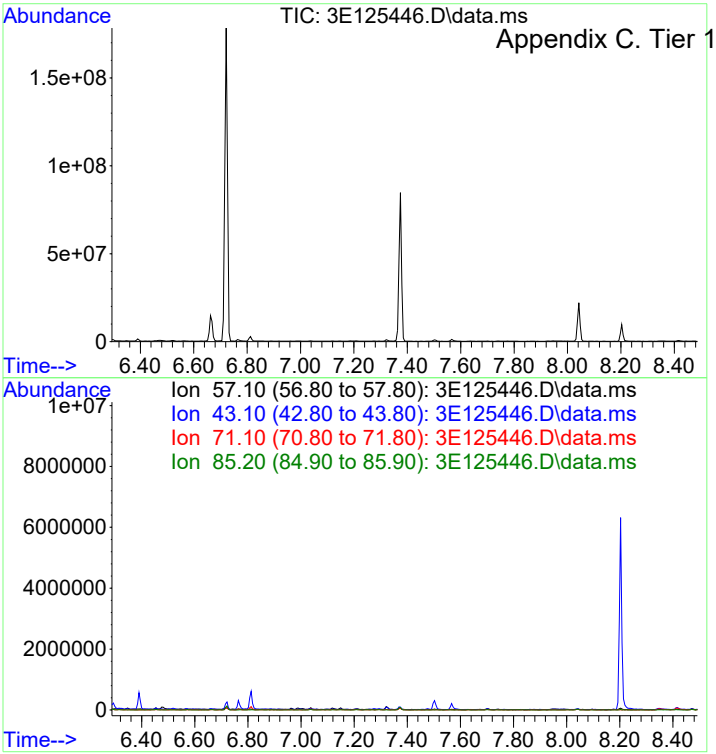
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 22:31:14 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration



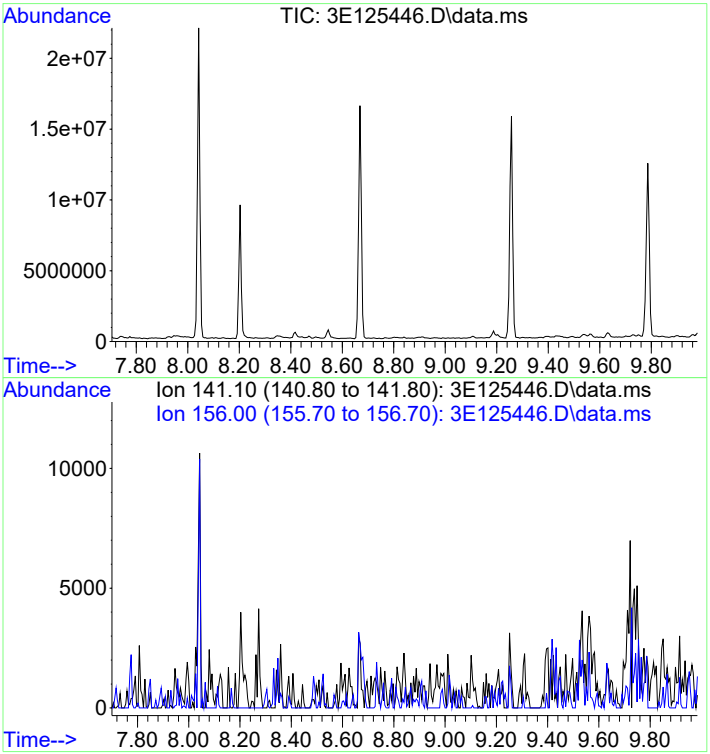



#1
Undecane (C11)
Concen: N.D.
Expected RT: 7.39 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 15.7 |
| 71 | 6.9 |
| 85 | 0.0 |

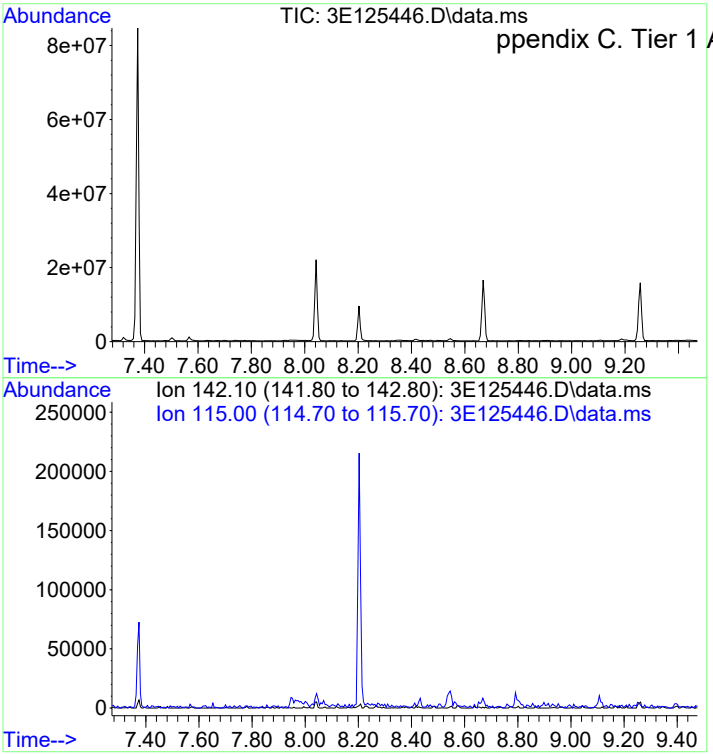



#2
Diethylnaphthalene
Concen: N.D.
Expected RT: 8.80 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 141

| Sig | Exp Ratio |
|---|---|
| 141 | 100 |
| 156 | 0.0 |

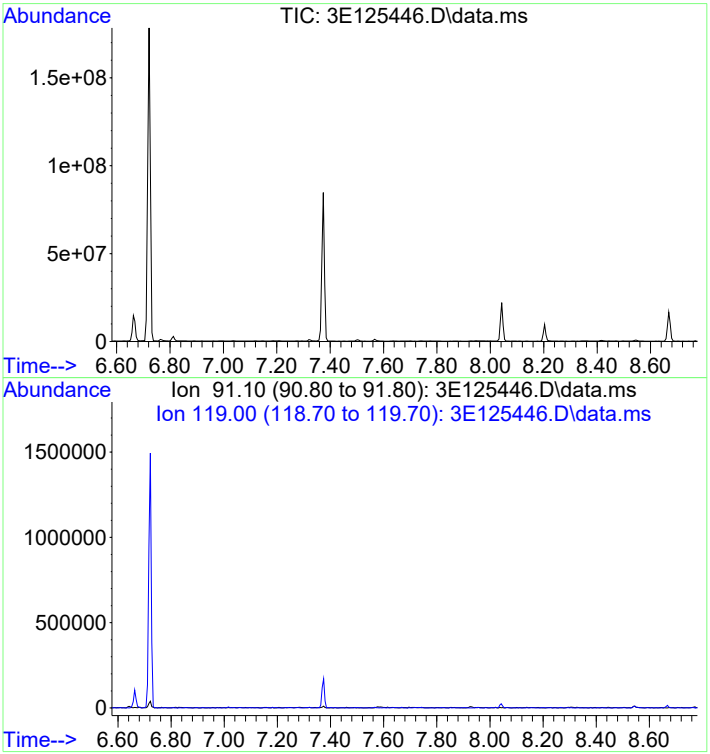



#3
1-Methylnaphthalene
Concen: N.D.
Expected RT: 8.37 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 142

| Sig | Exp Ratio |
|---|---|
| 142 | 100 |
| 115 | 0.0 |

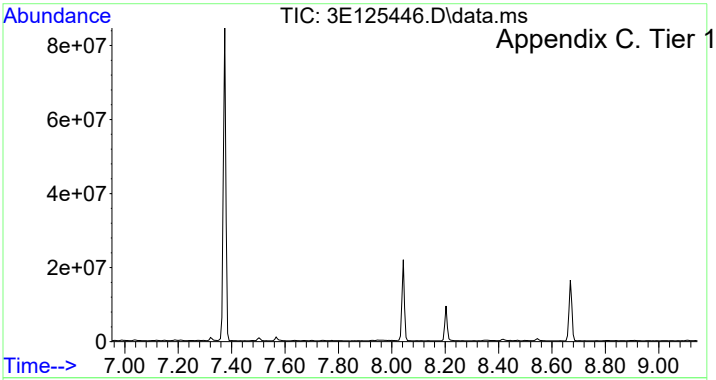



#4
1-Ethylpropylbenzene
Concen: N.D.
Expected RT: 7.68 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 91

| Sig | Exp Ratio |
|---|---|
| 91 | 100 |
| 119 | 0.0 |

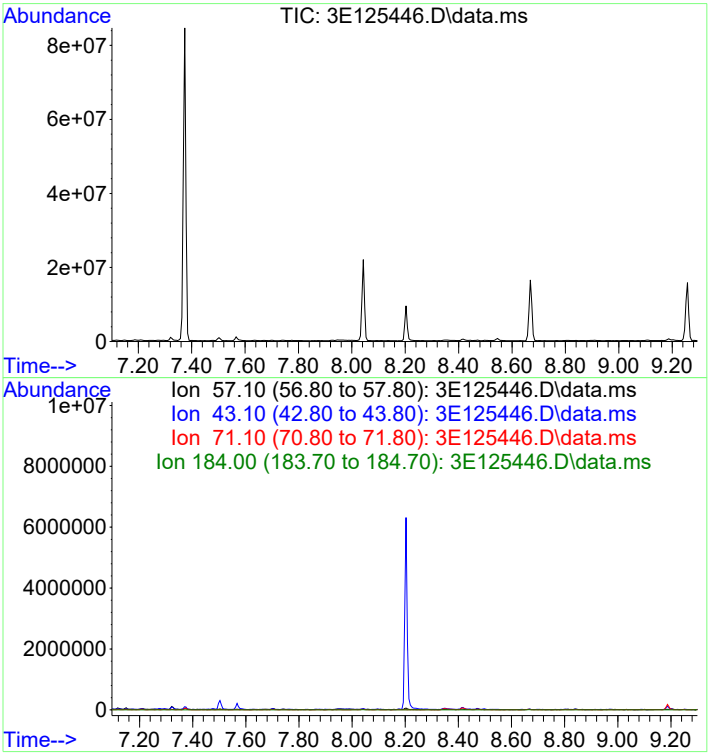



#5
Cyclohexane
Concen: N.D.
Expected RT: 8.05 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 84

| Sig | Exp Ratio |
|---|---|
| 84 | 100 |
| 56 | 0.0 |
| 69 | 0.0 |

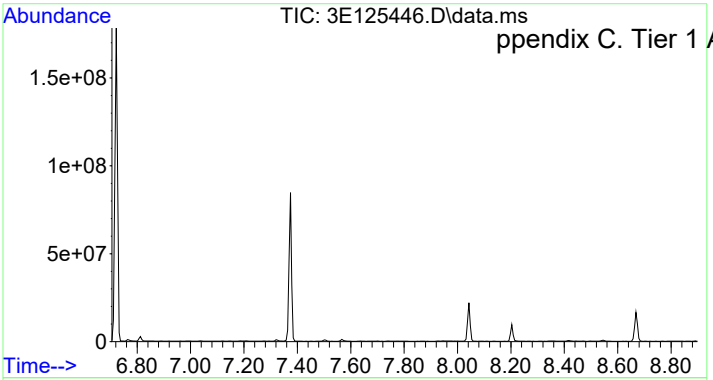



#6
Tridecane (C13)
Concen: N.D.
Expected RT: 8.20 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 6.1 |
| 71 | 0.0 |
| 184 | 0.0 |

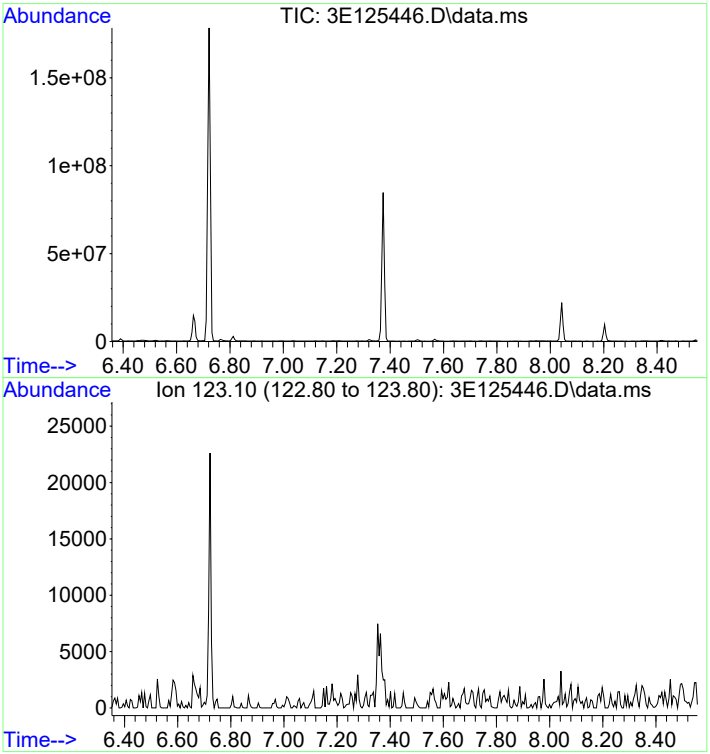



#7
Dodecane (C12)
Concen: N.D.
Expected RT: 7.80 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 43

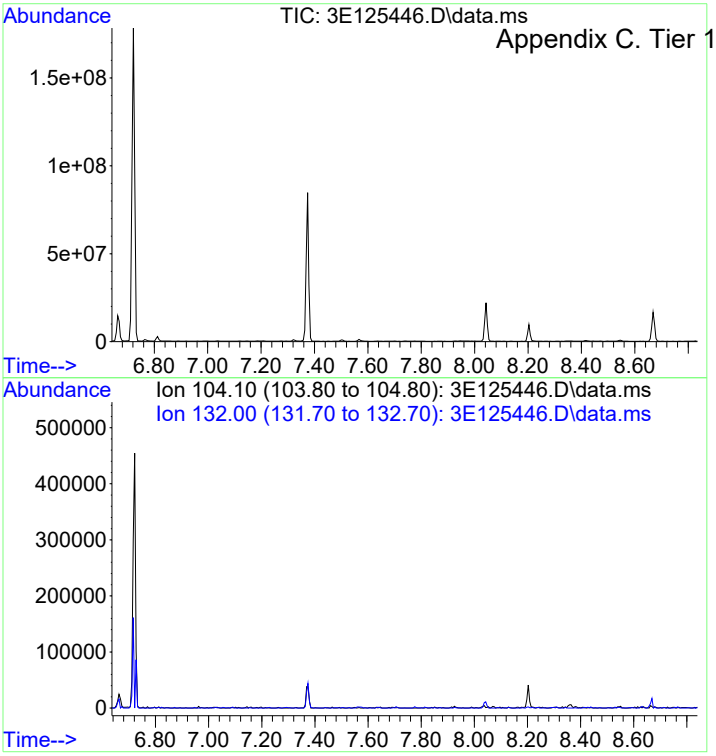
| Sig | Exp Ratio |
|---|---|
| 43 | 100 |
| 57 | 165.0 |
| 71 | 64.9 |
| 170 | 0.0 |




#8
Sesquiterpanes
Concen: N.D.
Expected RT: 7.45 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 123

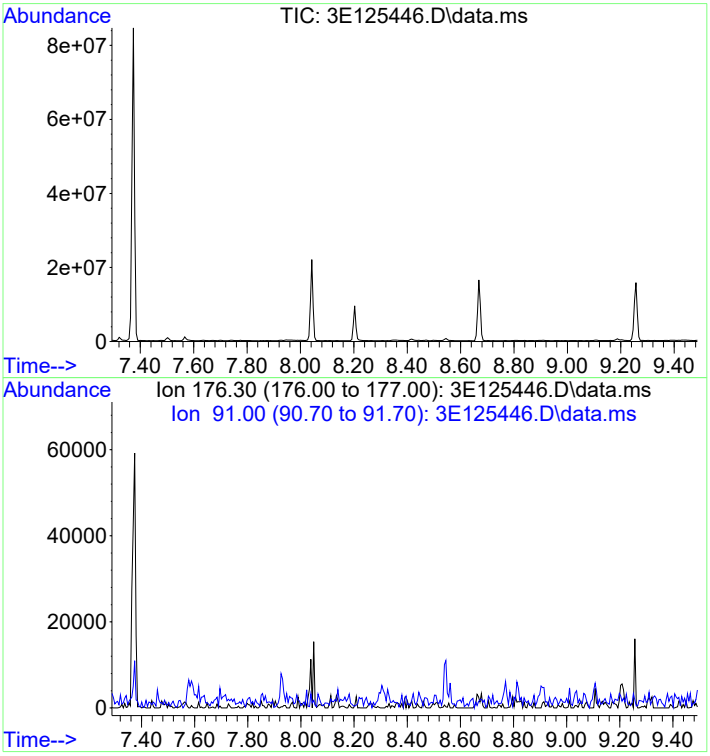



#9
Benzocyclohexane
Concen: N.D.
Expected RT: 7.74 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 104

| Sig | Exp Ratio |
|---|---|
| 104 | 100 |
| 132 | 0.0 |

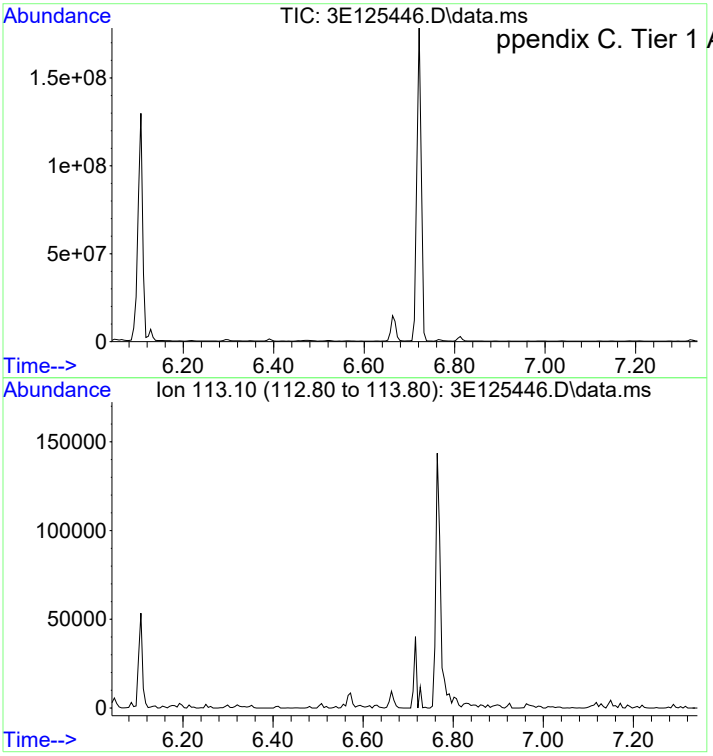



#10
Propylbutylbenzene
Concen: N.D.
Expected RT: 8.39 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 176

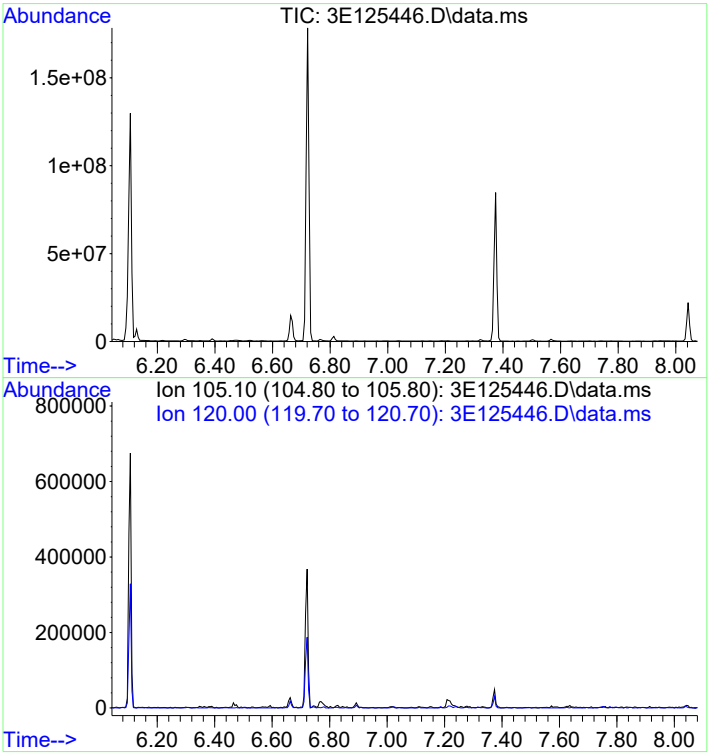
| Sig | Exp Ratio |
|---|---|
| 176 | 100 |
| 91 | 0.0 |




#11
Cyclic Isoprenoid
Concen: N.D.
Expected RT: 6.24 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 113

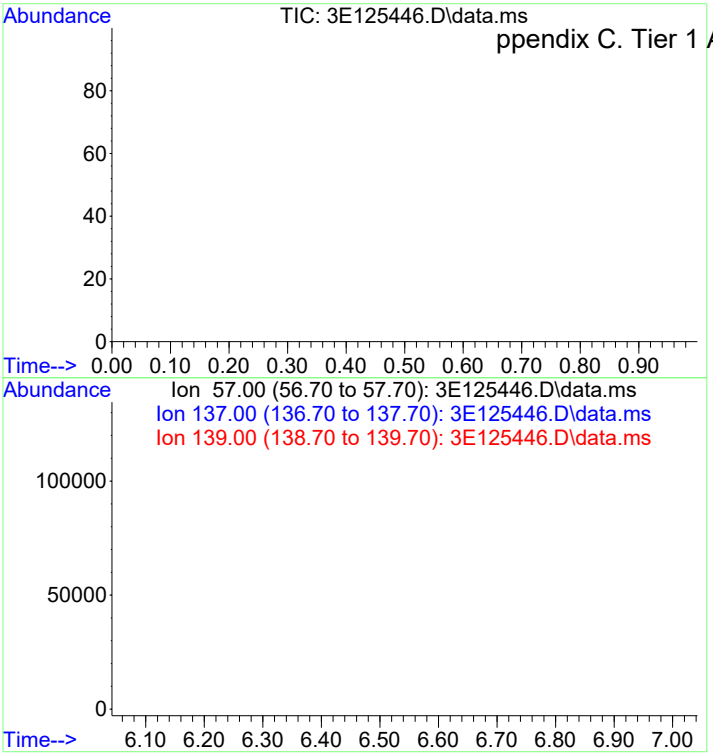



#12
Trimethylbenzene
Concen: N.D.
Expected RT: 6.98 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 105

| Sig | Exp Ratio |
|---|---|
| 105 | 100 |
| 120 | 0.0 |

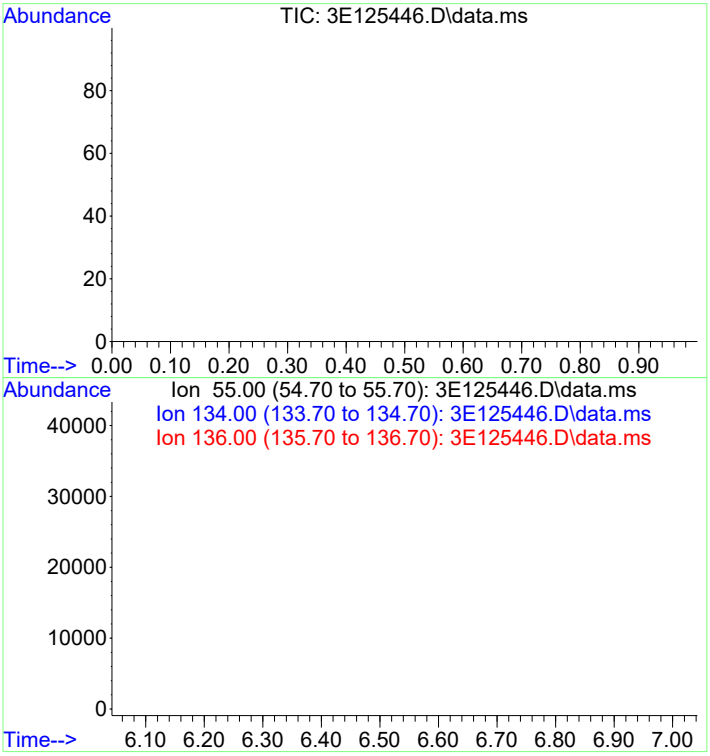



#13
Bromo-Xa
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 137 | 0.0 |
| 139 | 0.0 |

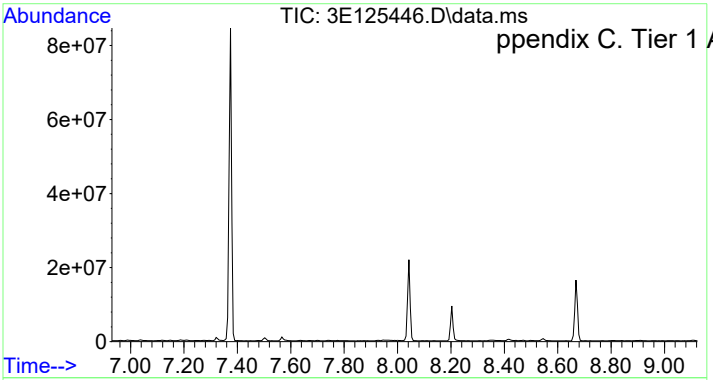



#14
Bromo-Xb
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 55

| Sig | Exp Ratio |
|---|---|
| 55 | 100 |
| 134 | 0.0 |
| 136 | 0.0 |

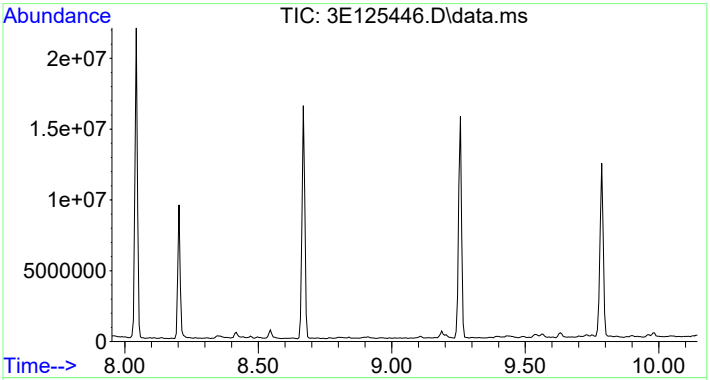



#15
n-Hexadecanoic Acid
Concen: N.D.
Expected RT: 8.03 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 256

| Sig | Exp Ratio |
|---|---|
| 256 | 100 |
| 73 | 117.8 |
| 60 | 50.7 |
| 129 | 36.1 |

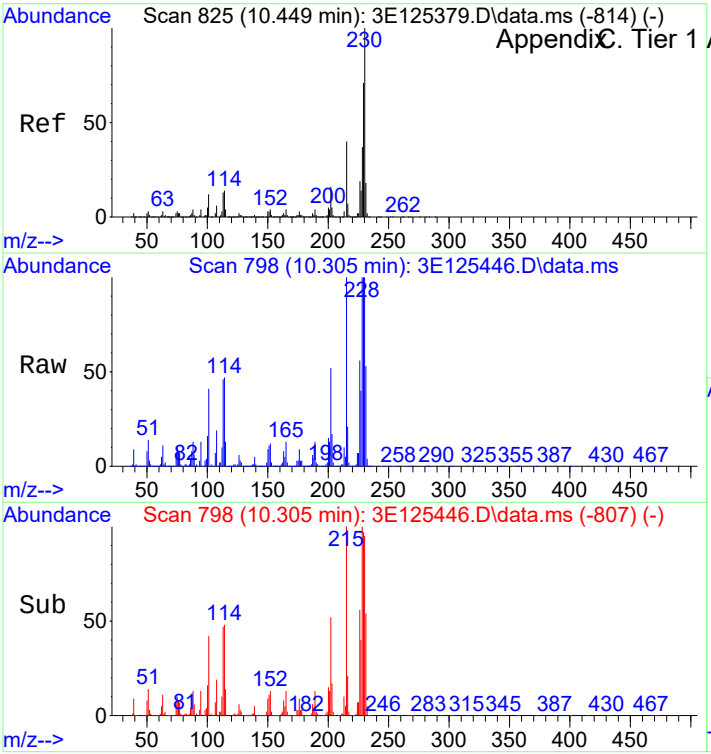



#16
n-Octadecanoic Acid
Concen: N.D.
Expected RT: 9.05 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 284

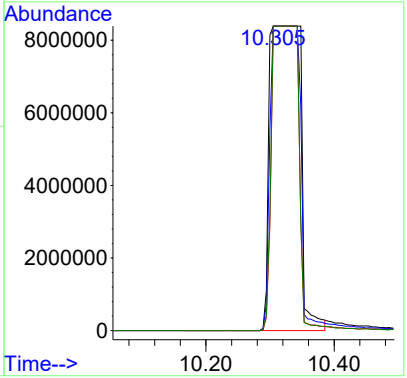
| Sig | Exp Ratio |
|---|---|
| 284 | 100 |
| 73 | 62.7 |
| 60 | 46.4 |
| 129 | 50.0 |

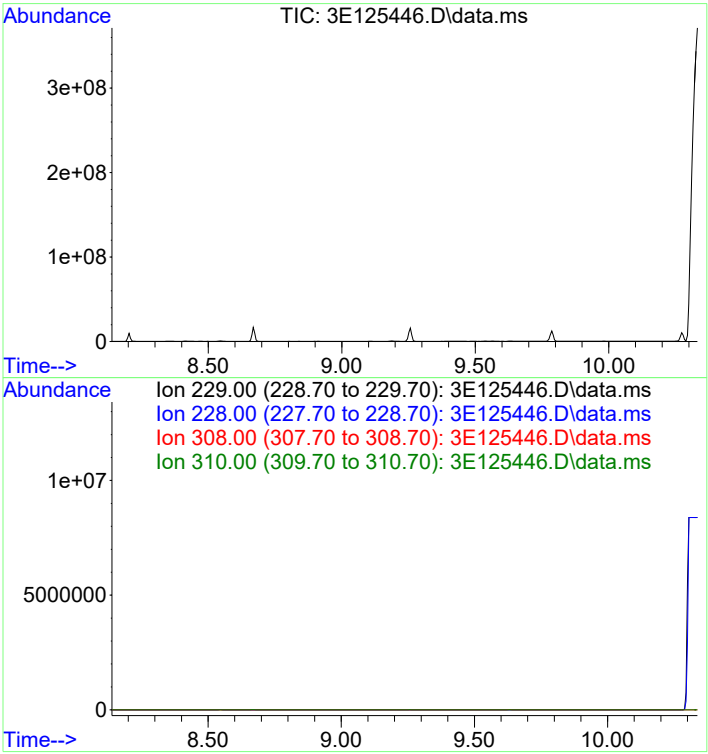



#17
o-Terphenyl
Concen: 28146944.00 m
RT: 10.305 min Scan# 798
Delta R.T. -0.150 min
Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion:230 Resp:28146944

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 230 | 100 | | |
| 229 | 0.0 | 43.0 | 83.0# |
| 228 | 0.0 | 27.3 | 67.3# |
| 215 | 0.1 | 30.0 | 70.0# |



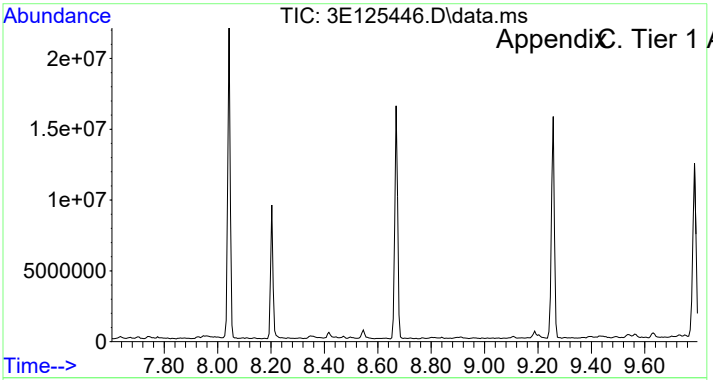




#18
Bromo-o-Terphenyl
Concen: N.D.
Expected RT: 9.24 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 229

| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 135.4 |
| 308 | 79.5 |
| 310 | 0.0 |

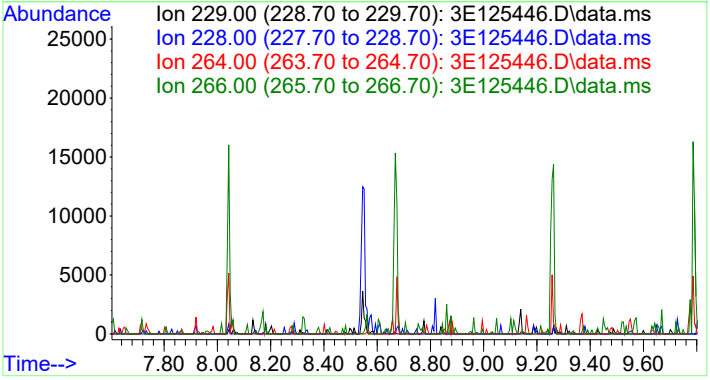


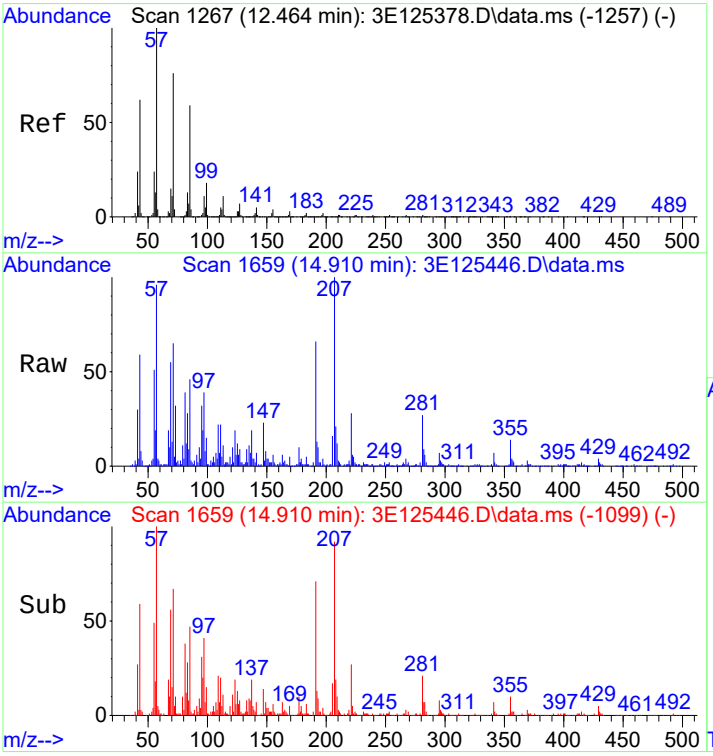

#19
Chloro-o-Terphenyl
Concen: N.D.
Expected RT: 8.70 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 229

| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 63.1 |
| 264 | 48.7 |
| 266 | 0.0 |

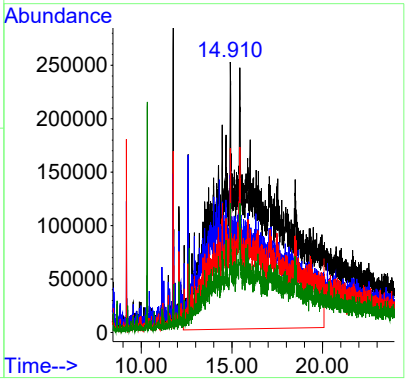


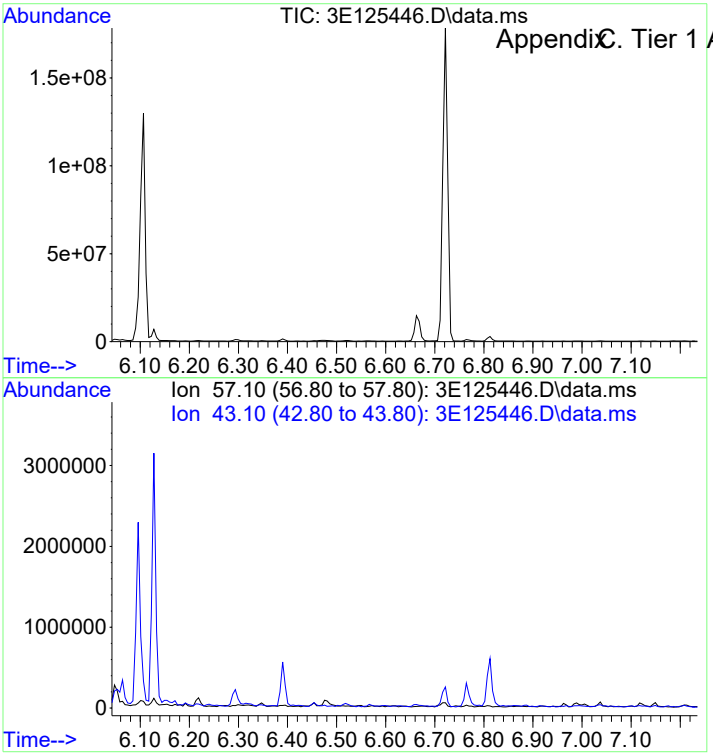




#20
n-Alkane
Concen: 44963904.00 m
RT: 14.910 min Scan# 1659
Delta R.T. 2.894 min
Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57 Resp:44963904

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 0.0 | 0.0 | 20.0 |
| 71 | 0.0 | 162.1 | 202.1# |
| 85 | 0.0 | 0.0 | 20.0 |



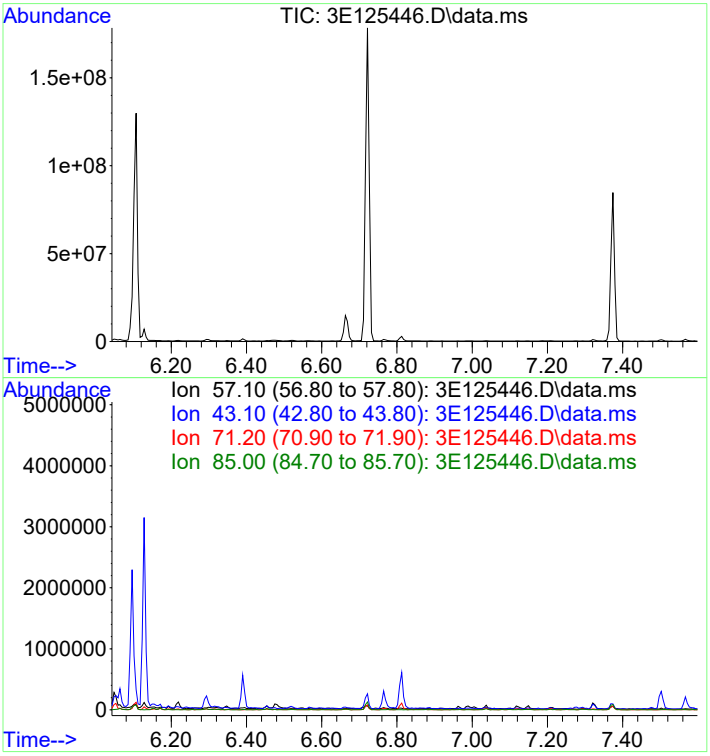



#21
n-Octane (C8)
Concen: N.D.
Expected RT: 6.14 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 235.9 |

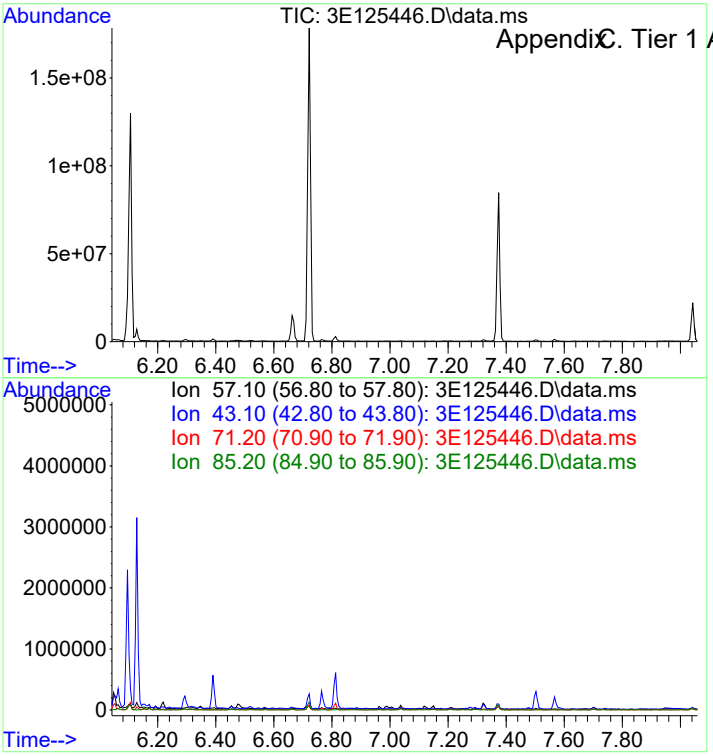



#22
n-Nonane (C9)
Concen: N.D.
Expected RT: 6.50 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 0.1 |
| 71 | 0.1 |
| 85 | 0.0 |

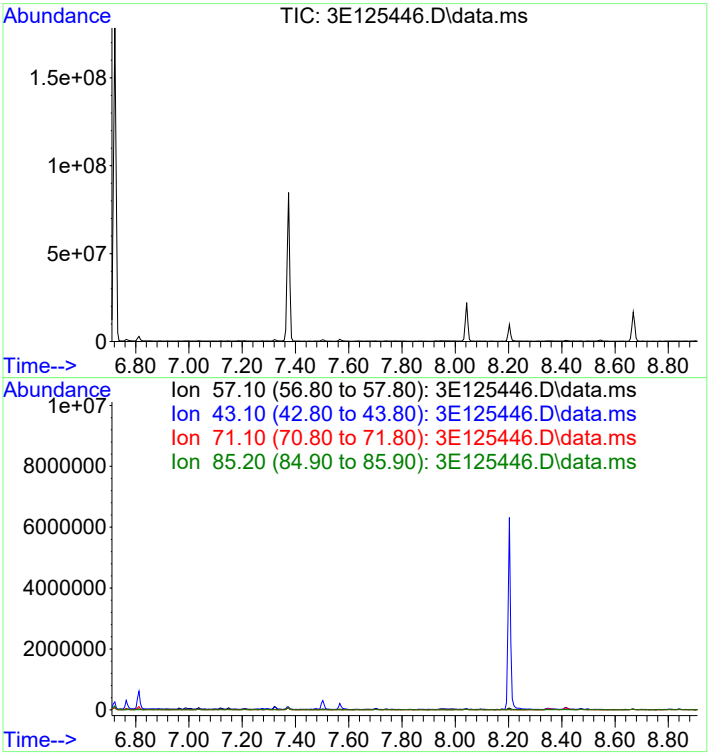



#23
n-Decane (C10)
Concen: N.D.
Expected RT: 6.96 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 90.4 |
| 71 | 39.1 |
| 85 | 27.8 |

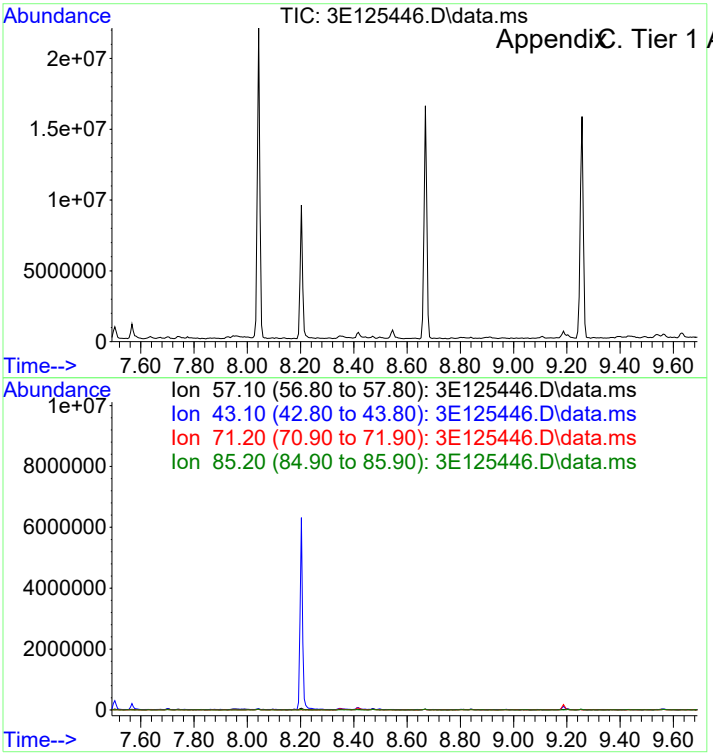



#24
n-Dodecane (C12)
Concen: N.D.
Expected RT: 7.81 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 77.7 |
| 71 | 53.0 |
| 85 | 32.4 |

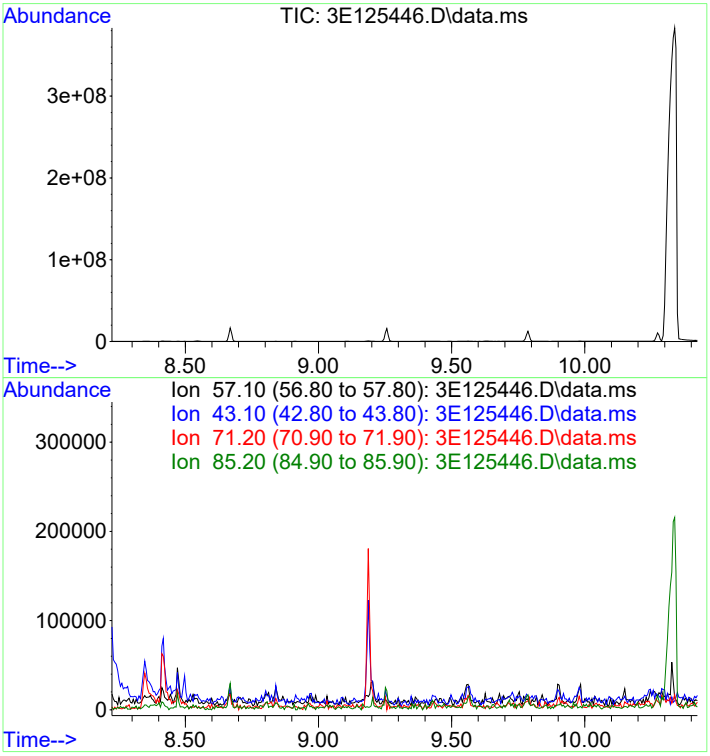



#25
n-Tetradecane (C14)
Concen: N.D.
Expected RT: 8.59 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 72.0 |
| 71 | 60.8 |
| 85 | 40.6 |

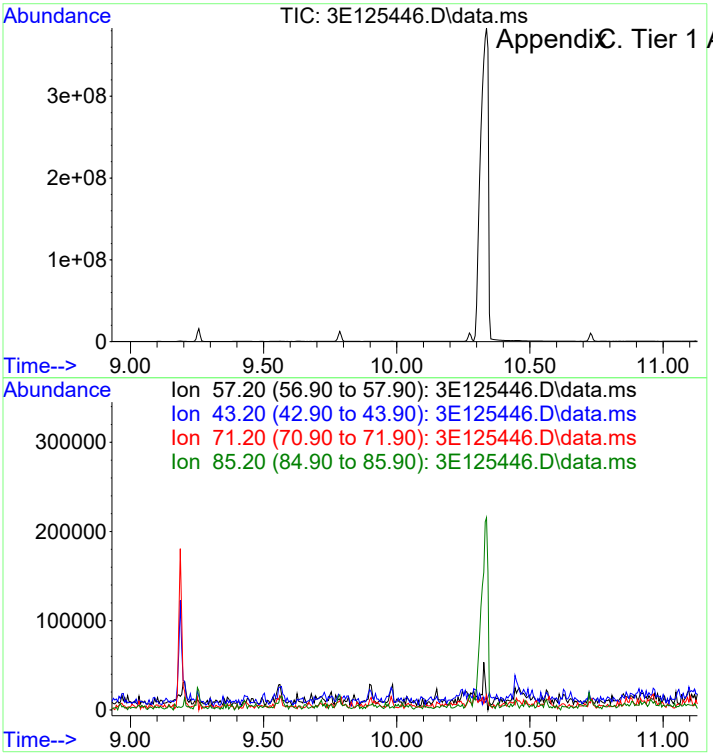



#26
n-Hexadecane (C16)
Concen: N.D.
Expected RT: 9.32 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 68.5 |
| 71 | 65.4 |
| 85 | 46.0 |

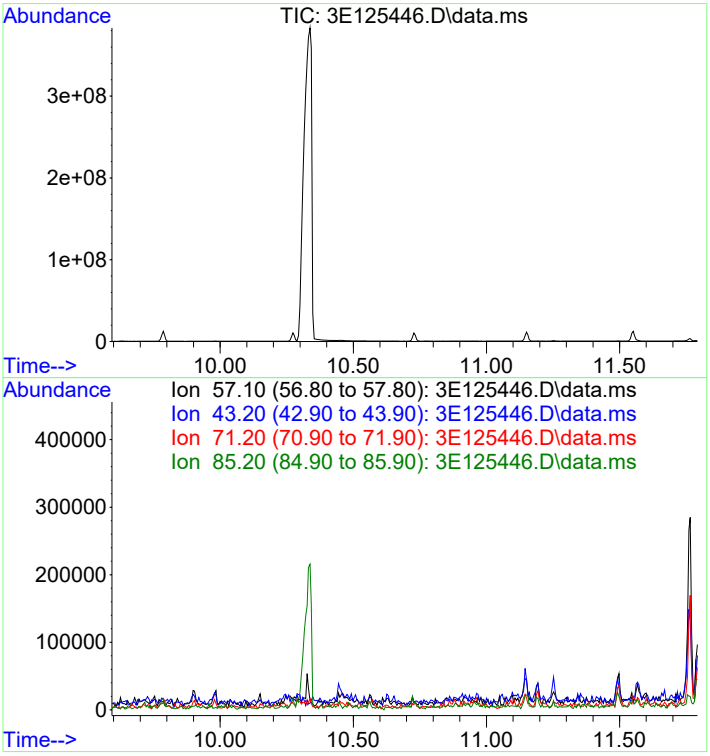



#27
n-Octadecane (C18)
Concen: N.D.
Expected RT: 10.03 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.7 |
| 71 | 68.9 |
| 85 | 49.4 |

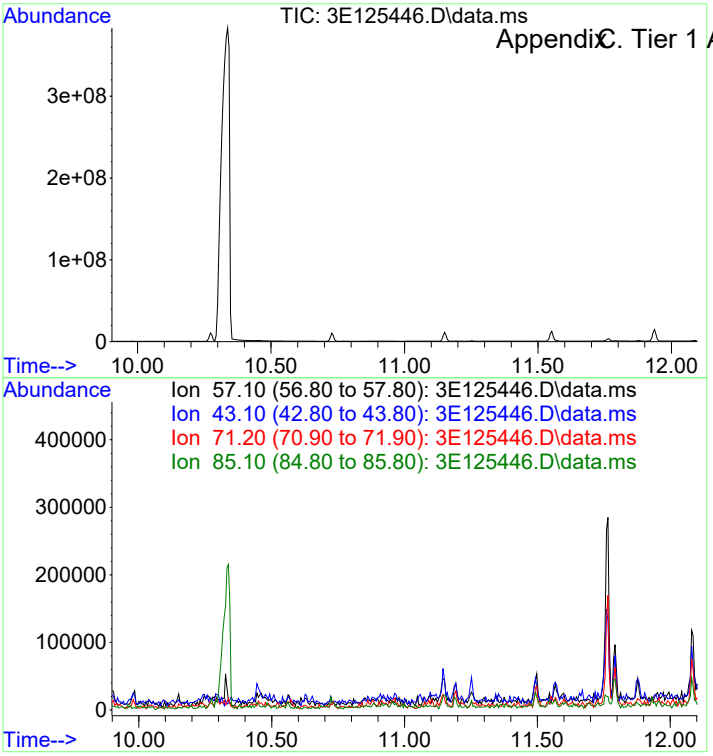



#28
n-Eicosane (C20)
Concen: N.D.
Expected RT: 10.69 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 65.8 |
| 71 | 70.2 |
| 85 | 51.9 |

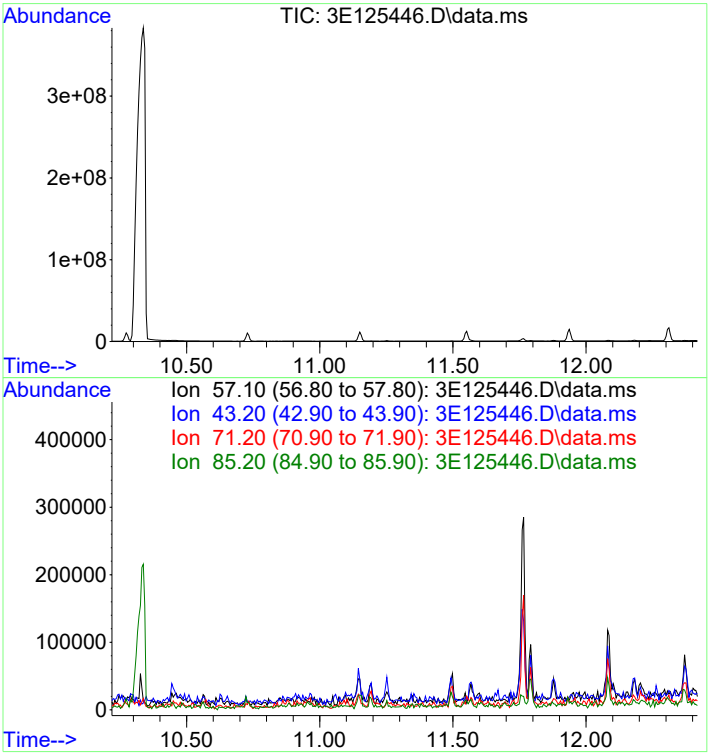



#29
n-Heneicosane (C21)
Concen: N.D.
Expected RT: 11.00 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 65.1 |
| 85 | 51.7 |

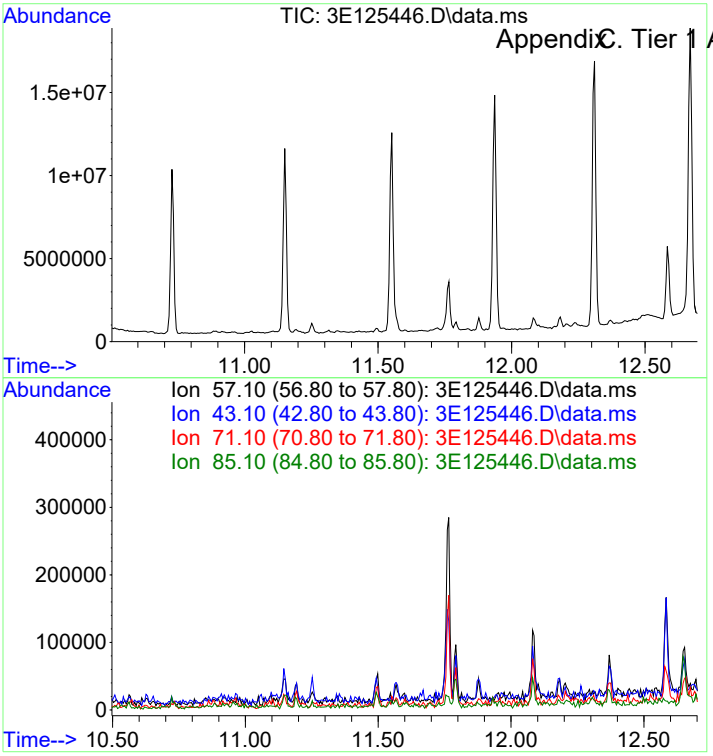



#30
n-Docosane (C22)
Concen: N.D.
Expected RT: 11.32 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.5 |
| 71 | 71.3 |
| 85 | 53.9 |

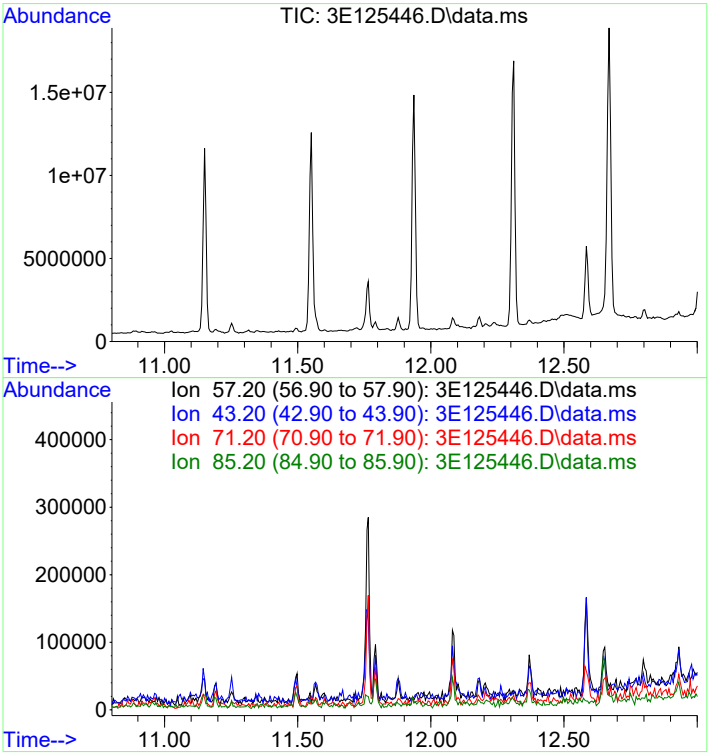



#31
n-Pentacosane (C25)
Concen: N.D.
Expected RT: 11.60 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 62.0 |
| 71 | 53.9 |
| 85 | 45.7 |

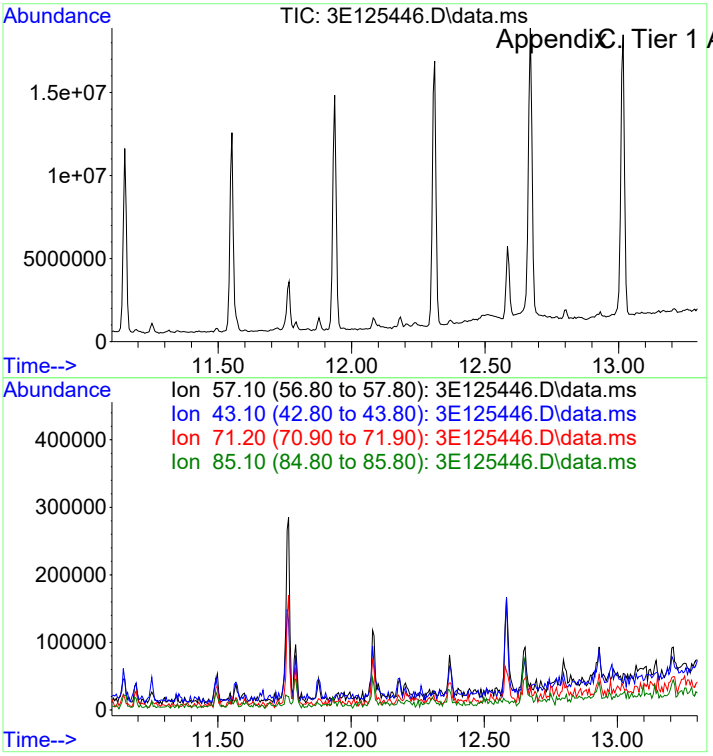



#32
n-Tetracosane (C24)
Concen: N.D.
Expected RT: 11.90 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.4 |
| 71 | 72.3 |
| 85 | 55.2 |

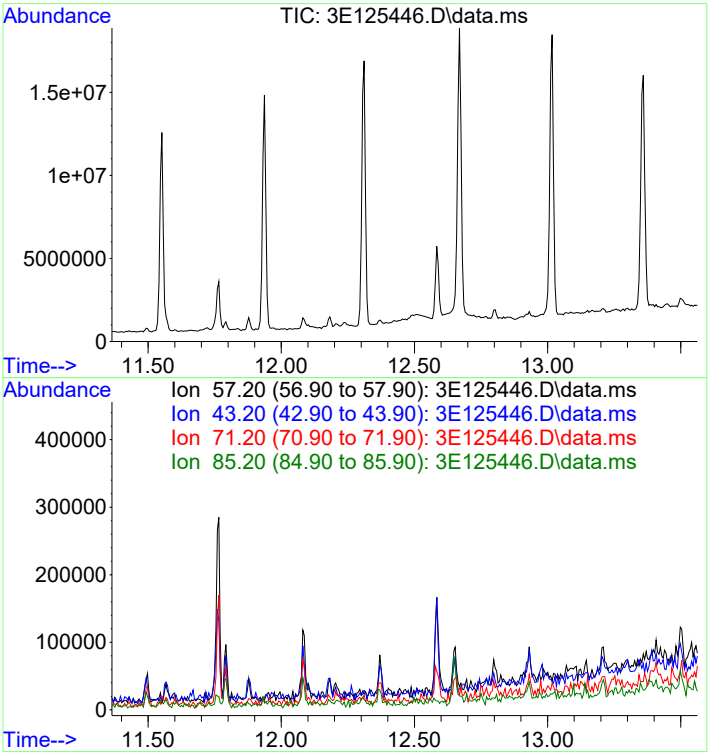



#33
n-Pentacosane (C25)
Concen: N.D.
Expected RT: 12.20 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 79.9 |
| 71 | 70.5 |
| 85 | 42.5 |

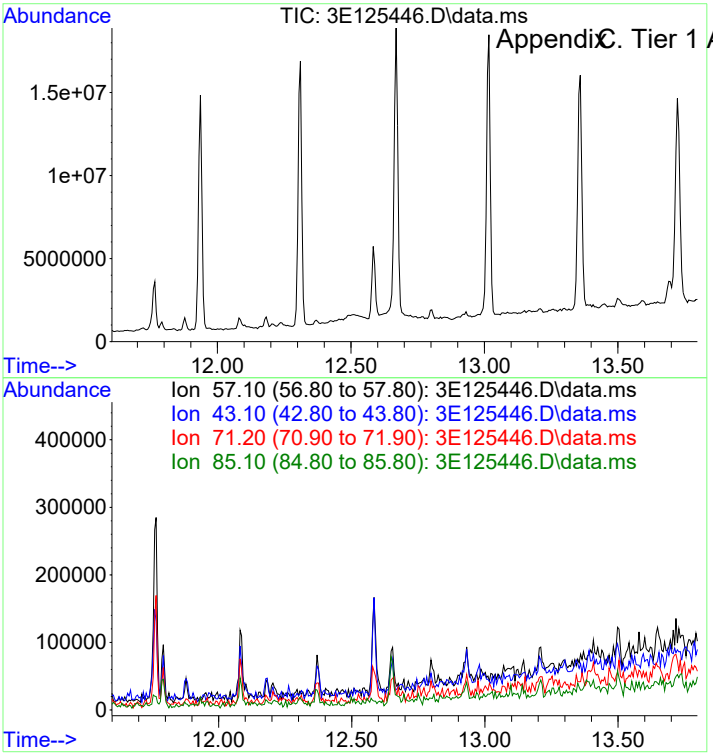



#34
n-Hexacosane (C26)
Concen: N.D.
Expected RT: 12.46 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.1 |
| 71 | 73.2 |
| 85 | 56.6 |

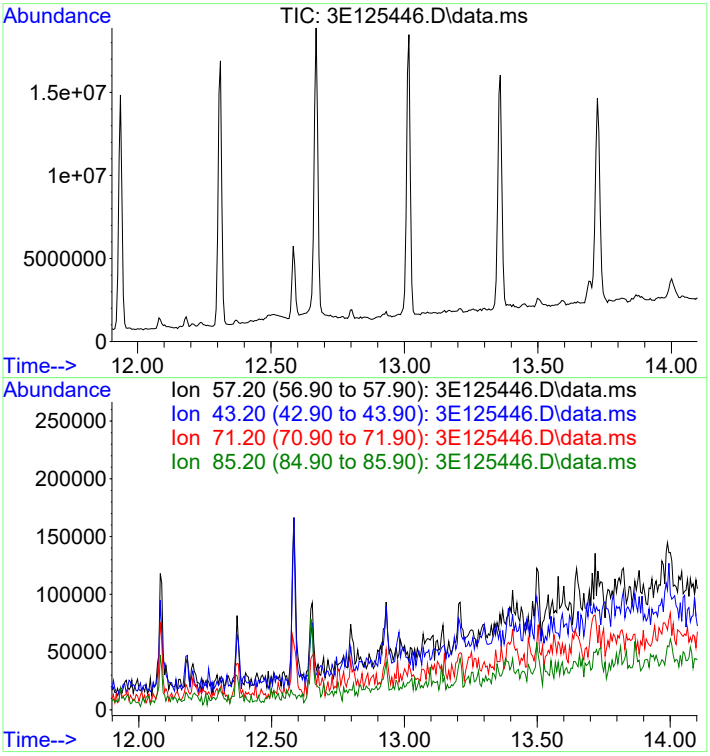



#35
n-Heptacosane (C27)
Concen: N.D.
Expected RT: 12.70 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 76.1 |
| 71 | 90.4 |
| 85 | 86.7 |

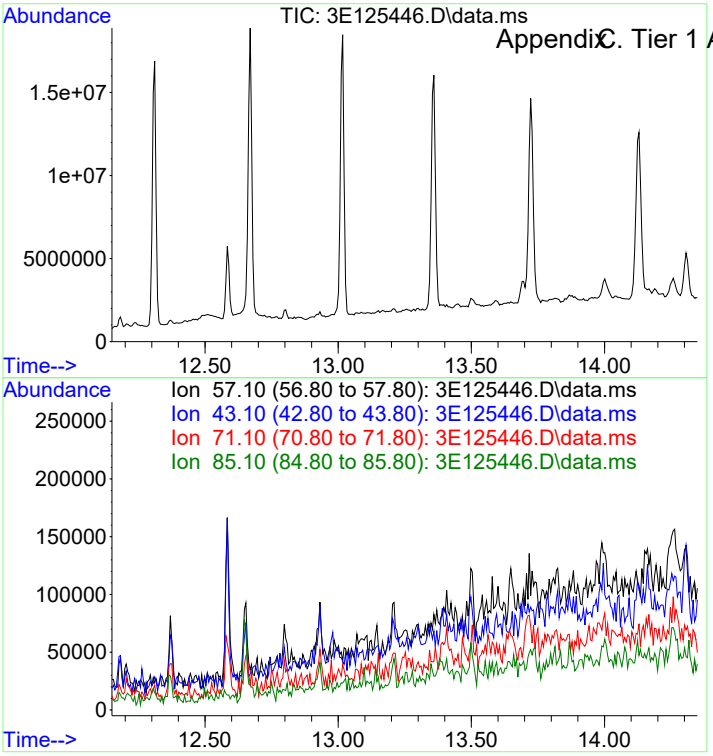



#36
n-Octacosane (C28)
Concen: N.D.
Expected RT: 13.00 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 60.8 |
| 71 | 72.9 |
| 85 | 56.3 |

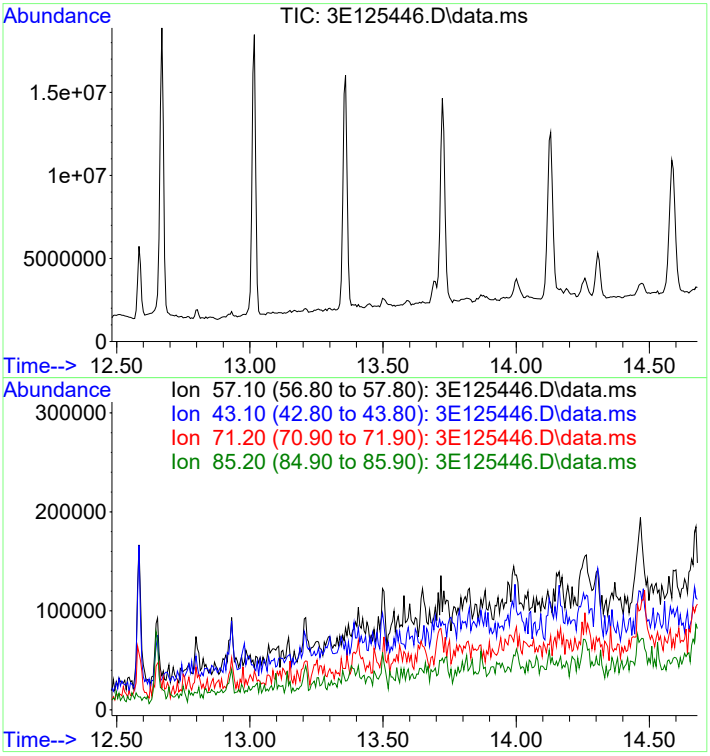



#37
n-Nonacosane (C29)
Concen: N.D.
Expected RT: 13.25 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.1 |
| 71 | 78.4 |
| 85 | 67.7 |

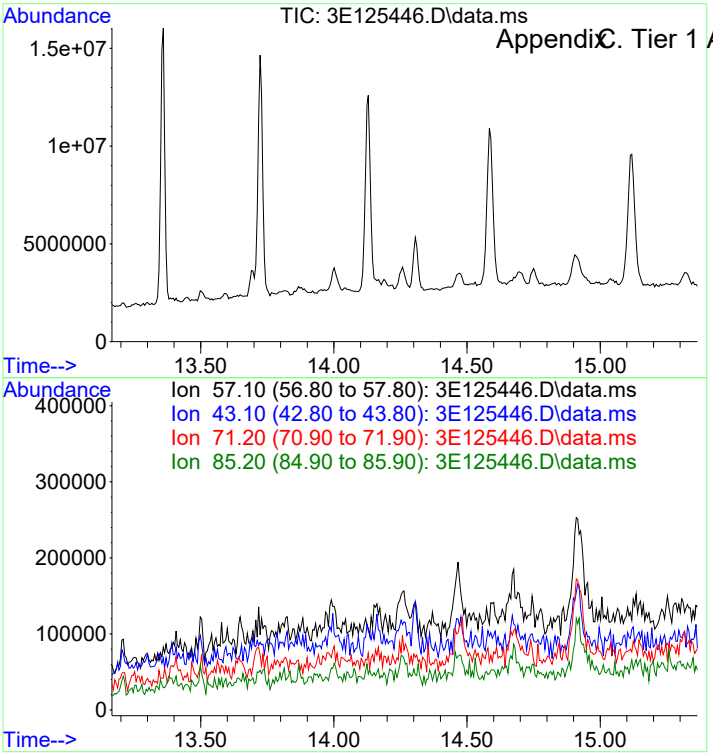



#38
n-Triacontane (C30)
Concen: N.D.
Expected RT: 13.58 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 59.6 |
| 71 | 72.8 |
| 85 | 56.9 |

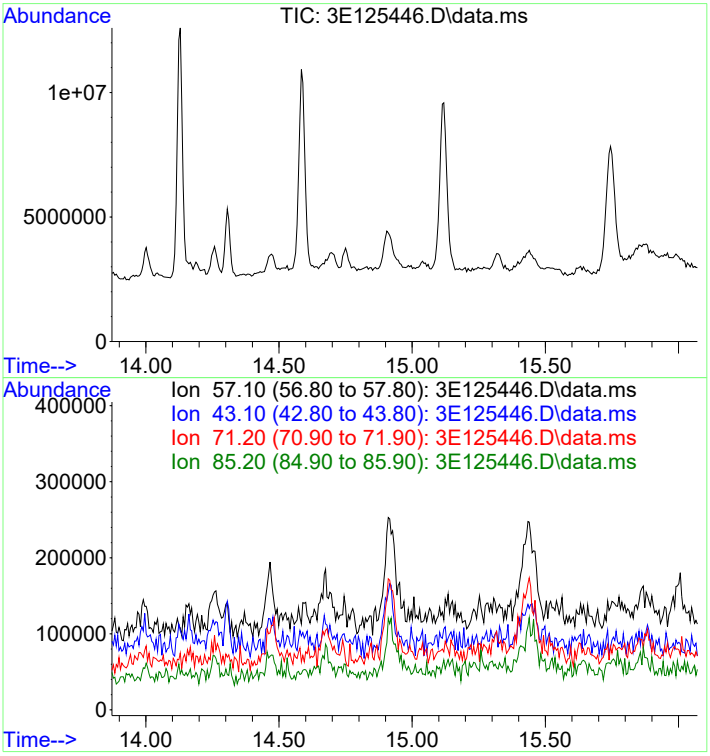



#39
n-Dotriacontane (C32)
Concen: N.D.
Expected RT: 14.27 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 58.6 |
| 71 | 71.7 |
| 85 | 55.6 |

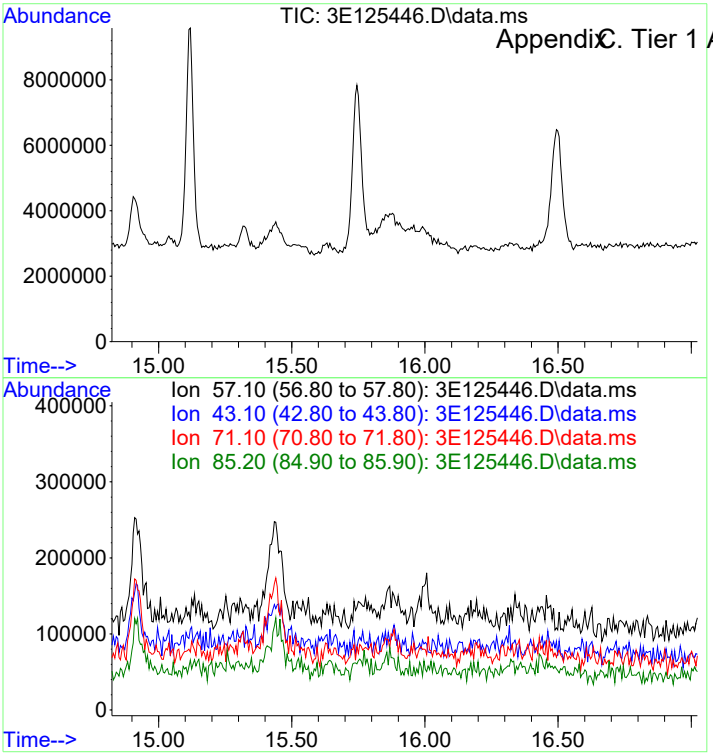



#40
n-Tetratriacontane (C34)
Concen: N.D.
Expected RT: 14.97 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 57.4 |
| 71 | 71.0 |
| 85 | 54.6 |

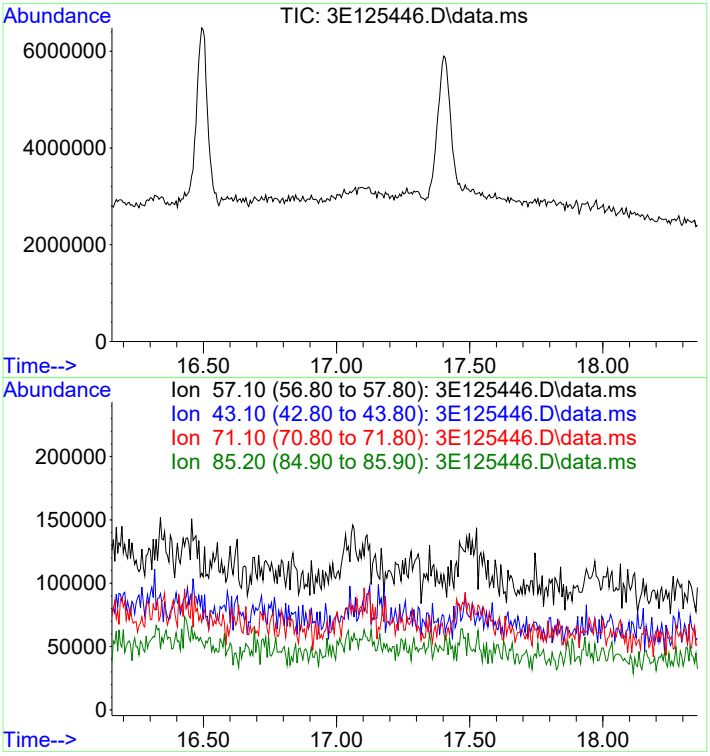



#41
n-Hexatriacontane (C36)
Concen: N.D.
Expected RT: 15.92 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 56.3 |
| 71 | 71.0 |
| 85 | 54.4 |

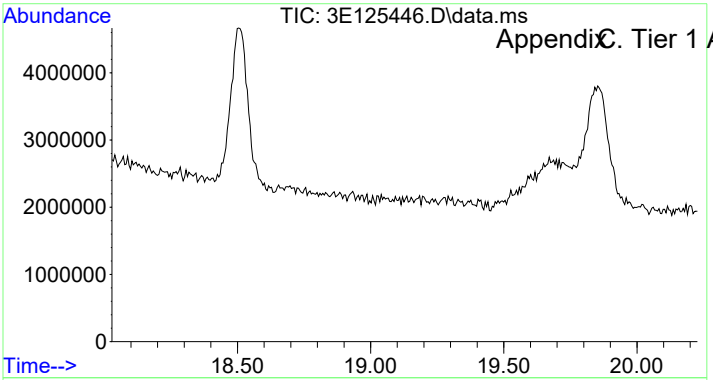


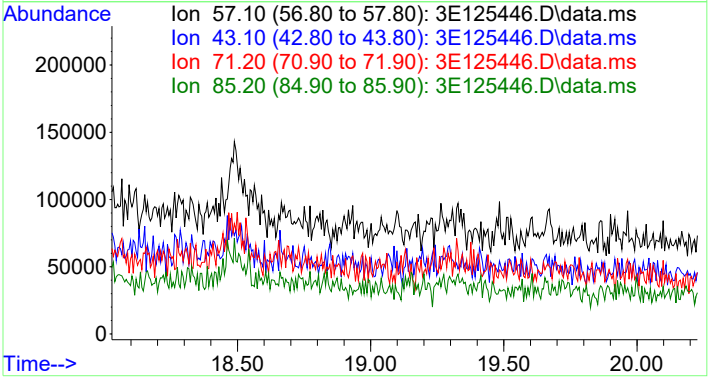

#42
n-Octatriacontane (C38)
Concen: N.D.
Expected RT: 17.26 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 55.0 |
| 71 | 70.8 |
| 85 | 53.9 |



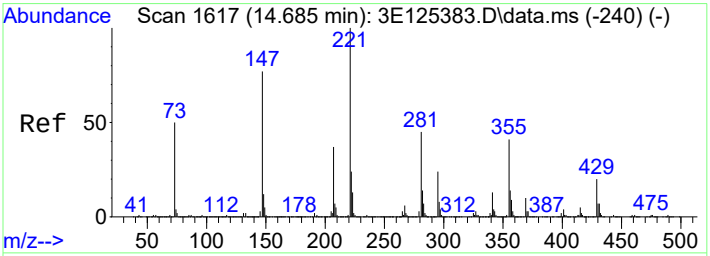



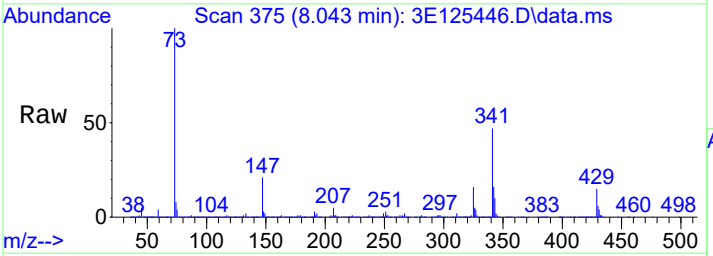

#43
n-Tetracontane (C40)
Concen: N.D.
Expected RT: 19.13 min

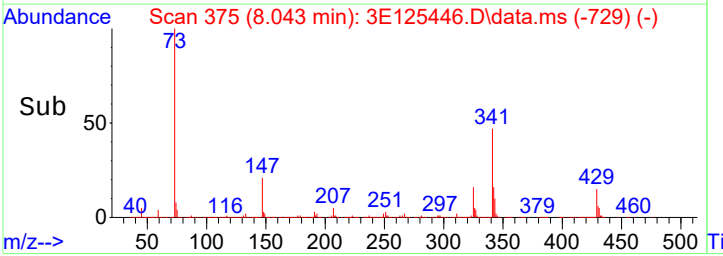
Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 70.6 |
| 85 | 53.9 |



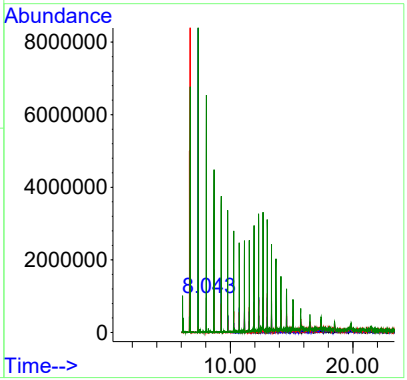



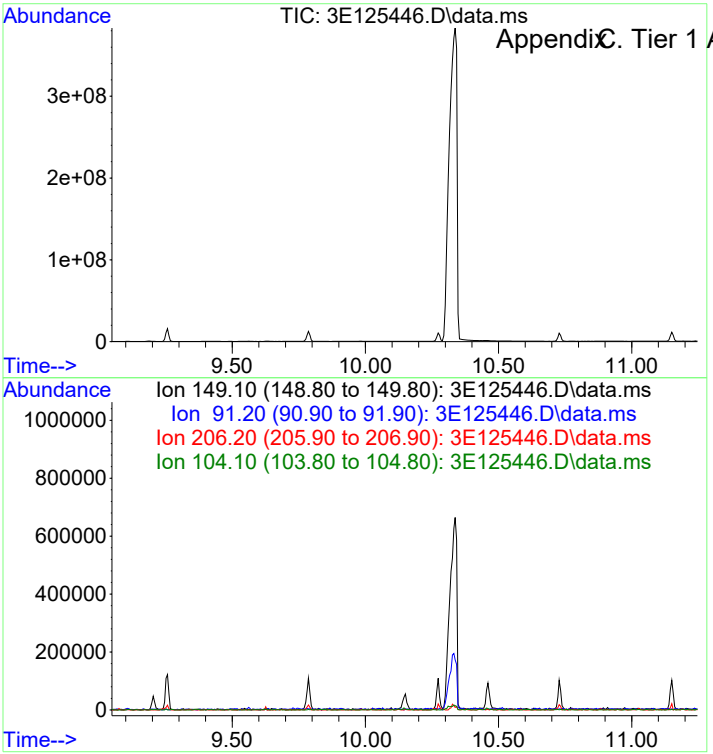




#44
Siloxane
Concen: 10042749.00 m
RT: 8.043 min Scan# 375
Delta R.T. -1.993 min
Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion:429 Resp:10042749

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 429 | 100 | | |
| 355 | 0.0 | 0.0 | 20.0 |
| 281 | 0.0 | 0.0 | 20.0 |
| 73 | 0.0 | 0.0 | 20.0 |



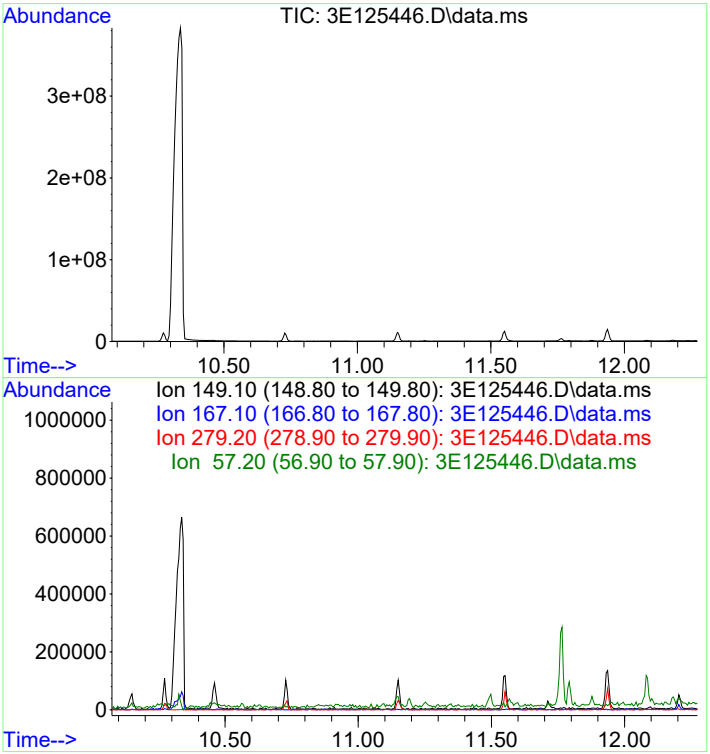



#45
Butyl benzyl phthalate
Concen: N.D.
Expected RT: 10.15 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 91 | 97.4 |
| 206 | 28.9 |
| 104 | 19.1 |

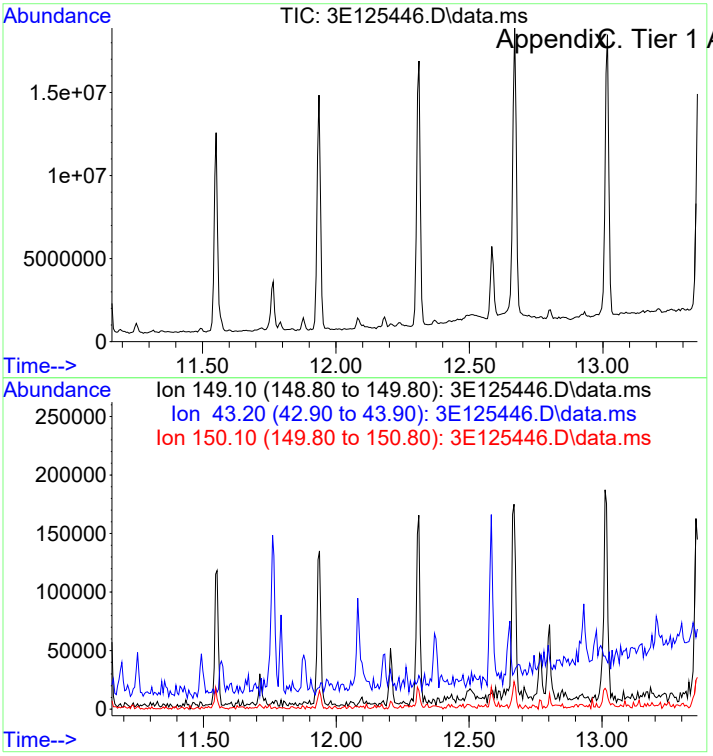



#46
Bis(2-ethylhexyl)phthalate
Concen: N.D.
Expected RT: 11.18 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 167 | 34.3 |
| 279 | 10.6 |
| 57 | 34.0 |

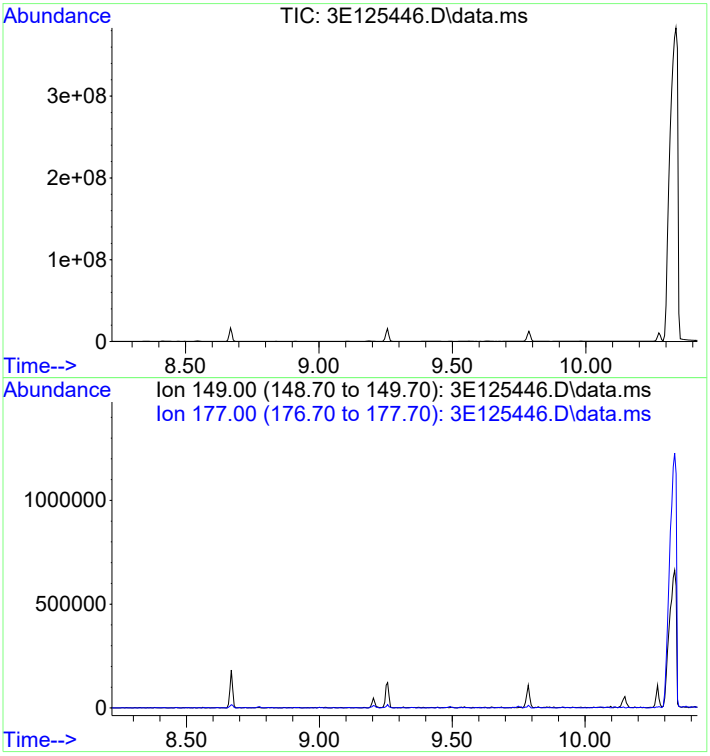



#47
Di-n-octyl Phthalate
Concen: N.D.
Expected RT: 12.26 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 43 | 12.1 |
| 150 | 10.0 |




#48
Diethyl Phthalate
Concen: N.D.
Expected RT: 9.32 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 177 | 21.3 |

LSC Area Percent Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Title : 8270C Calibration

Signal : TIC: 3E125446.D\data.ms

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.048 | 745 | 750 | 754 | rBV8 | 61609 | 93903 | 0.01% | 0.009% |
| 2 | 10.150 | 757 | 769 | 773 | rBV5 | 142697 | 234232 | 0.03% | 0.023% |
| 3 | 10.182 | 773 | 775 | 776 | rBV2 | 36747 | 18516 | 0.00% | 0.002% |
| 4 | 10.198 | 776 | 778 | 781 | rBV4 | 24555 | 25019 | 0.00% | 0.002% |
| 5 | 10.273 | 781 | 792 | 795 | rBV | 10129913 | 8746069 | 1.12% | 0.862% |
| 6 | 10.337 | 795 | 804 | 821 | rVV6 | 382383494 | 777713881 | 100.00% | 76.684% |
| 7 | 10.728 | 871 | 877 | 882 | rBV | 9898494 | 8192158 | 1.05% | 0.808% |
| 8 | 10.883 | 903 | 906 | 910 | rBV6 | 117955 | 151961 | 0.02% | 0.015% |
| 9 | 11.027 | 927 | 933 | 936 | rBV8 | 136248 | 199908 | 0.03% | 0.020% |
| 10 | 11.107 | 943 | 948 | 949 | rBV5 | 102446 | 107607 | 0.01% | 0.011% |
| 11 | 11.150 | 951 | 956 | 961 | rVV | 11080870 | 9258792 | 1.19% | 0.913% |
| 12 | 11.193 | 961 | 964 | 970 | rVB7 | 224588 | 323013 | 0.04% | 0.032% |
| 13 | 11.252 | 971 | 975 | 980 | rVB2 | 597312 | 560536 | 0.07% | 0.055% |
| 14 | 11.316 | 983 | 987 | 991 | rBV7 | 161318 | 174441 | 0.02% | 0.017% |
| 15 | 11.348 | 991 | 993 | 996 | rBV3 | 102577 | 105741 | 0.01% | 0.010% |
| 16 | 11.428 | 1005 | 1008 | 1010 | rBV4 | 76681 | 58107 | 0.01% | 0.006% |
| 17 | 11.492 | 1018 | 1020 | 1024 | rVB4 | 215639 | 191375 | 0.02% | 0.019% |
| 18 | 11.551 | 1024 | 1031 | 1038 | rBV | 11999181 | 11130593 | 1.43% | 1.097% |
| 19 | 11.722 | 1057 | 1063 | 1065 | rBV7 | 183753 | 268646 | 0.03% | 0.026% |
| 20 | 11.765 | 1065 | 1071 | 1074 | rVV | 2914864 | 2817393 | 0.36% | 0.278% |
| 21 | 11.792 | 1074 | 1076 | 1080 | rVB | 467130 | 346423 | 0.04% | 0.034% |
| 22 | 11.878 | 1089 | 1092 | 1096 | rVB | 749435 | 584757 | 0.08% | 0.058% |
| 23 | 11.936 | 1098 | 1103 | 1113 | rVV | 14126557 | 12684017 | 1.63% | 1.251% |
| 24 | 12.081 | 1126 | 1130 | 1141 | rBV4 | 661935 | 960955 | 0.12% | 0.095% |
| 25 | 12.182 | 1146 | 1149 | 1152 | rBV | 588951 | 469006 | 0.06% | 0.046% |
| 26 | 12.236 | 1157 | 1159 | 1167 | rVB6 | 232727 | 298601 | 0.04% | 0.029% |
| 27 | 12.311 | 1167 | 1173 | 1179 | rBV | 15980918 | 14918516 | 1.92% | 1.471% |
| 28 | 12.370 | 1181 | 1184 | 1187 | rBV3 | 252743 | 248250 | 0.03% | 0.024% |
| 29 | 12.584 | 1220 | 1224 | 1229 | rBV | 4348553 | 3953341 | 0.51% | 0.390% |
| 30 | 12.669 | 1234 | 1240 | 1256 | rVB | 17454808 | 17699241 | 2.28% | 1.745% |
| 31 | 12.803 | 1262 | 1265 | 1269 | rBV3 | 536642 | 482081 | 0.06% | 0.048% |
| 32 | 13.017 | 1299 | 1305 | 1312 | rBV | 16858930 | 15933260 | 2.05% | 1.571% |
| 33 | 13.359 | 1363 | 1369 | 1382 | rBV | 14127684 | 15984847 | 2.06% | 1.576% |
| 34 | 13.498 | 1393 | 1395 | 1404 | rBV8 | 519117 | 767482 | 0.10% | 0.076% |
| 35 | 13.723 | 1428 | 1437 | 1444 | rBV | 12318553 | 16291570 | 2.09% | 1.606% |
| 36 | 14.001 | 1485 | 1489 | 1495 | rVB5 | 1135328 | 1548491 | 0.20% | 0.153% |
| 37 | 14.129 | 1507 | 1513 | 1522 | rBV | 9956932 | 14304532 | 1.84% | 1.410% |
| 38 | 14.258 | 1533 | 1537 | 1542 | rVV6 | 1043375 | 1417606 | 0.18% | 0.140% |
| 39 | 14.306 | 1542 | 1546 | 1553 | rVB2 | 2682029 | 3302037 | 0.42% | 0.326% |
| 40 | 14.584 | 1592 | 1598 | 1610 | rVB | 8001702 | 12616200 | 1.62% | 1.244% |

LSC Area Percent Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Title : 8270C Calibration

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 41 | 14.750 | 1626 | 1629 | 1637 | rVB9 | 903262 | 1319174 | 0.17% | 0.130% |
| 42 | 14.905 | 1654 | 1658 | 1671 | rVB8 | 1464471 | 3351437 | 0.43% | 0.330% |
| 43 | 15.119 | 1691 | 1698 | 1708 | rVB | 6695285 | 12662787 | 1.63% | 1.249% |
| 44 | 15.745 | 1807 | 1815 | 1826 | rBV2 | 4983221 | 12139608 | 1.56% | 1.197% |
| 45 | 16.493 | 1948 | 1955 | 1967 | rVB3 | 3669484 | 10245560 | 1.32% | 1.010% |
| 46 | 17.403 | 2117 | 2125 | 2138 | rVB2 | 2785264 | 8739900 | 1.12% | 0.862% |
| 47 | 18.505 | 2322 | 2331 | 2351 | rVB5 | 2419529 | 10537891 | 1.35% | 1.039% |

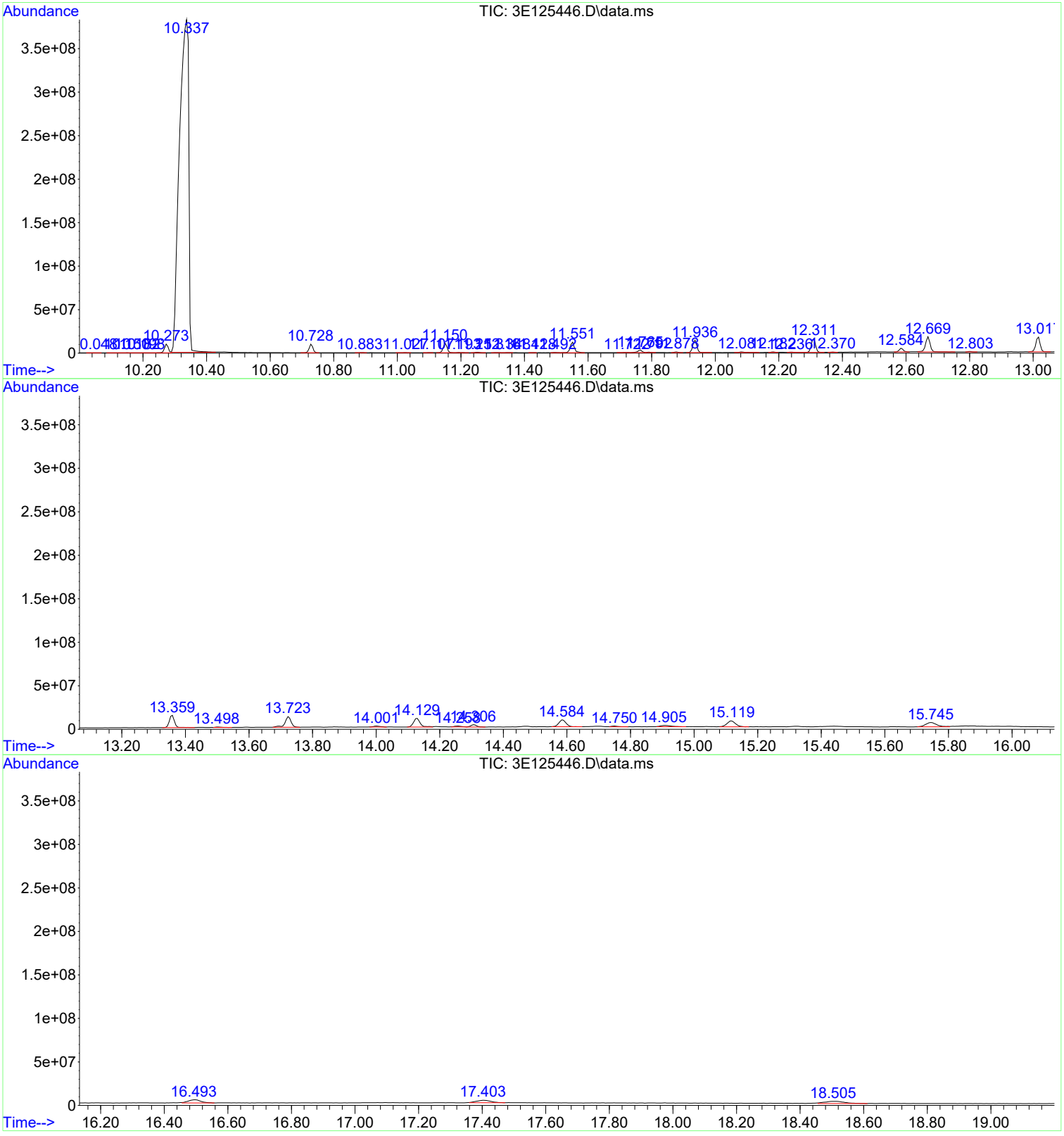
Sum of corrected areas: 1014179461

LSC Report - Integrated Chromatogram

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P



# Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

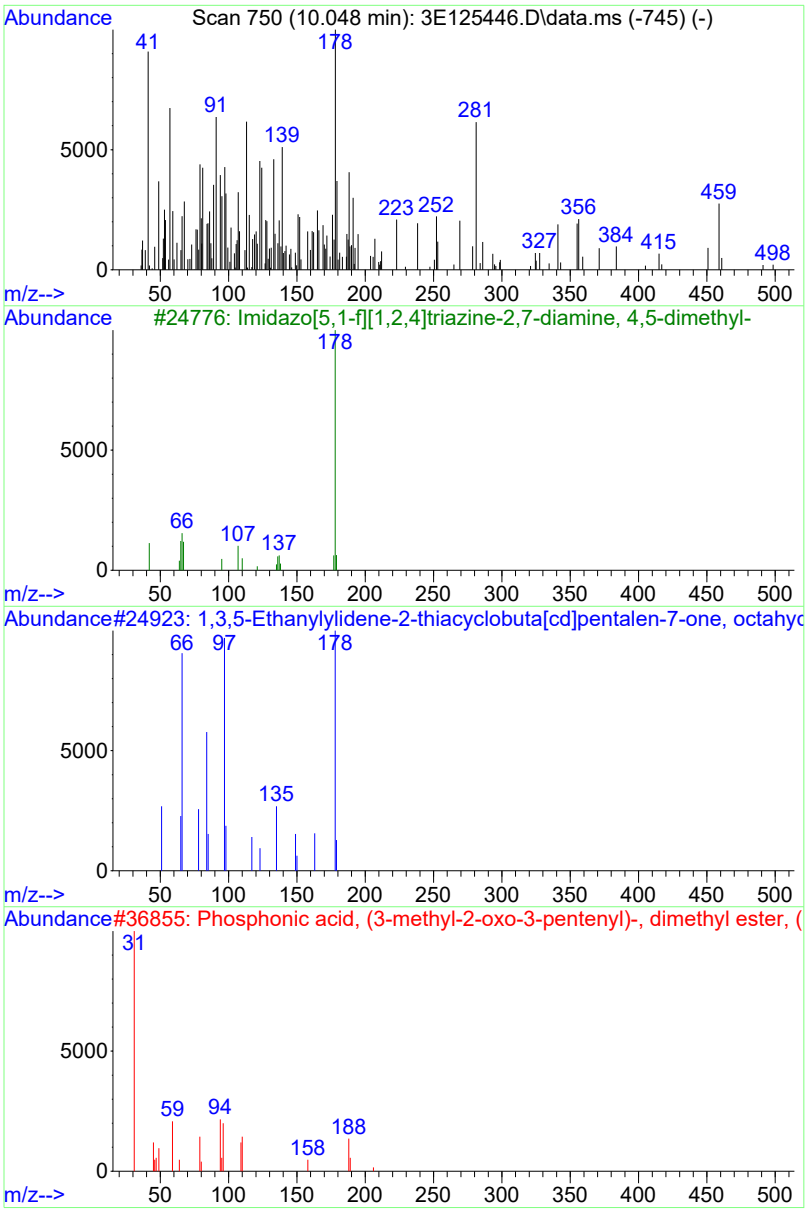
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

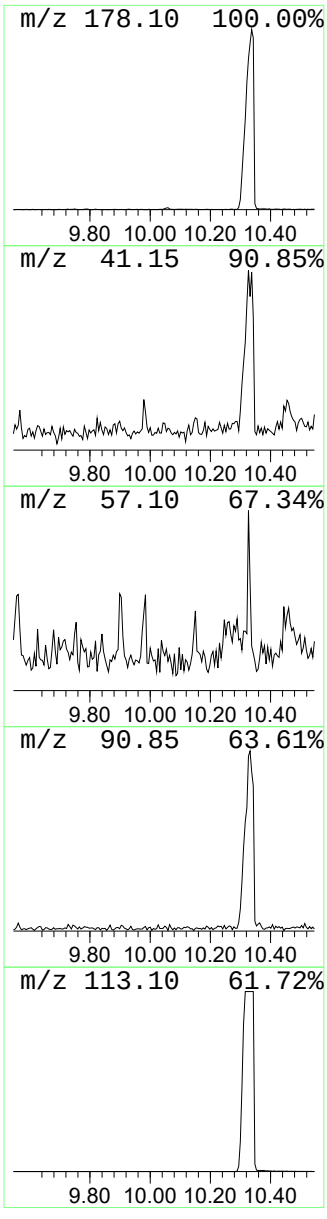
**********

Peak Number 1 Imidazo[5,1-f][1,2,4]triazi... Concentration Rank 41

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.048 | 939.03 | 93903 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Imidazo[5,1-f][1,2,4]triazine-2,... | 178 | C7H10N6 | 050473-86-4 | 27 |
| 2 | 1,3,5-Ethanylylidene-2-thiacyclo... | 178 | C10H10OS | 019086-85-2 | 27 |
| 3 | Phosphonic acid, (3-methyl-2-oxo... | 206 | C8H15O4P | 054543-04-3 | 14 |
| 4 | .beta.-Chlordene $$ 1,6-Methano-... | 336 | C10H6Cl6 | 056534-03-3 | 11 |
| 5 | 1,2,4-Triazolo[4,3-a]pyridine, 3... | 178 | C7H6N4O2 | 031040-10-5 | 11 |



# Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

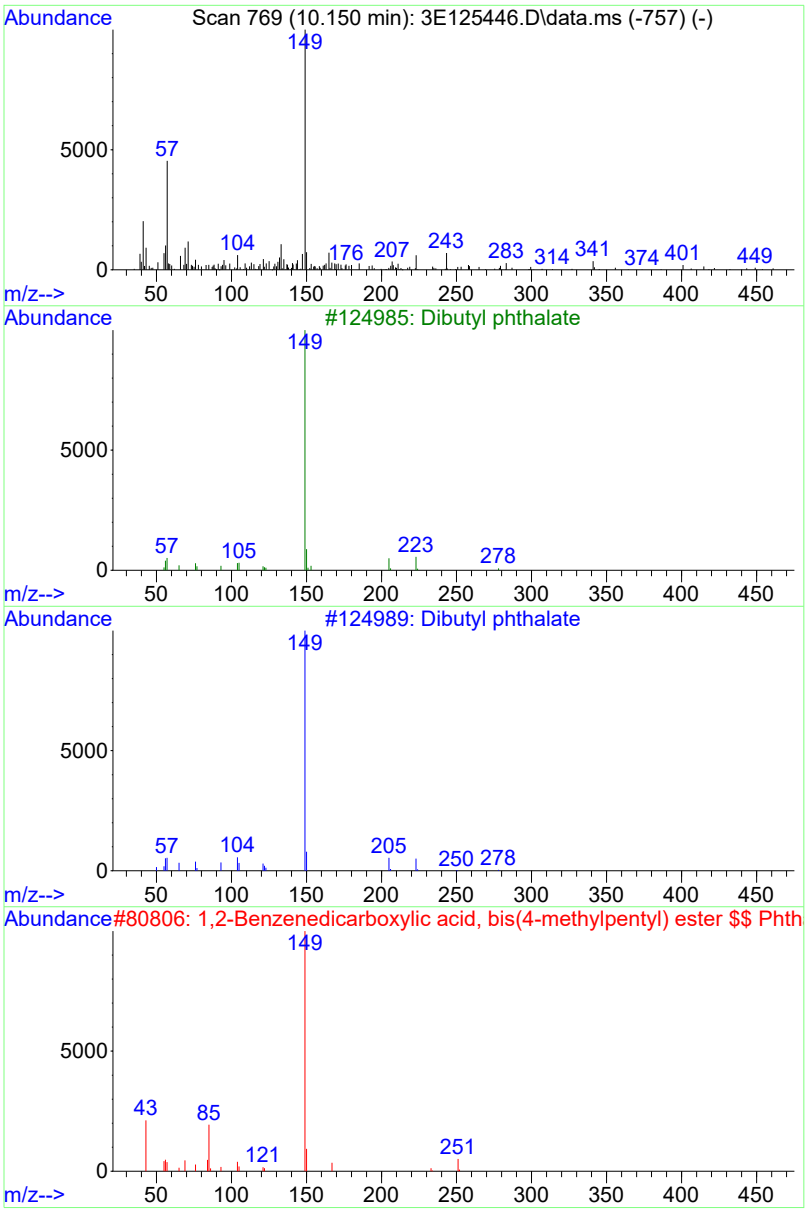
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

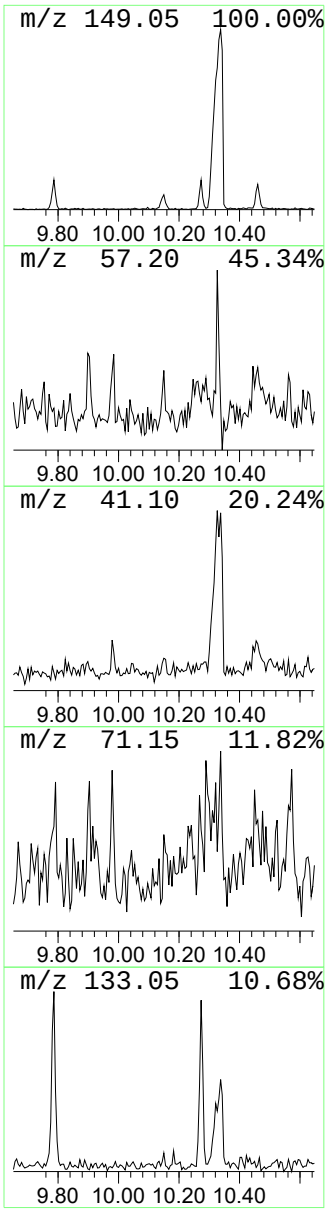
**********

Peak Number 2 Dibutyl phthalate Concentration Rank 34

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.150 | 2342.32 | 234232 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Dibutyl phthalate | 278 | C16H22O4 | 000084-74-2 | 58 |
| 2 | Dibutyl phthalate | 278 | C16H22O4 | 000084-74-2 | 53 |
| 3 | 1,2-Benzenedicarboxylic acid, bi... | 334 | C20H30O4 | 000146-50-9 | 53 |
| 4 | 1,2-Benzenedicarboxylic acid, bu... | 334 | C20H30O4 | 000084-78-6 | 53 |
| 5 | 1,2-Benzenedicarboxylic acid, mo... | 222 | C12H14O4 | 000131-70-4 | 53 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

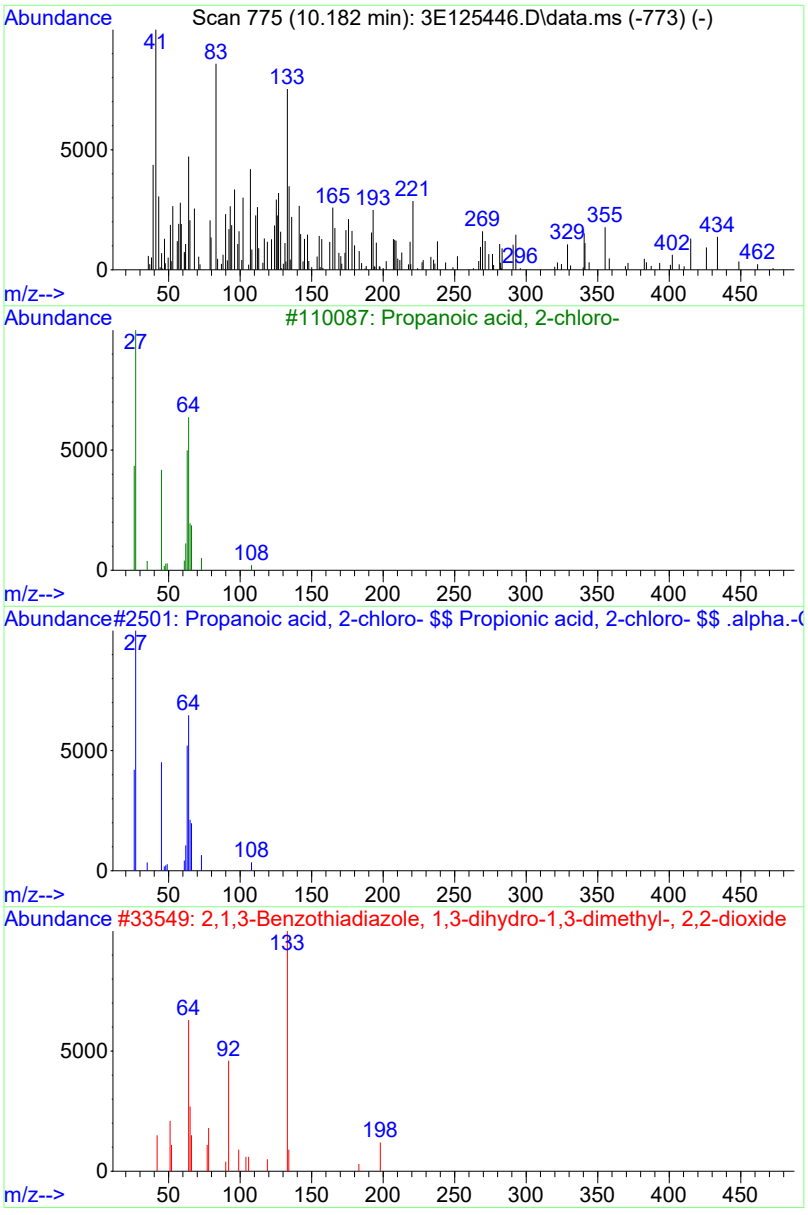
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

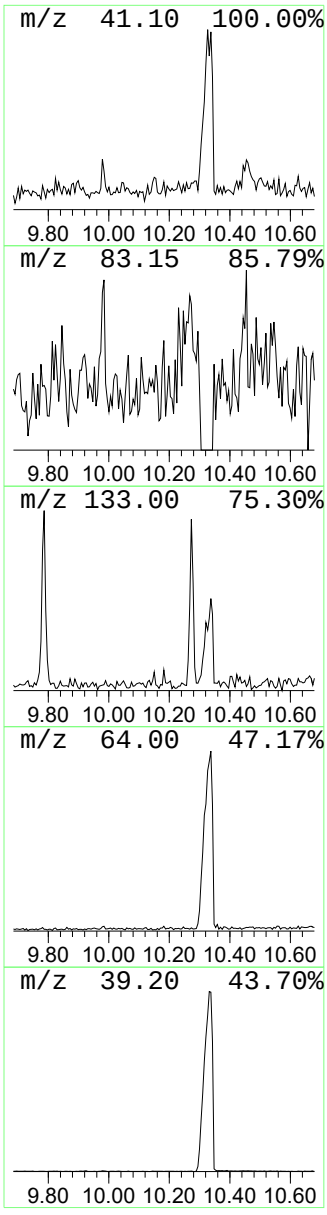
**********

Peak Number 3 Propanoic acid, 2-chloro- Concentration Rank 44

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.182 | 185.16 | 18516 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Propanoic acid, 2-chloro- | 108 | C3H5ClO2 | 000598-78-7 | 38 |
| 2 | Propanoic acid, 2-chloro- $$ Pro... | 108 | C3H5ClO2 | 000598-78-7 | 25 |
| 3 | 2,1,3-Benzothiadiazole, 1,3-dihy... | 198 | C8H10N2O2S | 031378-12-8 | 23 |
| 4 | Bicyclo[2.2.1]heptan-2-one, 4-et... | 176 | C12H16O | 000000-00-0 | 12 |
| 5 | Propanoic acid, 2-chloro-, 2-pro... | 148 | C6H9ClO2 | 000000-00-0 | 10 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

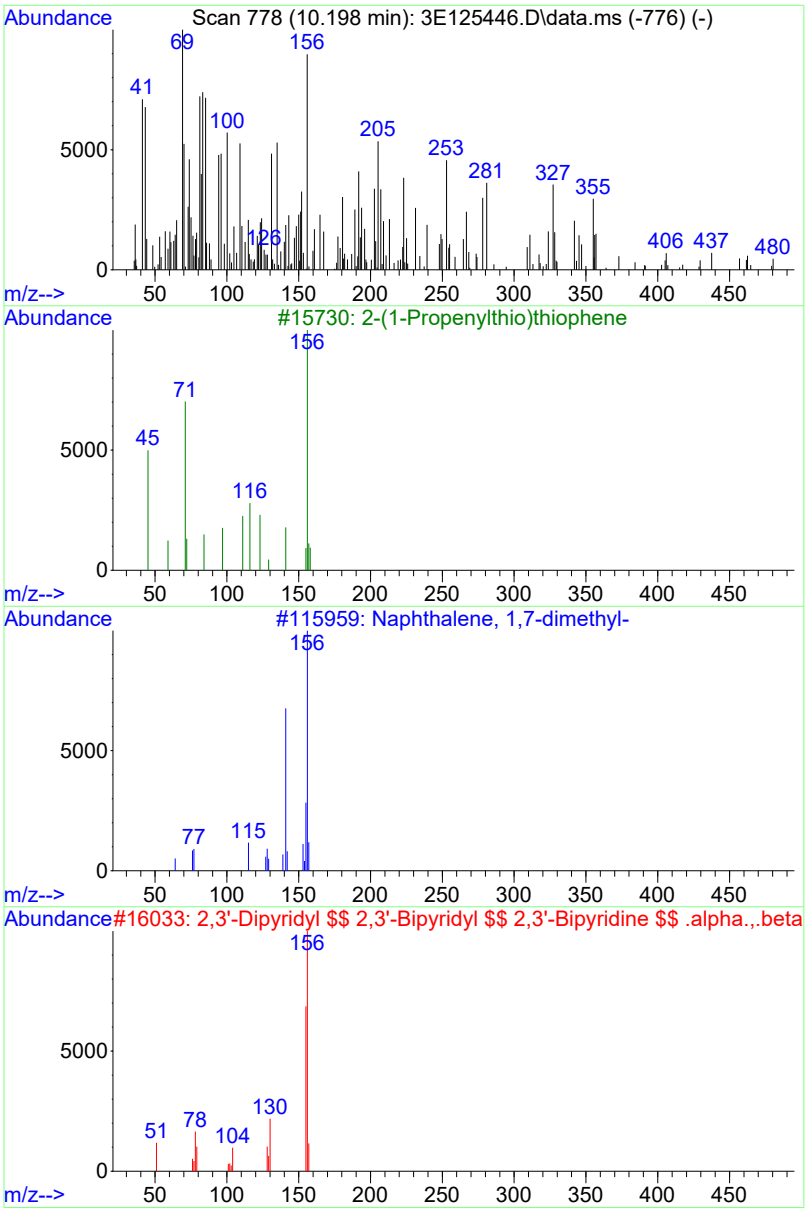
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

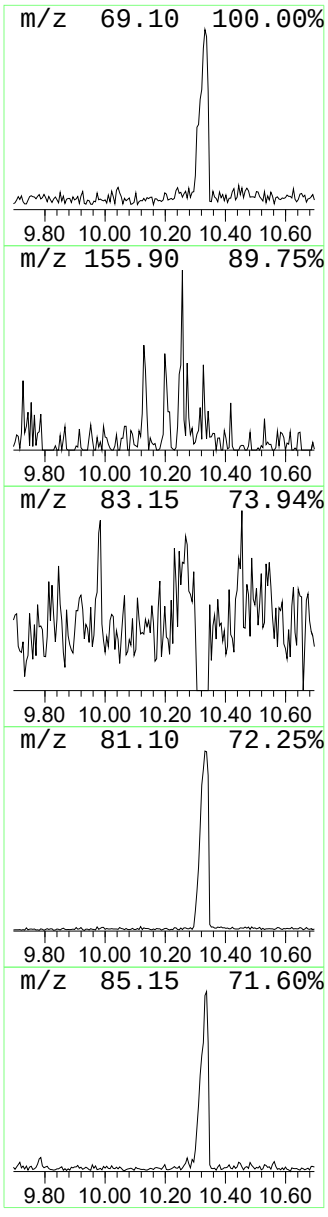
**********

Peak Number 4 2-(1-Propenylthio)thiophene Concentration Rank 43

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.198 | 250.19 | 25019 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-(1-Propenylthio)thiophene | 156 | C7H8S2 | 000000-00-0 | 10 |
| 2 | Naphthalene, 1,7-dimethyl- | 156 | C12H12 | 000575-37-1 | 9 |
| 3 | 2,3'-Dipyridyl $$ 2,3'-Bipyridyl... | 156 | C10H8N2 | 000581-50-0 | 9 |
| 4 | Naphthalene, 2,6-dimethyl- | 156 | C12H12 | 000581-42-0 | 9 |
| 5 | Cyclopentanecarboxylic acid, 4-m... | 216 | C14H16O2 | 072047-98-4 | 9 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

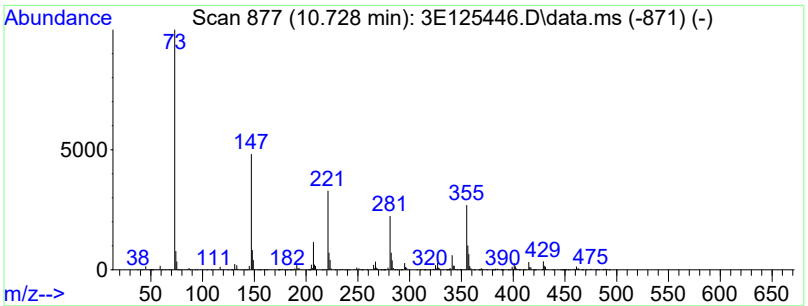
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

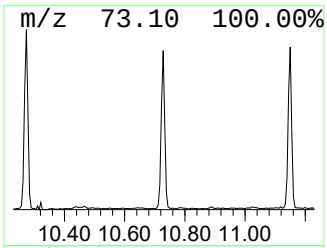
**********

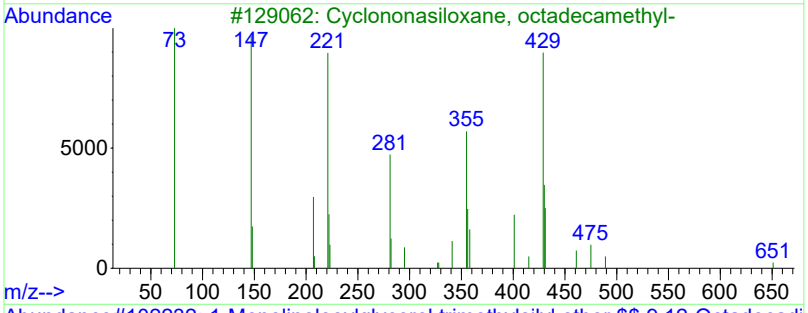
Peak Number 5 Cyclononasiloxane, octadeca... Concentration Rank 16

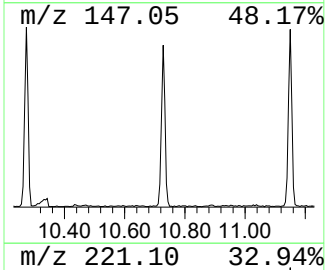
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.728 | 81921.60 | 8192160 | External Standard | 0.000 |

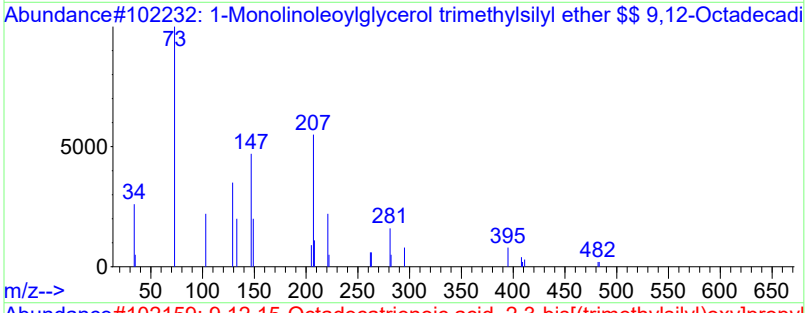
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 59 |
| 2 | 1-Monolinoleoylglycerol trimethy... | 498 | C27H54O4Si2 | 054284-45-6 | 42 |
| 3 | 9,12,15-Octadecatrienoic acid, 2... | 496 | C27H52O4Si2 | 055521-22-7 | 38 |
| 4 | Pentasiloxane, dodecamethyl- | 384 | C12H36O4Si5 | 000141-63-9 | 38 |
| 5 | 3-Isopropoxy-1,1,1,7,7,7-hexamet... | 576 | C18H52O7Si7 | 071579-69-6 | 16 |

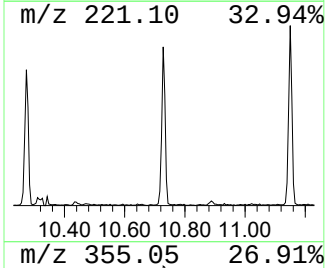


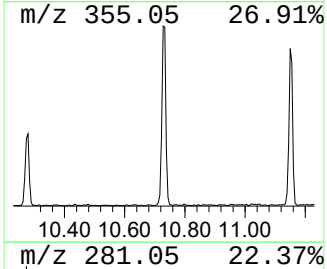



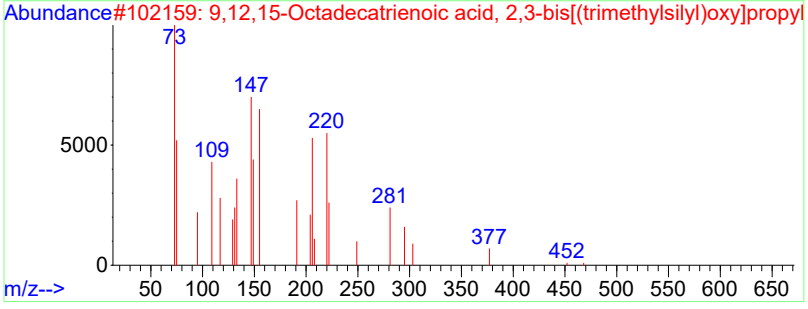



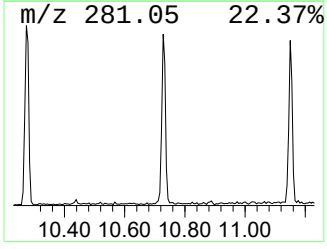



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

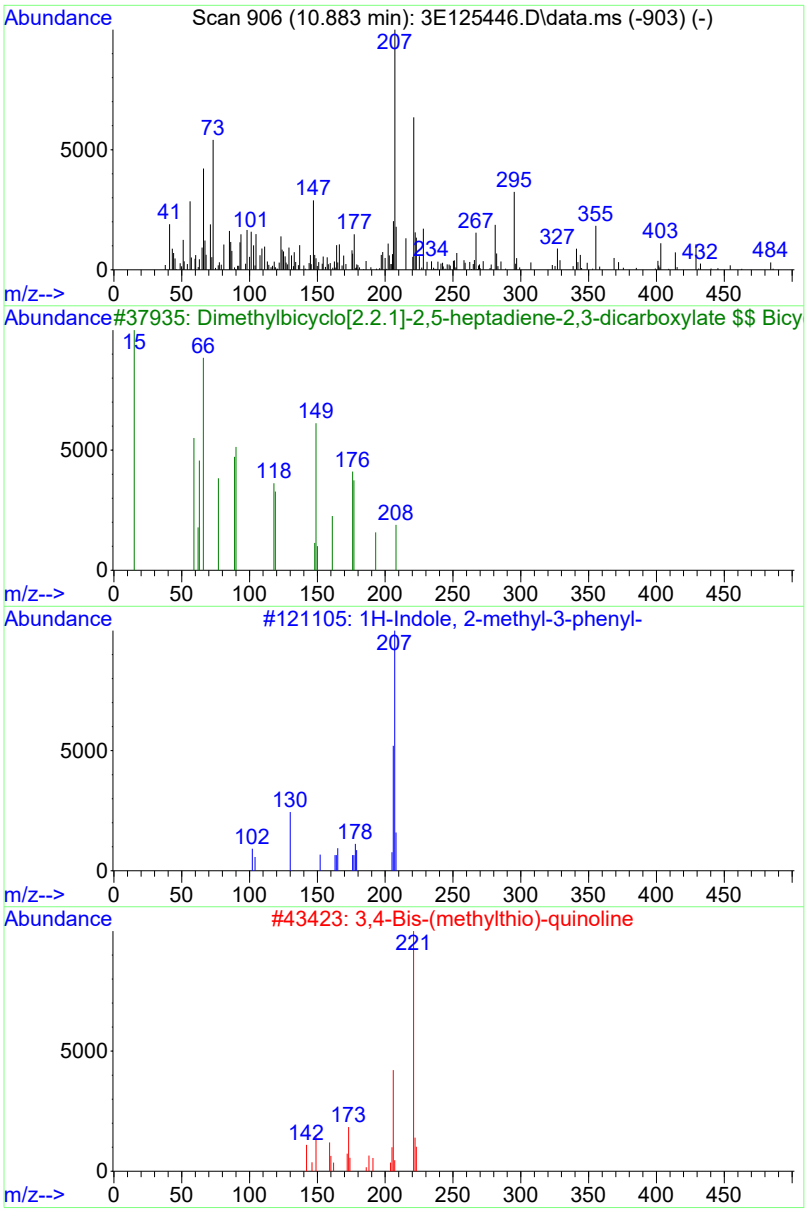
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

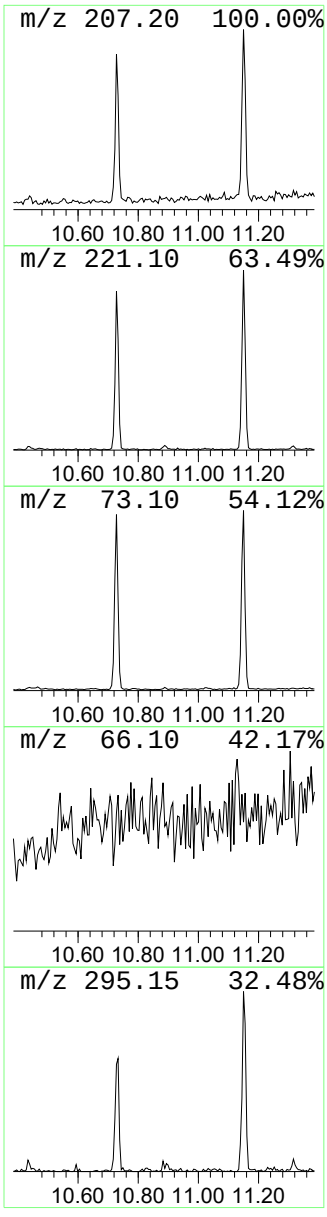
**********

Peak Number 6 Dimethylbicyclo[2.2.1]-2,5-... Concentration Rank 38

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.883 | 1519.61 | 151961 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Dimethylbicyclo[2.2.1]-2,5-hepta... | 208 | C11H12O4 | 000947-57-9 | 25 |
| 2 | 1H-Indole, 2-methyl-3-phenyl- | 207 | C15H13N | 004757-69-1 | 16 |
| 3 | 3,4-Bis-(methylthio)-quinoline | 221 | C11H11NS2 | 000000-00-0 | 14 |
| 4 | 3,3,7,11-Tetramethyltricyclo[5.4... | 222 | C15H26O | 000000-00-0 | 11 |
| 5 | Anthracene, 9,10-diethyl-9,10-di... | 236 | C18H20 | 046868-29-5 | 10 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

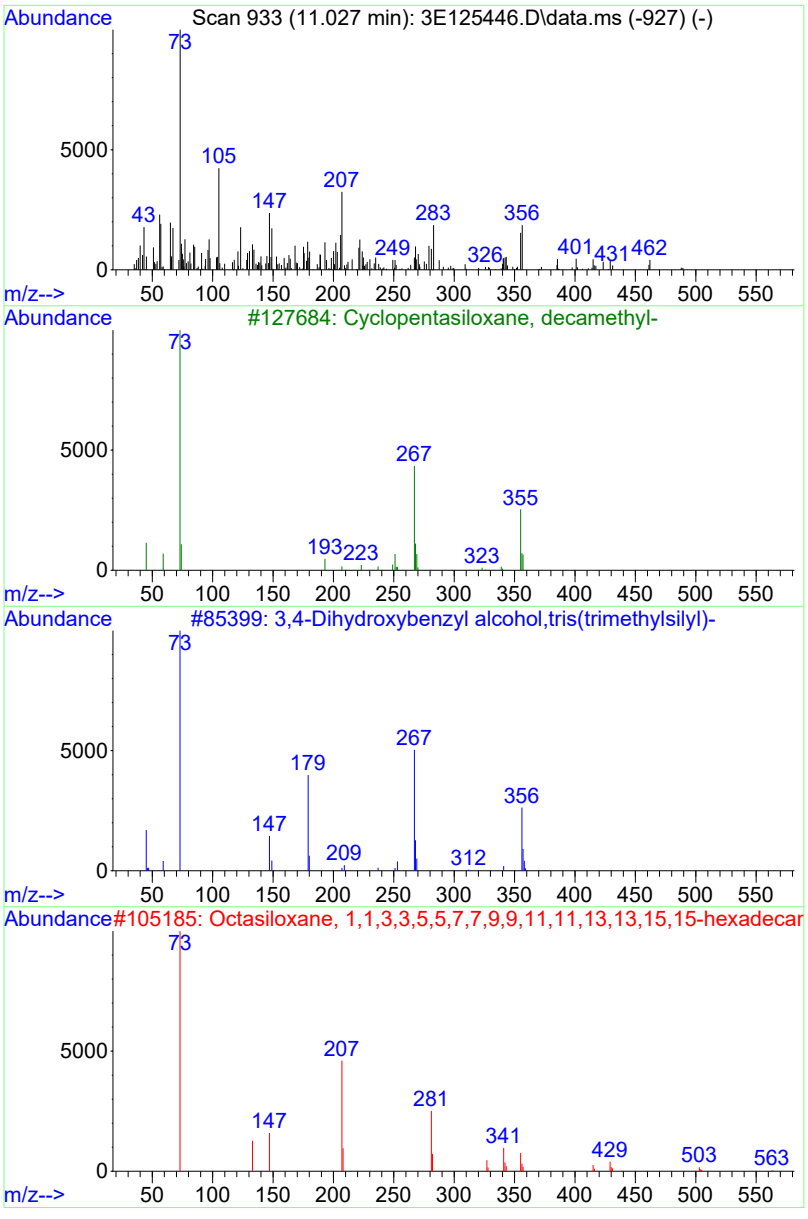
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

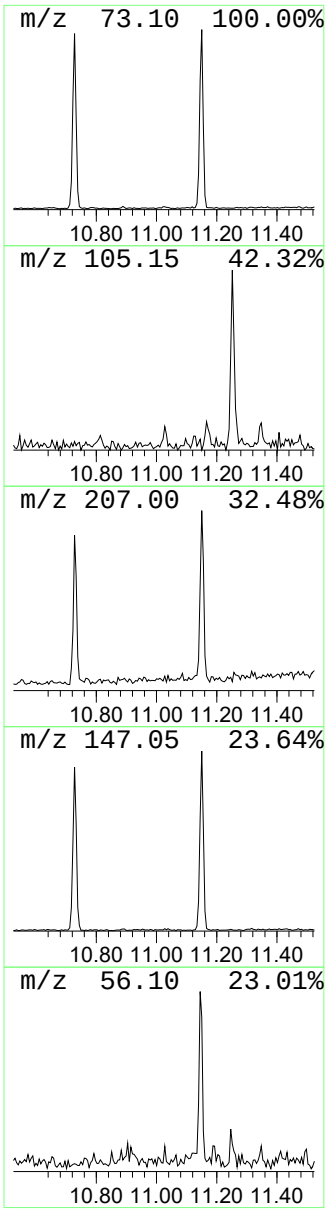
**********

Peak Number 7 Cyclopentasiloxane, decamet... Concentration Rank 35

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.027 | 1999.08 | 199908 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclopentasiloxane, decamethyl- | 370 | C10H30O5Si5 | 000541-02-6 | 9 |
| 2 | 3,4-Dihydroxybenzyl alcohol,tris... | 356 | C16H32O3Si3 | 068595-79-9 | 9 |
| 3 | Octasiloxane, 1,1,3,3,5,5,7,7,9,... | 578 | C16H50O7Si8 | 019095-24-0 | 9 |
| 4 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 8 |
| 5 | Heptasiloxane, 1,1,3,3,5,5,7,7,9... | 504 | C14H44O6Si7 | 019095-23-9 | 8 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

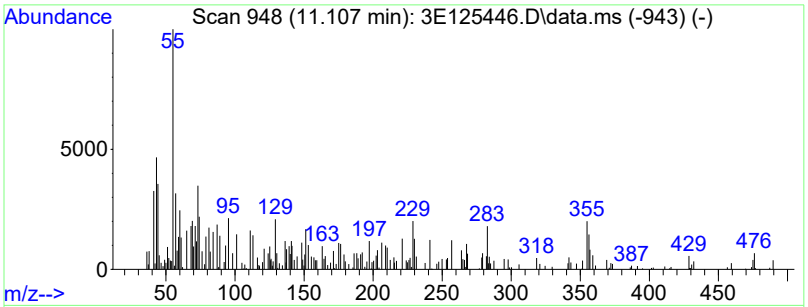
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

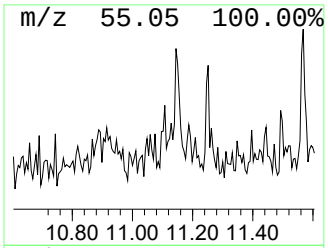
**********

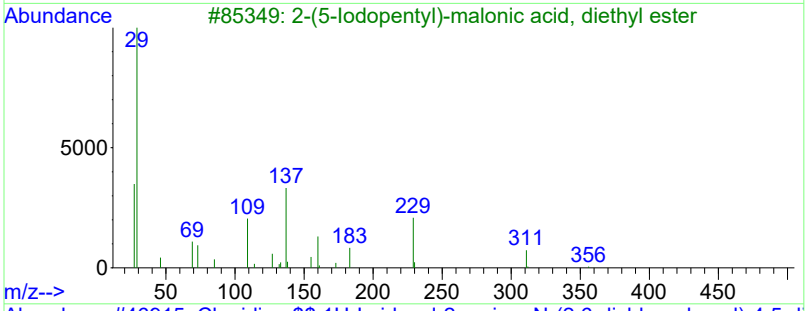
Peak Number 8 2-(5-Iodopentyl)-malonic ac... Concentration Rank 39

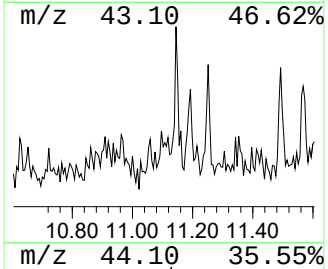
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.107 | 1076.07 | 107607 | External Standard | 0.000 |

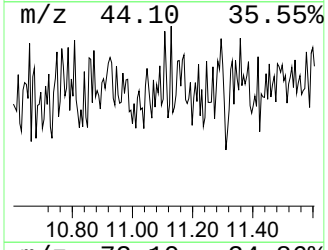
| Hit# of 3 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2-(5-Iodopentyl)-malonic acid, d... | 356 | C12H21IO4 | 000000-00-0 | 9 |
| 2 | Clonidine $$ 1H-Imidazol-2-amine... | 229 | C9H9Cl2N3 | 004205-90-7 | 4 |
| 3 | Mercury, diethyl- $$ Diethylmerc... | 260 | C4H10Hg | 000627-44-1 | 1 |

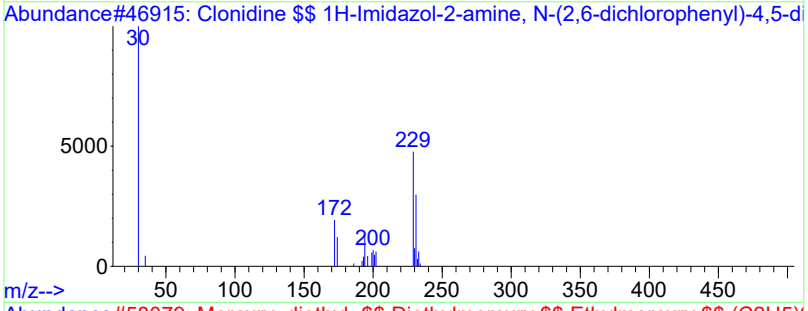


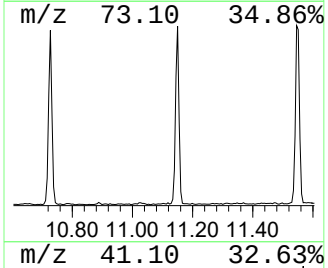



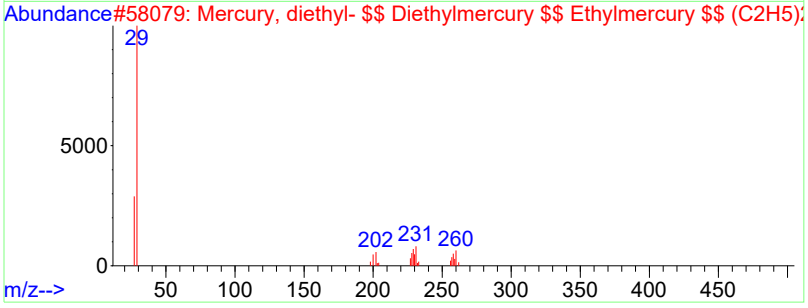



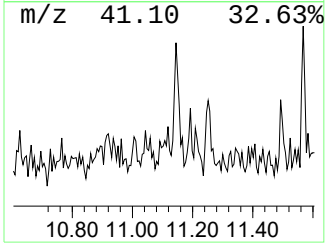



Library Search Compound Report

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Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
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Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

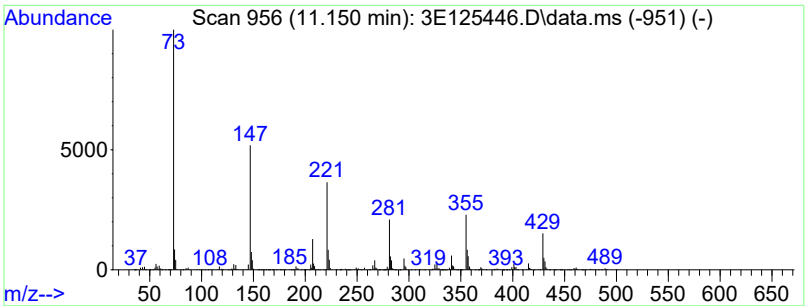
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

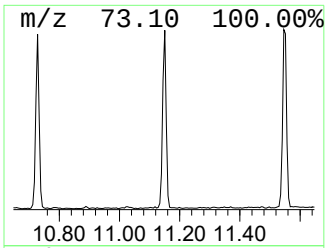
**********

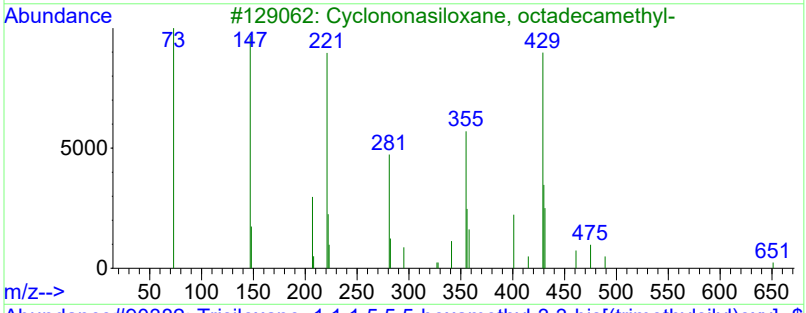
Peak Number 9 Cyclononasiloxane, octadeca... Concentration Rank 14

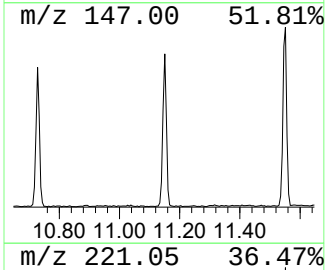
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.150 | 92587.90 | 9258790 | External Standard | 0.000 |

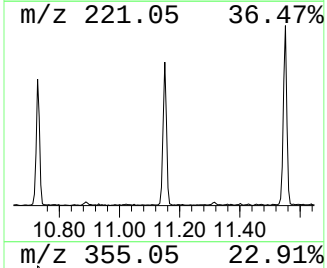
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 62 |
| 2 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 43 |
| 3 | 1,1,1,5,7,7,7-Heptamethyl-3,3-bi... | 444 | C13H40O5Si6 | 038147-00-1 | 42 |
| 4 | 9,12,15-Octadecatrienoic acid, 2... | 496 | C27H52O4Si2 | 055521-22-7 | 38 |
| 5 | 3-Isopropoxy-1,1,1,7,7,7-hexamet... | 576 | C18H52O7Si7 | 071579-69-6 | 25 |

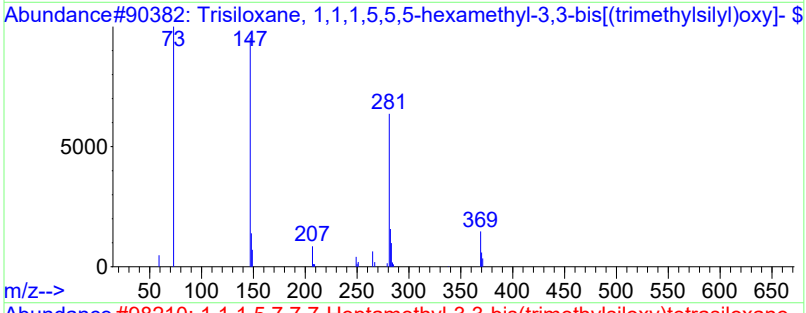


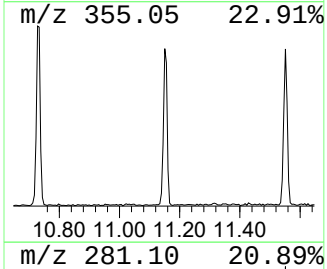



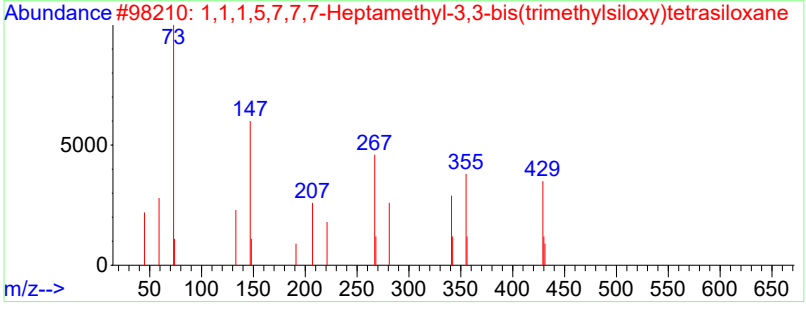



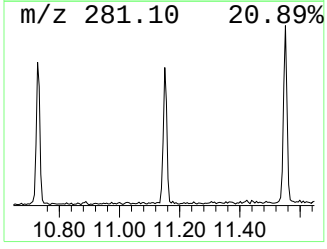



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Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

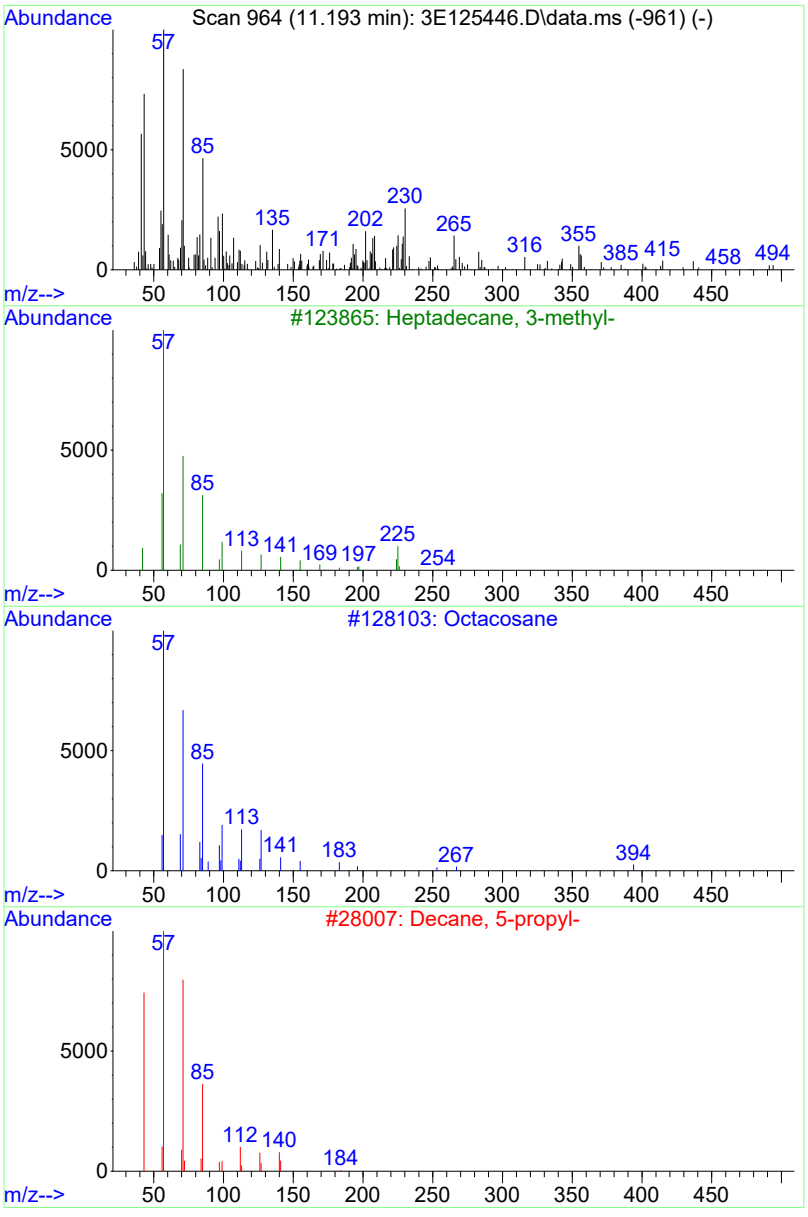
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

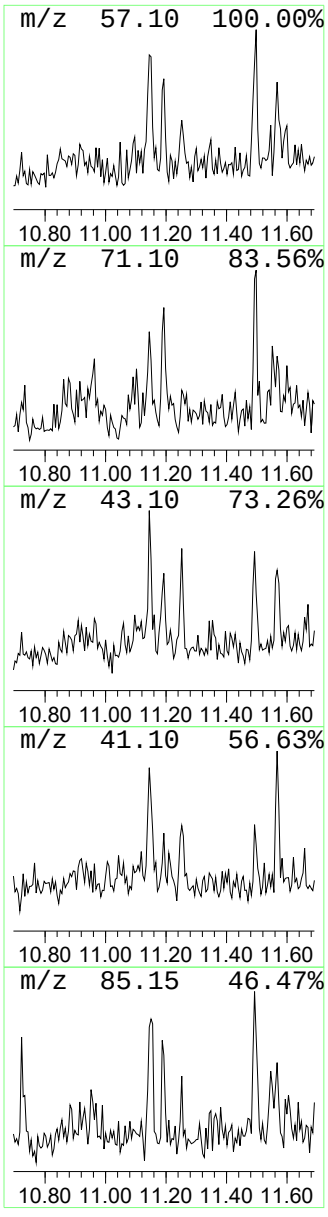
**********

Peak Number 10 Heptadecane, 3-methyl- Concentration Rank 30

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.193 | 3230.13 | 323013 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Heptadecane, 3-methyl- | 254 | C18H38 | 006418-44-6 | 52 |
| 2 | Octacosane | 394 | C28H58 | 000630-02-4 | 49 |
| 3 | Decane, 5-propyl- | 184 | C13H28 | 017312-62-8 | 49 |
| 4 | Undecane, 2,3-dimethyl- $$ 2,3-D... | 184 | C13H28 | 017312-77-5 | 47 |
| 5 | Octacosane | 394 | C28H58 | 000630-02-4 | 47 |



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ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

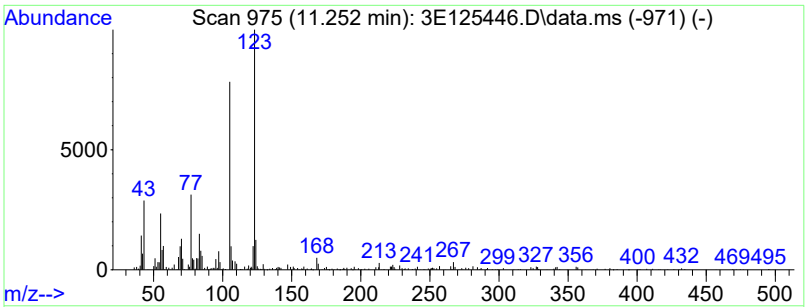
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

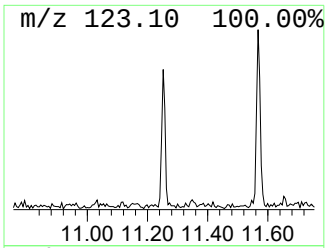
**********

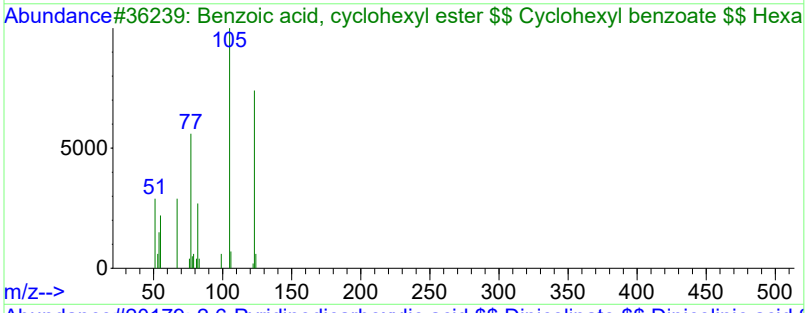
Peak Number 11 Benzoic acid, cyclohexyl es... Concentration Rank 26

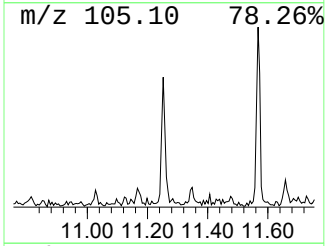
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.252 | 5605.36 | 560536 | External Standard | 0.000 |

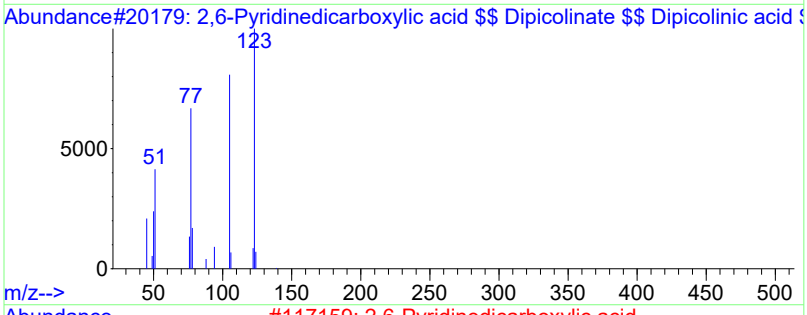
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzoic acid, cyclohexyl ester $... | 204 | C13H16O2 | 002412-73-9 | 78 |
| 2 | 2,6-Pyridinedicarboxylic acid $$... | 167 | C7H5NO4 | 000499-83-2 | 78 |
| 3 | 2,6-Pyridinedicarboxylic acid | 167 | C7H5NO4 | 000499-83-2 | 78 |
| 4 | Niacin | 123 | C6H5NO2 | 000059-67-6 | 64 |
| 5 | Benzoic acid, pentyl ester $$ n-... | 192 | C12H16O2 | 002049-96-9 | 56 |

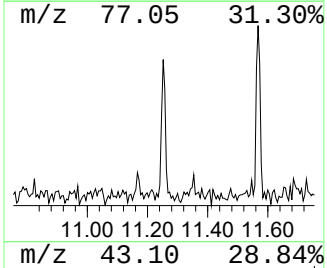


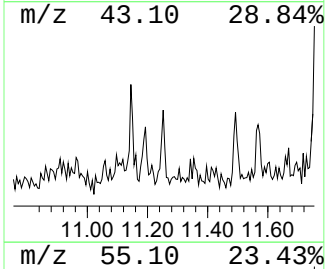



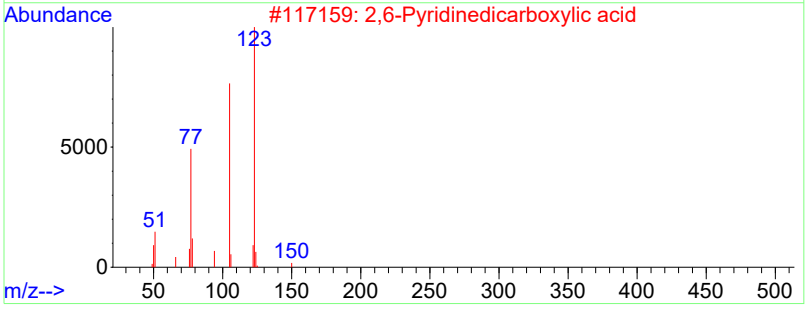



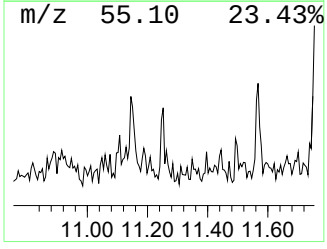



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ALS Vial : 3 Sample Multiplier: 1

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Quant Title : 8270C Calibration

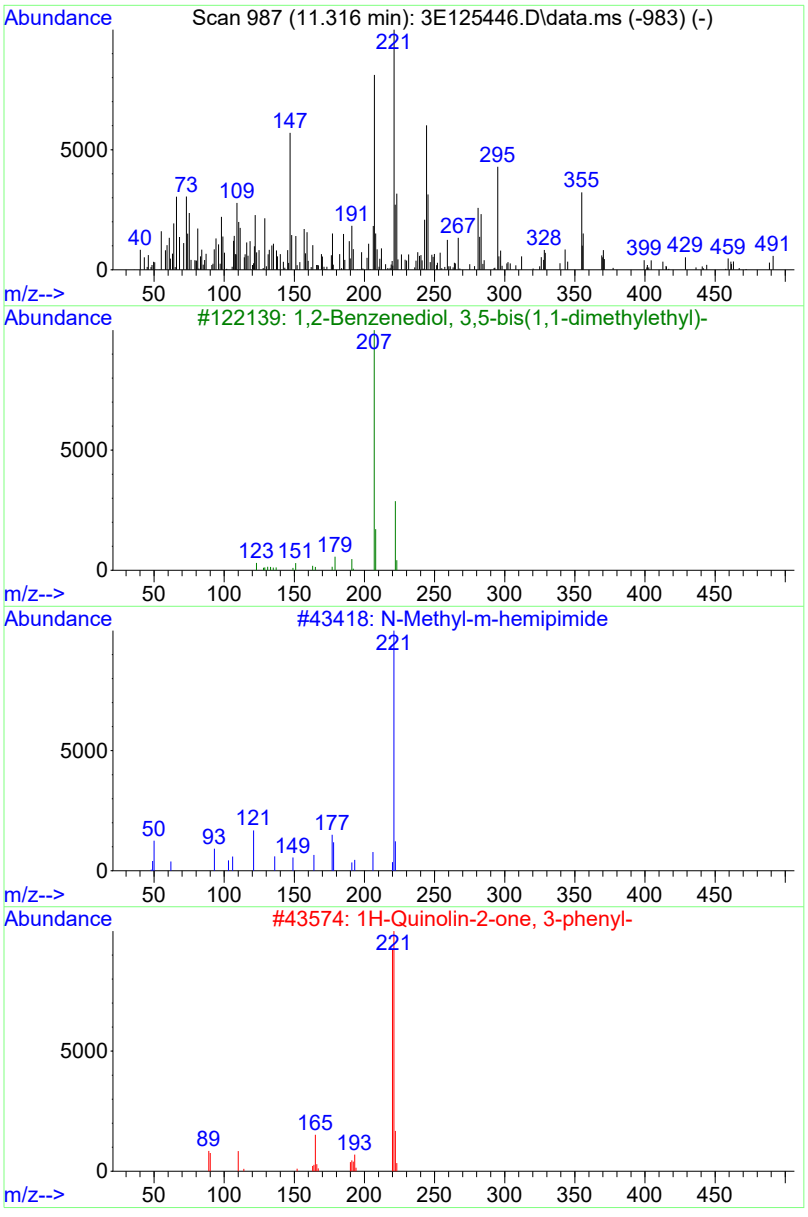
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

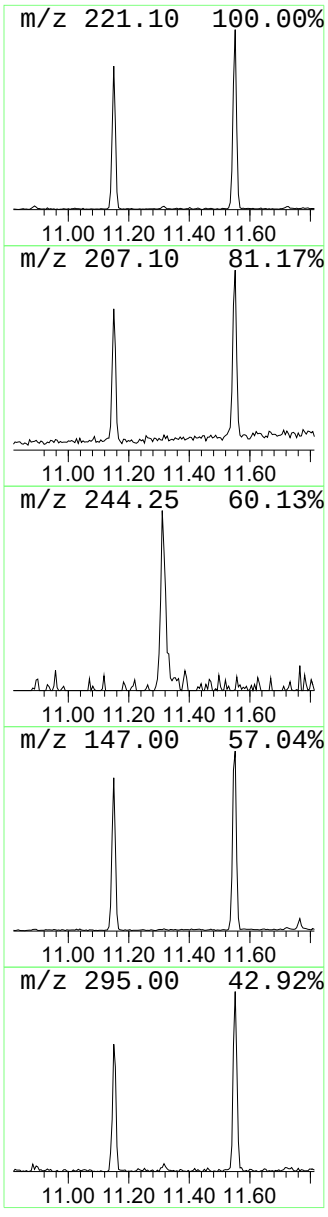
**********

Peak Number 12 1,2-Benzenediol, 3,5-bis(1,... Concentration Rank 37

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.316 | 1744.41 | 174441 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1,2-Benzenediol, 3,5-bis(1,1-dim... | 222 | C14H22O2 | 001020-31-1 | 10 |
| 2 | N-Methyl-m-hemipimide | 221 | C11H11NO4 | 092288-92-1 | 10 |
| 3 | 1H-Quinolin-2-one, 3-phenyl- | 221 | C15H11NO | 038035-81-3 | 10 |
| 4 | Cyclotrisiloxane, hexamethyl- | 222 | C6H18O3Si3 | 000541-05-9 | 10 |
| 5 | 1,4-Benzenediol, 2,5-bis(1,1-dim... | 222 | C14H22O2 | 000088-58-4 | 10 |



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ALS Vial : 3 Sample Multiplier: 1

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Quant Title : 8270C Calibration

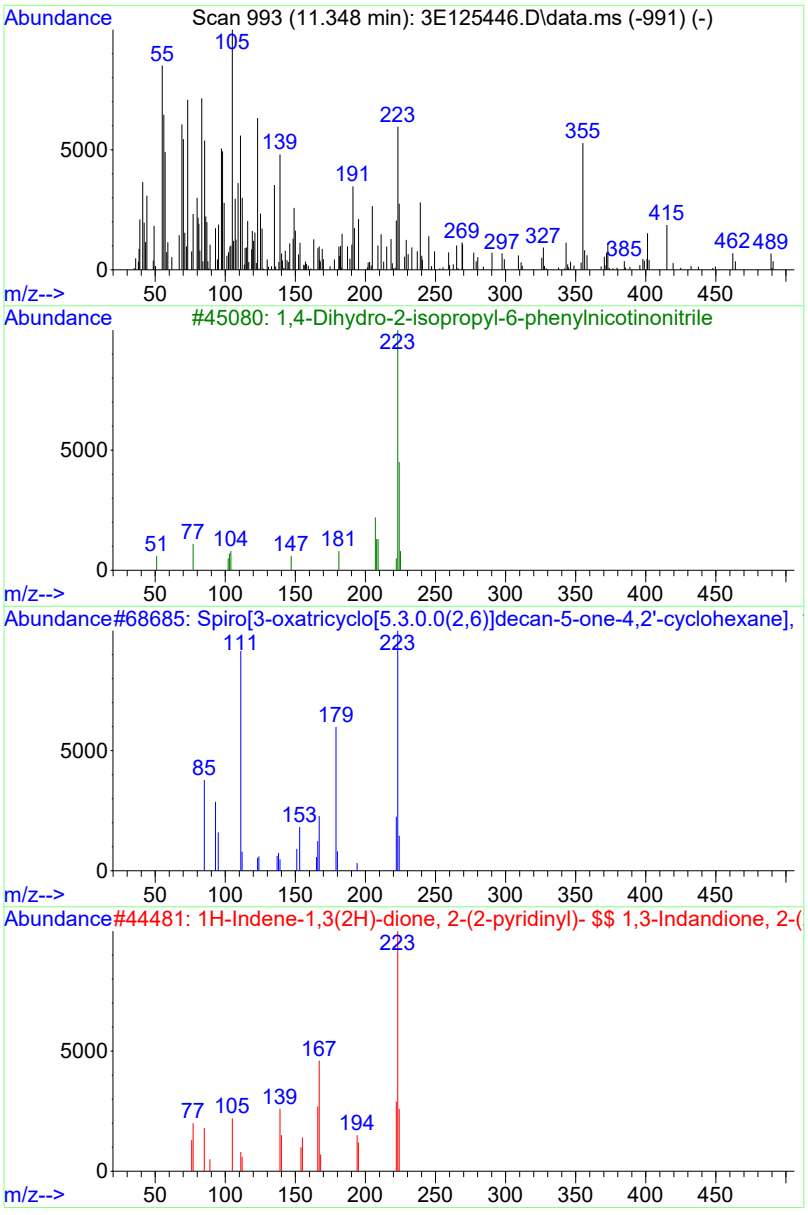
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

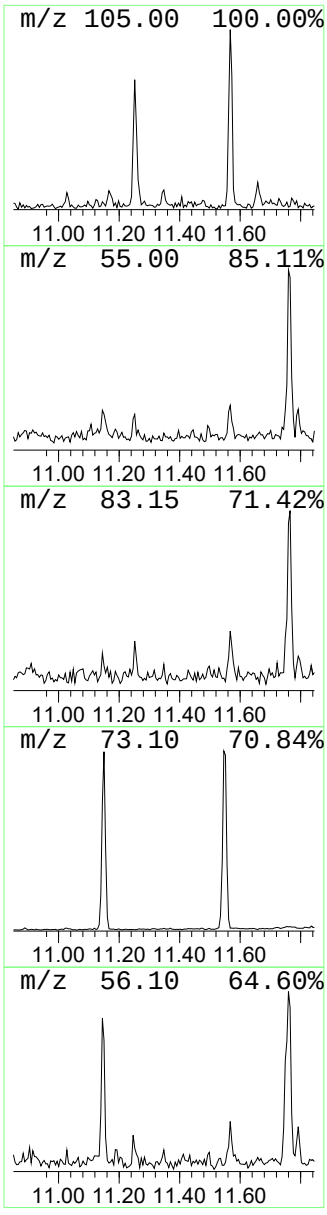
**********

Peak Number 13 1,4-Dihydro-2-isopropyl-6-p... Concentration Rank 40

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.348 | 1057.41 | 105741 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1,4-Dihydro-2-isopropyl-6-phenyl... | 224 | C15H16N2 | 070231-37-7 | 10 |
| 2 | Spiro[3-oxatricyclo[5.3.0.0(2,6)... | 290 | C19H30O2 | 000000-00-0 | 10 |
| 3 | 1H-Indene-1,3(2H)-dione, 2-(2-py... | 223 | C14H9NO2 | 000641-63-4 | 9 |
| 4 | Benzoic acid, 2-[(2,3-dimethylph... | 255 | C16H17NO2 | 001222-42-0 | 9 |
| 5 | (3-Oxo-2-pent-2-ynylcyclopentyl)... | 280 | C16H24O2S | 000000-00-0 | 9 |



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Quant Title : 8270C Calibration

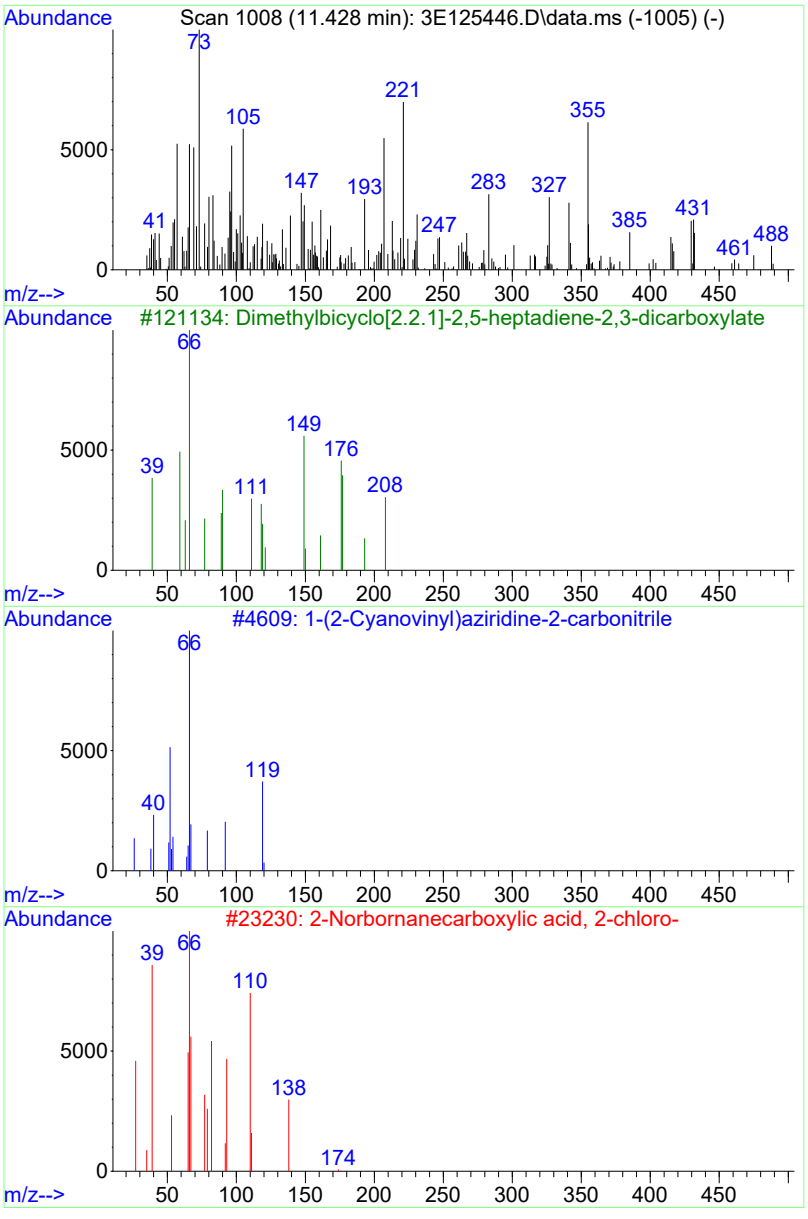
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

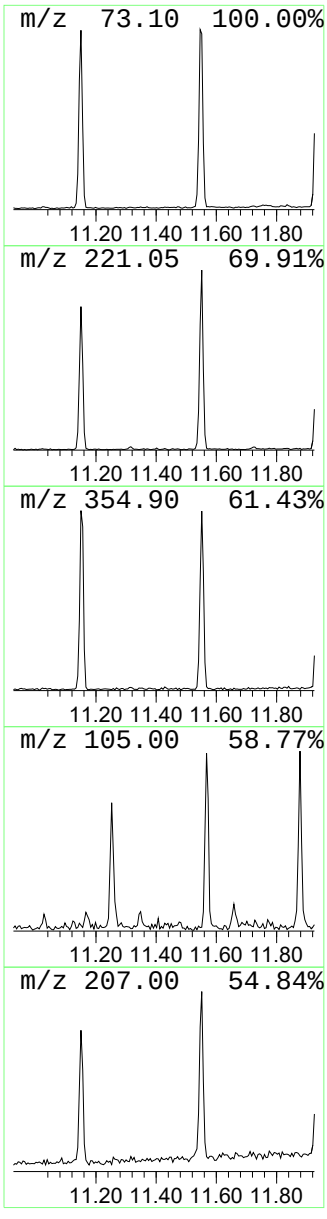
**********

Peak Number 14 Dimethylbicyclo[2.2.1]-2,5-... Concentration Rank 42

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.428 | 581.07 | 58107 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Dimethylbicyclo[2.2.1]-2,5-hepta... | 208 | C11H12O4 | 000947-57-9 | 25 |
| 2 | 1-(2-Cyanovinyl)aziridine-2-carb... | 119 | C6H5N3 | 000000-00-0 | 22 |
| 3 | 2-Norbornanecarboxylic acid, 2-c... | 174 | C8H11ClO2 | 101774-57-6 | 22 |
| 4 | Acetic acid, 1-cyano-1-(1-cyclop... | 193 | C10H11NO3 | 000000-00-0 | 22 |
| 5 | Tetracyclo[6.3.1.1(3,6).0(2,7)]t... | 202 | C14H18O | 000000-00-0 | 22 |



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ALS Vial : 3 Sample Multiplier: 1

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Quant Title : 8270C Calibration

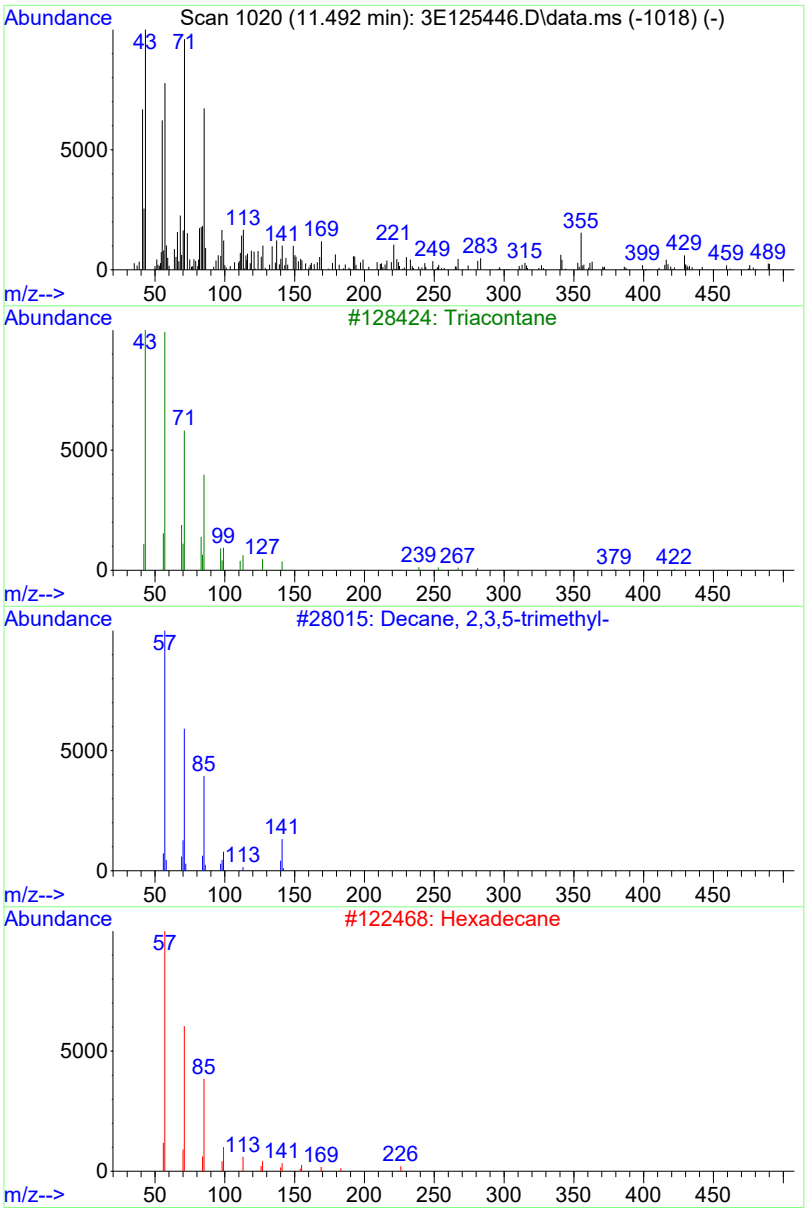
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

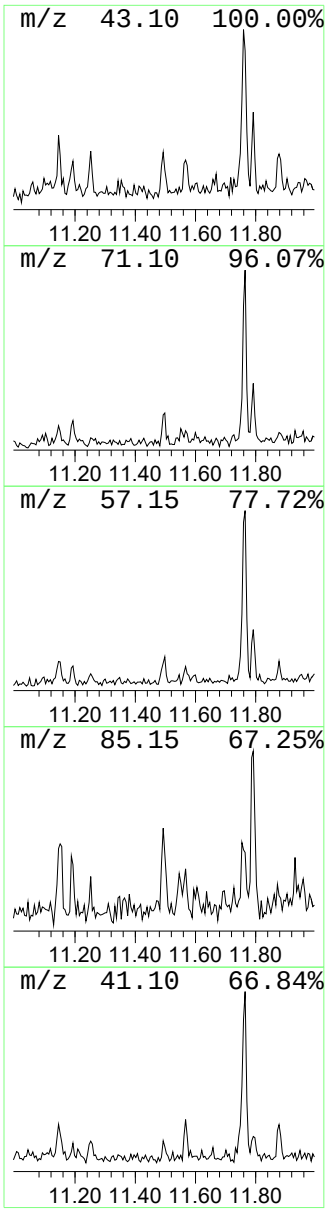
**********

Peak Number 15 Triacontane Concentration Rank 36

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.493 | 1913.75 | 191375 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Triacontane | 422 | C30H62 | 000638-68-6 | 76 |
| 2 | Decane, 2,3,5-trimethyl- | 184 | C13H28 | 062238-11-3 | 64 |
| 3 | Hexadecane | 226 | C16H34 | 000544-76-3 | 59 |
| 4 | Heptacosane $$ n-Heptacosane | 380 | C27H56 | 000593-49-7 | 59 |
| 5 | Heptadecane, 2,6,10,15-tetramethyl- | 296 | C21H44 | 054833-48-6 | 59 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

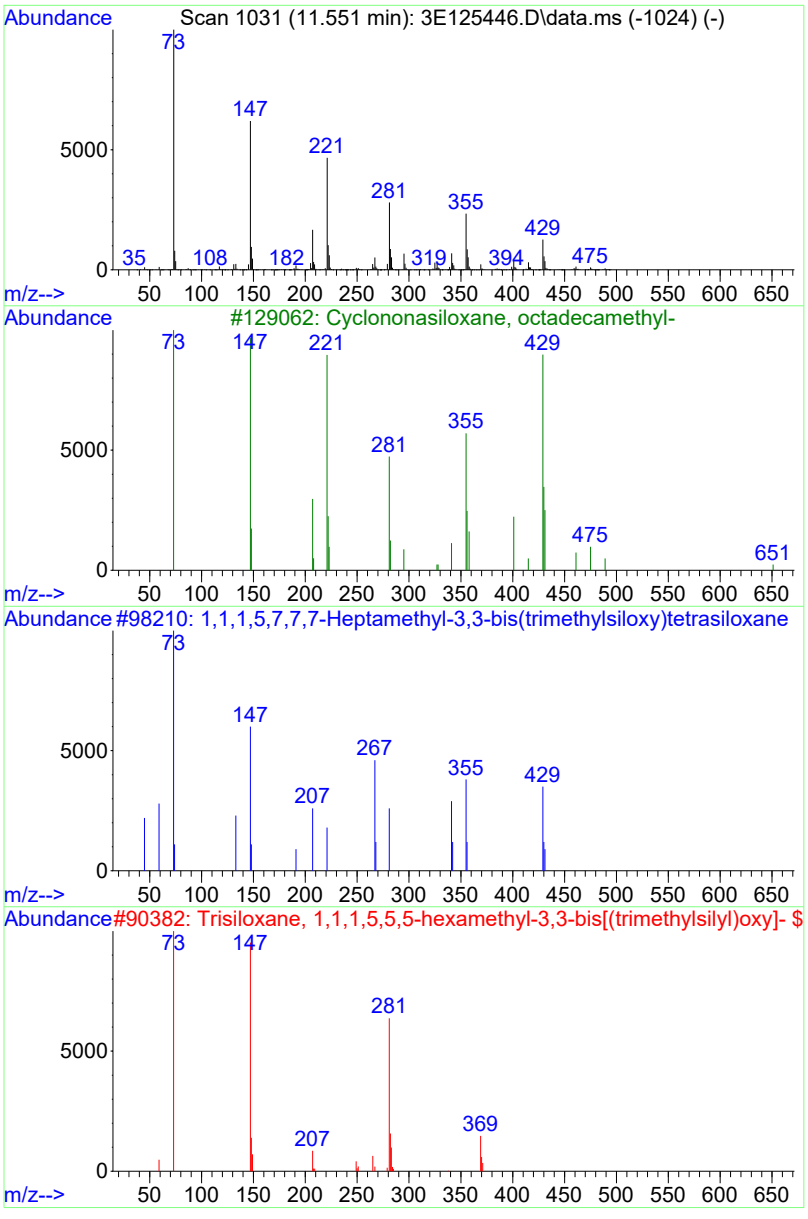
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

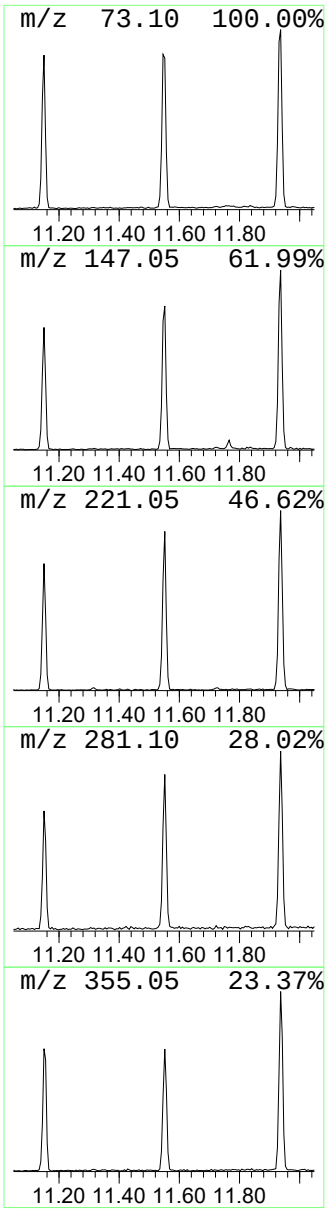
**********

Peak Number 16 Cyclononasiloxane, octadeca... Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.551 | 111306.00 | 11130600 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 83 |
| 2 | 1,1,1,5,7,7,7-Heptamethyl-3,3-bi... | 444 | C13H40O5Si6 | 038147-00-1 | 28 |
| 3 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 25 |
| 4 | Morphinan, 7,8-didehydro-4,5-epo... | 429 | C23H35NO3Si2 | 055449-66-6 | 15 |
| 5 | 3-Isopropoxy-1,1,1,7,7,7-hexamet... | 576 | C18H52O7Si7 | 071579-69-6 | 12 |



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Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

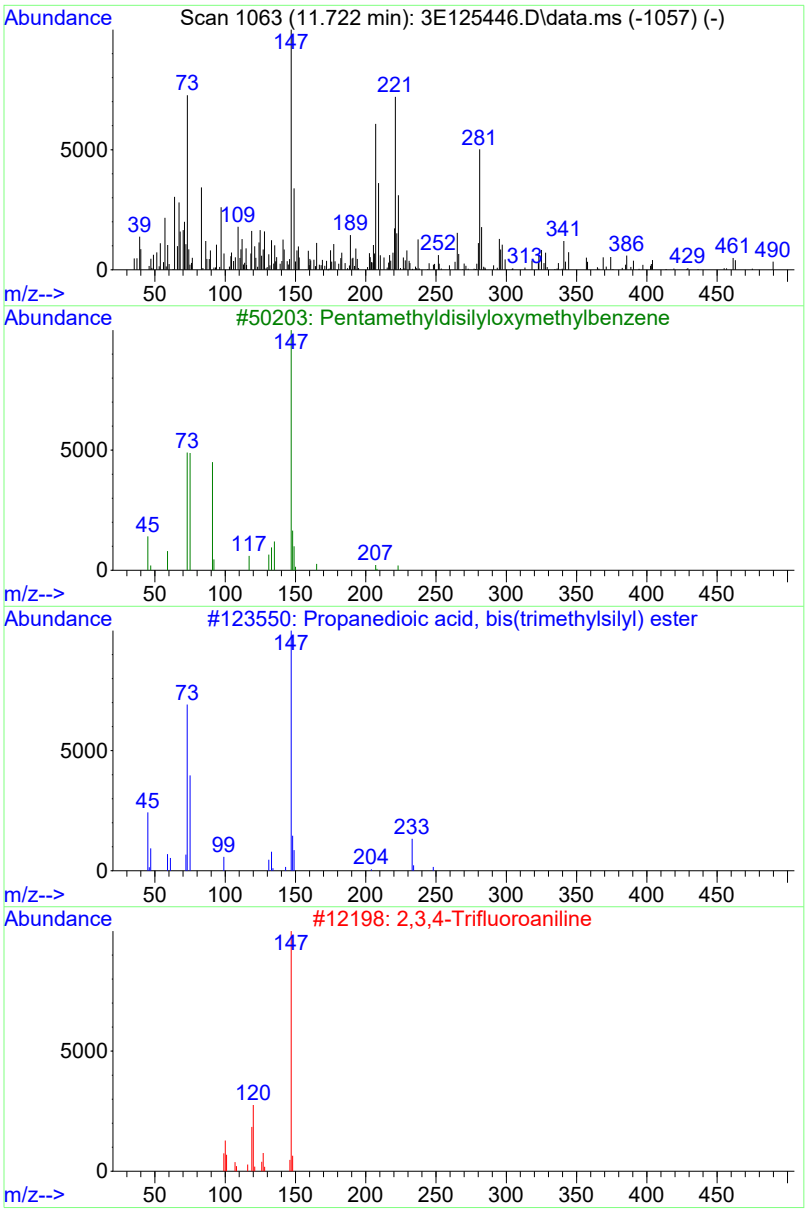
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

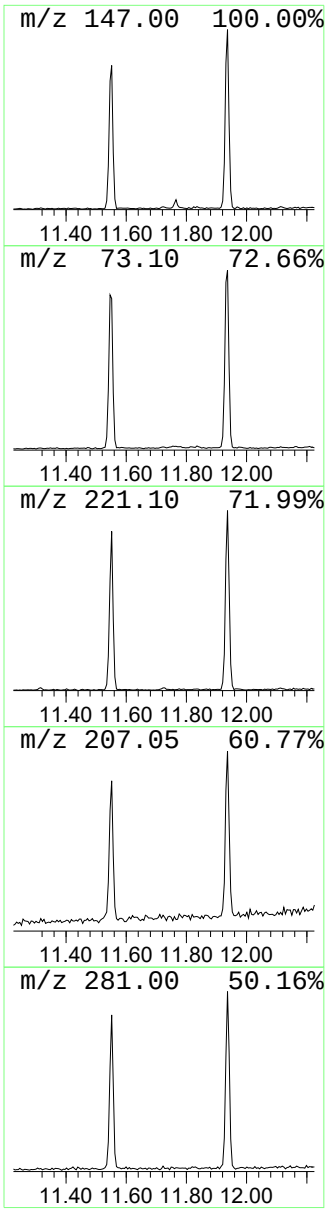
**********

Peak Number 17 Pentamethyldisilyloxymethyl... Concentration Rank 32

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.723 | 2686.46 | 268646 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Pentamethyldisilyloxymethylbenzene | 238 | C12H22OSi2 | 000000-00-0 | 22 |
| 2 | Propanedioic acid, bis(trimethyl... | 248 | C9H20O4Si2 | 018457-04-0 | 20 |
| 3 | 2,3,4-Trifluoroaniline | 147 | C6H4F3N | 003862-73-5 | 18 |
| 4 | 2,3,4-Trifluoroaniline | 147 | C6H4F3N | 003862-73-5 | 18 |
| 5 | 3,8-Dioxa-2,9-disiladecane, 2,2,... | 234 | C10H26O2Si2 | 018001-91-7 | 14 |



Library Search Compound Report

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Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

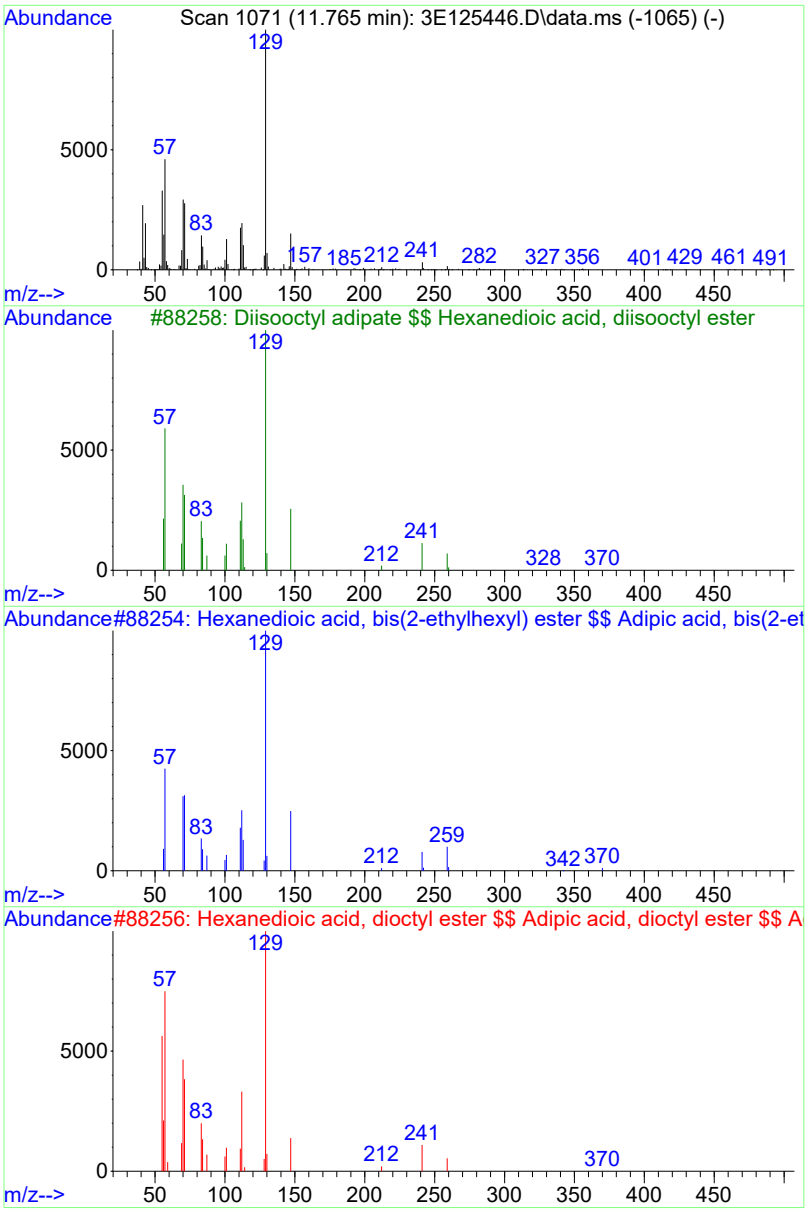
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

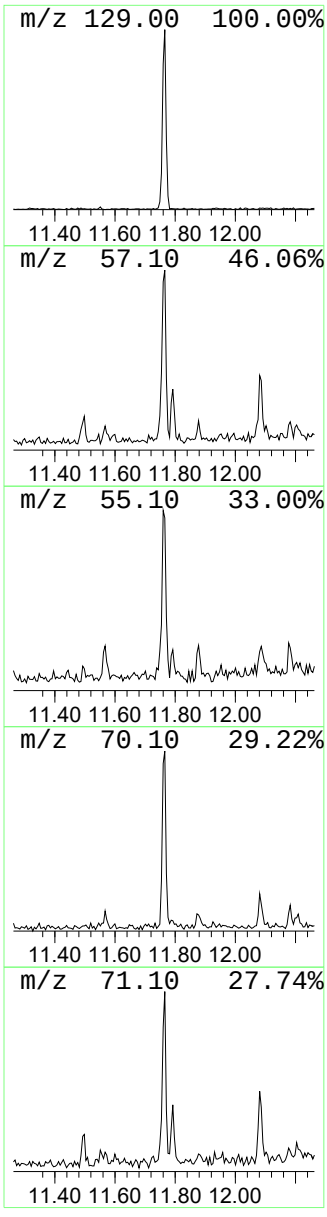
**********

Peak Number 18 Diisooctyl adipate $$ Hexan... Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.765 | 28173.90 | 2817390 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Diisooctyl adipate $$ Hexanedioi... | 370 | C22H42O4 | 001330-86-5 | 70 |
| 2 | Hexanedioic acid, bis(2-ethylhex... | 370 | C22H42O4 | 000103-23-1 | 59 |
| 3 | Hexanedioic acid, dioctyl ester ... | 370 | C22H42O4 | 000123-79-5 | 58 |
| 4 | Hexanedioic acid, bis(2-ethylhex... | 370 | C22H42O4 | 000103-23-1 | 52 |
| 5 | Hexanedioic acid, mono(2-ethylhe... | 258 | C14H26O4 | 004337-65-9 | 38 |



Library Search Compound Report

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Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

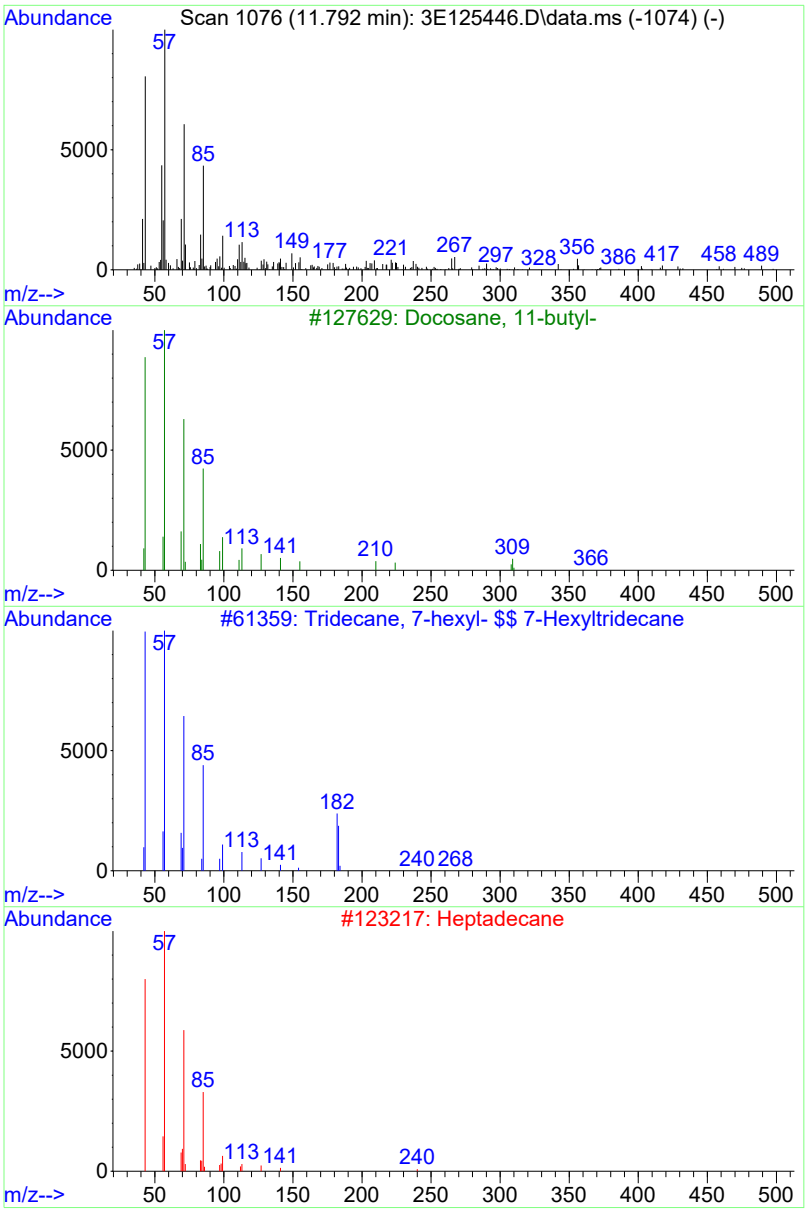
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

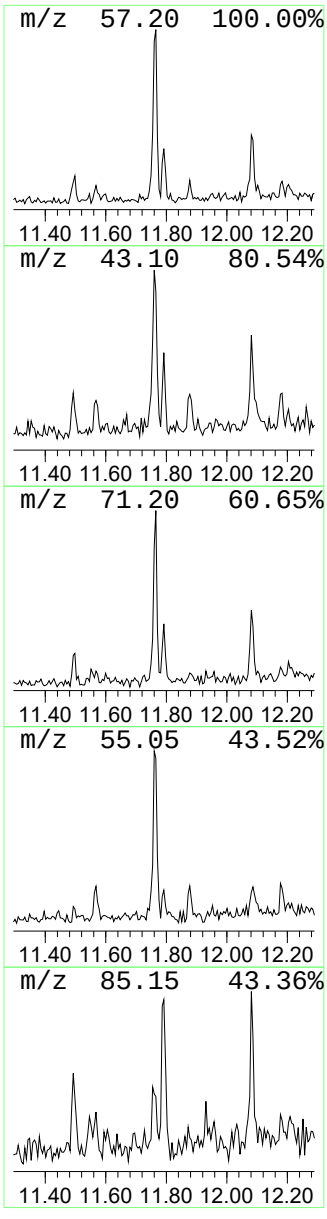
**********

Peak Number 19 Docosane, 11-butyl- Concentration Rank 29

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.792 | 3464.23 | 346423 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Docosane, 11-butyl- | 366 | C26H54 | 013475-76-8 | 93 |
| 2 | Tridecane, 7-hexyl- $$ 7-Hexyltr... | 268 | C19H40 | 007225-66-3 | 76 |
| 3 | Heptadecane | 240 | C17H36 | 000629-78-7 | 76 |
| 4 | Pentadecane, 2-methyl- | 226 | C16H34 | 001560-93-6 | 76 |
| 5 | Docosane | 310 | C22H46 | 000629-97-0 | 76 |



Library Search Compound Report

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Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

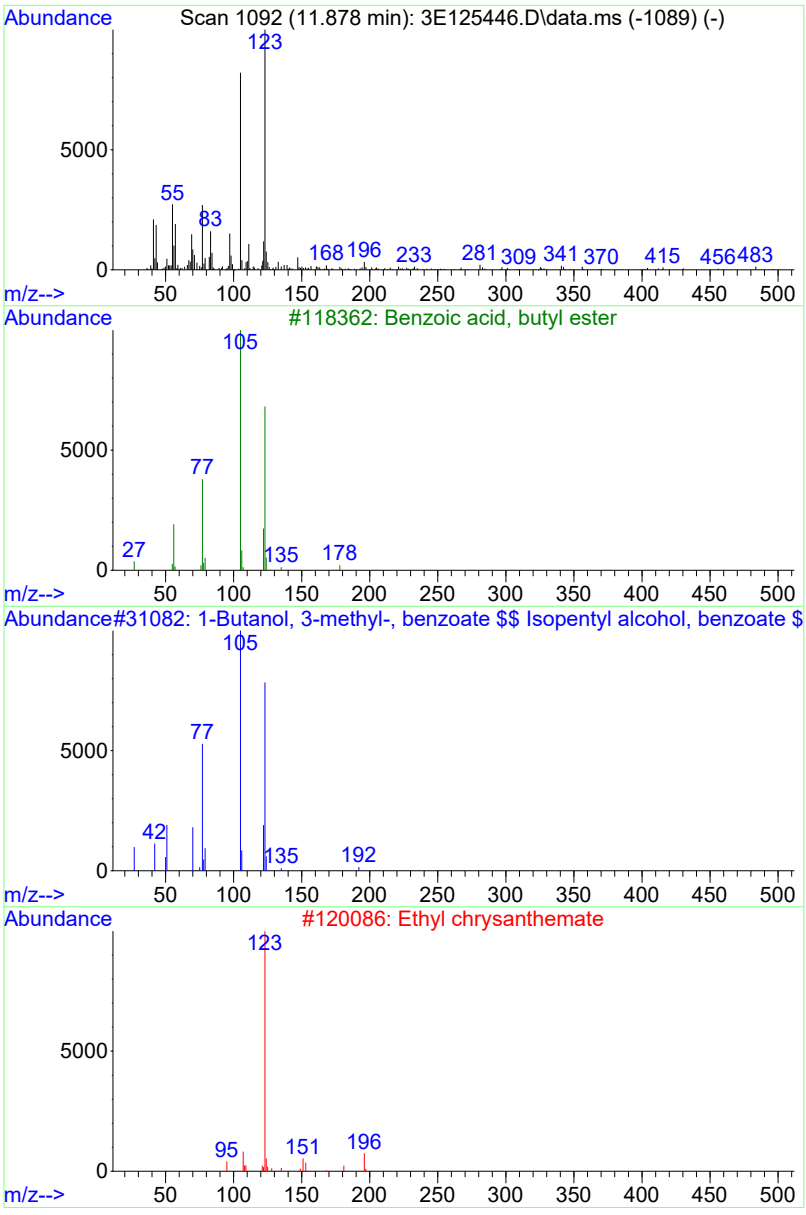
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

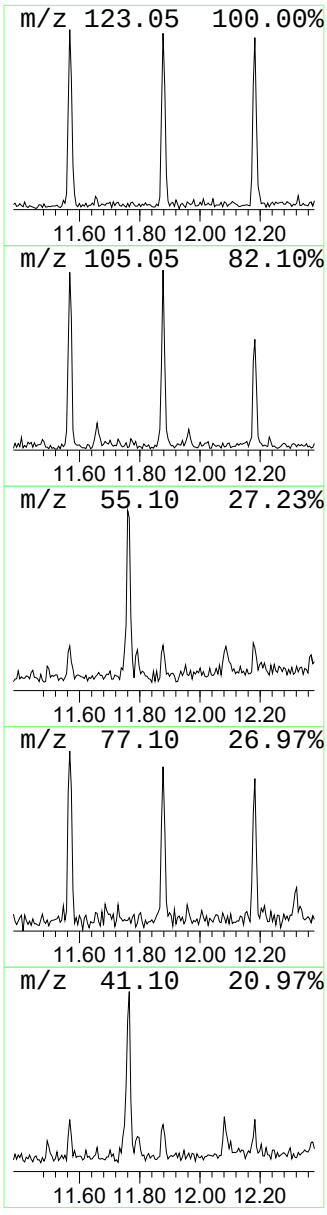
**********

Peak Number 20 Benzoic acid, butyl ester Concentration Rank 25

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.878 | 5847.57 | 584757 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzoic acid, butyl ester | 178 | C11H14O2 | 000136-60-7 | 45 |
| 2 | 1-Butanol, 3-methyl-, benzoate $... | 192 | C12H16O2 | 000094-46-2 | 45 |
| 3 | Ethyl chrysanthemate | 196 | C12H20O2 | 000097-41-6 | 38 |
| 4 | 4-Methylimidazole-5-[1,1-dimethy... | 154 | C8H14N2O | 000000-00-0 | 38 |
| 5 | 2,4-Pyridinedicarboxylic acid $$... | 167 | C7H5NO4 | 000499-80-9 | 38 |



Library Search Compound Report

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Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

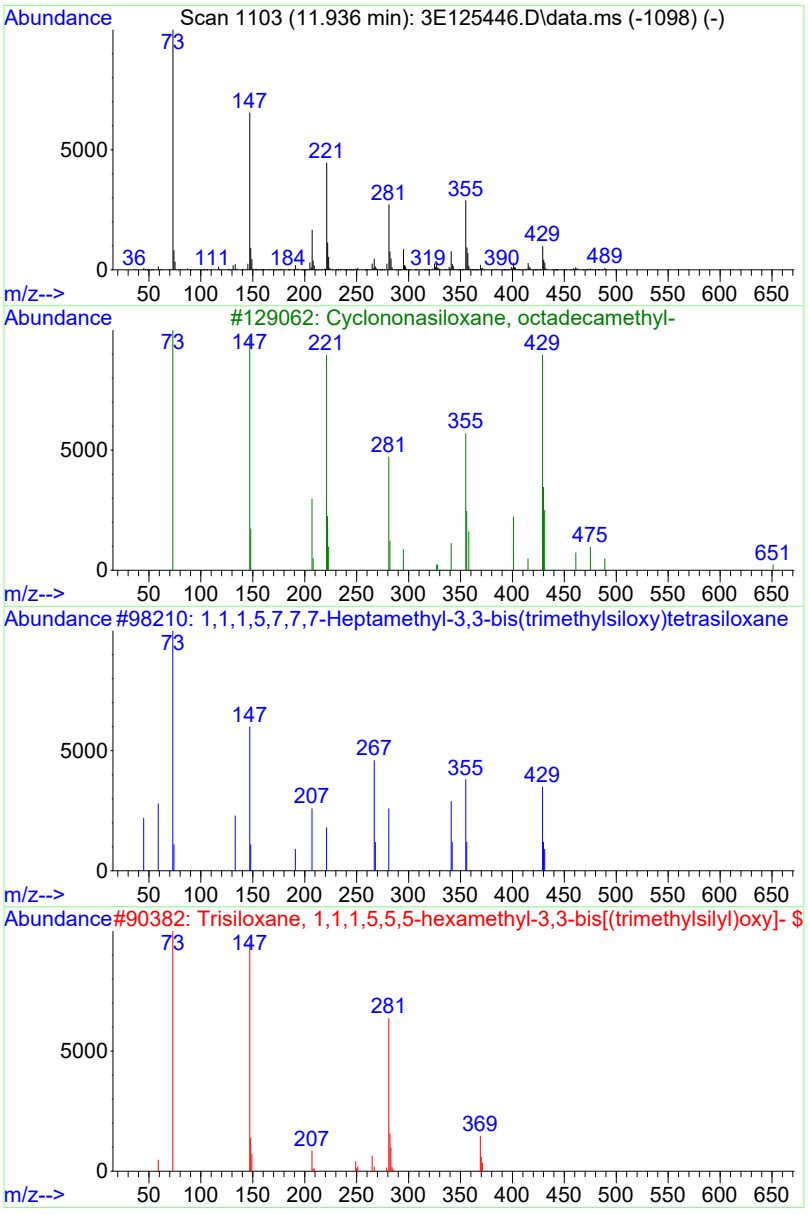
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

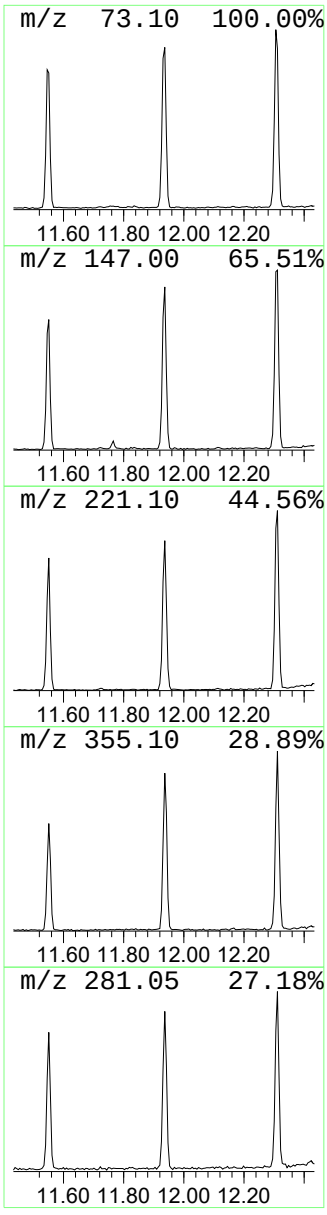
**********

Peak Number 21 Cyclononasiloxane, octadeca... Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.936 | 126840.00 | 12684000 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 64 |
| 2 | 1,1,1,5,7,7,7-Heptamethyl-3,3-bi... | 444 | C13H40O5Si6 | 038147-00-1 | 40 |
| 3 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 25 |
| 4 | Pentasiloxane, dodecamethyl- | 384 | C12H36O4Si5 | 000141-63-9 | 14 |
| 5 | 3-Isopropoxy-1,1,1,7,7,7-hexamet... | 576 | C18H52O7Si7 | 071579-69-6 | 12 |



Library Search Compound Report

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Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

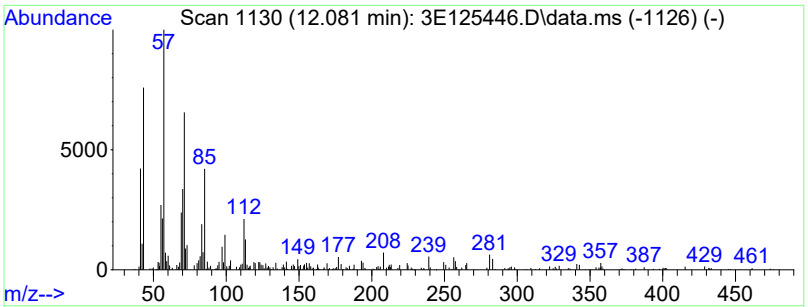
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

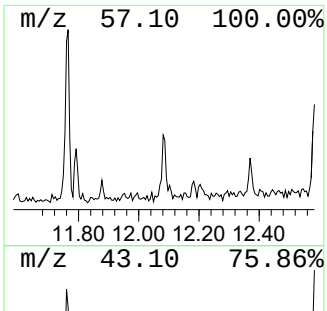
**********

Peak Number 22 Heneicosane $$ n-Heneicosane Concentration Rank 23

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.081 | 9609.55 | 960955 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Heneicosane $$ n-Heneicosane | 296 | C21H44 | 000629-94-7 | 64 |
| 2 | Tetradecane, 2-methyl- $$ 2-Meth... | 212 | C15H32 | 001560-95-8 | 60 |
| 3 | Heneicosane | 296 | C21H44 | 000629-94-7 | 60 |
| 4 | Dodecane, 2,6,10-trimethyl- | 212 | C15H32 | 003891-98-3 | 58 |
| 5 | Pentadecane | 212 | C15H32 | 000629-62-9 | 58 |



Library Search Compound Report

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Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

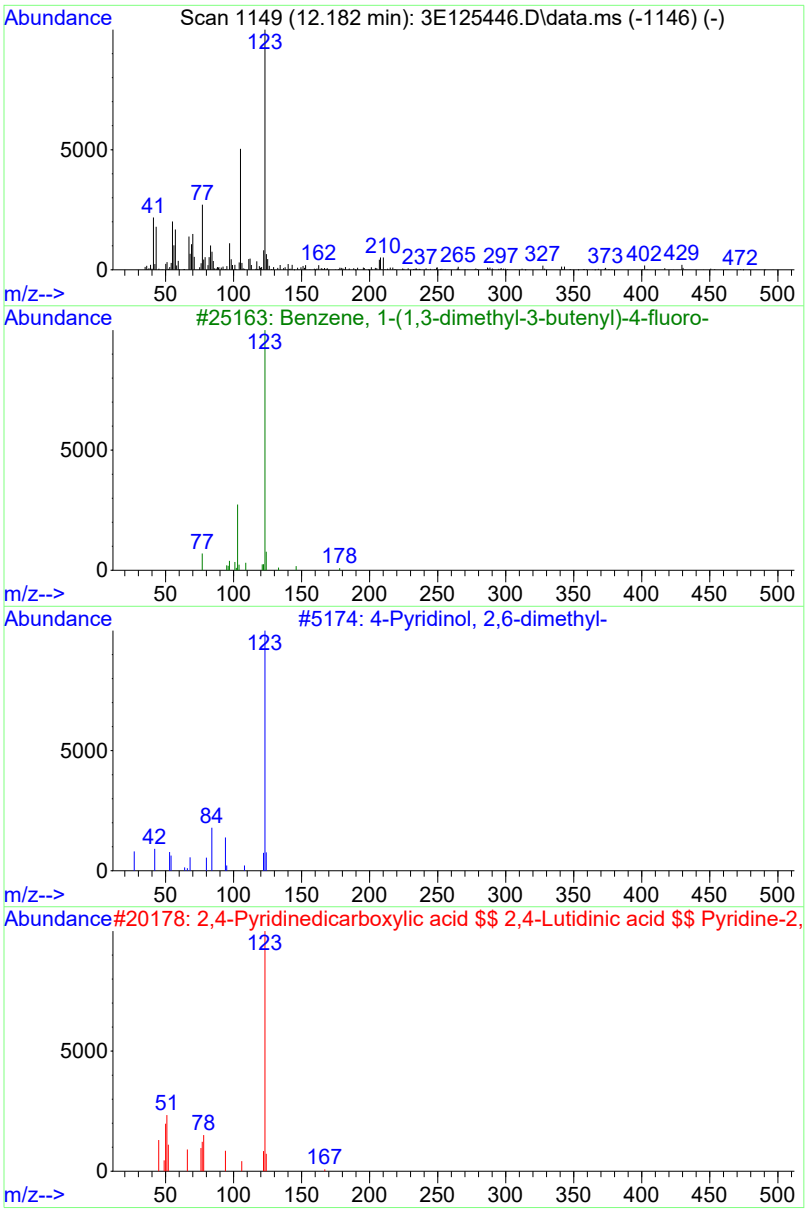
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

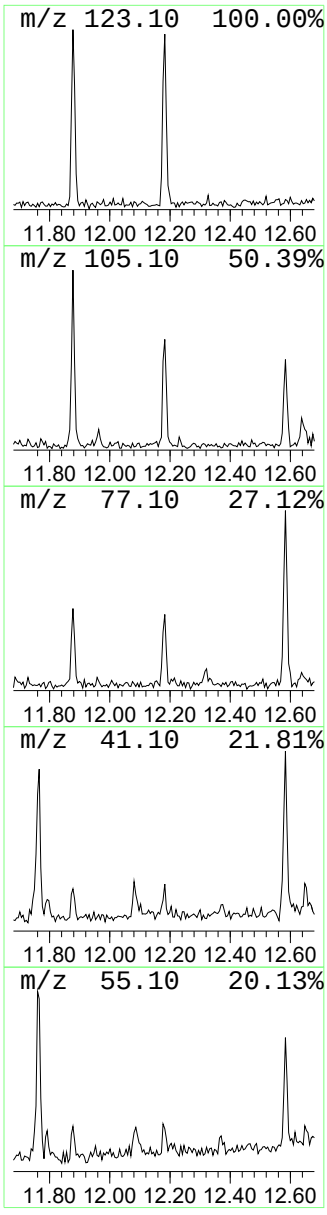
**********

Peak Number 23 Benzene, 1-(1,3-dimethyl-3-... Concentration Rank 28

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.182 | 4690.06 | 469006 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzene, 1-(1,3-dimethyl-3-buten... | 178 | C12H15F | 074646-34-7 | 50 |
| 2 | 4-Pyridinol, 2,6-dimethyl- | 123 | C7H9NO | 013603-44-6 | 47 |
| 3 | 2,4-Pyridinedicarboxylic acid $$... | 167 | C7H5NO4 | 000499-80-9 | 40 |
| 4 | 2,6-Pyridinedicarboxylic acid | 167 | C7H5NO4 | 000499-83-2 | 33 |
| 5 | 1,6,6-Trimethyl-7-(3-oxobut-1-en... | 236 | C13H16O4 | 000000-00-0 | 33 |



Library Search Compound Report

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Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

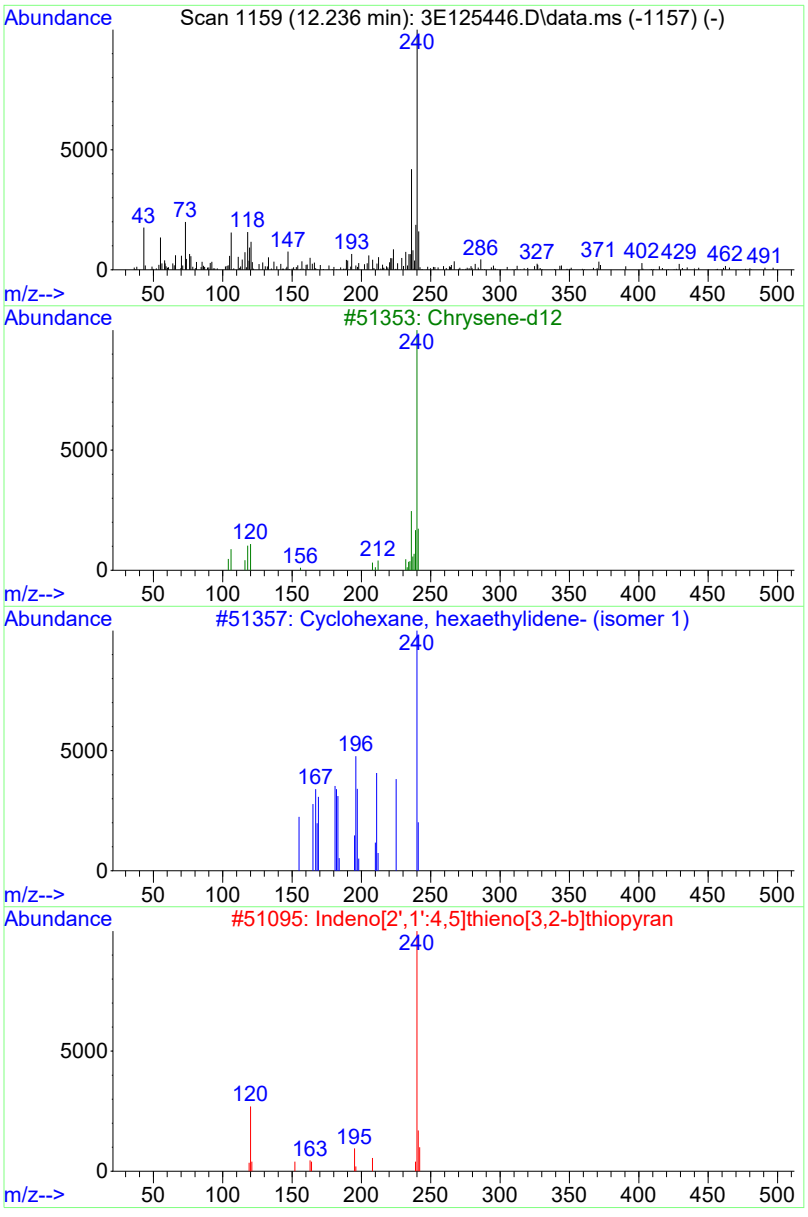
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

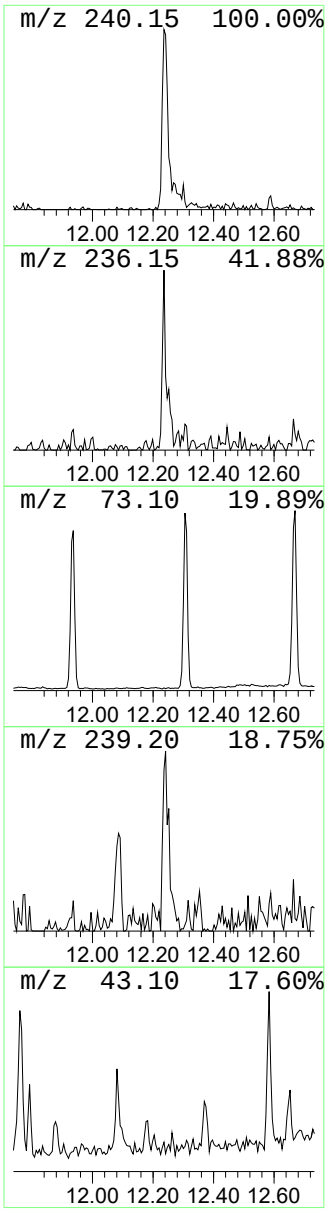
**********

Peak Number 24 Chrysene-d12 Concentration Rank 31

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.236 | 2986.01 | 298601 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Chrysene-d12 | 240 | C18D12 | 001719-03-5 | 70 |
| 2 | Cyclohexane, hexaethylidene- (is... | 240 | C18H24 | 000000-00-0 | 50 |
| 3 | Indeno[2',1':4,5]thieno[3,2-b]th... | 240 | C14H8S2 | 056830-85-4 | 49 |
| 4 | Bicyclo[2.2.1]heptan-2-one, 1,7,... | 240 | C17H20O | 015087-24-8 | 43 |
| 5 | 9,10-Anthracenedione, 1,4-dihydr... | 240 | C14H8O4 | 000081-64-1 | 43 |



Library Search Compound Report

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Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

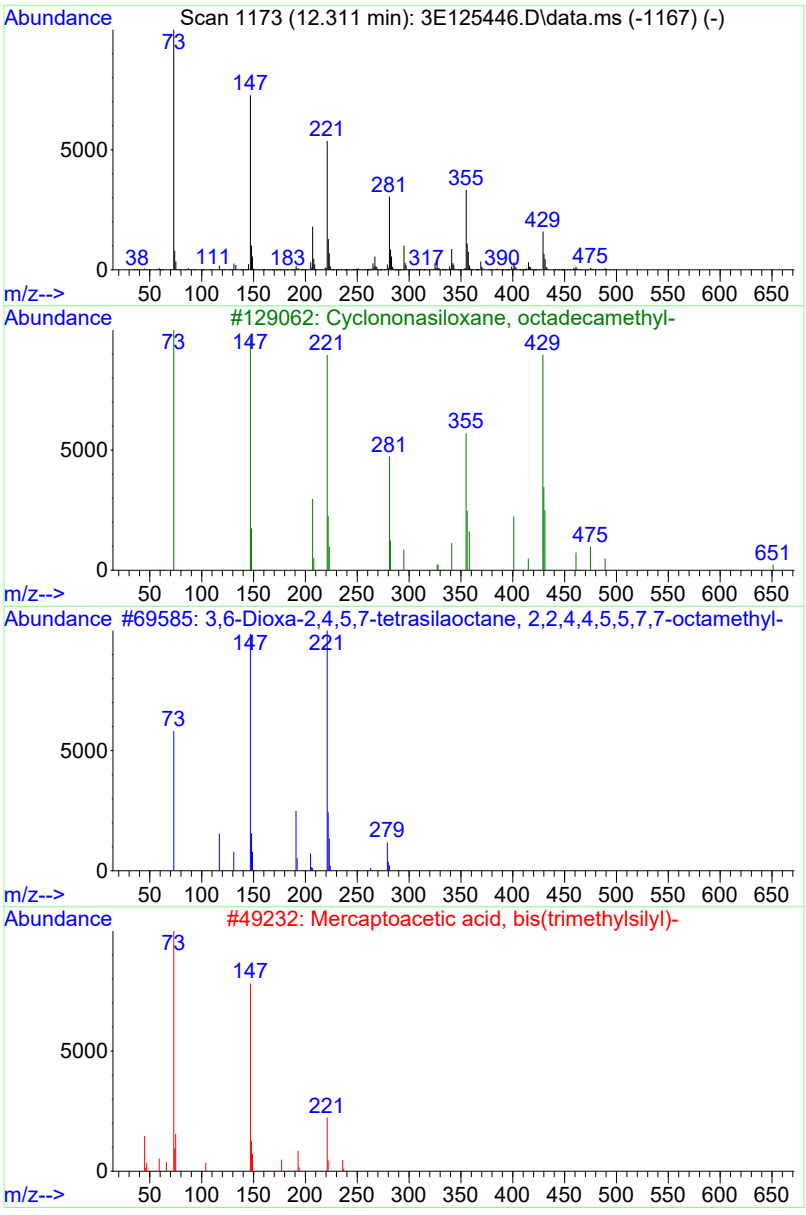
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

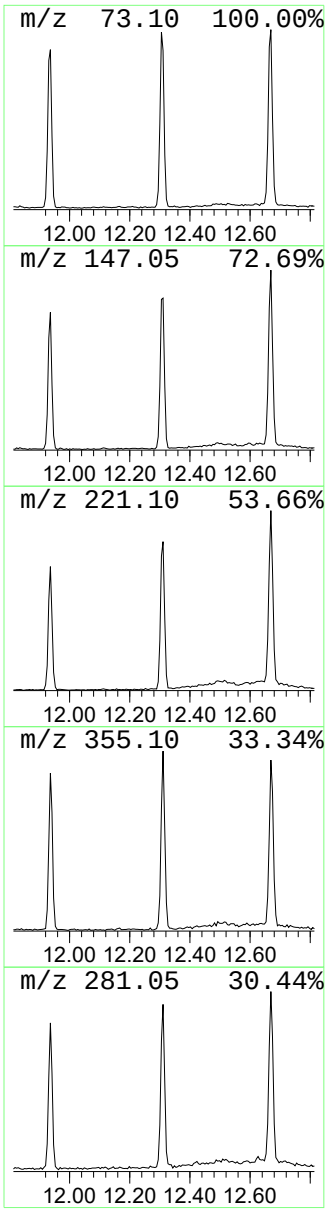
**********

Peak Number 25 Cyclononasiloxane, octadeca... Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.311 | 149185.00 | 14918500 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 74 |
| 2 | 3,6-Dioxa-2,4,5,7-tetrasilaoctan... | 294 | C10H30O2Si4 | 004342-25-0 | 37 |
| 3 | Mercaptoacetic acid, bis(trimeth... | 236 | C8H20O2SSi2 | 006398-62-5 | 32 |
| 4 | 1,1,1,5,7,7,7-Heptamethyl-3,3-bi... | 444 | C13H40O5Si6 | 038147-00-1 | 17 |
| 5 | 2(3H)-Thiazolethione, 3-ethyl-4-... | 221 | C11H11NS2 | 055976-02-8 | 14 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

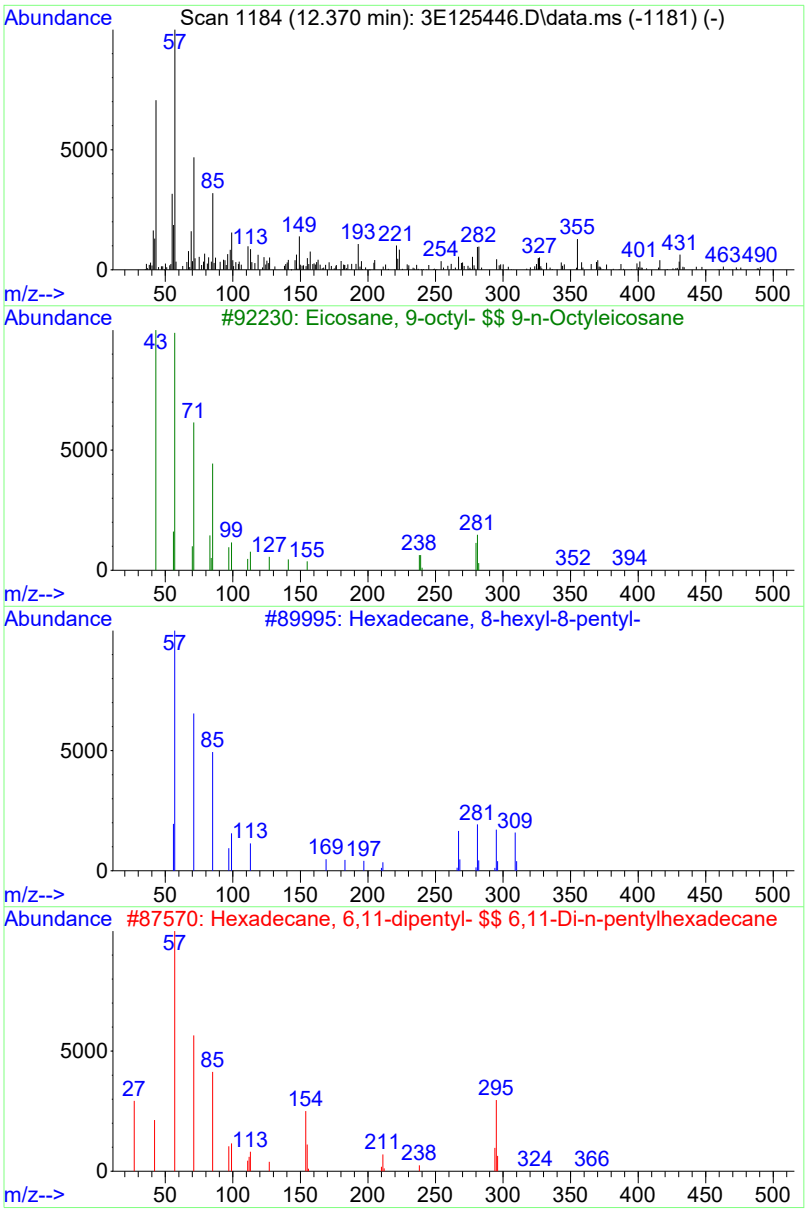
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

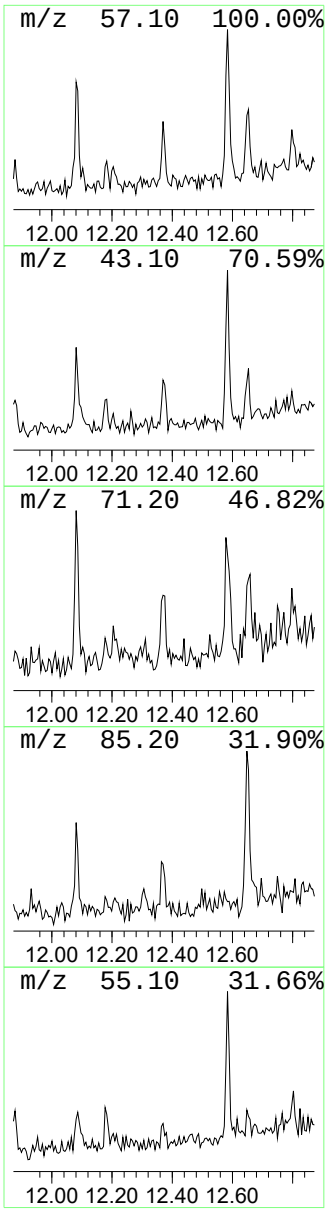
**********

Peak Number 26 Eicosane, 9-octyl- $$ 9-n-O... Concentration Rank 33

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.370 | 2482.50 | 248250 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Eicosane, 9-octyl- $$ 9-n-Octyle... | 394 | C28H58 | 013475-77-9 | 47 |
| 2 | Hexadecane, 8-hexyl-8-pentyl- | 380 | C27H56 | 055282-29-6 | 47 |
| 3 | Hexadecane, 6,11-dipentyl- $$ 6,... | 366 | C26H54 | 015874-03-0 | 38 |
| 4 | Octadecane, 9-ethyl-9-heptyl- | 380 | C27H56 | 055282-27-4 | 38 |
| 5 | 13,17-Dimethylhentriacontane | 465 | C33H68 | 000000-00-0 | 38 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

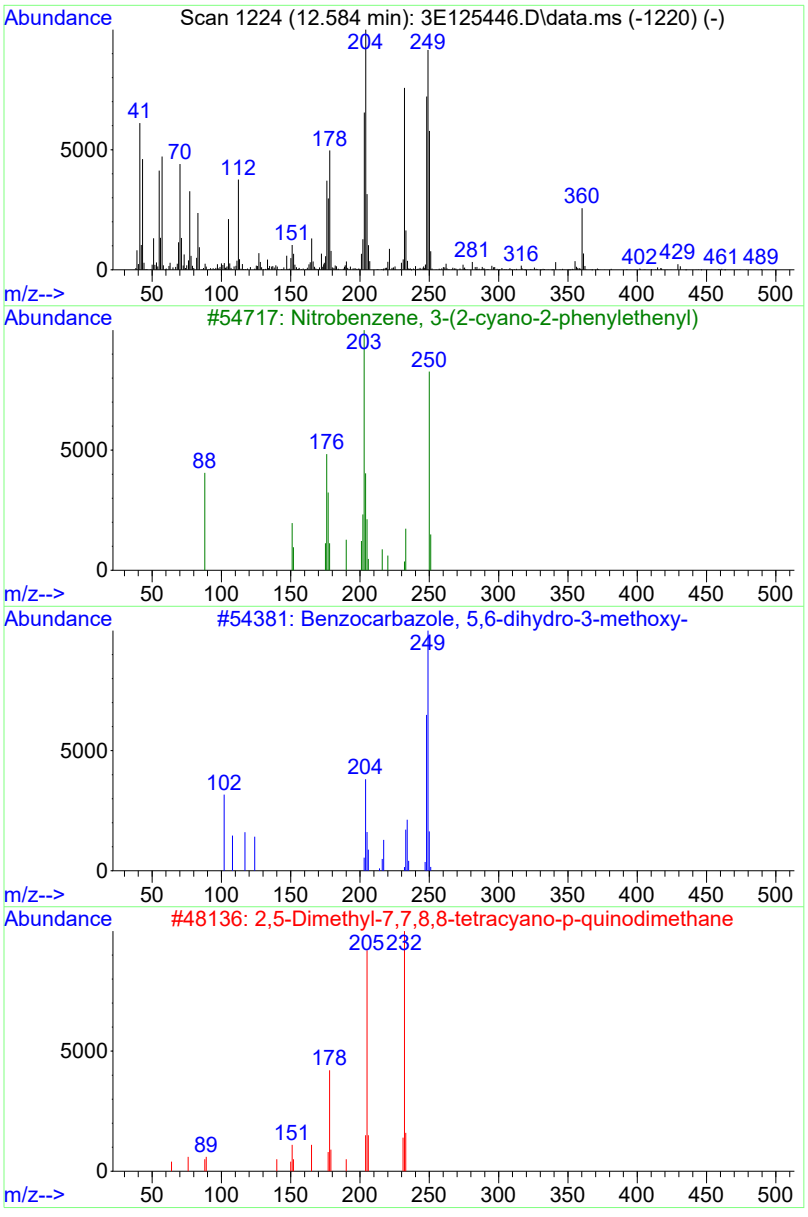
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

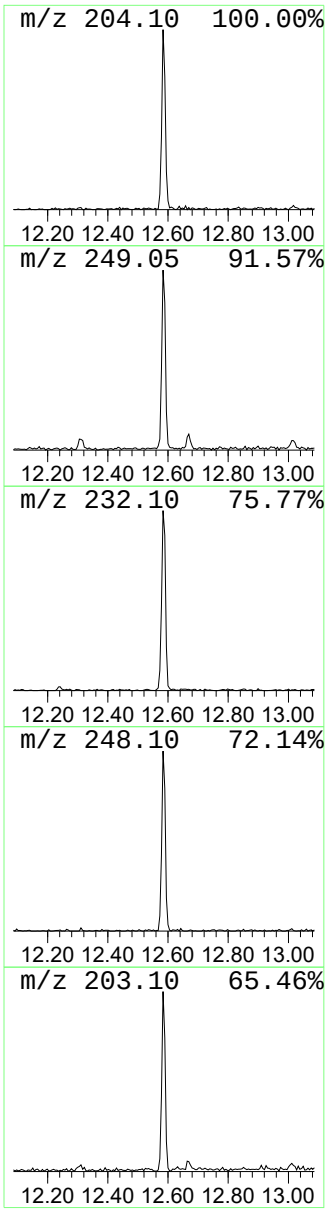
**********

Peak Number 27 Nitrobenzene, 3-(2-cyano-2-... Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.584 | 39533.40 | 3953340 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Nitrobenzene, 3-(2-cyano-2-pheny... | 250 | C15H10N2O2 | 006720-37-2 | 44 |
| 2 | Benzocarbazole, 5,6-dihydro-3-me... | 249 | C17H15NO | 000000-00-0 | 27 |
| 3 | 2,5-Dimethyl-7,7,8,8-tetracyano-... | 232 | C14H8N4 | 001487-82-7 | 18 |
| 4 | Benzene, 1-iodo-2,4-dimethyl- | 232 | C8H9I | 004214-28-2 | 11 |
| 5 | [1,1'-Biphenyl]-4,4'-dicarbonitrile | 204 | C14H8N2 | 001591-30-6 | 11 |



Library Search Compound Report

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Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

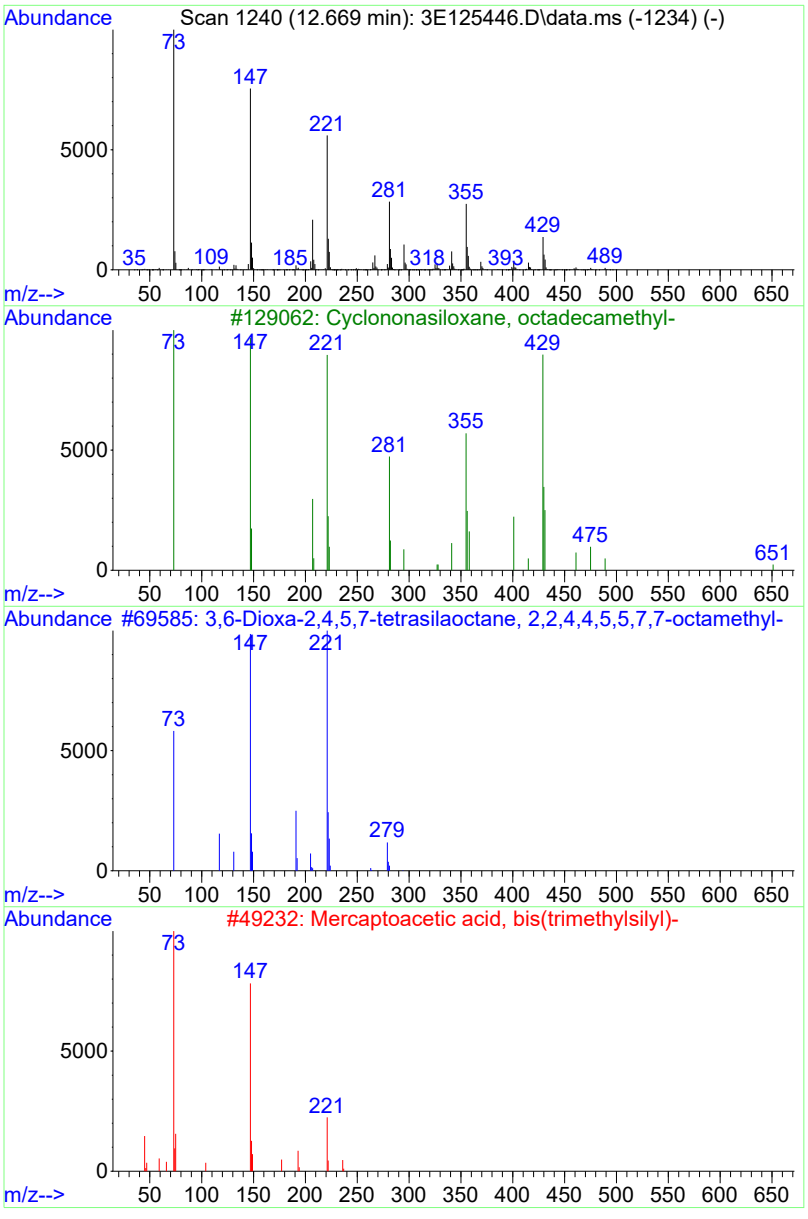
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

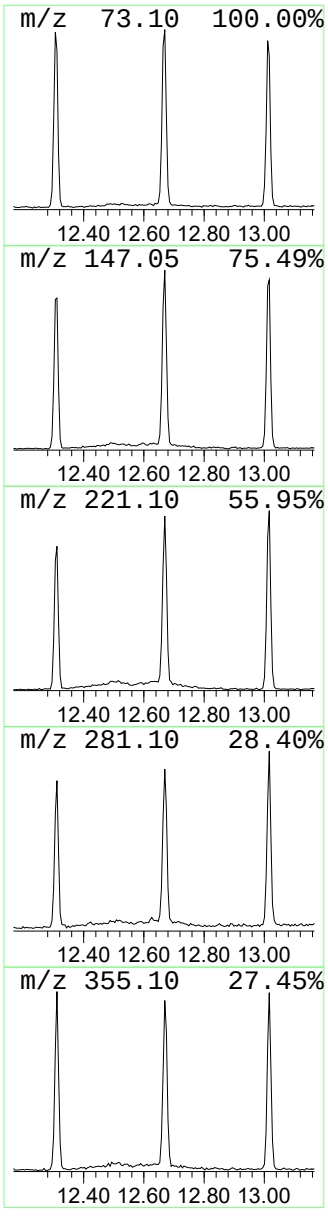
**********

Peak Number 28 Cyclononasiloxane, octadeca... Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.669 | 176992.00 | 17699200 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 59 |
| 2 | 3,6-Dioxa-2,4,5,7-tetrasilaoctan... | 294 | C10H30O2Si4 | 004342-25-0 | 47 |
| 3 | Mercaptoacetic acid, bis(trimeth... | 236 | C8H20O2SSi2 | 006398-62-5 | 38 |
| 4 | Pentasiloxane, dodecamethyl- | 384 | C12H36O4Si5 | 000141-63-9 | 35 |
| 5 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 35 |



Library Search Compound Report

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Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

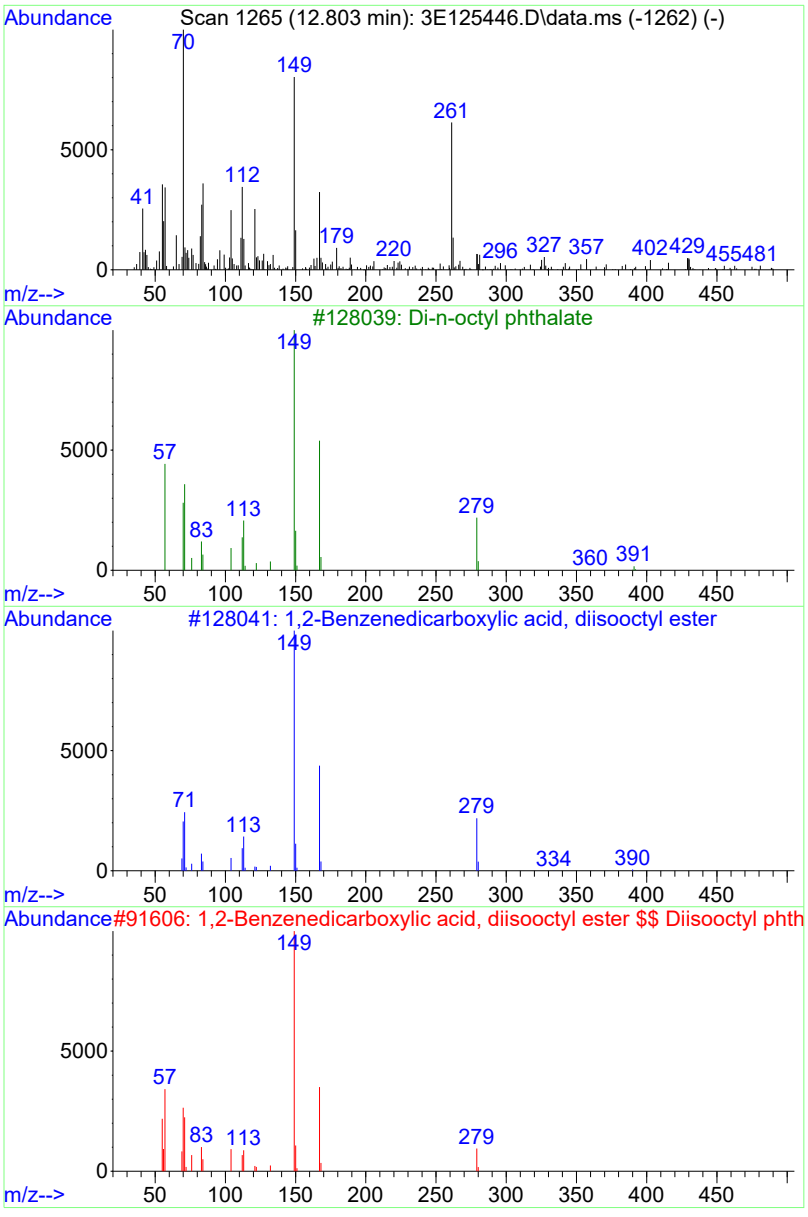
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

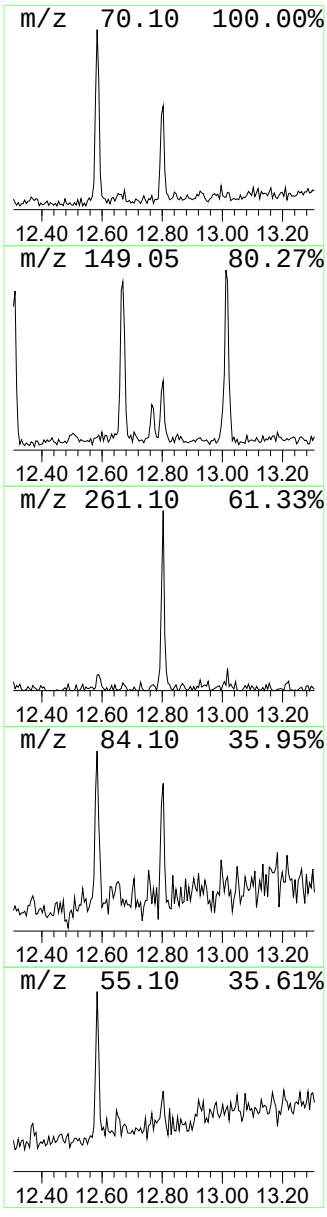
**********

Peak Number 29 Di-n-octyl phthalate Concentration Rank 27

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 12.803 | 4820.81 | 482081 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Di-n-octyl phthalate | 390 | C24H38O4 | 000117-84-0 | 35 |
| 2 | 1,2-Benzenedicarboxylic acid, di... | 390 | C24H38O4 | 027554-26-3 | 35 |
| 3 | 1,2-Benzenedicarboxylic acid, di... | 390 | C24H38O4 | 027554-26-3 | 25 |
| 4 | 1,2-Benzenedicarboxylic acid, mo... | 278 | C16H22O4 | 004376-20-9 | 25 |
| 5 | 4-Pyridinecarboxaldehyde, 3-hydr... | 167 | C8H9NO3 | 000066-72-8 | 22 |



Library Search Compound Report

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Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

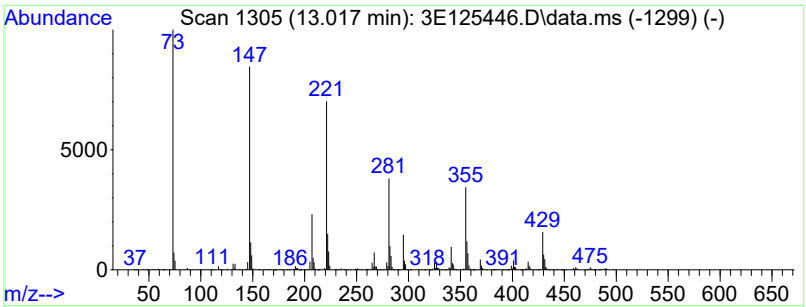
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

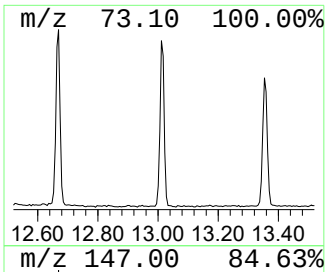
**********

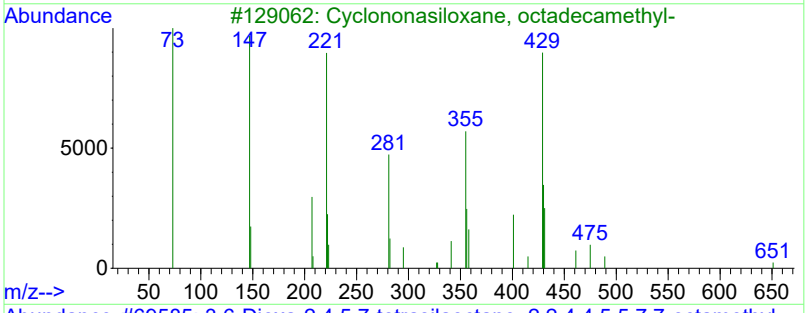
Peak Number 30 Cyclononasiloxane, octadeca... Concentration Rank 4

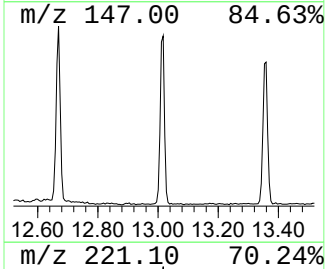
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.017 | 159333.00 | 15933300 | External Standard | 0.000 |

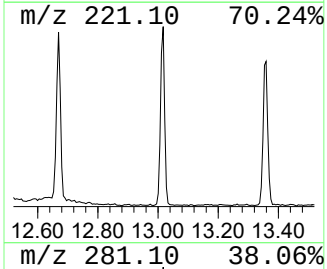
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 80 |
| 2 | 3,6-Dioxa-2,4,5,7-tetrasilaoctan... | 294 | C10H30O2Si4 | 004342-25-0 | 55 |
| 3 | Pentasiloxane, dodecamethyl- | 384 | C12H36O4Si5 | 000141-63-9 | 43 |
| 4 | 1,1,1,5,7,7,7-Heptamethyl-3,3-bi... | 444 | C13H40O5Si6 | 038147-00-1 | 42 |
| 5 | Silane, trimethyl[4-(trimethylsi... | 218 | C10H26OSi2 | 007140-91-2 | 22 |

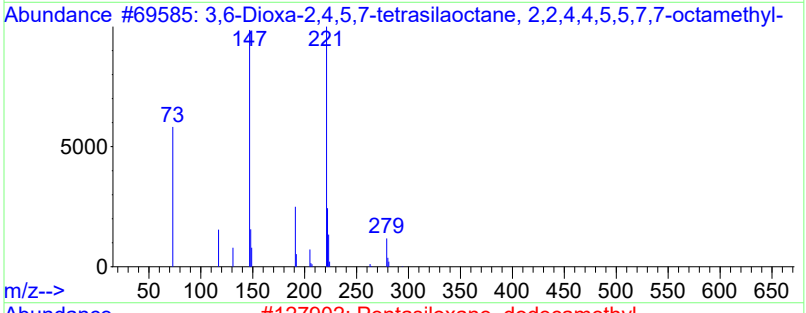


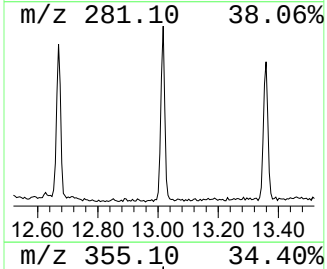



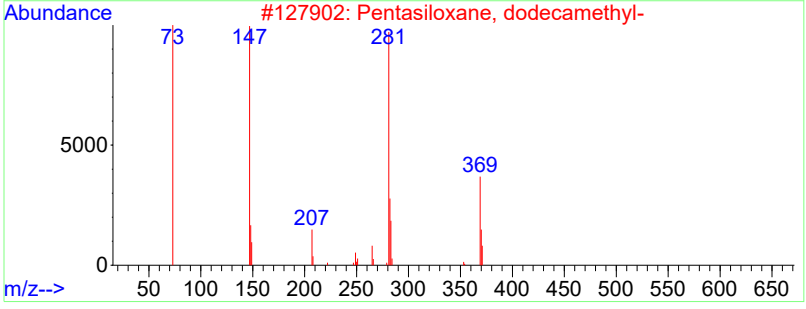



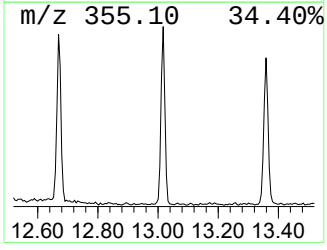



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

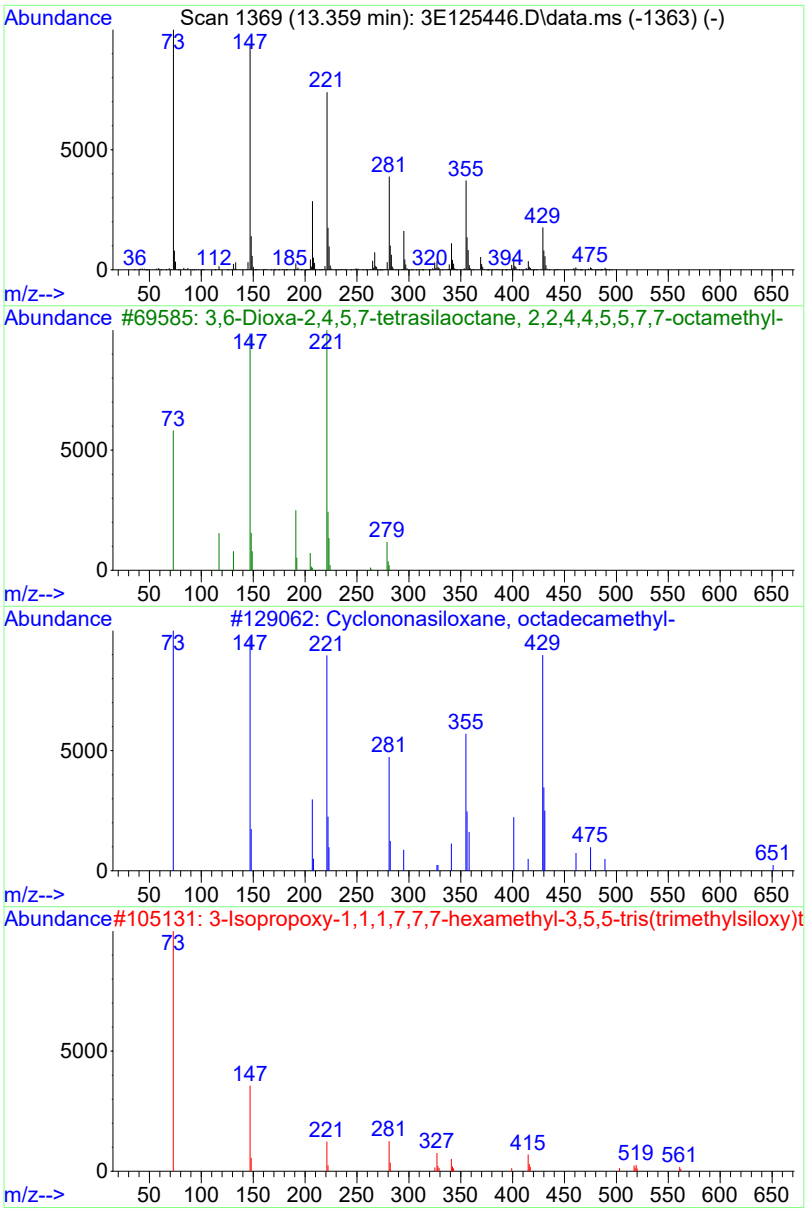
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

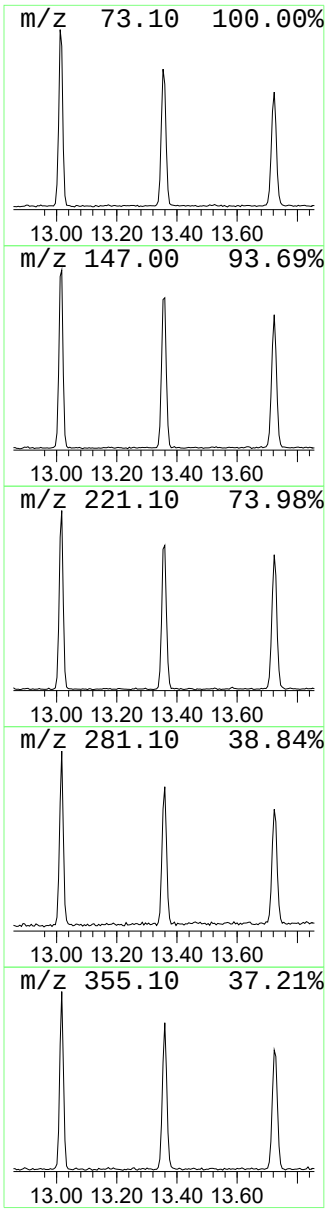
**********

Peak Number 31 3,6-Dioxa-2,4,5,7-tetrasila... Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.359 | 159848.00 | 15984800 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 3,6-Dioxa-2,4,5,7-tetrasilaoctan... | 294 | C10H30O2Si4 | 004342-25-0 | 60 |
| 2 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 59 |
| 3 | 3-Isopropoxy-1,1,1,7,7,7-hexamet... | 576 | C18H52O7Si7 | 071579-69-6 | 25 |
| 4 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 25 |
| 5 | Pentasiloxane, dodecamethyl- | 384 | C12H36O4Si5 | 000141-63-9 | 25 |



# Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

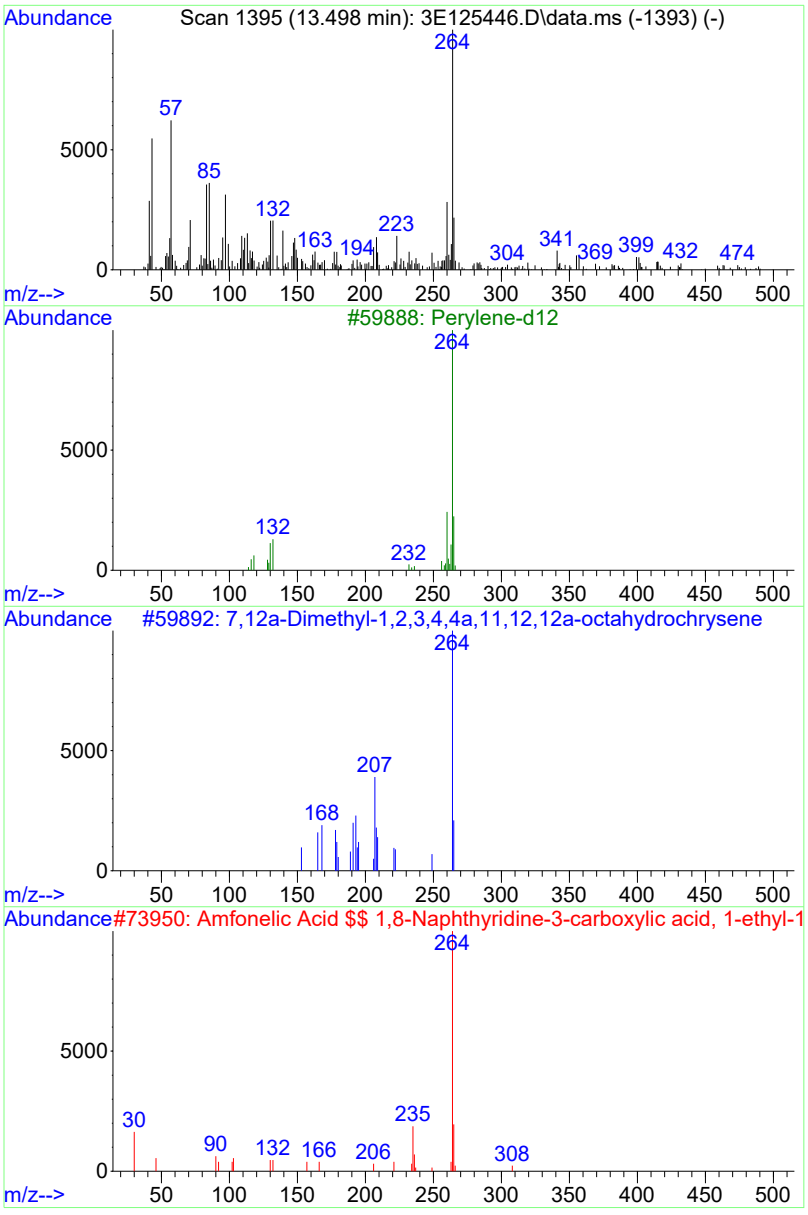
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

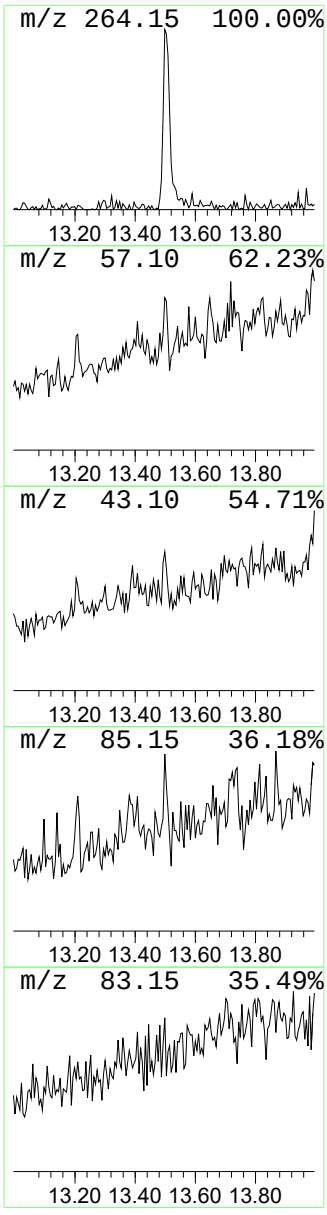
**********

Peak Number 32 Perylene-d12 Concentration Rank 24

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.498 | 7674.82 | 767482 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Perylene-d12 | 264 | C20D12 | 001520-96-3 | 89 |
| 2 | 7,12a-Dimethyl-1,2,3,4,4a,11,12,... | 264 | C20H24 | 075758-27-9 | 50 |
| 3 | Amfonelic Acid $$ 1,8-Naphthyrid... | 308 | C18H16N2O3 | 015180-02-6 | 43 |
| 4 | Anthraquinone, 2,3,6,7-tetramethyl- | 264 | C18H16O2 | 000000-00-0 | 43 |
| 5 | 3,3'-Dimethyl-4,4'-biphenylene d... | 264 | C16H12N2O2 | 000091-97-4 | 43 |



# Library Search Compound Report

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Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

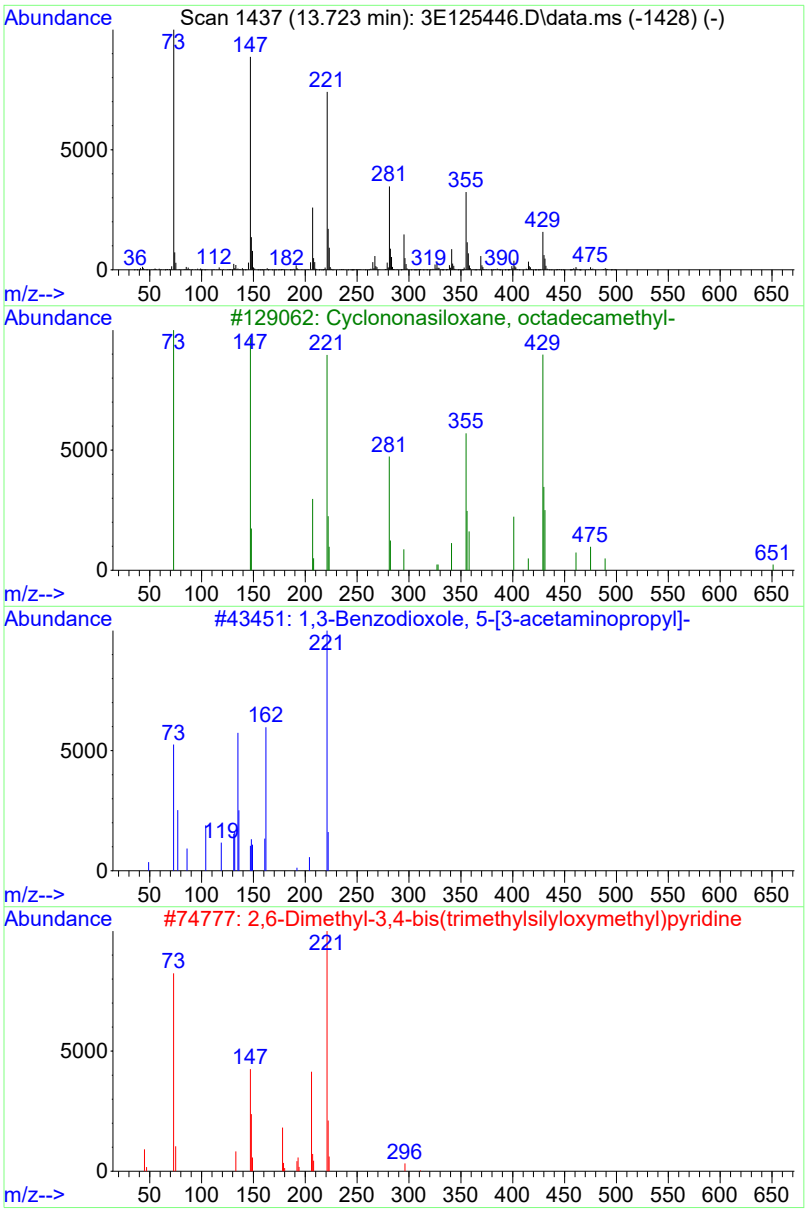
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

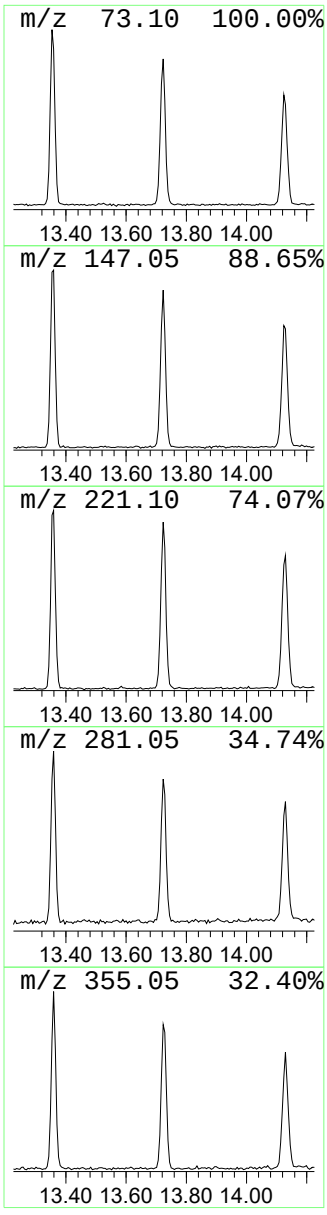
**********

Peak Number 33 Cyclononasiloxane, octadeca... Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 13.723 | 162916.00 | 16291600 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 91 |
| 2 | 1,3-Benzodioxole, 5-[3-acetamino... | 221 | C12H15NO3 | 000000-00-0 | 22 |
| 3 | 2,6-Dimethyl-3,4-bis(trimethylsi... | 311 | C15H29NO2Si2 | 000000-00-0 | 16 |
| 4 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 16 |
| 5 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 16 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

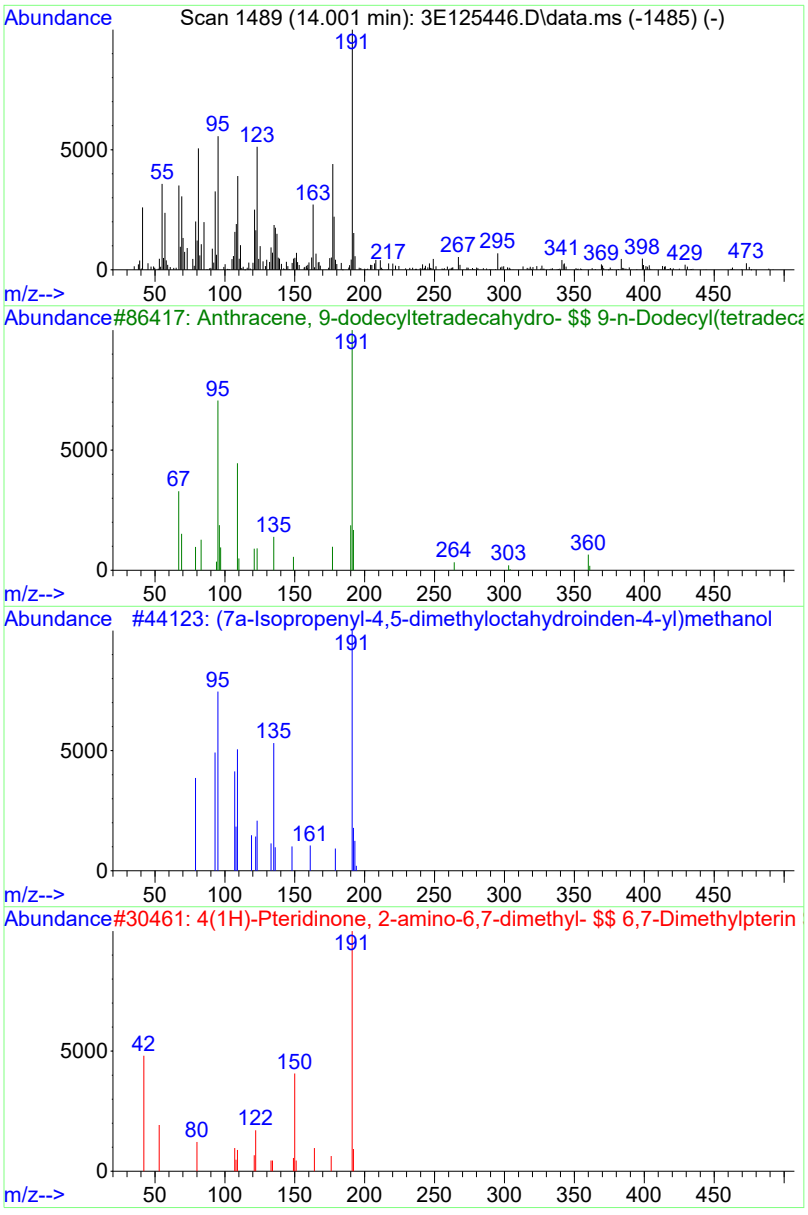
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

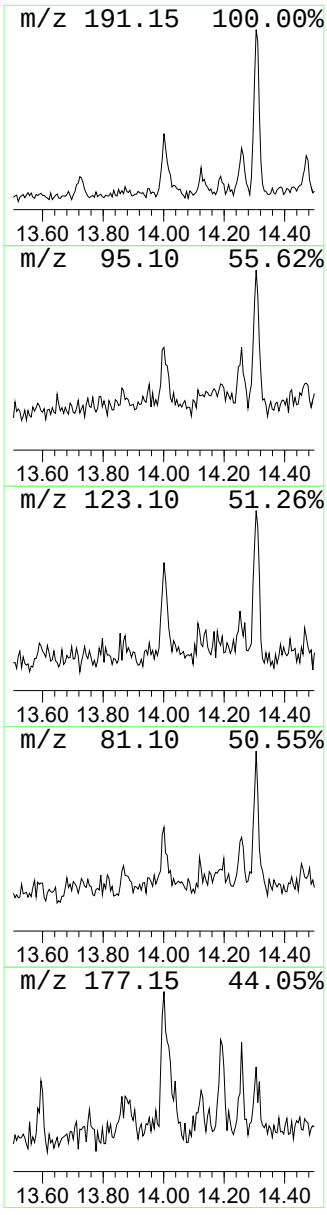
**********

Peak Number 34 Anthracene, 9-dodecyltetrad... Concentration Rank 20

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.001 | 15484.90 | 1548490 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Anthracene, 9-dodecyltetradecahy... | 360 | C26H48 | 055401-75-7 | 43 |
| 2 | (7a-Isopropenyl-4,5-dimethylocta... | 222 | C15H26O | 000000-00-0 | 37 |
| 3 | 4(1H)-Pteridinone, 2-amino-6,7-d... | 191 | C8H9N5O | 000611-55-2 | 35 |
| 4 | Anthracene, 9-cyclohexyltetradec... | 274 | C20H34 | 055255-70-4 | 27 |
| 5 | Anthracene, 9-butyltetradecahydr... | 248 | C18H32 | 055133-89-6 | 27 |



Library Search Compound Report

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Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

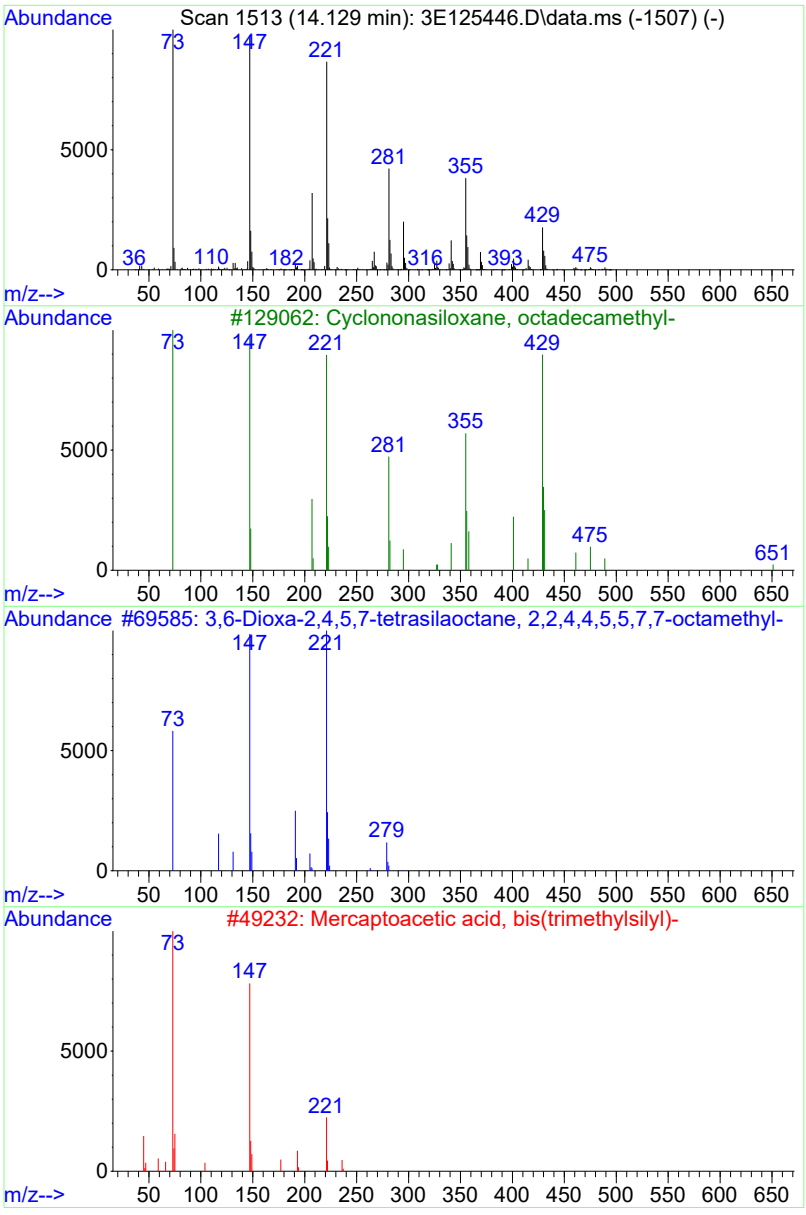
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

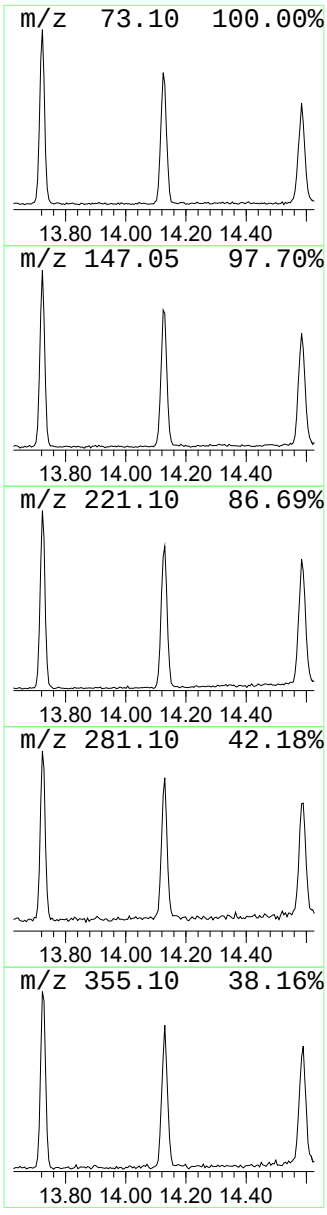
**********

Peak Number 35 Cyclononasiloxane, octadeca... Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.129 | 143045.00 | 14304500 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 91 |
| 2 | 3,6-Dioxa-2,4,5,7-tetrasilaoctan... | 294 | C10H30O2Si4 | 004342-25-0 | 38 |
| 3 | Mercaptoacetic acid, bis(trimeth... | 236 | C8H20O2SSi2 | 006398-62-5 | 38 |
| 4 | Pentasiloxane, dodecamethyl- | 384 | C12H36O4Si5 | 000141-63-9 | 27 |
| 5 | 1,1,1,5,7,7,7-Heptamethyl-3,3-bi... | 444 | C13H40O5Si6 | 038147-00-1 | 25 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

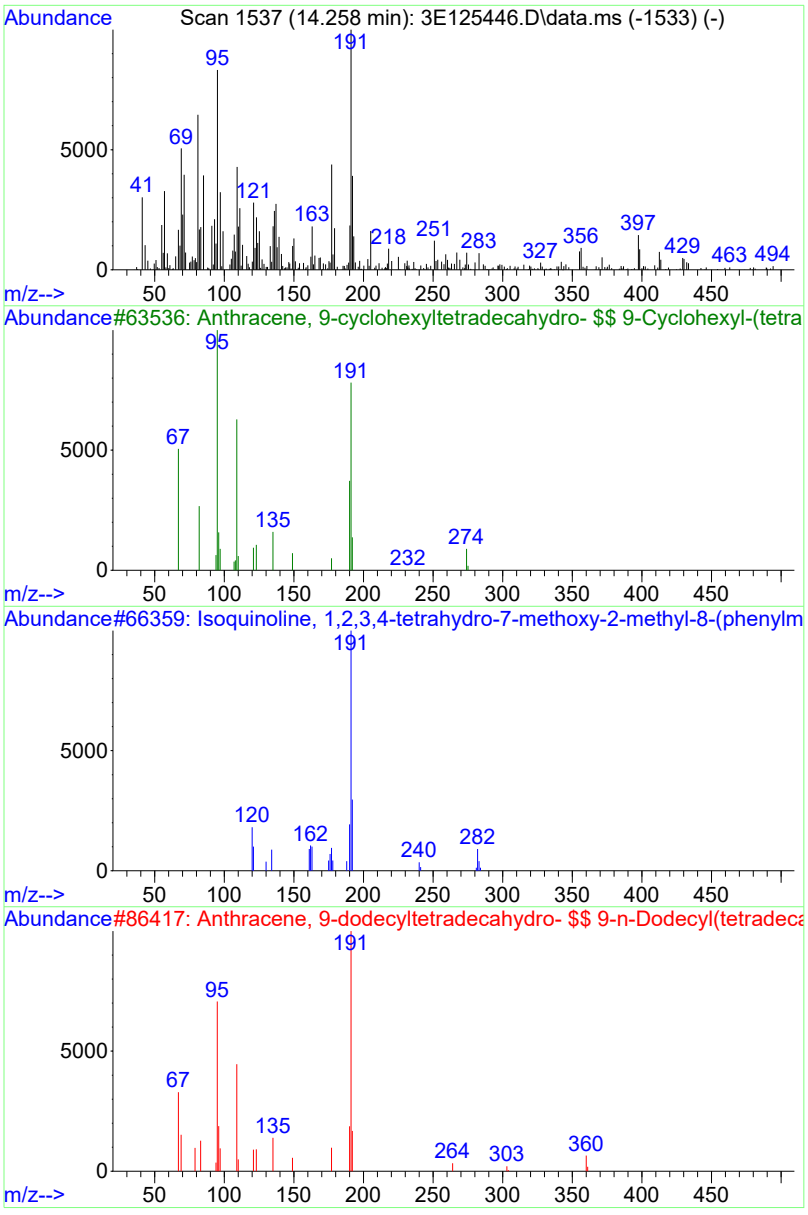
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

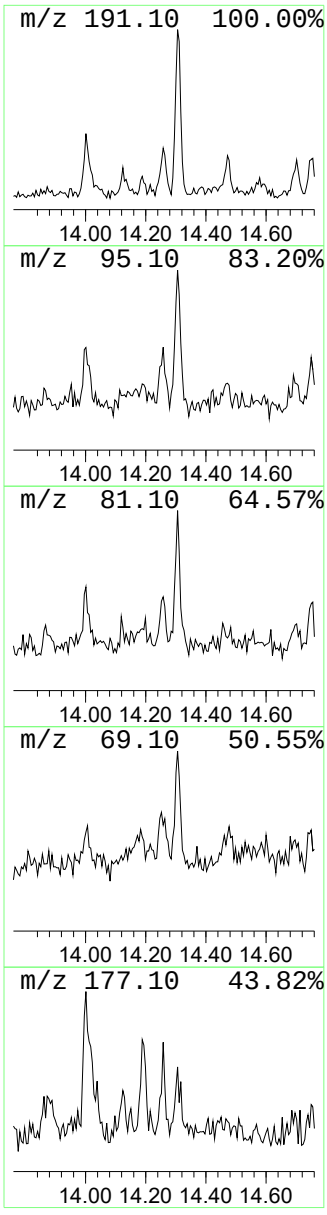
**********

Peak Number 36 Anthracene, 9-cyclohexyltet... Concentration Rank 21

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.258 | 14176.10 | 1417610 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Anthracene, 9-cyclohexyltetradec... | 274 | C20H34 | 055255-70-4 | 47 |
| 2 | Isoquinoline, 1,2,3,4-tetrahydro... | 283 | C18H21NO2 | 036646-87-4 | 43 |
| 3 | Anthracene, 9-dodecyltetradecahy... | 360 | C26H48 | 055401-75-7 | 40 |
| 4 | Anthracene, 9-butyltetradecahydr... | 248 | C18H32 | 055133-89-6 | 40 |
| 5 | Anthracene, 9-dodecyltetradecahy... | 360 | C26H48 | 055401-75-7 | 38 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

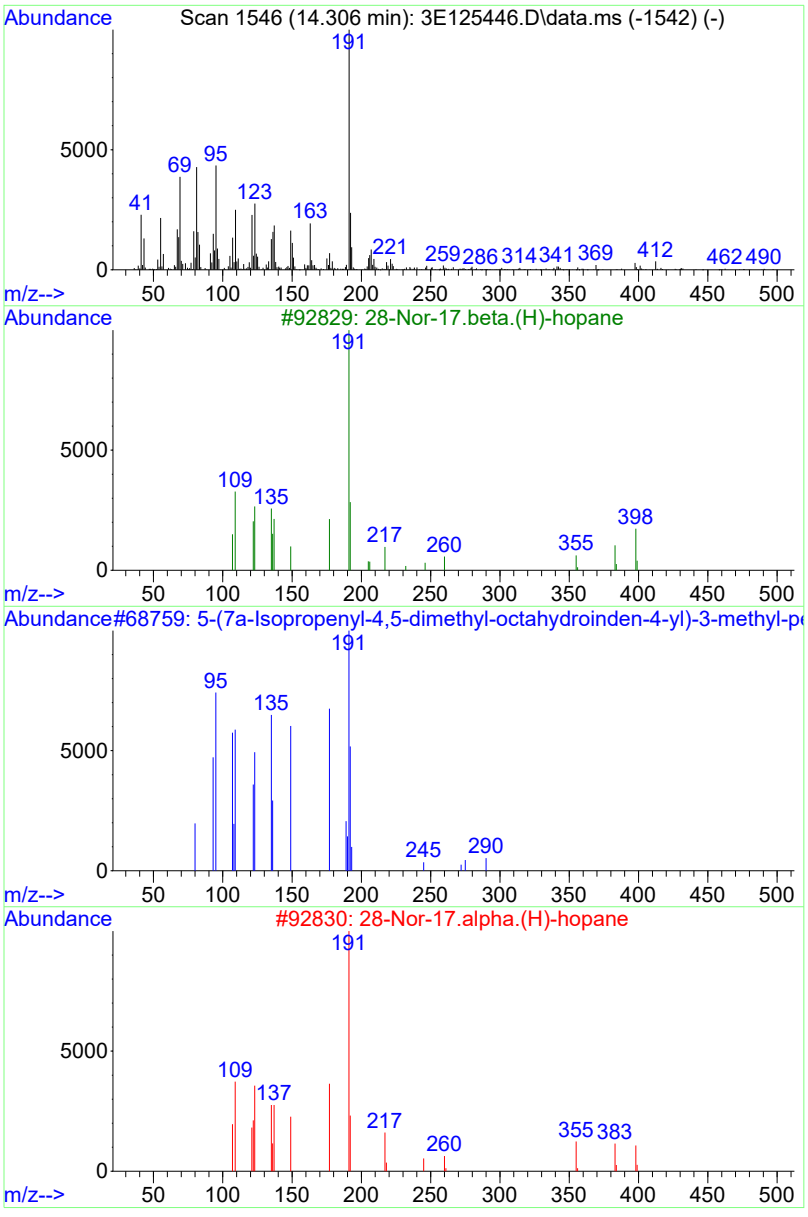
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

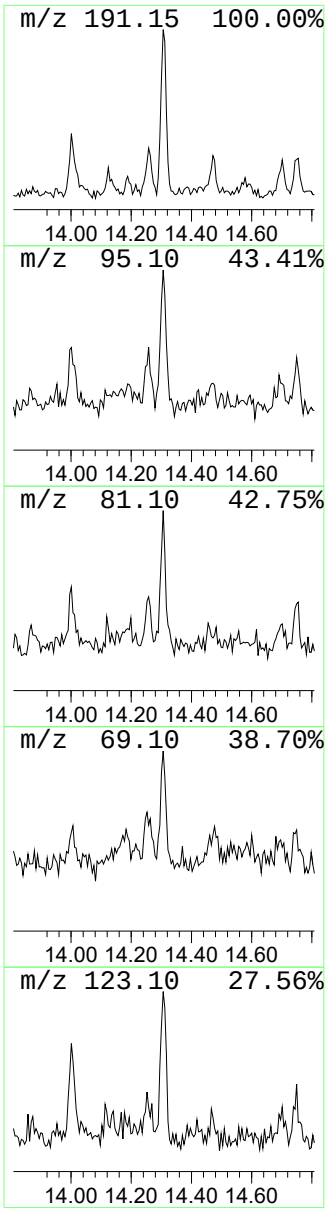
**********

Peak Number 37 28-Nor-17.beta.(H)-hopane Concentration Rank 18

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.306 | 33020.40 | 3302040 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 28-Nor-17.beta.(H)-hopane | 398 | C29H50 | 036728-72-0 | 59 |
| 2 | 5-(7a-Isopropenyl-4,5-dimethyl-o... | 290 | C20H34O | 000000-00-0 | 45 |
| 3 | 28-Nor-17.alpha.(H)-hopane | 398 | C29H50 | 053584-60-4 | 42 |
| 4 | Anthracene, 9-dodecyltetradecahy... | 360 | C26H48 | 055401-75-7 | 38 |
| 5 | 2-Methylidenehydrazono-3-methyl-... | 191 | C9H9N3S | 000000-00-0 | 38 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

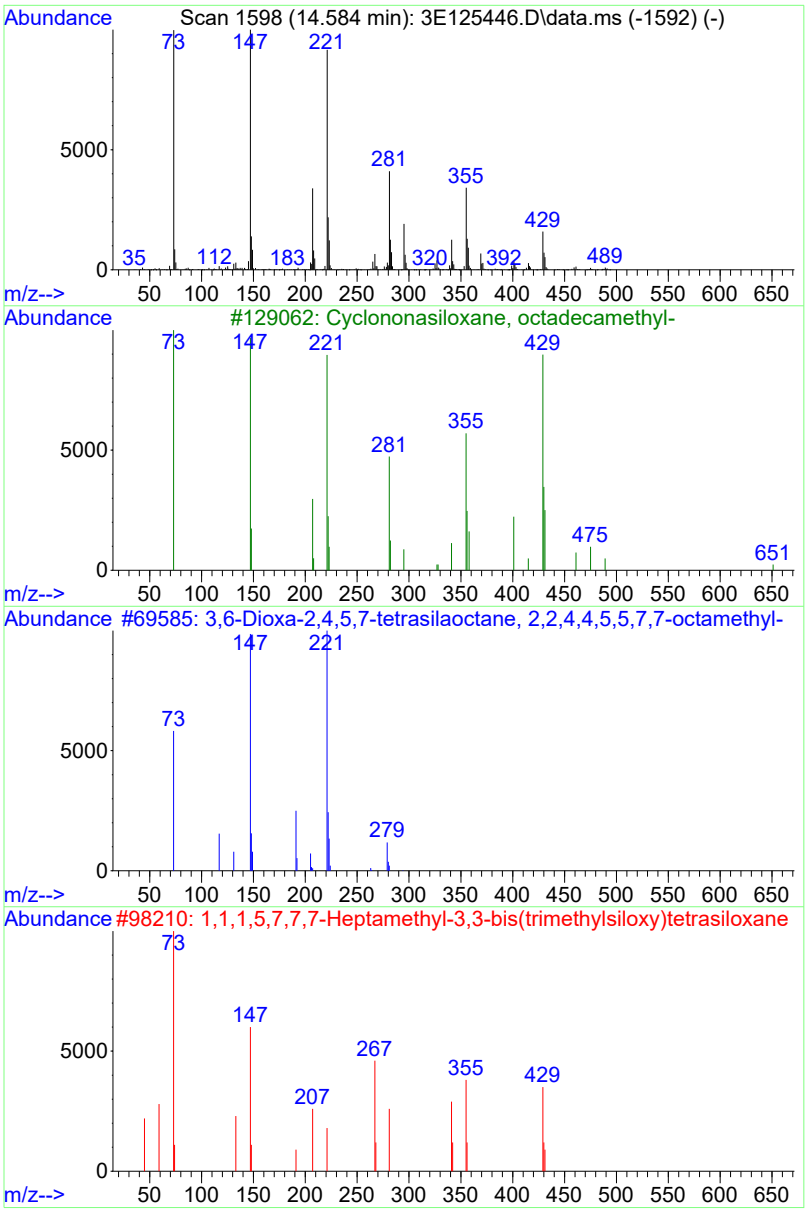
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

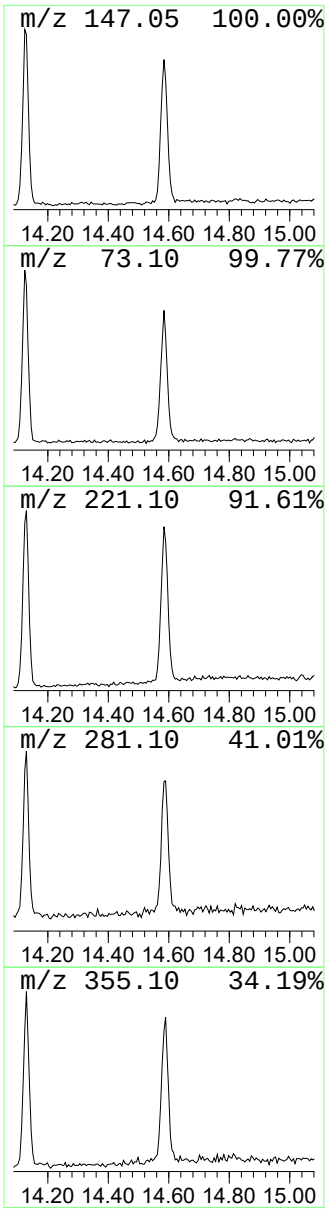
**********

Peak Number 38 Cyclononasiloxane, octadeca... Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.584 | 126162.00 | 12616200 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 87 |
| 2 | 3,6-Dioxa-2,4,5,7-tetrasilaoctan... | 294 | C10H30O2Si4 | 004342-25-0 | 43 |
| 3 | 1,1,1,5,7,7,7-Heptamethyl-3,3-bi... | 444 | C13H40O5Si6 | 038147-00-1 | 38 |
| 4 | Mercaptoacetic acid, bis(trimeth... | 236 | C8H20O2SSi2 | 006398-62-5 | 38 |
| 5 | Tris(trimethylsilyl)borate $$ Si... | 278 | C9H27BO3Si3 | 004325-85-3 | 22 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

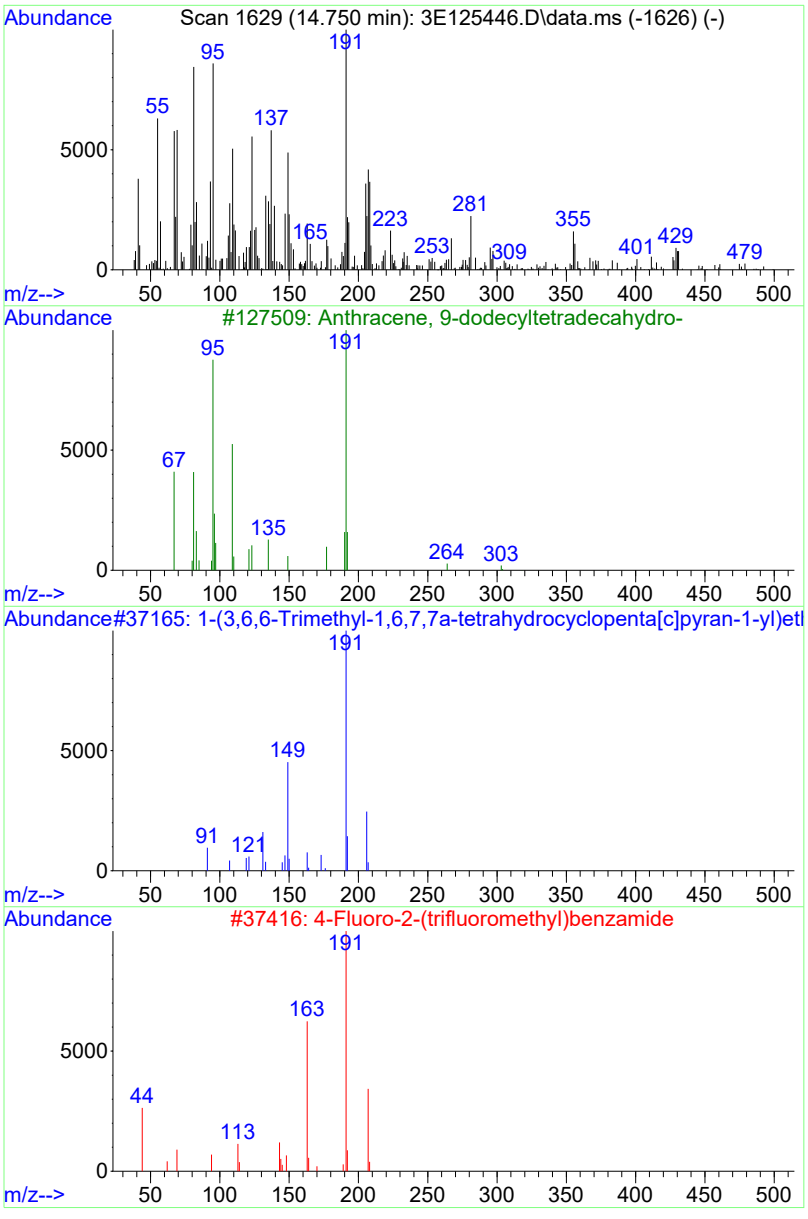
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

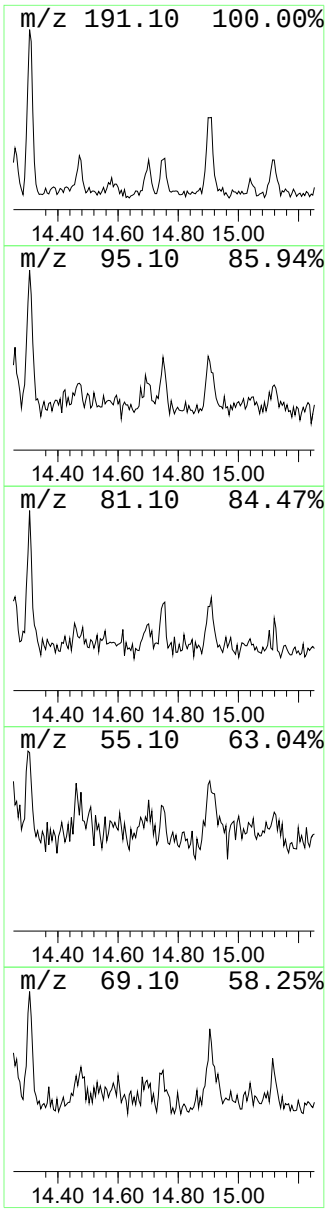
**********

Peak Number 39 Anthracene, 9-dodecyltetrad... Concentration Rank 22

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 14.750 | 13191.70 | 1319170 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Anthracene, 9-dodecyltetradecahy... | 360 | C26H48 | 055401-75-7 | 38 |
| 2 | 1-(3,6,6-Trimethyl-1,6,7,7a-tetr... | 206 | C13H18O2 | 054686-01-0 | 38 |
| 3 | 4-Fluoro-2-(trifluoromethyl)benz... | 207 | C8H5F4NO | 000000-00-0 | 25 |
| 4 | Pyrrolidine, 1-(9-borabicyclo[3.... | 191 | C12H22BN | 022516-41-2 | 22 |
| 5 | 5-Hexen-1-one, 1-(1H-imidazol-4-... | 192 | C11H16N2O | 069393-41-5 | 18 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

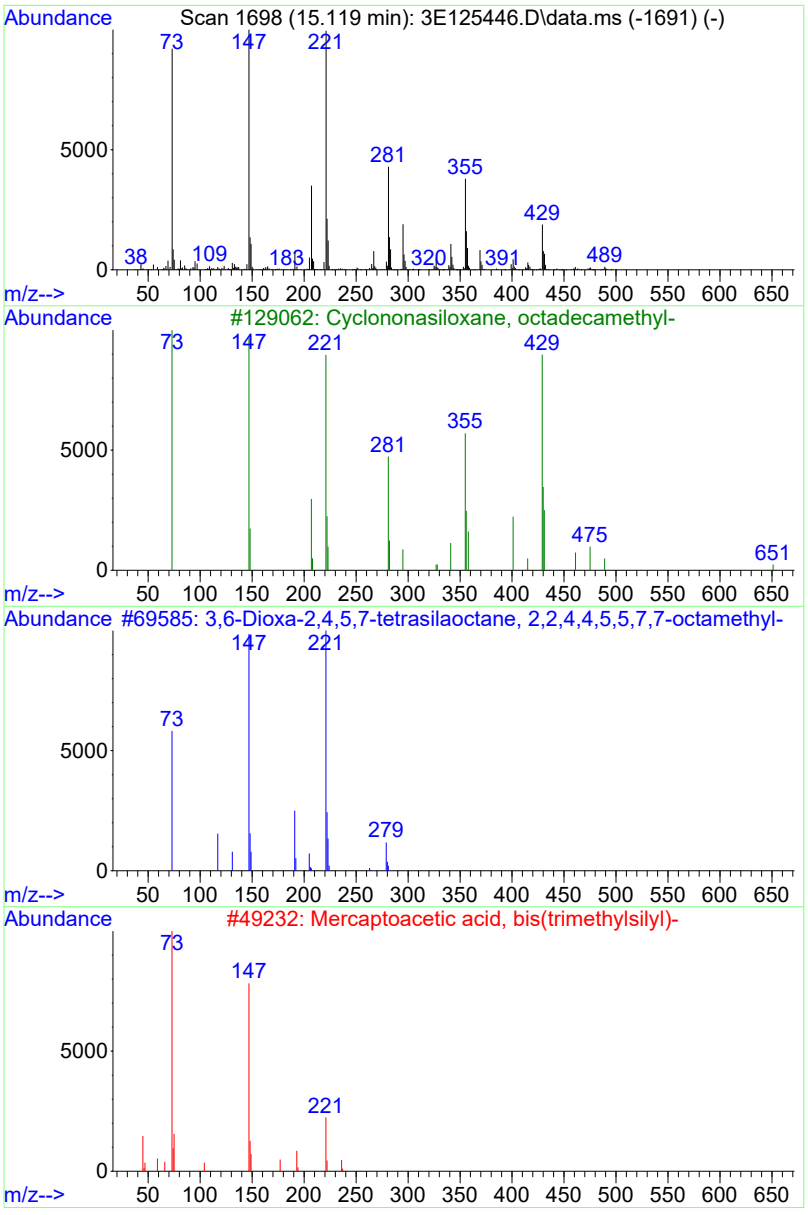
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

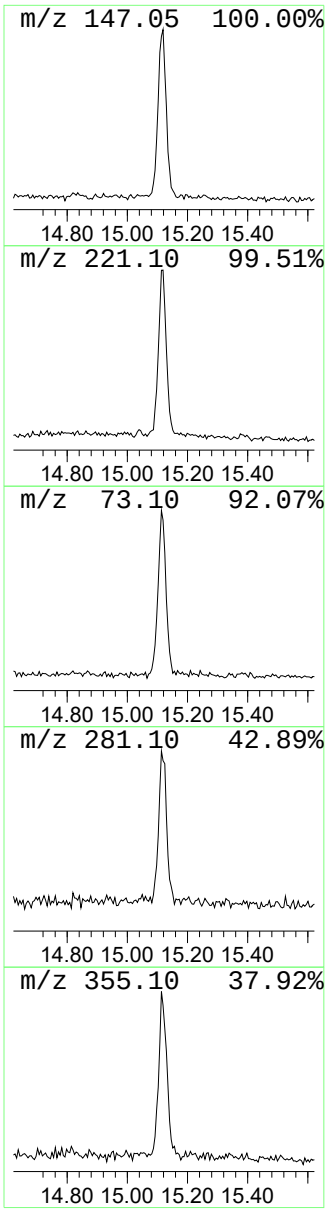
**********

Peak Number 40 Cyclononasiloxane, octadeca... Concentration Rank 8

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.119 | 126628.00 | 12662800 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 91 |
| 2 | 3,6-Dioxa-2,4,5,7-tetrasilaoctan... | 294 | C10H30O2Si4 | 004342-25-0 | 64 |
| 3 | Mercaptoacetic acid, bis(trimeth... | 236 | C8H20O2SSi2 | 006398-62-5 | 38 |
| 4 | 4H-Pyrido[1,2-a]pyrimidine-3-car... | 221 | C11H15N3O2 | 064399-29-7 | 27 |
| 5 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 27 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

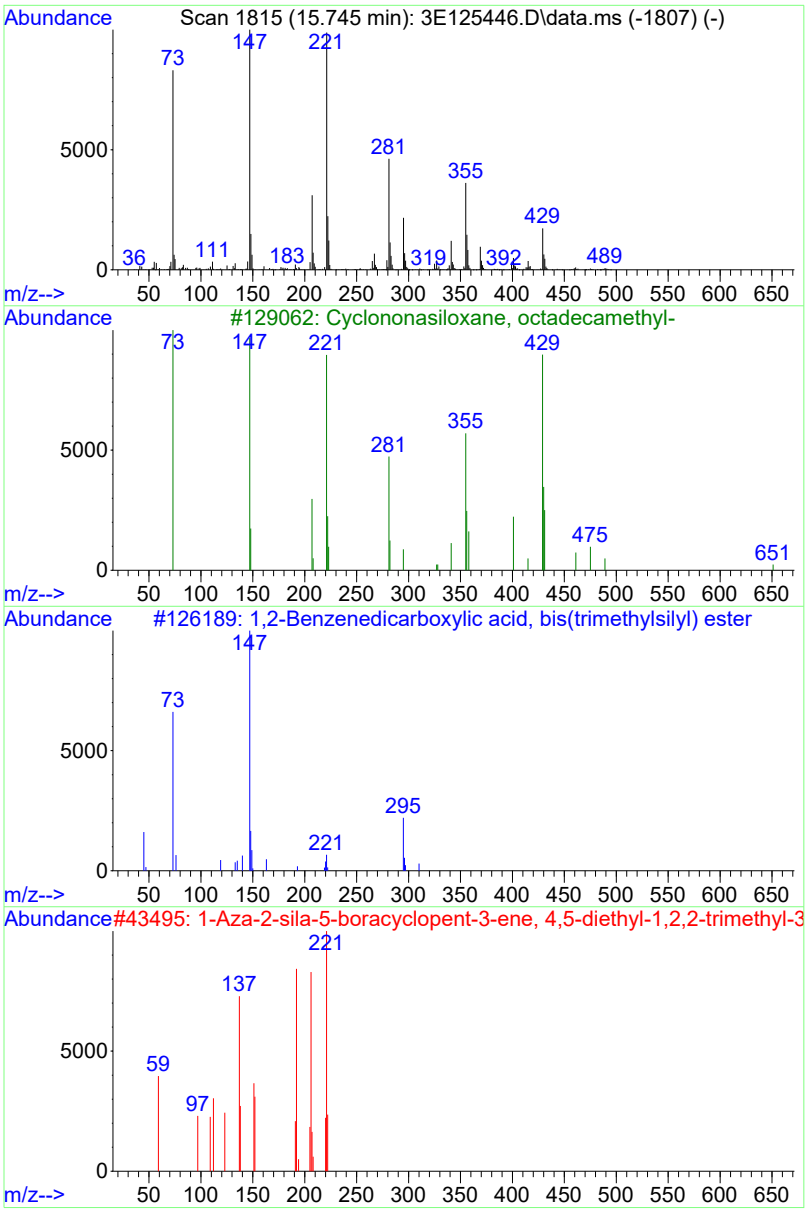
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

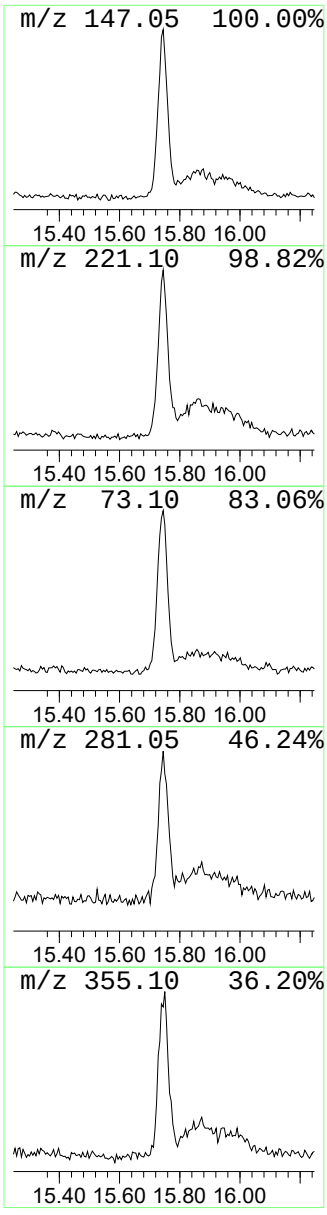
**********

Peak Number 41 Cyclononasiloxane, octadeca... Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 15.745 | 121396.00 | 12139600 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 87 |
| 2 | 1,2-Benzenedicarboxylic acid, bi... | 310 | C14H22O4Si2 | 002078-22-0 | 12 |
| 3 | 1-Aza-2-sila-5-boracyclopent-3-e... | 221 | C12H24BNSi | 081620-70-4 | 12 |
| 4 | 1,2-Benzenedicarboxylic acid, bi... | 310 | C14H22O4Si2 | 002078-22-0 | 12 |
| 5 | Trisiloxane, octamethyl- | 236 | C8H24O2Si3 | 000107-51-7 | 12 |



# Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

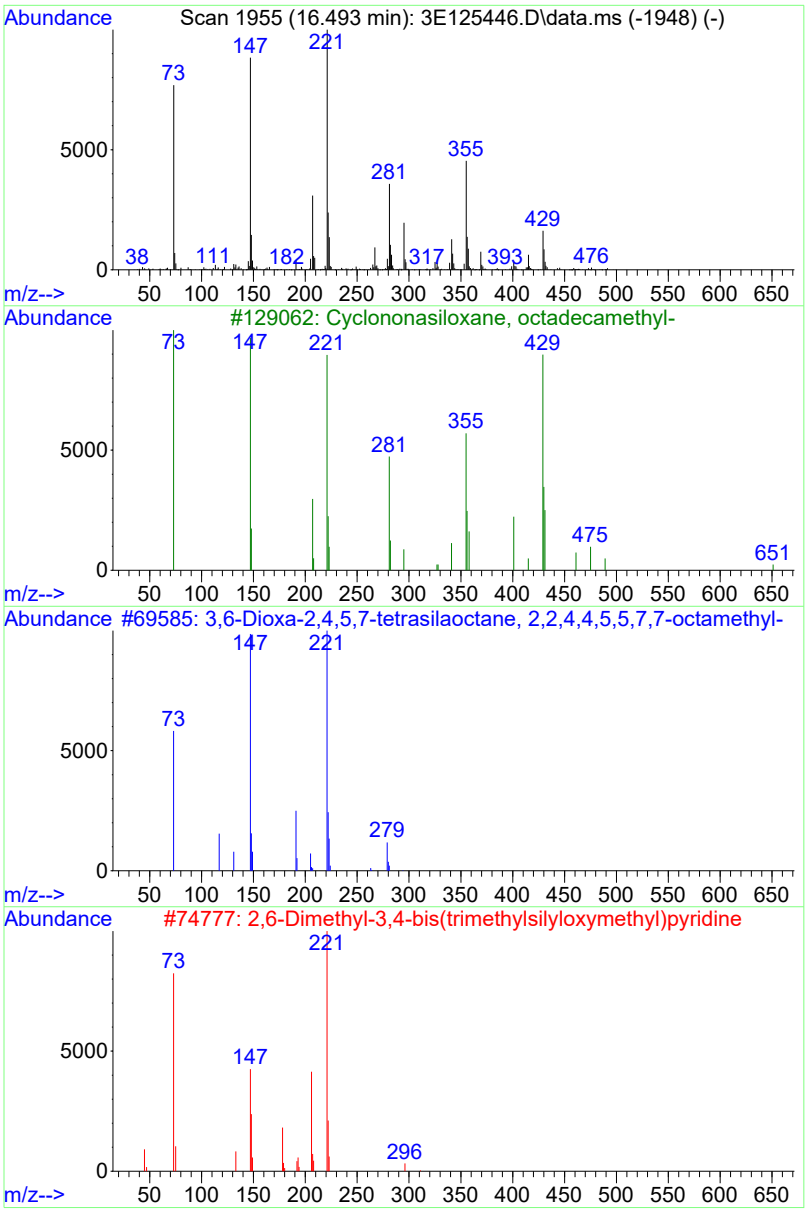
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

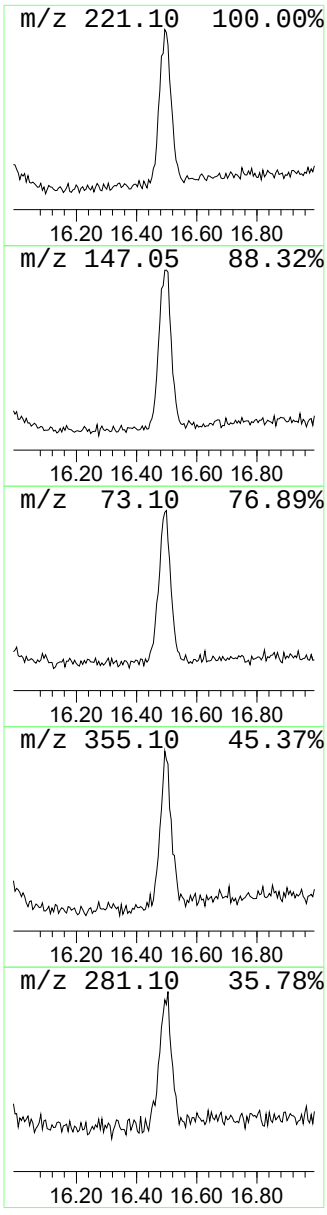
**********

Peak Number 42 Cyclononasiloxane, octadeca... Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 16.493 | 102456.00 | 10245600 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 62 |
| 2 | 3,6-Dioxa-2,4,5,7-tetrasilaoctan... | 294 | C10H30O2Si4 | 004342-25-0 | 33 |
| 3 | 2,6-Dimethyl-3,4-bis(trimethylsi... | 311 | C15H29NO2Si2 | 000000-00-0 | 23 |
| 4 | 3-Isopropoxy-1,1,1,7,7,7-hexamet... | 576 | C18H52O7Si7 | 071579-69-6 | 16 |
| 5 | 1,2-Benzenedicarboxylic acid, bi... | 310 | C14H22O4Si2 | 002078-22-0 | 12 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

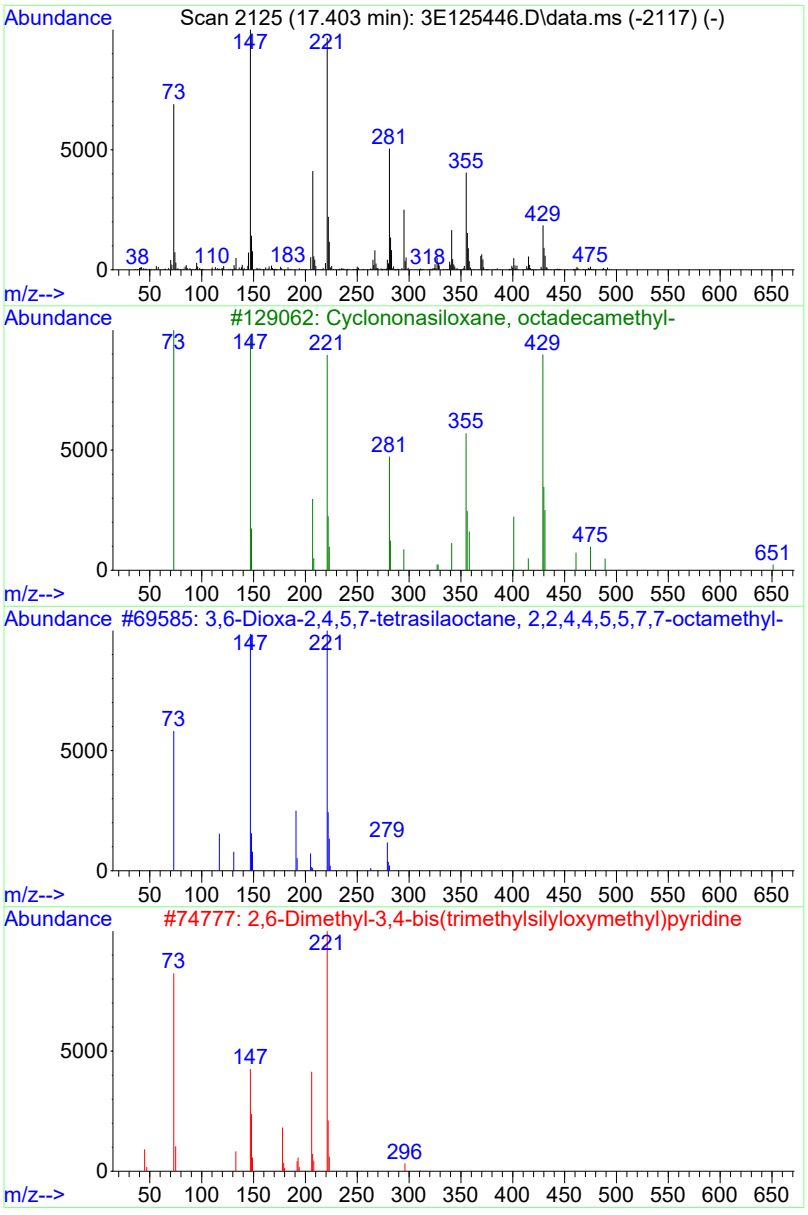
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

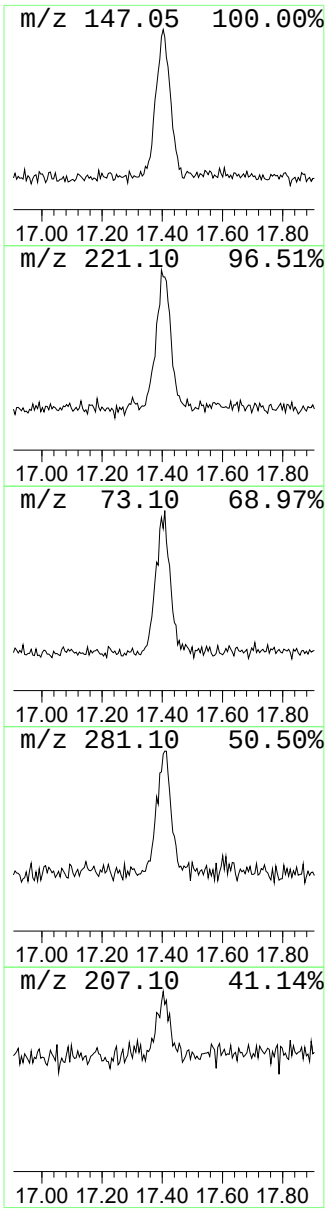
**********

Peak Number 43 Cyclononasiloxane, octadeca... Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 17.403 | 87399.00 | 8739900 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 87 |
| 2 | 3,6-Dioxa-2,4,5,7-tetrasilaoctan... | 294 | C10H30O2Si4 | 004342-25-0 | 32 |
| 3 | 2,6-Dimethyl-3,4-bis(trimethylsi... | 311 | C15H29NO2Si2 | 000000-00-0 | 16 |
| 4 | Pentasiloxane, dodecamethyl- | 384 | C12H36O4Si5 | 000141-63-9 | 12 |
| 5 | Pentasiloxane, dodecamethyl- $$ ... | 384 | C12H36O4Si5 | 000141-63-9 | 12 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

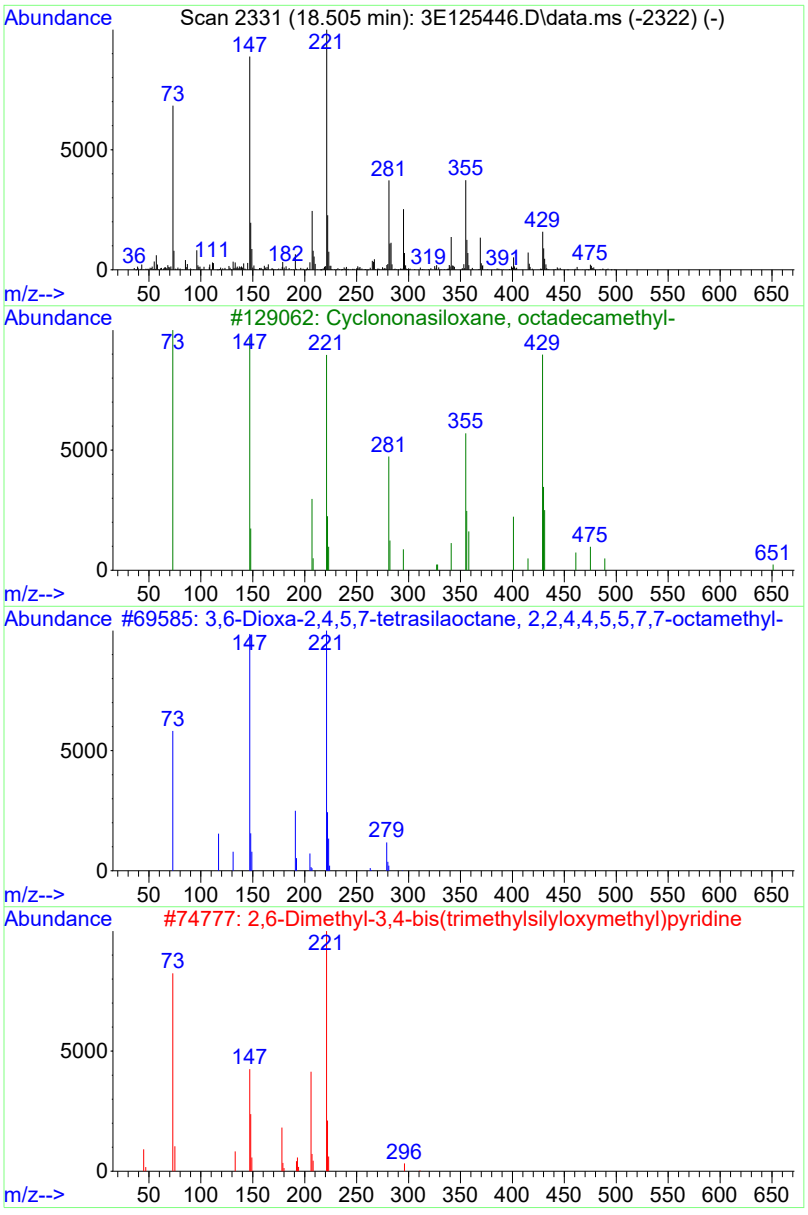
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

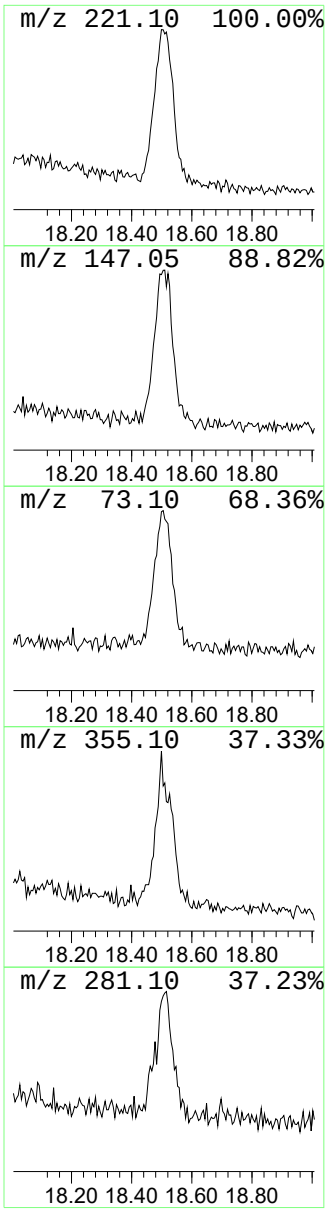
**********

Peak Number 44 Cyclononasiloxane, octadeca... Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 18.505 | 105379.00 | 10537900 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 64 |
| 2 | 3,6-Dioxa-2,4,5,7-tetrasilaoctan... | 294 | C10H30O2Si4 | 004342-25-0 | 40 |
| 3 | 2,6-Dimethyl-3,4-bis(trimethylsi... | 311 | C15H29NO2Si2 | 000000-00-0 | 32 |
| 4 | Methyl 2-methyl-2-benzylideneami... | 221 | C12H15NO3 | 000000-00-0 | 22 |
| 5 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 22 |



Tentatively Identified Compound (LSC) summary

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| Imidazo[5,1-f][... | 10.048 | 939.0 | | 93903 | 0 | 0.000 | 100 | 1.0 |
| Dibutyl phthalate | 10.150 | 2342.3 | | 234232 | 0 | 0.000 | 100 | 1.0 |
| Propanoic acid,... | 10.182 | 185.2 | | 18516 | 0 | 0.000 | 100 | 1.0 |
| 2-(1-Propenylth... | 10.198 | 250.2 | | 25019 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 10.728 | 81921.6 | | 8192160 | 0 | 0.000 | 100 | 1.0 |
| Dimethylbicyclo... | 10.883 | 1519.6 | | 151961 | 0 | 0.000 | 100 | 1.0 |
| Cyclopentasilox... | 11.027 | 1999.1 | | 199908 | 0 | 0.000 | 100 | 1.0 |
| 2-(5-Iodopentyl... | 11.107 | 1076.1 | | 107607 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 11.150 | 92587.9 | | 9258790 | 0 | 0.000 | 100 | 1.0 |
| Heptadecane, 3-... | 11.193 | 3230.1 | | 323013 | 0 | 0.000 | 100 | 1.0 |
| Benzoic acid, c... | 11.252 | 5605.4 | | 560536 | 0 | 0.000 | 100 | 1.0 |
| 1,2-Benzenediol... | 11.316 | 1744.4 | | 174441 | 0 | 0.000 | 100 | 1.0 |
| 1,4-Dihydro-2-i... | 11.348 | 1057.4 | | 105741 | 0 | 0.000 | 100 | 1.0 |
| Dimethylbicyclo... | 11.428 | 581.1 | | 58107 | 0 | 0.000 | 100 | 1.0 |
| Triacontane | 11.493 | 1913.8 | | 191375 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 11.551 | 111306.0 | | 11130600 | 0 | 0.000 | 100 | 1.0 |
| Pentamethyldisi... | 11.723 | 2686.5 | | 268646 | 0 | 0.000 | 100 | 1.0 |
| Diisooctyl adip... | 11.765 | 28173.9 | | 2817390 | 0 | 0.000 | 100 | 1.0 |
| Docosane, 11-bu... | 11.792 | 3464.2 | | 346423 | 0 | 0.000 | 100 | 1.0 |
| Benzoic acid, b... | 11.878 | 5847.6 | | 584757 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 11.936 | 126840.0 | | 12684000 | 0 | 0.000 | 100 | 1.0 |
| Heneicosane $$ ... | 12.081 | 9609.5 | | 960955 | 0 | 0.000 | 100 | 1.0 |
| Benzene, 1-(1,3... | 12.182 | 4690.1 | | 469006 | 0 | 0.000 | 100 | 1.0 |
| Chrysene-d12 | 12.236 | 2986.0 | | 298601 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 12.311 | 149185.0 | | 14918500 | 0 | 0.000 | 100 | 1.0 |
| Eicosane, 9-oct... | 12.370 | 2482.5 | | 248250 | 0 | 0.000 | 100 | 1.0 |
| Nitrobenzene, 3... | 12.584 | 39533.4 | | 3953340 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 12.669 | 176992.0 | | 17699200 | 0 | 0.000 | 100 | 1.0 |
| Di-n-octyl phth... | 12.803 | 4820.8 | | 482081 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 13.017 | 159333.0 | | 15933300 | 0 | 0.000 | 100 | 1.0 |
| 3,6-Dioxa-2,4,5... | 13.359 | 159848.0 | | 15984800 | 0 | 0.000 | 100 | 1.0 |
| Perylene-d12 | 13.498 | 7674.8 | | 767482 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 13.723 | 162916.0 | | 16291600 | 0 | 0.000 | 100 | 1.0 |
| Anthracene, 9-d... | 14.001 | 15484.9 | | 1548490 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 14.129 | 143045.0 | | 14304500 | 0 | 0.000 | 100 | 1.0 |
| Anthracene, 9-c... | 14.258 | 14176.1 | | 1417610 | 0 | 0.000 | 100 | 1.0 |
| 28-Nor-17.beta.... | 14.306 | 33020.4 | | 3302040 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 14.584 | 126162.0 | | 12616200 | 0 | 0.000 | 100 | 1.0 |
| Anthracene, 9-d... | 14.750 | 13191.7 | | 1319170 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 15.119 | 126628.0 | | 12662800 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 15.745 | 121396.0 | | 12139600 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 16.493 | 102456.0 | | 10245600 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 17.403 | 87399.0 | | 8739900 | 0 | 0.000 | 100 | 1.0 |
| Cyclononasiloxa... | 18.505 | 105379.0 | | 10537900 | 0 | 0.000 | 100 | 1.0 |

Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125444.D
Acq On : 30 Jul 2024 8:48 pm
Operator : (b) (6)
Sample : MB
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 30 22:38:39 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration

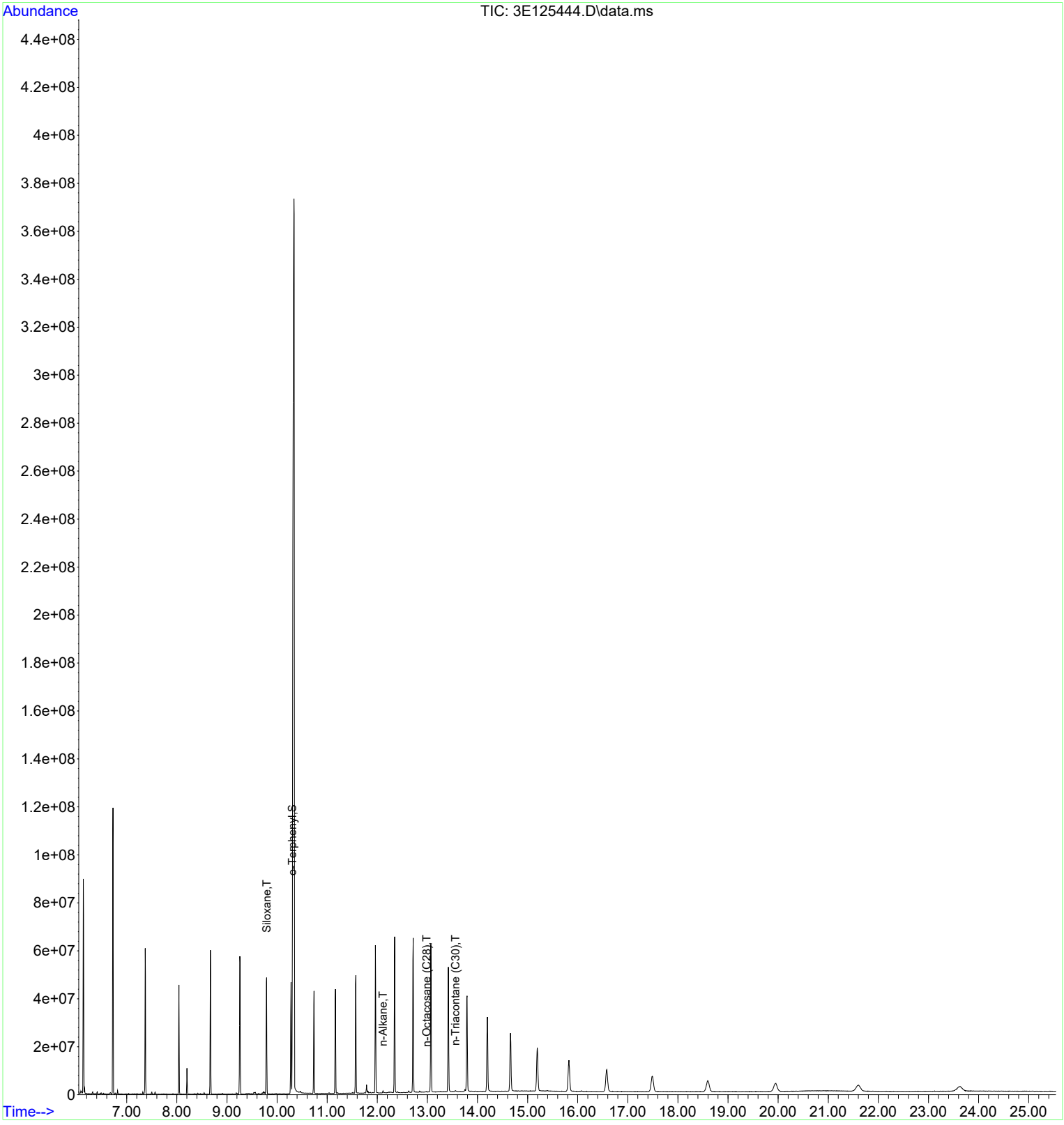
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | | |
| 17) o-Terphenyl | 10.305 | 230 | 26985321m | 26985321.00 | | | -0.15 |
| Target Compounds | | | | | | Qvalue | |
| 1) Undecane (C11) | 0.000 | | 0 | N.D. | d | | |
| 2) Diethylnaphthalene | 0.000 | | 0 | N.D. | d | | |
| 3) 1-Methylnaphthalene | 0.000 | | 0 | N.D. | d | | |
| 4) 1-Ethylpropylbenzene | 0.000 | | 0 | N.D. | d | | |
| 5) Cyclohexane | 0.000 | | 0 | N.D. | d | | |
| 6) Tridecane (C13) | 0.000 | | 0 | N.D. | d | | |
| 7) Dodecane (C12) | 0.000 | | 0 | N.D. | d | | |
| 8) Sesquiterpanes | 0.000 | | 0 | N.D. | d | | |
| 9) Benzocyclohexane | 0.000 | | 0 | N.D. | d | | |
| 10) Propylbutylbenzene | 0.000 | | 0 | N.D. | d | | |
| 11) Cyclic Isoprenoid | 0.000 | | 0 | N.D. | d | | |
| 12) Trimethylbenzene | 0.000 | | 0 | N.D. | d | | |
| 13) Bromo-Xa | 0.000 | | 0 | N.D. | | | |
| 14) Bromo-Xb | 0.000 | | 0 | N.D. | | | |
| 15) n-Hexadecanoic Acid | 0.000 | | 0 | N.D. | | | |
| 16) n-Octadecanoic Acid | 0.000 | | 0 | N.D. | | | |
| 18) Bromo-o-Terphenyl | 0.000 | | 0 | N.D. | d | | |
| 19) Chloro-o-Terphenyl | 0.000 | | 0 | N.D. | d | | |
| 20) n-Alkane | 12.113 | 57 | 3795635m | 3795635.00 | | | |
| 21) n-Octane (C8) | 0.000 | | 0 | N.D. | d | | |
| 22) n-Nonane (C9) | 6.491 | 57 | 108341 | No Calib | | # | |
| 23) n-Decane (C10) | 0.000 | | 0 | N.D. | d | | |
| 24) n-Dodecane (C12) | 0.000 | | 0 | N.D. | d | | |
| 25) n-Tetradecane (C14) | 0.000 | | 0 | N.D. | d | | |
| 26) n-Hexadecane (C16) | 0.000 | | 0 | N.D. | d | | |
| 27) n-Octadecane (C18) | 0.000 | | 0 | N.D. | d | | |
| 28) n-Eicosane (C20) | 0.000 | | 0 | N.D. | d | | |
| 29) n-Heneicosane (C21) | 0.000 | | 0 | N.D. | d | | |
| 30) n-Docosane (C22) | 0.000 | | 0 | N.D. | d | | |
| 31) n-Tricosane (C23) | 0.000 | | 0 | N.D. | d | | |
| 32) n-Tetracosane (C24) | 0.000 | | 0 | N.D. | d | | |
| 33) n-Pentacosane (C25) | 0.000 | | 0 | N.D. | d | | |
| 34) n-Hexacosane (C26) | 0.000 | | 0 | N.D. | d | | |
| 35) n-Heptacosane (C27) | 0.000 | | 0 | N.D. | d | | |
| 36) n-Octacosane (C28) | 12.985 | 57 | 57295 | 57295.00 | | # | 74 |
| 37) n-Nonacosane (C29) | 0.000 | | 0 | N.D. | d | | |
| 38) n-Triacontane (C30) | 13.562 | 57 | 44416 | 44416.00 | | # | 72 |
| 39) n-Doatriacontane (C32) | 0.000 | | 0 | N.D. | d | | |
| 40) n-Tetratriacontane (C34) | 0.000 | | 0 | N.D. | d | | |
| 41) n-Hexatriacontane (C36) | 0.000 | | 0 | N.D. | d | | |
| 42) n-Octatriacontane (C38) | 0.000 | | 0 | N.D. | d | | |
| 43) n-Tetracontane (C40) | 0.000 | | 0 | N.D. | d | | |
| 44) Siloxane | 9.792 | 429 | 16067230m | 16067230.00 | | | |
| 45) Butyl benzyl phthalate | 0.000 | | 0 | N.D. | d | | |
| 46) Bis(2-ethylhexyl)phtha... | 0.000 | | 0 | N.D. | d | | |
| 47) Di-n-octylphthalate | 0.000 | | 0 | N.D. | d | | |
| 48) Diethyl Phthalate | 0.000 | | 0 | N.D. | d | | |

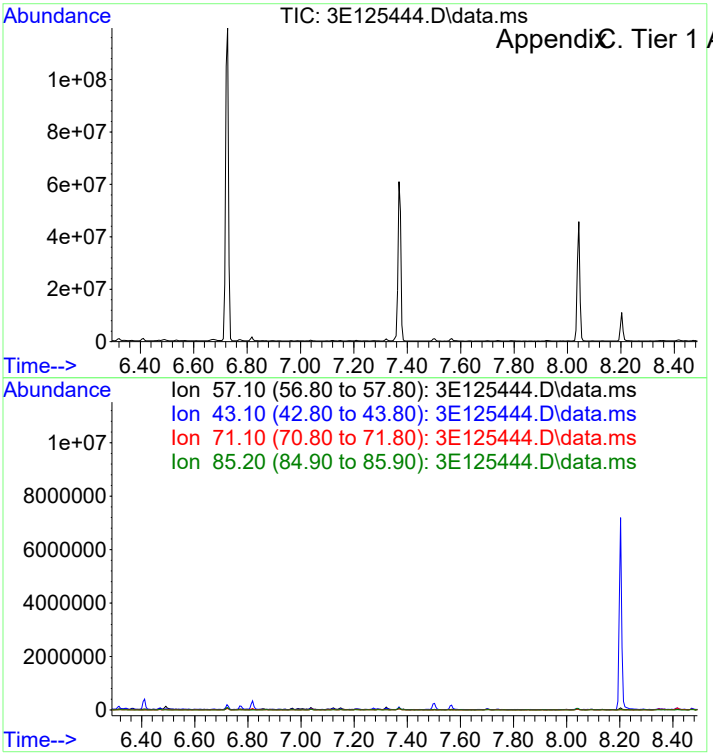
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125444.D
Acq On : 30 Jul 2024 8:48 pm
Operator : (b) (6)
Sample : MB
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 30 22:38:39 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration



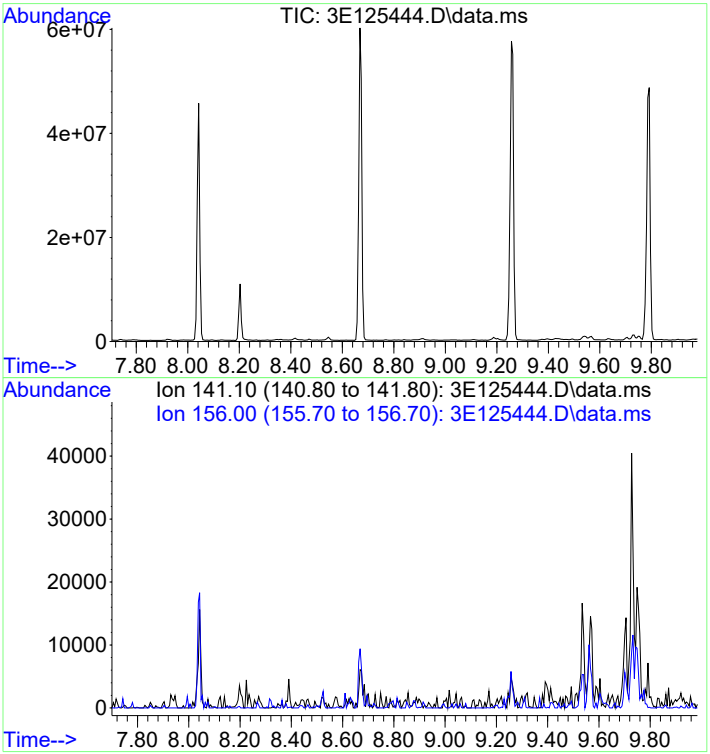



#1
Undecane (C11)
Concen: N.D.
Expected RT: 7.39 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 15.7 |
| 71 | 6.9 |
| 85 | 0.0 |

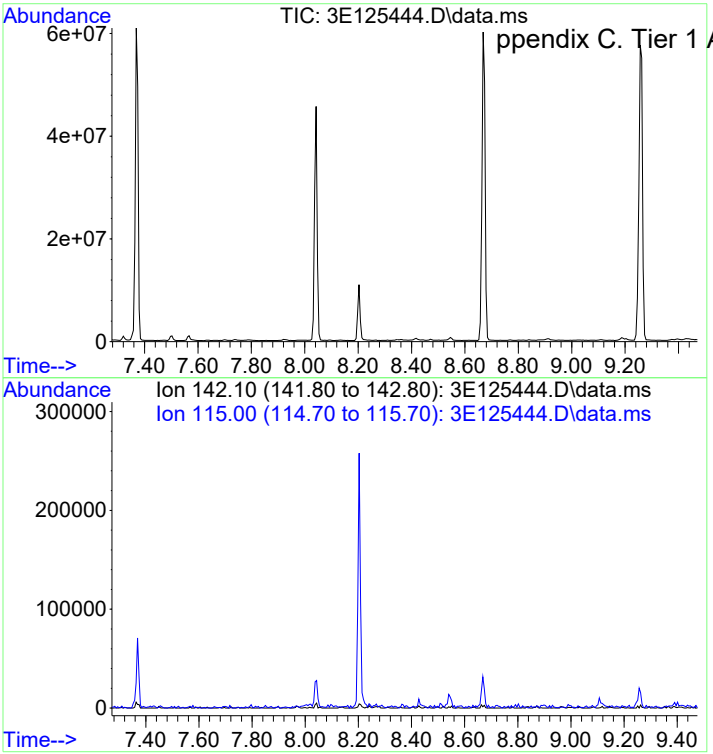



#2
Diethylnaphthalene
Concen: N.D.
Expected RT: 8.80 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 141

| Sig | Exp Ratio |
|---|---|
| 141 | 100 |
| 156 | 0.0 |

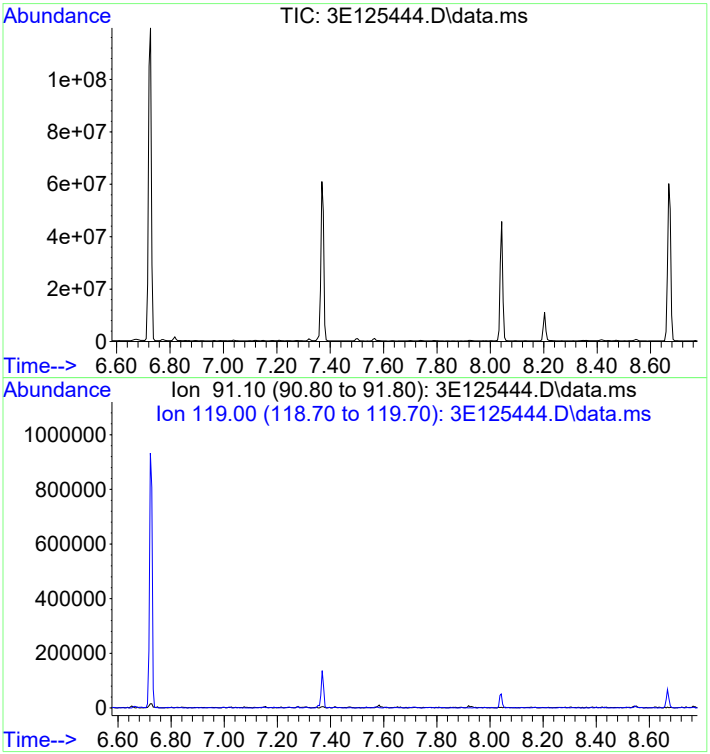



#3
1-Methylnaphthalene
Concen: N.D.
Expected RT: 8.37 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 142

| Sig | Exp Ratio |
|---|---|
| 142 | 100 |
| 115 | 0.0 |

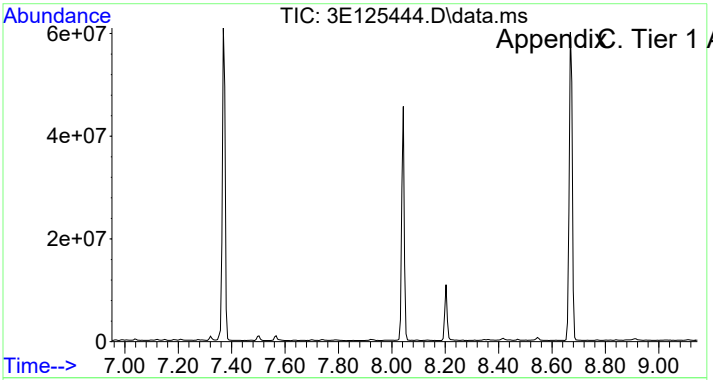



#4
1-Ethylpropylbenzene
Concen: N.D.
Expected RT: 7.68 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 91

| Sig | Exp Ratio |
|---|---|
| 91 | 100 |
| 119 | 0.0 |

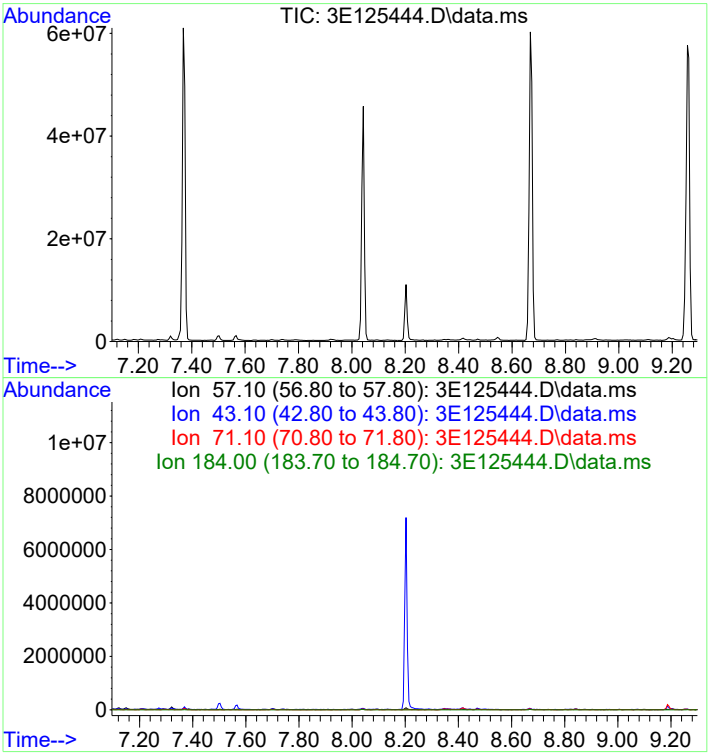



#5
Cyclohexane
Concen: N.D.
Expected RT: 8.05 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 84

| Sig | Exp Ratio |
|---|---|
| 84 | 100 |
| 56 | 0.0 |
| 69 | 0.0 |

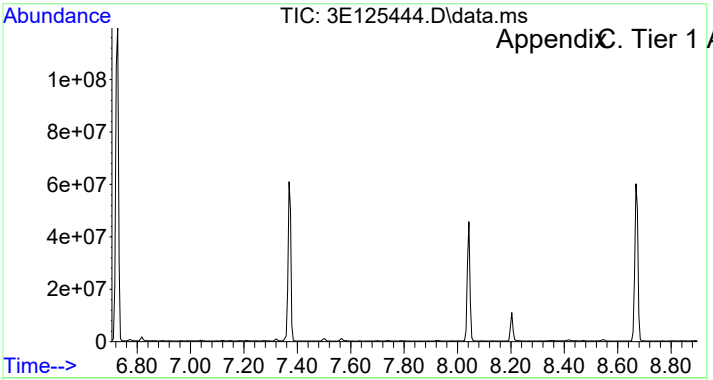


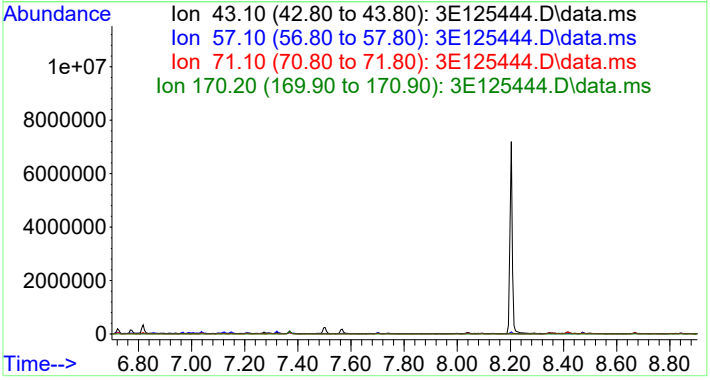

#6
Tridecane (C13)
Concen: N.D.
Expected RT: 8.20 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 6.1 |
| 71 | 0.0 |
| 184 | 0.0 |



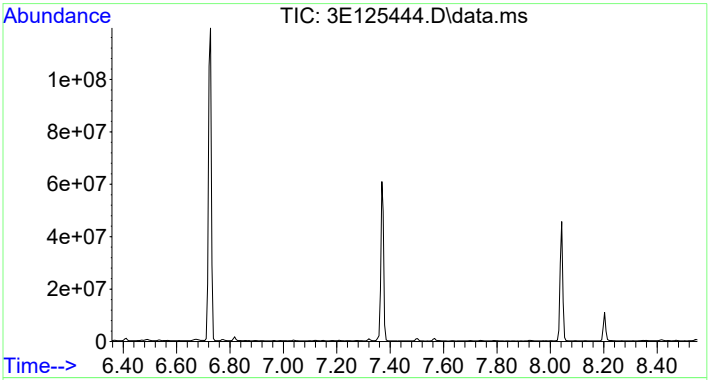



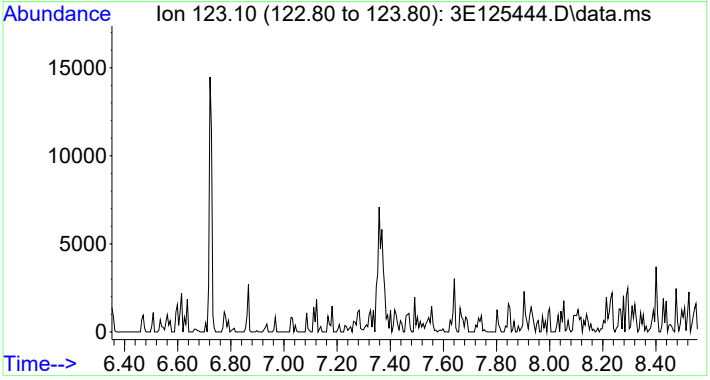

#7
Dodecane (C12)
Concen: N.D.
Expected RT: 7.80 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 43

| Sig | Exp Ratio |
|---|---|
| 43 | 100 |
| 57 | 165.0 |
| 71 | 64.9 |
| 170 | 0.0 |

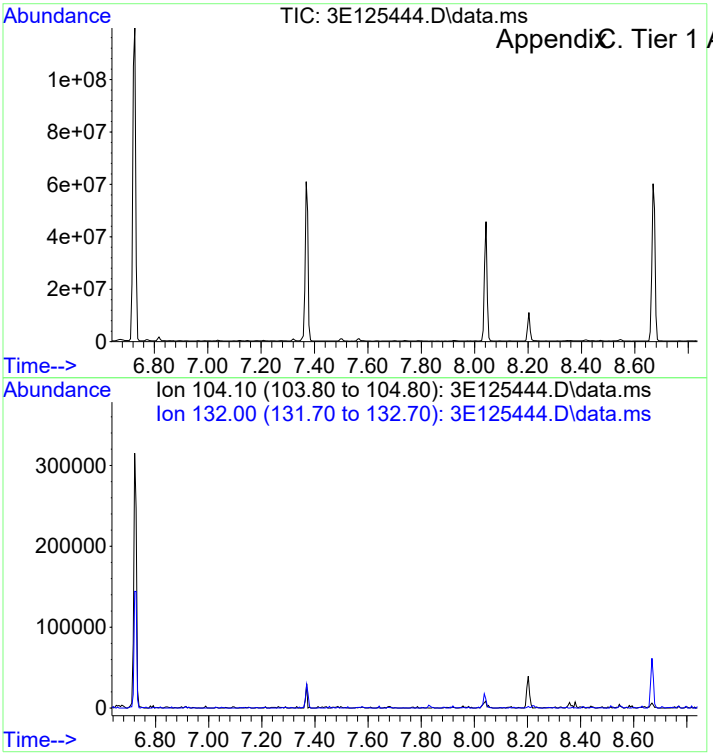



#8
Sesquiterpanes
Concen: N.D.
Expected RT: 7.45 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 123

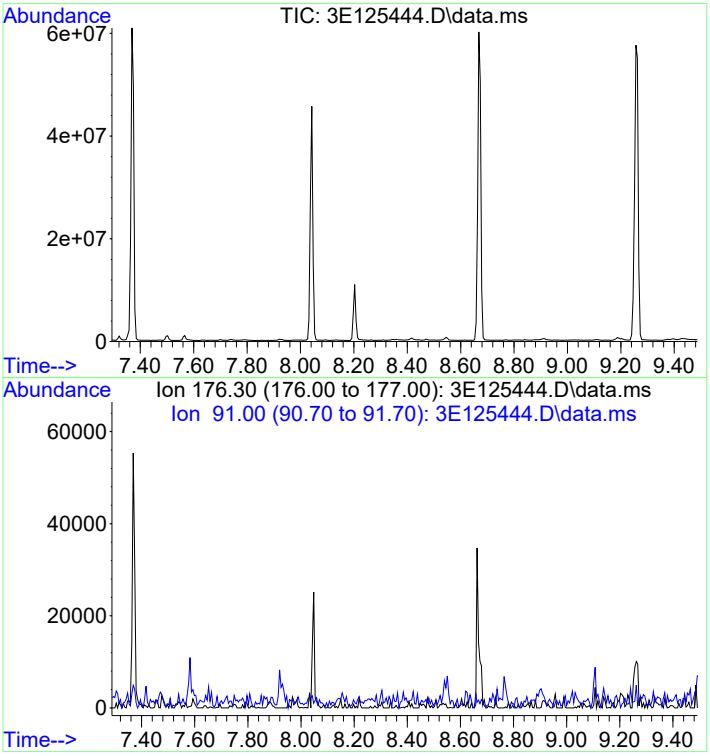



#9
Benzocyclohexane
Concen: N.D.
Expected RT: 7.74 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 104

| Sig | Exp Ratio |
|---|---|
| 104 | 100 |
| 132 | 0.0 |

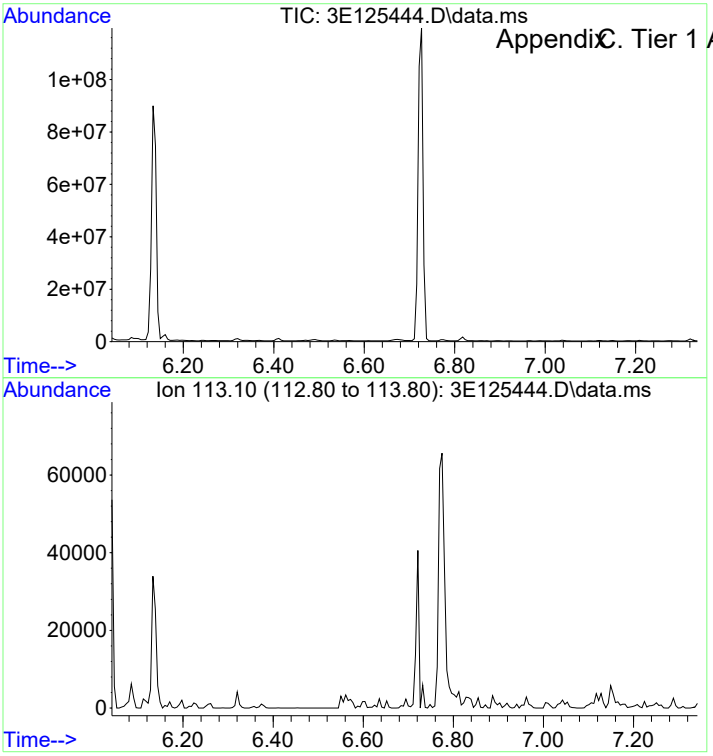



#10
Propylbutylbenzene
Concen: N.D.
Expected RT: 8.39 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 176

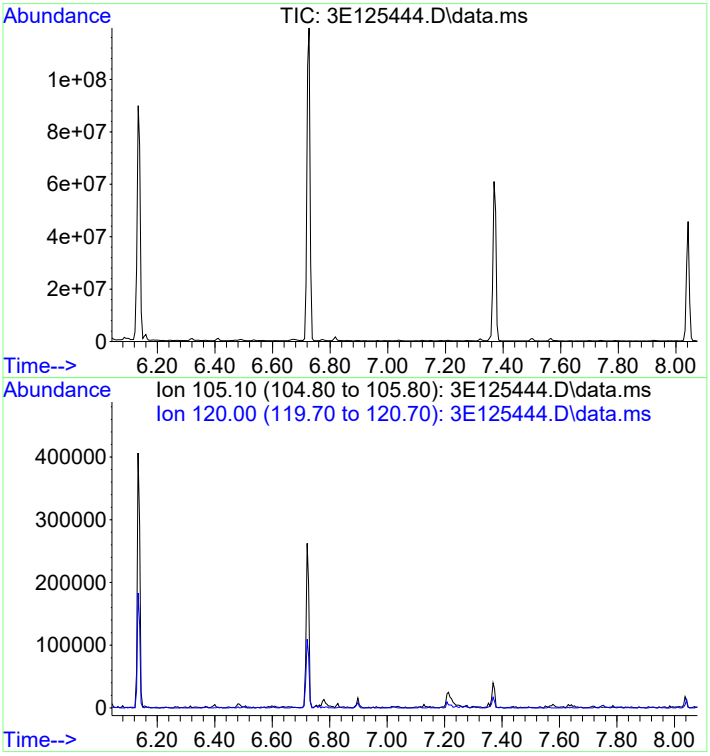
| Sig | Exp Ratio |
|---|---|
| 176 | 100 |
| 91 | 0.0 |




#11
Cyclic Isoprenoid
Concen: N.D.
Expected RT: 6.24 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 113

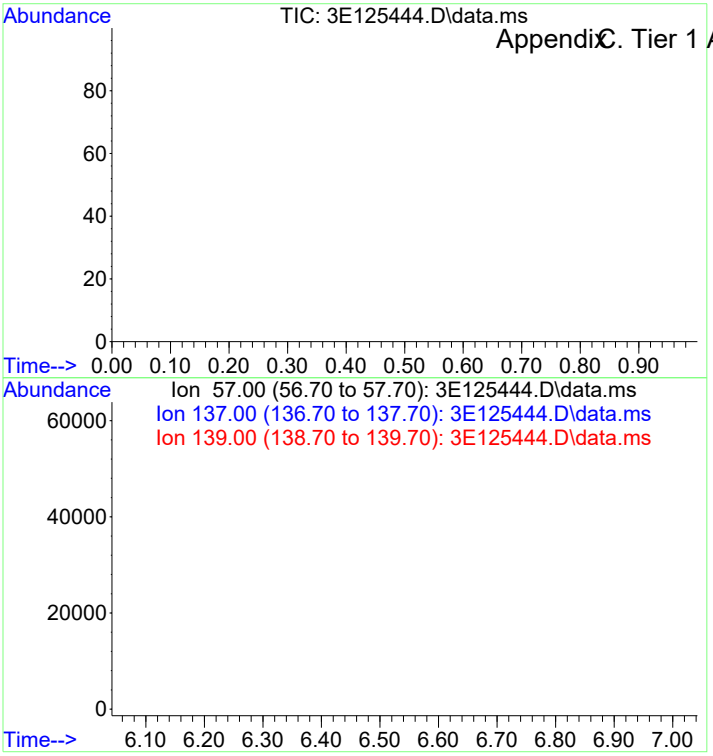



#12
Trimethylbenzene
Concen: N.D.
Expected RT: 6.98 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 105

| Sig | Exp Ratio |
|---|---|
| 105 | 100 |
| 120 | 0.0 |

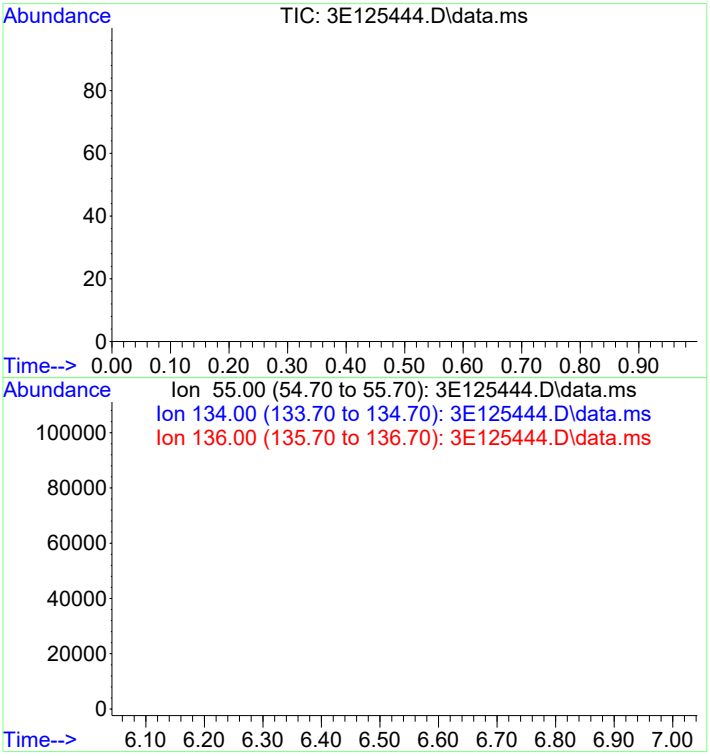



#13
Bromo-Xa
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 137 | 0.0 |
| 139 | 0.0 |

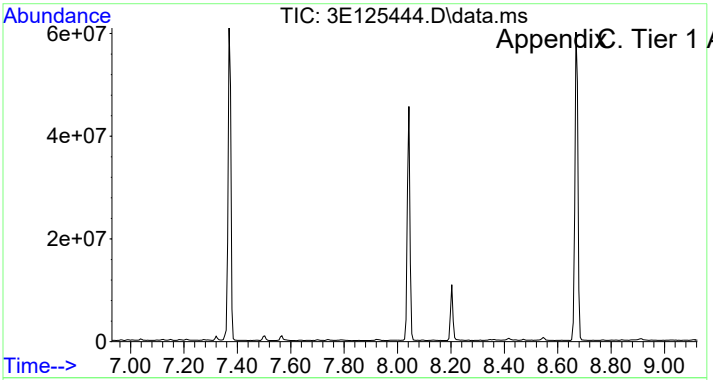



#14
Bromo-Xb
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 55

| Sig | Exp Ratio |
|---|---|
| 55 | 100 |
| 134 | 0.0 |
| 136 | 0.0 |

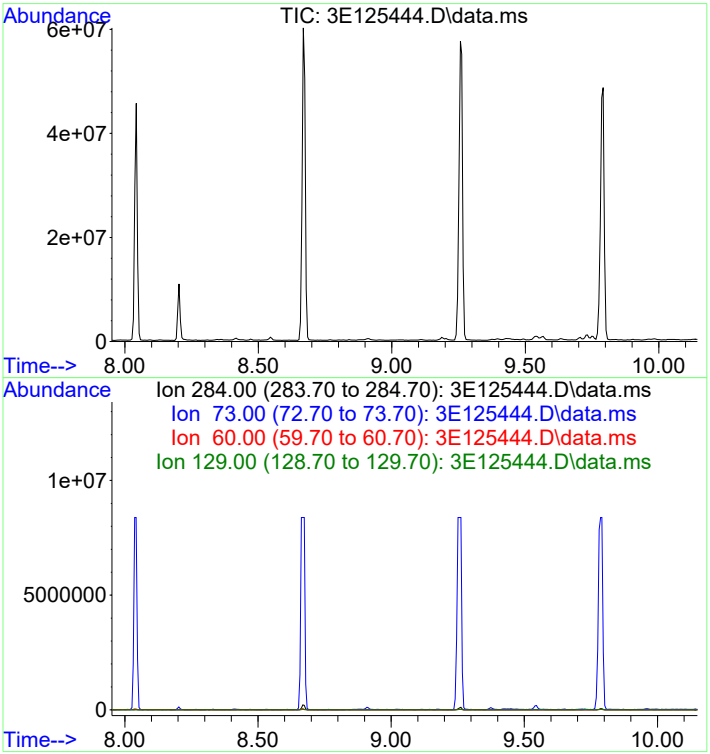



#15
n-Hexadecanoic Acid
Concen: N.D.
Expected RT: 8.03 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 256

| Sig | Exp Ratio |
|---|---|
| 256 | 100 |
| 73 | 117.8 |
| 60 | 50.7 |
| 129 | 36.1 |

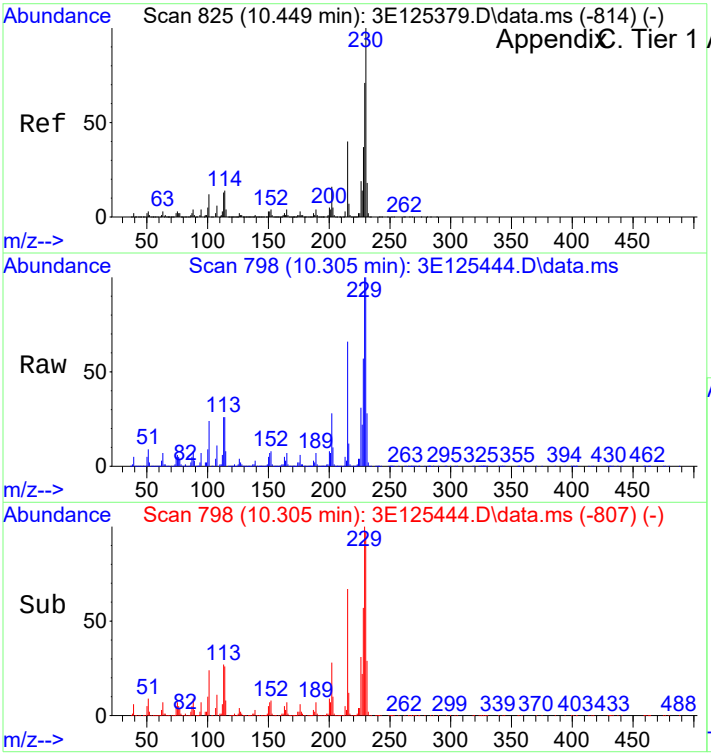



#16
n-Octadecanoic Acid
Concen: N.D.
Expected RT: 9.05 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 284

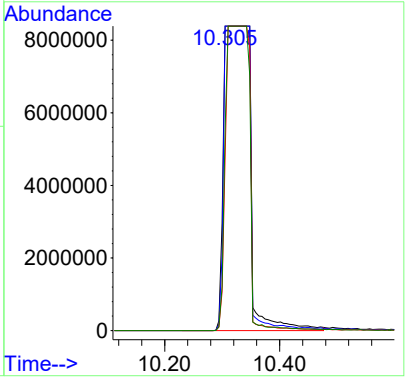
| Sig | Exp Ratio |
|---|---|
| 284 | 100 |
| 73 | 62.7 |
| 60 | 46.4 |
| 129 | 50.0 |

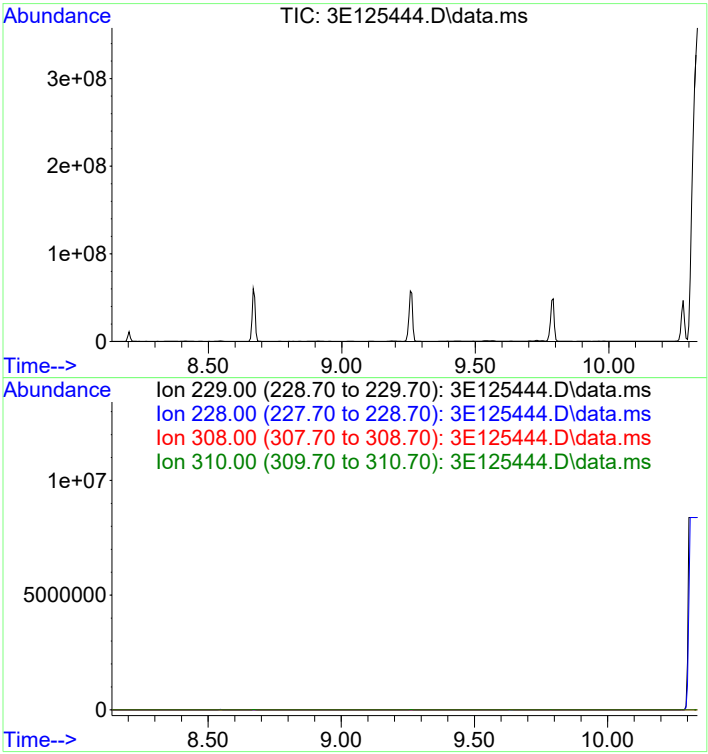



#17
o-Terphenyl
Concen: 26985321.00 m
RT: 10.305 min Scan# 798
Delta R.T. -0.150 min
Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion:230 Resp:26985321

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 230 | 100 | | |
| 229 | 0.0 | 43.0 | 83.0# |
| 228 | 0.0 | 27.3 | 67.3# |
| 215 | 0.0 | 30.0 | 70.0# |



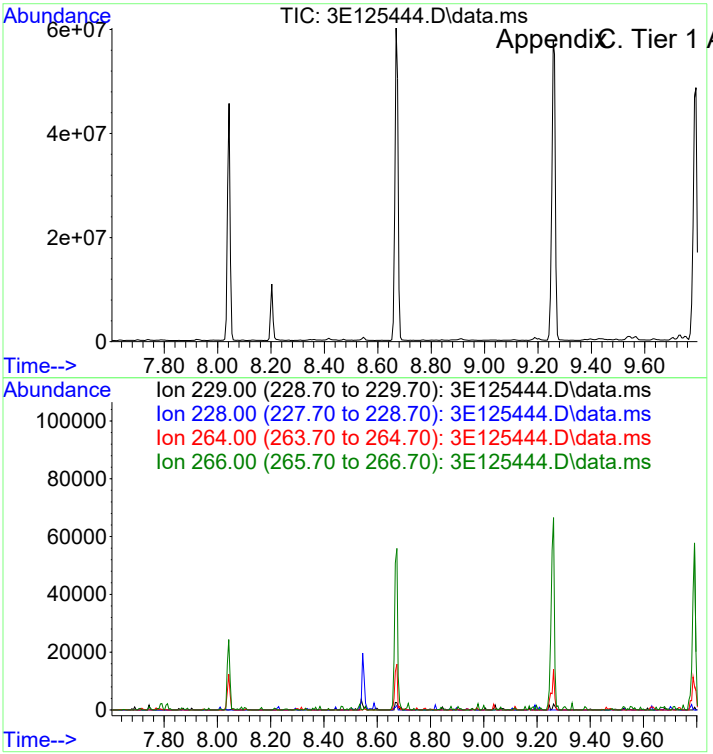




#18
Bromo-o-Terphenyl
Concen: N.D.
Expected RT: 9.24 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 229

| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 135.4 |
| 308 | 79.5 |
| 310 | 0.0 |

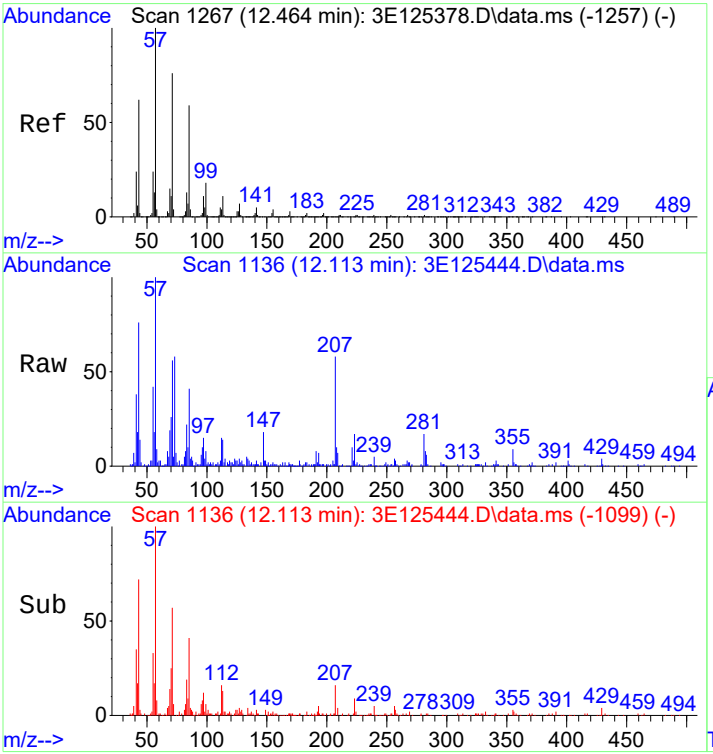



#19
Chloro-o-Terphenyl
Concen: N.D.
Expected RT: 8.70 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 229

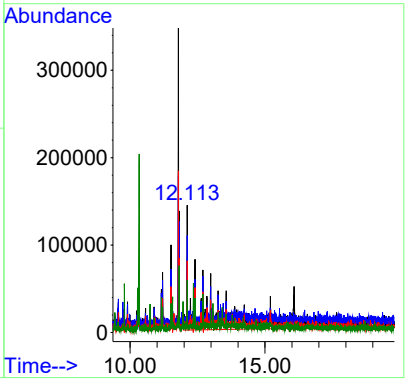
| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 63.1 |
| 264 | 48.7 |
| 266 | 0.0 |

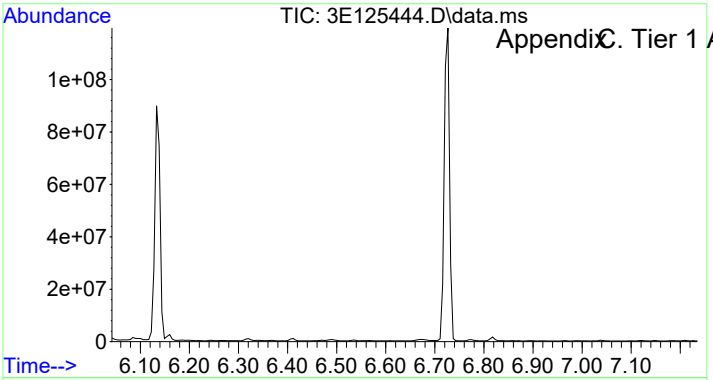


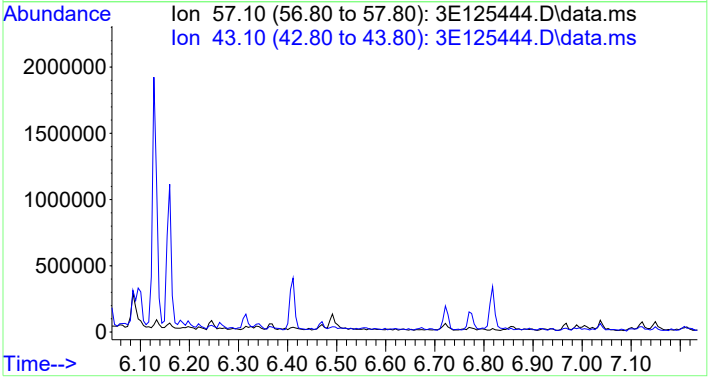

#20
n-Alkane
Concen: 3795635.00 m
RT: 12.113 min Scan# 1136
Delta R.T. 0.097 min
Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57 Resp: 3795635

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 0.2 | 0.0 | 20.0 |
| 71 | 0.1 | 162.1 | 202.1# |
| 85 | 0.2 | 0.0 | 20.0 |





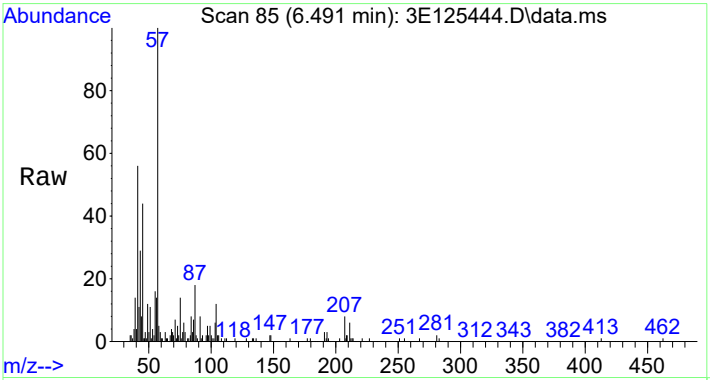




#21
n-Octane (C8)
Concen: N.D.
Expected RT: 6.14 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

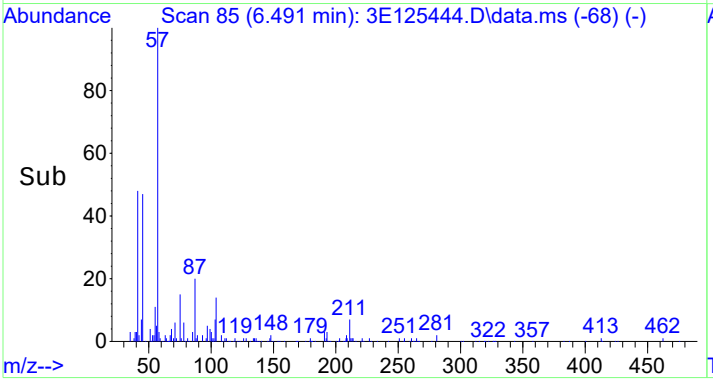
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 235.9 |

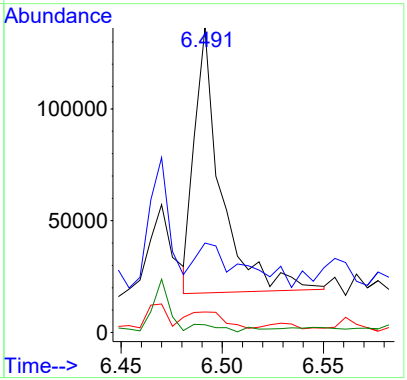


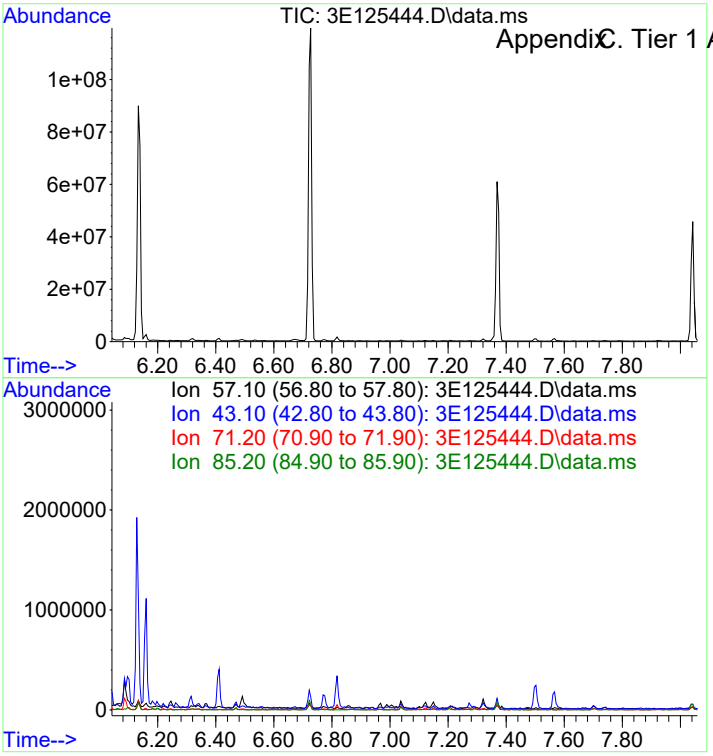

#22
n-Nonane (C9)
Concen: N.D.
RT: 6.491 min Scan# 85
Delta R.T. -0.009 min
Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57 Resp: 108341

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 30.3 | 0.1 | 0.1# |
| 71 | 9.9 | 0.1 | 0.1# |
| 85 | 0.0 | 0.0 | 0.0 |



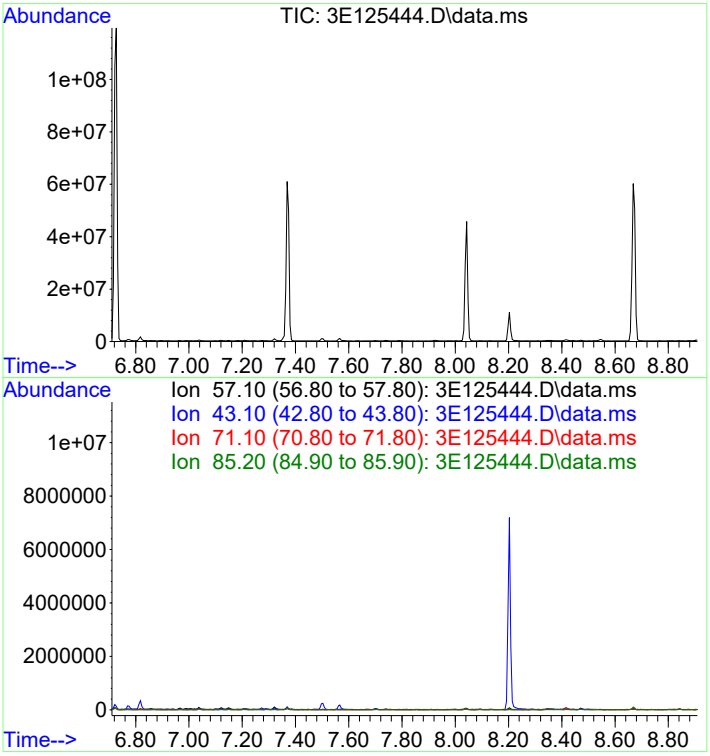



#23
n-Decane (C10)
Concen: N.D.
Expected RT: 6.96 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 90.4 |
| 71 | 39.1 |
| 85 | 27.8 |

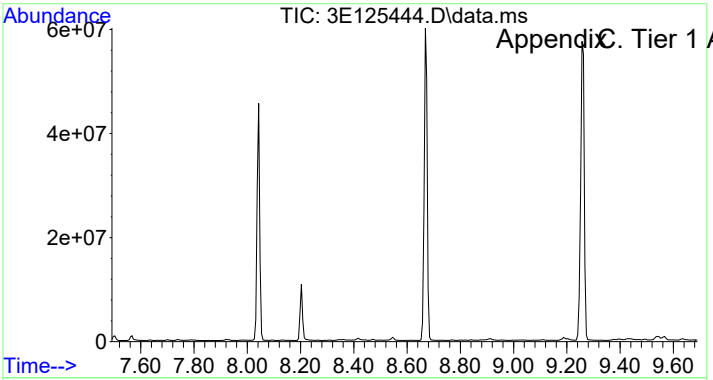



#24
n-Dodecane (C12)
Concen: N.D.
Expected RT: 7.81 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 77.7 |
| 71 | 53.0 |
| 85 | 32.4 |

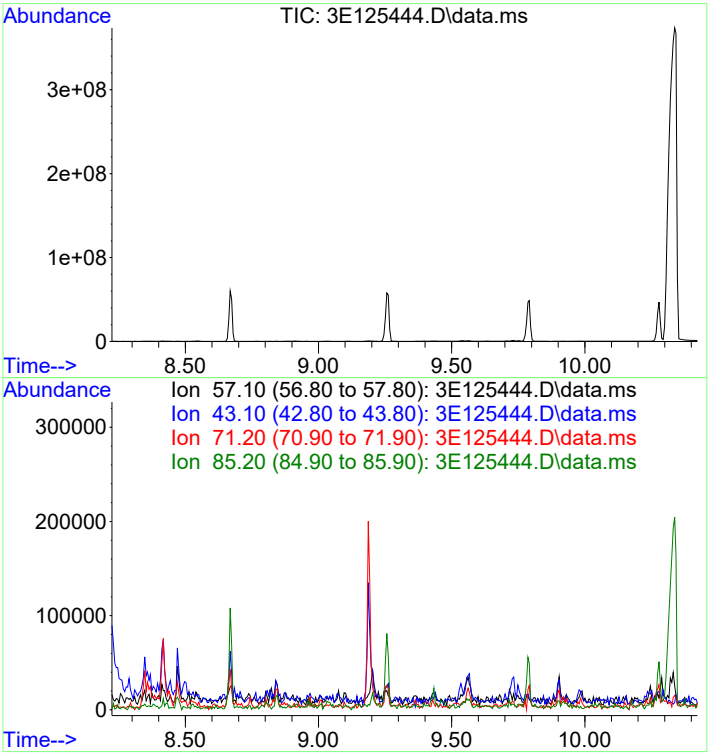



#25
n-Tetradecane (C14)
Concen: N.D.
Expected RT: 8.59 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 72.0 |
| 71 | 60.8 |
| 85 | 40.6 |

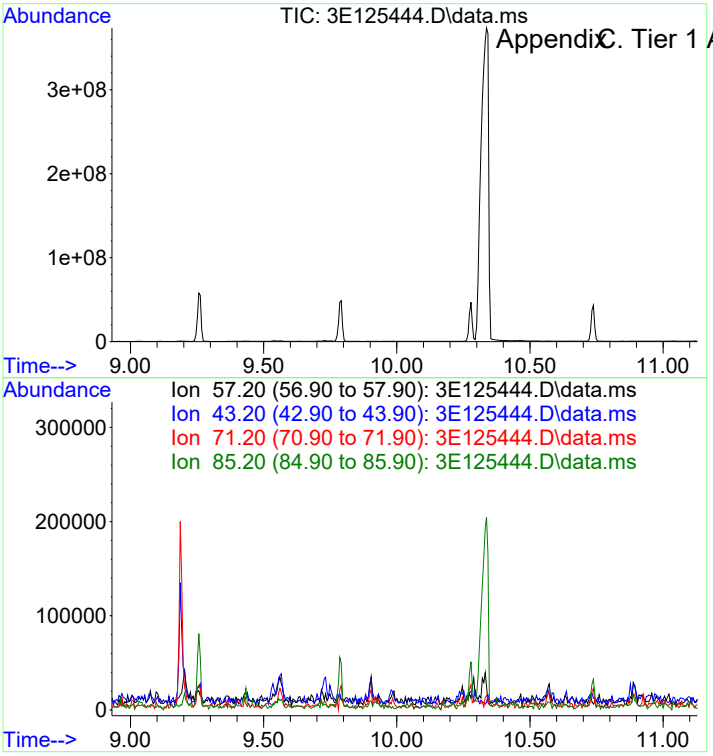



#26
n-Hexadecane (C16)
Concen: N.D.
Expected RT: 9.32 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 68.5 |
| 71 | 65.4 |
| 85 | 46.0 |

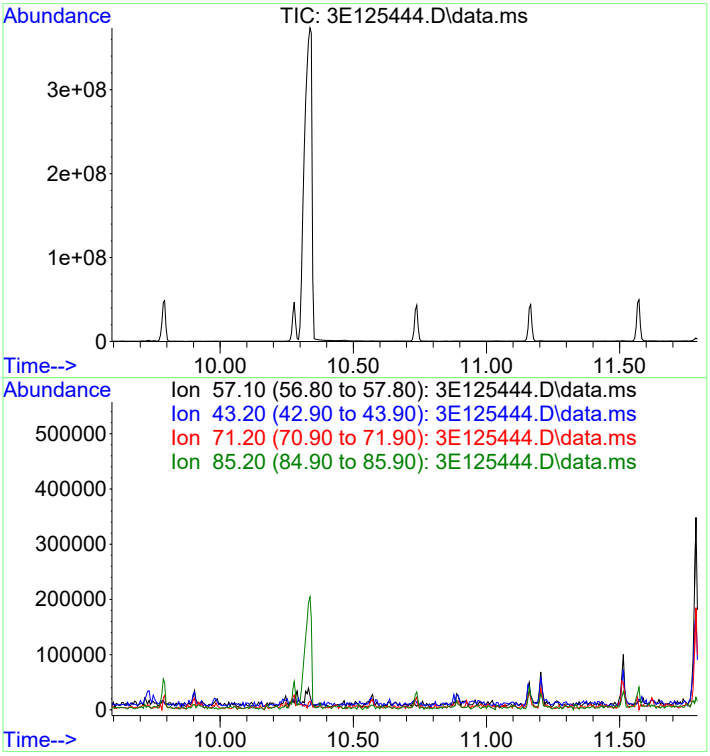



#27
n-Octadecane (C18)
Concen: N.D.
Expected RT: 10.03 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.7 |
| 71 | 68.9 |
| 85 | 49.4 |

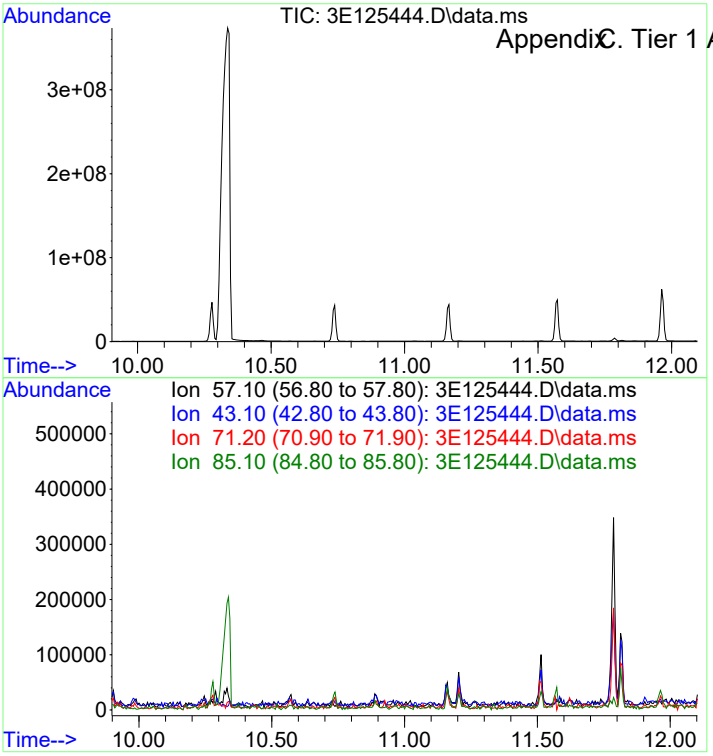



#28
n-Eicosane (C20)
Concen: N.D.
Expected RT: 10.69 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 65.8 |
| 71 | 70.2 |
| 85 | 51.9 |

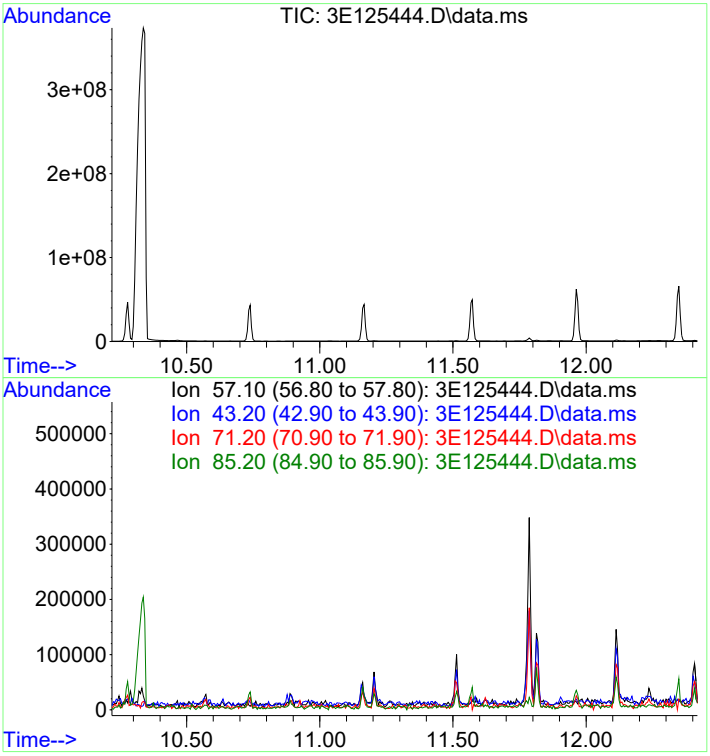



#29
n-Heneicosane (C21)
Concen: N.D.
Expected RT: 11.00 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 65.1 |
| 85 | 51.7 |

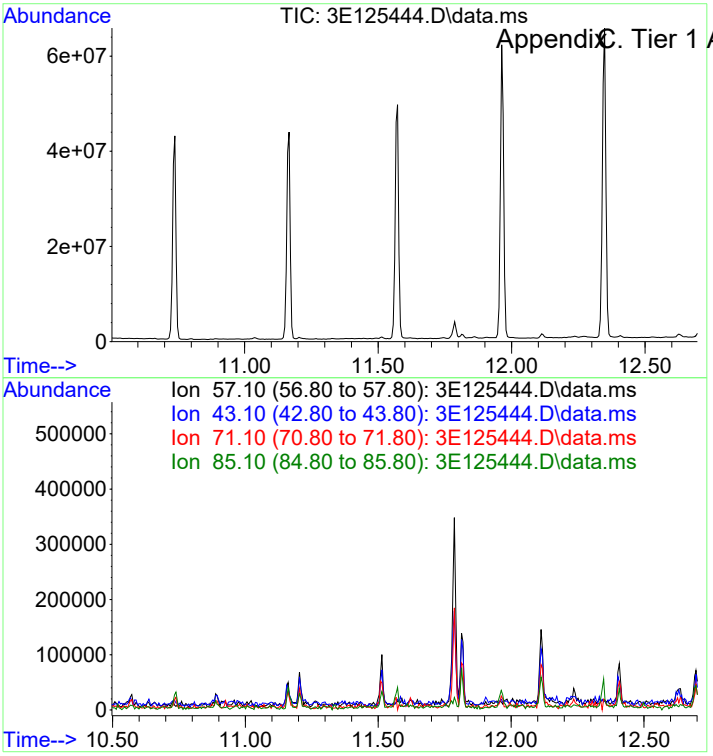



#30
n-Docosane (C22)
Concen: N.D.
Expected RT: 11.32 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.5 |
| 71 | 71.3 |
| 85 | 53.9 |

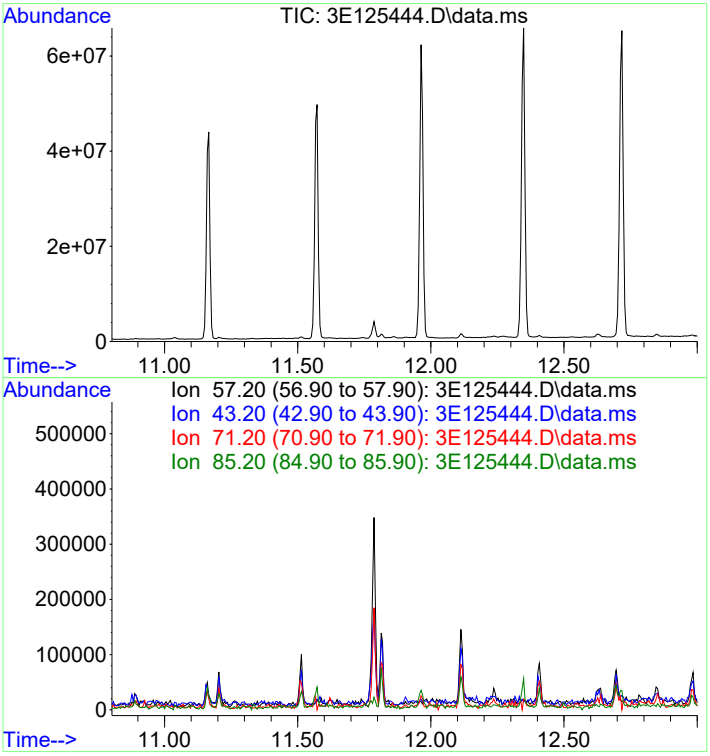



#31
n-Pentacosane (C25)
Concen: N.D.
Expected RT: 11.60 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 62.0 |
| 71 | 53.9 |
| 85 | 45.7 |

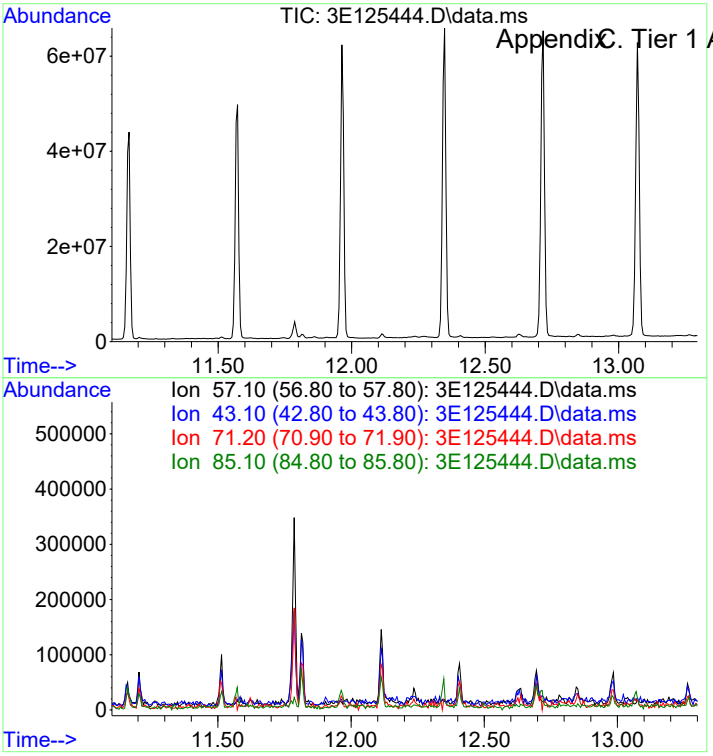



#32
n-Tetracosane (C24)
Concen: N.D.
Expected RT: 11.90 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.4 |
| 71 | 72.3 |
| 85 | 55.2 |

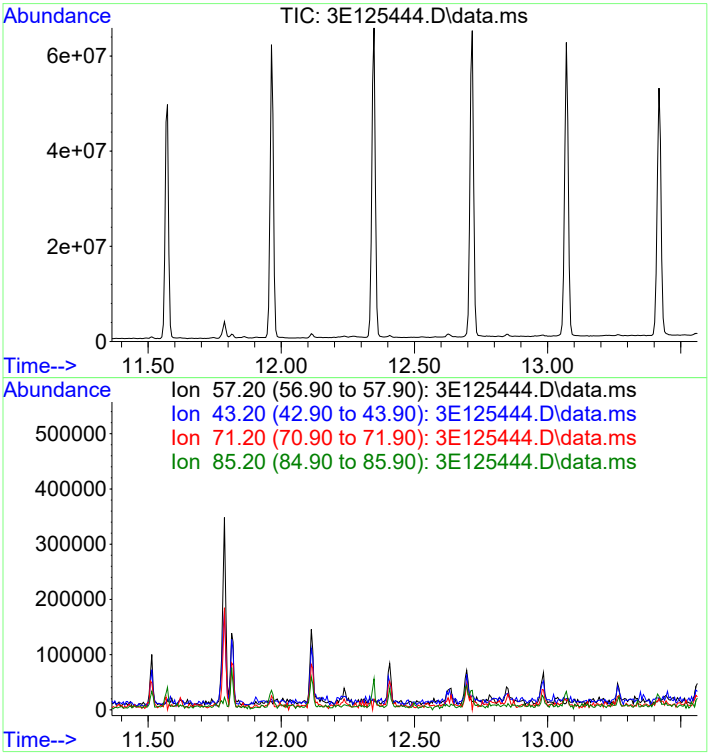



#33
n-Pentacosane (C25)
Concen: N.D.
Expected RT: 12.20 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 79.9 |
| 71 | 70.5 |
| 85 | 42.5 |

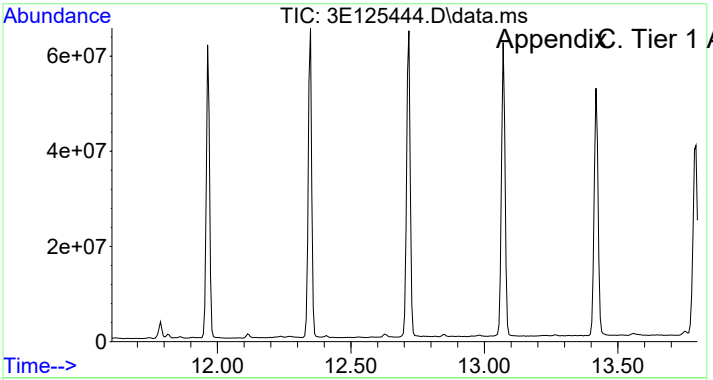



#34
n-Hexacosane (C26)
Concen: N.D.
Expected RT: 12.46 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.1 |
| 71 | 73.2 |
| 85 | 56.6 |

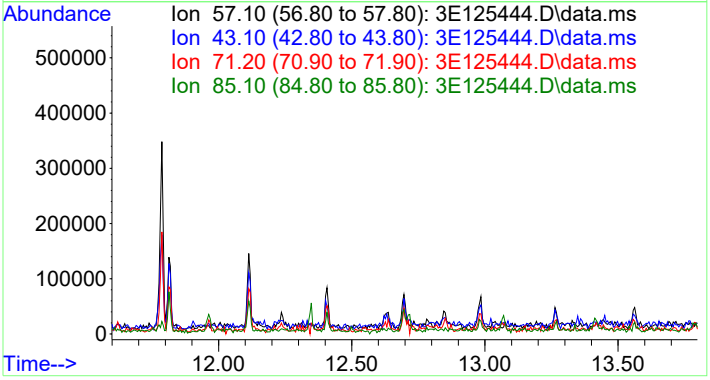


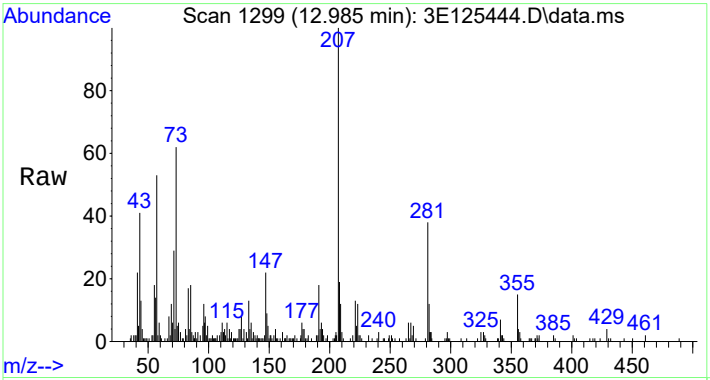

#35
n-Heptacosane (C27)
Concen: N.D.
Expected RT: 12.70 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 76.1 |
| 71 | 90.4 |
| 85 | 86.7 |

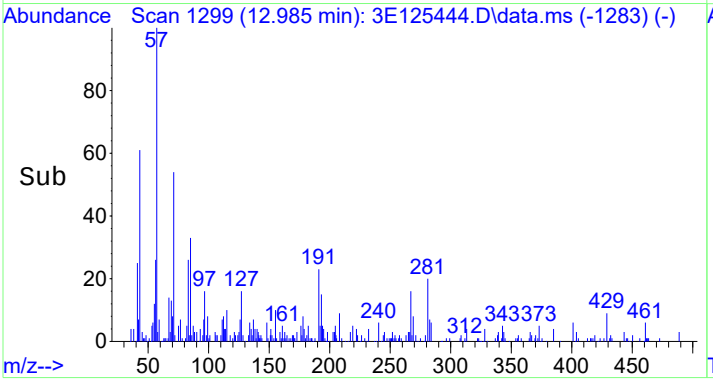


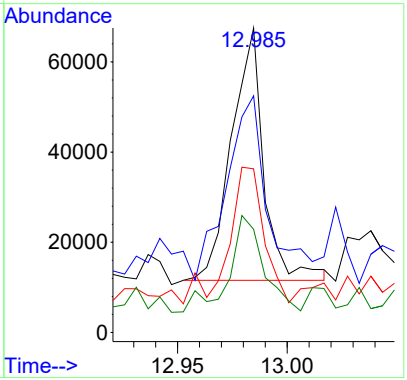



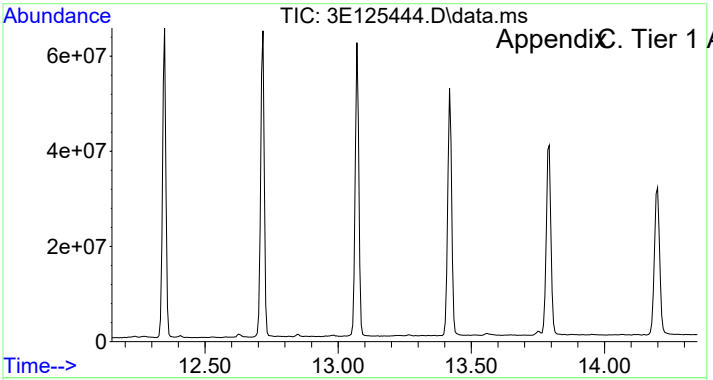

#36
n-Octacosane (C28)
Concen: 57295.00
RT: 12.985 min Scan# 1299
Delta R.T. -0.015 min
Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

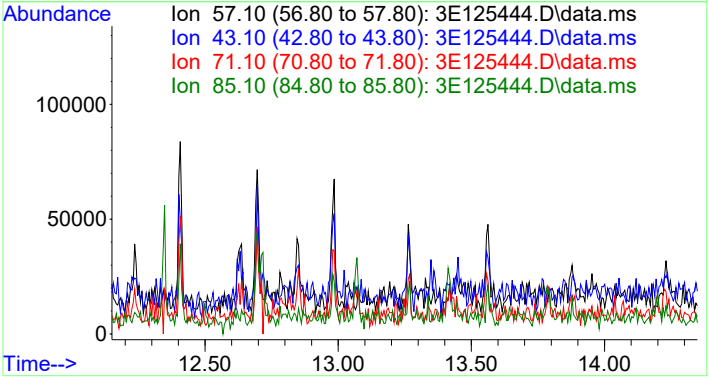
Tgt Ion: 57 Resp: 57295

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 92.7 | 48.6 | 73.0# |
| 71 | 59.5 | 58.3 | 87.5 |
| 85 | 41.3 | 45.0 | 67.6# |





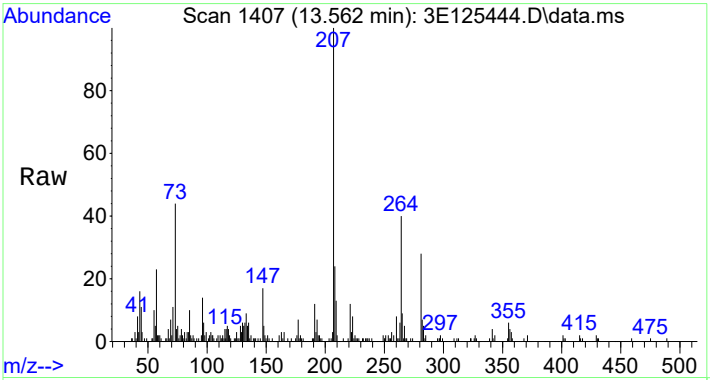




#37
n-Nonacosane (C29)
Concen: N.D.
Expected RT: 13.25 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

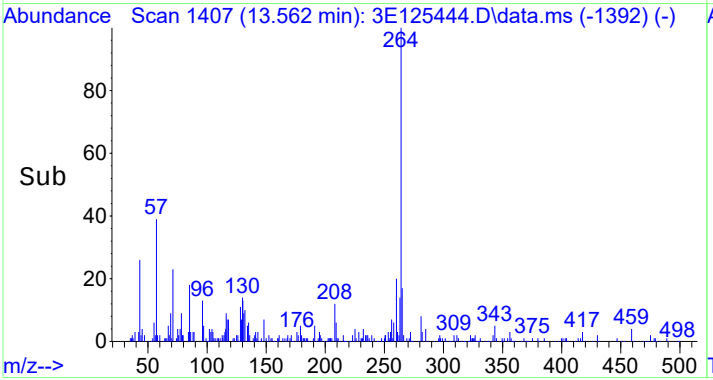
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.1 |
| 71 | 78.4 |
| 85 | 67.7 |

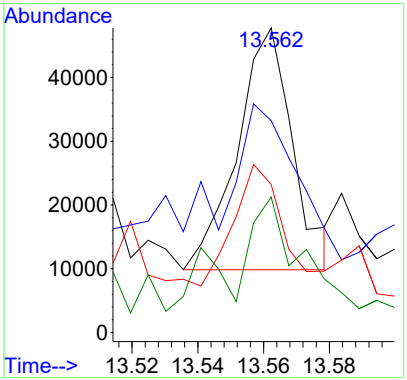


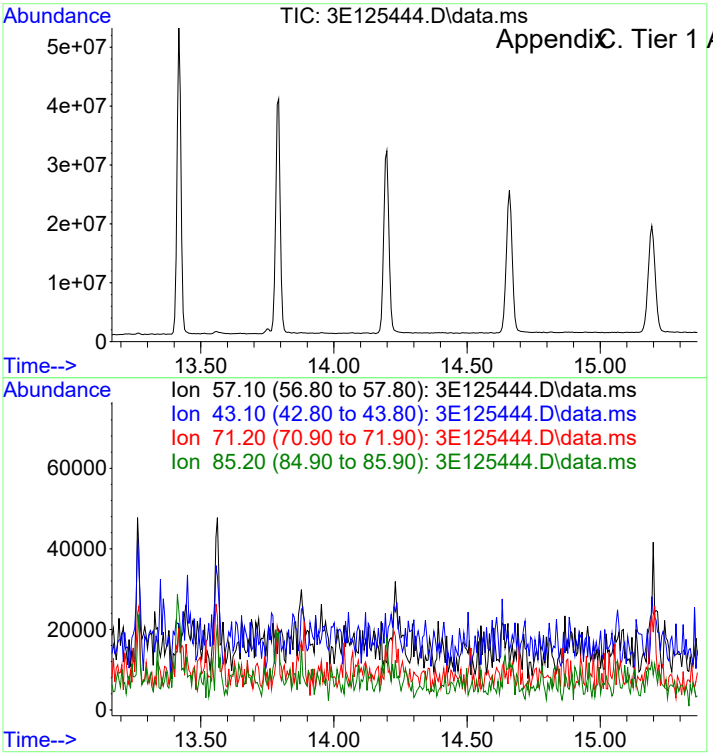

#38
n-Triacontane (C30)
Concen: 44416.00
RT: 13.562 min Scan# 1407
Delta R.T. -0.019 min
Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57 Resp: 44416

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 77.5 | 47.7 | 71.5# |
| 71 | 43.0 | 58.2 | 87.4# |
| 85 | 39.2 | 45.5 | 68.3# |



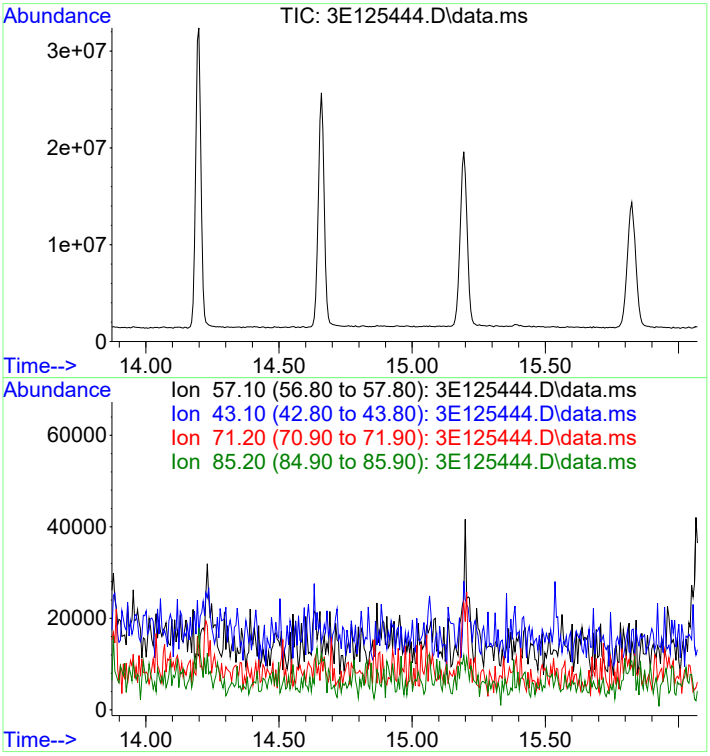



#39
n-Dotriacontane (C32)
Concen: N.D.
Expected RT: 14.27 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 58.6 |
| 71 | 71.7 |
| 85 | 55.6 |

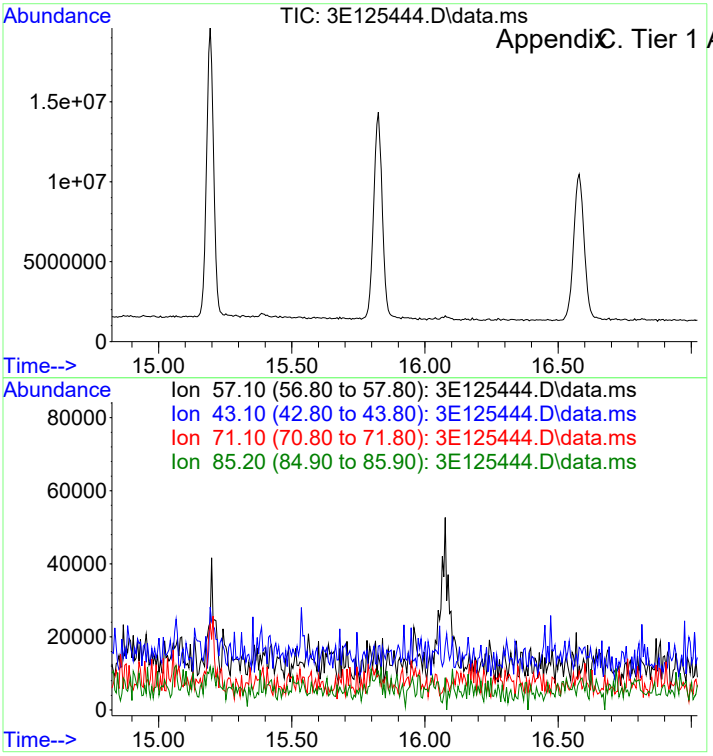



#40
n-Tetratriacontane (C34)
Concen: N.D.
Expected RT: 14.97 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 57.4 |
| 71 | 71.0 |
| 85 | 54.6 |

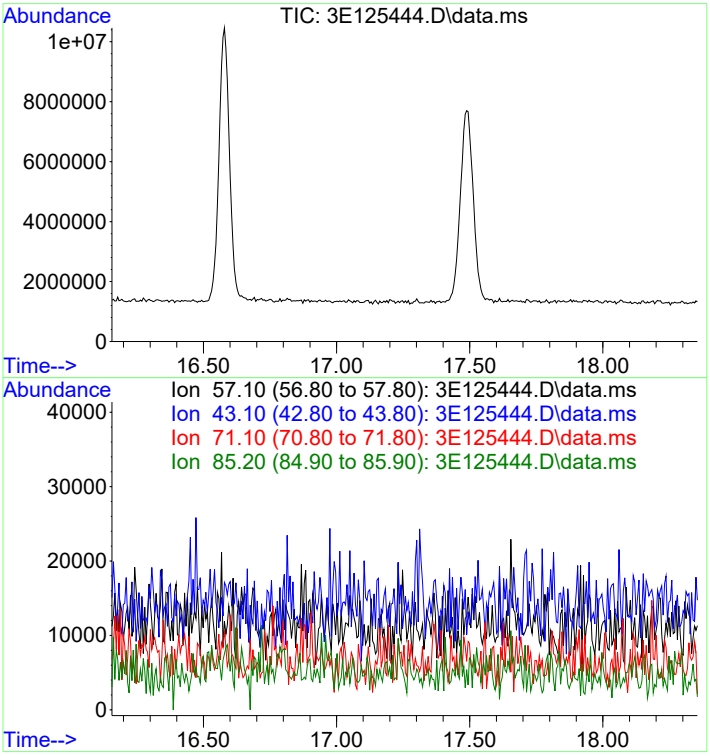



#41
n-Hexatriacontane (C36)
Concen: N.D.
Expected RT: 15.92 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 56.3 |
| 71 | 71.0 |
| 85 | 54.4 |

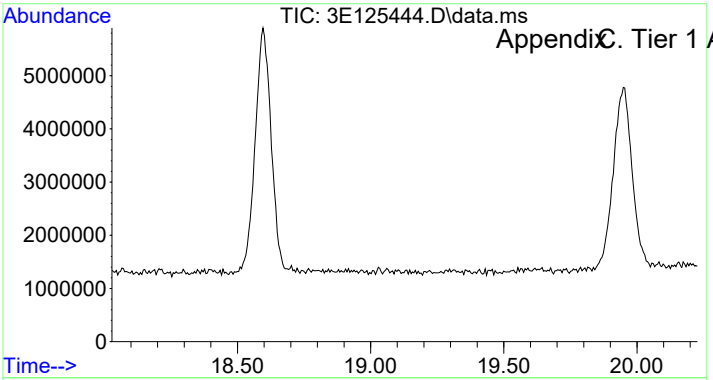



#42
n-Octatriacontane (C38)
Concen: N.D.
Expected RT: 17.26 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 55.0 |
| 71 | 70.8 |
| 85 | 53.9 |

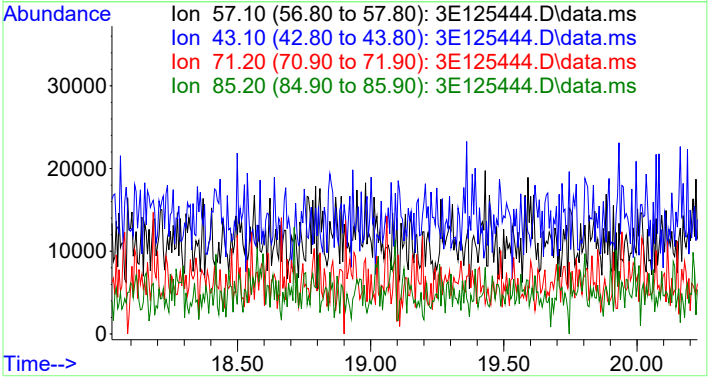


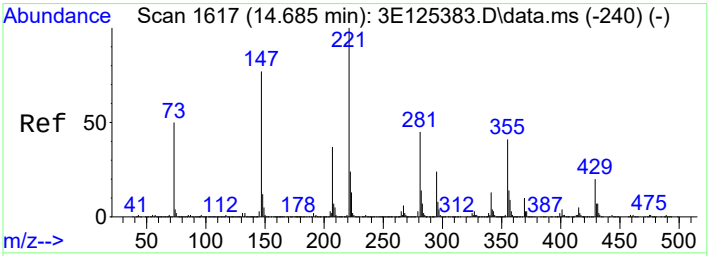

#43
n-Tetracontane (C40)
Concen: N.D.
Expected RT: 19.13 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 70.6 |
| 85 | 53.9 |

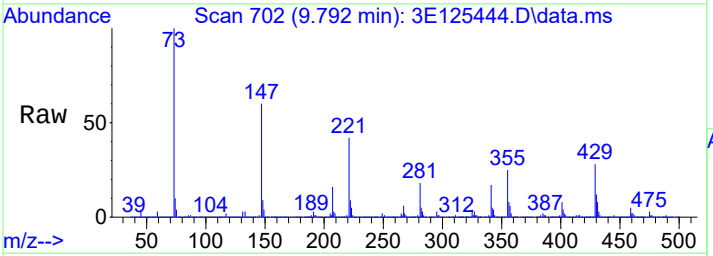


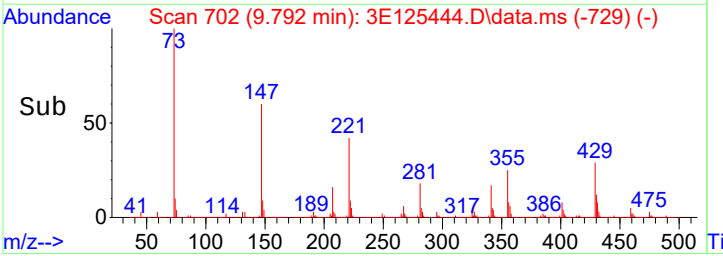



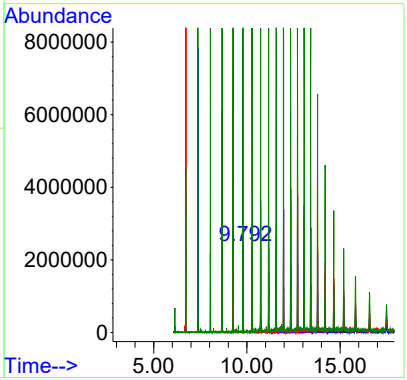

#44
Siloxane
Concen: 16067230.00 m
RT: 9.792 min Scan# 702
Delta R.T. -0.244 min
Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

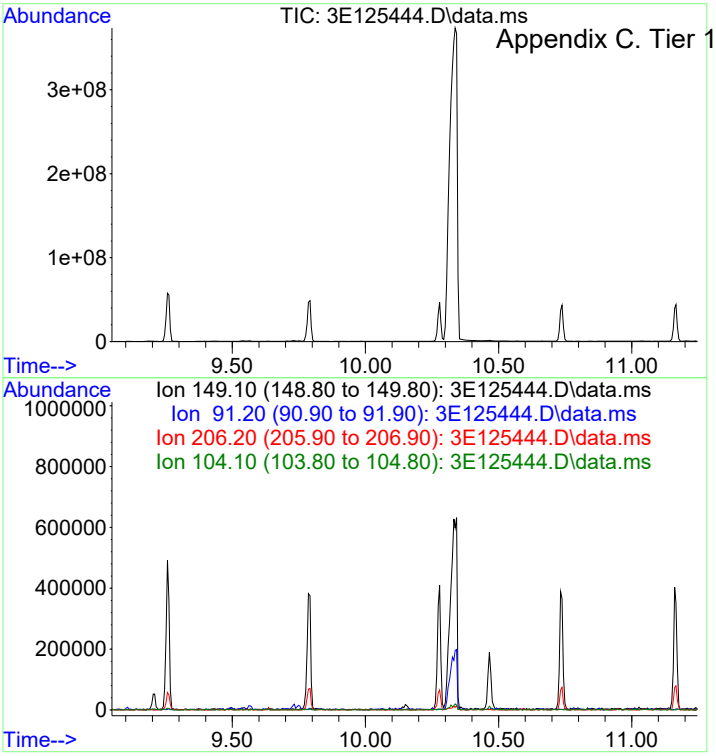
Tgt Ion:429 Resp:16067230

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 429 | 100 | | |
| 355 | 0.0 | 0.0 | 20.0 |
| 281 | 0.0 | 0.0 | 20.0 |
| 73 | 0.0 | 0.0 | 20.0 |



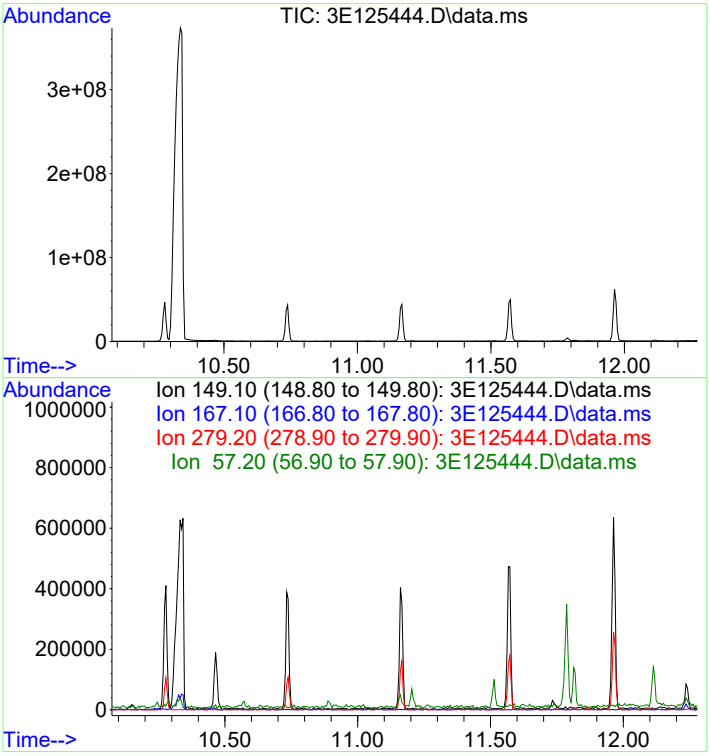



#45
Butyl benzyl phthalate
Concen: N.D.
Expected RT: 10.15 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 91 | 97.4 |
| 206 | 28.9 |
| 104 | 19.1 |

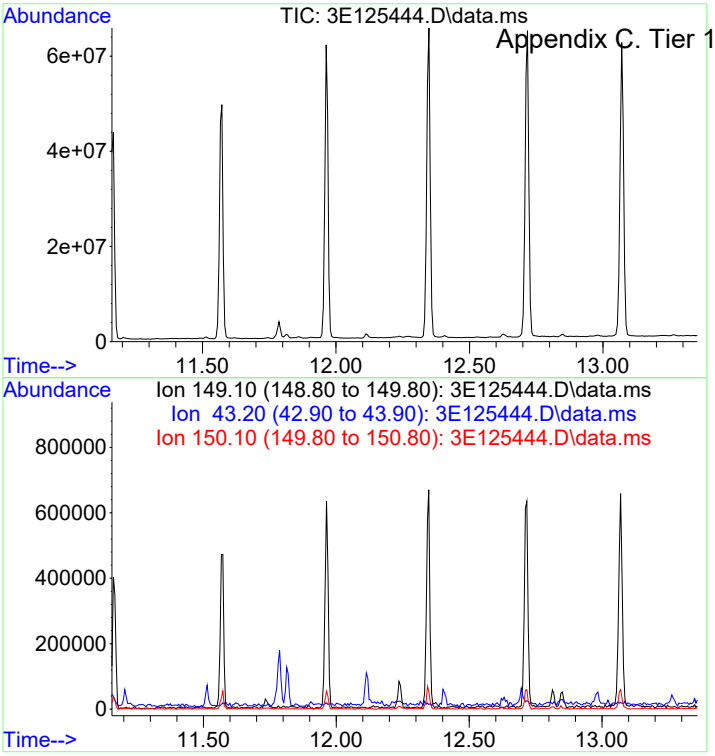



#46
Bis(2-ethylhexyl)phthalate
Concen: N.D.
Expected RT: 11.18 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 167 | 34.3 |
| 279 | 10.6 |
| 57 | 34.0 |

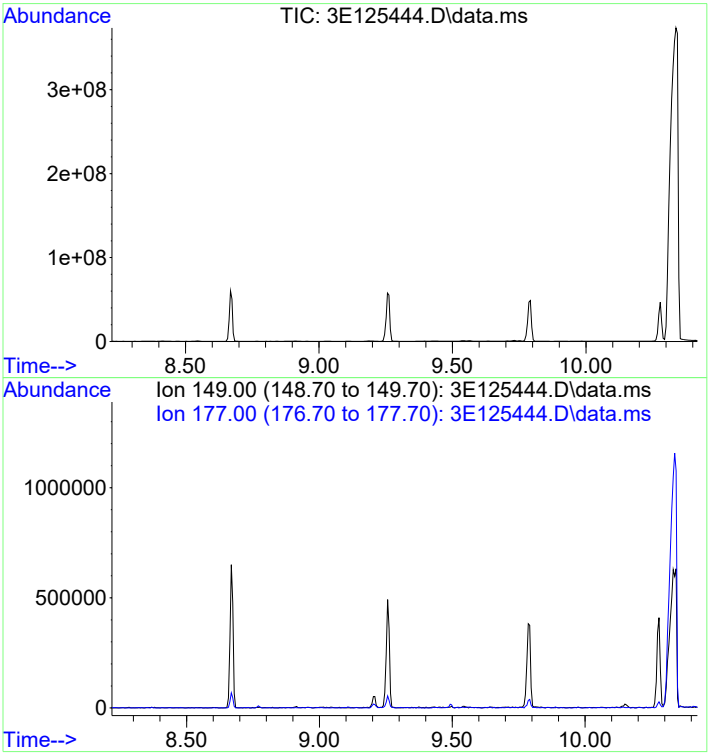



#47
Di-n-octyl phthalate
Concen: N.D.
Expected RT: 12.26 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 43 | 12.1 |
| 150 | 10.0 |




#48
Diethyl Phthalate
Concen: N.D.
Expected RT: 9.32 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 177 | 21.3 |

# Appendix C. Tier 1 Analysis Tech Memos

AECOM
1001 Bishop Street
Suite 1600
Honolulu, HI 96813
aecom.com

August 12, 2024

CDR Benjamin Dunn, P.E.
NAVFAC Hawaii
400 Marshall Road
JBPHH HI 96860-3139

**Subject:** **Joint Base Pearl Harbor-Hickam Drinking Water**
**EDWM TPH Detection Investigation**
**Sample D3-TW-0010607-24092-N**

Attention CDR Dunn:

On Tuesday, July 16, 2024, AECOM Technical Services, Inc. (AECOM) was notified of a diesel range organics (DRO) detection of 62.3 micrograms per liter (µg/L) and an oil range organics (ORO) detection of 47.4 µg/L in sample D3-TW-0010607-24092-N, collected from the residence at 223 Puapilo Court in Zone D3 on July 11, 2024. The sample was analyzed at (b) (4), Colorado, for total petroleum hydrocarbons (TPH) via EPA SW-846 Method 8015D following micro-extraction by SW-846 Method 3511. This analysis is not specific and may not equate to the presence of petroleum hydrocarbons, and a more detailed evaluation of the results is needed when a positive result is noted. The sample chromatogram was reviewed to determine if the reported detection was likely to be related to a fuel-related petrogenic source, particularly the November 2021 release of Jet Propellant 5 (JP-5), and if not, to assign a probable reason for the detection. **All evidence points to the conclusion that this detection is unrelated to JP-5 and is likely due to contamination via incidental contact with a glove at the time of sample collection or in the laboratory.**

The chromatogram for this sample is shown on Figure 1. Figure 2 displays the chromatogram of the laboratory's retention time (RT) marker reference standard[1] with each of the carbon numbers labeled, and Figure 3 displays the laboratory's JP-5 standard chromatogram. As it can be difficult to compare peak patterns on separate chromatograms, the laboratory provided overlays of the sample with JP-5 (Figure 4), the laboratory's DRO standard (Figure 5), and the laboratory's ORO standard (Figure 6).

The sample chromatogram shows a complex mixture of resolved and unresolved discrete peaks in the C17-C40 carbon range. Since JP-5 elutes in the C10 to C16 range (Figure 3), there is no overlap with the pattern of substances found in the sample, which are therefore not related to JP-5.

The observed pattern may have originated in the premise plumbing or household supplies in the vicinity of the sampling point and introduced into the sample through incidental contact with one of these substances or the sampler's glove. It is also possible that it is a laboratory artifact that was introduced during preparation or analysis of the sample.

The sample chromatogram does not exactly match the chromatographic patterns seen in any of the laboratory standards, but there are many peaks present in the ranges covered by these standards. Therefore, visual inspection of the chromatogram cannot be relied upon alone to rule out a fuel-related source.

[1] RT marker reference standards are standards containing n-alkanes with different numbers of carbon atoms and are analyzed with each run for the purpose of determining the beginning and end of carbon ranges of interest. The DRO area is defined as the total area of all peaks that come out (elute) between the retention time of C10 (decane, the 10 carbon, straight chain alkane) and the retention time of C24 (tetracosane, the 24 carbon, straight chain alkane); the ORO area is defined as the total area of peaks that elute between the retention times of C24 and C40.

**Figure 1. Sample DA65640-12 D3-TW-0010607-24092-N**

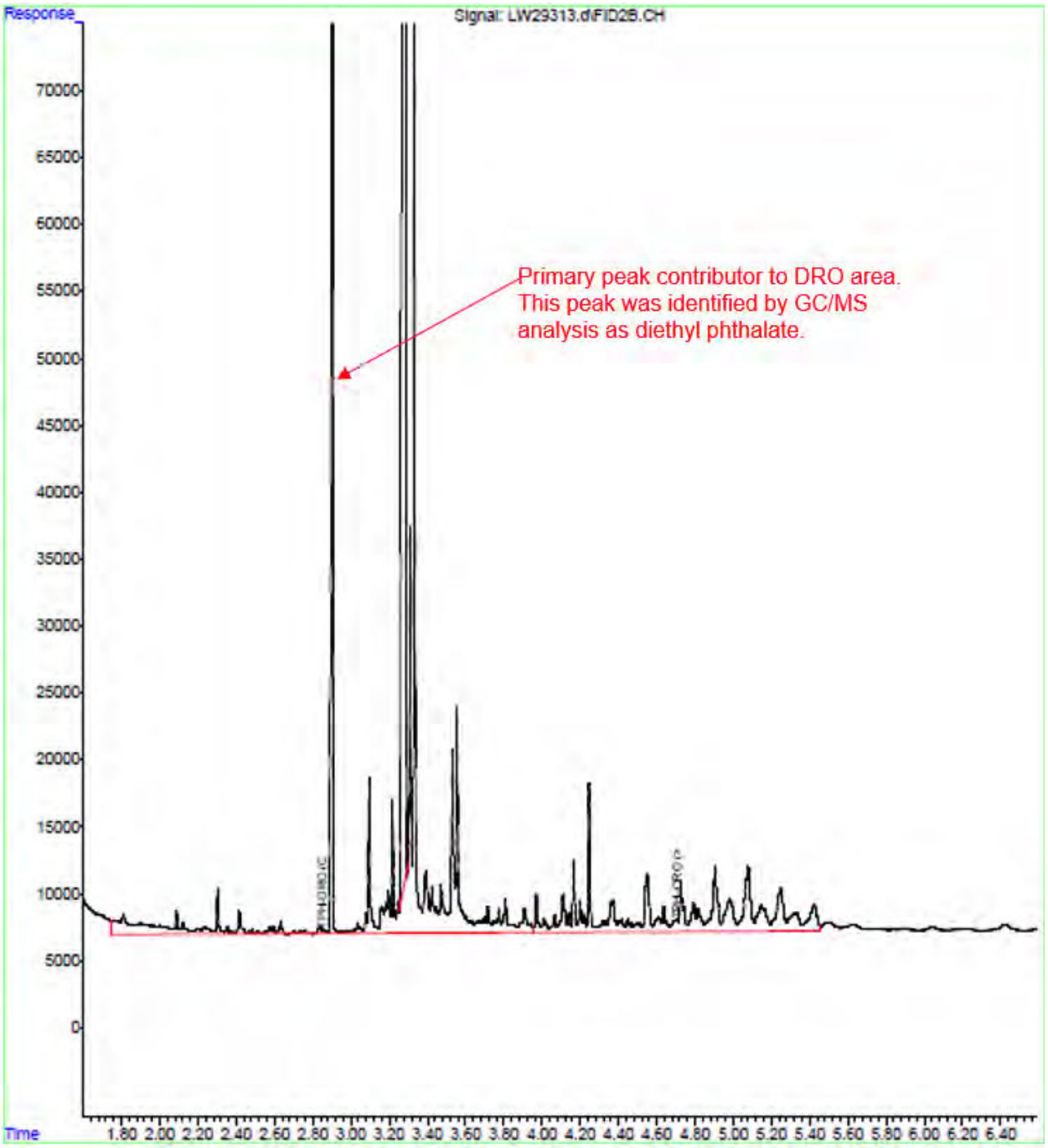


**Figure 2. Retention Time Marker Standard with Carbon Numbers**

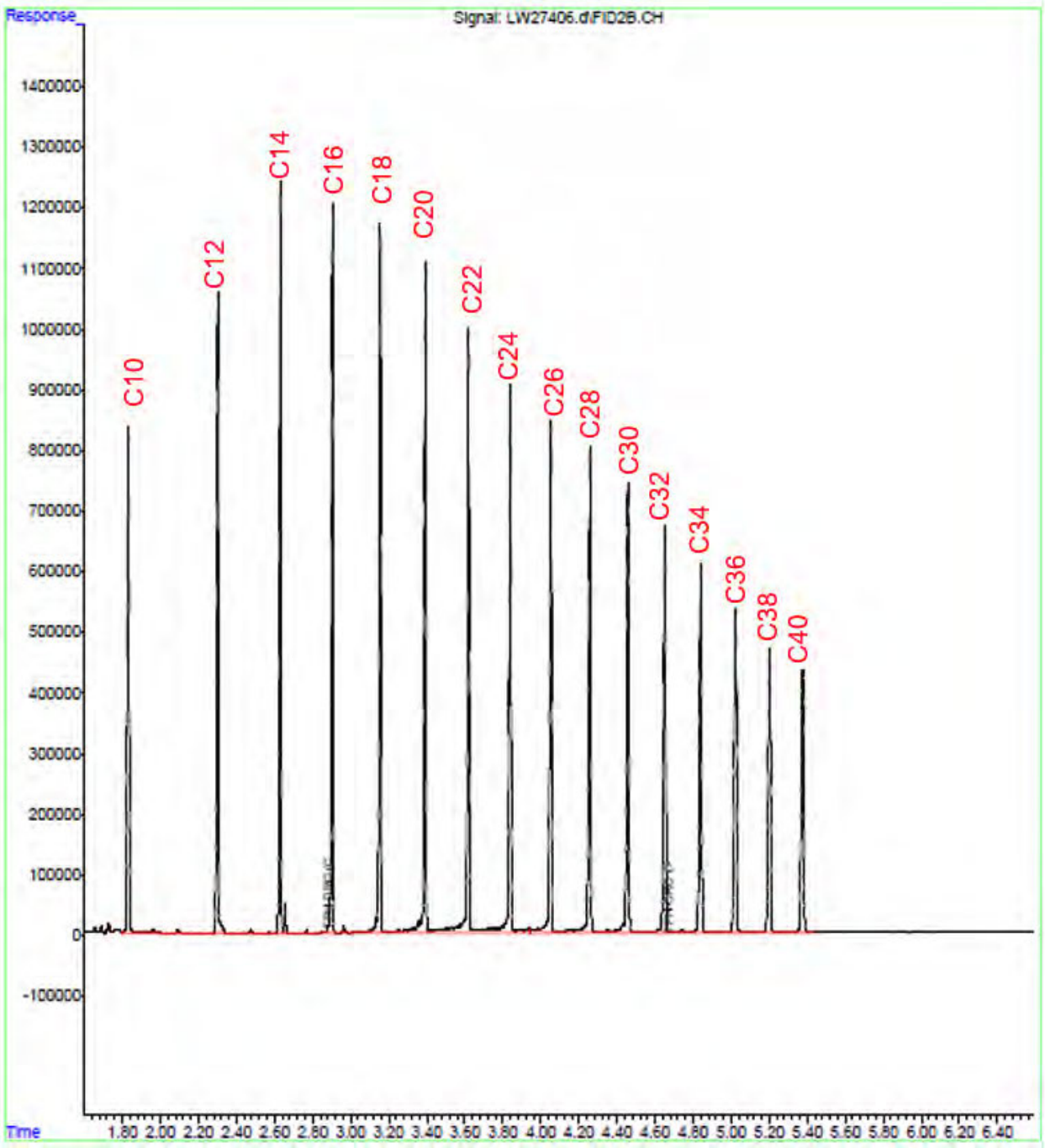


**Figure 3. JP-5 Standard**

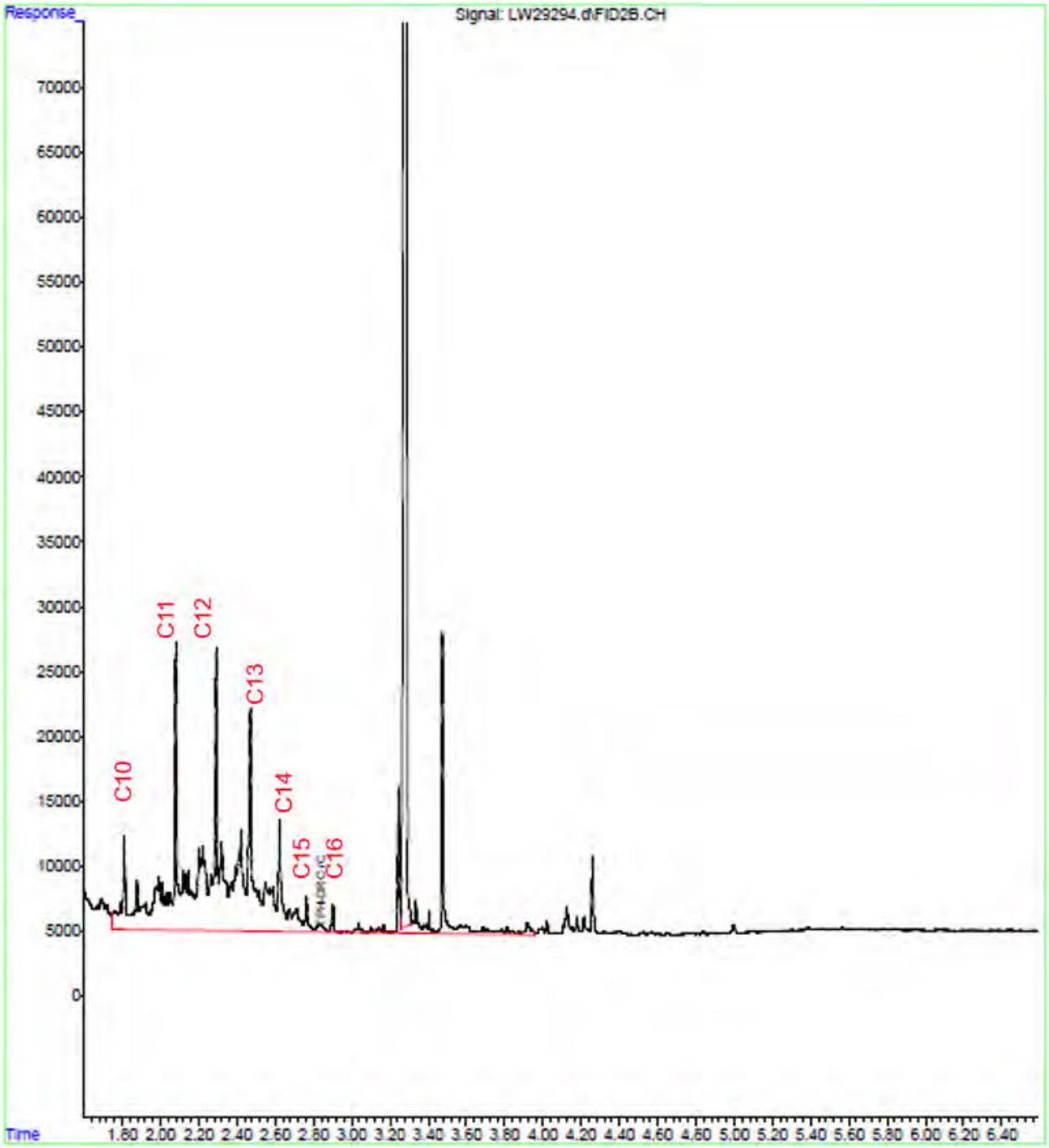


**Figure 4. Sample DA65640-12 D3-TW-0010607-24092-N (black), Overlayed with JP-5 Standard (blue)**

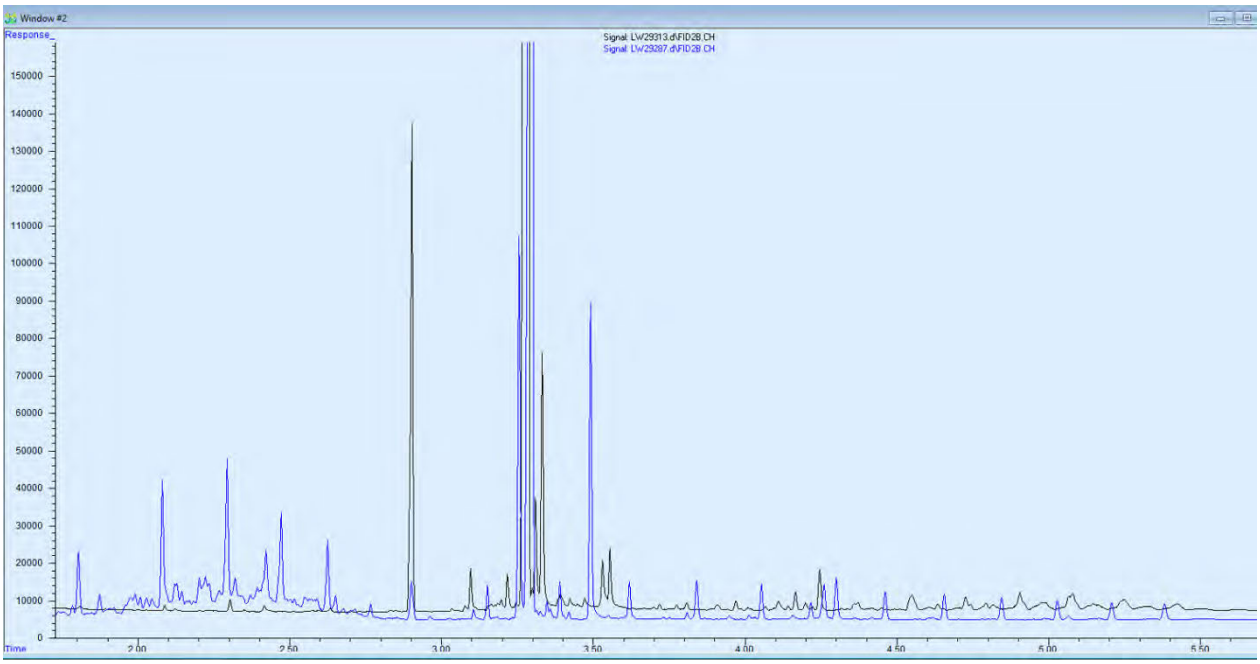



**Figure 5. Sample DA65640-12 D3-TW-0010607-24092-N (black), Overlayed with DRO Standard (blue)**

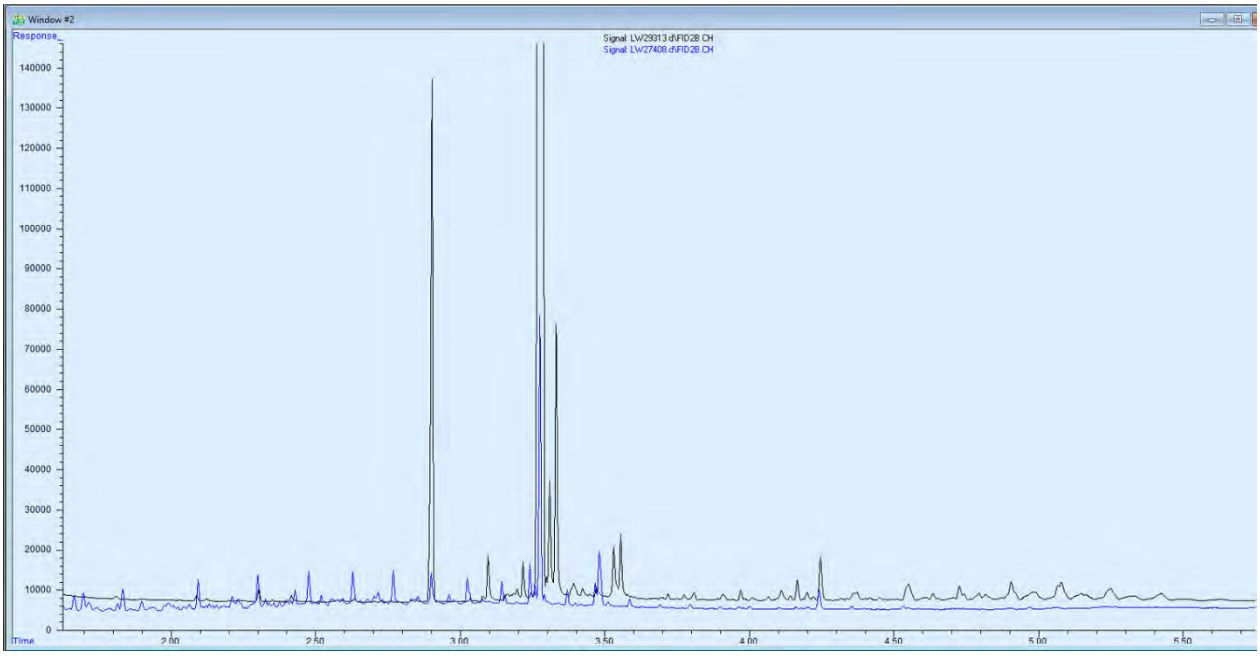
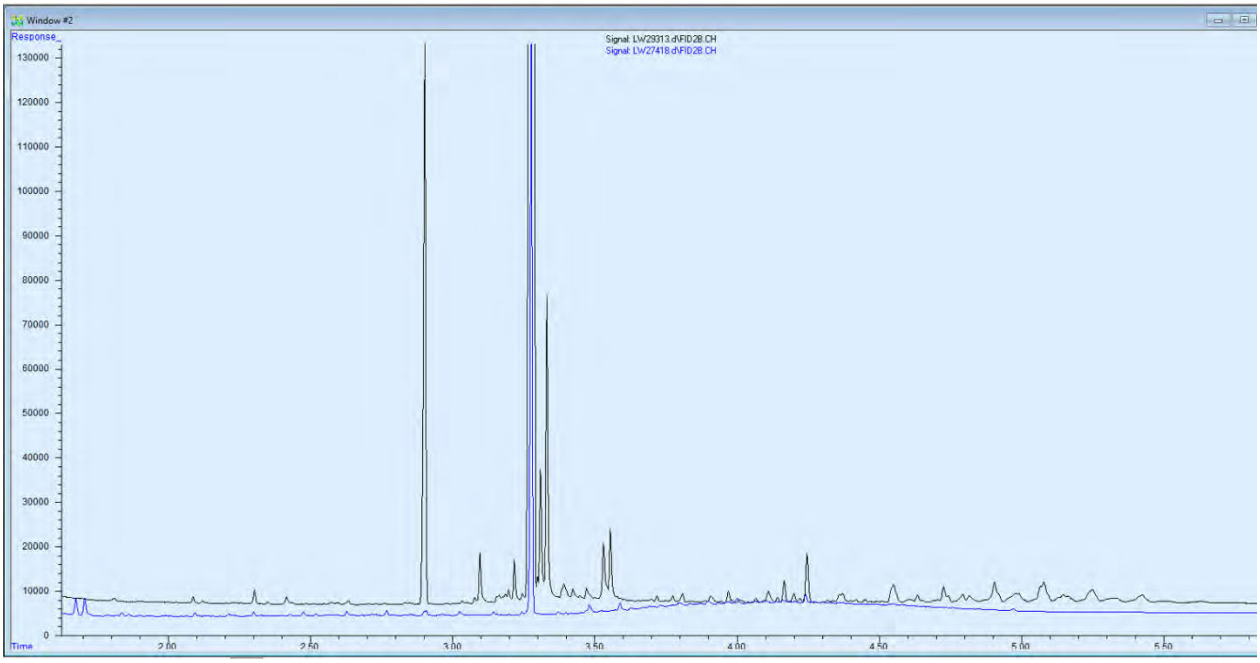


**Figure 6. Sample DA65640-12 D3-TW-0010607-24092-N (black), Overlayed with ORO Standard (blue)**




The sample extract was further evaluated using the Tier 1 mass spectral confirmation procedure outlined in the extended drinking water monitoring (EDWM) plan. The procedure entails analyzing the sample and associated method blank extracts obtained from the original extraction using full scan gas chromatography-mass spectrometry via Method 8270. The resulting total ion chromatograms are evaluated as follows:

1. For the sample, retain all peaks that are above a 3:1 signal-to-noise (S:N) ratio.
2. For peaks retained from Step 1, retain all peaks that have a response greater than 5 times that found in the method blank.
3. Obtain the mass spectrum and perform a background subtraction (including all blank contamination present below the method reporting limit/method detection limit) for each peak retained from Step 2.
4. Perform a Tentatively Identified Compound (TIC) search evaluation on each peak retained from Step 3 by comparing the corrected mass spectrum to a National Institute of Standards and Technology mass spectral library. Retain the top five probability matches for each. Retain a list of all TICs with an 80 percent probability match or higher.
5. Evaluate chromatograms, Extraction Limited Ion Profile Screening (ELIPS), and additional chemistry data from the laboratory to determine if the detected TPH is JP-5/other fuel-related analytes or is associated TPH-oil, and/or with “naturally occurring” hydrocarbons.

The results of this evaluation further support the conclusion that the TPH detection is due to the presence of artifacts introduced in the laboratory. The ELIPS-selected ion chromatogram reviews did not indicate the presence of specific known petroleum-related chemicals at concentrations confirming the presence of fresh or weathered petroleum-derived fuel products. The presence of identified diethyl phthalate, trace n-alkanes from paraffin wax, fatty acids (from tetradecanoic to heptadecanoic, plus octadec-8-enoic acid) and many siloxanes indicates accidental contamination from skin or laboratory glove contact during laboratory sample preparation is the most likely cause of the DRO and ORO detections.

Sample volume was submitted to (b) (4) Massachusetts, for the Tier 2 analyses identified in the EDWM plan, specifically paraffins, isoparaffins, aromatics, naphthenes, and olefins volatile

organics by SW-846 Method 8260D, parent and alkylated polyaromatic hydrocarbons (P&A PAHs) by SW-846 Method 8270E with selected ion monitoring, and saturated hydrocarbons by SW-846 Method 8015D (modified). All results were non-detect. The complete lack of any other C20-C40 hydrocarbon detections or unresolved complex mixture supports the conclusion that the original detection was the result of incidental contamination in the field or laboratory, and not from the sampled tap water.

AECOM has concluded that the chromatographic evidence from the original, Tier 1, and Tier 2 analyses points to incidental contamination of the original sample with a mixture of compounds unrelated to JP-5 or any other fuel product. It is not known with certainty whether the artifact was introduced in the field or in the laboratory; however, AECOM concludes that the most likely source was incidental contact in the laboratory during sample preparation.

There is no evidence of a systematic contamination issue in the laboratory. Method blanks have been free of DRO and ORO detections, and laboratory contamination has been suspected in fewer than 5 of the more than 2000 samples collected under EDWM to date. (b) (4) laboratory management regularly reviews good laboratory practices, including steps necessary to minimize incidental contamination, with laboratory personnel. On August 8, 2024, AECOM requested that the laboratory again review these practices with all staff. SGS agreed and will provide AECOM with documentation of attendance. No additional action is recommended at this time.

Questions regarding this letter should be addressed to the AECOM project manager, (b) (6)

Yours sincerely,

(b) (6)

(b) (6)
Senior Project Chemist
(b) (6)

CLEAN Program Manager

Attachments
Attachment 1 Tier 1 Evaluation, Sample DA65640-12 D3-TW-0010607-24092-N

# Appendix C. Tier 1 Analysis Tech Memos

# Attachment 1 Tier 1 Evaluation, Sample DA65640-12 D3-TW-0010607-24092-N

# Appendix C. Tier 1 Analysis Tech Memos

**Attachment 1:**

**Tier 1 Evaluation, Sample D3-TW-0010607-24092-N**

**(Laboratory ID: DA65640-12)**

Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Time: Jul 20 18:24:56 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration

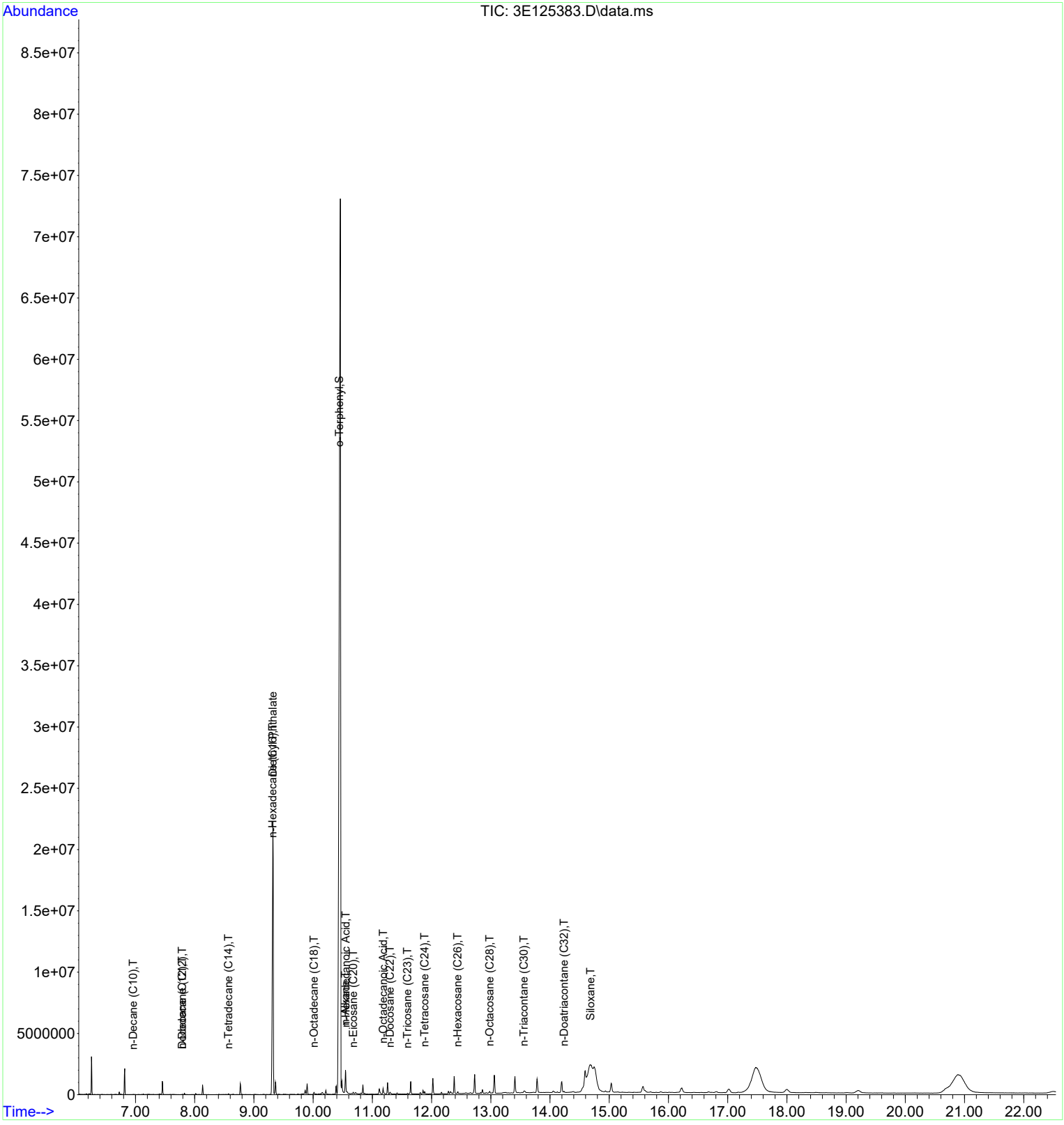
| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| **System Monitoring Compounds** | | | | | | | |
| 17) o-Terphenyl | 10.444 | 230 | 19987102m | 19987102.00 | ppm | | -0.01 |
| **Target Compounds** | | | | | | | Qvalue |
| 1) Undecane (C11) | 0.000 | | 0 | N.D. | d | | |
| 2) Diethylnaphthalene | 0.000 | | 0 | N.D. | | | |
| 3) 1-Methylnaphthalene | 0.000 | | 0 | N.D. | | | |
| 4) 1-Ethylpropylbenzene | 0.000 | | 0 | N.D. | | | |
| 5) Cyclohexane | 0.000 | | 0 | N.D. | | | |
| 6) Tridecane (C13) | 0.000 | | 0 | N.D. | d | | |
| 7) Dodecane (C12) | 7.791 | 43 | 4799 | 4799.00 | ppm | # | 71 |
| 8) Sesquiterpanes | 0.000 | | 0 | N.D. | | | |
| 9) Benzocyclohexane | 0.000 | | 0 | N.D. | | | |
| 10) Propylbutylbenzene | 0.000 | | 0 | N.D. | | | |
| 11) Cyclic Isoprenoid | 0.000 | | 0 | N.D. | | | |
| 12) Trimethylbenzene | 0.000 | | 0 | N.D. | | | |
| 13) Bromo-Xa | 0.000 | | 0 | N.D. | | | |
| 14) Bromo-Xb | 0.000 | | 0 | N.D. | | | |
| 15) n-Hexadecanoic Acid | 10.551 | 256 | 19659m | 19659.00 | ppm | | |
| 16) n-Octadecanoic Acid | 11.182 | 284 | 5126m | 5126.00 | ppm | | |
| 18) Bromo-o-Terphenyl | 0.000 | | 0 | N.D. | | | |
| 19) Chloro-o-Terphenyl | 0.000 | | 0 | N.D. | | | |
| 20) n-Alkane | 10.546 | 57 | 1998711m | 1998711.00 | ppm | | |
| 21) n-Octane (C8) | 0.000 | | 0 | N.D. | d | | |
| 22) n-Nonane (C9) | 0.000 | | 0 | N.D. | d | | |
| 23) n-Decane (C10) | 6.962 | 57 | 4184 | 4184.00 | ug/l | # | 81 |
| 24) n-Dodecane (C12) | 7.791 | 57 | 5625m | 5625.00 | ug/l | | |
| 25) n-Tetradecane (C14) | 8.572 | 57 | 9892 | 9892.00 | ug/l | # | 88 |
| 26) n-Hexadecane (C16) | 9.315 | 57 | 17371 | 17371.00 | ug/l | # | 1 |
| 27) n-Octadecane (C18) | 10.016 | 57 | 26304 | 26304.00 | ug/l | # | 87 |
| 28) n-Eicosane (C20) | 10.679 | 57 | 21668 | 21668.00 | ug/l | # | 86 |
| 29) n-Heneicosane (C21) | 0.000 | | 0 | N.D. | d | | |
| 30) n-Docosane (C22) | 11.300 | 57 | 22820 | 22820.00 | ug/l | # | 88 |
| 31) n-Tricosane (C23) | 11.594 | 57 | 8667 | 8667.00 | ug/l | # | 77 |
| 32) n-Tetracosane (C24) | 11.883 | 57 | 27256 | 27256.00 | ug/l | # | 88 |
| 33) n-Pentacosane (C25) | 0.000 | | 0 | N.D. | d | | |
| 34) n-Hexacosane (C26) | 12.439 | 57 | 29284 | 29284.00 | ug/l | | 86 |
| 35) n-Heptacosane (C27) | 0.000 | | 0 | N.D. | d | | |
| 36) n-Octacosane (C28) | 12.979 | 57 | 25140 | 25140.00 | ug/l | | 90 |
| 37) n-Nonacosane (C29) | 0.000 | | 0 | N.D. | d | | |
| 38) n-Triacontane (C30) | 13.557 | 57 | 23630 | 23630.00 | ug/l | | 93 |
| 39) n-Doatriacontane (C32) | 14.236 | 57 | 25864 | 25864.00 | ug/l | # | 88 |
| 40) n-Tetratriacontane (C34) | 0.000 | | 0 | N.D. | d | | |
| 41) n-Hexatriacontane (C36) | 0.000 | | 0 | N.D. | d | | |
| 42) n-Octatriacontane (C38) | 0.000 | | 0 | N.D. | d | | |
| 43) n-Tetracontane (C40) | 0.000 | | 0 | N.D. | | | |
| 44) Siloxane | 14.685 | 429 | 1524493m | 1524493.00 | ppm | | |
| 45) Butyl benzyl phthalate | 0.000 | | 0 | N.D. | | | |
| 46) Bis(2-ethylhexyl)phtha... | 0.000 | | 0 | N.D. | d | | |
| 47) Di-n-octylphthalate | 0.000 | | 0 | N.D. | d | | |
| 48) Diethyl Phthalate | 9.321 | 149 | 10934914 | 10934914.00 | ug/l | | 100 |

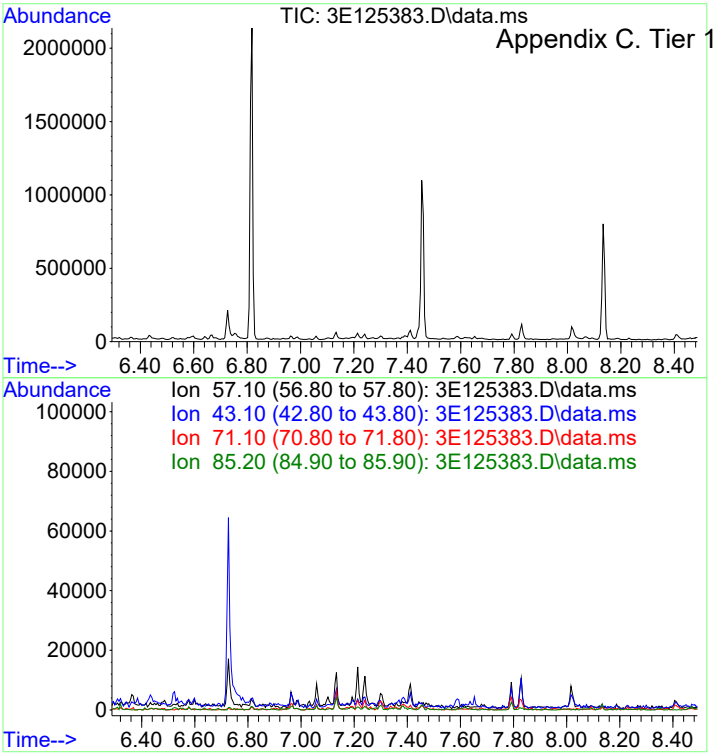
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Time: Jul 20 18:24:56 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration



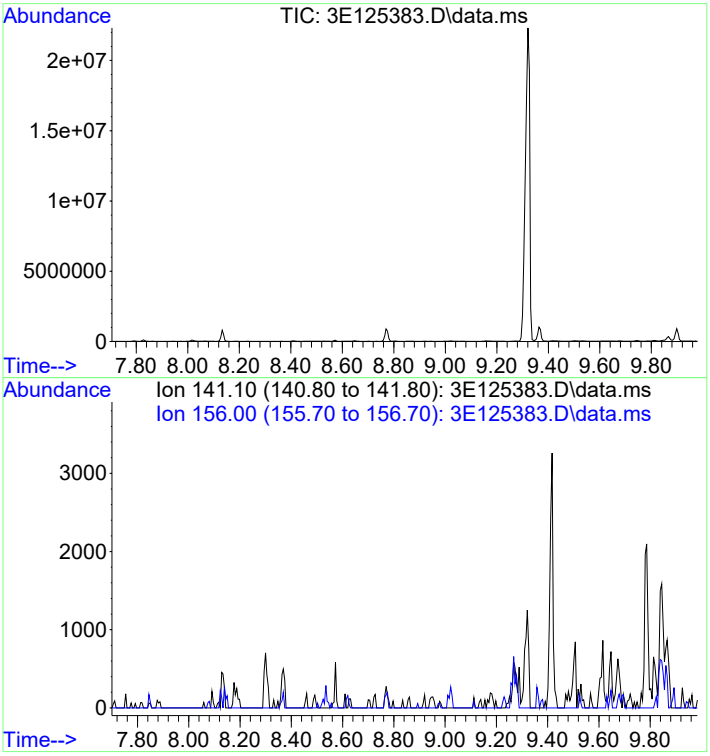



#1
Undecane (C11)
Concen: N.D.
Expected RT: 7.39 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 15.7 |
| 71 | 6.9 |
| 85 | 0.0 |

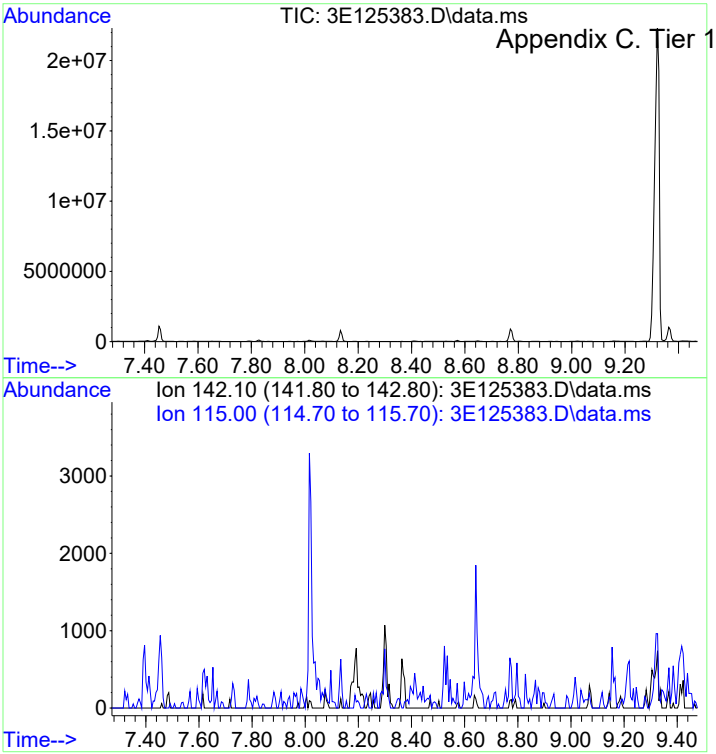



#2
Diethylnaphthalene
Concen: N.D.
Expected RT: 8.80 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 141

| Sig | Exp Ratio |
|---|---|
| 141 | 100 |
| 156 | 0.0 |

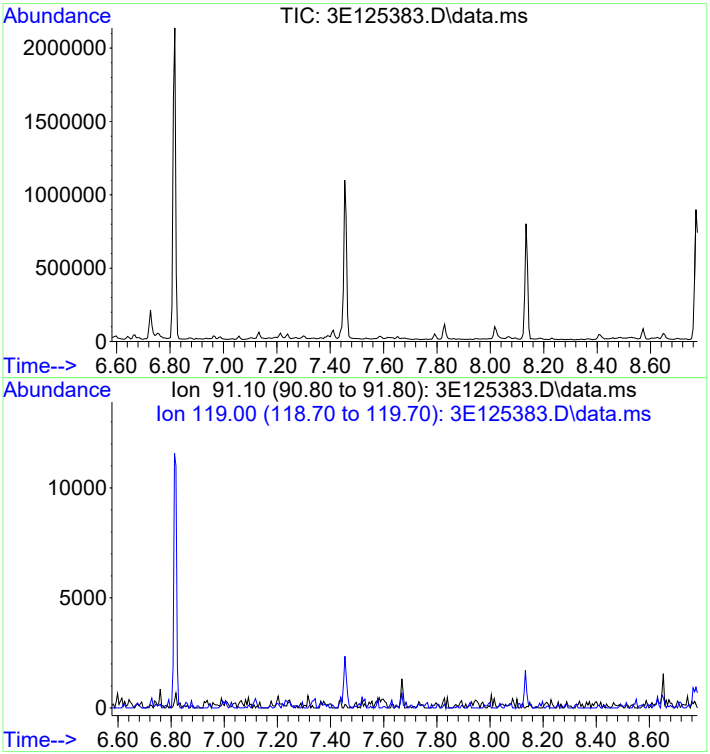



#3
1-Methylnaphthalene
Concen: N.D.
Expected RT: 8.37 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 142

| Sig | Exp Ratio |
|---|---|
| 142 | 100 |
| 115 | 0.0 |

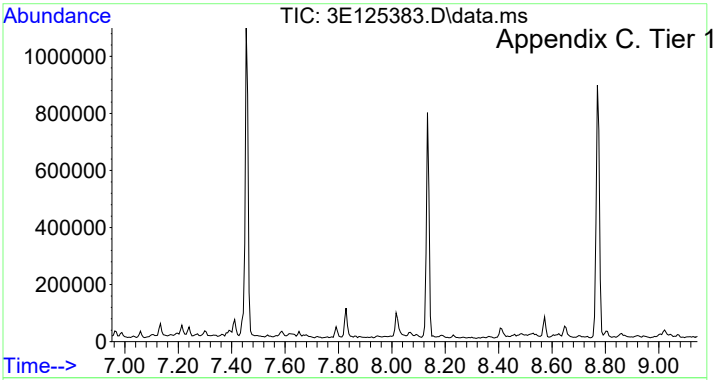



#4
1-Ethylpropylbenzene
Concen: N.D.
Expected RT: 7.68 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 91

| Sig | Exp Ratio |
|---|---|
| 91 | 100 |
| 119 | 0.0 |

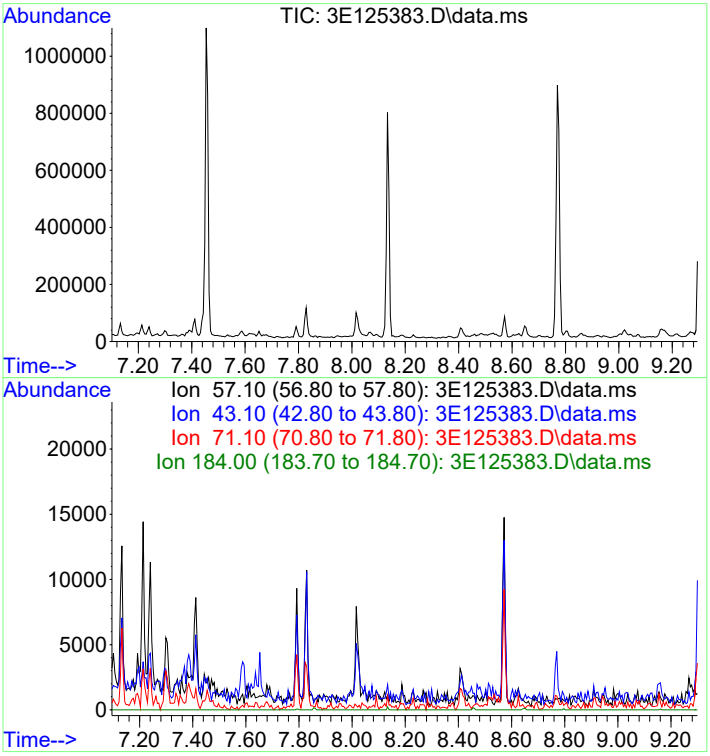



#5
Cyclohexane
Concen: N.D.
Expected RT: 8.05 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 84

| Sig | Exp Ratio |
|---|---|
| 84 | 100 |
| 56 | 0.0 |
| 69 | 0.0 |

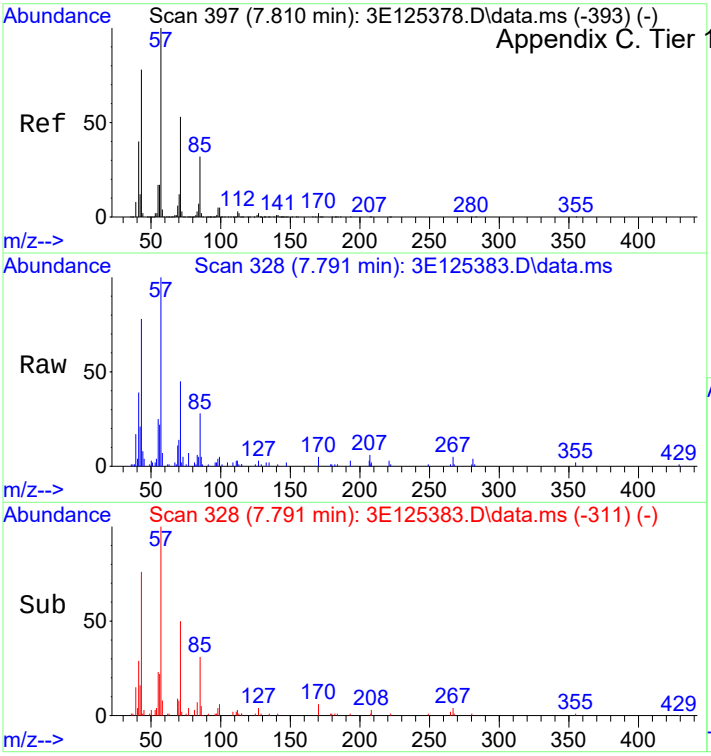



#6
Tridecane (C13)
Concen: N.D.
Expected RT: 8.20 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57

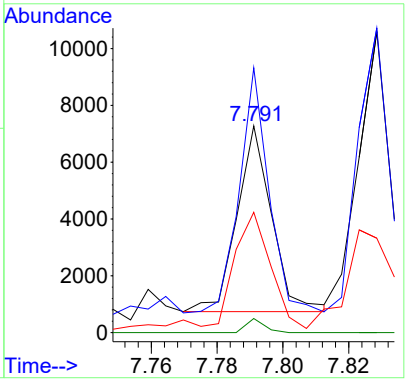
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 6.1 |
| 71 | 0.0 |
| 184 | 0.0 |

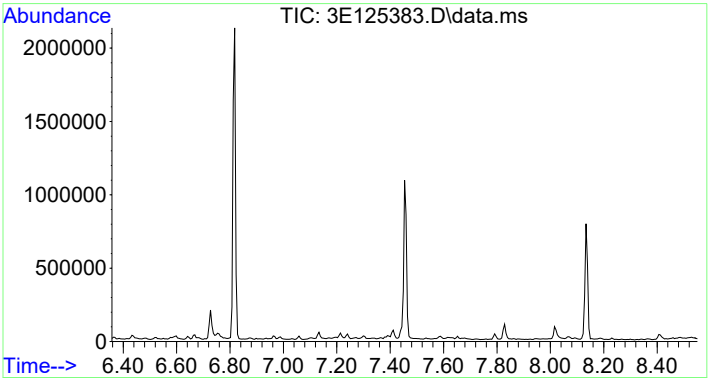



#7
Dodecane (C12)
Concen: 4799.00 ppm
RT: 7.791 min Scan# 328
Delta R.T. -0.011 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 43 Resp: 4799

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 112.7 | 145.0 | 185.0# |
| 71 | 67.3 | 44.9 | 84.9 |
| 170 | 0.0 | 0.0 | 20.0 |

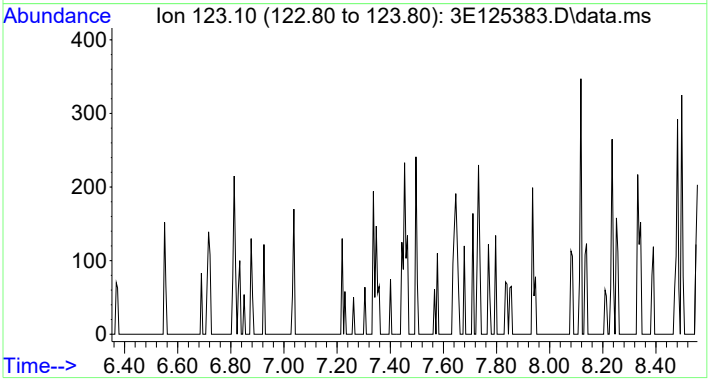


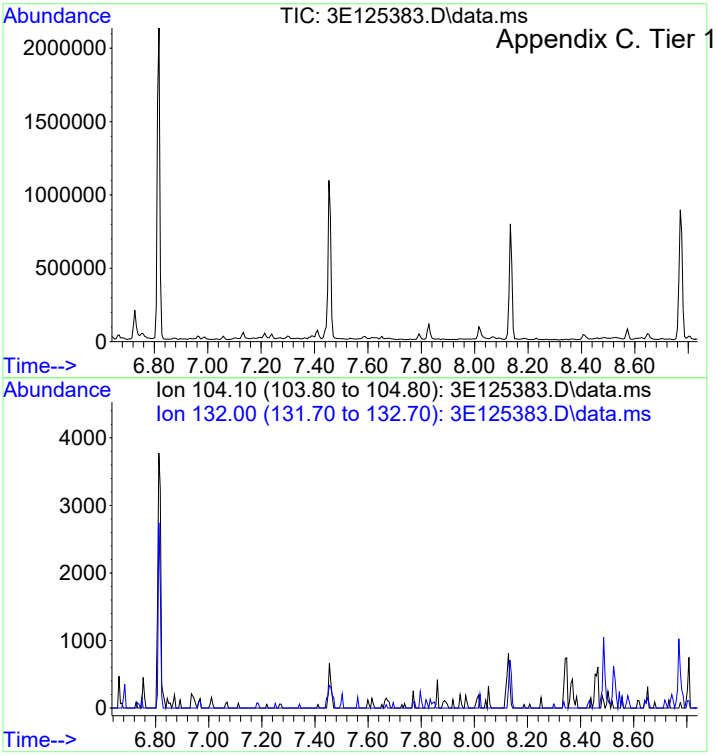




#8
Sesquiterpanes
Concen: N.D.
Expected RT: 7.45 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 123



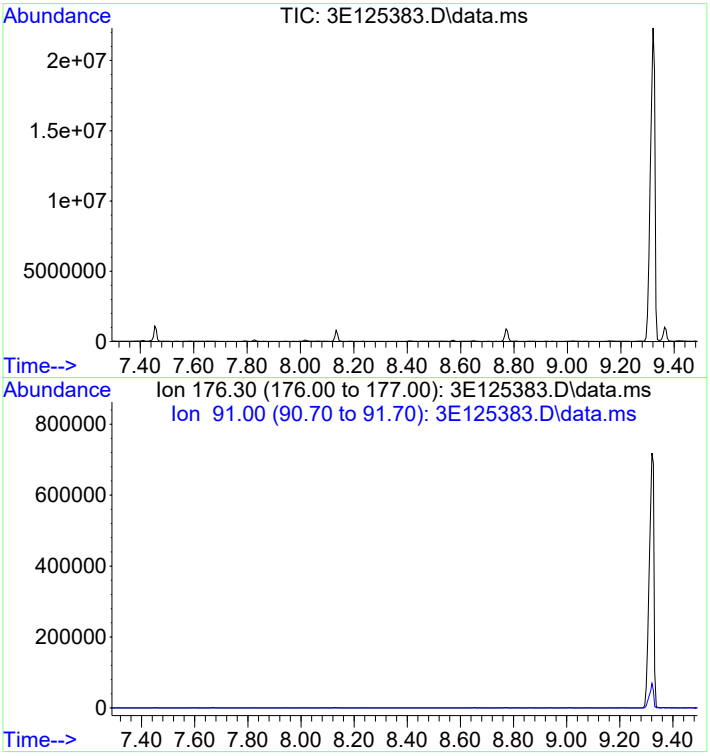



#9
Benzocyclohexane
Concen: N.D.
Expected RT: 7.74 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 104

| Sig | Exp Ratio |
|---|---|
| 104 | 100 |
| 132 | 0.0 |

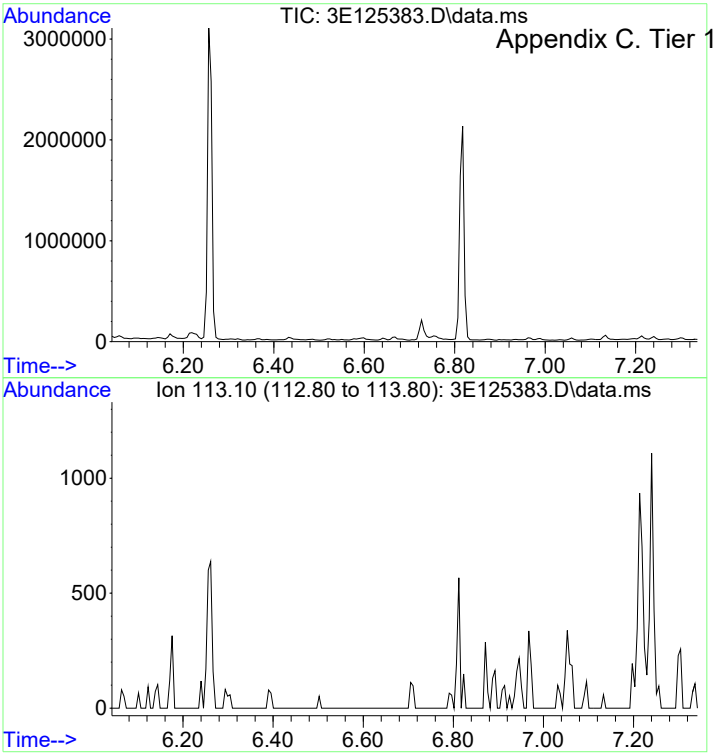



#10
Propylbutylbenzene
Concen: N.D.
Expected RT: 8.39 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 176

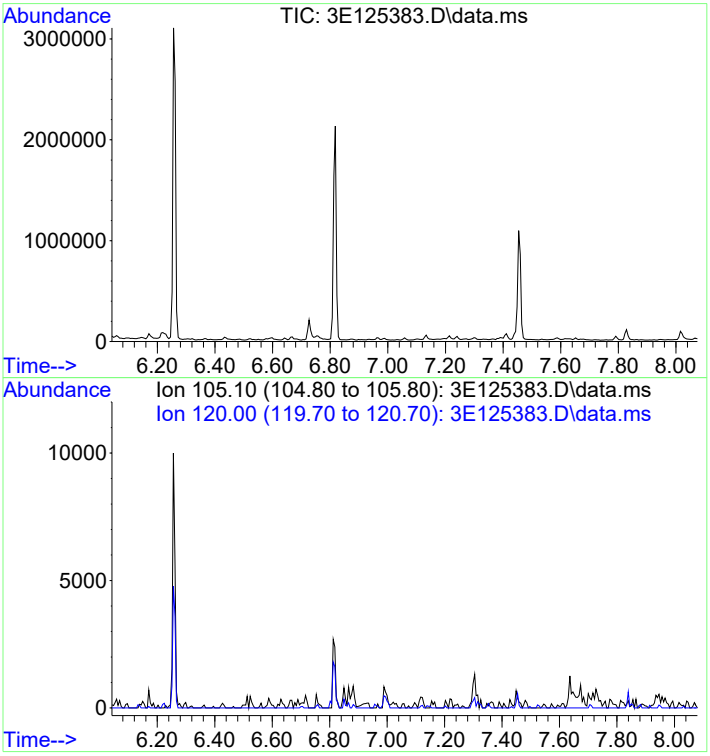
| Sig | Exp Ratio |
|---|---|
| 176 | 100 |
| 91 | 0.0 |




#11
Cyclic Isoprenoid
Concen: N.D.
Expected RT: 6.24 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 113

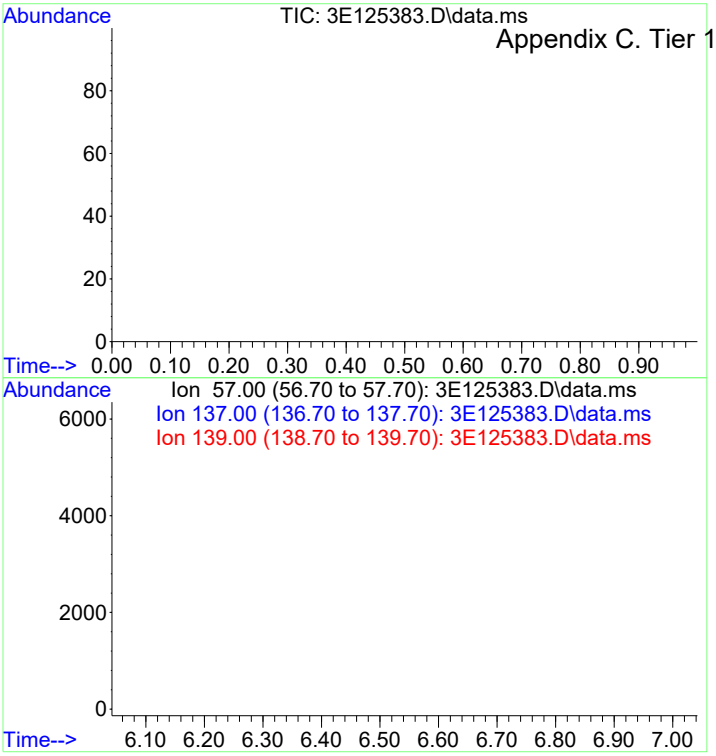



#12
Trimethylbenzene
Concen: N.D.
Expected RT: 6.98 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 105

| Sig | Exp Ratio |
|---|---|
| 105 | 100 |
| 120 | 0.0 |

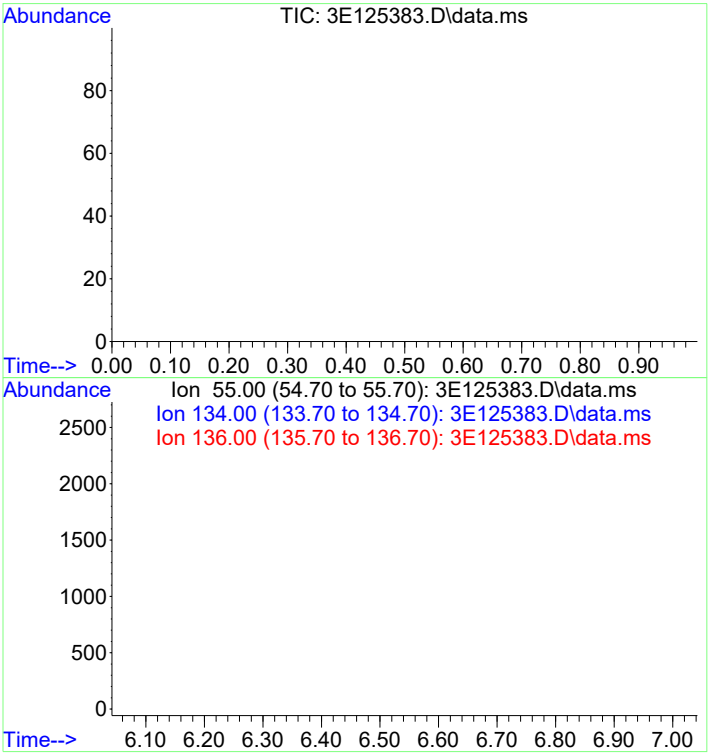



#13
Bromo-Xa
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 137 | 0.0 |
| 139 | 0.0 |

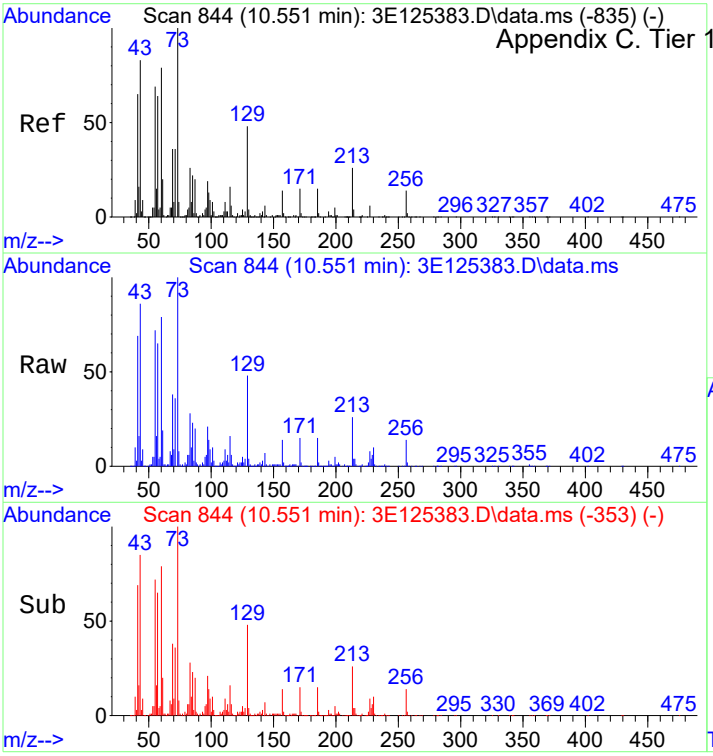



#14
Bromo-Xb
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 55

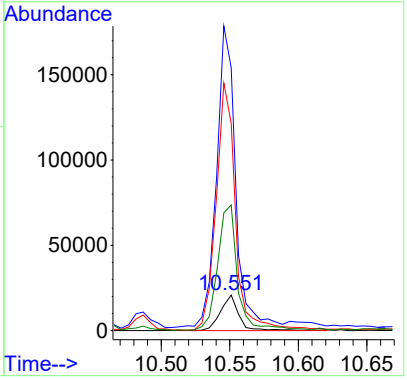
| Sig | Exp Ratio |
|---|---|
| 55 | 100 |
| 134 | 0.0 |
| 136 | 0.0 |

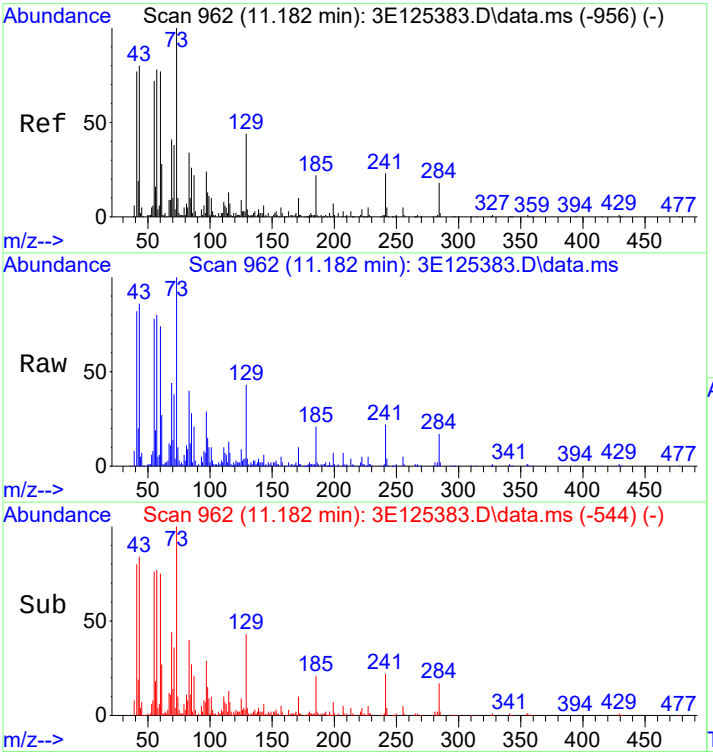



#15
n-Hexadecanoic Acid
Concen: 19659.00 ppm m
RT: 10.551 min Scan# 844
Delta R.T. 2.524 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion:256 Resp: 19659

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 256 | 100 | | |
| 73 | 0.0 | 97.8 | 137.8# |
| 60 | 0.0 | 30.7 | 70.7# |
| 129 | 0.0 | 16.1 | 56.1# |

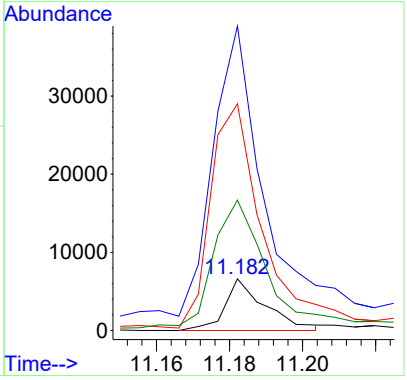


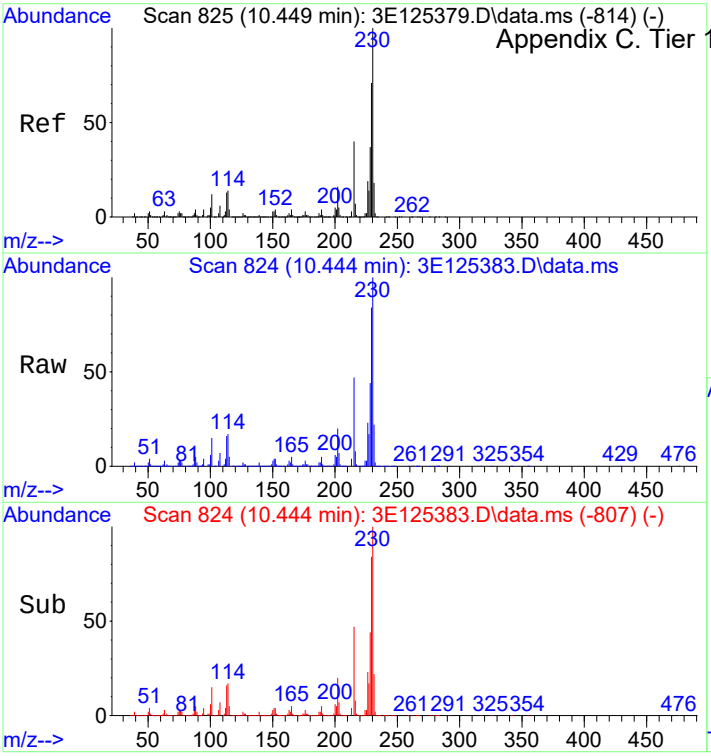




#16
n-Octadecanoic Acid
Concen: 5126.00 ppm m
RT: 11.182 min Scan# 962
Delta R.T. 2.133 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion:284 Resp: 5126

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 284 | 100 | | |
| 73 | 0.0 | 42.7 | 82.7# |
| 60 | 0.0 | 26.4 | 66.4# |
| 129 | 0.0 | 30.0 | 70.0# |

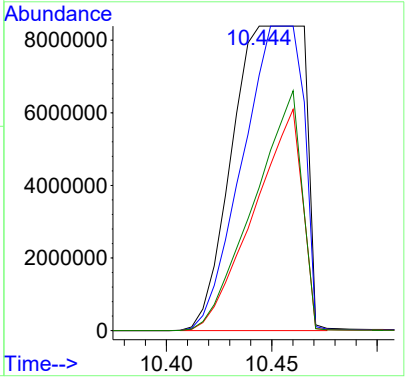


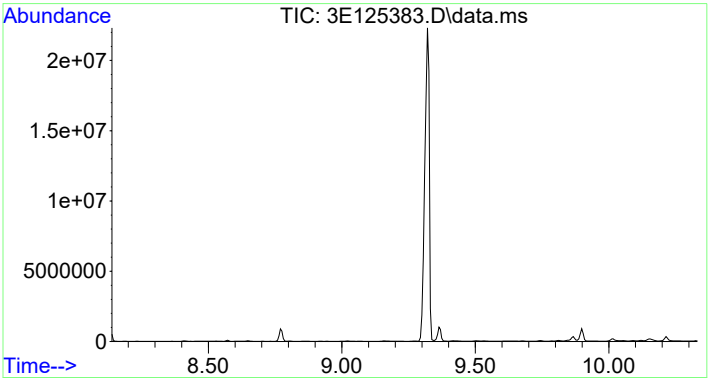


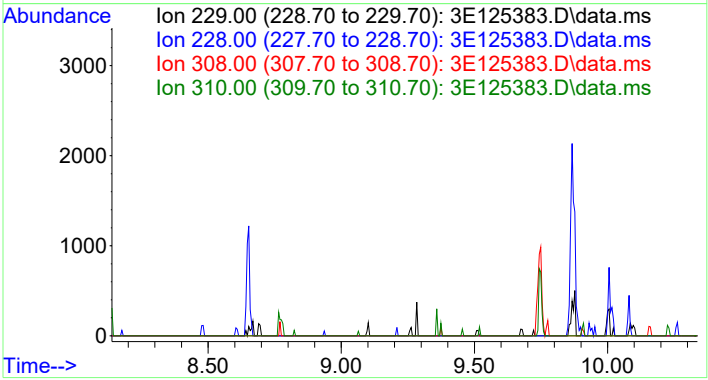

#17
o-Terphenyl
Concen: 19987102.00 ppm m
RT: 10.444 min Scan# 824
Delta R.T. -0.011 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion:230 Resp:19987102

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 230 | 100 | | |
| 229 | 0.0 | 43.0 | 83.0# |
| 228 | 0.0 | 27.3 | 67.3# |
| 215 | 0.0 | 30.0 | 70.0# |



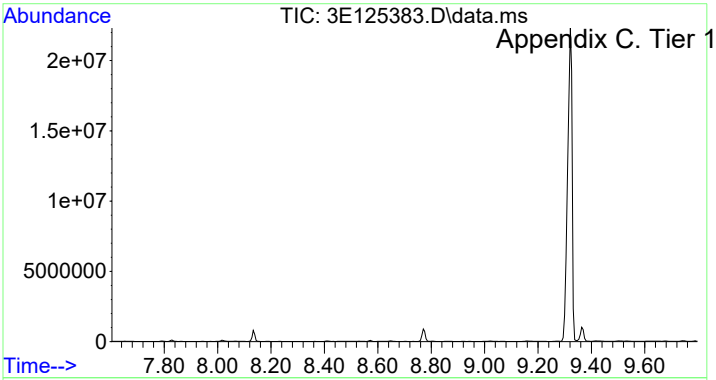




#18
Bromo-o-Terphenyl
Concen: N.D.
Expected RT: 9.24 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 229

| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 135.4 |
| 308 | 79.5 |
| 310 | 0.0 |

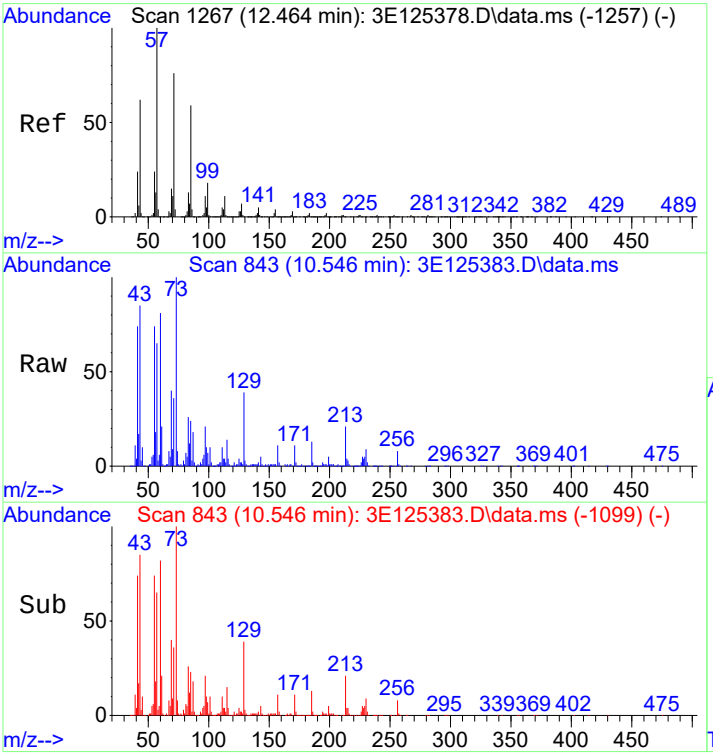



#19
Chloro-o-Terphenyl
Concen: N.D.
Expected RT: 8.70 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 229

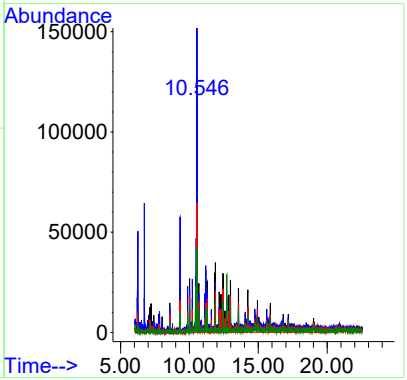
| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 63.1 |
| 264 | 48.7 |
| 266 | 0.0 |

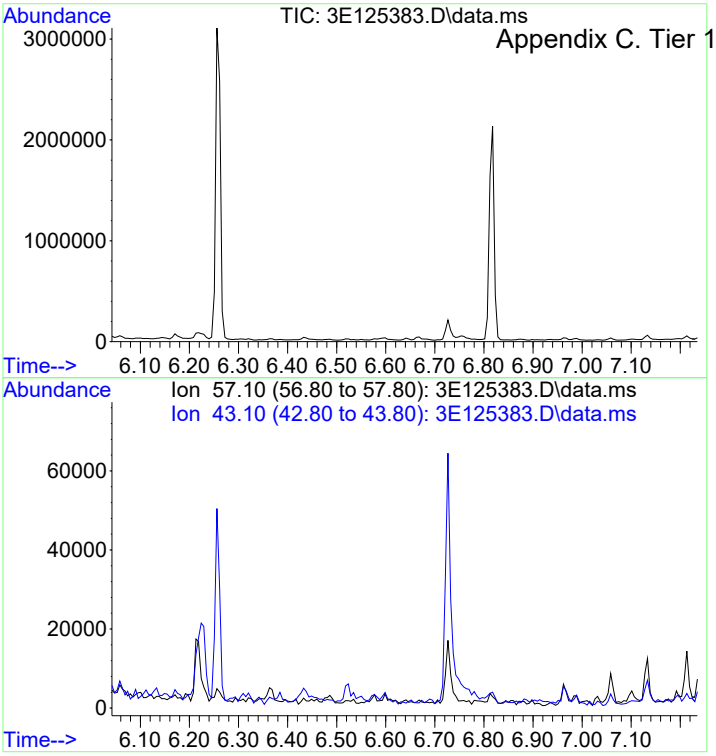



#20
n-Alkane
Concen: 1998711.00 ppm m
RT: 10.546 min Scan# 843
Delta R.T. -1.470 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 1998711

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 0.1 | 0.0 | 20.0 |
| 71 | 0.0 | 162.1 | 202.1# |
| 85 | 0.1 | 0.0 | 20.0 |



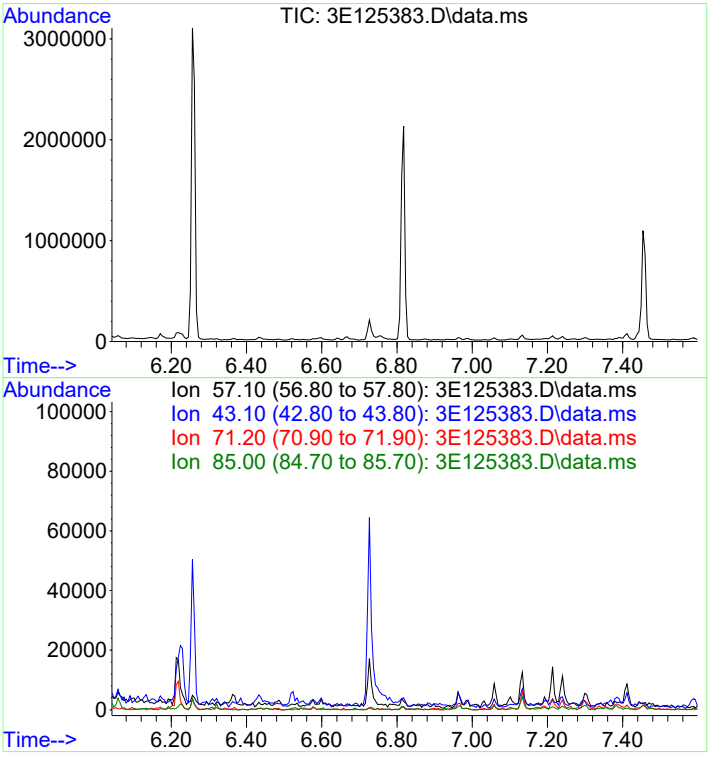



#21
n-Octane (C8)
Concen: N.D.
Expected RT: 6.14 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 235.9 |

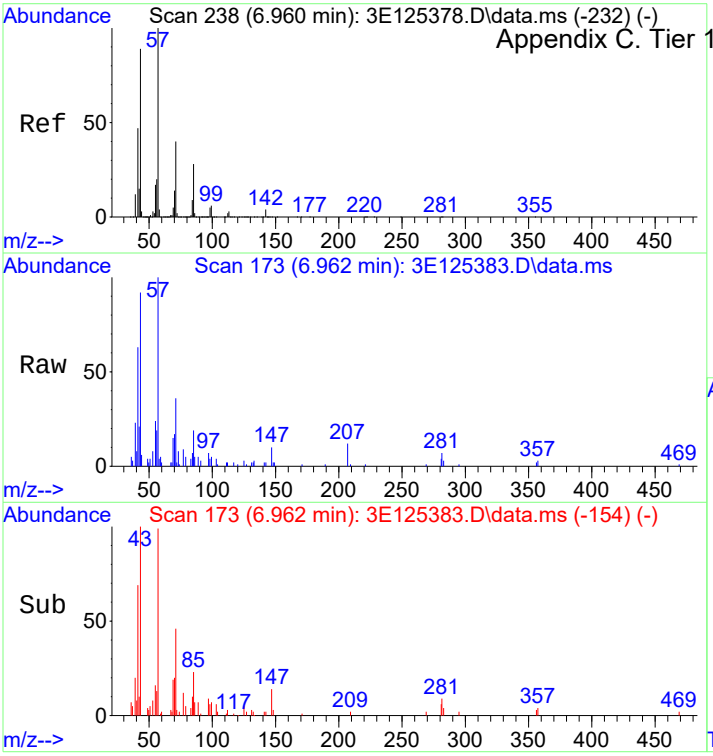



#22
n-Nonane (C9)
Concen: N.D.
Expected RT: 6.50 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57

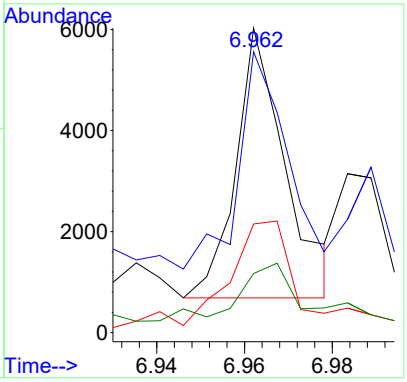
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 0.1 |
| 71 | 0.1 |
| 85 | 0.0 |

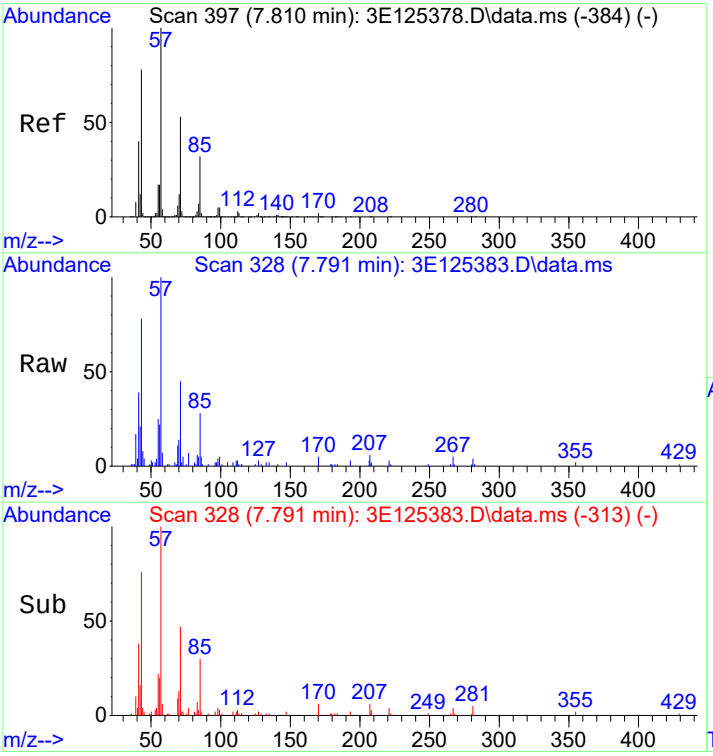



#23
n-Decane (C10)
Concen: 4184.00 ug/l
RT: 6.962 min Scan# 173
Delta R.T. 0.002 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 4184

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 90.8 | 72.3 | 108.5 |
| 71 | 68.5 | 31.3 | 46.9# |
| 85 | 47.3 | 22.2 | 33.4# |

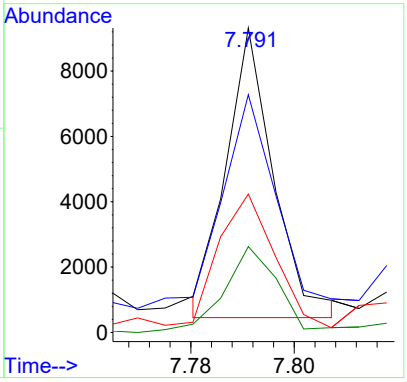


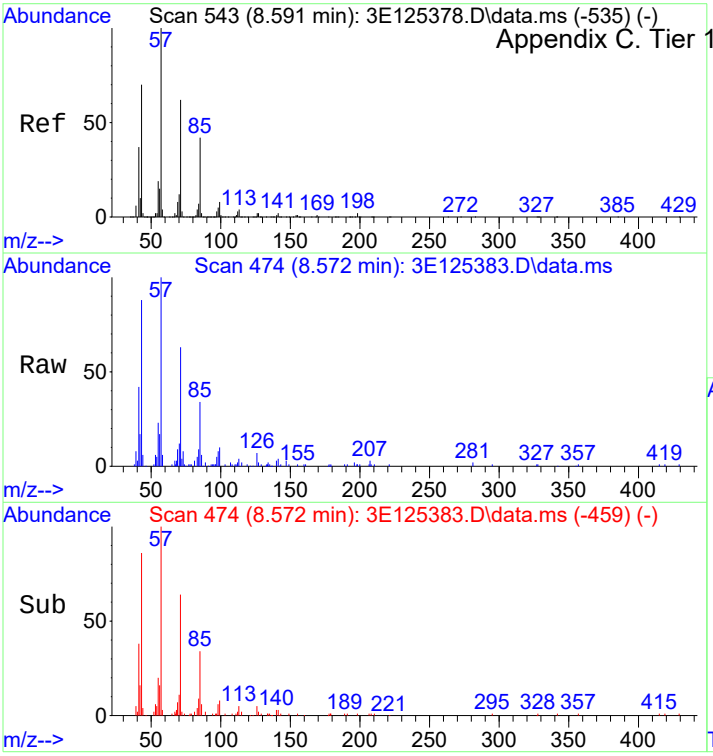




#24
n-Dodecane (C12)
Concen: 5625.00 ug/l m
RT: 7.791 min Scan# 328
Delta R.T. -0.019 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 5625

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 131.6 | 62.2 | 93.2# |
| 71 | 62.1 | 42.4 | 63.6 |
| 85 | 0.0 | 25.9 | 38.9# |

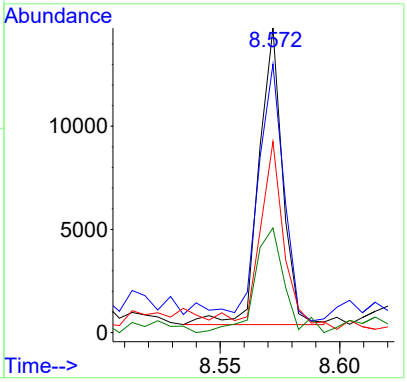


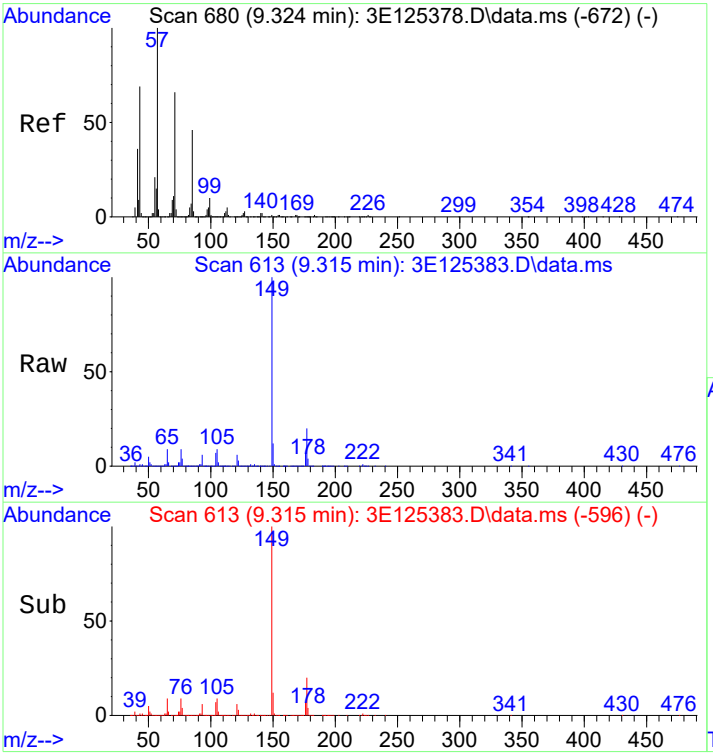



#25
n-Tetradecane (C14)
Concen: 9892.00 ug/l
RT: 8.572 min Scan# 474
Delta R.T. -0.019 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 9892

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 90.6 | 57.6 | 86.4# |
| 71 | 63.3 | 48.6 | 73.0 |
| 85 | 44.3 | 32.5 | 48.7 |

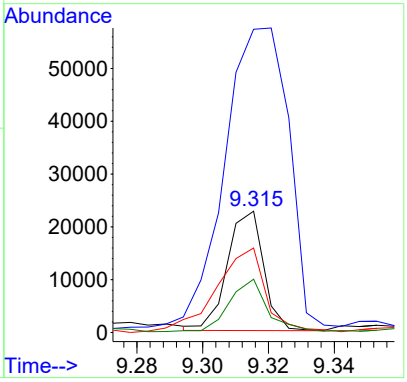


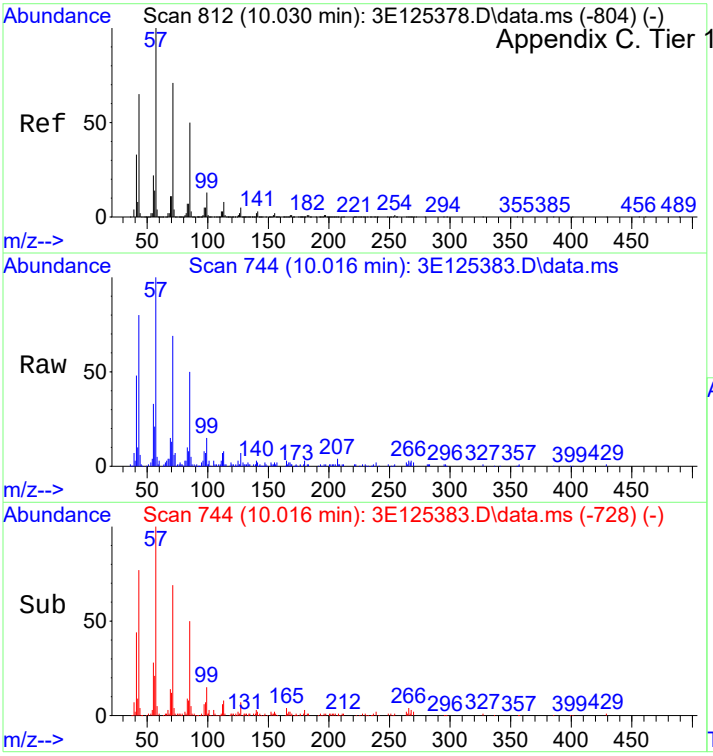




#26
n-Hexadecane (C16)
Concen: 17371.00 ug/l
RT: 9.315 min Scan# 613
Delta R.T. -0.009 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 17371

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 444.8 | 54.8 | 82.2# |
| 71 | 97.8 | 52.3 | 78.5# |
| 85 | 46.9 | 36.8 | 55.2 |

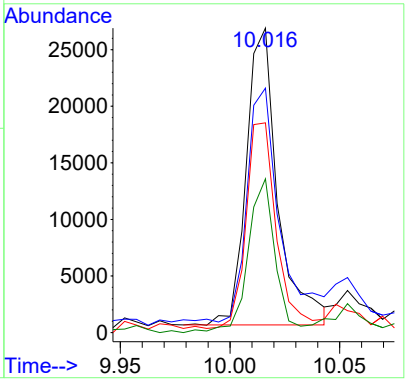


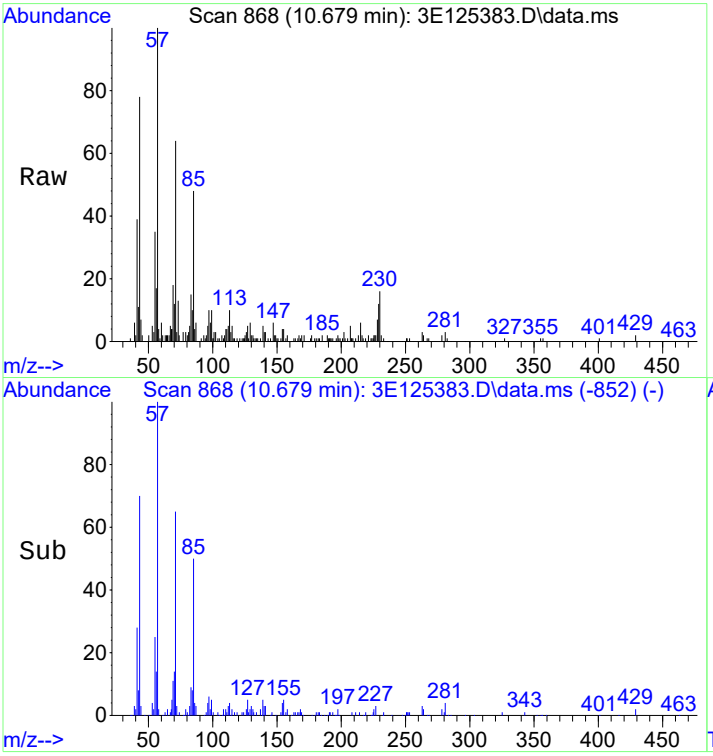



#27
n-octadecane (C18)
Concen: 26304.00 ug/l
RT: 10.016 min Scan# 744
Delta R.T. -0.014 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 26304

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 87.6 | 53.4 | 80.0# |
| 71 | 66.1 | 55.1 | 82.7 |
| 85 | 44.2 | 39.5 | 59.3 |

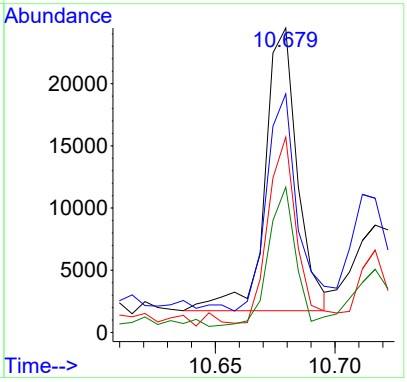


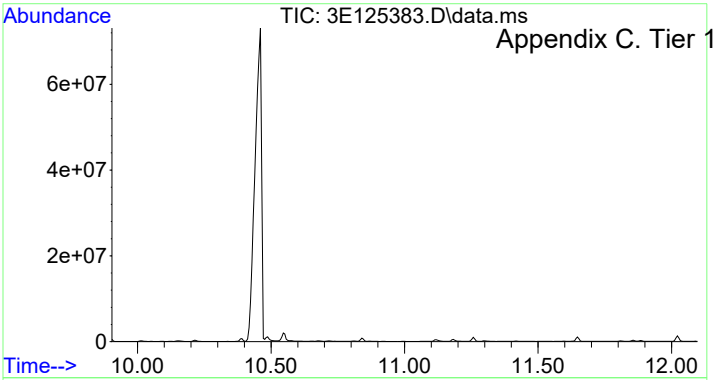



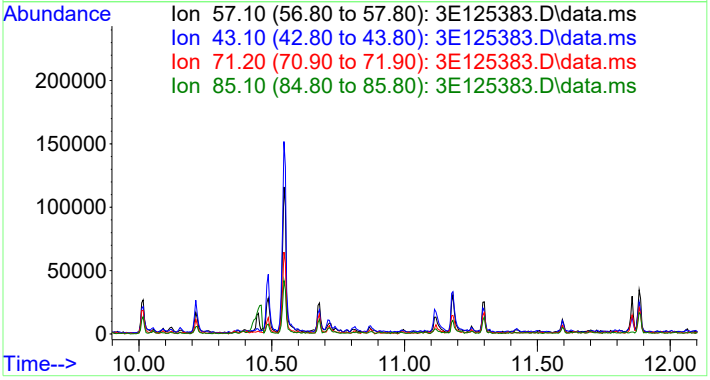

#28
n-Eicosane (C20)
Concen: 21668.00 ug/l
RT: 10.679 min Scan# 868
Delta R.T. -0.014 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 21668

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 76.1 | 52.6 | 79.0 |
| 71 | 58.5 | 56.2 | 84.2 |
| 85 | 40.5 | 41.5 | 62.3# |





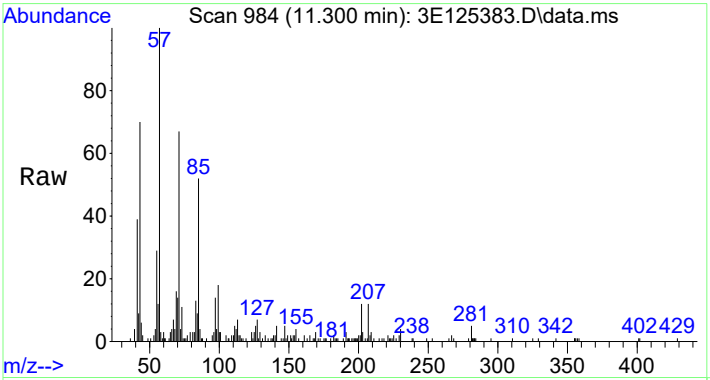



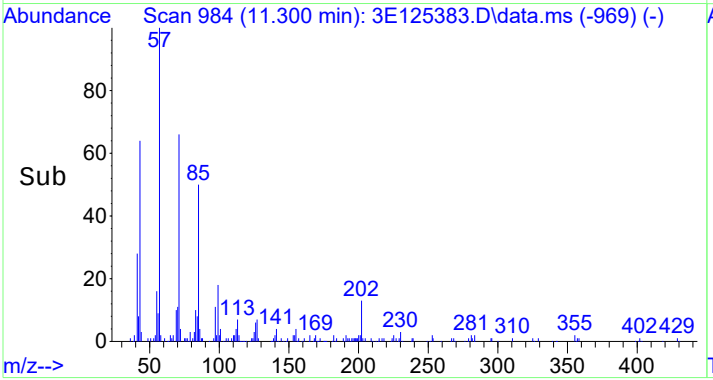

#29
n-Heneicosane (C21)
Concen: N.D.
Expected RT: 11.00 min

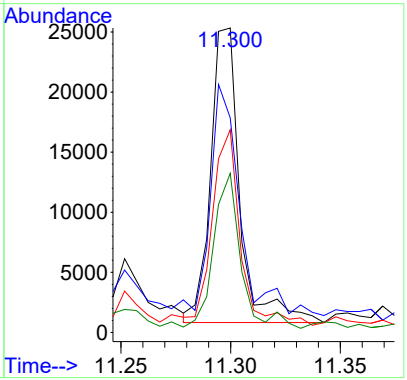
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 65.1 |
| 85 | 51.7 |



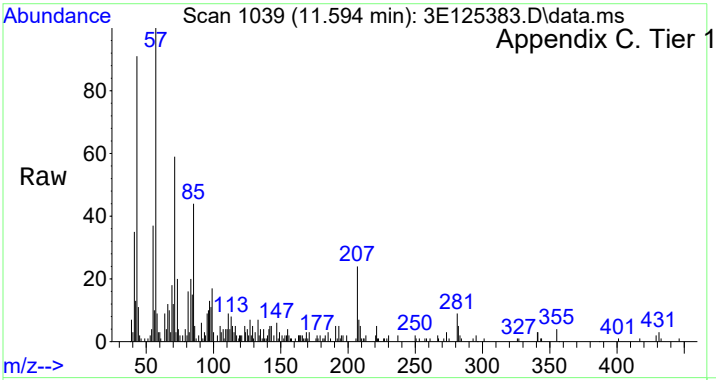




#30
n-Docosane (C22)
Concen: 22820.00 ug/l
RT: 11.300 min Scan# 984
Delta R.T. -0.019 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 22820

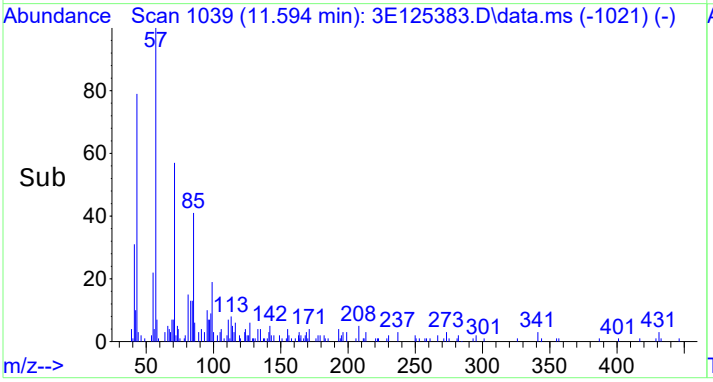
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 79.8 | 50.8 | 76.2# |
| 71 | 65.8 | 57.0 | 85.6 |
| 85 | 48.6 | 43.1 | 64.7 |

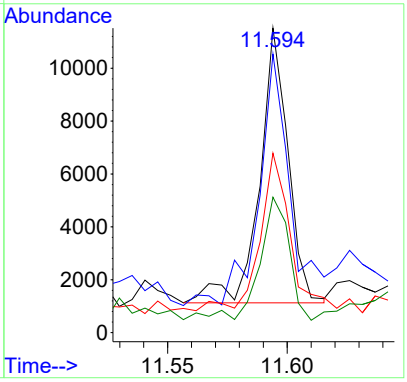


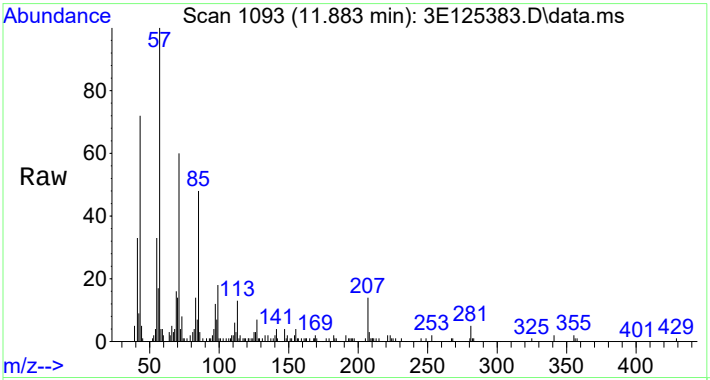

#31
n-Hexacosane (C26)
Concen: 8667.00 ug/l
RT: 11.594 min Scan# 1039
Delta R.T. -0.006 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 8667

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 101.1 | 49.6 | 74.4# |
| 71 | 60.0 | 43.1 | 64.7 |
| 85 | 47.9 | 36.6 | 54.8 |



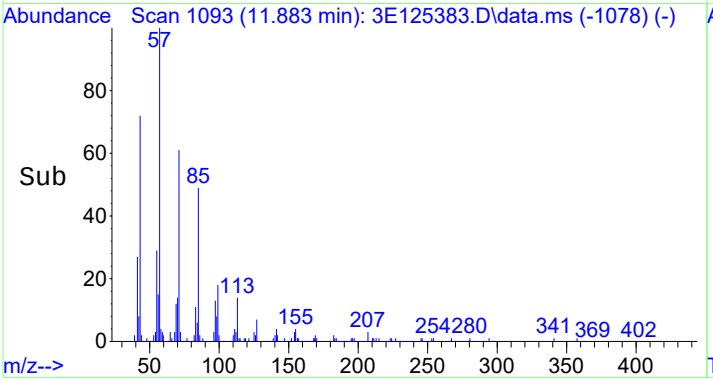



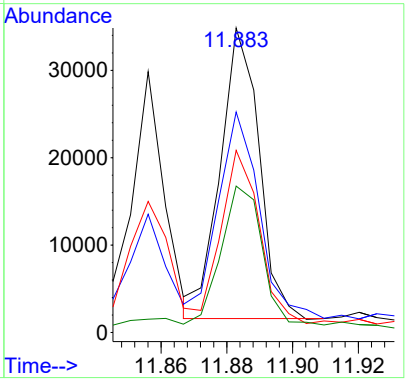



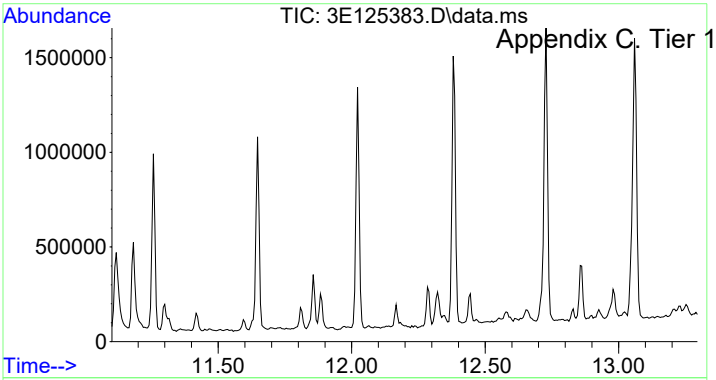

#32
n-Tetracosane (C24)
Concen: 27256.00 ug/l
RT: 11.883 min Scan# 1093
Delta R.T. -0.019 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 27256

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 77.3 | 50.7 | 76.1# |
| 71 | 57.9 | 57.8 | 86.8 |
| 85 | 55.1 | 44.2 | 66.2 |



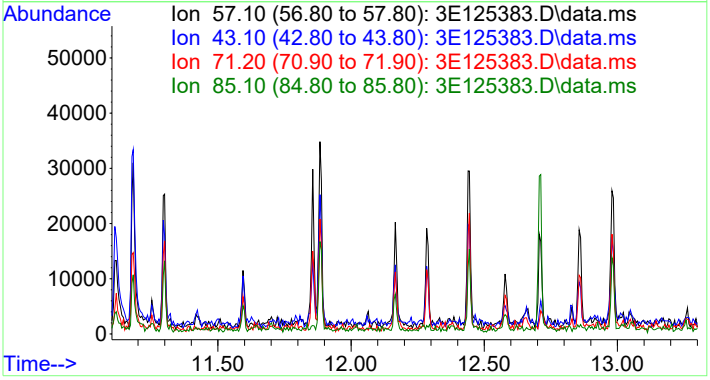


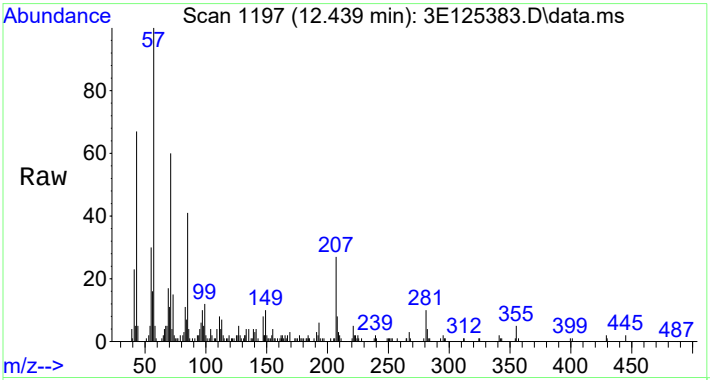

#33
n-Pentacosane (C25)
Concen: N.D.
Expected RT: 12.20 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 79.9 |
| 71 | 70.5 |
| 85 | 42.5 |

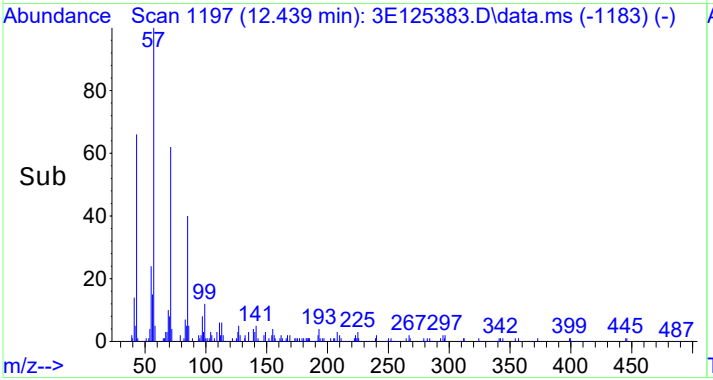


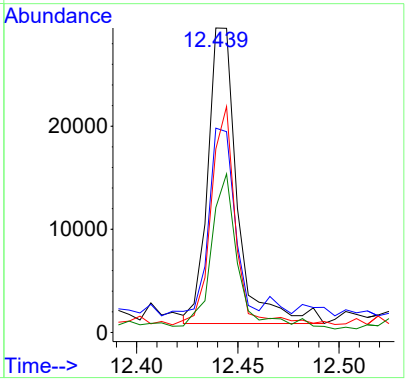



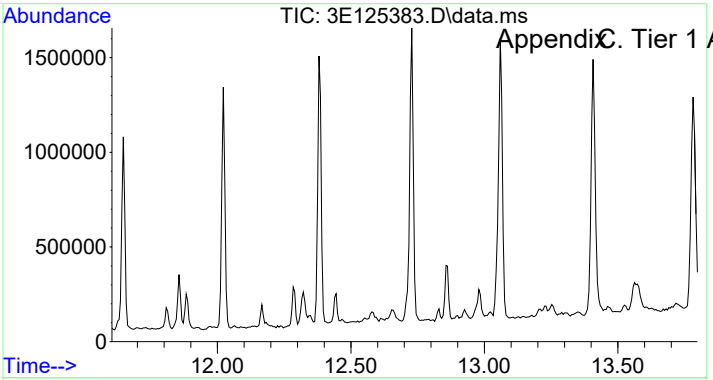

#34
n-Hexacosane (C26)
Concen: 29284.00 ug/l
RT: 12.439 min Scan# 1197
Delta R.T. -0.025 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 29284

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 51.3 | 50.5 | 75.7 |
| 71 | 61.0 | 58.6 | 87.8 |
| 85 | 48.7 | 45.3 | 67.9 |



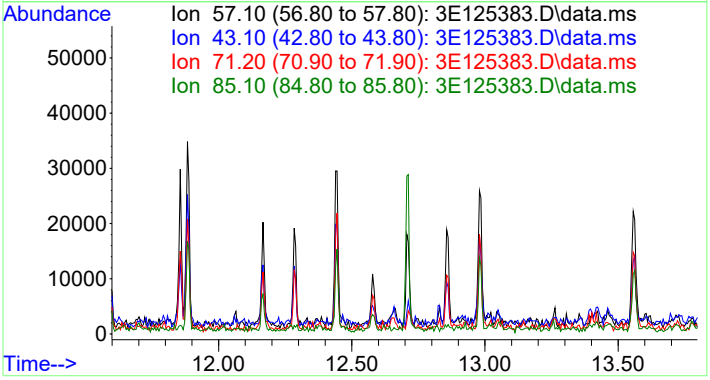


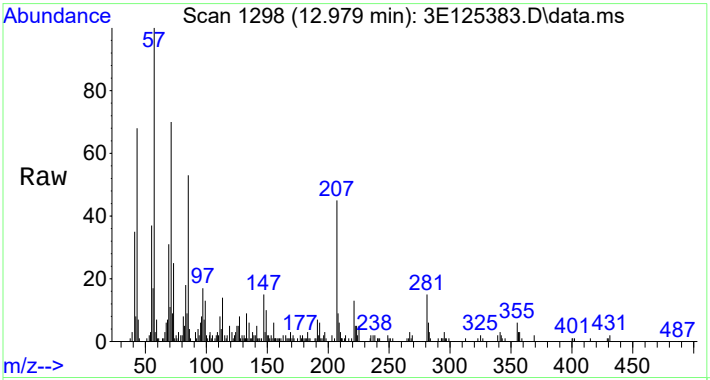

#35
n-heptacosane (C27)
Concen: N.D.
Expected RT: 12.70 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 76.1 |
| 71 | 90.4 |
| 85 | 86.7 |

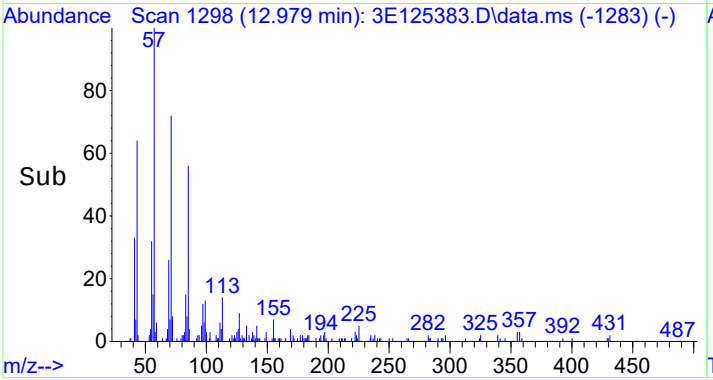


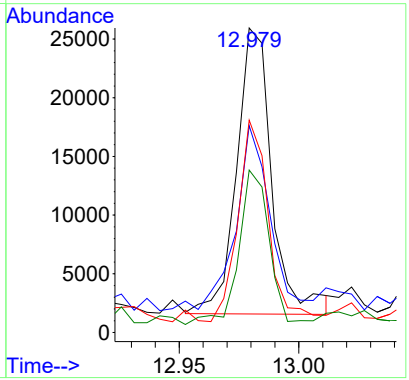



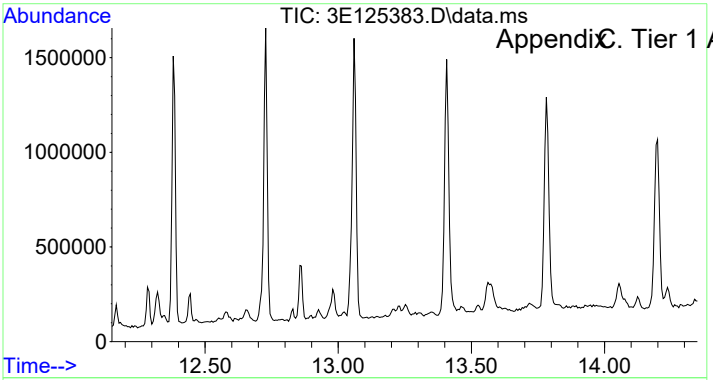

#36
n-Octacosane (C28)
Concen: 25140.00 ug/l
RT: 12.979 min Scan# 1298
Delta R.T. -0.021 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 25140

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 63.0 | 48.6 | 73.0 |
| 71 | 61.4 | 58.3 | 87.5 |
| 85 | 46.5 | 45.0 | 67.6 |



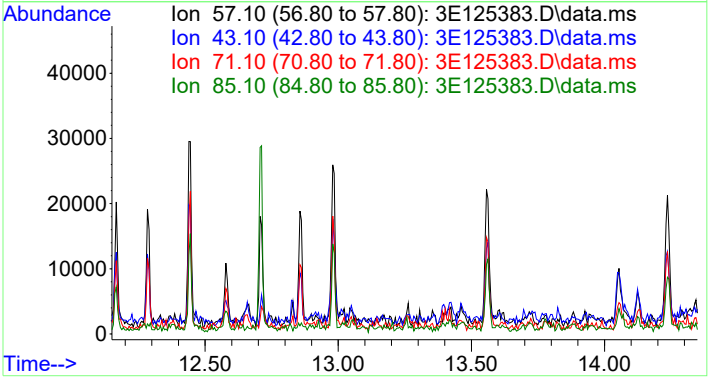


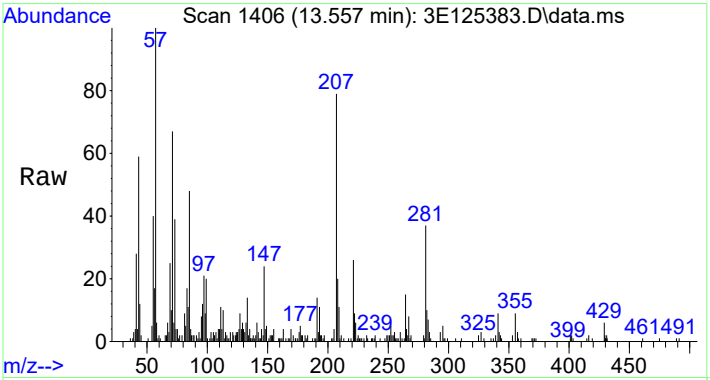

#37
n-Nonacosane (C29)
Concen: N.D.
Expected RT: 13.25 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.1 |
| 71 | 78.4 |
| 85 | 67.7 |

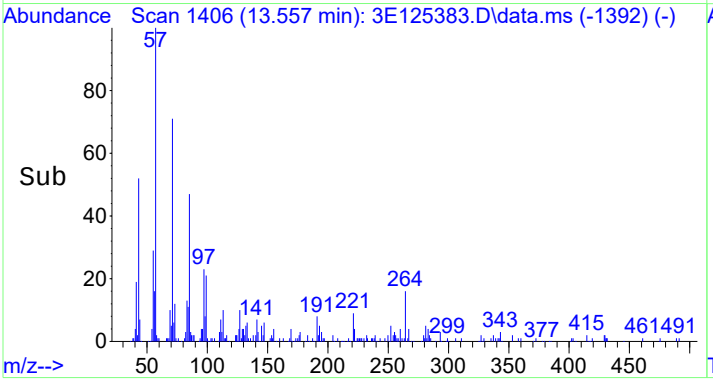


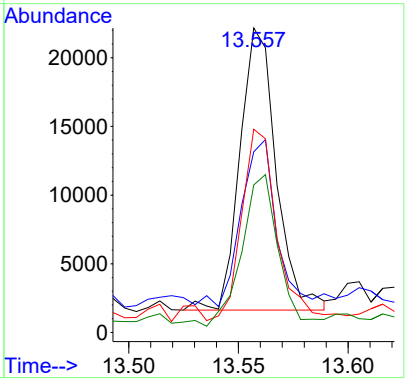



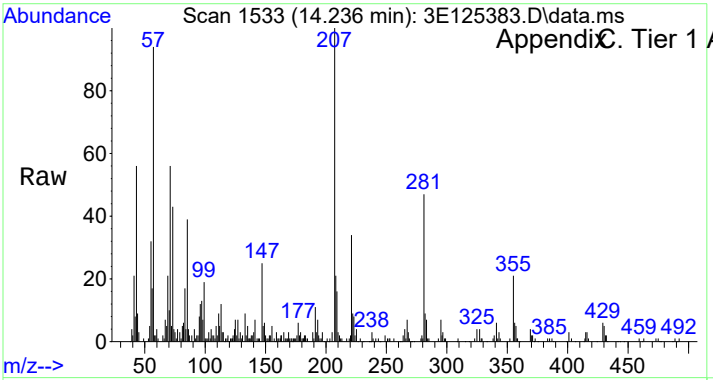

#38
n-Triacontane (C30)
Concen: 23630.00 ug/l
RT: 13.557 min Scan# 1406
Delta R.T. -0.024 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 23630

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 56.9 | 47.7 | 71.5 |
| 71 | 67.0 | 58.2 | 87.4 |
| 85 | 49.8 | 45.5 | 68.3 |



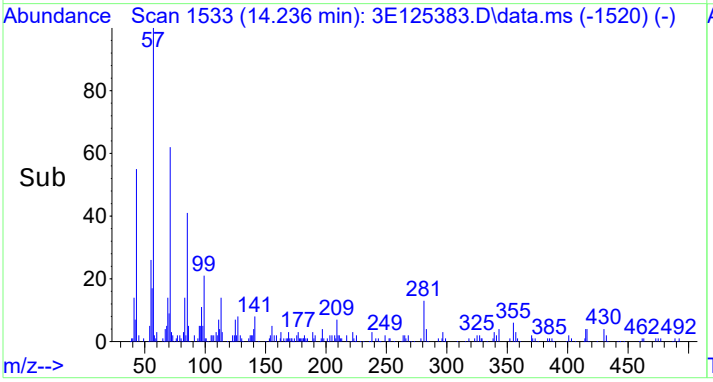



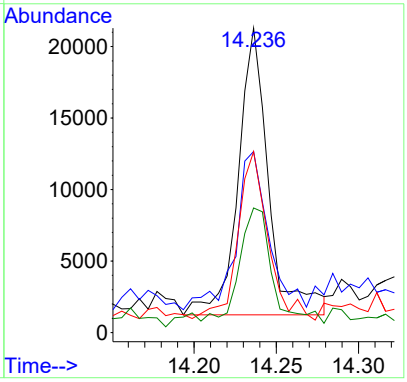


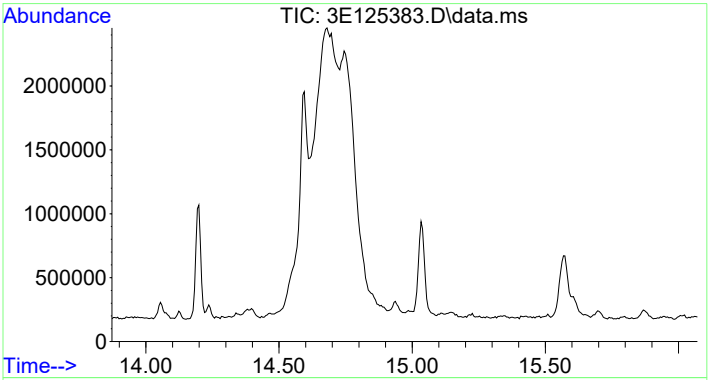

#39
n-Dotriacontane (C32)
Concen: 25864.00 ug/l
RT: 14.236 min Scan# 1533
Delta R.T. -0.030 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57 Resp: 25864

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 59.6 | 46.9 | 70.3 |
| 71 | 58.6 | 57.4 | 86.0 |
| 85 | 42.7 | 44.5 | 66.7# |



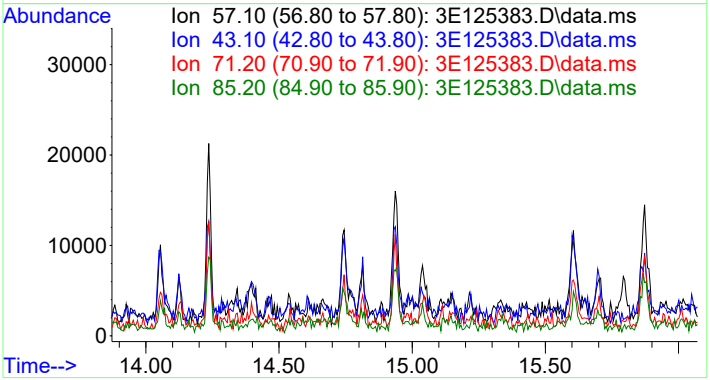



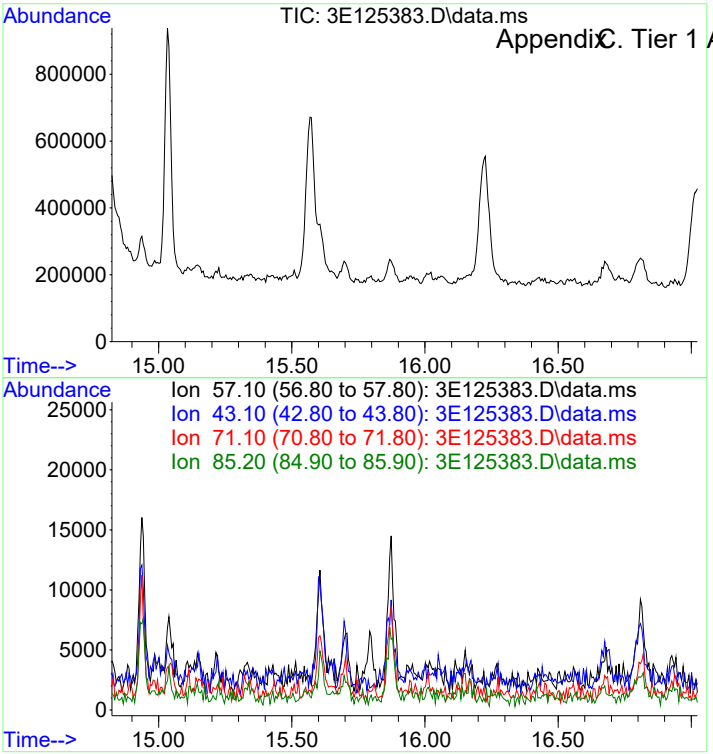

#40
n-Tetratriacontane (C34)
Concen: N.D.
Expected RT: 14.97 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 57.4 |
| 71 | 71.0 |
| 85 | 54.6 |



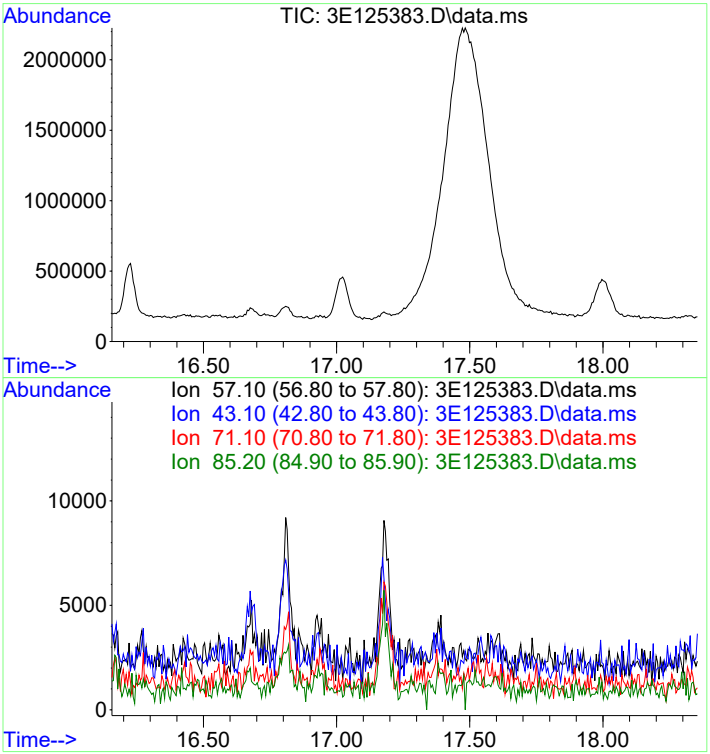



#41
n-Hexatriacontane (C36)
Concen: N.D.
Expected RT: 15.92 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 56.3 |
| 71 | 71.0 |
| 85 | 54.4 |

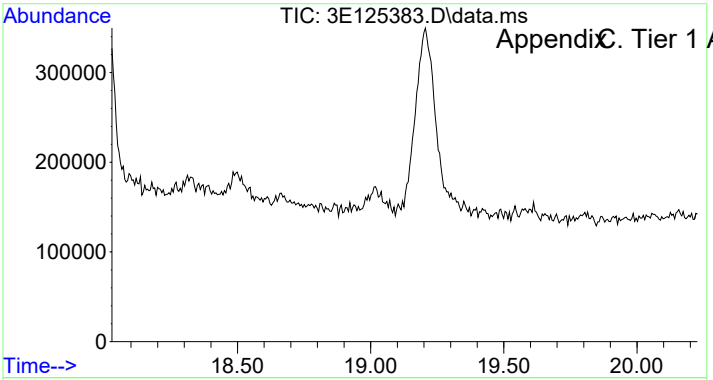


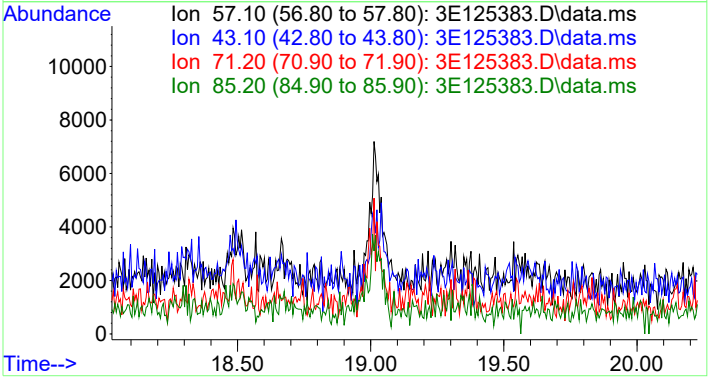

#42
n-Octatriacontane (C38)
Concen: N.D.
Expected RT: 17.26 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 55.0 |
| 71 | 70.8 |
| 85 | 53.9 |



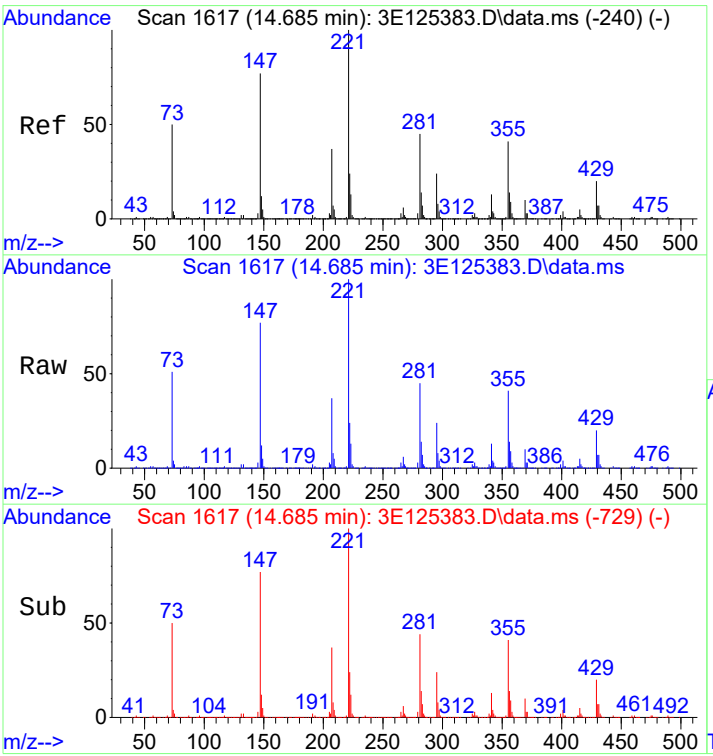




#43
n-Tetracontane (C40)
Concen: N.D.
Expected RT: 19.13 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 57

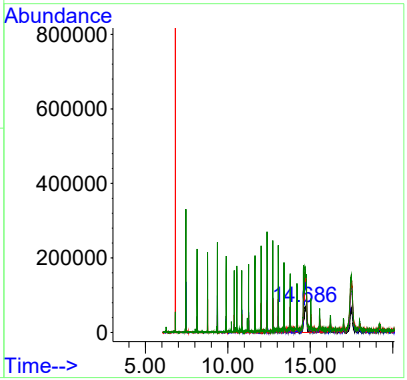
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 70.6 |
| 85 | 53.9 |

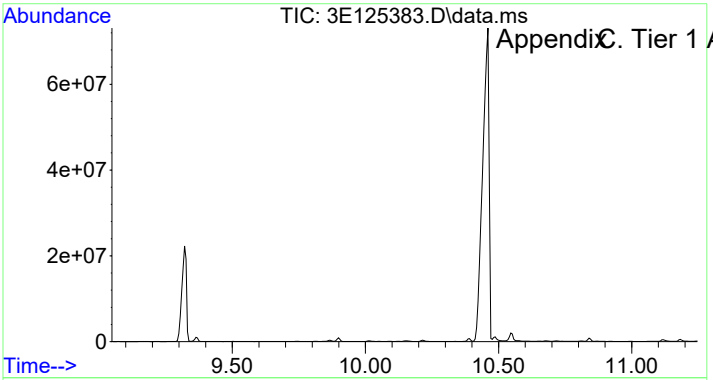


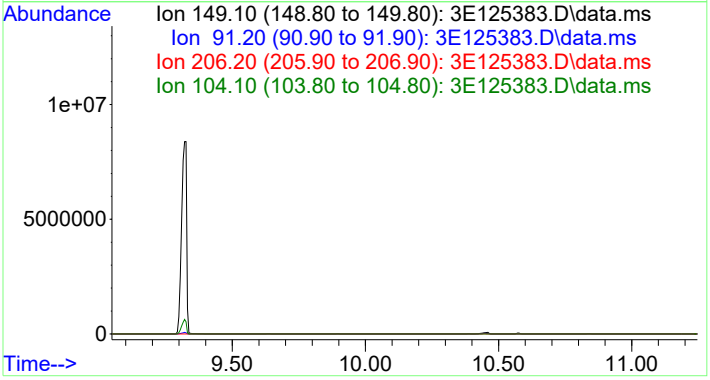

#44
Siloxane
Concen: 1524493.00 ppm m
RT: 14.685 min Scan# 1617
Delta R.T. 4.649 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion:429 Resp: 1524493

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 429 | 100 | | |
| 355 | 0.0 | 0.0 | 20.0 |
| 281 | 0.0 | 0.0 | 20.0 |
| 73 | 0.0 | 0.0 | 20.0 |





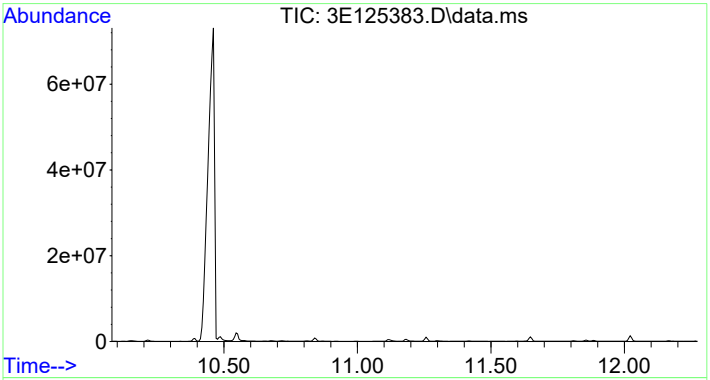



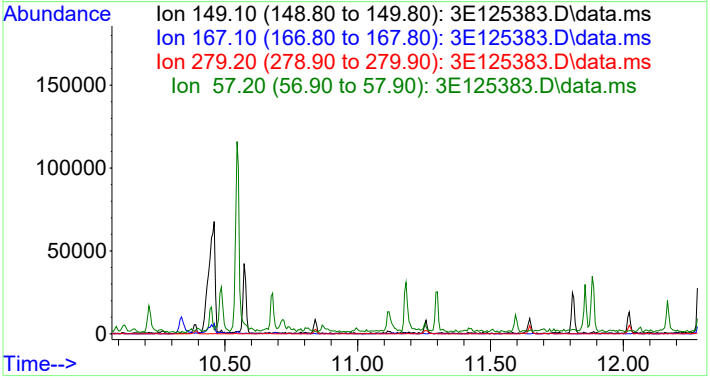

#45
Butyl benzyl phthalate
Concen: N.D.
Expected RT: 10.15 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 91 | 97.4 |
| 206 | 28.9 |
| 104 | 19.1 |



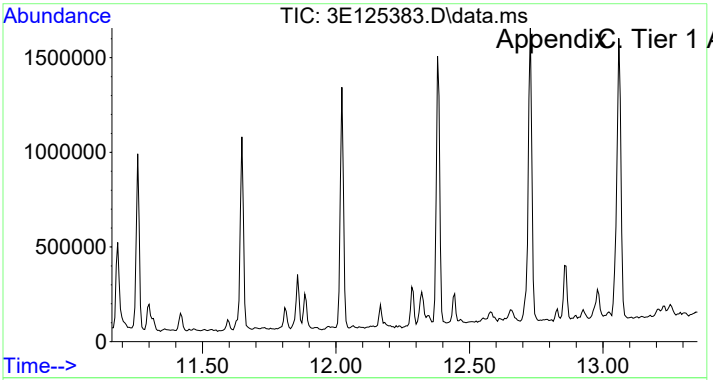




#46
Bis(2-ethylhexyl)phthalate
Concen: N.D.
Expected RT: 11.18 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 167 | 34.3 |
| 279 | 10.6 |
| 57 | 34.0 |

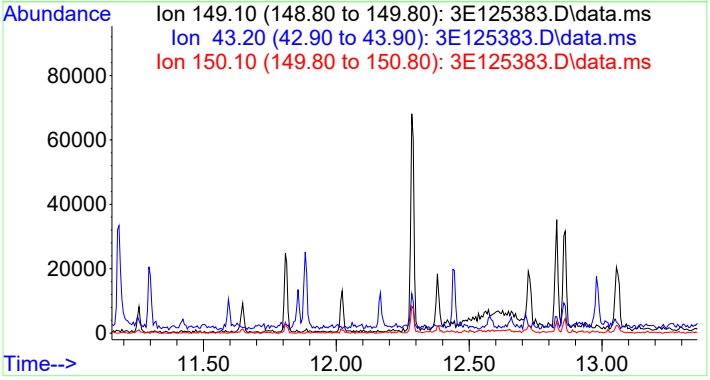


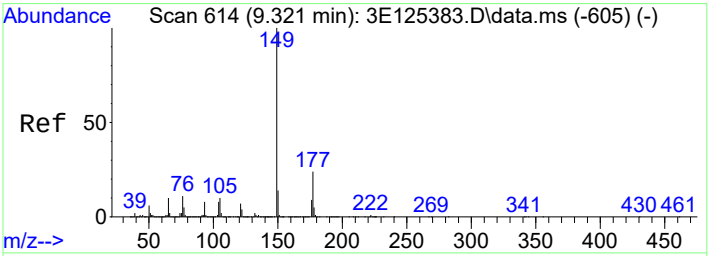

#47
Di-n-octylphthalate
Concen: N.D.
Expected RT: 12.26 min

Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 43 | 12.1 |
| 150 | 10.0 |

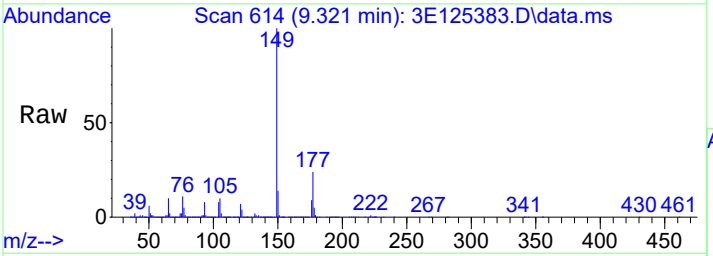


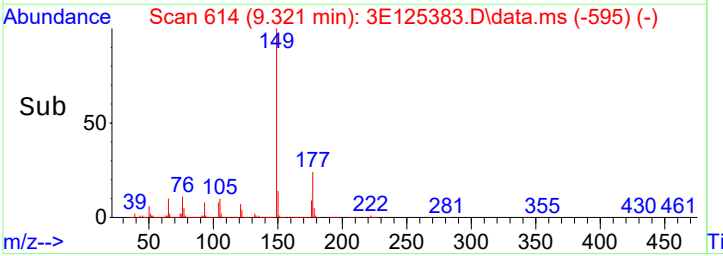



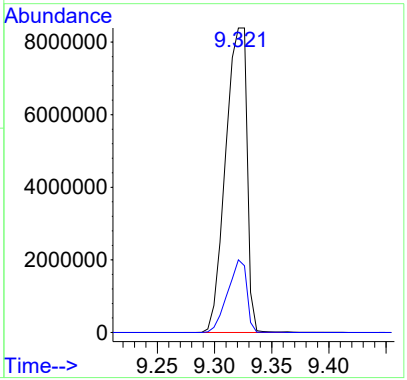

#48
Diethyl Phthalate
Concen: 10934914.00 ug/l
RT: 9.321 min Scan# 614
Delta R.T. -0.000 min
Lab File: 3E125383.D
Acq: 20 Jul 2024 1:56 pm

Tgt Ion:149 Resp:10934914

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 149 | 100 | | |
| 177 | 21.3 | 17.0 | 25.6 |



LSC Area Percent Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Title : 8270C Calibration

Signal : TIC: 3E125383.D\data.ms

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 9.160 | 580 | 584 | 591 | rBV5 | 28169 | 51137 | 0.04% | 0.032% |
| 2 | 9.219 | 591 | 595 | 598 | rVB6 | 9578 | 11459 | 0.01% | 0.007% |
| 3 | 9.267 | 599 | 604 | 607 | rBV7 | 16958 | 22420 | 0.02% | 0.014% |
| 4 | 9.321 | 607 | 614 | 619 | rVV | 22292427 | 26073288 | 21.22% | 16.375% |
| 5 | 9.364 | 619 | 622 | 628 | rVB | 1002765 | 877930 | 0.71% | 0.551% |
| 6 | 9.417 | 628 | 632 | 641 | rVB4 | 32209 | 61246 | 0.05% | 0.038% |
| 7 | 9.503 | 642 | 648 | 652 | rBV | 38730 | 48791 | 0.04% | 0.031% |
| 8 | 9.535 | 652 | 654 | 659 | rVB | 27599 | 26230 | 0.02% | 0.016% |
| 9 | 9.567 | 659 | 660 | 663 | rVB3 | 5169 | 3443 | 0.00% | 0.002% |
| 10 | 9.615 | 663 | 669 | 671 | rBV7 | 20793 | 27964 | 0.02% | 0.018% |
| 11 | 9.647 | 671 | 675 | 678 | rVB3 | 13585 | 21525 | 0.02% | 0.014% |
| 12 | 9.679 | 678 | 681 | 685 | rVB3 | 24877 | 20571 | 0.02% | 0.013% |
| 13 | 9.743 | 688 | 693 | 697 | rBV3 | 44723 | 48448 | 0.04% | 0.030% |
| 14 | 9.786 | 697 | 701 | 703 | rBV4 | 18410 | 20948 | 0.02% | 0.013% |
| 15 | 9.813 | 703 | 706 | 709 | rBV4 | 47901 | 43760 | 0.04% | 0.027% |
| 16 | 9.866 | 709 | 716 | 719 | rBV2 | 318547 | 351867 | 0.29% | 0.221% |
| 17 | 9.898 | 719 | 722 | 737 | rVB | 884833 | 754691 | 0.61% | 0.474% |
| 18 | 10.016 | 737 | 744 | 749 | rBV | 171417 | 229660 | 0.19% | 0.144% |
| 19 | 10.054 | 749 | 751 | 755 | rVB4 | 30300 | 24131 | 0.02% | 0.015% |
| 20 | 10.091 | 755 | 758 | 760 | rBV4 | 34153 | 28060 | 0.02% | 0.018% |
| 21 | 10.123 | 760 | 764 | 766 | rBV5 | 40198 | 40062 | 0.03% | 0.025% |
| 22 | 10.150 | 766 | 769 | 776 | rVB3 | 150107 | 228201 | 0.19% | 0.143% |
| 23 | 10.214 | 776 | 781 | 799 | rVB2 | 324108 | 357062 | 0.29% | 0.224% |
| 24 | 10.337 | 800 | 804 | 807 | rBV3 | 32798 | 39152 | 0.03% | 0.025% |
| 25 | 10.391 | 807 | 814 | 816 | rBV | 681675 | 589862 | 0.48% | 0.370% |
| 26 | 10.460 | 816 | 827 | 830 | rVV3 | 73031873 | 122870205 | 100.00% | 77.165% |
| 27 | 10.487 | 830 | 832 | 838 | rVV | 1052516 | 1077753 | 0.88% | 0.677% |
| 28 | 10.546 | 838 | 843 | 858 | rVB2 | 1924527 | 2171895 | 1.77% | 1.364% |
| 29 | 10.679 | 865 | 868 | 871 | rVV | 114779 | 95415 | 0.08% | 0.060% |
| 30 | 10.717 | 871 | 875 | 885 | rVB9 | 113463 | 197296 | 0.16% | 0.124% |
| 31 | 10.808 | 889 | 892 | 895 | rBV4 | 71780 | 83233 | 0.07% | 0.052% |
| 32 | 10.840 | 895 | 898 | 902 | rVV | 771043 | 609940 | 0.50% | 0.383% |
| 33 | 10.872 | 902 | 904 | 911 | rVB6 | 56433 | 61982 | 0.05% | 0.039% |
| 34 | 10.995 | 924 | 927 | 930 | rVB5 | 12329 | 12709 | 0.01% | 0.008% |
| 35 | 11.118 | 946 | 950 | 958 | rBV2 | 412495 | 518048 | 0.42% | 0.325% |
| 36 | 11.182 | 958 | 962 | 971 | rVV | 467178 | 492458 | 0.40% | 0.309% |
| 37 | 11.257 | 971 | 976 | 981 | rVV | 936689 | 761985 | 0.62% | 0.479% |
| 38 | 11.300 | 981 | 984 | 992 | rVB2 | 142755 | 189213 | 0.15% | 0.119% |
| 39 | 11.417 | 1002 | 1006 | 1010 | rVB2 | 92540 | 85418 | 0.07% | 0.054% |

LSC Area Percent Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1000 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Title : 8270C Calibration

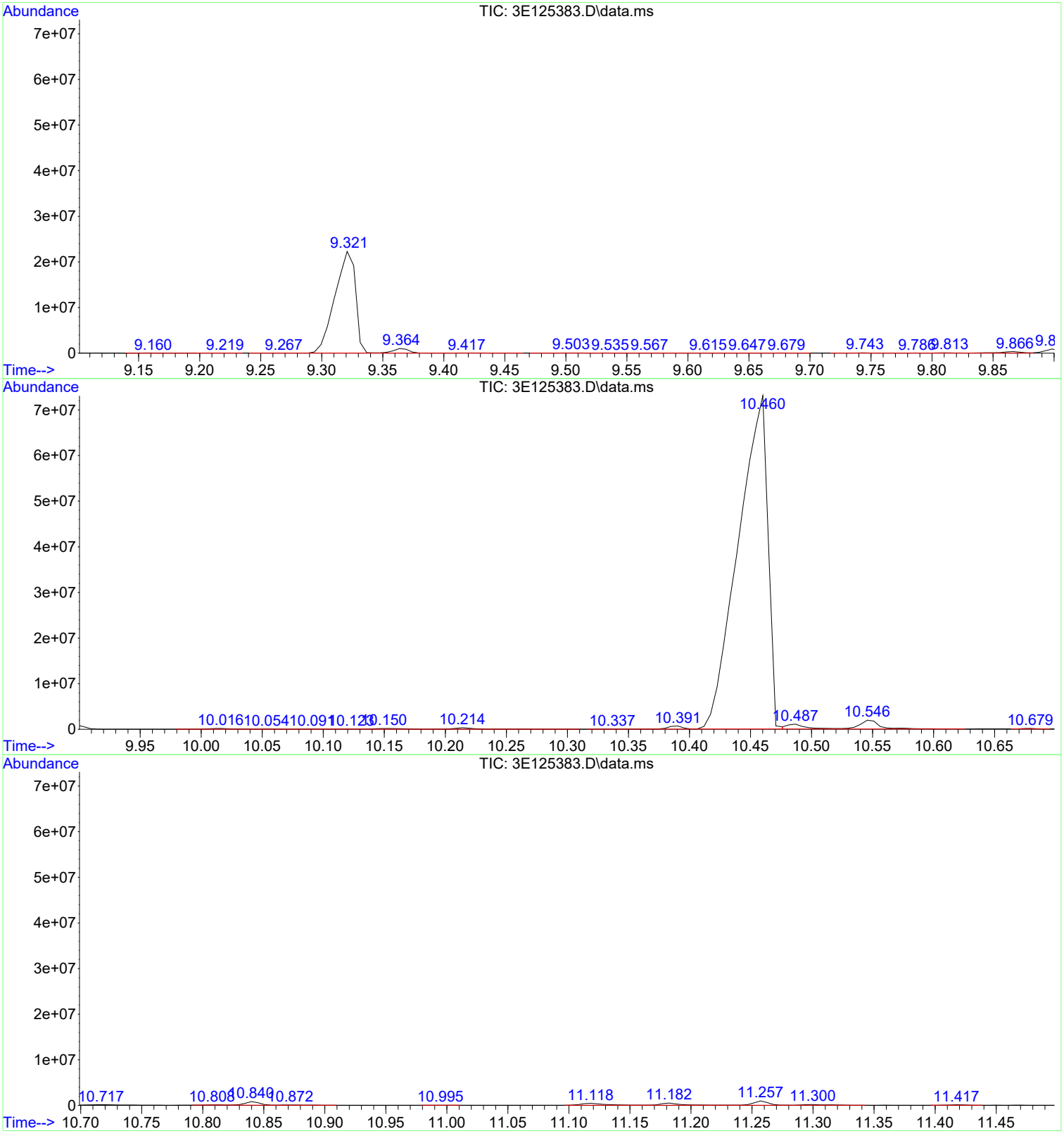
Sum of corrected areas: 159229458

LSC Report - Integrated Chromatogram

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

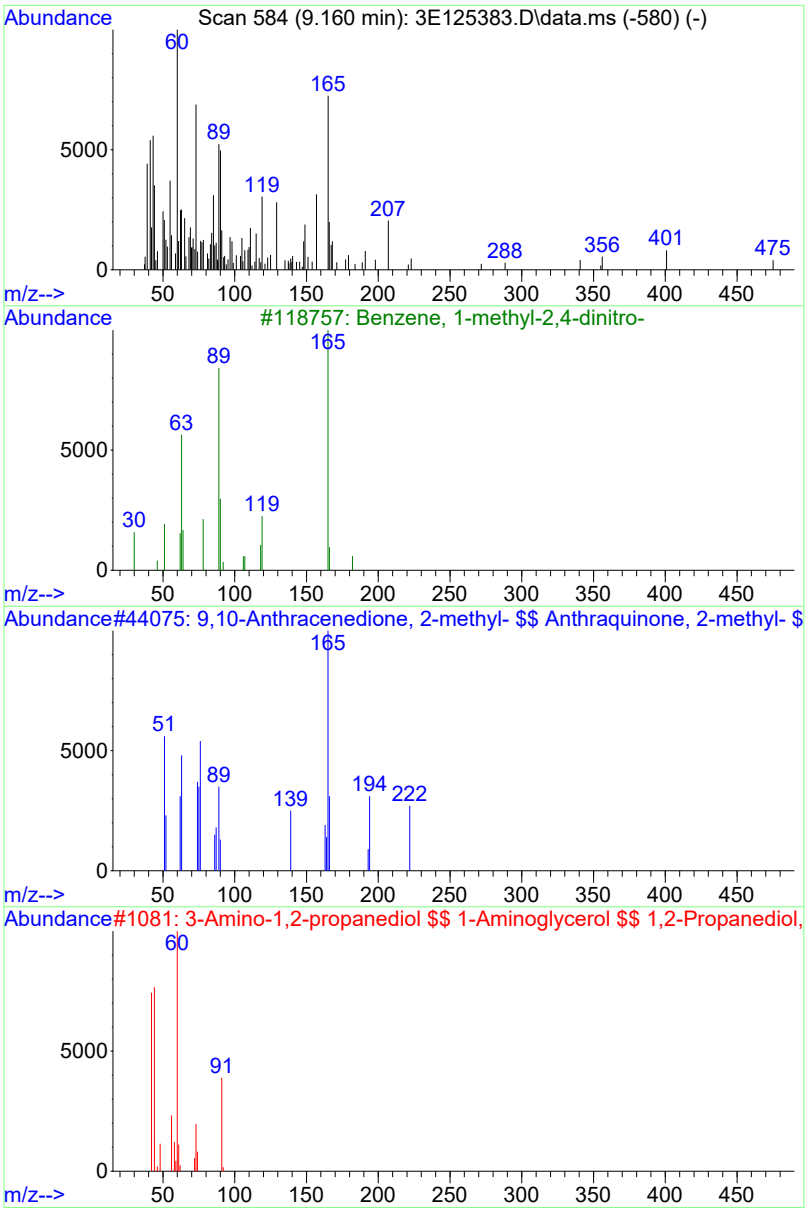
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

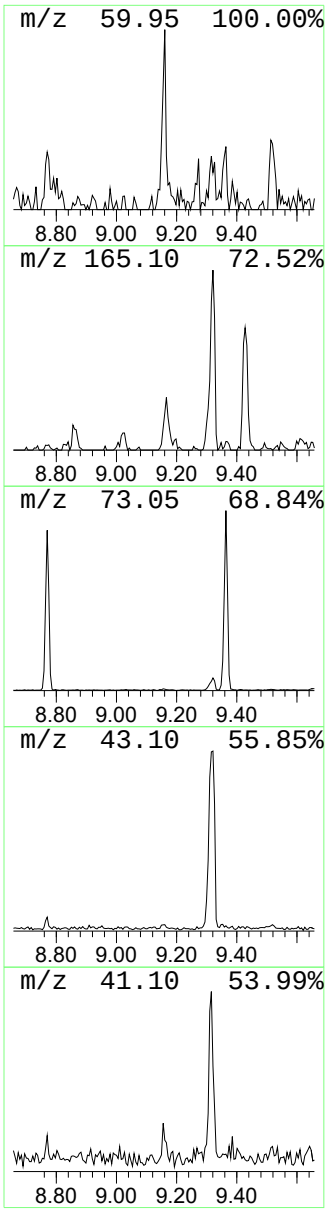
**********

Peak Number 1 Benzene, 1-methyl-2,4-dinitro- Concentration Rank 12

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.160 | 511.37 ppm | 51137 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzene, 1-methyl-2,4-dinitro- | 182 | C7H6N2O4 | 000121-14-2 | 12 |
| 2 | 9,10-Anthracenedione, 2-methyl- ... | 222 | C15H10O2 | 000084-54-8 | 12 |
| 3 | 3-Amino-1,2-propanediol $$ 1-Ami... | 91 | C3H9NO2 | 000616-30-8 | 11 |
| 4 | Carbamic acid, 2,2,3,3-tetrafluo... | 189 | C5H7F4NO2 | 000756-48-9 | 11 |
| 5 | 2-Methylseleno-3-benzo[B]thiophe... | 256 | C10H8OSSe | 039857-07-3 | 11 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

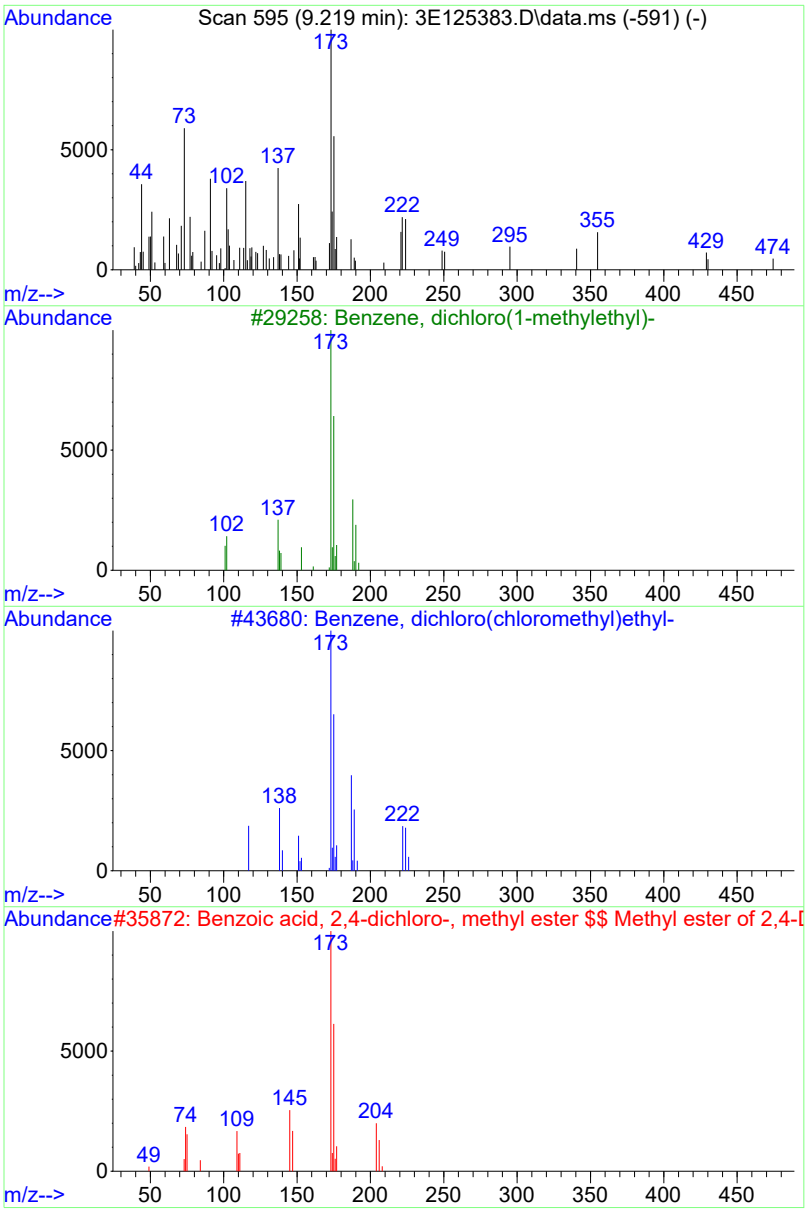
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

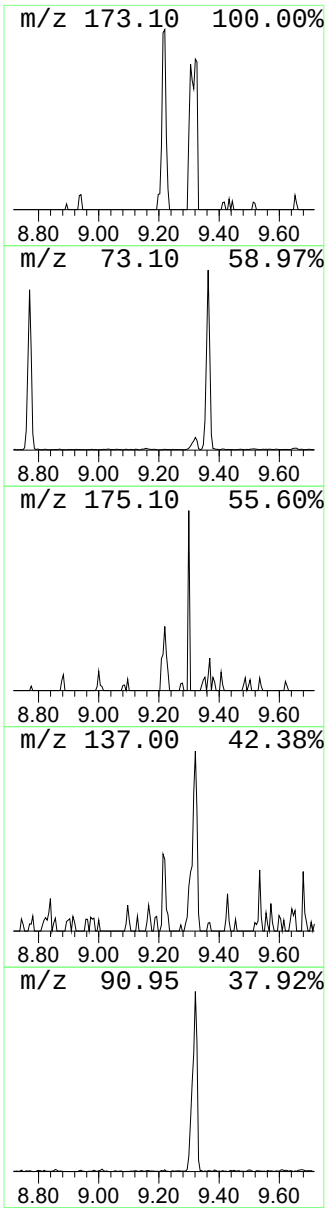
**********

Peak Number 2 Benzene, dichloro(1-methyle... Concentration Rank 25

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.219 | 114.59 ppm | 11459 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzene, dichloro(1-methylethyl)- | 188 | C9H10Cl2 | 051345-56-3 | 40 |
| 2 | Benzene, dichloro(chloromethyl)e... | 222 | C9H9Cl3 | 054965-69-4 | 40 |
| 3 | Benzoic acid, 2,4-dichloro-, met... | 204 | C8H6Cl2O2 | 035112-28-8 | 38 |
| 4 | Benzene, 1-methyl-4-(trichlorome... | 208 | C8H7Cl3 | 003335-35-1 | 38 |
| 5 | Benzoic acid, 3,4-dichloro-, met... | 204 | C8H6Cl2O2 | 002905-68-2 | 38 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

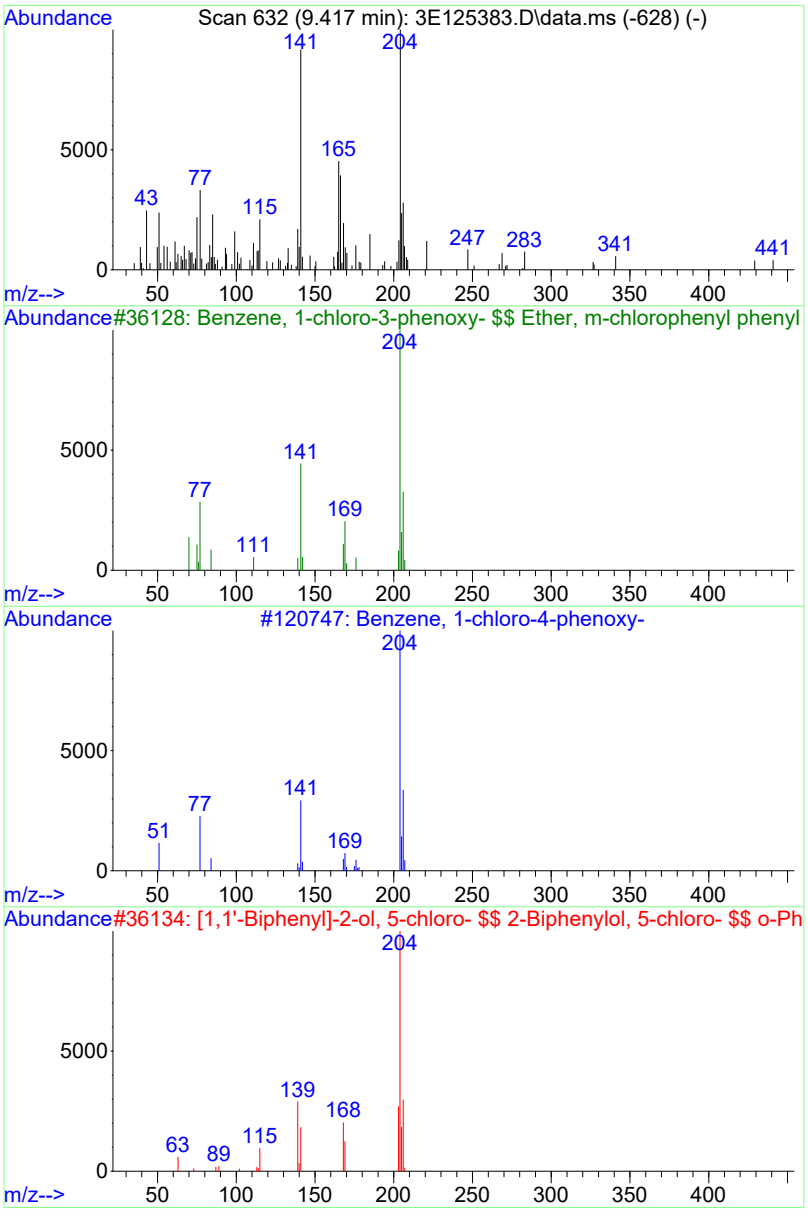
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

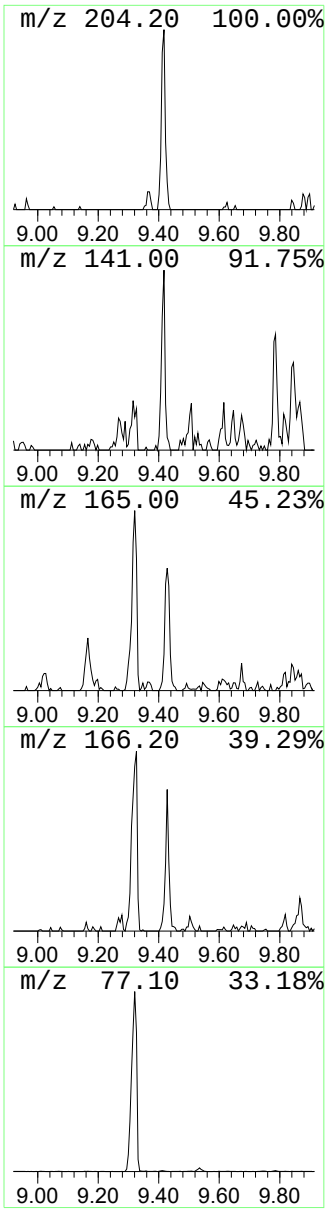
**********

Peak Number 3 Benzene, 1-chloro-3-phenoxy... Concentration Rank 11

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.417 | 612.46 ppm | 61246 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzene, 1-chloro-3-phenoxy- $$ ... | 204 | C12H9ClO | 006452-49-9 | 49 |
| 2 | Benzene, 1-chloro-4-phenoxy- | 204 | C12H9ClO | 007005-72-3 | 47 |
| 3 | [1,1'-Biphenyl]-2-ol, 5-chloro- ... | 204 | C12H9ClO | 000607-12-5 | 35 |
| 4 | [1,1'-Biphenyl]-2-ol, 3-chloro- ... | 204 | C12H9ClO | 000085-97-2 | 27 |
| 5 | [1,1'-Biphenyl]-4-ol, 4'-chloro-... | 204 | C12H9ClO | 028034-99-3 | 25 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

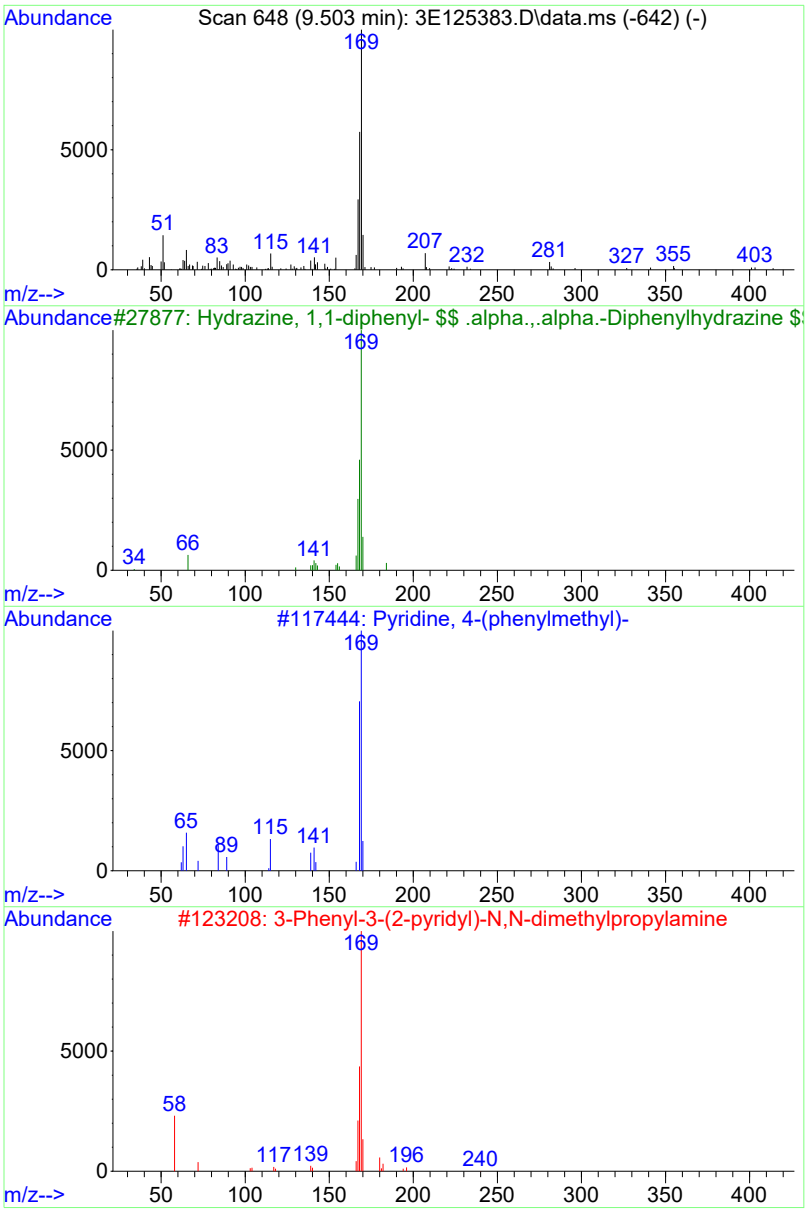
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

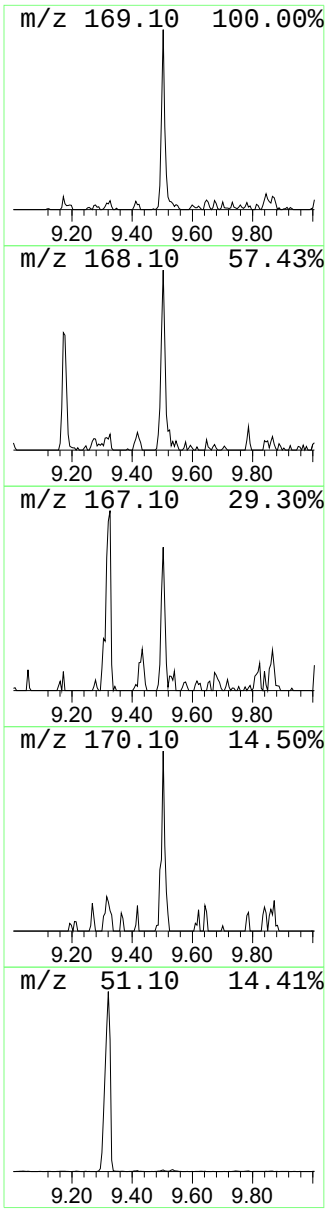
**********

Peak Number 4 Hydrazine, 1,1-diphenyl- $$... Concentration Rank 13

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.503 | 487.91 ppm | 48791 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Hydrazine, 1,1-diphenyl- $$ .alp... | 184 | C12H12N2 | 000530-50-7 | 78 |
| 2 | Pyridine, 4-(phenylmethyl)- | 169 | C12H11N | 002116-65-6 | 76 |
| 3 | 3-Phenyl-3-(2-pyridyl)-N,N-dimet... | 240 | C16H20N2 | 000086-21-5 | 64 |
| 4 | Diphenylamine | 169 | C12H11N | 000122-39-4 | 64 |
| 5 | Diphenylamine $$ Benzenamine, N-... | 169 | C12H11N | 000122-39-4 | 64 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

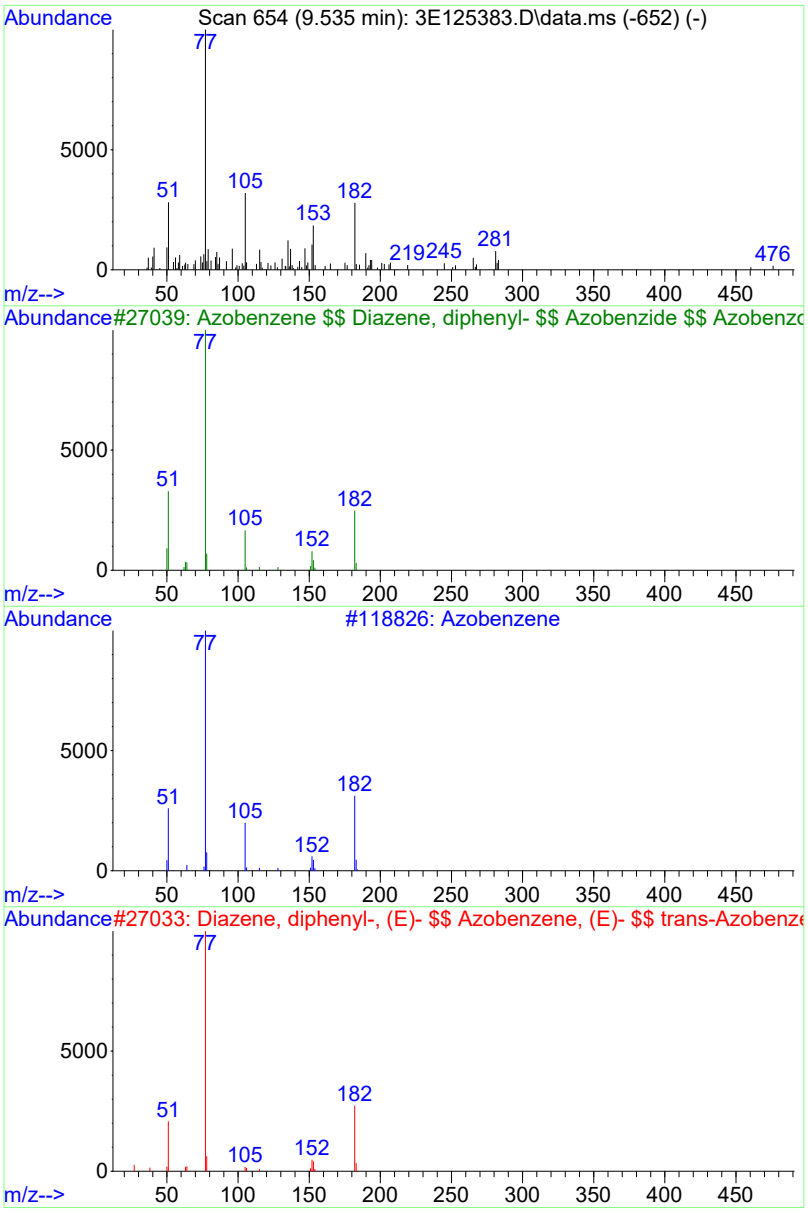
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

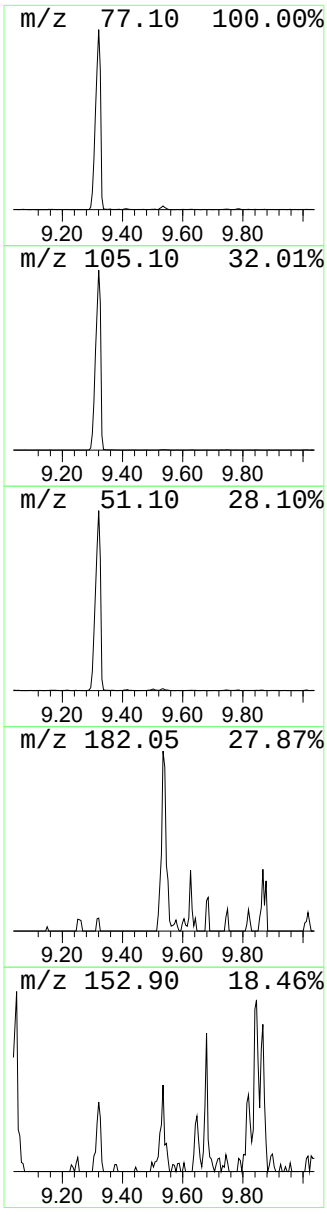
**********

Peak Number 5 Azobenzene $$ Diazene, diph... Concentration Rank 20

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.535 | 262.30 ppm | 26230 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Azobenzene $$ Diazene, diphenyl-... | 182 | C12H10N2 | 000103-33-3 | 64 |
| 2 | Azobenzene | 182 | C12H10N2 | 000103-33-3 | 59 |
| 3 | Diazene, diphenyl-, (E)- $$ Azob... | 182 | C12H10N2 | 017082-12-1 | 42 |
| 4 | Azobenzene | 182 | C12H10N2 | 000103-33-3 | 40 |
| 5 | Benzenecarbothioic acid $$ Benzo... | 138 | C7H6OS | 000098-91-9 | 32 |



Library Search Compound Report

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

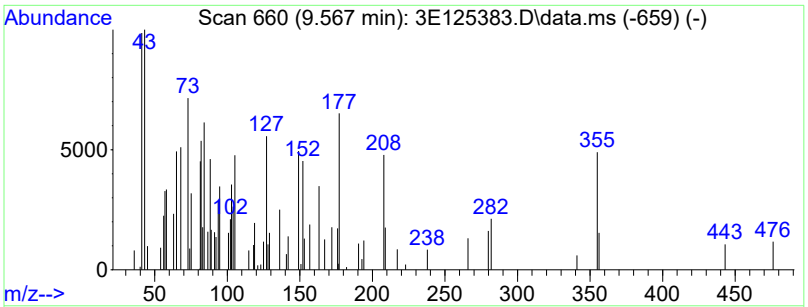
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

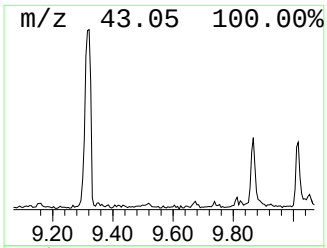
**********

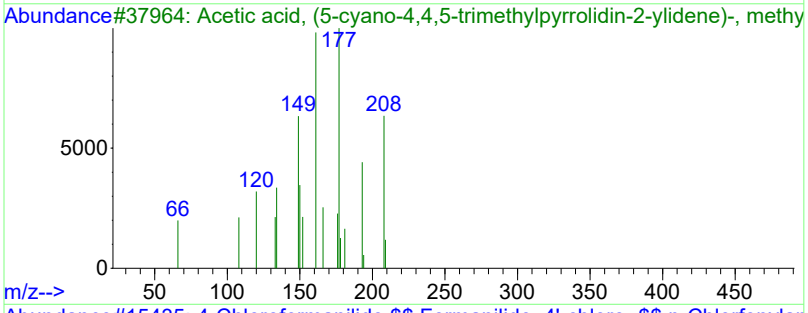
Peak Number 6 Acetic acid, (5-cyano-4,4,5... Concentration Rank 26

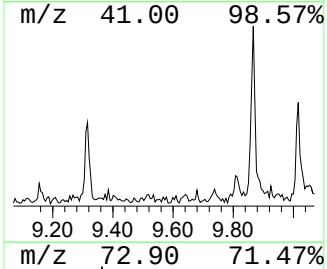
| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.567 | 34.43 ppm | 3443 | External Standard | 0.000 |

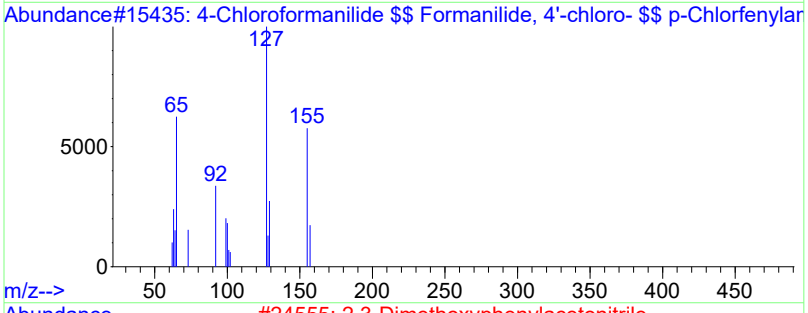
| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Acetic acid, (5-cyano-4,4,5-trim... | 208 | C11H16N2O2 | 098188-21-7 | 9 |
| 2 | 4-Chloroformanilide $$ Formanili... | 155 | C7H6ClNO | 002617-79-0 | 9 |
| 3 | 2,3-Dimethoxyphenylacetonitrile | 177 | C10H11NO2 | 004468-57-9 | 7 |
| 4 | 2-(Methyl(2-hydroxyethyl)amino)b... | 208 | C10H12N2OS | 000000-00-0 | 5 |
| 5 | 1,2-Benzenediol, 4-(2-aminoethyl)- | 153 | C8H11NO2 | 000051-61-6 | 4 |

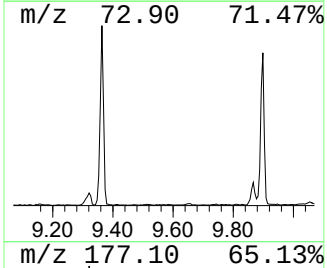


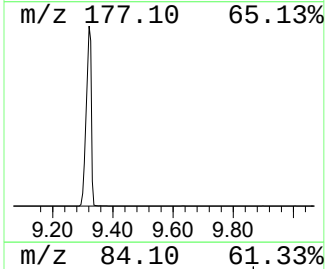



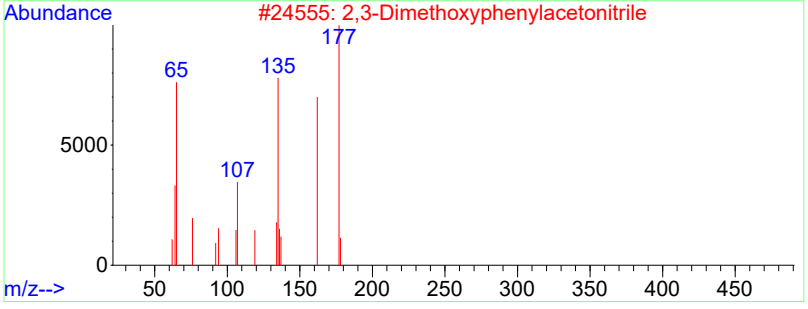



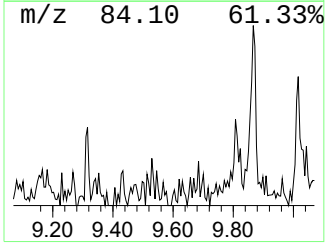



Library Search Compound Report

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Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

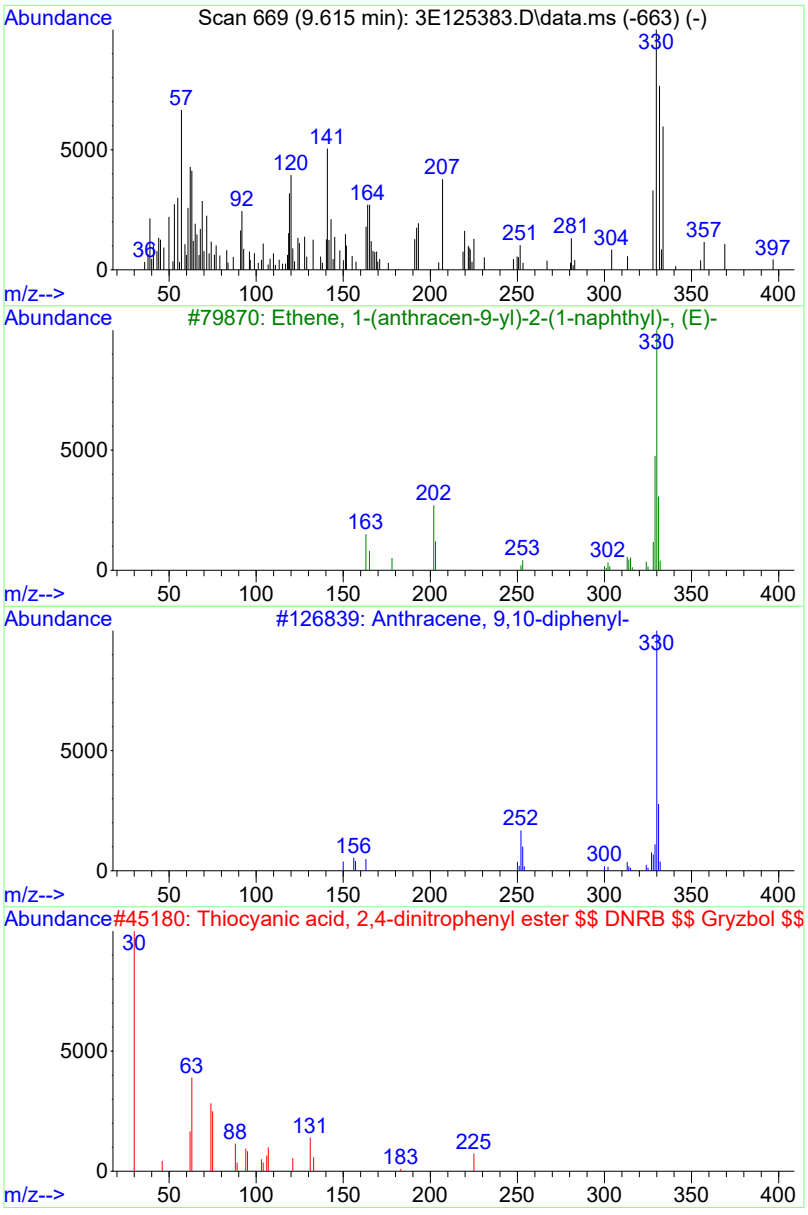
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

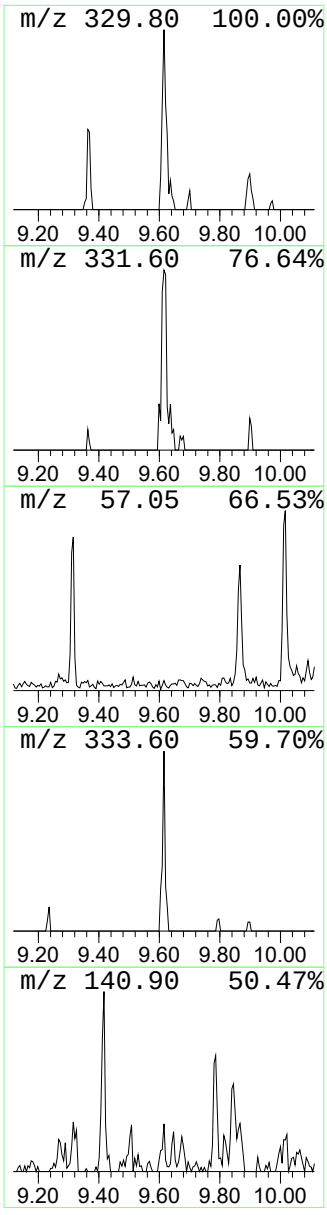
**********

Peak Number 7 Ethene, 1-(anthracen-9-yl)-... Concentration Rank 19

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.615 | 279.64 ppm | 27964 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Ethene, 1-(anthracen-9-yl)-2-(1-... | 330 | C26H18 | 001654-48-4 | 9 |
| 2 | Anthracene, 9,10-diphenyl- | 330 | C26H18 | 001499-10-1 | 9 |
| 3 | Thiocyanic acid, 2,4-dinitrophen... | 225 | C7H3N3O4S | 001594-56-5 | 9 |
| 4 | Androstan-16-one, 3,17-bis(acety... | 390 | C23H34O5 | 077880-39-8 | 9 |
| 5 | Phenol, 2,6-dinitro-4-(trifluoro... | 252 | C7H3F3N2O5 | 000393-77-1 | 9 |



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ALS Vial : 94 Sample Multiplier: 1

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Quant Title : 8270C Calibration

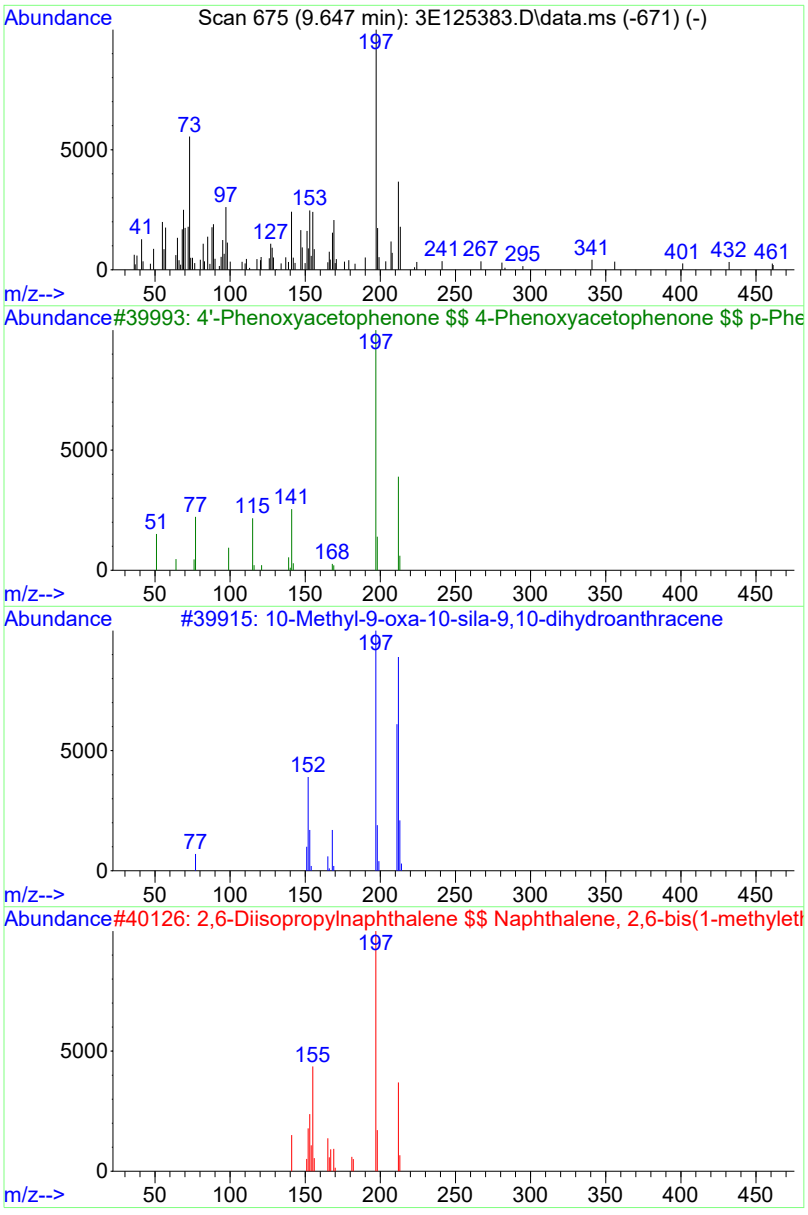
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

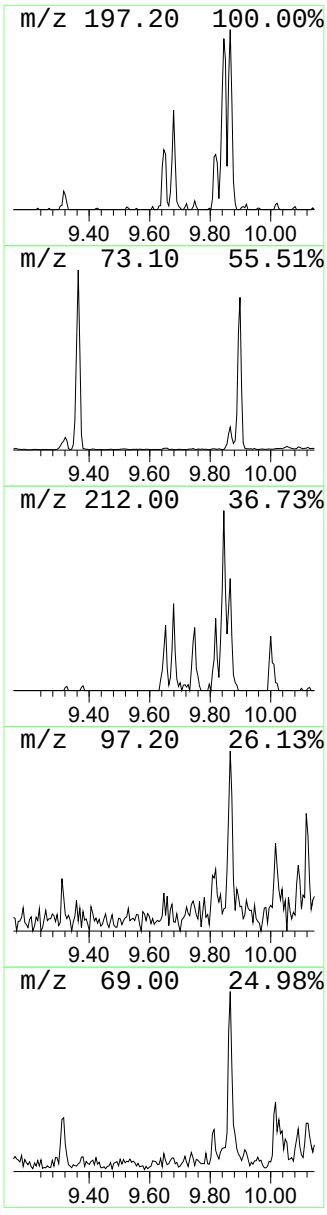
**********

Peak Number 8 4'-Phenoxyacetophenone $$ 4... Concentration Rank 21

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.647 | 215.25 ppm | 21525 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 4'-Phenoxyacetophenone $$ 4-Phen... | 212 | C14H12O2 | 005031-78-7 | 49 |
| 2 | 10-Methyl-9-oxa-10-sila-9,10-dih... | 212 | C13H12OSi | 074637-38-0 | 43 |
| 3 | 2,6-Diisopropylnaphthalene $$ Na... | 212 | C16H20 | 024157-81-1 | 40 |
| 4 | Phenol, 4-(1-methyl-1-phenylethy... | 212 | C15H16O | 000599-64-4 | 38 |
| 5 | Naphthalene, dibutyl- | 240 | C18H24 | 038641-19-9 | 37 |



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Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

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Quant Title : 8270C Calibration

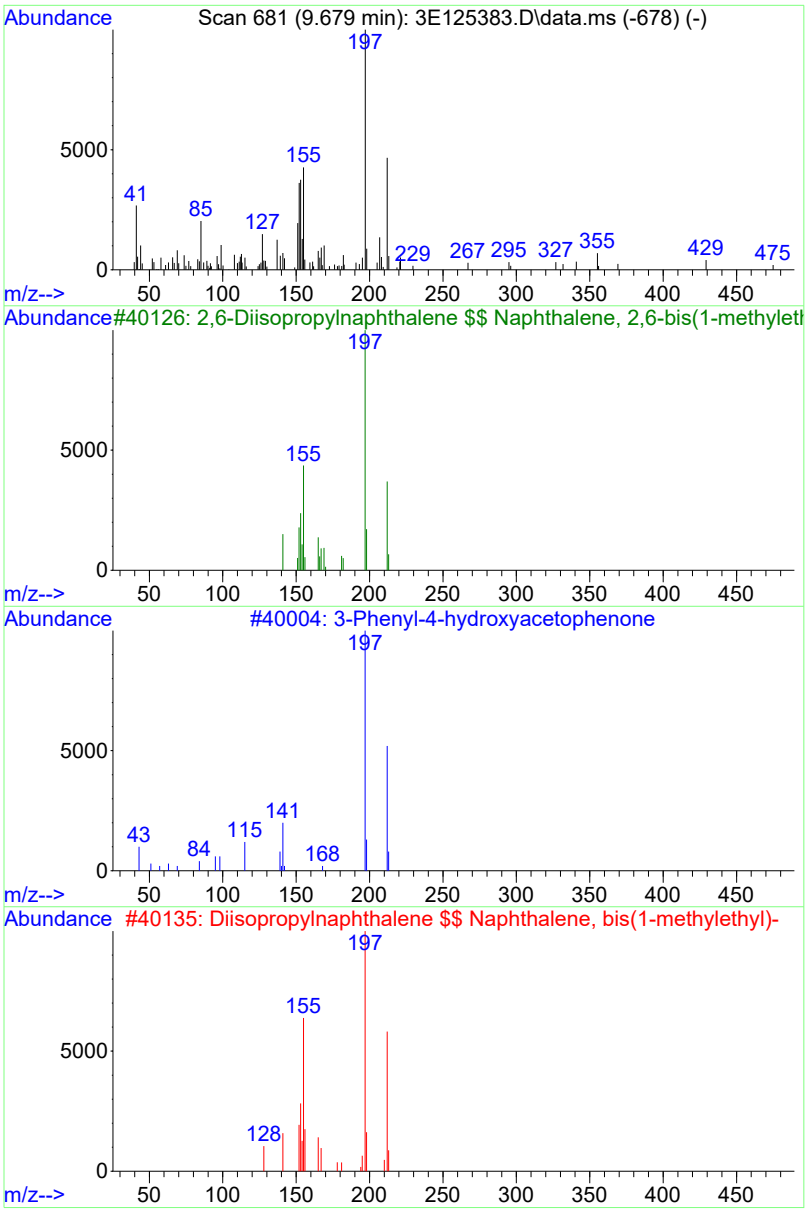
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

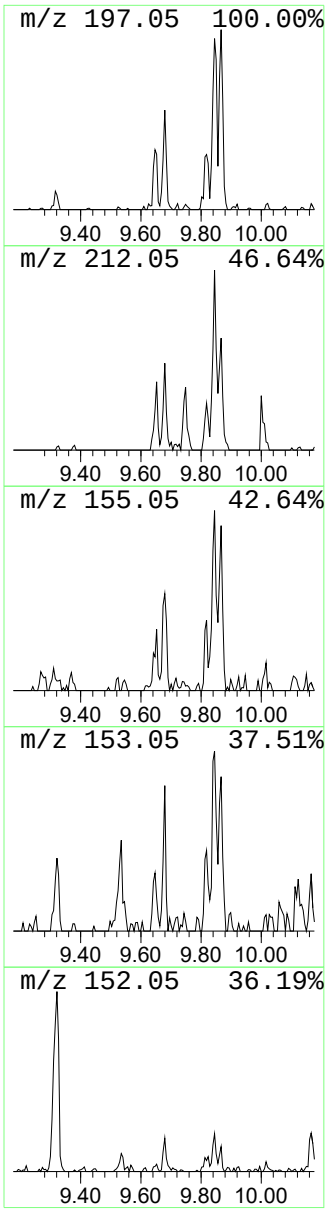
**********

Peak Number 9 2,6-Diisopropylnaphthalene ... Concentration Rank 23

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.679 | 205.71 ppm | 20571 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2,6-Diisopropylnaphthalene $$ Na... | 212 | C16H20 | 024157-81-1 | 59 |
| 2 | 3-Phenyl-4-hydroxyacetophenone | 212 | C14H12O2 | 021424-82-8 | 38 |
| 3 | Diisopropylnaphthalene $$ Naphth... | 212 | C16H20 | 038640-62-9 | 37 |
| 4 | Borane, dipropyl[2-(2-pyridyl)py... | 240 | C15H21BN2 | 028916-20-3 | 35 |
| 5 | Phenol, 4-(1-methyl-1-phenylethy... | 212 | C15H16O | 000599-64-4 | 32 |



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Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

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Quant Title : 8270C Calibration

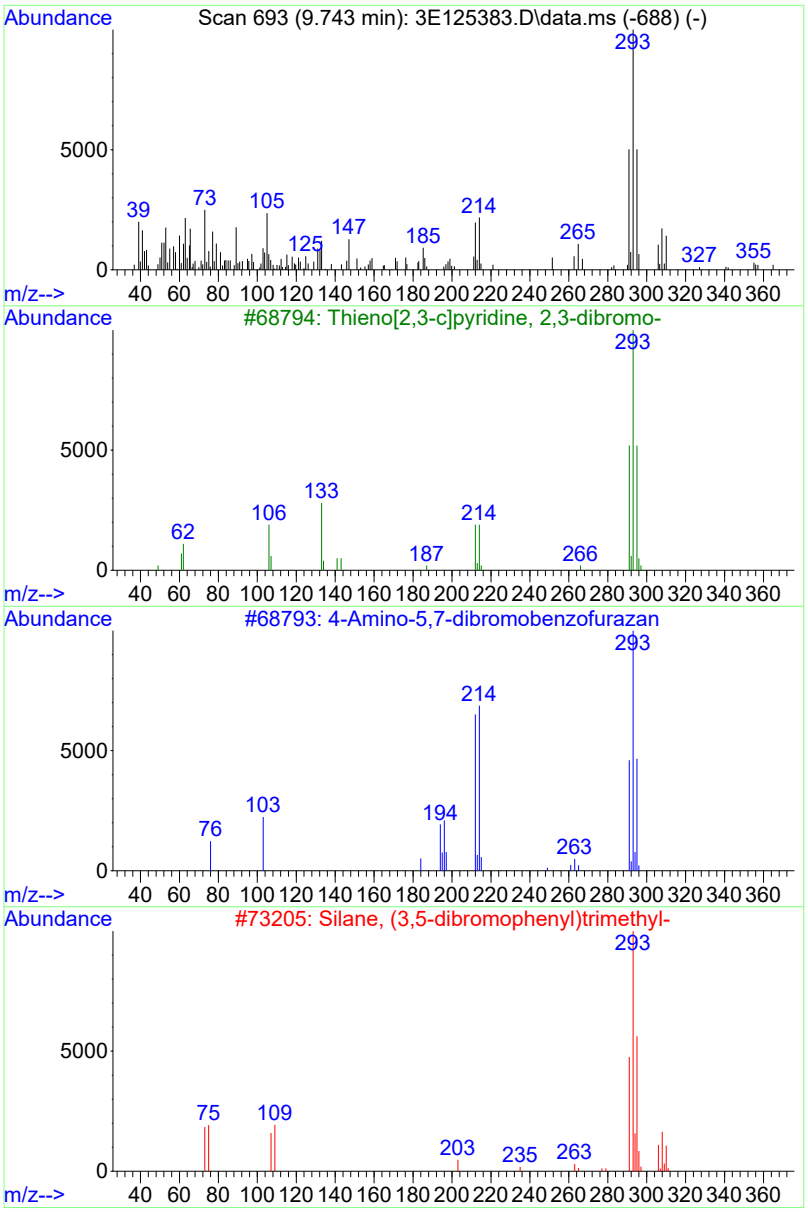
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

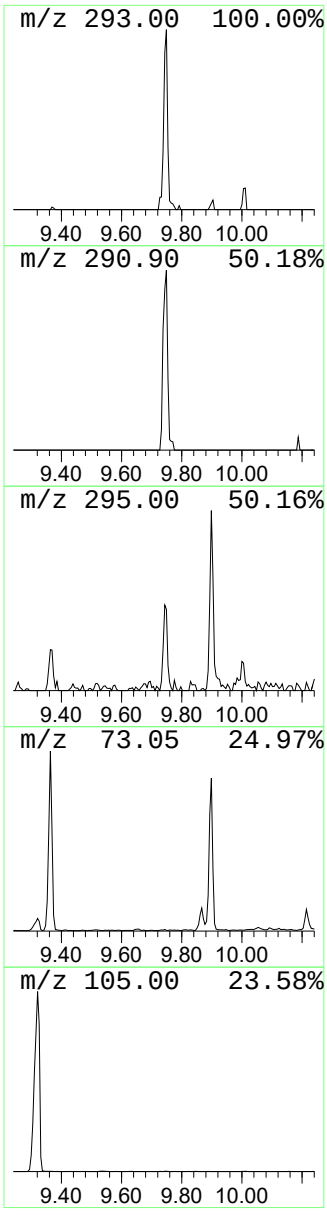
**********

Peak Number 10 Thieno[2,3-c]pyridine, 2,3-... Concentration Rank 14

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.743 | 484.48 ppm | 48448 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Thieno[2,3-c]pyridine, 2,3-dibromo- | 291 | C7H3Br2NS | 028783-19-9 | 91 |
| 2 | 4-Amino-5,7-dibromobenzofurazan | 291 | C6H3Br2N3O | 000000-00-0 | 70 |
| 3 | Silane, (3,5-dibromophenyl)trime... | 306 | C9H12Br2Si | 017878-23-8 | 64 |
| 4 | Thieno[3,2-c]pyridine, 2,3-dibromo- | 291 | C7H3Br2NS | 028783-20-2 | 49 |
| 5 | 3-Chloro-8-[1,1-dimethylethyl]-1... | 308 | C19H17ClN2 | 000000-00-0 | 23 |



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ALS Vial : 94 Sample Multiplier: 1

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Quant Title : 8270C Calibration

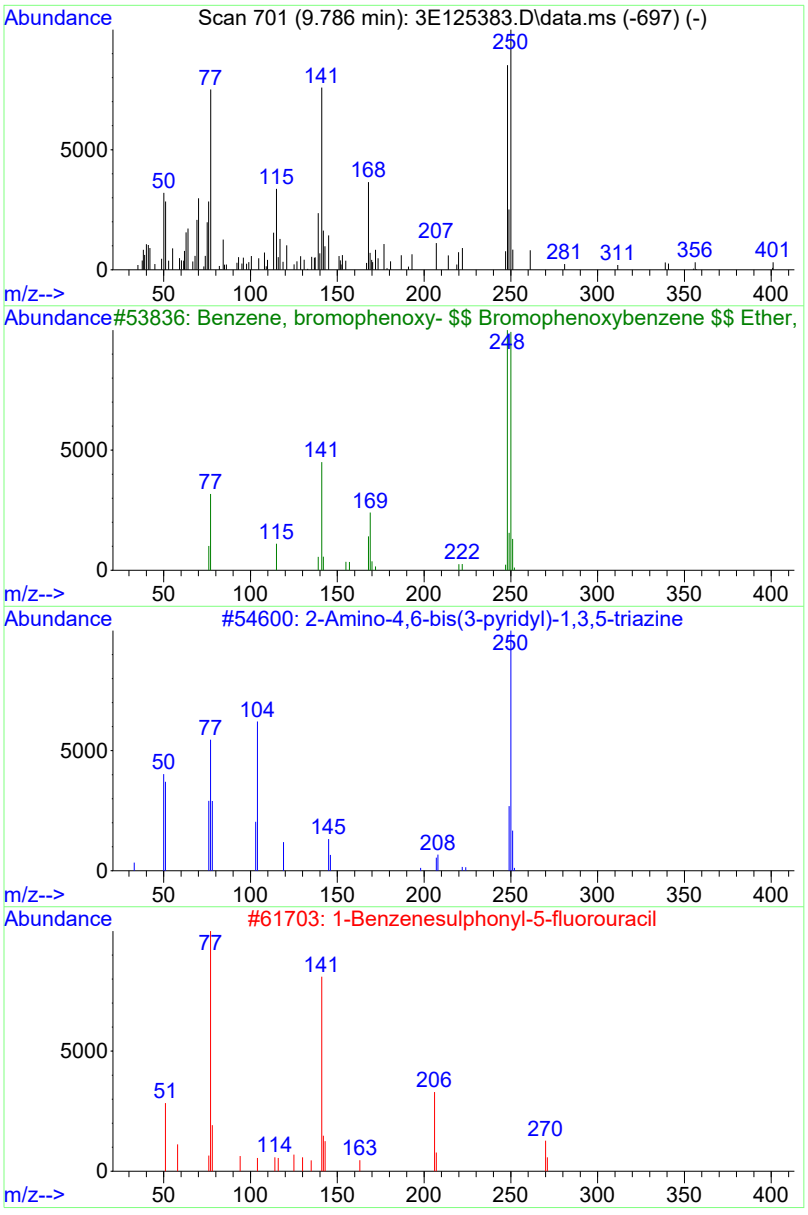
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

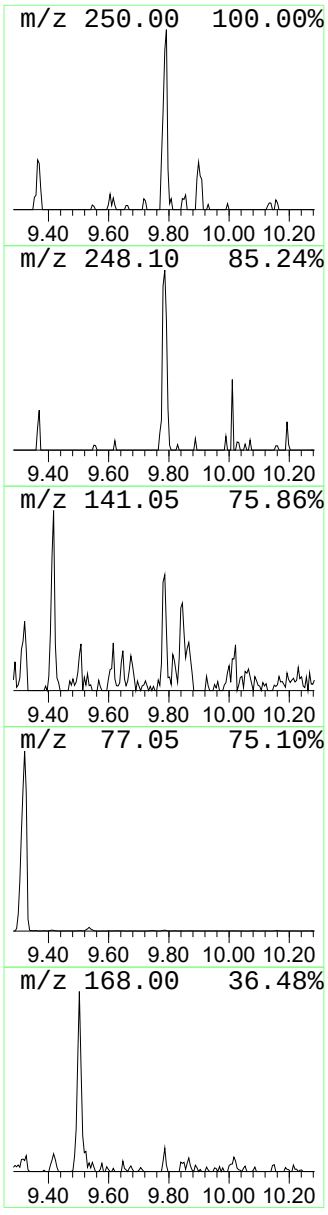
**********

Peak Number 11 Benzene, bromophenoxy- $$ B... Concentration Rank 22

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.786 | 209.48 ppm | 20948 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Benzene, bromophenoxy- $$ Bromop... | 248 | C12H9BrO | 036563-47-0 | 40 |
| 2 | 2-Amino-4,6-bis(3-pyridyl)-1,3,5... | 250 | C13H10N6 | 000000-00-0 | 30 |
| 3 | 1-Benzenesulphonyl-5-fluorouracil | 270 | C10H7FN2O4S | 054390-99-7 | 27 |
| 4 | Benzene, pentachloro- | 248 | C6HCl5 | 000608-93-5 | 27 |
| 5 | Benzene, pentachloro- | 248 | C6HCl5 | 000608-93-5 | 27 |



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Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

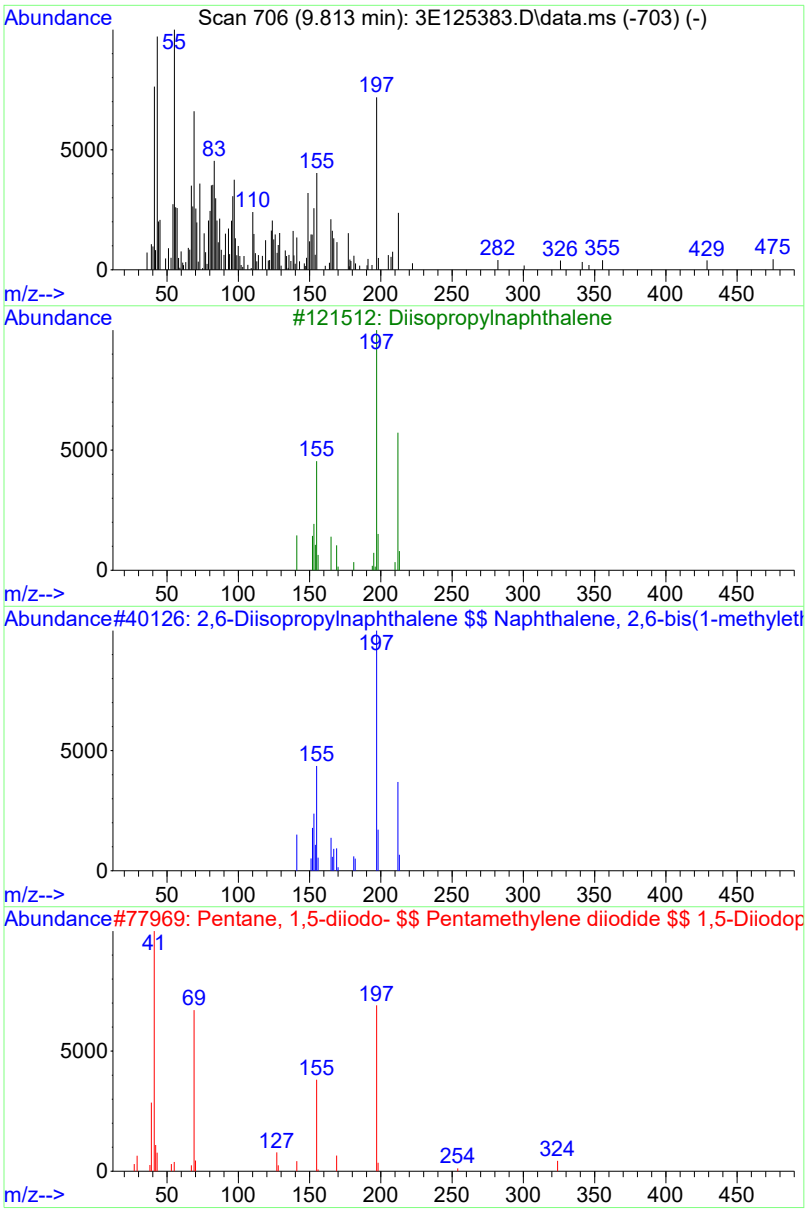
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

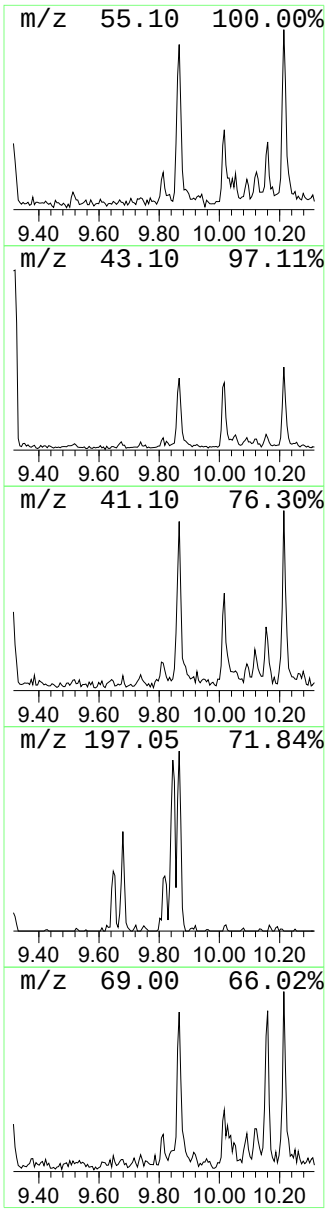
**********

Peak Number 12 Diisopropylnaphthalene Concentration Rank 15

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.813 | 437.60 ppm | 43760 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Diisopropylnaphthalene | 212 | C16H20 | 038640-62-9 | 43 |
| 2 | 2,6-Diisopropylnaphthalene $$ Na... | 212 | C16H20 | 024157-81-1 | 35 |
| 3 | Pentane, 1,5-diiodo- $$ Pentamet... | 324 | C5H10I2 | 000628-77-3 | 22 |
| 4 | Undecanenitrile | 167 | C11H21N | 002244-07-7 | 11 |
| 5 | 1,3-Benzoxazin-2-one, trans-octa... | 155 | C8H13NO2 | 000000-00-0 | 10 |



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Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

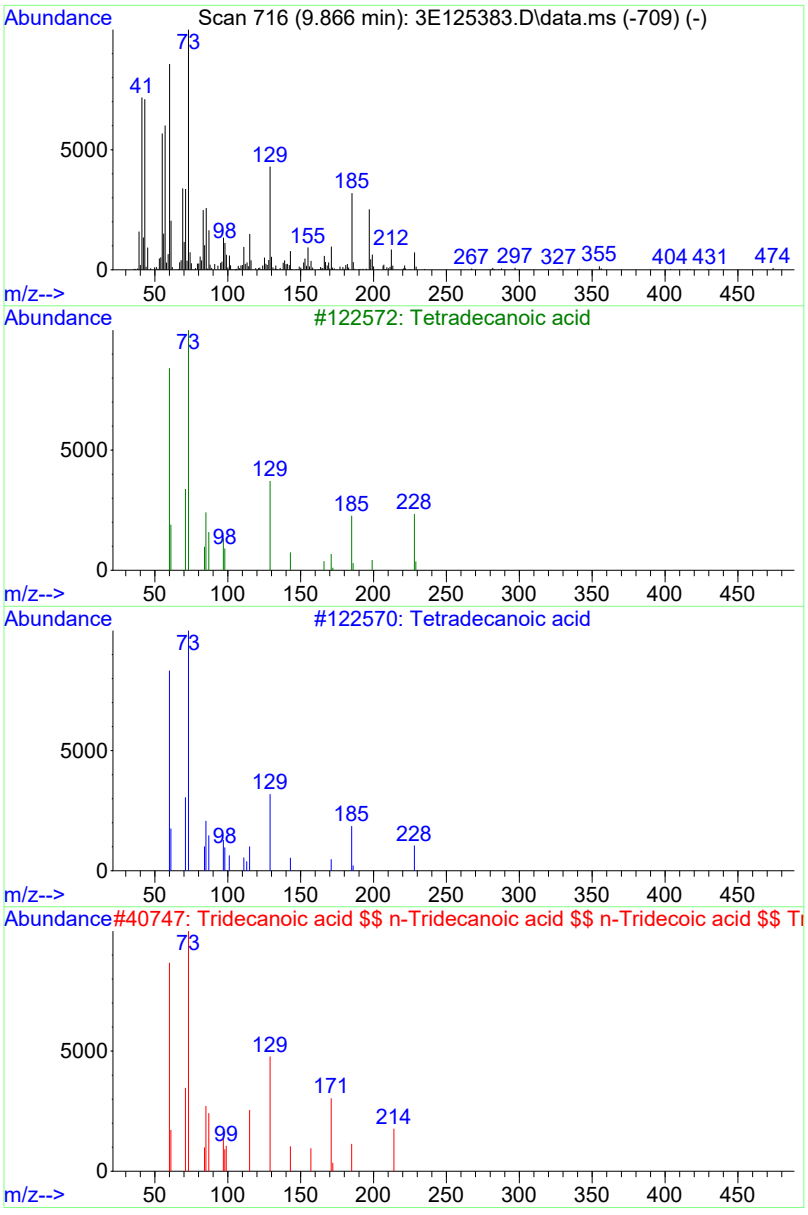
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

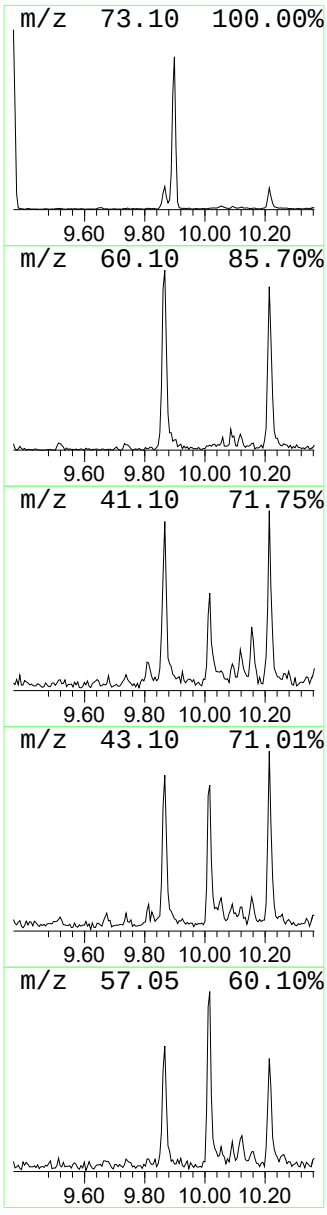
**********

Peak Number 13 Tetradecanoic acid Concentration Rank 6

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.866 | 3518.67 ppm | 351867 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Tetradecanoic acid | 228 | C14H28O2 | 000544-63-8 | 83 |
| 2 | Tetradecanoic acid | 228 | C14H28O2 | 000544-63-8 | 60 |
| 3 | Tridecanoic acid $$ n-Tridecanoi... | 214 | C13H26O2 | 000638-53-9 | 59 |
| 4 | Tetradecanoic acid $$ Myristic a... | 228 | C14H28O2 | 000544-63-8 | 58 |
| 5 | Dodecanoic acid $$ n-Dodecanoic ... | 200 | C12H24O2 | 000143-07-7 | 58 |



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Operator : (b) (6)
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Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

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Quant Title : 8270C Calibration

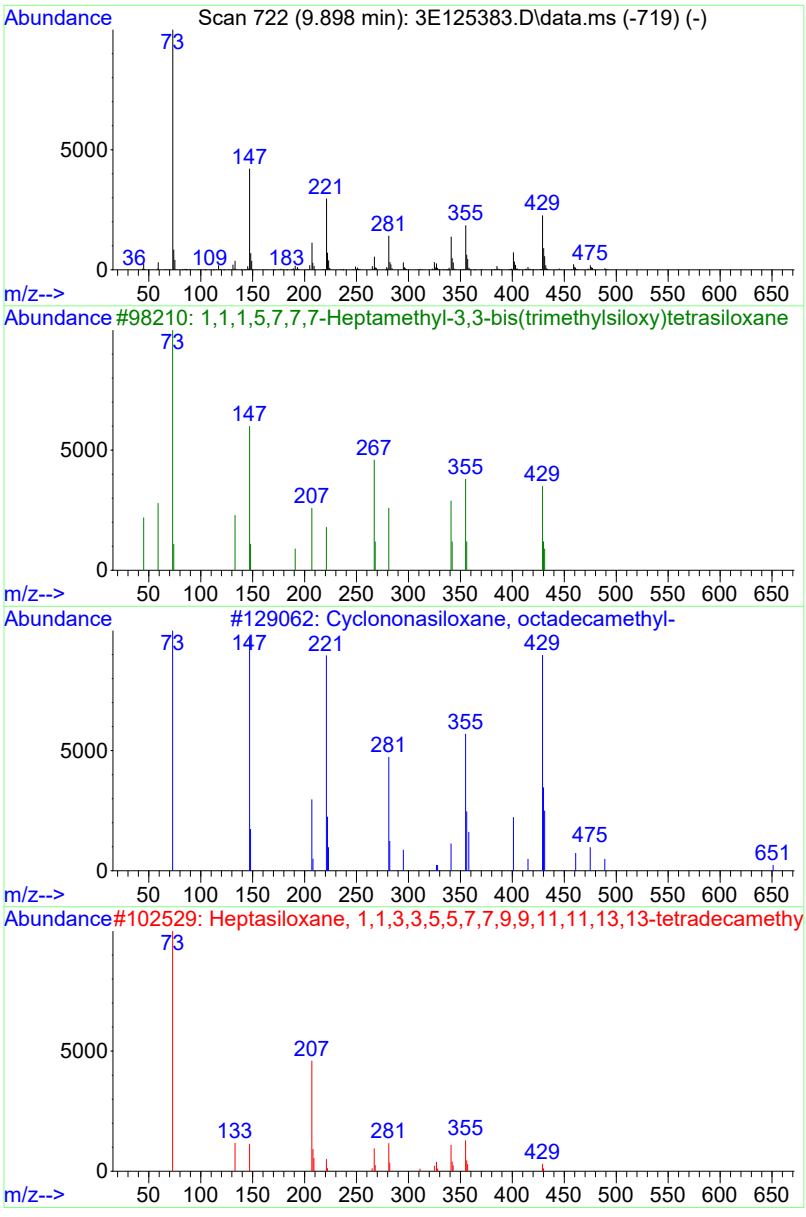
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

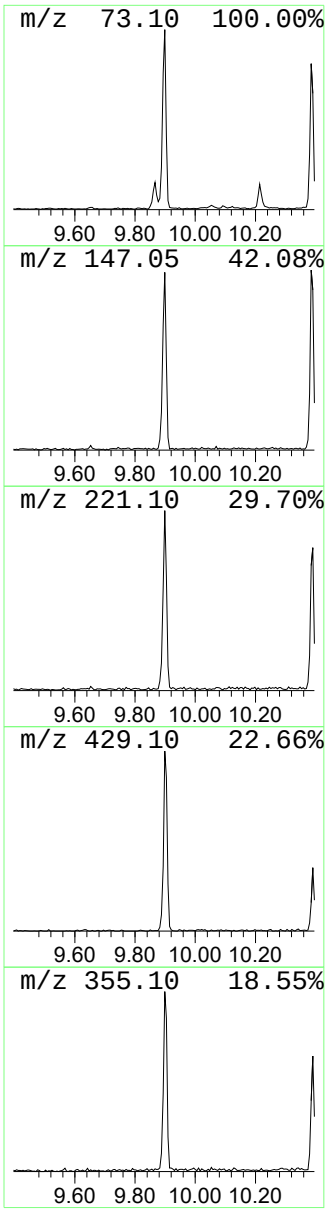
**********

Peak Number 14 1,1,1,5,7,7,7-Heptamethyl-3... Concentration Rank 1

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 9.898 | 7546.91 ppm | 754691 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1,1,1,5,7,7,7-Heptamethyl-3,3-bi... | 444 | C13H40O5Si6 | 038147-00-1 | 64 |
| 2 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 47 |
| 3 | Heptasiloxane, 1,1,3,3,5,5,7,7,9... | 504 | C14H44O6Si7 | 019095-23-9 | 12 |
| 4 | Morphinan, 7,8-didehydro-4,5-epo... | 429 | C23H35NO3Si2 | 055449-66-6 | 9 |
| 5 | Cyclohexasiloxane, dodecamethyl-... | 444 | C12H36O6Si6 | 000540-97-6 | 9 |



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Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

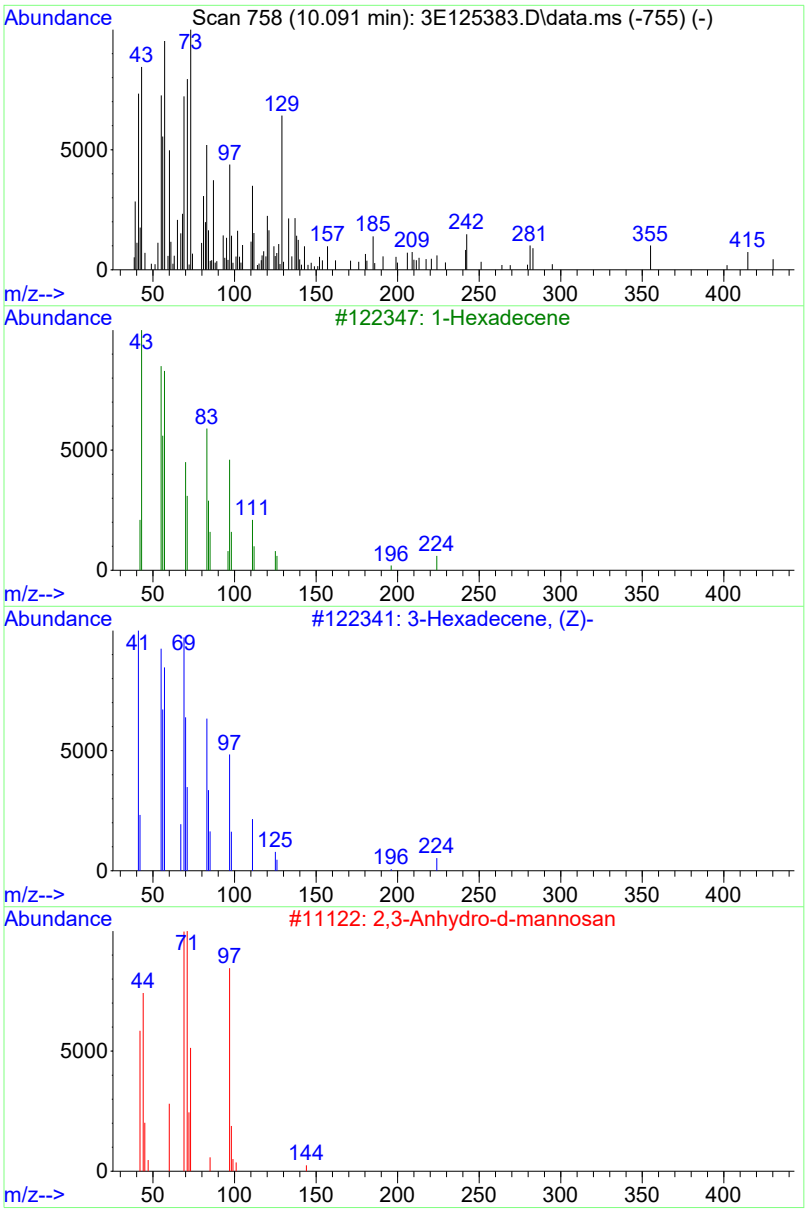
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

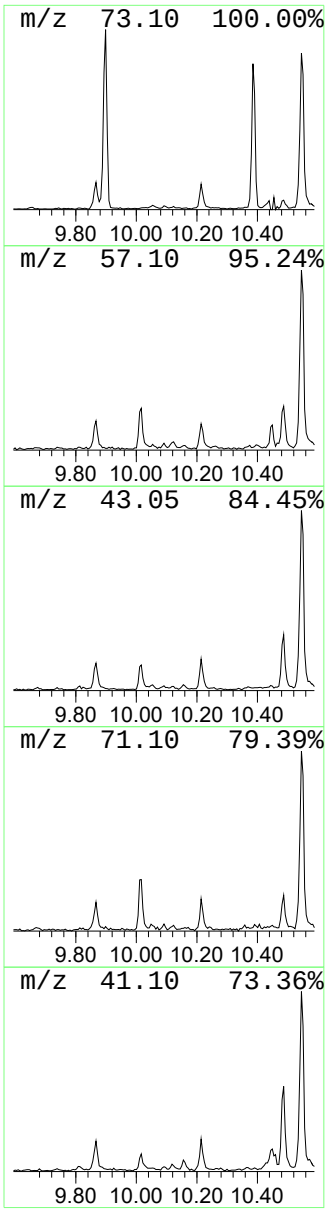
**********

Peak Number 15 1-Hexadecene Concentration Rank 18

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.091 | 280.60 ppm | 28060 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1-Hexadecene | 224 | C16H32 | 000629-73-2 | 42 |
| 2 | 3-Hexadecene, (Z)- | 224 | C16H32 | 034303-81-6 | 41 |
| 3 | 2,3-Anhydro-d-mannosan | 144 | C6H8O4 | 000000-00-0 | 35 |
| 4 | Tetradecanoic acid, 12-methyl-, ... | 242 | C15H30O2 | 005746-58-7 | 35 |
| 5 | 1-Pentadecene $$ Pentadecene,1- ... | 210 | C15H30 | 013360-61-7 | 25 |



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Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

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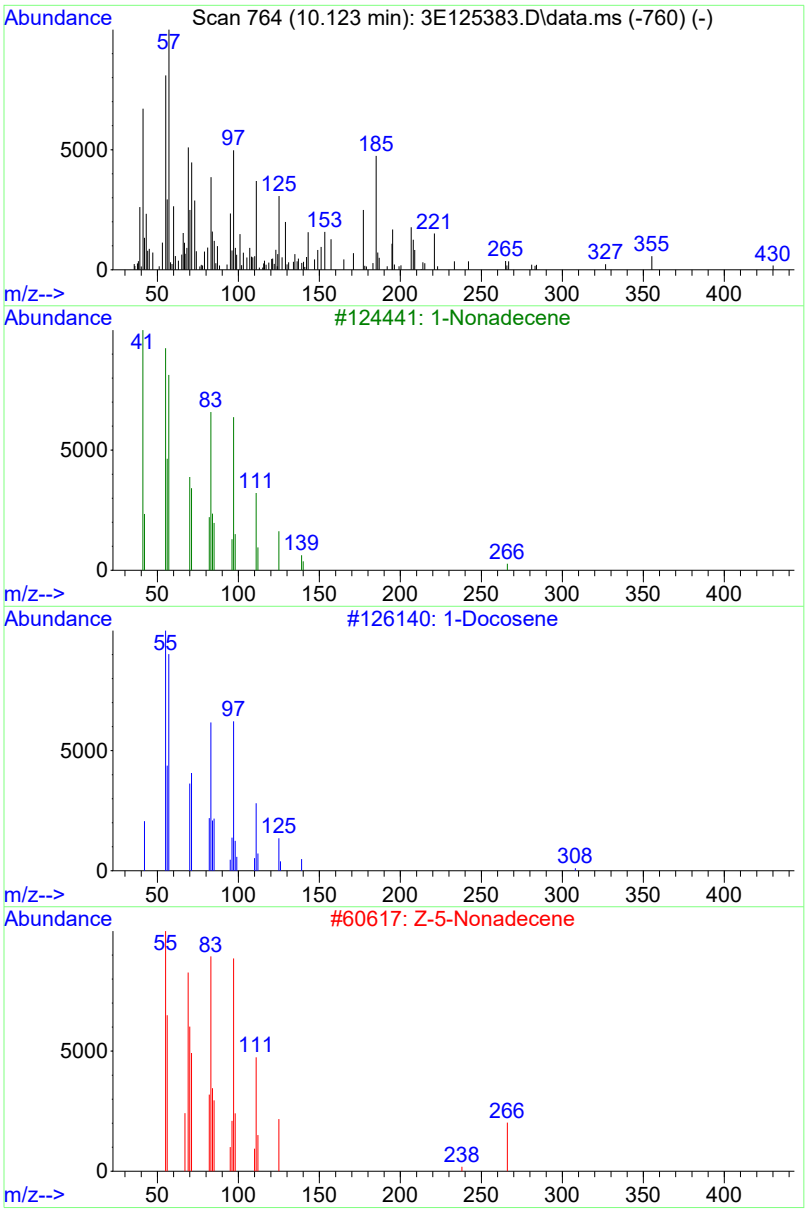
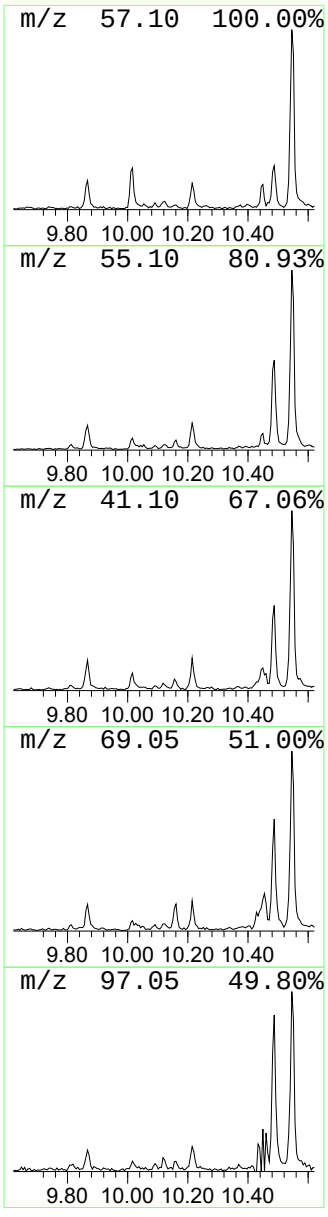
Peak Number 16 1-Nonadecene Concentration Rank 16

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.123 | 400.62 ppm | 40062 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1-Nonadecene | 266 | C19H38 | 018435-45-5 | 35 |
| 2 | 1-Docosene | 308 | C22H44 | 001599-67-3 | 30 |
| 3 | Z-5-Nonadecene | 266 | C19H38 | 000000-00-0 | 27 |
| 4 | Cyclohexane, 1,2,4,5-tetraethyl-... | 196 | C14H28 | 061142-24-3 | 27 |
| 5 | 9-Nonadecene | 266 | C19H38 | 031035-07-1 | 25 |



Library Search Compound Report

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Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

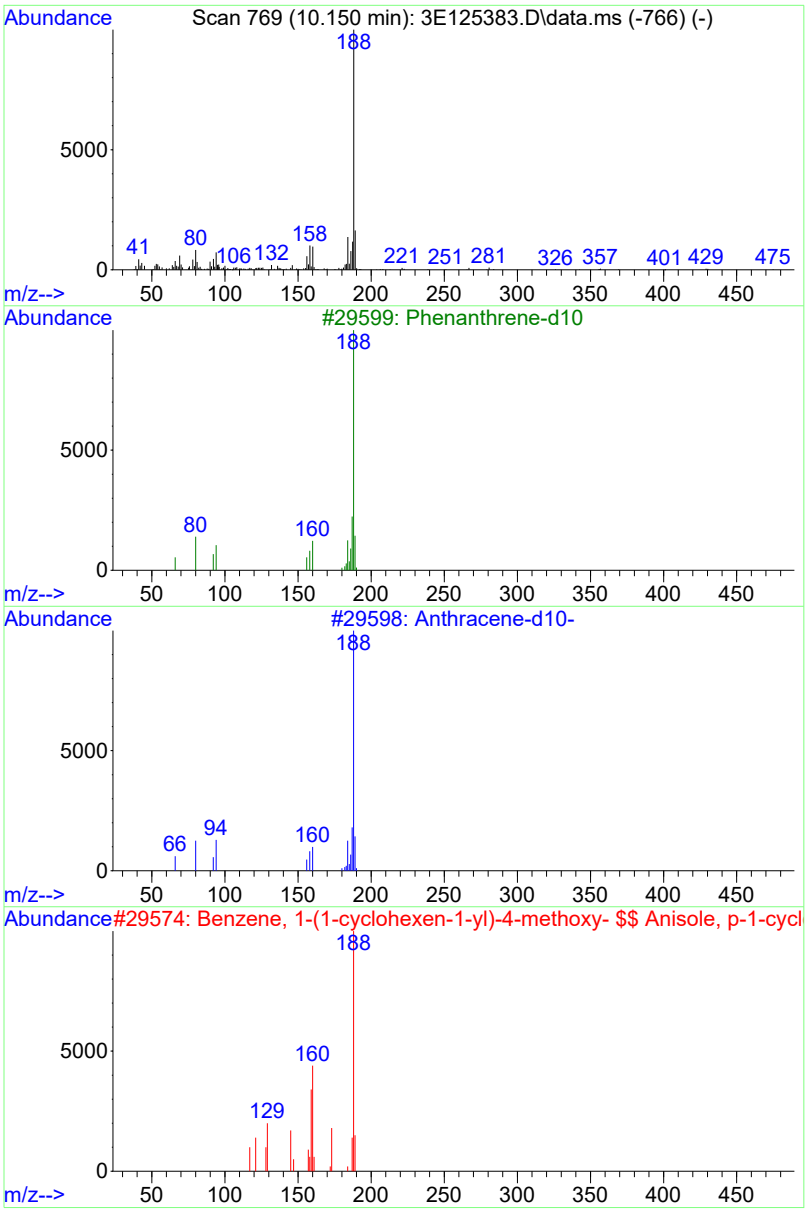
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

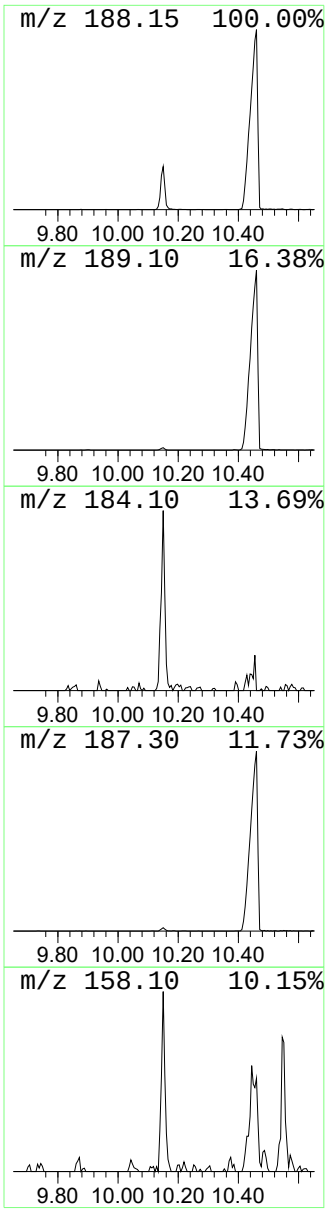
**********

Peak Number 17 Phenanthrene-d10 Concentration Rank 7

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.150 | 2282.01 ppm | 228201 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Phenanthrene-d10 | 188 | C14D10 | 001517-22-2 | 93 |
| 2 | Anthracene-d10- | 188 | C14D10 | 001719-06-8 | 72 |
| 3 | Benzene, 1-(1-cyclohexen-1-yl)-4... | 188 | C13H16O | 020758-60-5 | 59 |
| 4 | Selenide, ethyl 1-methyl-1-pente... | 188 | C8H12Se | 025128-48-7 | 59 |
| 5 | 4-Fluoro-6-methyl-2-phenylpyrimi... | 188 | C11H9FN2 | 051421-92-2 | 42 |



Library Search Compound Report

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Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

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Quant Title : 8270C Calibration

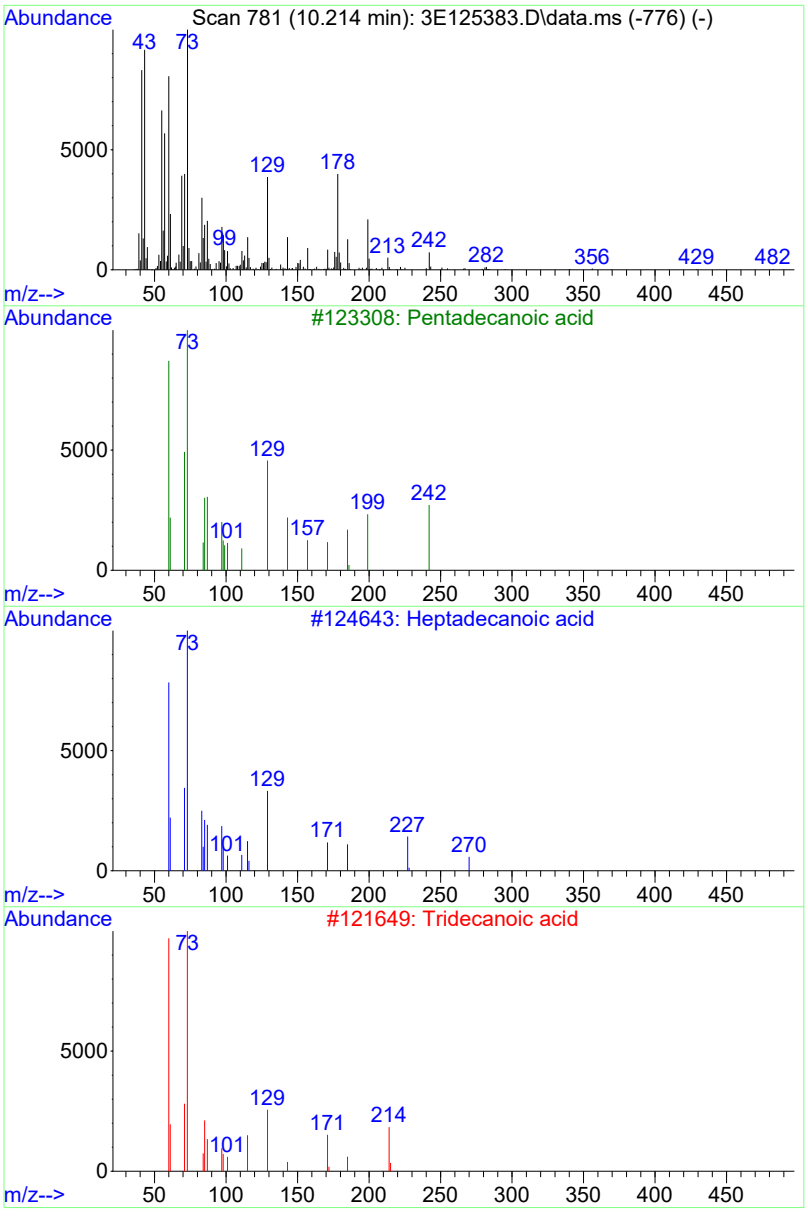
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

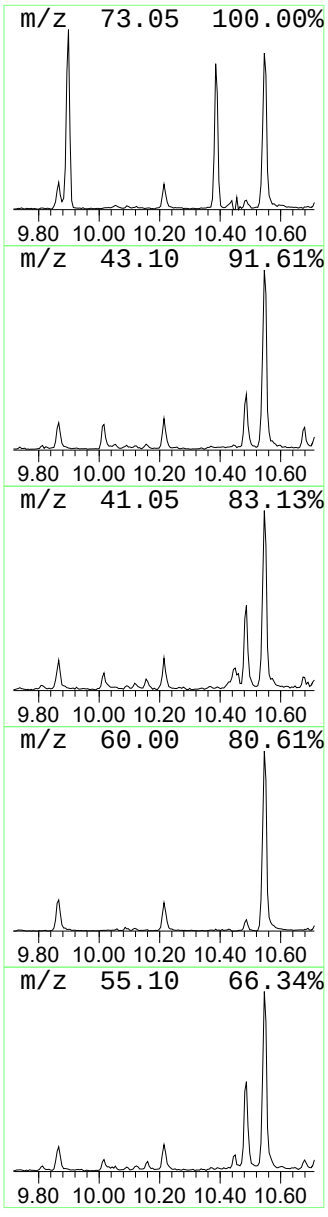
**********

Peak Number 18 Pentadecanoic acid Concentration Rank 5

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.214 | 3570.62 ppm | 357062 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Pentadecanoic acid | 242 | C15H30O2 | 001002-84-2 | 98 |
| 2 | Heptadecanoic acid | 270 | C17H34O2 | 000506-12-7 | 76 |
| 3 | Tridecanoic acid | 214 | C13H26O2 | 000638-53-9 | 68 |
| 4 | Tetradecanoic acid $$ Myristic a... | 228 | C14H28O2 | 000544-63-8 | 64 |
| 5 | Dodecanoic acid $$ n-Dodecanoic ... | 200 | C12H24O2 | 000143-07-7 | 62 |



Library Search Compound Report

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Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

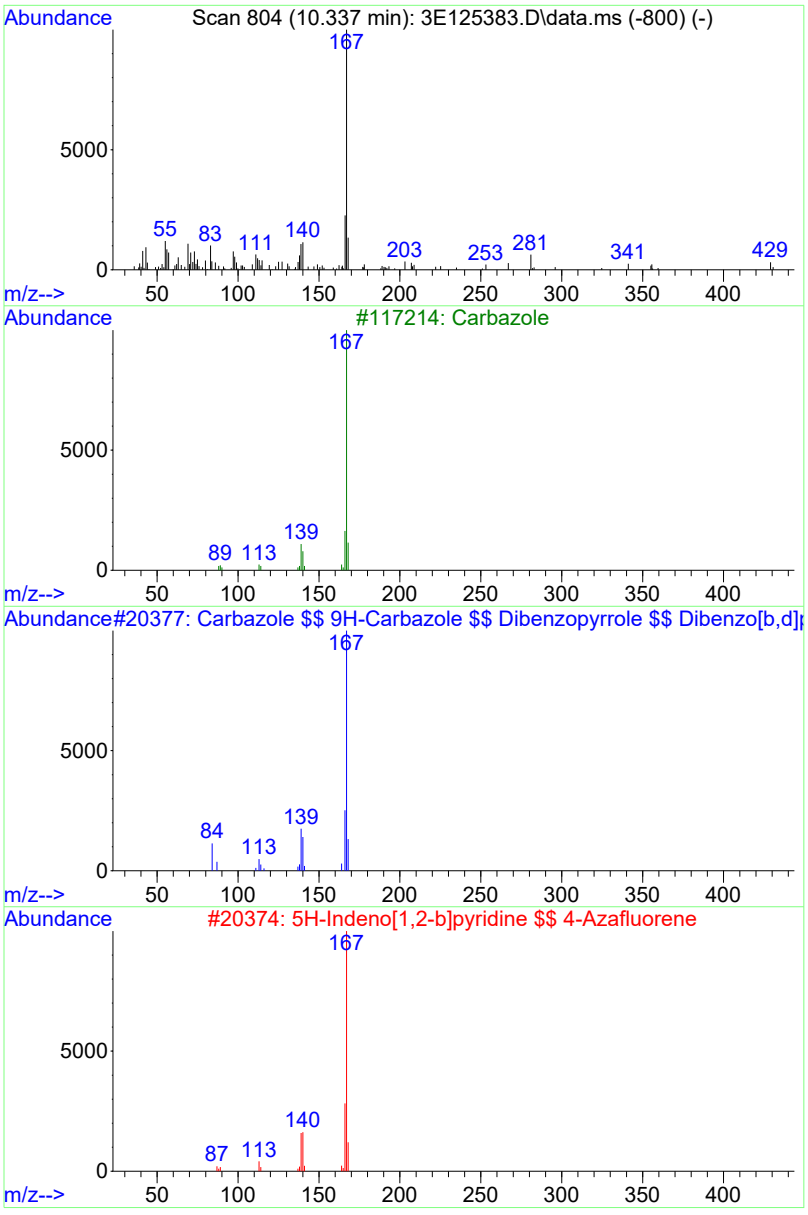
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

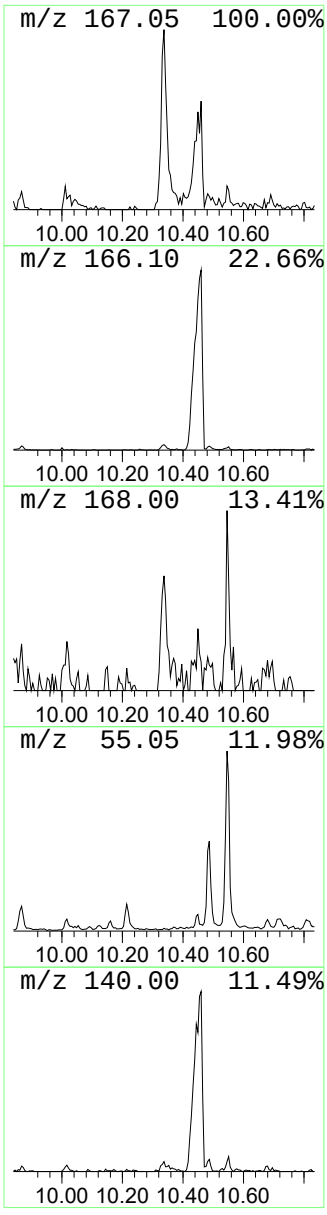
**********

Peak Number 19 Carbazole Concentration Rank 17

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.337 | 391.52 ppm | 39152 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Carbazole | 167 | C12H9N | 000086-74-8 | 87 |
| 2 | Carbazole $$ 9H-Carbazole $$ Dib... | 167 | C12H9N | 000086-74-8 | 86 |
| 3 | 5H-Indeno[1,2-b]pyridine $$ 4-Az... | 167 | C12H9N | 000244-99-5 | 86 |
| 4 | Carbazole | 167 | C12H9N | 000086-74-8 | 86 |
| 5 | 9H-Carbazole, 9-nitroso- | 196 | C12H8N2O | 002788-23-0 | 86 |



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Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

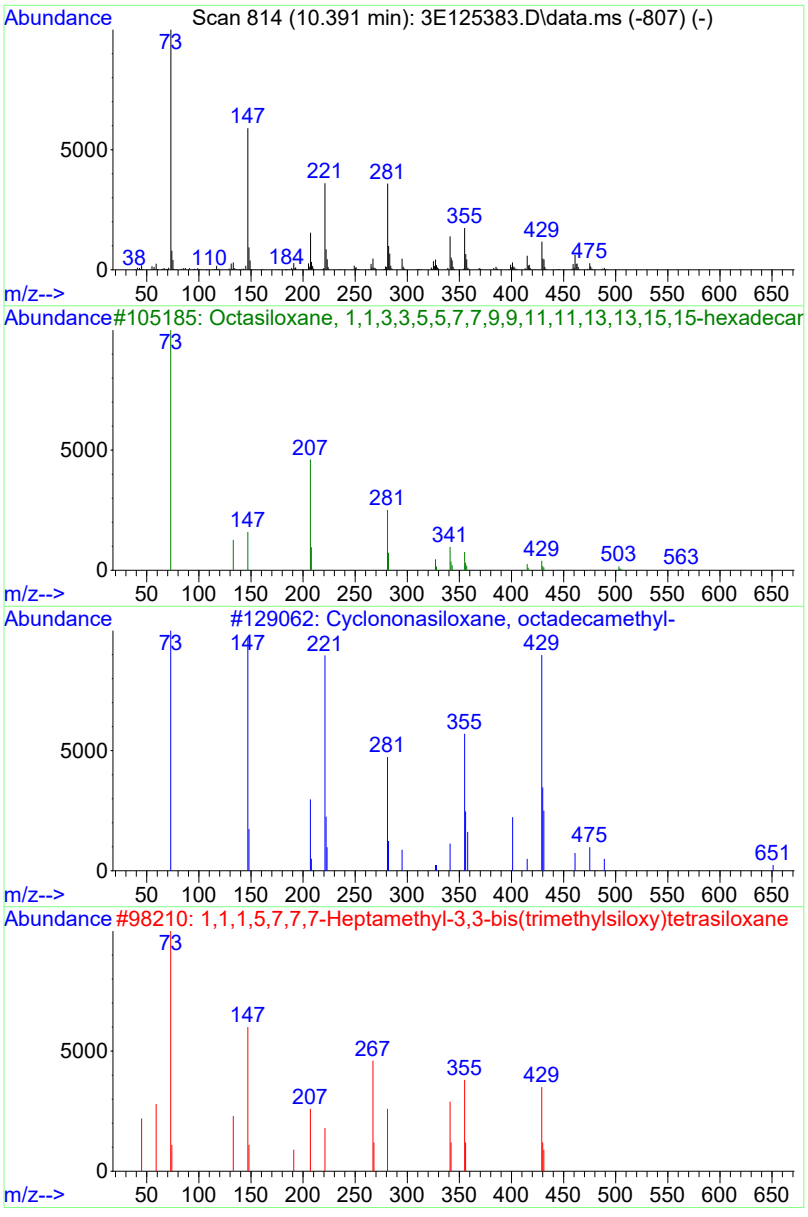
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

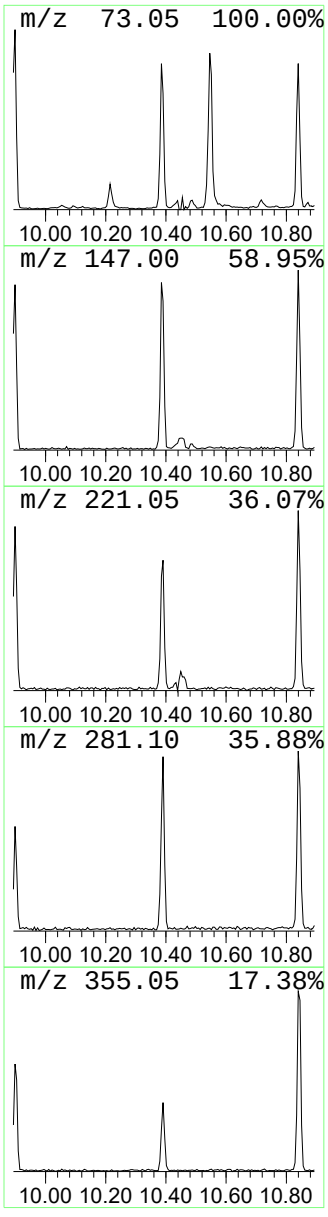
**********

Peak Number 20 Octasiloxane, 1,1,3,3,5,5,7... Concentration Rank 3

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.391 | 5898.62 ppm | 589862 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Octasiloxane, 1,1,3,3,5,5,7,7,9,... | 578 | C16H50O7Si8 | 019095-24-0 | 64 |
| 2 | Cyclononasiloxane, octadecamethyl- | 666 | C18H54O9Si9 | 000556-71-8 | 58 |
| 3 | 1,1,1,5,7,7,7-Heptamethyl-3,3-bi... | 444 | C13H40O5Si6 | 038147-00-1 | 53 |
| 4 | Hexasiloxane, 1,1,3,3,5,5,7,7,9,... | 430 | C12H38O5Si6 | 000995-82-4 | 32 |
| 5 | Heptasiloxane, 1,1,3,3,5,5,7,7,9... | 504 | C14H44O6Si7 | 019095-23-9 | 27 |



Library Search Compound Report

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Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

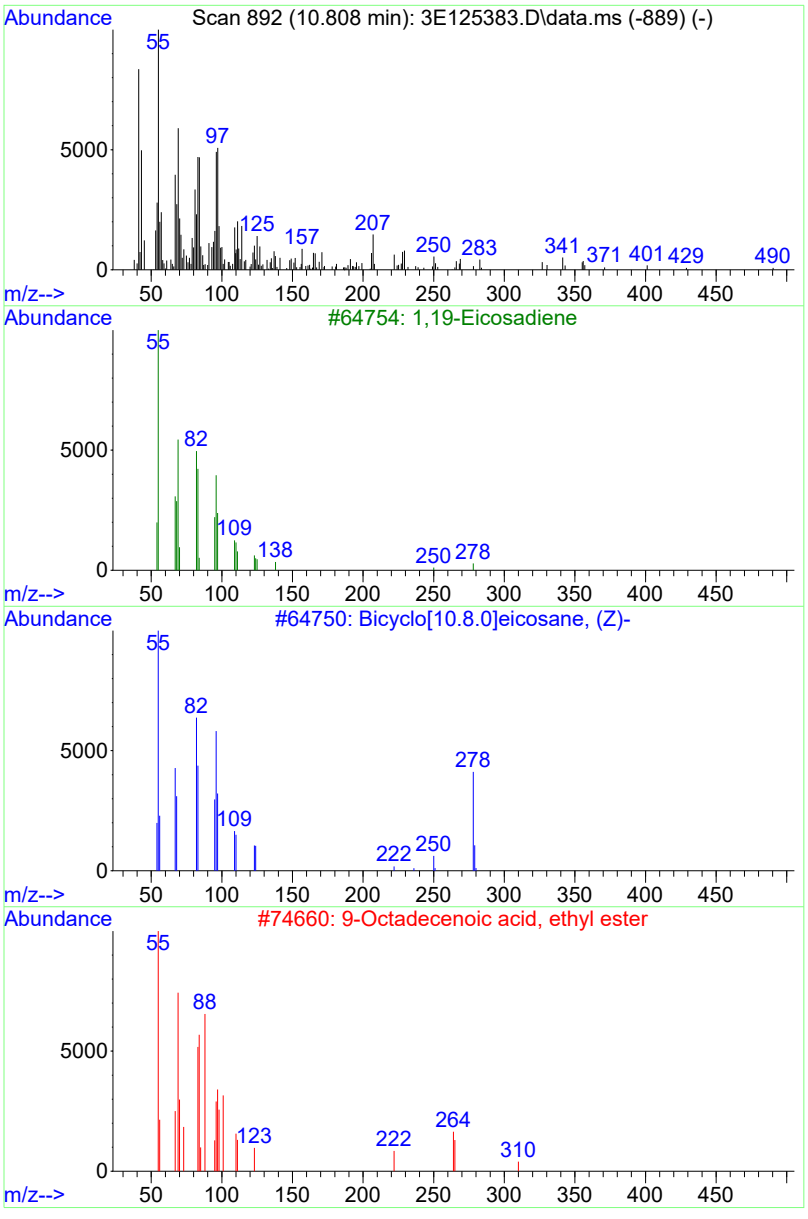
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

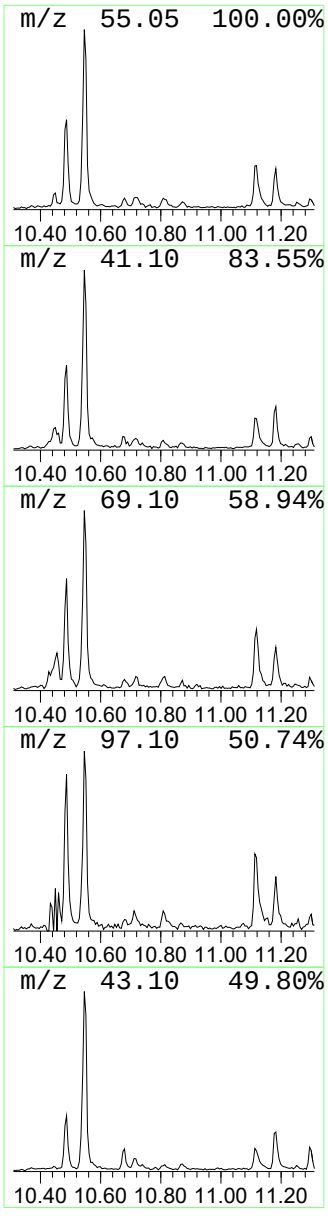
**********

Peak Number 21 1,19-Eicosadiene Concentration Rank 9

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.808 | 832.33 ppm | 83233 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 1,19-Eicosadiene | 278 | C20H38 | 014811-95-1 | 49 |
| 2 | Bicyclo[10.8.0]eicosane, (Z)- | 278 | C20H38 | 000000-00-0 | 46 |
| 3 | 9-Octadecenoic acid, ethyl ester | 310 | C20H38O2 | 006512-99-8 | 46 |
| 4 | 1,1'-Bicyclohexyl, 4-methyl-4'-p... | 222 | C16H30 | 092343-70-9 | 46 |
| 5 | 9-Octadecenal, (Z)- $$ Olealdehy... | 266 | C18H34O | 002423-10-1 | 45 |



Library Search Compound Report

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Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

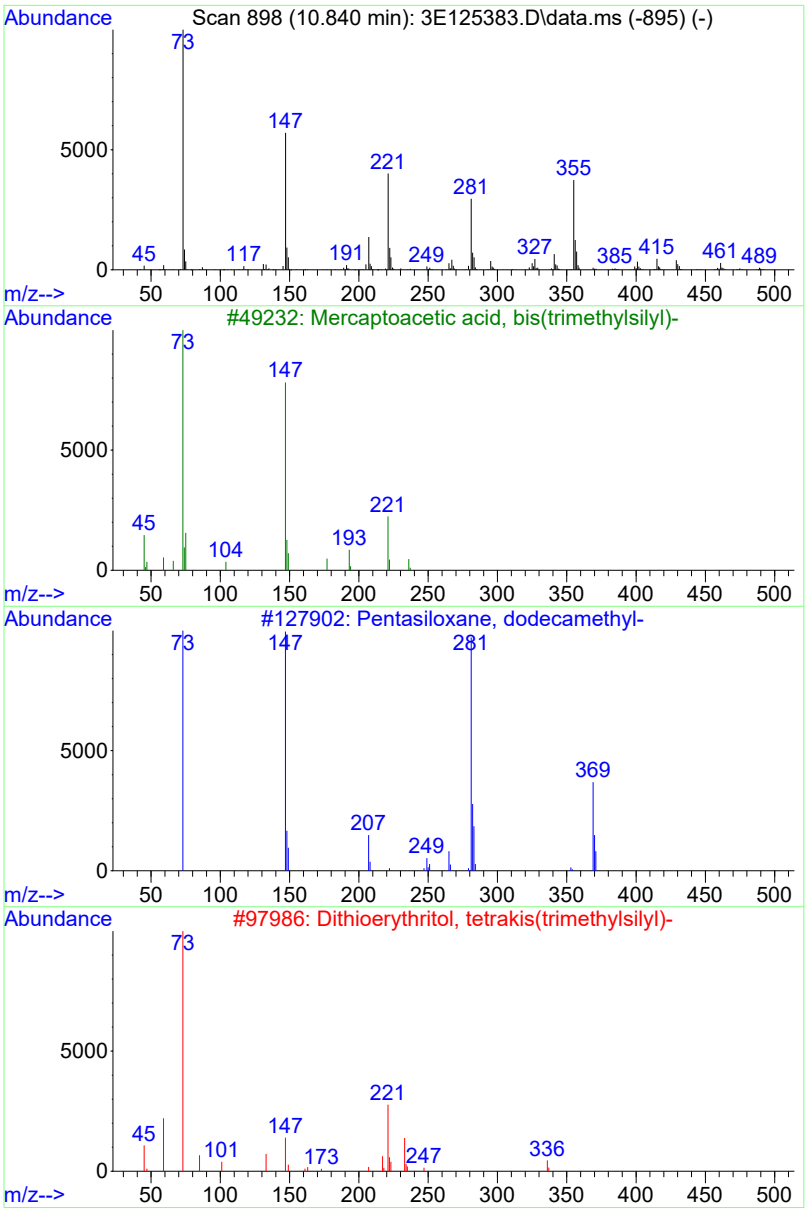
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

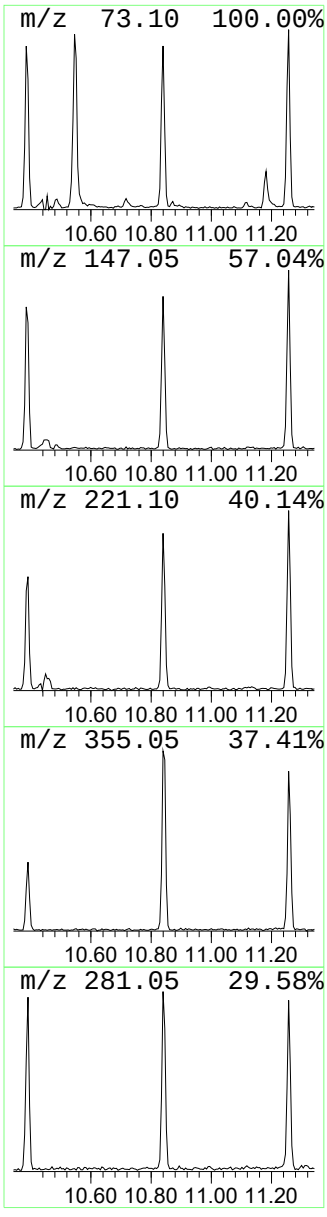
**********

Peak Number 22 Mercaptoacetic acid, bis(tr... Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.840 | 6099.40 ppm | 609940 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Mercaptoacetic acid, bis(trimeth... | 236 | C8H20O2SSi2 | 006398-62-5 | 28 |
| 2 | Pentasiloxane, dodecamethyl- | 384 | C12H36O4Si5 | 000141-63-9 | 25 |
| 3 | Dithioerythritol, tetrakis(trime... | 442 | C16H42O2S2Si4 | 000000-00-0 | 17 |
| 4 | Trisiloxane, 1,1,1,5,5,5-hexamet... | 384 | C12H36O4Si5 | 003555-47-3 | 16 |
| 5 | Tris(trimethylsilyl)borate $$ Si... | 278 | C9H27BO3Si3 | 004325-85-3 | 16 |



Library Search Compound Report

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Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

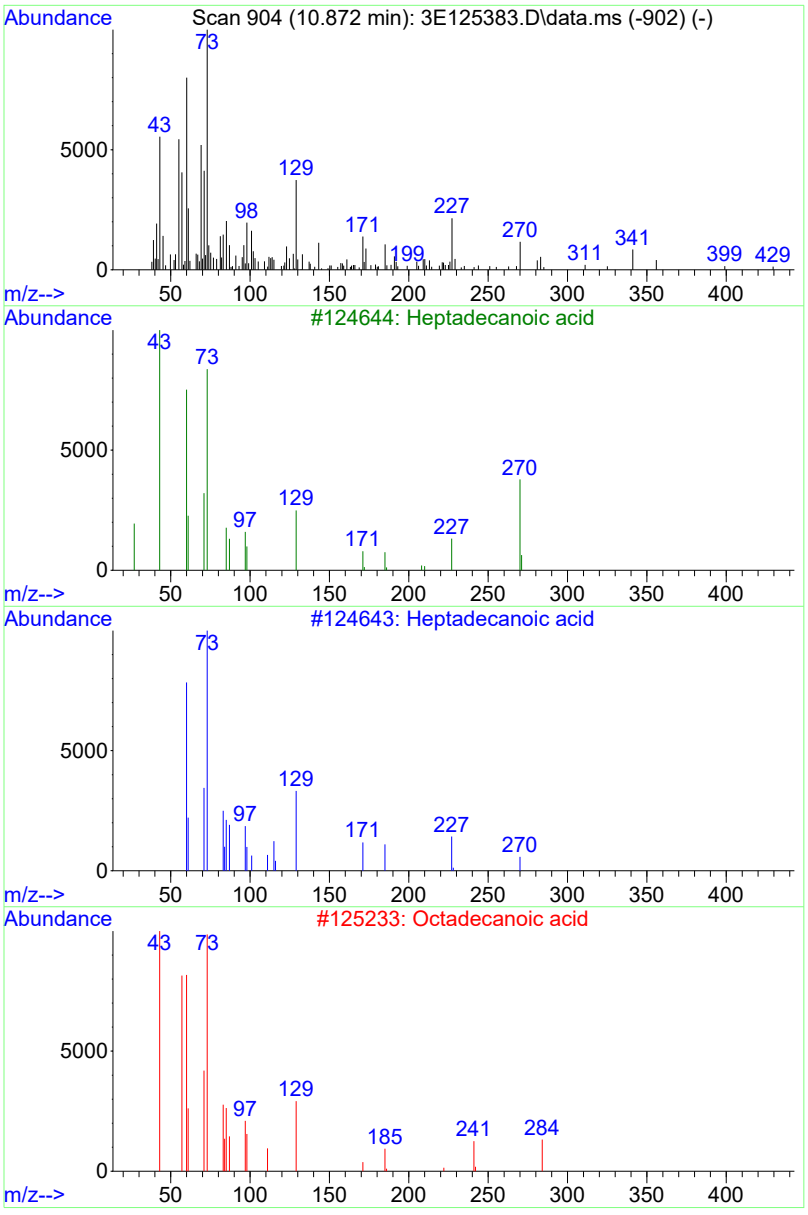
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

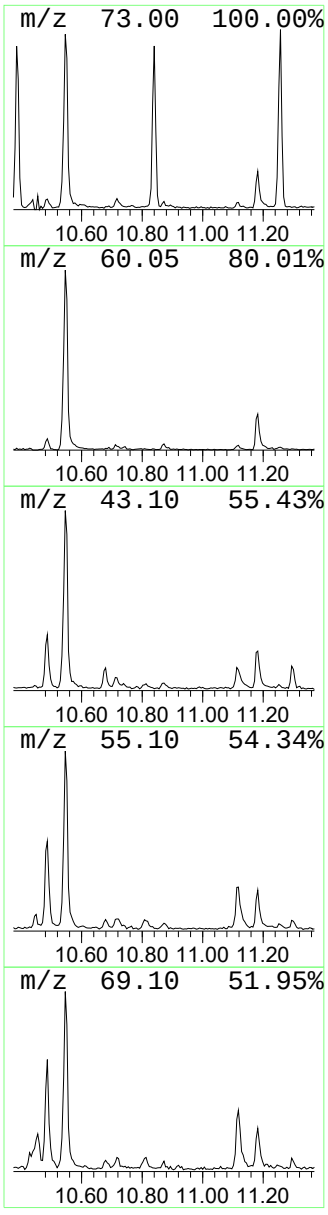
**********

Peak Number 23 Heptadecanoic acid Concentration Rank 10

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.872 | 619.82 ppm | 61982 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Heptadecanoic acid | 270 | C17H34O2 | 000506-12-7 | 87 |
| 2 | Heptadecanoic acid | 270 | C17H34O2 | 000506-12-7 | 83 |
| 3 | Octadecanoic acid | 284 | C18H36O2 | 000057-11-4 | 64 |
| 4 | Tetradecanoic acid | 228 | C14H28O2 | 000544-63-8 | 53 |
| 5 | n-Hexadecanoic acid $$ Hexadecan... | 256 | C16H32O2 | 000057-10-3 | 50 |



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Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

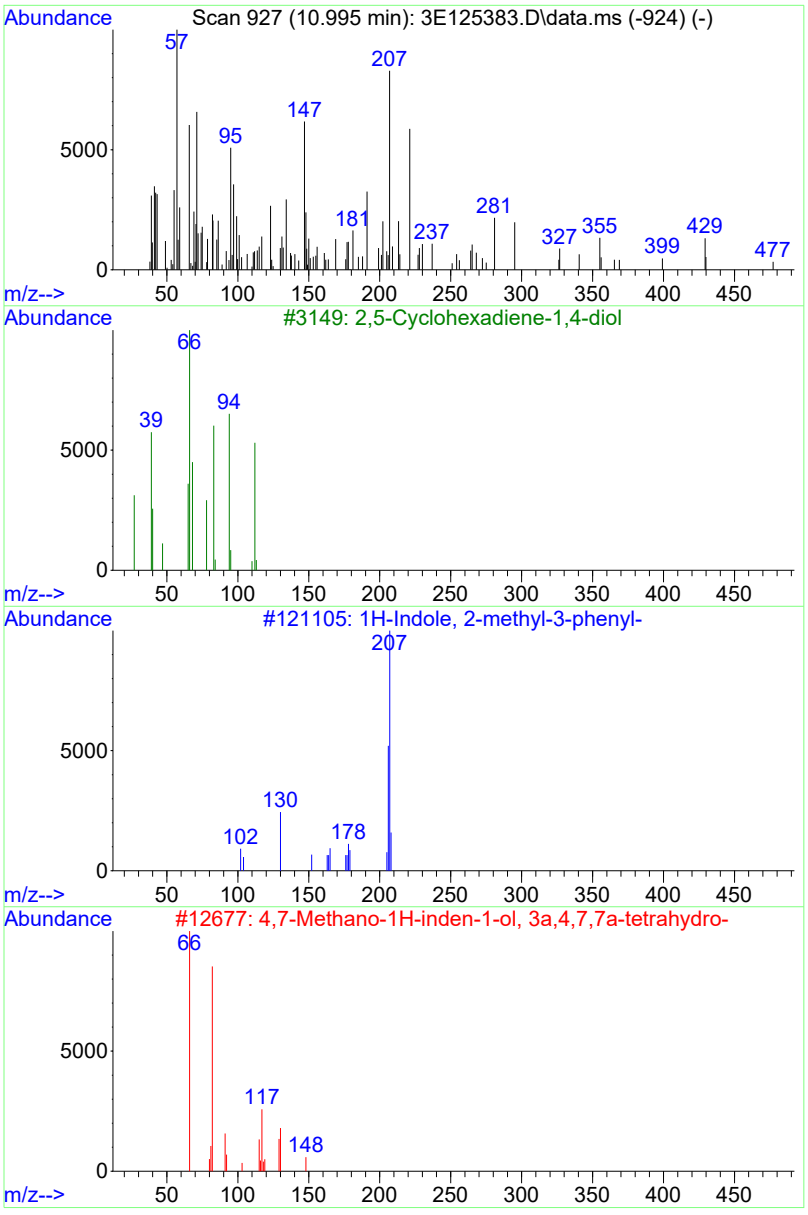
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

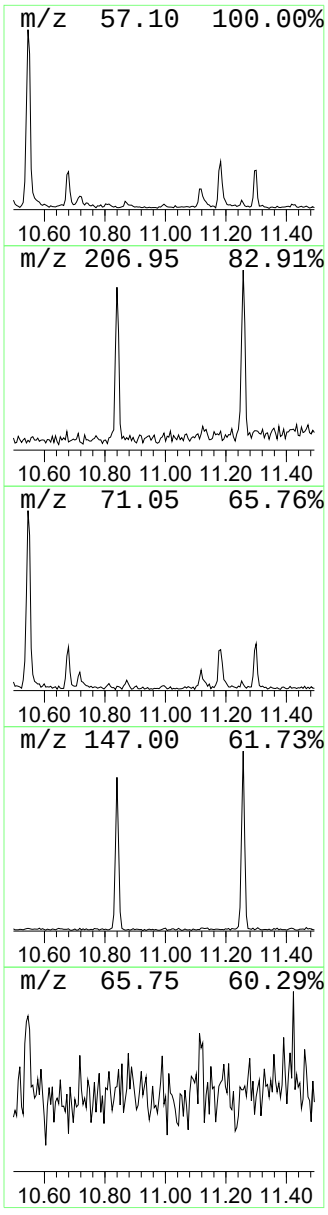
**********

Peak Number 24 2,5-Cyclohexadiene-1,4-diol Concentration Rank 24

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 10.995 | 127.09 ppm | 12709 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | 2,5-Cyclohexadiene-1,4-diol | 112 | C6H8O2 | 063453-92-9 | 25 |
| 2 | 1H-Indole, 2-methyl-3-phenyl- | 207 | C15H13N | 004757-69-1 | 22 |
| 3 | 4,7-Methano-1H-inden-1-ol, 3a,4,... | 148 | C10H12O | 006814-80-8 | 22 |
| 4 | Dimethylbicyclo[2.2.1]-2,5-hepta... | 208 | C11H12O4 | 000947-57-9 | 22 |
| 5 | Dicyclopentenyl alcohol $$ 4,7-M... | 150 | C10H14O | 027137-33-3 | 22 |



Library Search Compound Report

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Operator : (b) (6)
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Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

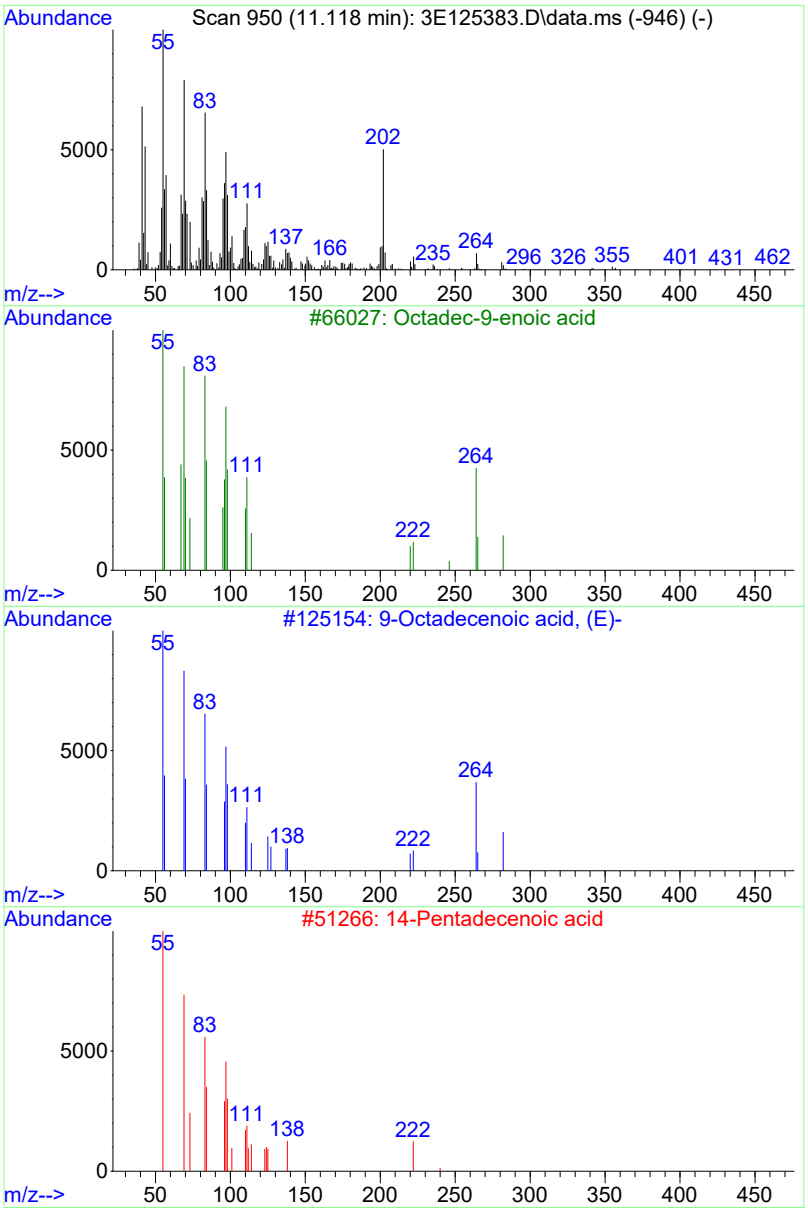
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

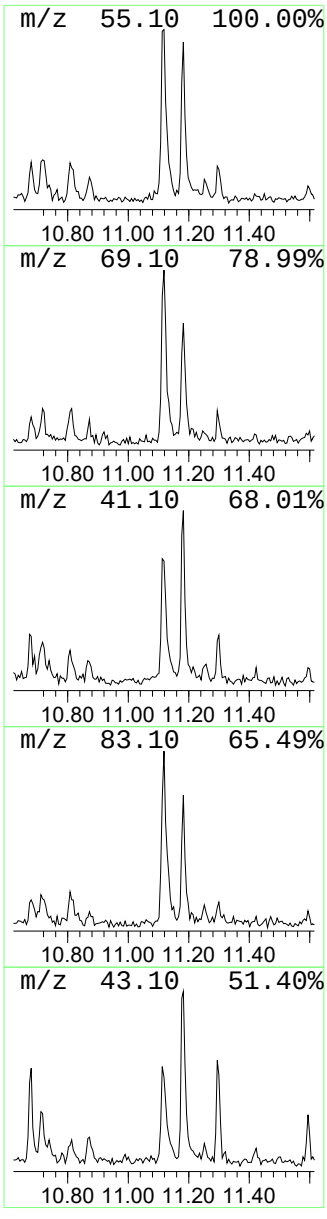
**********

Peak Number 25 Octadec-9-enoic acid Concentration Rank 4

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.118 | 5180.48 ppm | 518048 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Octadec-9-enoic acid | 282 | C18H34O2 | 000000-00-0 | 99 |
| 2 | 9-Octadecenoic acid, (E)- | 282 | C18H34O2 | 000112-79-8 | 98 |
| 3 | 14-Pentadecenoic acid | 240 | C15H28O2 | 017351-34-7 | 70 |
| 4 | 9-Octadecenoic acid, (E)- | 282 | C18H34O2 | 000112-79-8 | 68 |
| 5 | 1-Hexadecanol $$ n-Cetyl alcohol... | 242 | C16H34O | 036653-82-4 | 64 |



Library Search Compound Report

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Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

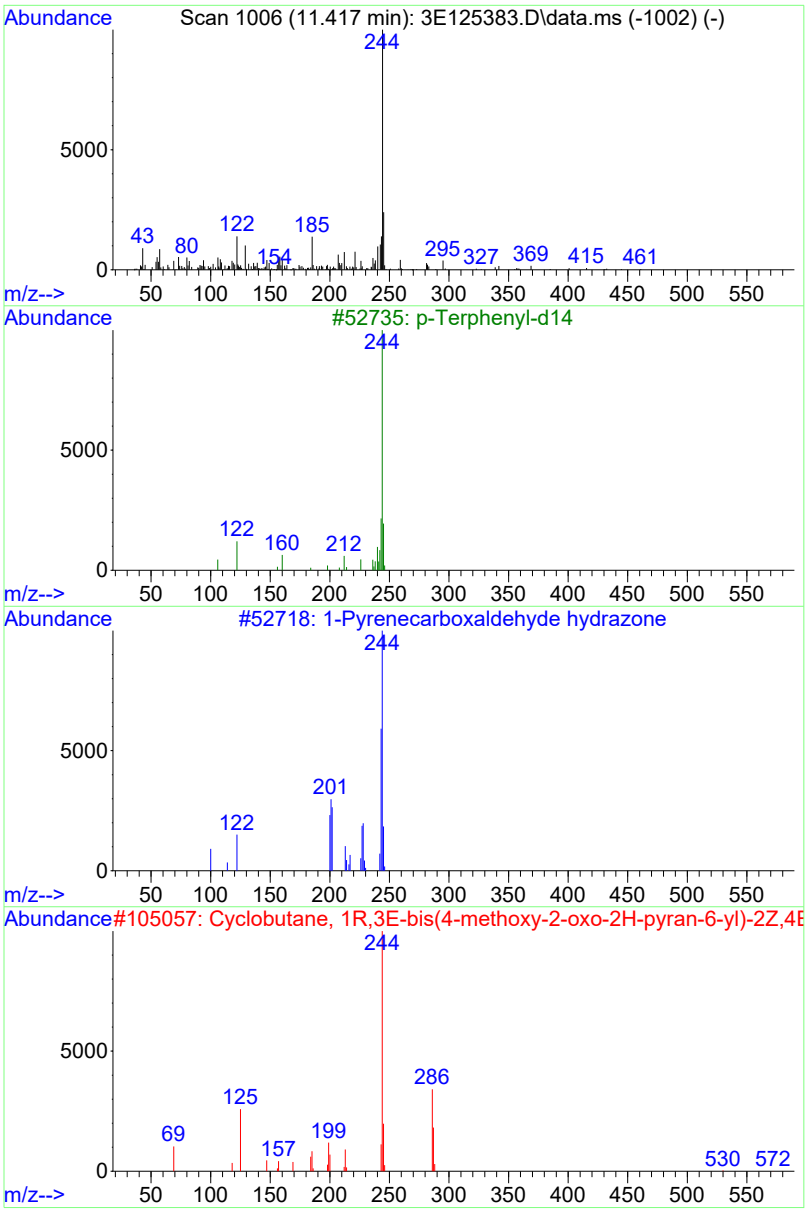
TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

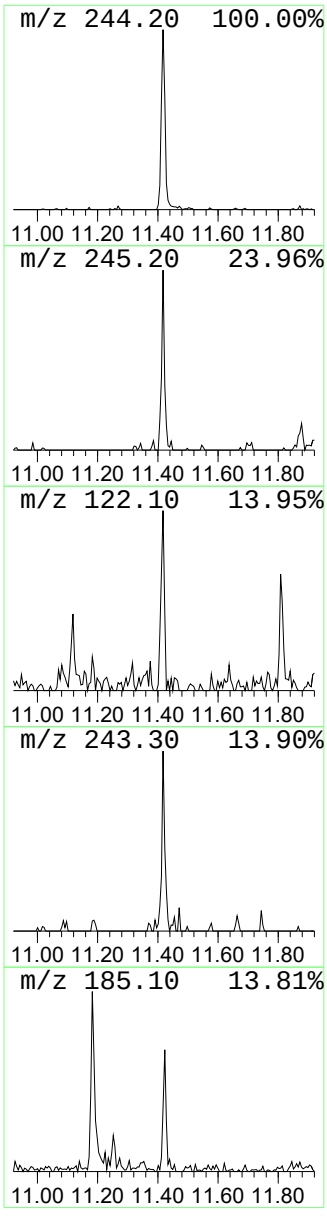
**********

Peak Number 26 p-Terphenyl-d14 Concentration Rank 8

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 11.418 | 854.18 ppm | 85418 | External Standard | 0.000 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | p-Terphenyl-d14 | 244 | C18D14 | 001718-51-0 | 87 |
| 2 | 1-Pyrenecarboxaldehyde hydrazone | 244 | C17H12N2 | 076465-53-7 | 47 |
| 3 | Cyclobutane, 1R,3E-bis(4-methoxy... | 572 | C32H28O10 | 000000-00-0 | 40 |
| 4 | Pregn-4-ene-3,20-dione, 16-methy... | 328 | C22H32O2 | 001922-34-5 | 40 |
| 5 | Dicyclooctanopyridazine | 244 | C16H24N2 | 000000-00-0 | 38 |



Tentatively Identified Compound (LSC) summary

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125383.D
Acq On : 20 Jul 2024 1:56 pm
Operator : (b) (6)
Sample : 640-12
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 94 Sample Multiplier: 1

Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration

TIC Library : C:\Database\NIST129K.L
TIC Integration Parameters: RTEINT.P

| | | | | | Internal Standard | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| Benzene, 1-meth... | 9.160 | 511.4 | ppm | 51137 | 0 | 0.000 | 100 | 1.0 |
| Benzene, dichlo... | 9.219 | 114.6 | ppm | 11459 | 0 | 0.000 | 100 | 1.0 |
| Benzene, 1-chlo... | 9.417 | 612.5 | ppm | 61246 | 0 | 0.000 | 100 | 1.0 |
| Hydrazine, 1,1-... | 9.503 | 487.9 | ppm | 48791 | 0 | 0.000 | 100 | 1.0 |
| Azobenzene $$ D... | 9.535 | 262.3 | ppm | 26230 | 0 | 0.000 | 100 | 1.0 |
| Acetic acid, (5... | 9.567 | 34.4 | ppm | 3443 | 0 | 0.000 | 100 | 1.0 |
| Ethene, 1-(anth... | 9.615 | 279.6 | ppm | 27964 | 0 | 0.000 | 100 | 1.0 |
| 4'-Phenoxyaceto... | 9.647 | 215.3 | ppm | 21525 | 0 | 0.000 | 100 | 1.0 |
| 2,6-Diisopropyl... | 9.679 | 205.7 | ppm | 20571 | 0 | 0.000 | 100 | 1.0 |
| Thieno[2,3-c]py... | 9.743 | 484.5 | ppm | 48448 | 0 | 0.000 | 100 | 1.0 |
| Benzene, bromop... | 9.786 | 209.5 | ppm | 20948 | 0 | 0.000 | 100 | 1.0 |
| Diisopropylnaph... | 9.813 | 437.6 | ppm | 43760 | 0 | 0.000 | 100 | 1.0 |
| Tetradecanoic acid | 9.866 | 3518.7 | ppm | 351867 | 0 | 0.000 | 100 | 1.0 |
| 1,1,1,5,7,7,7-H... | 9.898 | 7546.9 | ppm | 754691 | 0 | 0.000 | 100 | 1.0 |
| 1-Hexadecene | 10.091 | 280.6 | ppm | 28060 | 0 | 0.000 | 100 | 1.0 |
| 1-Nonadecene | 10.123 | 400.6 | ppm | 40062 | 0 | 0.000 | 100 | 1.0 |
| Phenanthrene-d10 | 10.150 | 2282.0 | ppm | 228201 | 0 | 0.000 | 100 | 1.0 |
| Pentadecanoic acid | 10.214 | 3570.6 | ppm | 357062 | 0 | 0.000 | 100 | 1.0 |
| Carbazole | 10.337 | 391.5 | ppm | 39152 | 0 | 0.000 | 100 | 1.0 |
| Octasiloxane, 1... | 10.391 | 5898.6 | ppm | 589862 | 0 | 0.000 | 100 | 1.0 |
| 1,19-Eicosadiene | 10.808 | 832.3 | ppm | 83233 | 0 | 0.000 | 100 | 1.0 |
| Mercaptoacetic ... | 10.840 | 6099.4 | ppm | 609940 | 0 | 0.000 | 100 | 1.0 |
| Heptadecanoic acid | 10.872 | 619.8 | ppm | 61982 | 0 | 0.000 | 100 | 1.0 |
| 2,5-Cyclohexadi... | 10.995 | 127.1 | ppm | 12709 | 0 | 0.000 | 100 | 1.0 |
| Octadec-9-enoic... | 11.118 | 5180.5 | ppm | 518048 | 0 | 0.000 | 100 | 1.0 |
| p-Terphenyl-d14 | 11.418 | 854.2 | ppm | 85418 | 0 | 0.000 | 100 | 1.0 |

Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125382.D
Acq On : 20 Jul 2024 1:25 pm
Operator : (b) (6)
Sample : MB
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 95 Sample Multiplier: 1

Quant Time: Jul 20 18:32:11 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration

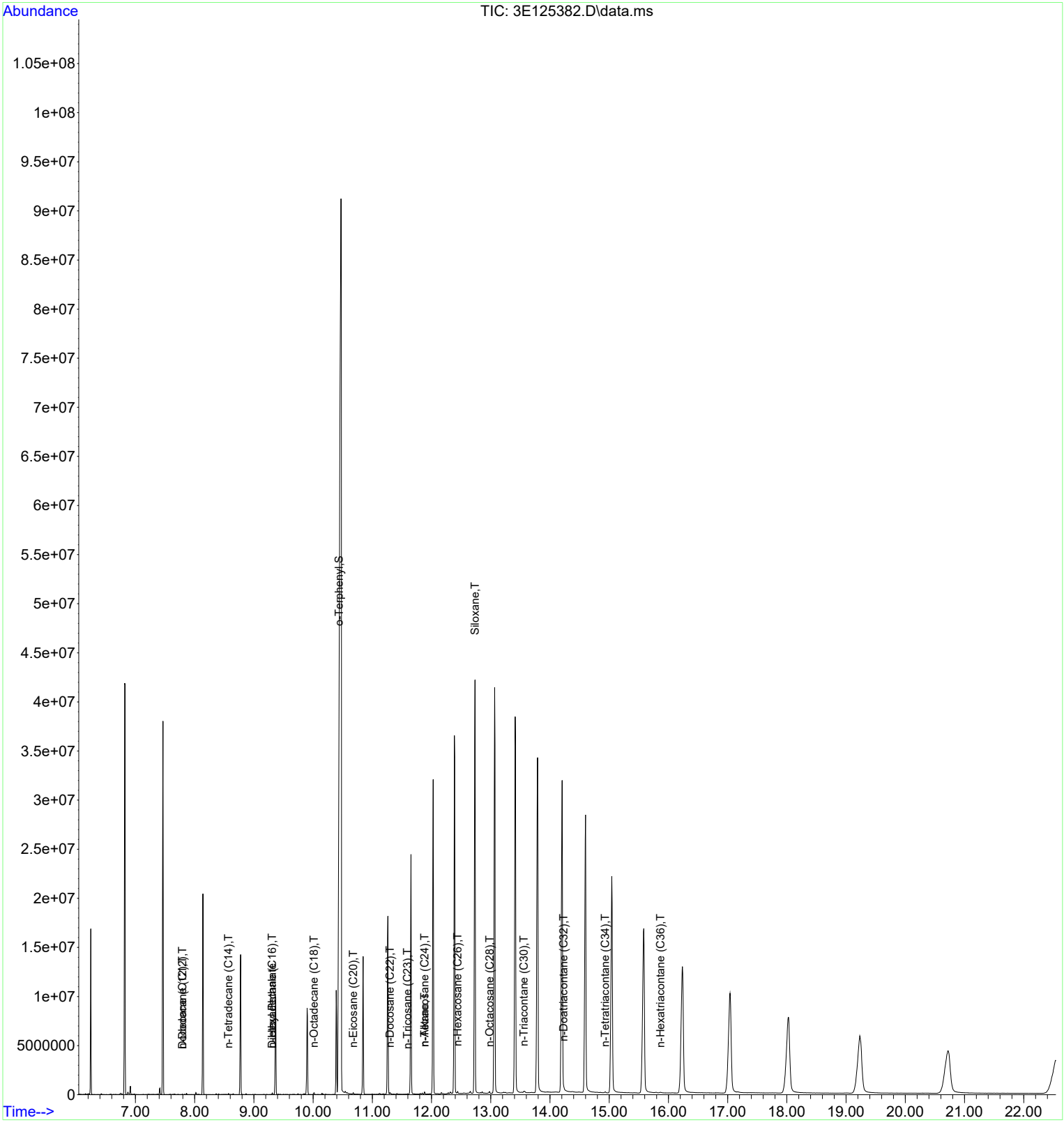
| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | |
| 17) o-Terphenyl | 10.439 | 230 | 26464995m | 26464995.00 ppm | -0.02 |
| Target Compounds | | | | | Qvalue |
| 1) Undecane (C11) | 0.000 | | 0 | N.D. d | |
| 2) Diethylnaphthalene | 0.000 | | 0 | N.D. d | |
| 3) 1-Methylnaphthalene | 0.000 | | 0 | N.D. d | |
| 4) 1-Ethylpropylbenzene | 0.000 | | 0 | N.D. d | |
| 5) Cyclohexane | 0.000 | | 0 | N.D. d | |
| 6) Tridecane (C13) | 0.000 | | 0 | N.D. d | |
| 7) Dodecane (C12) | 7.791 | 43 | 6579 | 6579.00 ppm # | 51 |
| 8) Sesquiterpanes | 0.000 | | 0 | N.D. d | |
| 9) Benzocyclohexane | 0.000 | | 0 | N.D. | |
| 10) Propylbutylbenzene | 0.000 | | 0 | N.D. | |
| 11) Cyclic Isoprenoid | 0.000 | | 0 | N.D. d | |
| 12) Trimethylbenzene | 0.000 | | 0 | N.D. d | |
| 13) Bromo-Xa | 0.000 | | 0 | N.D. | |
| 14) Bromo-Xb | 0.000 | | 0 | N.D. | |
| 15) n-Hexadecanoic Acid | 0.000 | | 0 | N.D. | |
| 16) n-Octadecanoic Acid | 0.000 | | 0 | N.D. | |
| 18) Bromo-o-Terphenyl | 0.000 | | 0 | N.D. | |
| 19) Chloro-o-Terphenyl | 0.000 | | 0 | N.D. | |
| 20) n-Alkane | 11.883 | 57 | 467904m | 467904.00 ppm | |
| 21) n-Octane (C8) | 0.000 | | 0 | N.D. d | |
| 22) n-Nonane (C9) | 0.000 | | 0 | N.D. d | |
| 23) n-Decane (C10) | 0.000 | | 0 | N.D. d | |
| 24) n-Dodecane (C12) | 7.791 | 57 | 7050 | 7050.00 ug/l # | 80 |
| 25) n-Tetradecane (C14) | 8.572 | 57 | 17020 | 17020.00 ug/l | 97 |
| 26) n-Hexadecane (C16) | 9.310 | 57 | 18497 | 18497.00 ug/l # | 65 |
| 27) n-Octadecane (C18) | 10.016 | 57 | 29378 | 29378.00 ug/l | 94 |
| 28) n-Eicosane (C20) | 10.680 | 57 | 21550 | 21550.00 ug/l | 94 |
| 29) n-Heneicosane (C21) | 0.000 | | 0 | N.D. d | |
| 30) n-Docosane (C22) | 11.300 | 57 | 25915 | 25915.00 ug/l # | 87 |
| 31) n-Tricosane (C23) | 11.594 | 57 | 8152 | 8152.00 ug/l | 91 |
| 32) n-Tetracosane (C24) | 11.883 | 57 | 31313 | 31313.00 ug/l | 89 |
| 33) n-Pentacosane (C25) | 0.000 | | 0 | N.D. d | |
| 34) n-Hexacosane (C26) | 12.439 | 57 | 27113 | 27113.00 ug/l | 93 |
| 35) n-Heptacosane (C27) | 0.000 | | 0 | N.D. d | |
| 36) n-Octacosane (C28) | 12.979 | 57 | 26133 | 26133.00 ug/l # | 88 |
| 37) n-Nonacosane (C29) | 0.000 | | 0 | N.D. d | |
| 38) n-Triacontane (C30) | 13.557 | 57 | 21828 | 21828.00 ug/l # | 92 |
| 39) n-Doatriacontane (C32) | 14.231 | 57 | 20097m | 20097.00 ug/l | |
| 40) n-Tetratriacontane (C34) | 14.932 | 57 | 20931 | 20931.00 ug/l | 92 |
| 41) n-Hexatriacontane (C36) | 15.868 | 57 | 16371 | 16371.00 ug/l # | 83 |
| 42) n-Octatriacontane (C38) | 0.000 | | 0 | N.D. d | |
| 43) n-Tetracontane (C40) | 0.000 | | 0 | N.D. d | |
| 44) Siloxane | 12.733 | 429 | 17770016m | 17770016.00 ppm | |
| 45) Butyl benzyl phthalate | 0.000 | | 0 | N.D. | |
| 46) Bis(2-ethylhexyl)phtha... | 0.000 | | 0 | N.D. | |
| 47) Di-n-octylphthalate | 0.000 | | 0 | N.D. d | |
| 48) Diethyl Phthalate | 9.310 | 149 | 14771 | 14771.00 ug/l | 92 |

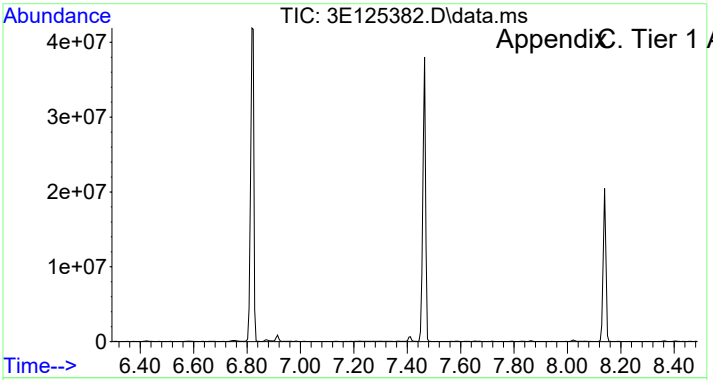
(#) = qualifier out of range (m) = manual integration (+) = signals summed

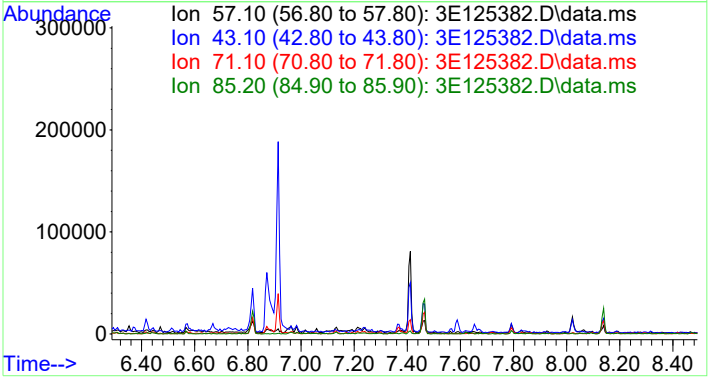
Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\e3e5834A\
Data File : 3E125382.D
Acq On : 20 Jul 2024 1:25 pm
Operator : (b) (6)
Sample : MB
Misc : op52156,e3e5831,1000,,,1,1
ALS Vial : 95 Sample Multiplier: 1

Quant Time: Jul 20 18:32:11 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration





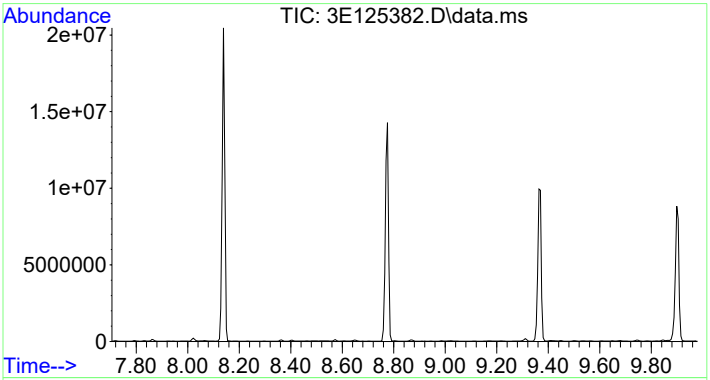



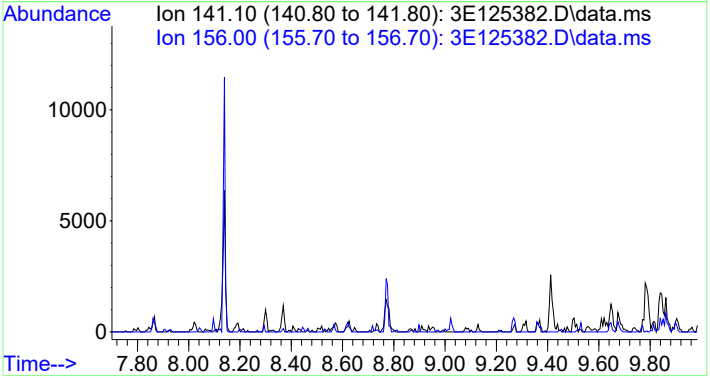

#1
Undecane (C11)
Concen: N.D.
Expected RT: 7.39 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 15.7 |
| 71 | 6.9 |
| 85 | 0.0 |



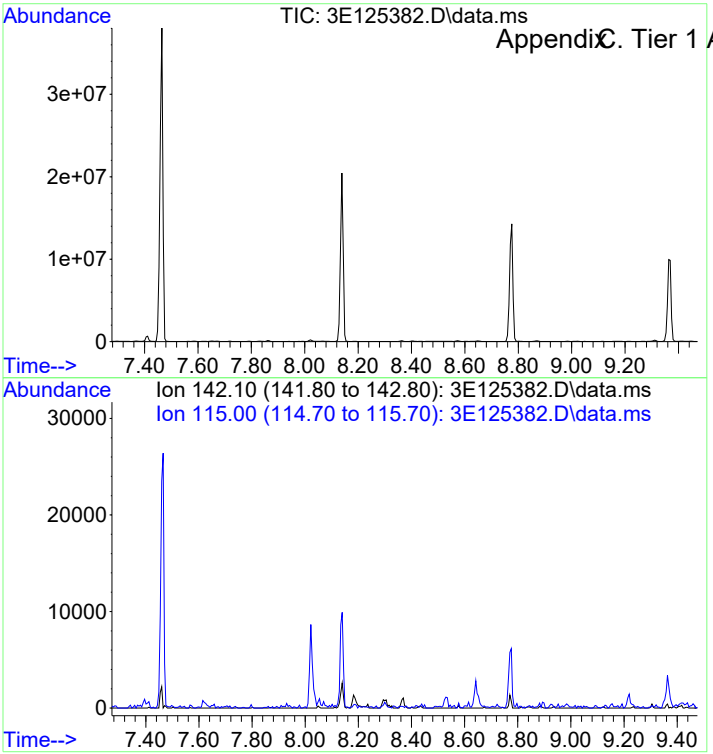




#2
Diethylnaphthalene
Concen: N.D.
Expected RT: 8.80 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 141

| Sig | Exp Ratio |
|---|---|
| 141 | 100 |
| 156 | 0.0 |

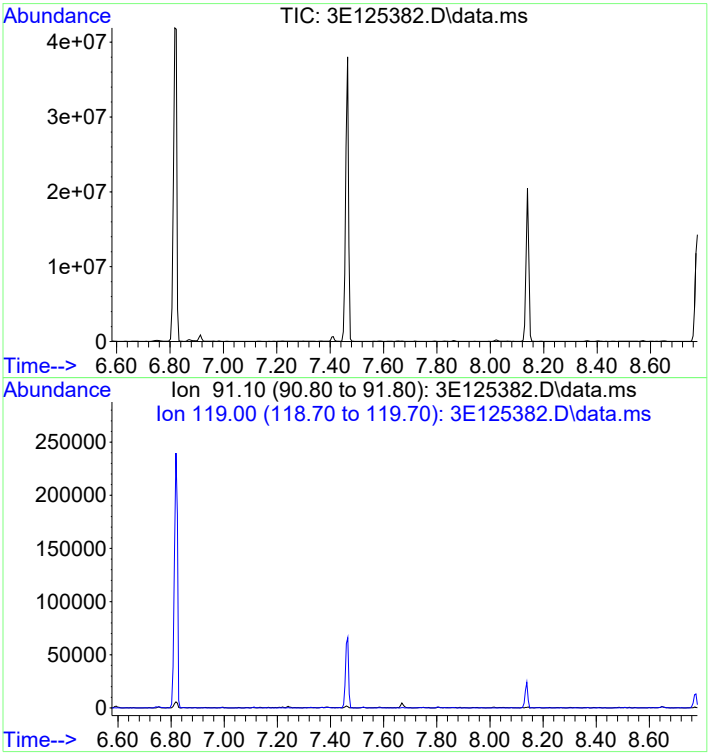



#3
1-Methylnaphthalene
Concen: N.D.
Expected RT: 8.37 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 142

| Sig | Exp Ratio |
|---|---|
| 142 | 100 |
| 115 | 0.0 |

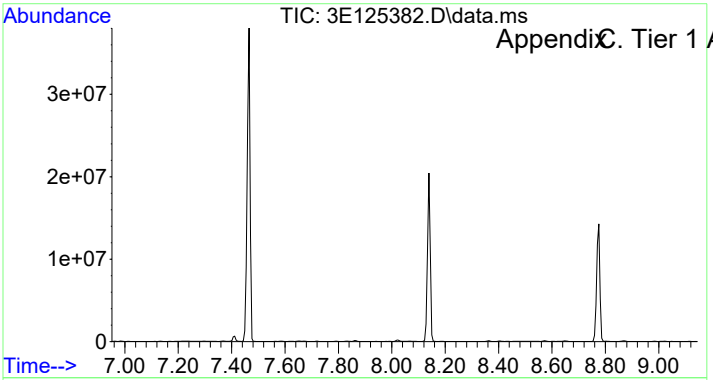


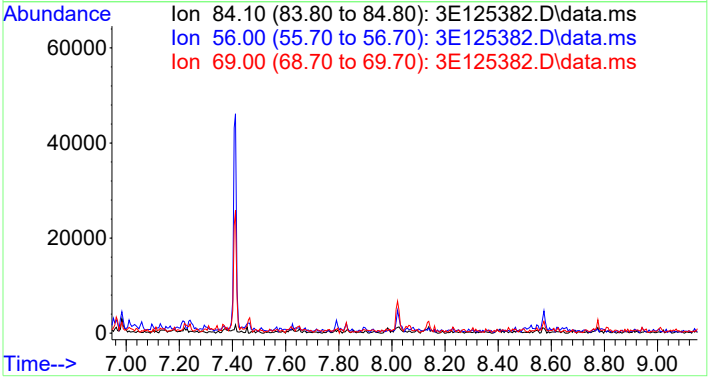

#4
1-Ethylpropylbenzene
Concen: N.D.
Expected RT: 7.68 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 91

| Sig | Exp Ratio |
|---|---|
| 91 | 100 |
| 119 | 0.0 |



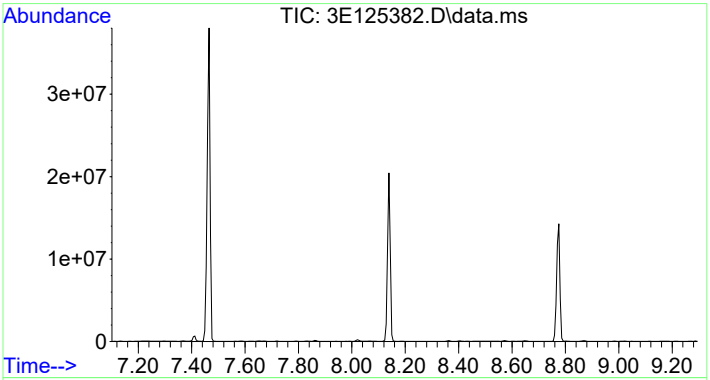



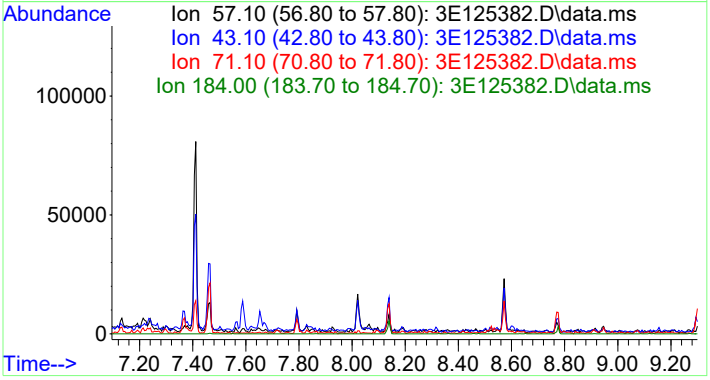

#5
Cyclohexane
Concen: N.D.
Expected RT: 8.05 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 84

| Sig | Exp Ratio |
|---|---|
| 84 | 100 |
| 56 | 0.0 |
| 69 | 0.0 |



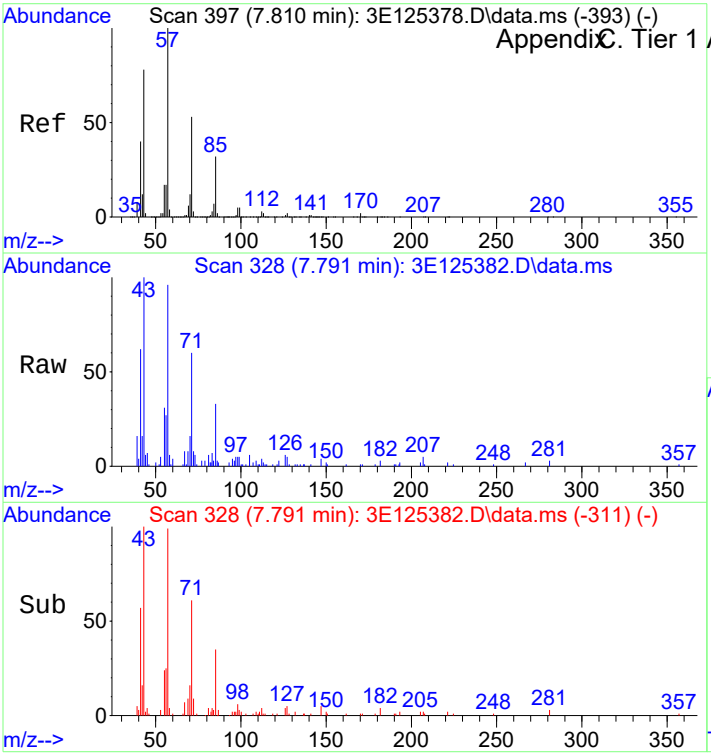




#6
Tridecane (C13)
Concen: N.D.
Expected RT: 8.20 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57

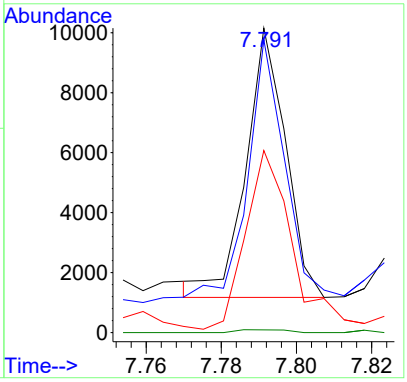
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 6.1 |
| 71 | 0.0 |
| 184 | 0.0 |

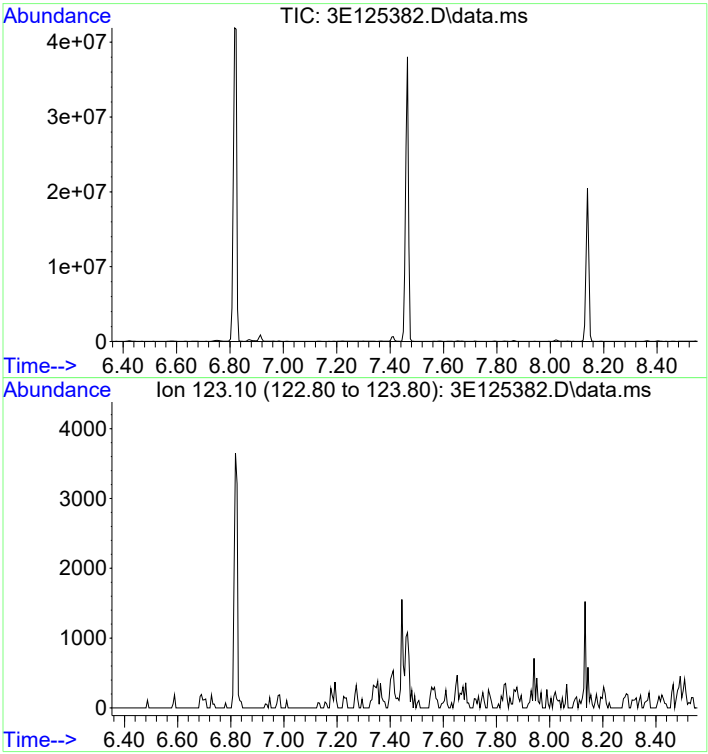



#7
Dodecane (C12)
Concen: 6579.00 ppm
RT: 7.791 min Scan# 328
Delta R.T. -0.011 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 43 Resp: 6579

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 82.2 | 145.0 | 185.0# |
| 71 | 77.6 | 44.9 | 84.9 |
| 170 | 0.0 | 0.0 | 20.0 |

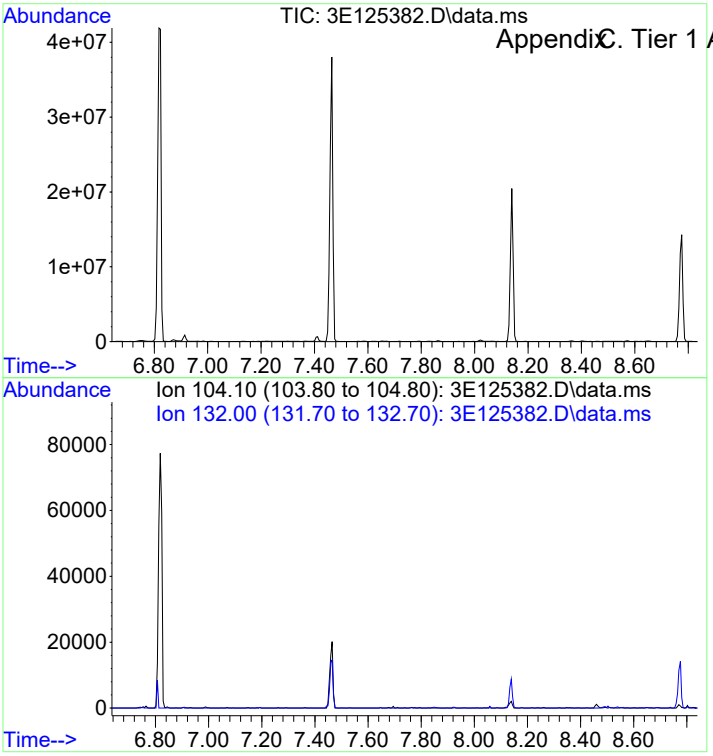



#8
Sesquiterpanes
Concen: N.D.
Expected RT: 7.45 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 123

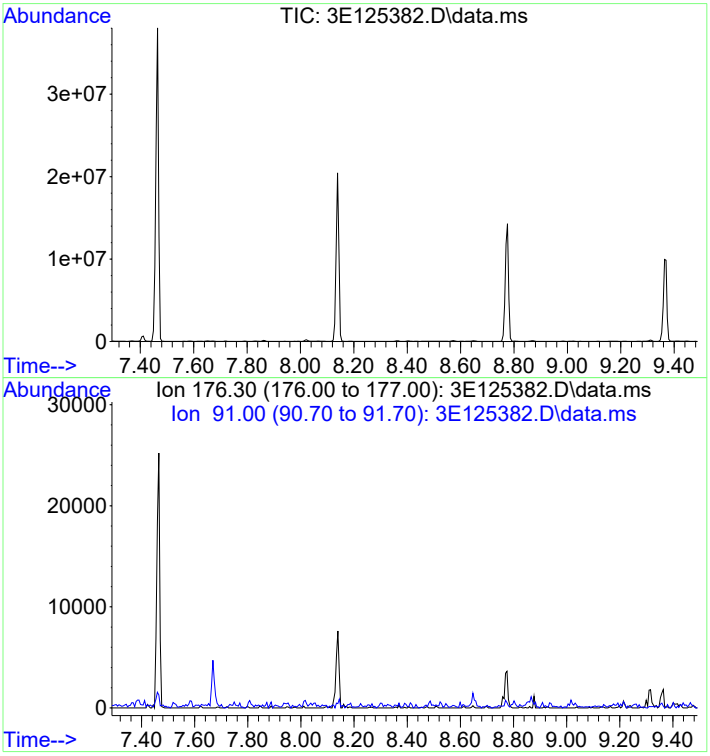



#9
Benzocyclohexane
Concen: N.D.
Expected RT: 7.74 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 104

| Sig | Exp Ratio |
|---|---|
| 104 | 100 |
| 132 | 0.0 |

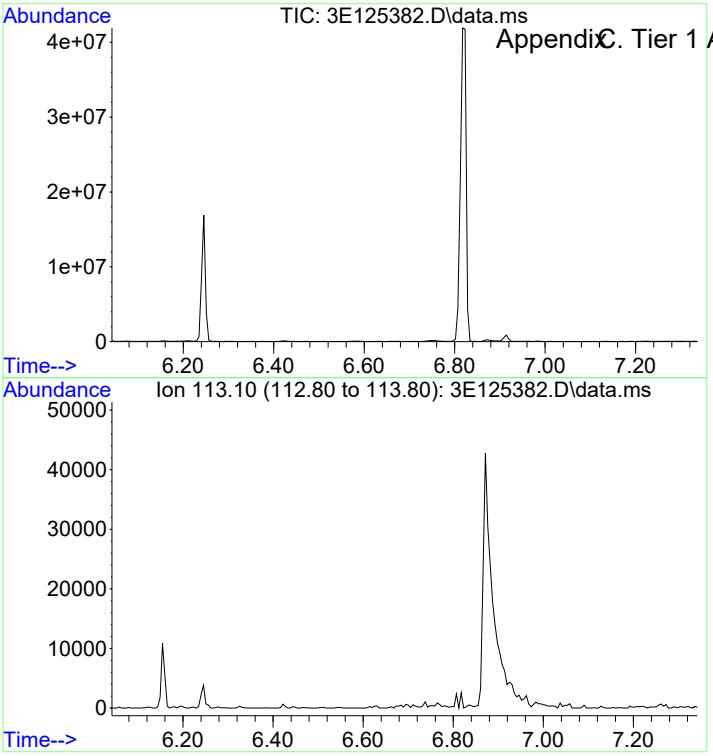



#10
Propylbutylbenzene
Concen: N.D.
Expected RT: 8.39 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 176

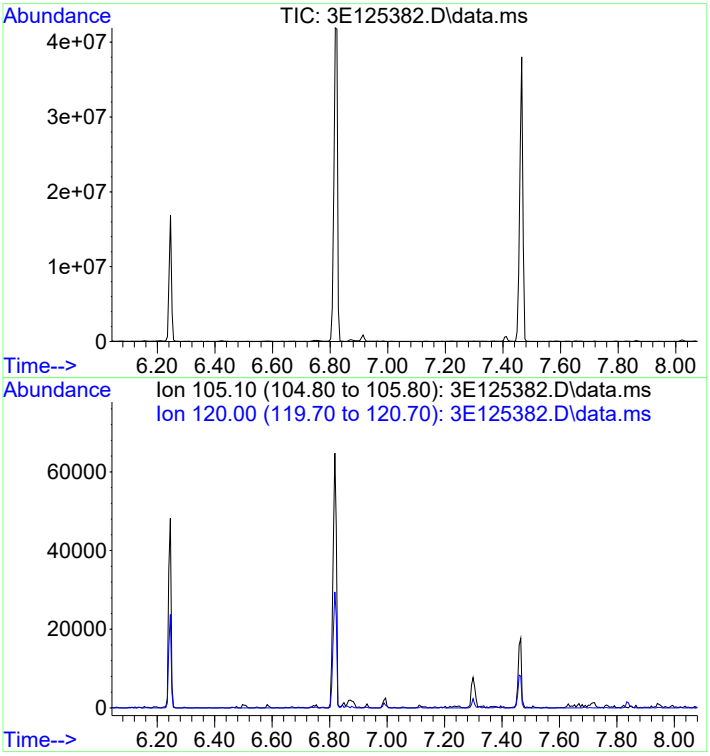
| Sig | Exp Ratio |
|---|---|
| 176 | 100 |
| 91 | 0.0 |




#11
Cyclic Isoprenoid
Concen: N.D.
Expected RT: 6.24 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 113

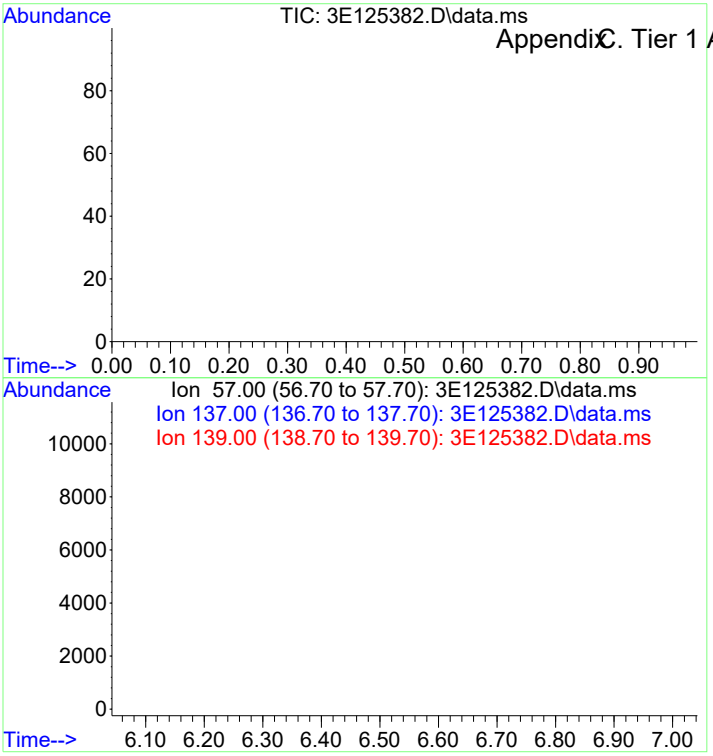



#12
Trimethylbenzene
Concen: N.D.
Expected RT: 6.98 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 105

| Sig | Exp Ratio |
|---|---|
| 105 | 100 |
| 120 | 0.0 |

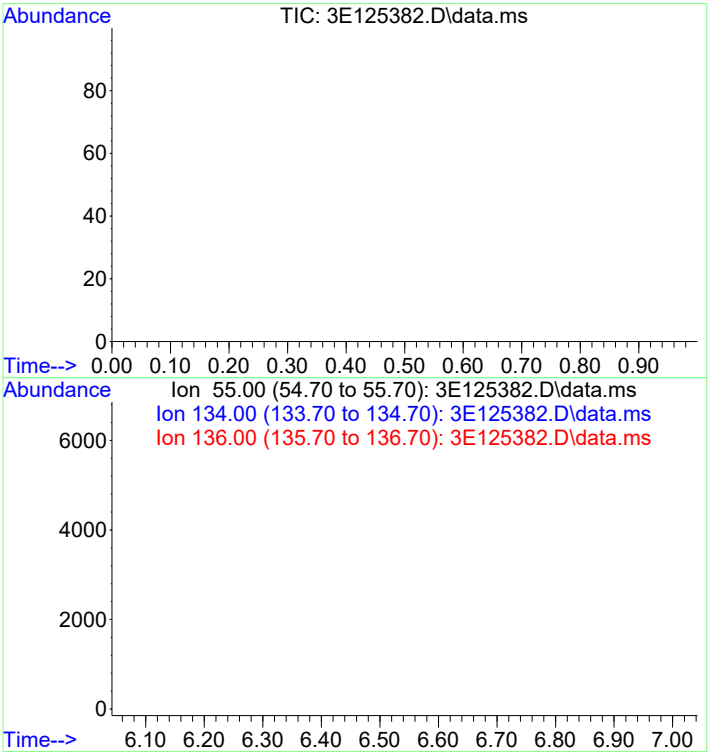



#13
Bromo-Xa
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 137 | 0.0 |
| 139 | 0.0 |

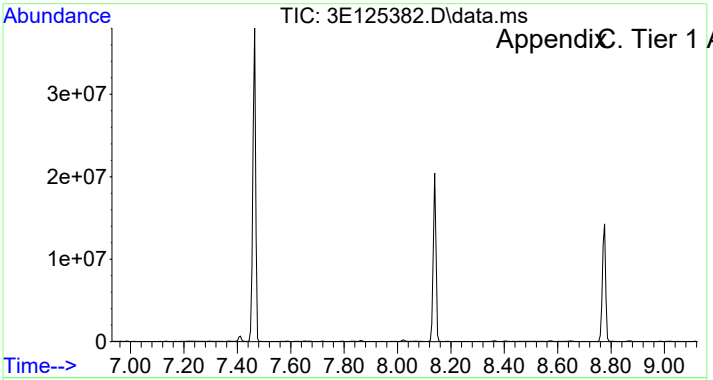



#14
Bromo-Xb
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 55

| Sig | Exp Ratio |
|---|---|
| 55 | 100 |
| 134 | 0.0 |
| 136 | 0.0 |

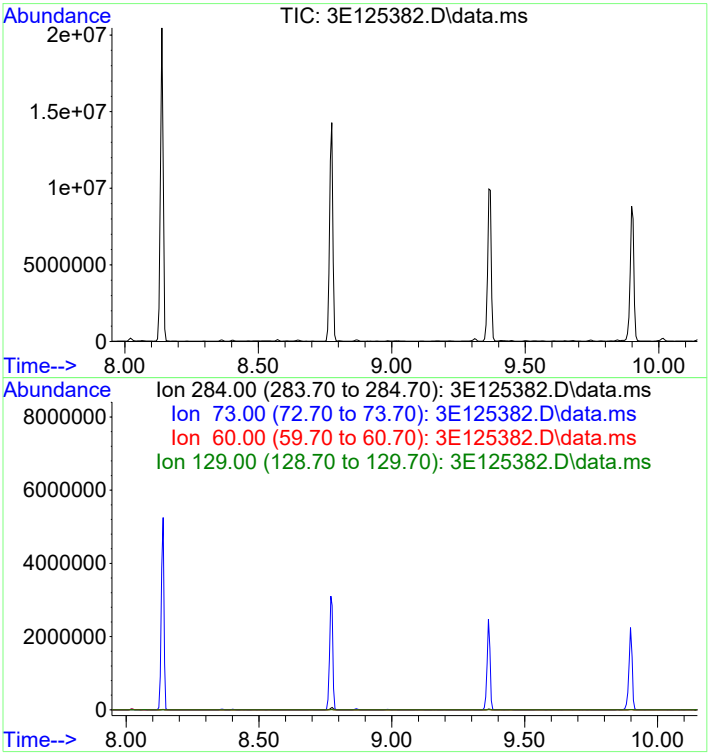



#15
n-Hexadecanoic Acid
Concen: N.D.
Expected RT: 8.03 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 256

| Sig | Exp Ratio |
|---|---|
| 256 | 100 |
| 73 | 117.8 |
| 60 | 50.7 |
| 129 | 36.1 |

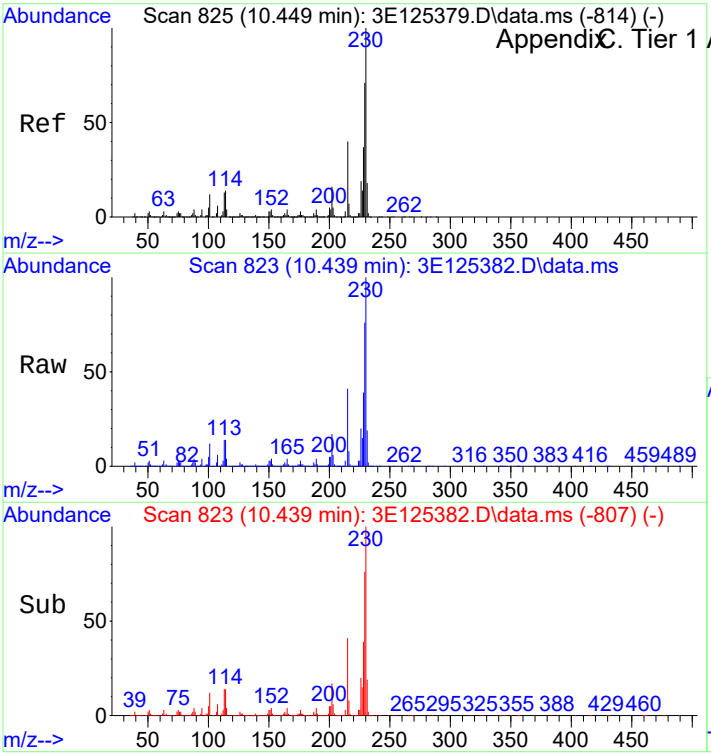



#16
n-Octadecanoic Acid
Concen: N.D.
Expected RT: 9.05 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 284

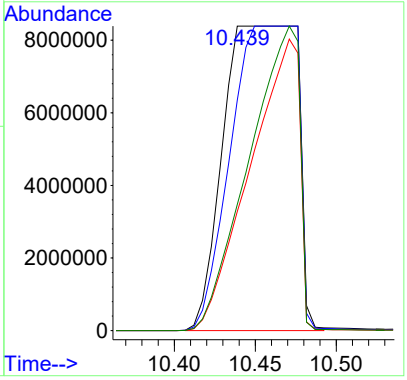
| Sig | Exp Ratio |
|---|---|
| 284 | 100 |
| 73 | 62.7 |
| 60 | 46.4 |
| 129 | 50.0 |

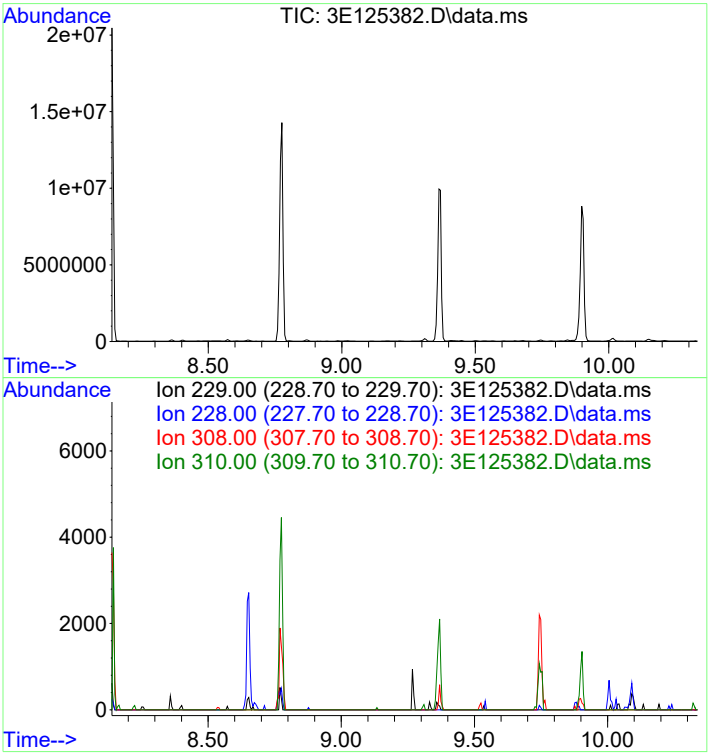



#17
o-Terphenyl
Concen: 26464995.00 ppm m
RT: 10.439 min Scan# 823
Delta R.T. -0.016 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion:230 Resp:26464995

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 230 | 100 | | |
| 229 | 0.0 | 43.0 | 83.0# |
| 228 | 0.0 | 27.3 | 67.3# |
| 215 | 0.0 | 30.0 | 70.0# |



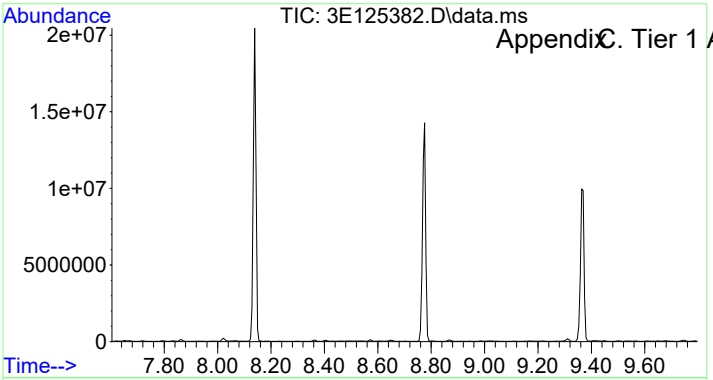




#18
Bromo-o-Terphenyl
Concen: N.D.
Expected RT: 9.24 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 229

| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 135.4 |
| 308 | 79.5 |
| 310 | 0.0 |

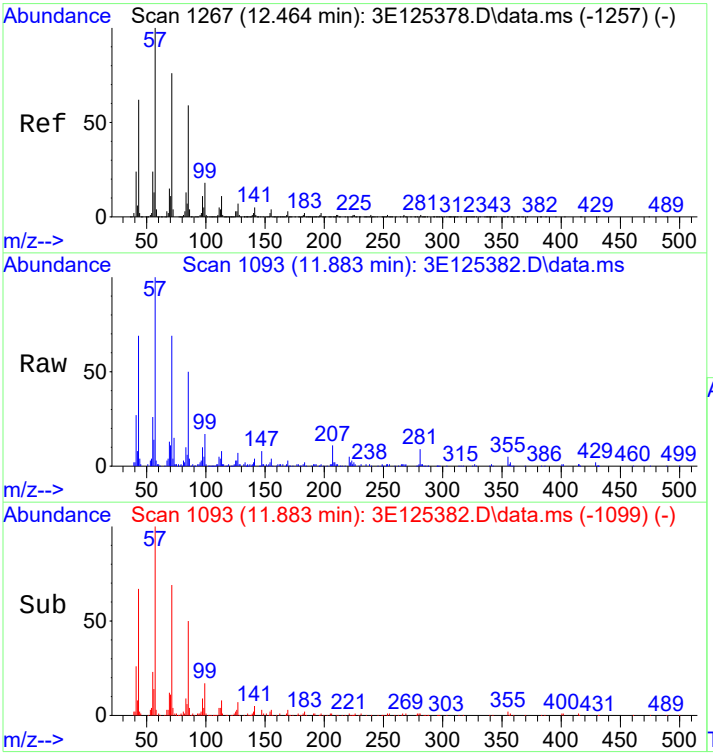



#19
Chloro-o-Terphenyl
Concen: N.D.
Expected RT: 8.70 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 229

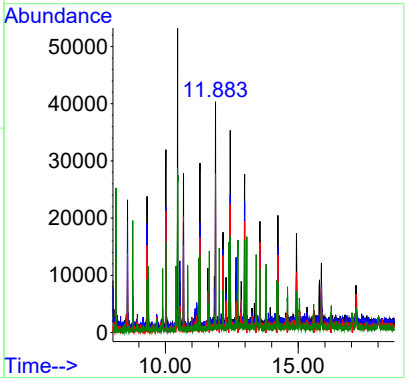
| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 63.1 |
| 264 | 48.7 |
| 266 | 0.0 |

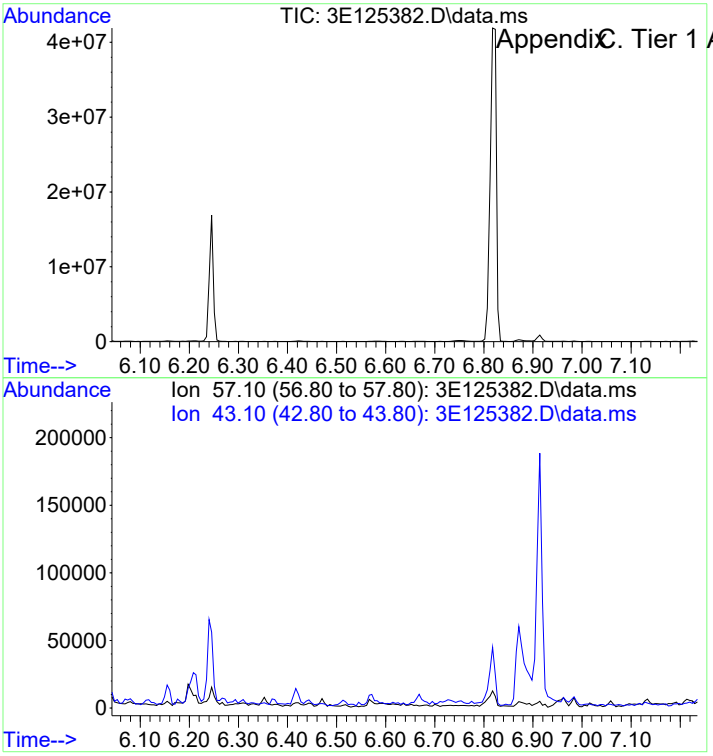



#20
n-Alkane
Concen: 467904.00 ppm m
RT: 11.883 min Scan# 1093
Delta R.T. -0.133 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 467904

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 0.5 | 0.0 | 20.0 |
| 71 | 0.7 | 162.1 | 202.1# |
| 85 | 3.3 | 0.0 | 20.0 |



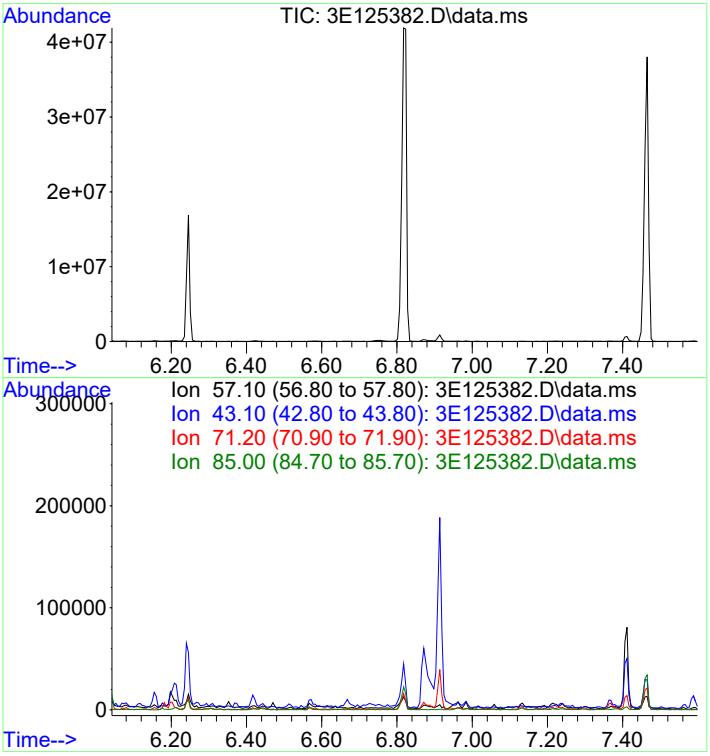



#21
n-Octane (C8)
Concen: N.D.
Expected RT: 6.14 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 235.9 |

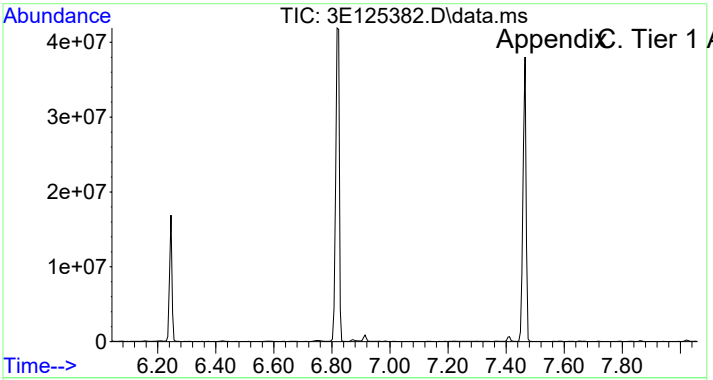



#22
n-Nonane (C9)
Concen: N.D.
Expected RT: 6.50 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 0.1 |
| 71 | 0.1 |
| 85 | 0.0 |

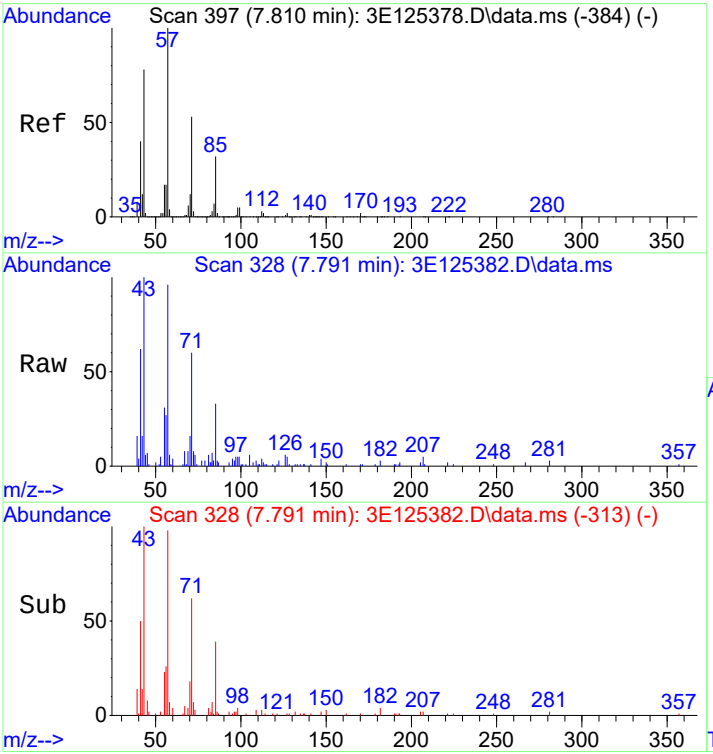



#23
n-Decane (C10)
Concen: N.D.
Expected RT: 6.96 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57

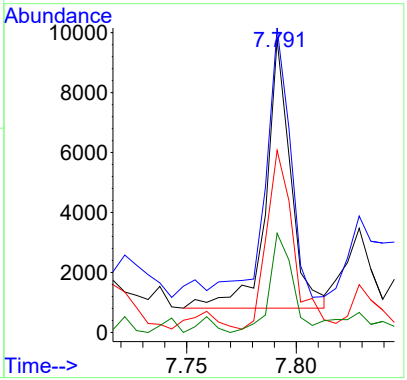
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 90.4 |
| 71 | 39.1 |
| 85 | 27.8 |

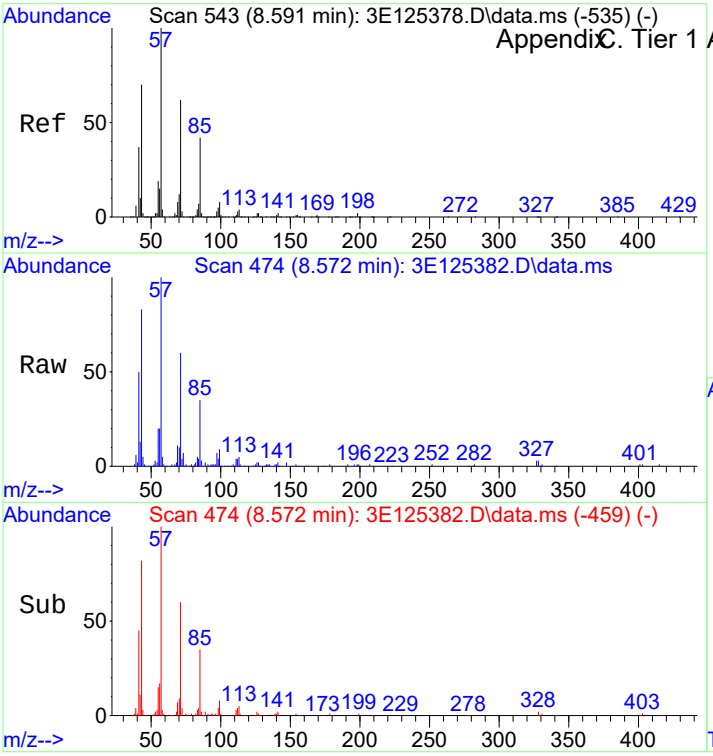



#24
n-Dodecane (C12)
Concen: 7050.00 ug/l
RT: 7.791 min Scan# 328
Delta R.T. -0.019 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 7050

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 97.3 | 62.2 | 93.2# |
| 71 | 72.4 | 42.4 | 63.6# |
| 85 | 33.8 | 25.9 | 38.9 |

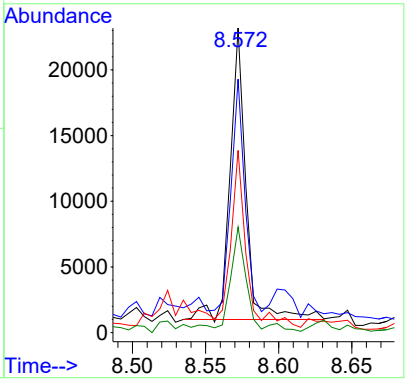


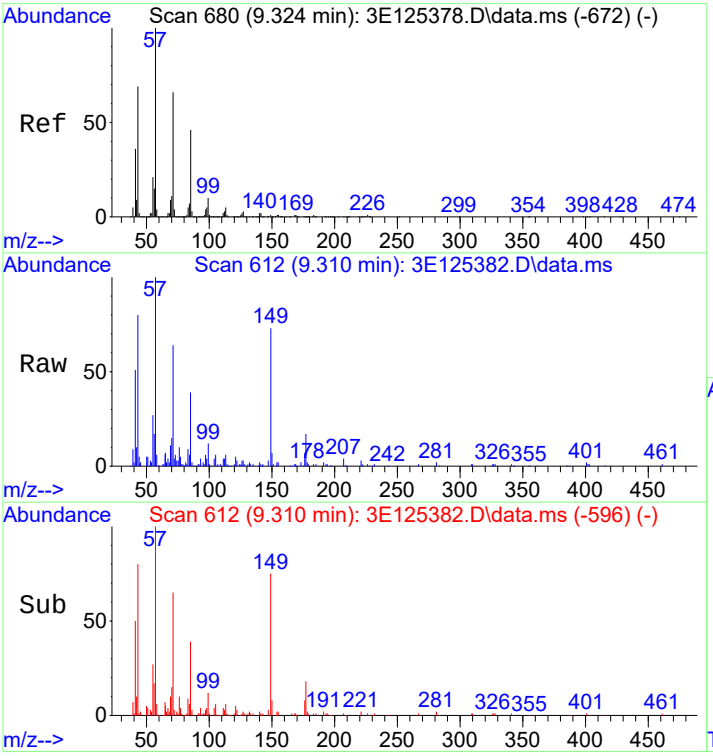



#25
n-Tetradecane (C14)
Concen: 17020.00 ug/l
RT: 8.572 min Scan# 474
Delta R.T. -0.019 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 17020

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 72.3 | 57.6 | 86.4 |
| 71 | 58.3 | 48.6 | 73.0 |
| 85 | 36.1 | 32.5 | 48.7 |

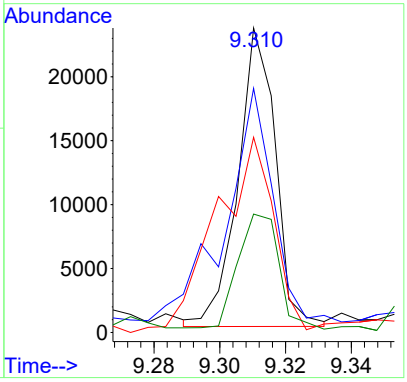


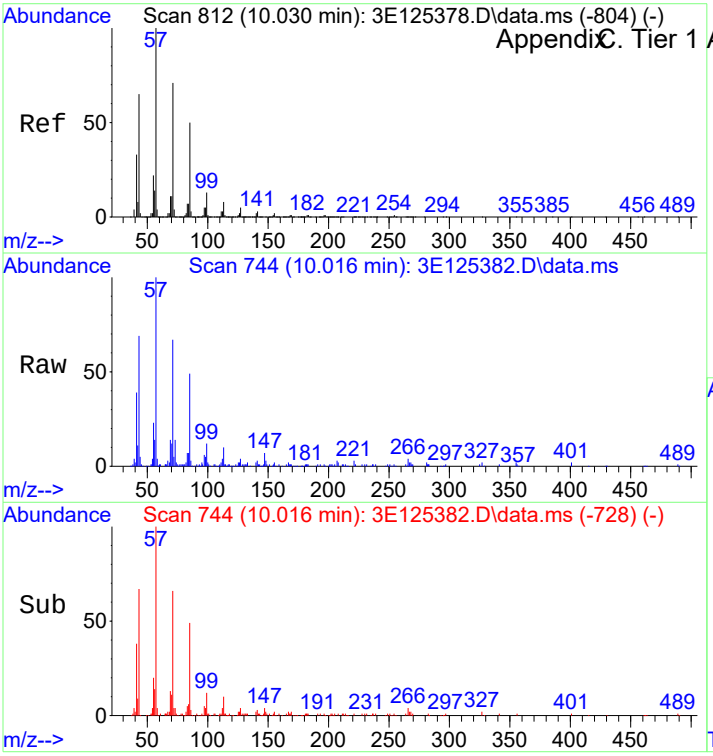




#26
n-Hexadecane (C16)
Concen: 18497.00 ug/l
RT: 9.310 min Scan# 612
Delta R.T. -0.014 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 18497

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 102.6 | 54.8 | 82.2# |
| 71 | 101.9 | 52.3 | 78.5# |
| 85 | 41.5 | 36.8 | 55.2 |

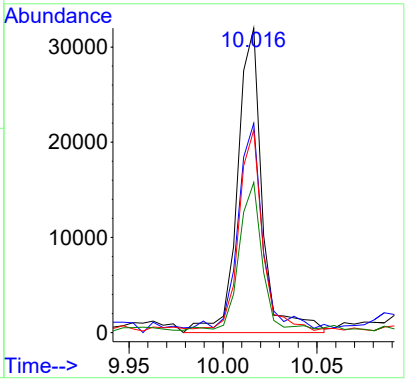


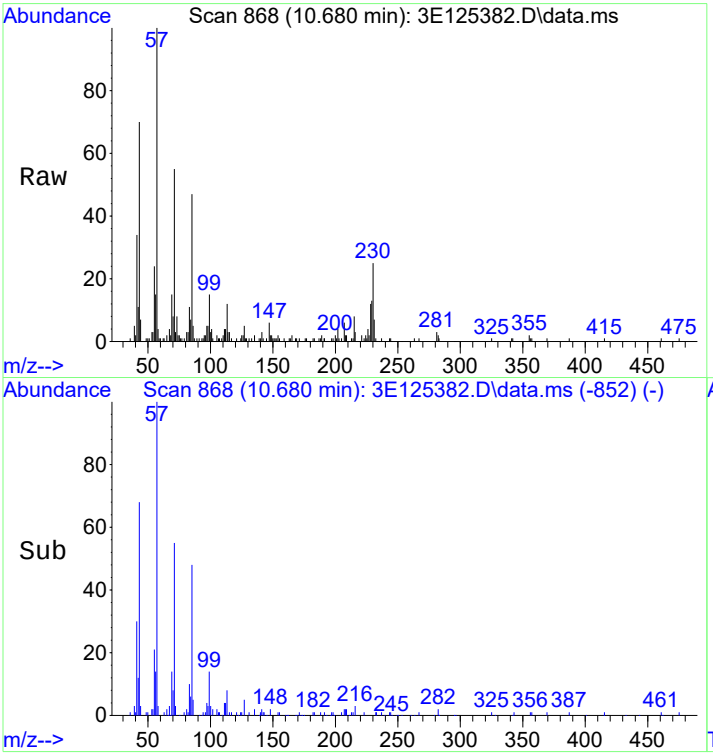



#27
n-Octadecane (C18)
Concen: 29378.00 ug/l
RT: 10.016 min Scan# 744
Delta R.T. -0.014 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 29378

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 65.2 | 53.4 | 80.0 |
| 71 | 60.0 | 55.1 | 82.7 |
| 85 | 45.4 | 39.5 | 59.3 |

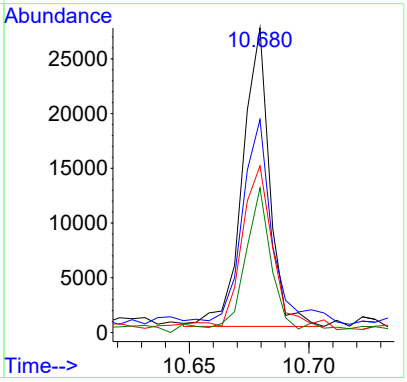


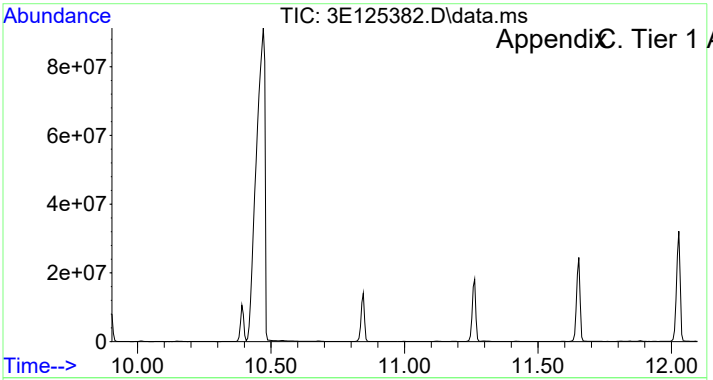



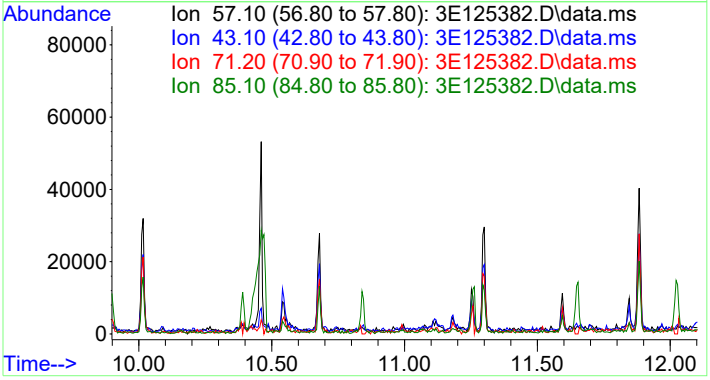

#28
n-Eicosane (C20)
Concen: 21550.00 ug/l
RT: 10.680 min Scan# 868
Delta R.T. -0.013 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 21550

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 75.9 | 52.6 | 79.0 |
| 71 | 66.6 | 56.2 | 84.2 |
| 85 | 51.8 | 41.5 | 62.3 |





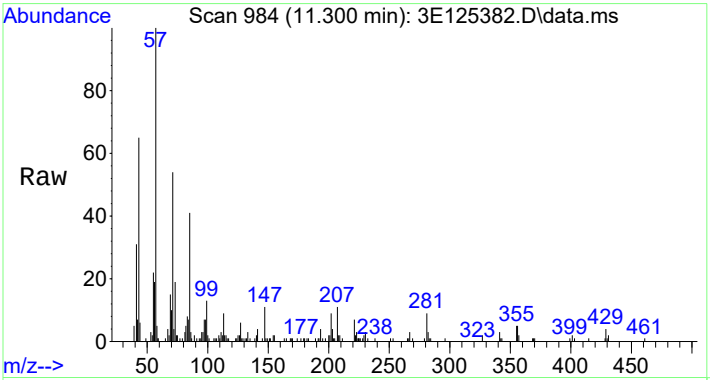




#29
n-Heneicosane (C21)
Concen: N.D.
Expected RT: 11.00 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57

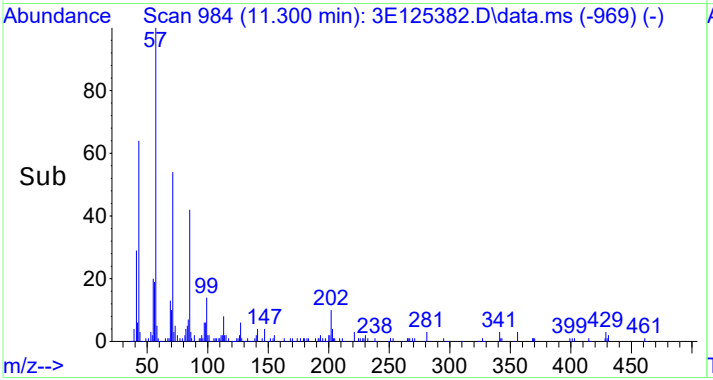
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 65.1 |
| 85 | 51.7 |

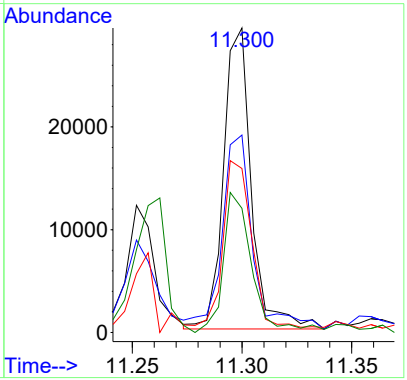


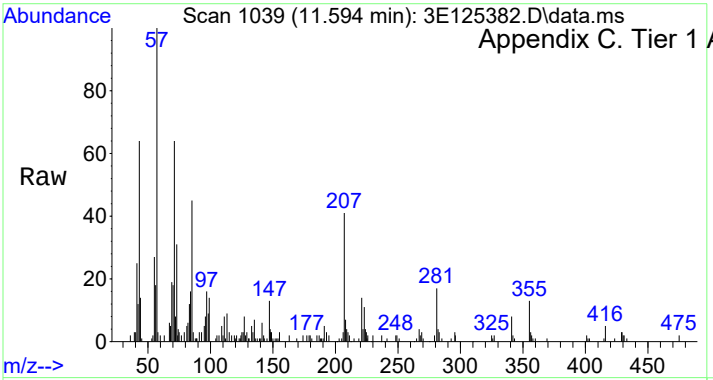

#30
n-Docosane (C22)
Concen: 25915.00 ug/l
RT: 11.300 min Scan# 984
Delta R.T. -0.019 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 25915

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 70.5 | 50.8 | 76.2 |
| 71 | 55.8 | 57.0 | 85.6# |
| 85 | 46.5 | 43.1 | 64.7 |



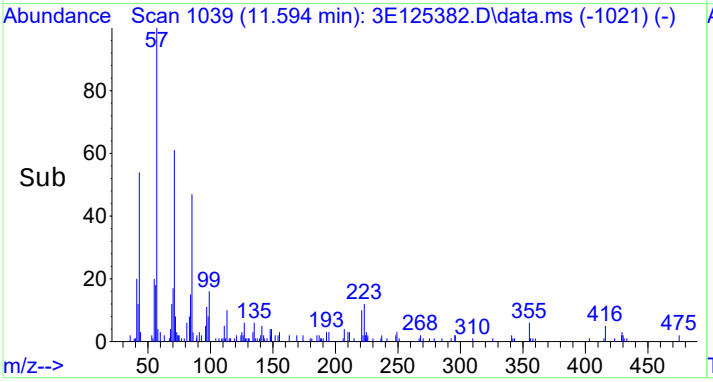



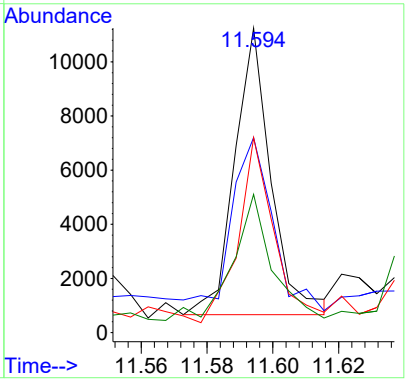


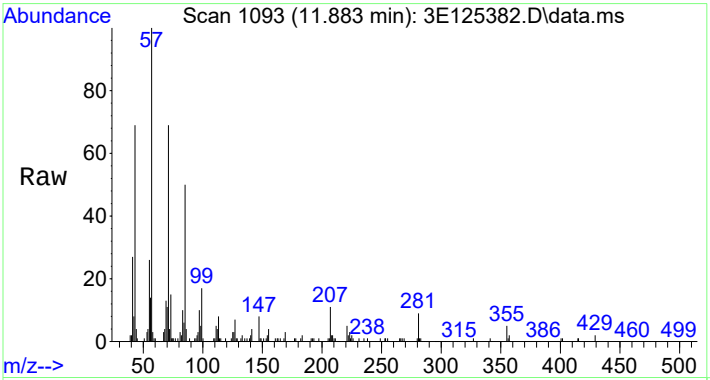

#31
n-Pentacosane (C25)
Concen: 8152.00 ug/l
RT: 11.594 min Scan# 1039
Delta R.T. -0.006 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 8152

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 67.5 | 49.6 | 74.4 |
| 71 | 64.1 | 43.1 | 64.7 |
| 85 | 48.1 | 36.6 | 54.8 |



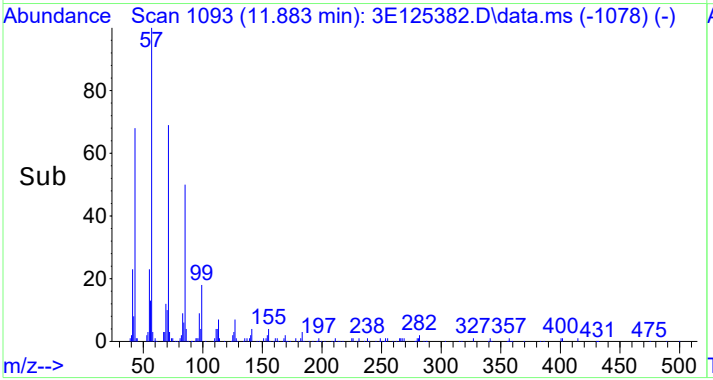



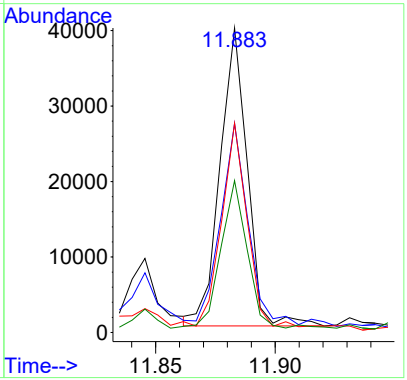



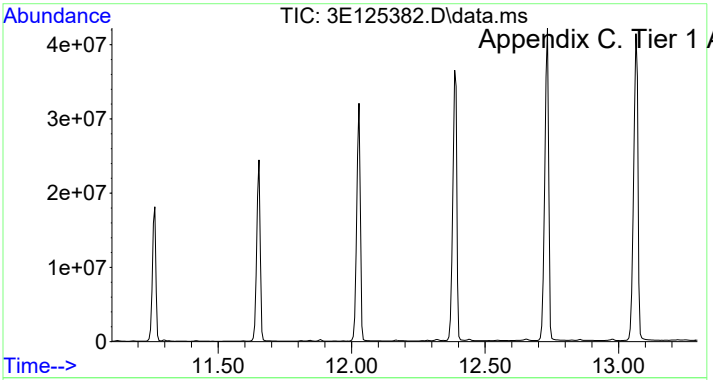

#32
n-Tetracosane (C24)
Concen: 31313.00 ug/l
RT: 11.883 min Scan# 1093
Delta R.T. -0.019 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 31313

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 73.0 | 50.7 | 76.1 |
| 71 | 64.3 | 57.8 | 86.8 |
| 85 | 47.5 | 44.2 | 66.2 |



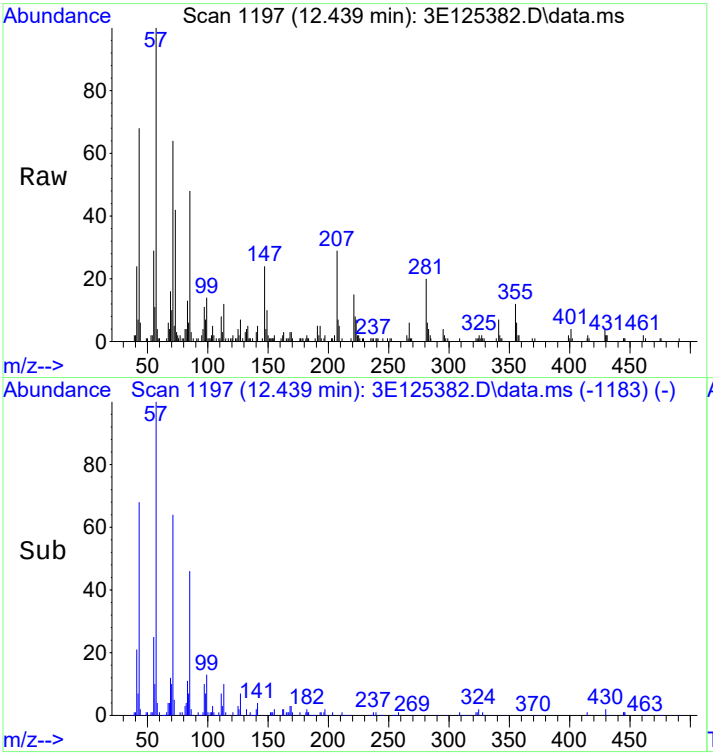



#33
n-Pentacosane (C25)
Concen: N.D.
Expected RT: 12.20 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57

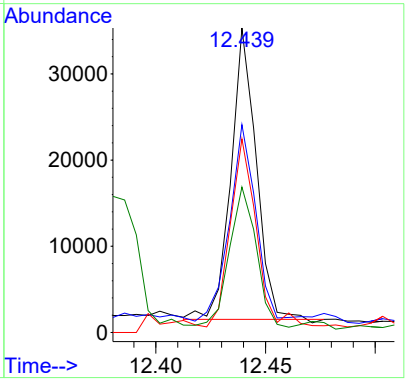
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 79.9 |
| 71 | 70.5 |
| 85 | 42.5 |

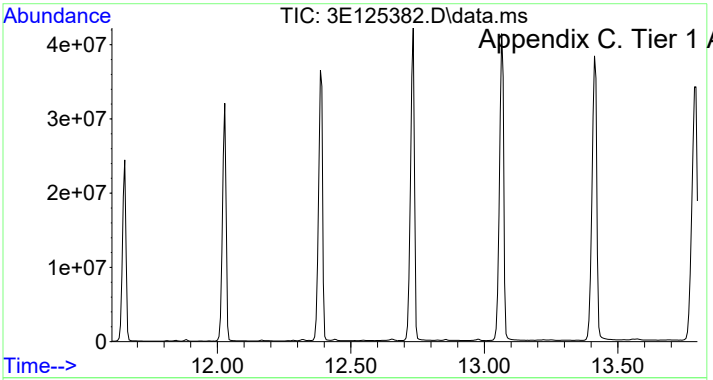


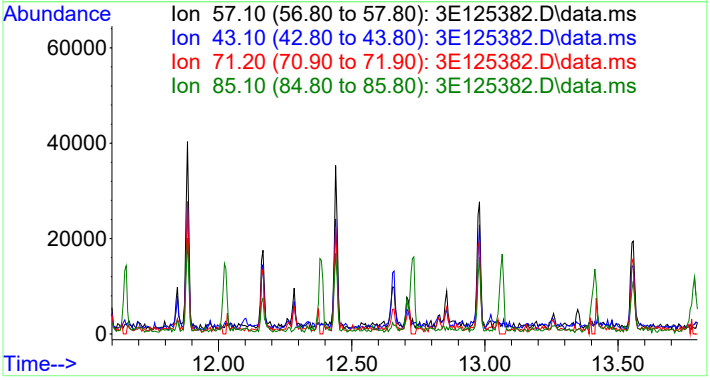

#34
n-Hexacosane (C26)
Concen: 27113.00 ug/l
RT: 12.439 min Scan# 1197
Delta R.T. -0.025 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 27113

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 71.0 | 50.5 | 75.7 |
| 71 | 69.8 | 58.6 | 87.8 |
| 85 | 51.0 | 45.3 | 67.9 |





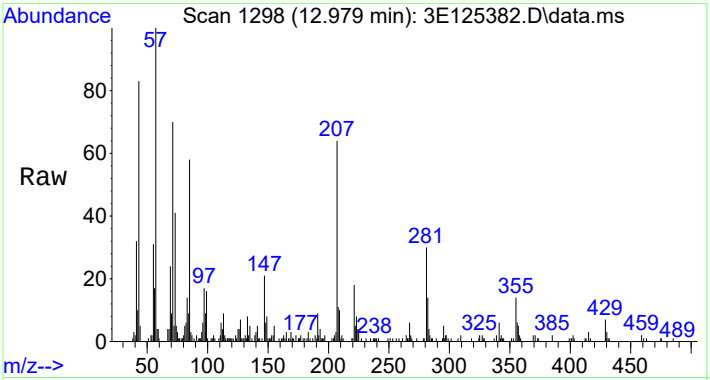




#35
n-Heptacosane (C27)
Concen: N.D.
Expected RT: 12.70 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57

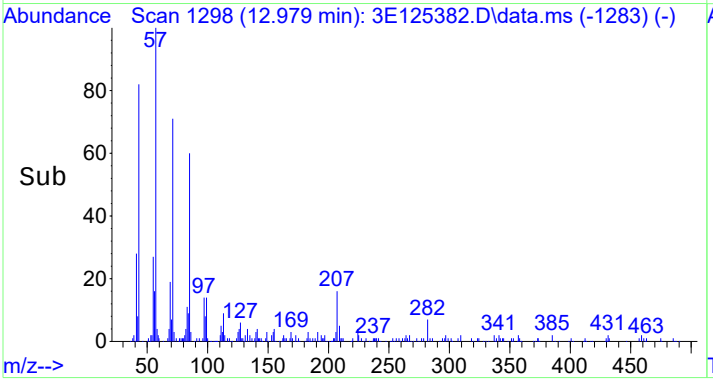
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 76.1 |
| 71 | 90.4 |
| 85 | 86.7 |

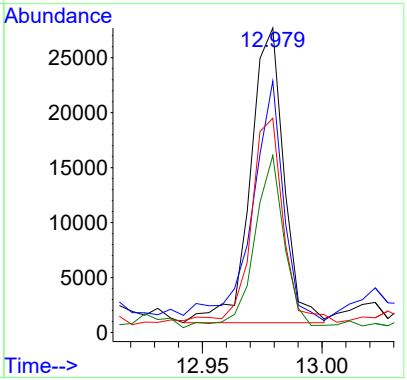


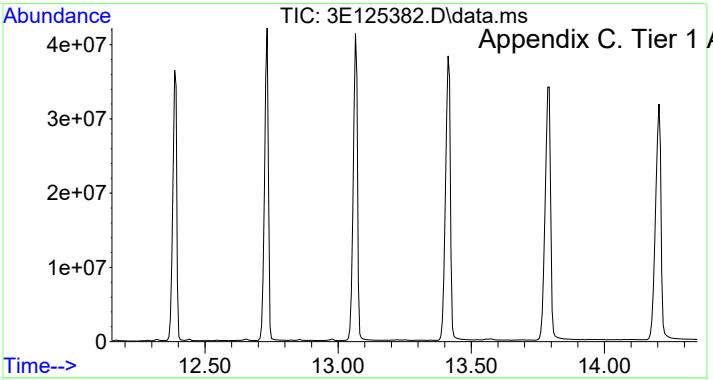

#36
n-Octacosane (C28)
Concen: 26133.00 ug/l
RT: 12.979 min Scan# 1298
Delta R.T. -0.021 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

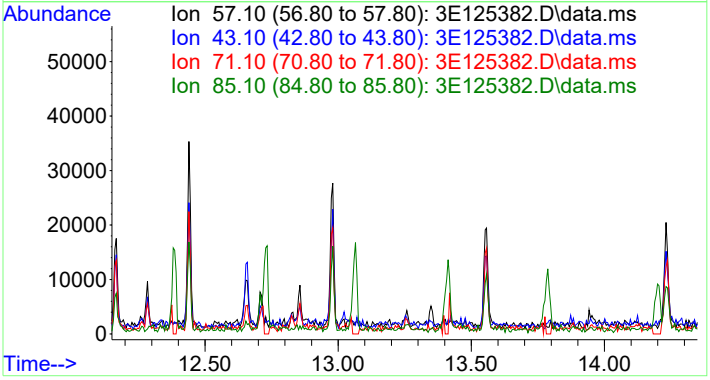
Tgt Ion: 57 Resp: 26133

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 78.0 | 48.6 | 73.0# |
| 71 | 66.8 | 58.3 | 87.5 |
| 85 | 52.5 | 45.0 | 67.6 |





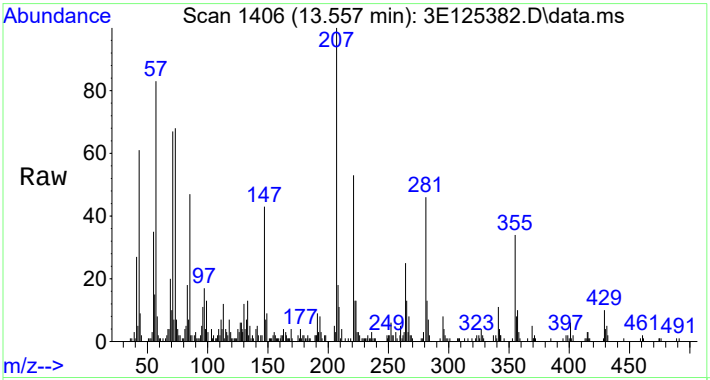




#37
n-Nonacosane (C29)
Concen: N.D.
Expected RT: 13.25 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57

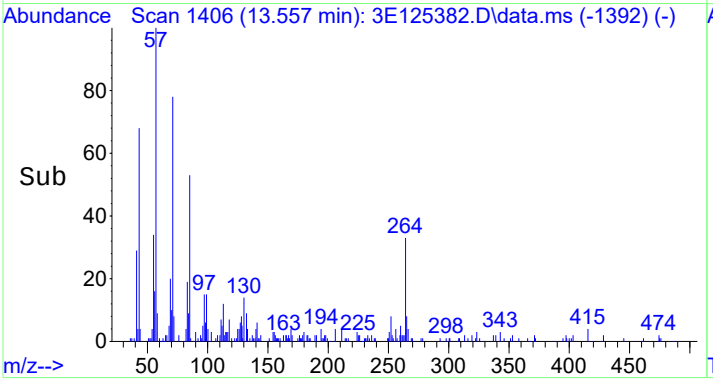
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.1 |
| 71 | 78.4 |
| 85 | 67.7 |

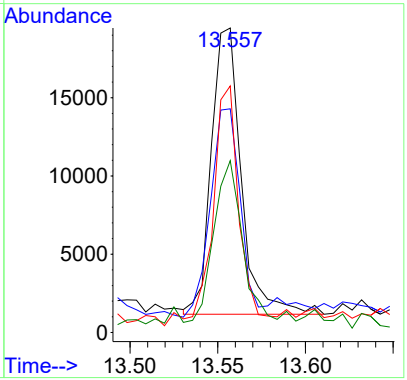


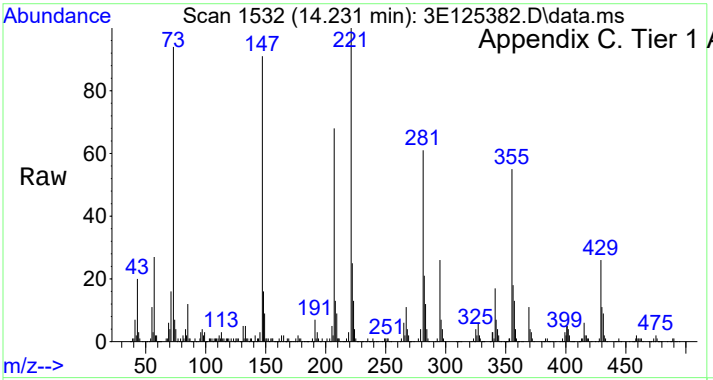

#38
n-Triacontane (C30)
Concen: 21828.00 ug/l
RT: 13.557 min Scan# 1406
Delta R.T. -0.024 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 21828

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 73.1 | 47.7 | 71.5# |
| 71 | 74.6 | 58.2 | 87.4 |
| 85 | 53.2 | 45.5 | 68.3 |



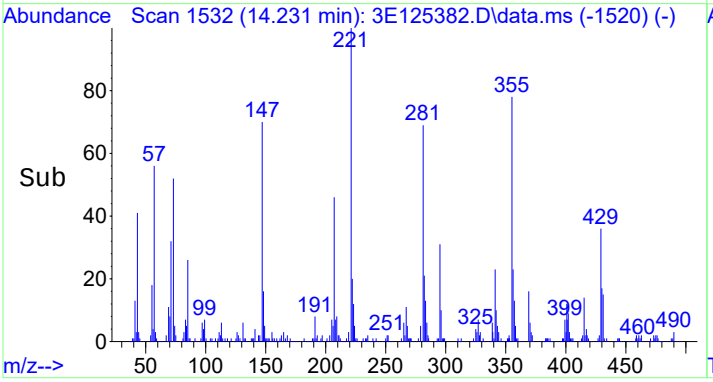



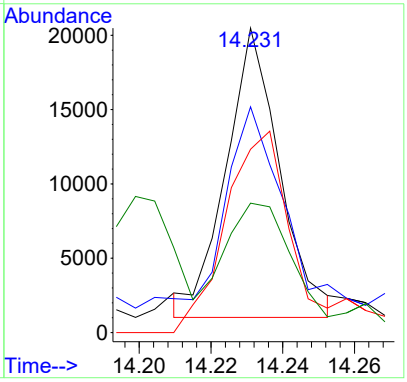


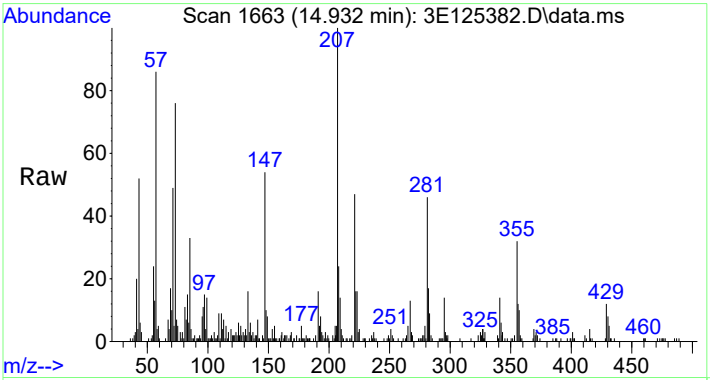

#39
n-Dotriacontane (C32)
Concen: 20097.00 ug/l m
RT: 14.231 min Scan# 1532
Delta R.T. -0.035 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 20097

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 0.0 | 46.9 | 70.3# |
| 71 | 0.0 | 57.4 | 86.0# |
| 85 | 0.0 | 44.5 | 66.7# |



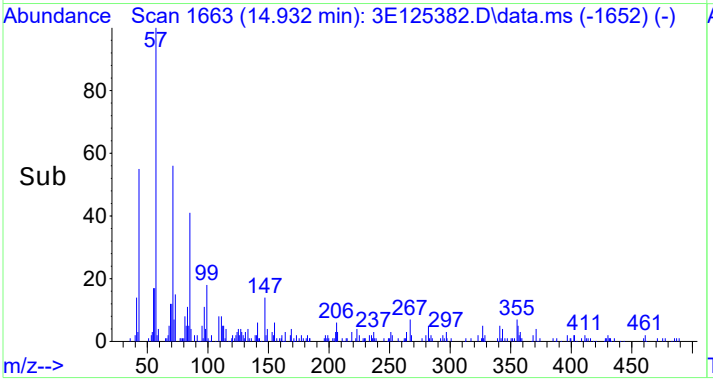



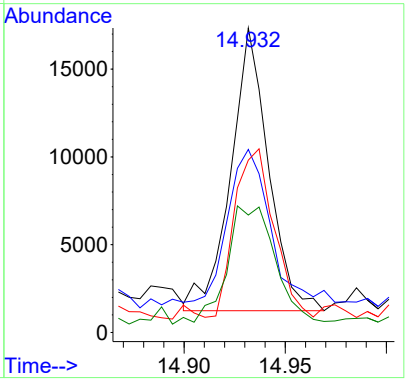



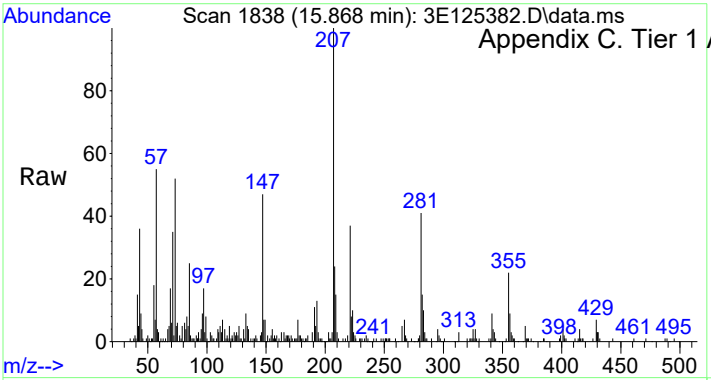

#40
n-Tetratriacontane (C34)
Concen: 20931.00 ug/l
RT: 14.932 min Scan# 1663
Delta R.T. -0.040 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 20931

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 63.8 | 45.9 | 68.9 |
| 71 | 61.9 | 56.8 | 85.2 |
| 85 | 51.3 | 43.7 | 65.5 |



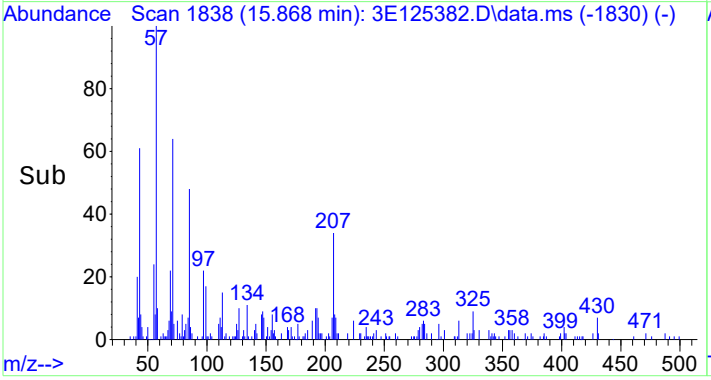



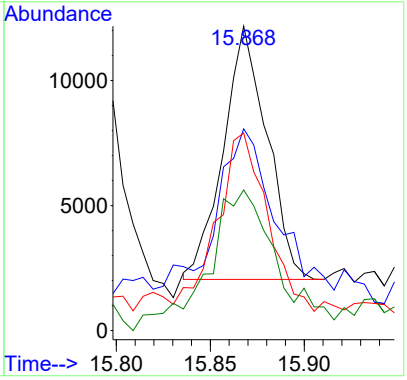


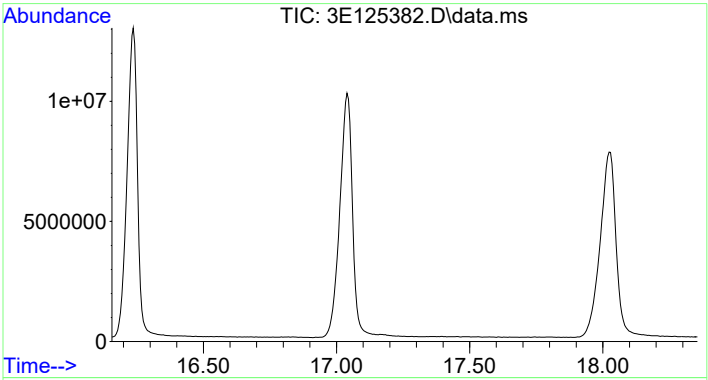

#41
n-Hexatriacontane (C36)
Concen: 16371.00 ug/l
RT: 15.868 min Scan# 1838
Delta R.T. -0.056 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57 Resp: 16371

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 76.3 | 45.0 | 67.6# |
| 71 | 76.4 | 56.8 | 85.2 |
| 85 | 68.0 | 43.5 | 65.3# |



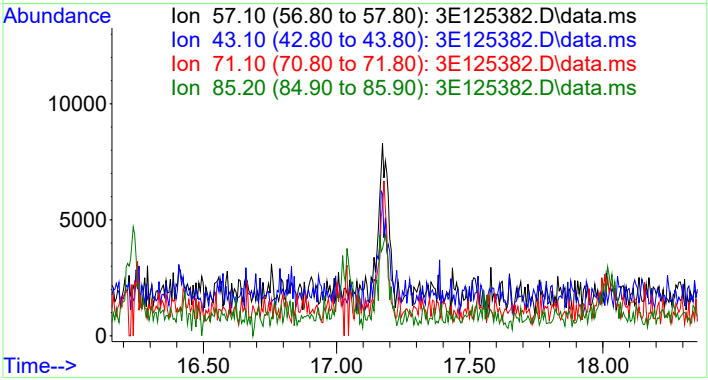



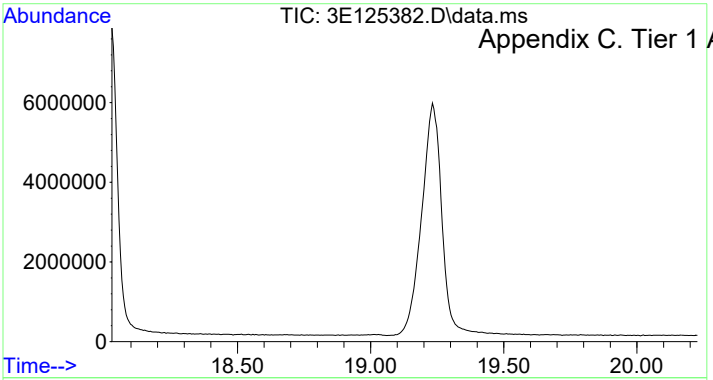

#42
n-Octatriacontane (C38)
Concen: N.D.
Expected RT: 17.26 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 55.0 |
| 71 | 70.8 |
| 85 | 53.9 |



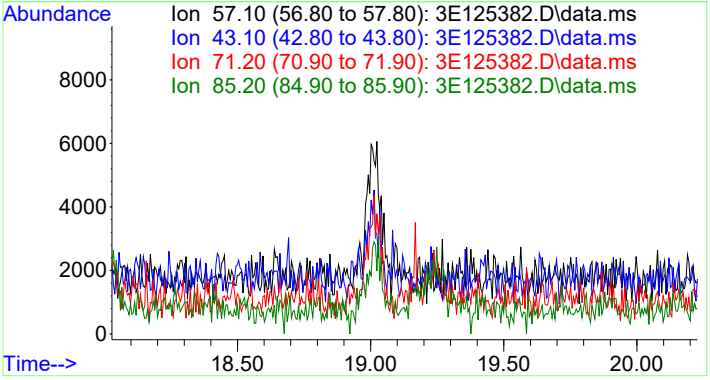


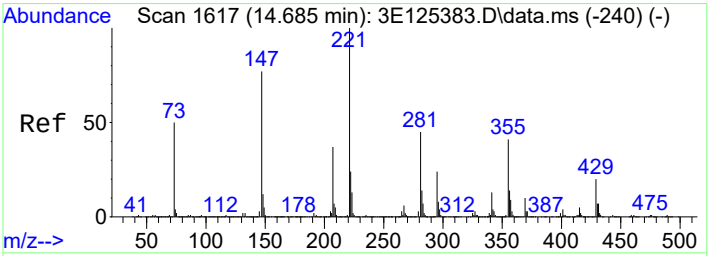

#43
n-Tetracontane (C40)
Concen: N.D.
Expected RT: 19.13 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 70.6 |
| 85 | 53.9 |

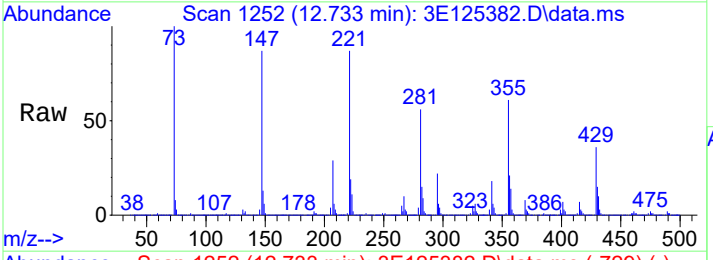


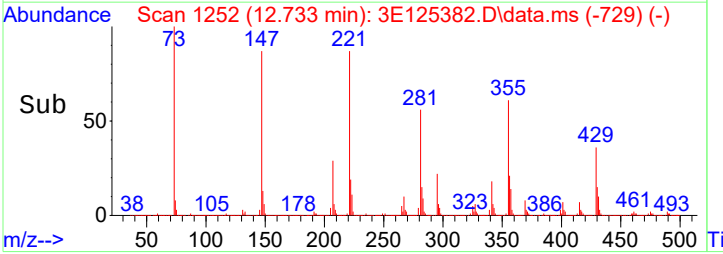



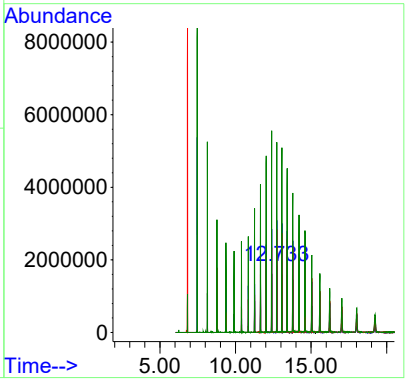

#44
Siloxane
Concen: 17770016.00 ppm m
RT: 12.733 min Scan# 1252
Delta R.T. 2.697 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

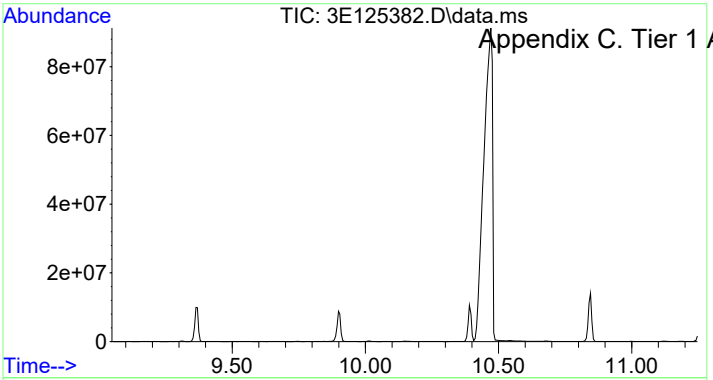
Tgt Ion:429 Resp:17770016

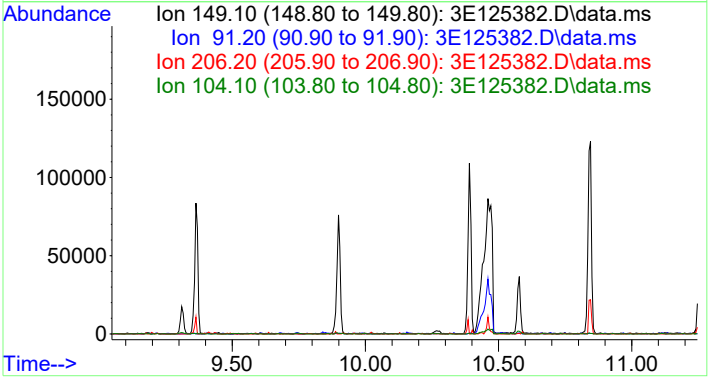
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 429 | 100 | | |
| 355 | 0.0 | 0.0 | 20.0 |
| 281 | 0.0 | 0.0 | 20.0 |
| 73 | 0.0 | 0.0 | 20.0 |





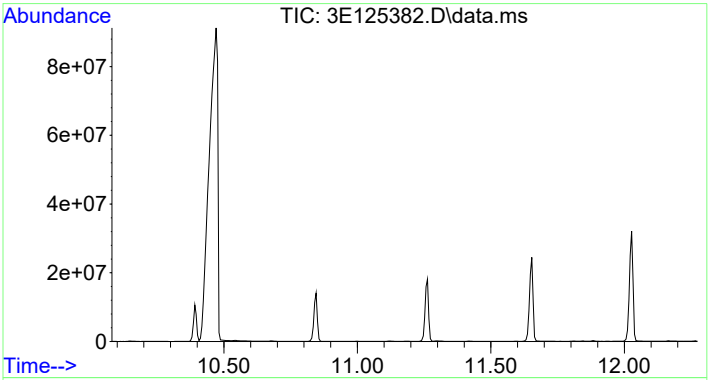



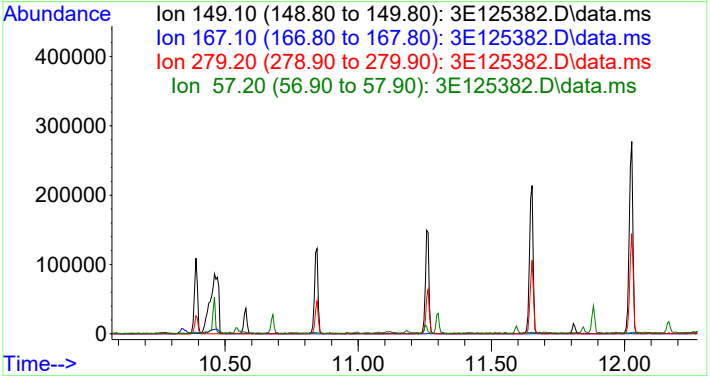

#45
Butyl benzyl phthalate
Concen: N.D.
Expected RT: 10.15 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 91 | 97.4 |
| 206 | 28.9 |
| 104 | 19.1 |



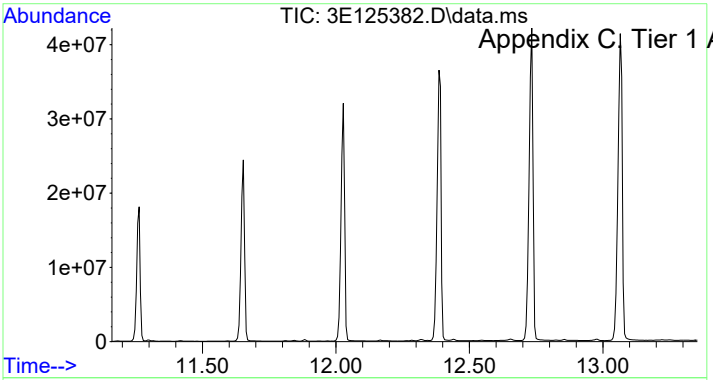




#46
Bis(2-ethylhexyl)phthalate
Concen: N.D.
Expected RT: 11.18 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 167 | 34.3 |
| 279 | 10.6 |
| 57 | 34.0 |

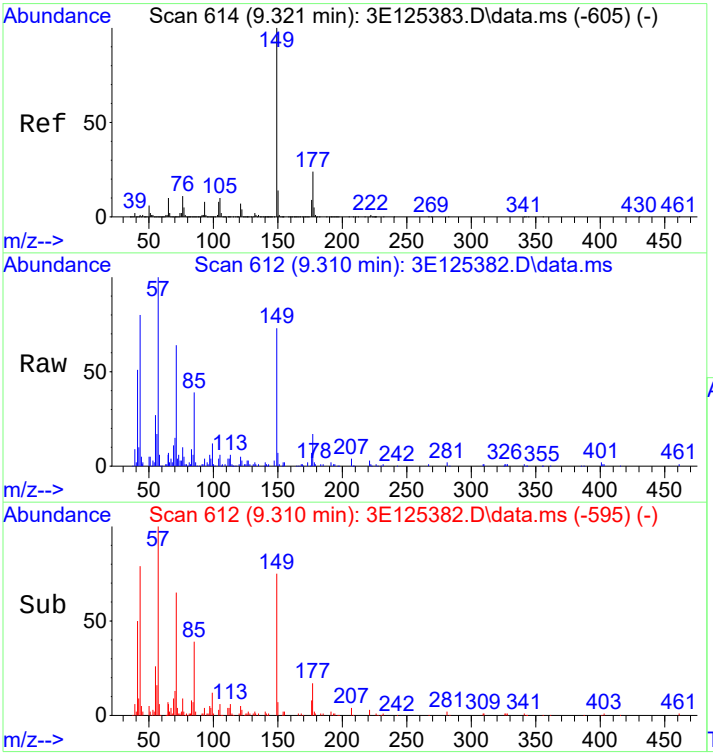



#47
Di-n-octylphthalate
Concen: N.D.
Expected RT: 12.26 min

Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion: 149

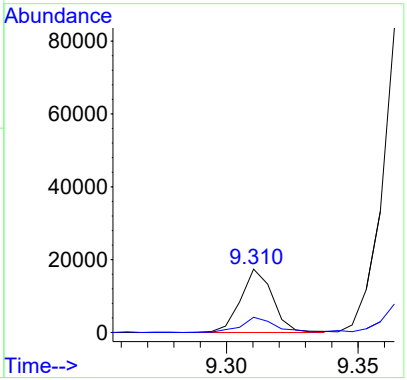
| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 43 | 12.1 |
| 150 | 10.0 |




#48
Diethyl Phthalate
Concen: 14771.00 ug/l
RT: 9.310 min Scan# 612
Delta R.T. -0.011 min
Lab File: 3E125382.D
Acq: 20 Jul 2024 1:25 pm

Tgt Ion:149 Resp: 14771

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 149 | 100 | | |
| 177 | 25.2 | 17.0 | 25.6 |



Appendix C. Tier 1 Analysis Tech Memos

AECOM
1001 Bishop Street
Suite 1600
Honolulu, HI 96813
aecom.com

August 9, 2024

CDR Benjamin Dunn, P.E.
NAVFAC Hawaii
400 Marshall Road
JBPHH HI 96860-3139

**Subject:** **Joint Base Pearl Harbor-Hickam Drinking Water**
**EDWM GRO Detection Investigation**
**Zone H1, Hydrant 1387**

Attention CDR Dunn:

On Sunday, July 21, 2024, AECOM Technical Services, Inc. (AECOM) was notified of a gasoline range organics (GRO) detection of 63.5 micrograms per liter (µg/L) in sample H1-DL-0017756-24183-A, collected at hydrant 1387 in Zone H1 on July 16, 2024. **The GRO detection has been determined to be cross-contamination with isopropyl alcohol (IPA), which is a material used to decontaminate hydrant fittings. Acetone, used in the manufacture of IPA, was also detected in the sample. Neither IPA nor acetone are fuel.** The sample was analyzed at (b) (4), Colorado, via gas chromatography/mass spectrometry (GC/MS) using SW-846 Method 8260. GRO concentrations are calculated by summing the areas of all peaks coming out (eluting) between the observed retention times for pentane (C5) and dodecane (C12), then subtracting out the areas attributable to the internal standards and surrogate standard that were added by the laboratory prior to analysis.

Review of the chromatogram indicates that the reported concentration is due almost exclusively to two discrete peaks that elute on the chromatogram just beyond 3 minutes There are no other significant peaks, and a fuel pattern was not observed. Since this sample was analyzed via GC/MS, the laboratory was able to isolate these peaks and perform mass spectral analysis. The peaks have been identified as acetone and isopropyl alcohol (IPA), with the larger peak identified as IPA. IPA is a chemical used to decontaminate hydrant fittings prior to sampling. It is believed that IPA was introduced into the sample in the field as a direct result of the decontamination procedures. The acetone may be an impurity in the IPA since acetone is frequently used in the manufacturing of IPA, or it may have been introduced in the laboratory since acetone is a common laboratory contaminant.

The chromatogram from the 8260 analysis of H1-DL-0017756-24183-A is shown on Figure 1. The chromatogram contains two peaks (outlined in a red box) that come out on the chromatogram (elute) between 3 and 4 minutes, two internal standards and one surrogate standard. Internal standards and surrogate standards are chemicals added by the laboratory to monitor analytical performance and are not part of the sample.

Figure 2 displays the sample chromatogram (black) overlayed with a gasoline calibration standard (green), retention time marker (blue), and Jet Propellant 5 (JP-5) (red). The sample chromatogram does not display the characteristic multi-peak patterns of either gasoline or JP-5. Furthermore, both peaks in the sample elute between the retention times bracketed by the C5 (pentane) and C6 (hexane) markers. JP-5 does not begin to elute until the C9 (nonane) marker.

**Figure 1. H1-DL-0017756-24183-A (Lab ID DA65707-1)**

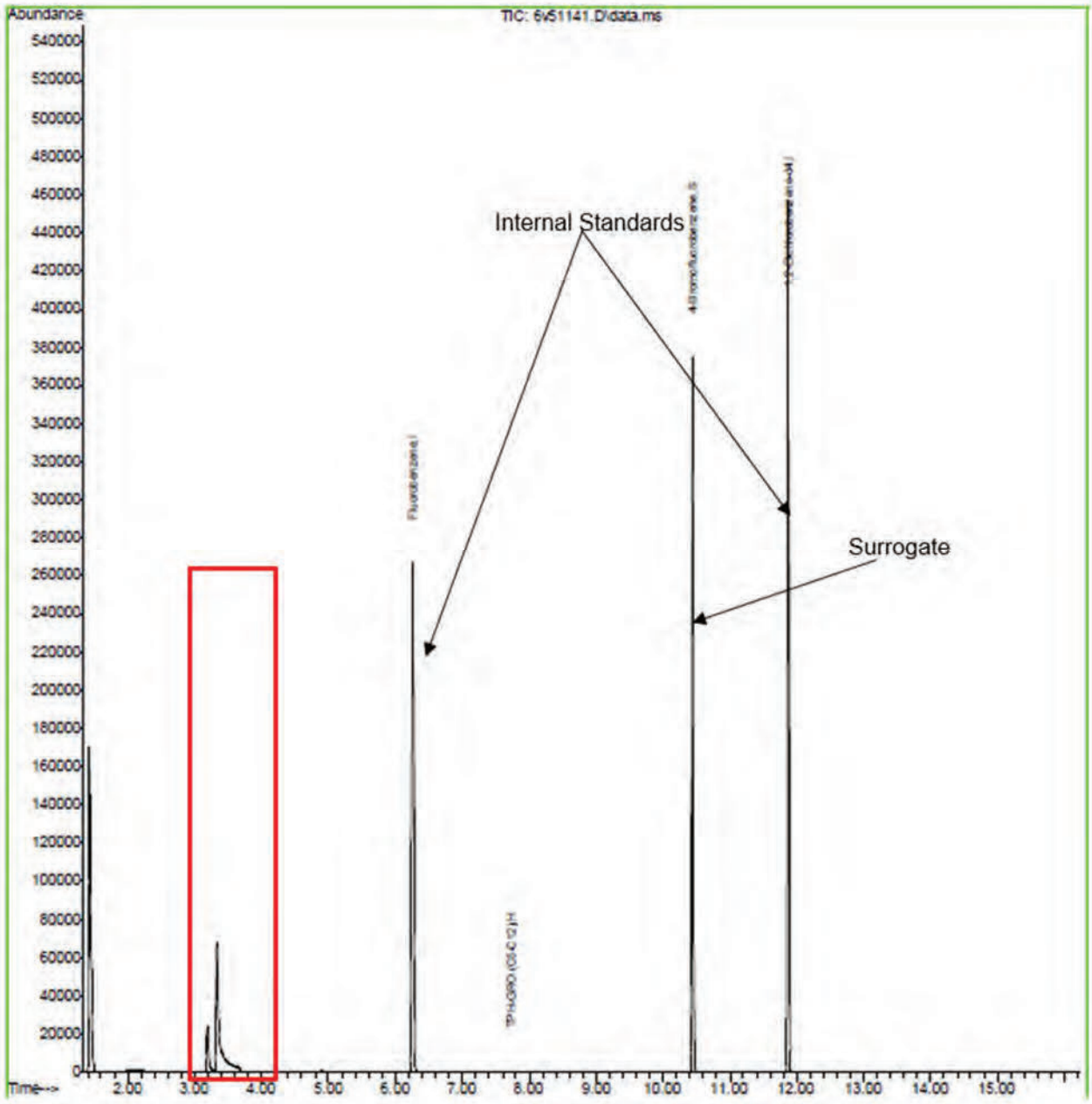
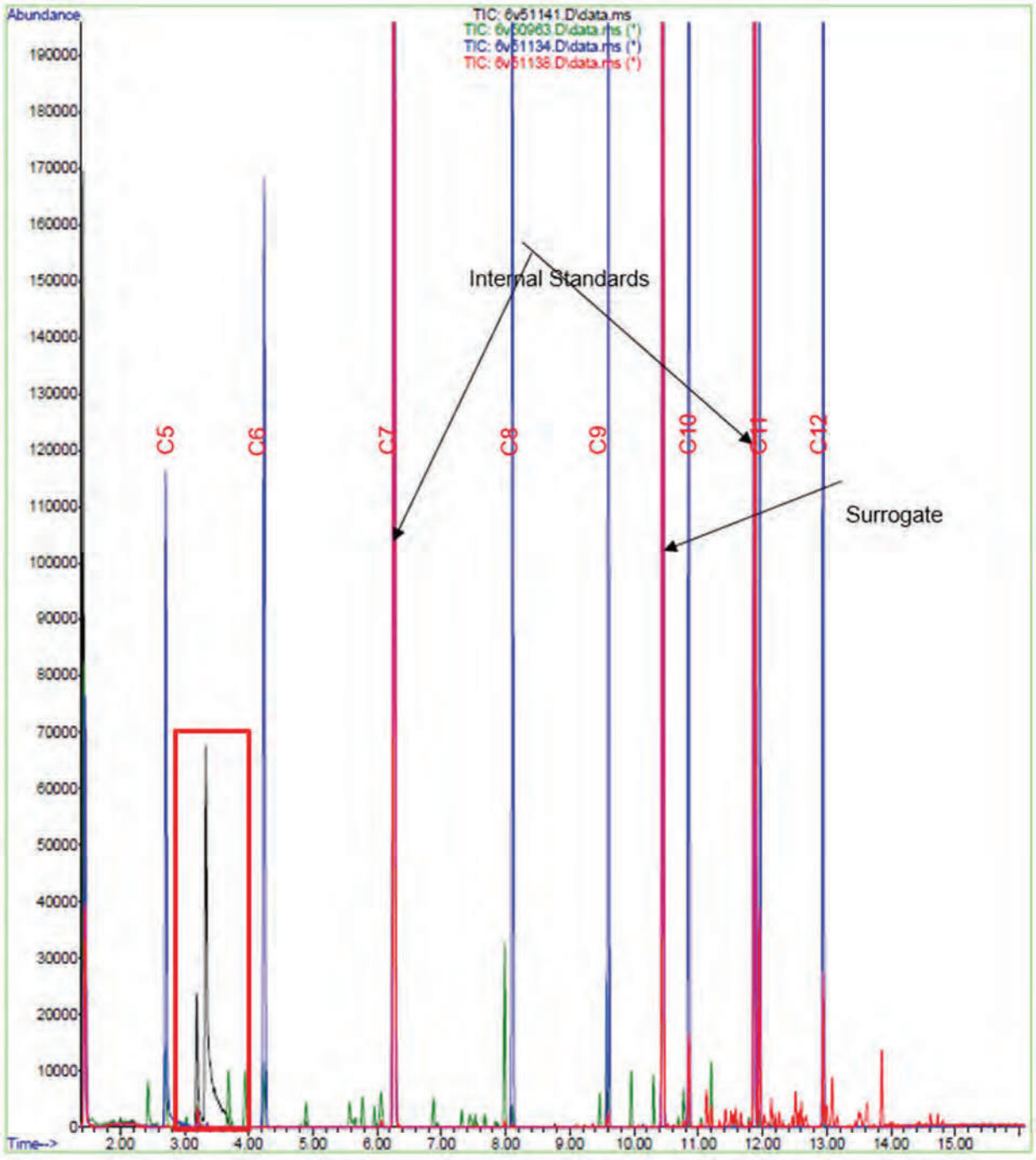


**Figure 2. H1-DL-0017756-24183-A, overlayed with GRO standard (green), retention time marker standard (blue) and JP-5 (red)**




GC/MS methods such as 8260 allow for the evaluation of mass spectra of specific peaks, which makes it possible to identify individual compounds. Therefore, the laboratory was able to identify the individual peaks in the chromatogram from the original analysis. The mass spectrum for the large peak eluting at 3.33 minutes is provided on Figure 3 and identifies the peak as IPA. The tailing peak shape, early RT, and mass spectrum are all consistent with IPA. Figure 4 presents the mass spectral analysis of the peak at 3.19 minutes and identifies it as acetone.

**Figure 3. H1-DL-0017756-24183-A (8260 Mass Spectral Analysis of peak at 3.33 minutes)**

```
**********************************************************************
Peak Number  3  Isopropyl Alcohol                 Concentration Rank  2

  R.T.      EstConc          Area       Relative to ISTD          R.T.
----------------------------------------------------------------------
  3.330   18.48 ppb        189591   Fluorobenzene                6.261

 Hit# of  5    Tentative ID                MW  MolForm       CAS#        Qual
----------------------------------------------------------------------
 1 Isopropyl Alcohol                      60  C3H8O         000067-63-0 83
 2 Isopropyl Alcohol                      60  C3H8O         000067-63-0 78
 3 Isopropyl Alcohol                      60  C3H8O         000067-63-0 74
 4 Isopropyl Alcohol                      60  C3H8O         000067-63-0 64
 5 Isopropyl Alcohol                      60  C3H8O         000067-63-0 9
```

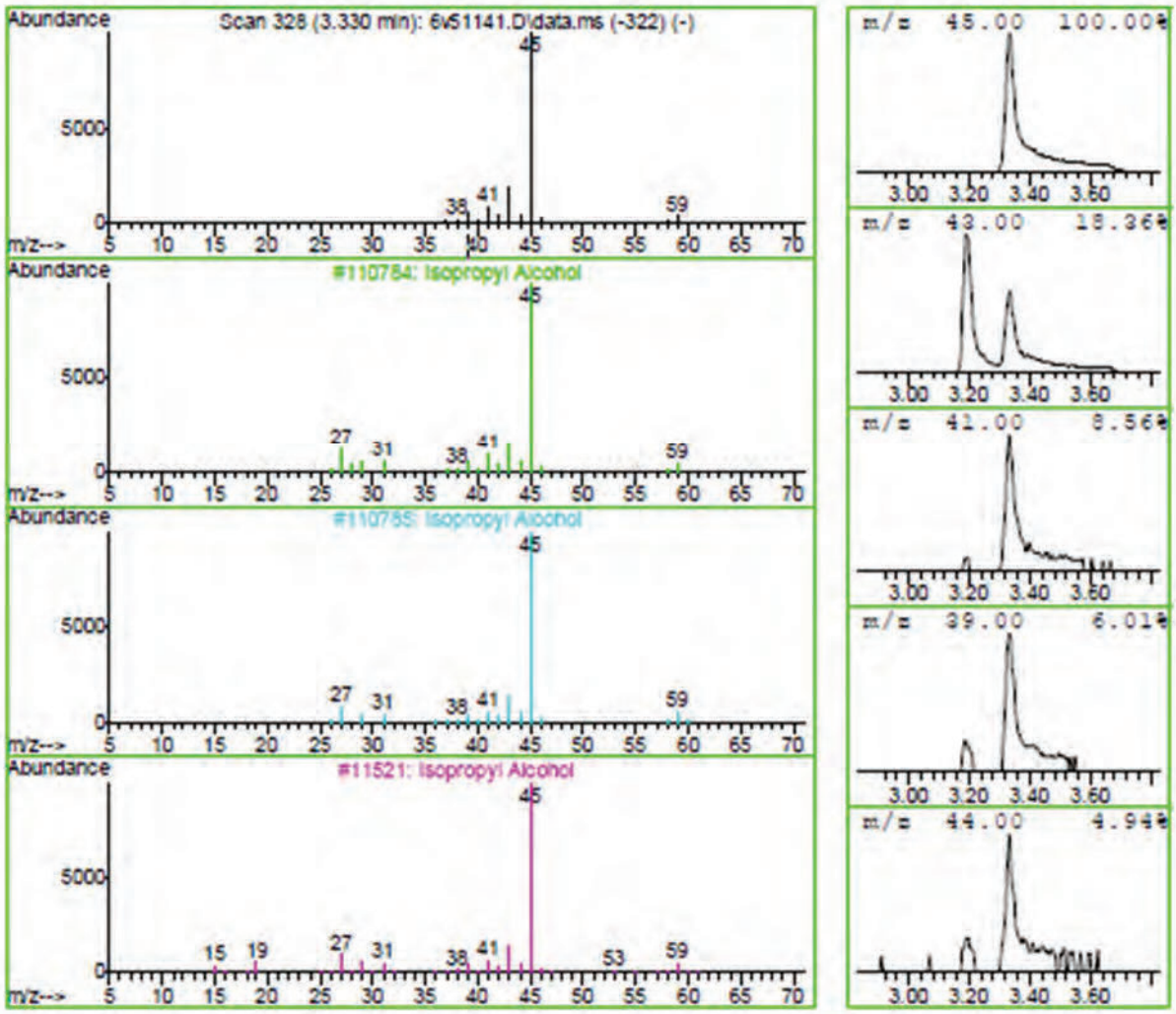
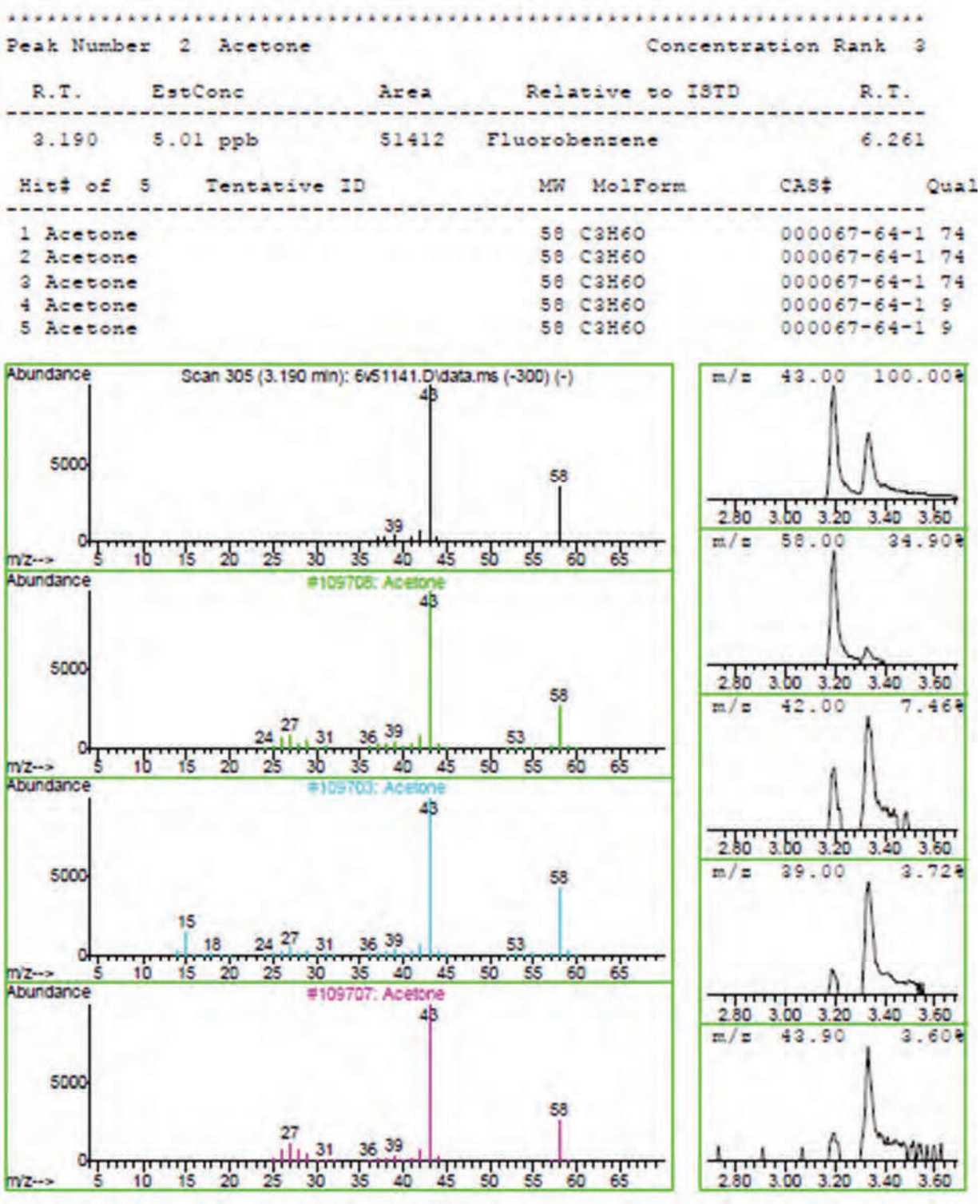


**Figure 4. D2-DL-0017717-24122-N (8260 Mass Spectral Analysis of peak at 3.19 minutes)**




The laboratory noted that IPA and acetone were detected in the same sample analyzed by EPA Method 524.2, also a GC/MS method. This suggests that the compound was present in the sample as received at the laboratory and is not the result of laboratory contamination. It is extremely unlikely that the water in the hydrant contained IPA, suggesting that the compound was introduced into the sample at the time of collection.

AECOM's standard operating procedure (SOP) for hydrant sampling specifies decontamination of the hydrant spigot fitting with IPA using a spray bottle, followed by rinsing with deionized (DI) water prior to purging and sampling. The DI rinse and purging should have eliminated any traces of IPA, but it is possible that the IPA came into contact with another piece of equipment or the sampler's glove and was introduced into the sample. It is also possible that some IPA was on the outside of the spray bottle or remained in the nozzle. If the spray bottle was in the vicinity of the sampling container, volatilized IPA could have been introduced into the sampling containers.

AECOM concludes that the water from Hydrant 1387 does not contain petroleum hydrocarbons. The GRO detection is the result of contamination with IPA in conjunction with decontamination procedures conducted on the hydrant prior to sampling. AECOM initiated a stand down and reviewed sampling and decontamination procedures with all sampling personnel on July 31, 2024. A sign-in sheet of the samplers who were in attendance for the stand down was provided via email on August 5, 2024. Sampling personnel were reminded of the need to change gloves after decontamination and flushing prior to sample collection. In addition, the IPA spray bottle will be removed from the sampling area and returned to the vehicle prior to opening any sample containers. AECOM will ensure that any new sampling personnel are provided with the updated SOP training prior to collecting any samples and will continue to conduct periodic refresher training with existing staff. Any modifications to SOPs will result in training for the entire team.

Questions regarding this letter should be addressed to (b) (6)

Yours sincerely,

(b) (6)

(b) (6)
Senior Project Chemist
(b) (6)

CLEAN Program Manager

cc: (b) (6)

AECOM
1001 Bishop Street
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August 21, 2024

CDR Benjamin Dunn, P.E.
NAVFAC Hawaii
400 Marshall Road
JBPHH HI 96860-3139

**Subject:** **Joint Base Pearl Harbor-Hickam Drinking Water**
**EDWM TPH Detection Investigation**
**Sample D2-DL-0017711-24092-N**

Attention CDR Dunn:

On Saturday, April 20, 2024, AECOM Technical Services, Inc. (AECOM) was notified of an oil range organics (ORO) detection of 48.4 micrograms per liter (µg/L) in sample D2-DL-0017711-24092-N, collected from hydrant 236 in Zone D2 on April 15, 2024. The sample was analyzed at (b) (4) [redacted], Colorado, for total petroleum hydrocarbons (TPH) via EPA SW-846 Method 8015D following microextraction by SW-846 Method 3511. Reported TPH values are the sum of diesel range organics (DRO) and ORO. DRO was reported as not detected at the method detection limit of 47 µg/L. The sample chromatogram was reviewed to determine if the reported detection was likely to be related to a fuel-related petrogenic source, particularly the November 2021 release of Jet Propellant 5 (JP-5), and if not, to assign a probable reason for the detection. **All evidence points to the conclusion that this detection is unrelated to JP-5 and is likely due to contamination with a lubricating grease present in the hydrant at the time of sample collection.**

The chromatogram for this sample is shown on Figure 1. Figure 2 displays the retention time (RT) marker reference standard[1] with each of the carbon numbers labeled. The sample chromatogram shows an unresolved complex mixture that begins to elute (come out) at approximately the C20 range and extends slightly beyond C40. Since JP-5 elutes in the C10 to C16 range (Figure 3), there is no overlap with the substance found in the sample and therefore is not related. This is further demonstrated on Figure 4, which presents the sample (black) overlayed with the JP-5 standard (blue).

AECOM also evaluated the possibility that the sample was inadvertently contaminated with the laboratory's ORO standard solution during preparation or analysis. Figure 5 presents an overlay of the sample (black) with the laboratory's ORO standard (blue). The patterns are markedly different, with the ORO standard showing a distinctive bell-shaped pattern beginning just after 3.2 minutes, reaching a maximum response at shortly beyond 4.0 minutes and returning to baseline at 5.2 minutes. The sample produces a broader, less defined peak pattern that does not return to baseline until approximately 6.0 minutes.

[1] RT marker reference standards are standards containing n-alkanes with different numbers of carbon atoms and are analyzed with each run for the purpose of determining the beginning and end of carbon ranges of interest. The DRO area is defined as the total area of all peaks that come out (elute) between the retention time of C10 (decane, the 10 carbon, straight chain alkane) and the retention time of C24 (tetracosane, the 24 carbon, straight chain alkane); the ORO area is defined as the total area of peaks that elute between the retention times of C24 and C40.

**Figure 1. Sample DA65684-2, D2-DL-0017711-24092-N**

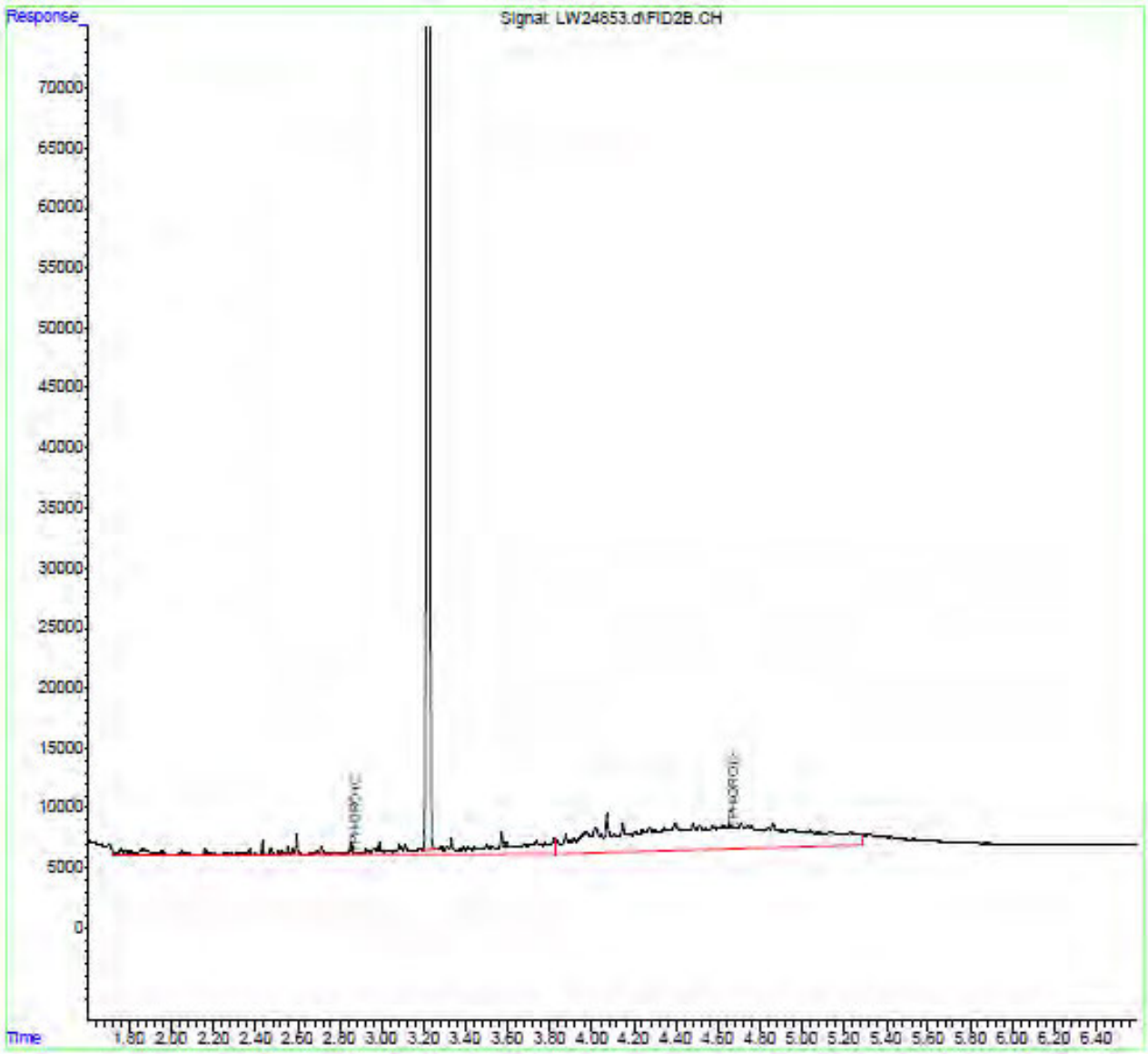


**Figure 2. Retention Time Marker Standard with Carbon Numbers**

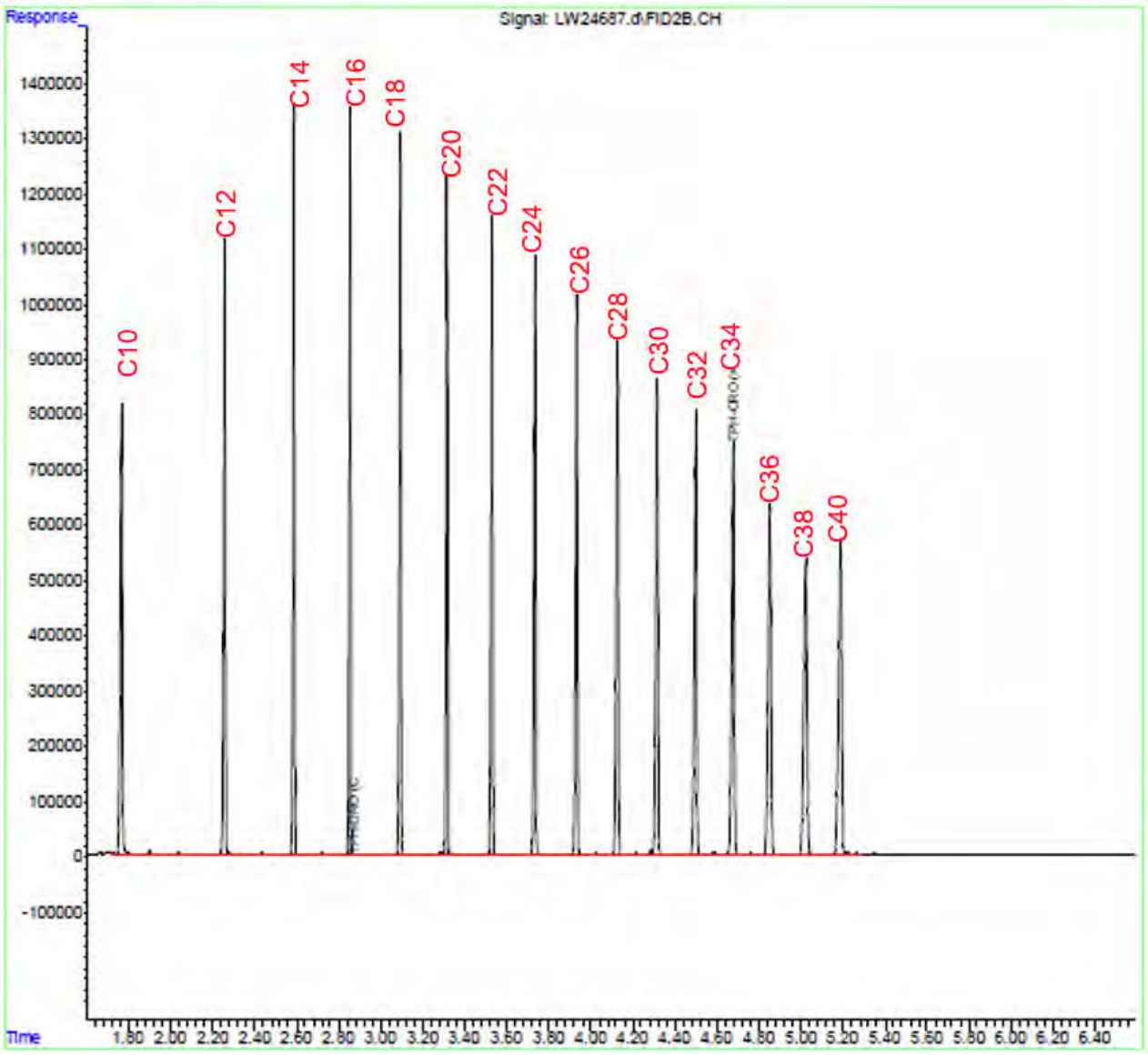


**Figure 3. JP-5 Standard**

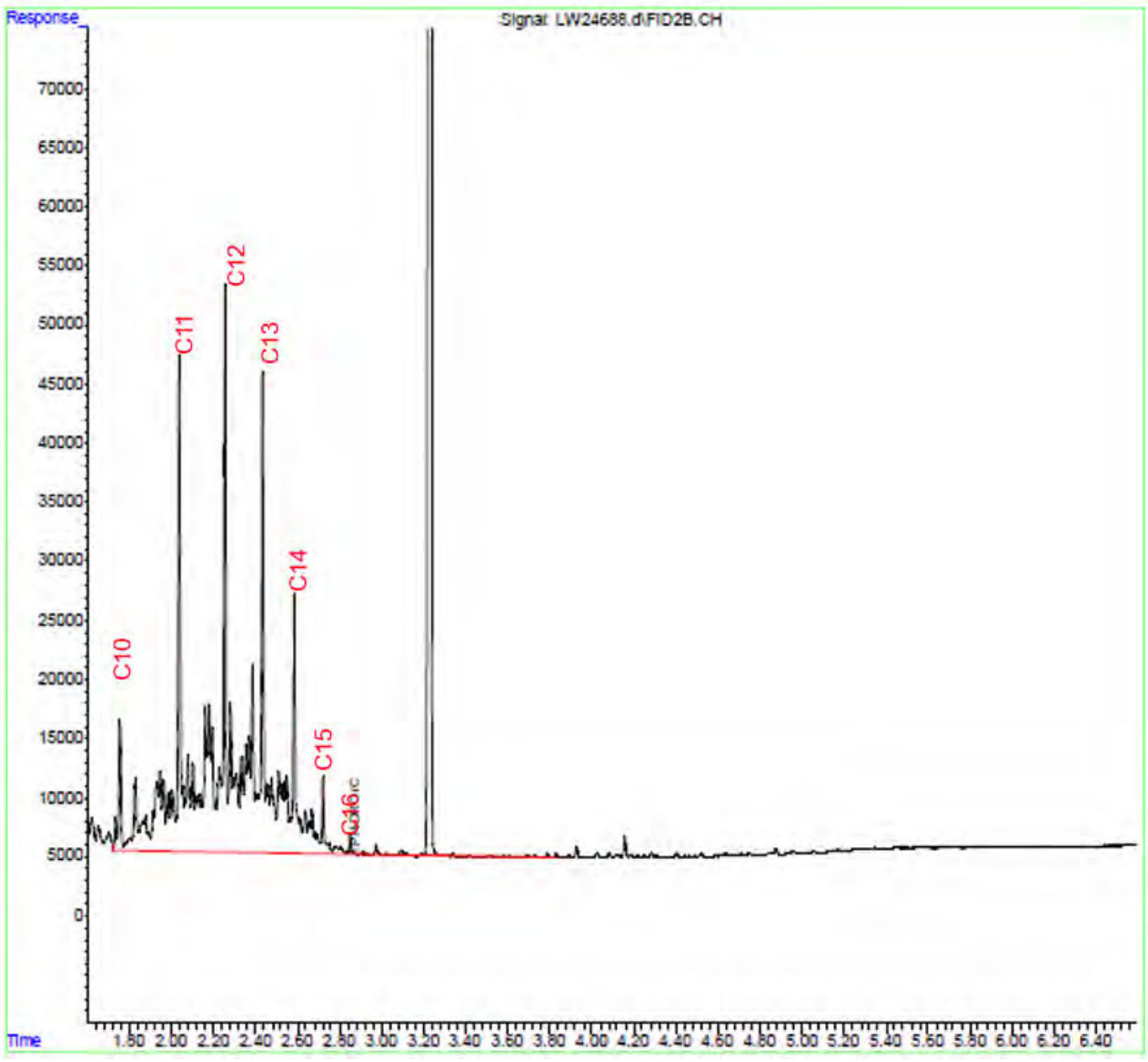


**Figure 4. Sample D2-DL-0017711-24092-N (black), Overlayed with JP-5 Standard (blue)**

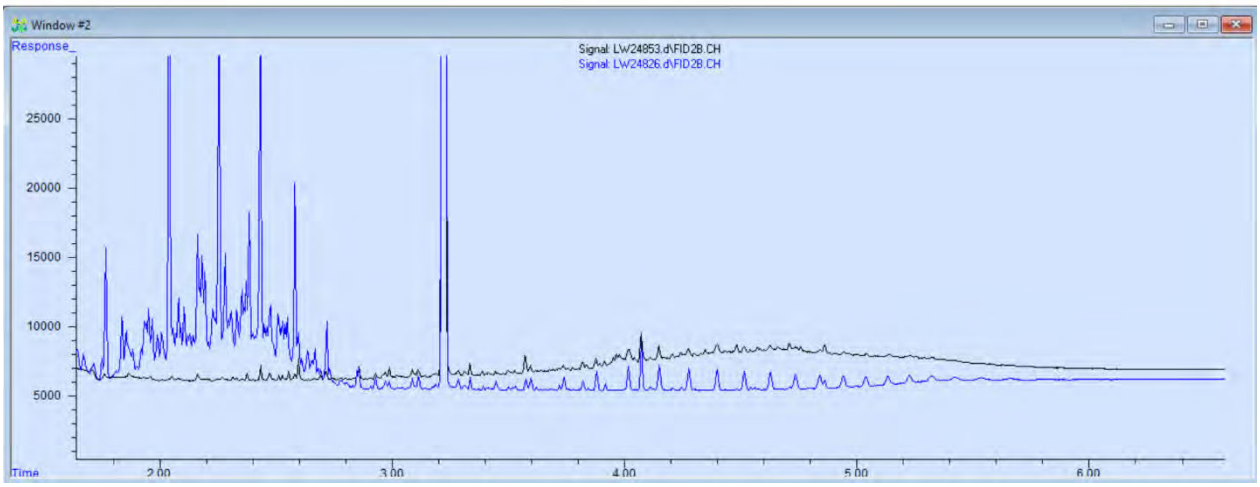
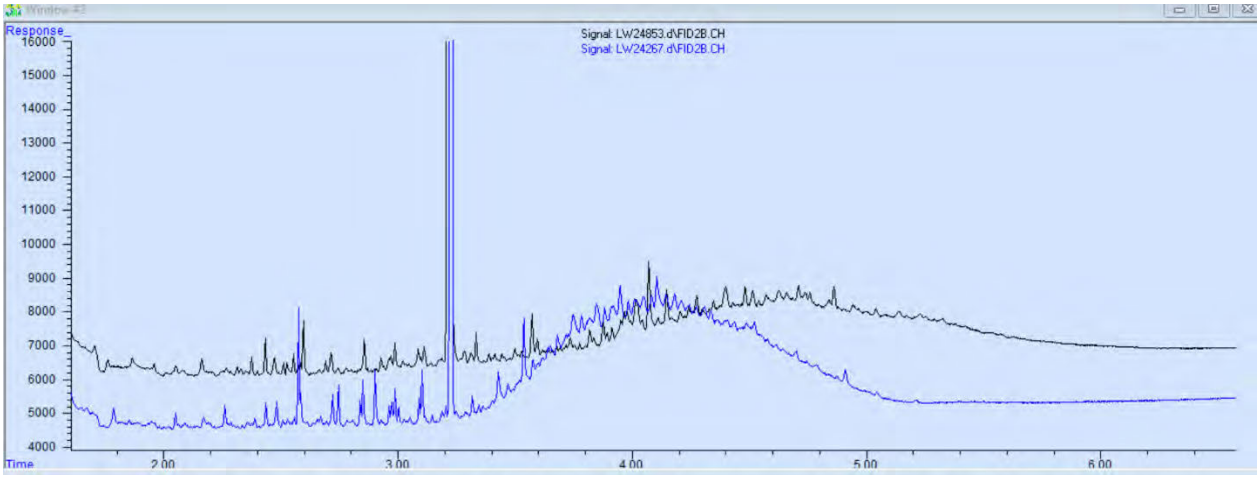



**Figure 5. Sample D2-DL-0017711-24092-N (black), Overlayed with ORO Standard (blue)**




The sample extract was further evaluated using the Tier 1 mass spectral confirmation procedure outlined in the extended drinking water monitoring plan. The procedure entails analyzing the sample and associated method blank extracts obtained in the original extraction using full scan gas chromatography-mass spectrometry via Method 8270. The resulting total ion chromatograms are evaluated as follows:

1. For the sample, retain all peaks that are above a 3:1 signal-to-noise (S:N) ratio.
2. For peaks retained from Step 1, retain all peaks that have a response greater than five times that are found in the method blank.
3. Obtain the mass spectrum and perform a background subtraction (including all blank contamination present below the method reporting limit/method detection limit) for each peak retained from Step 2.

4. Perform a tentatively identified compound (TIC) search evaluation on each peak retained from Step 3 by comparing the corrected mass spectrum to a National Institute of Standards and Technology (NIST) mass spectral library. Retain the top five probability matches for each. Retain a list of all TICs with an 80 percent probability match or higher.
5. Evaluate chromatograms, extraction limited ion profile screening (ELIPS), and additional chemistry data from the laboratory to determine if the detected TPH is JP-5/other fuel-related analytes or is associated TPH-O, and/or with “naturally occurring” hydrocarbons.

The results of this evaluation further support the conclusion that the TPH detection is due to the presence of a high molecular weight hydrocarbon mixture consistent with a lubricating oil, such as those used in the routine maintenance of fire hydrants. The ELIPS-selected ion chromatogram reviews did not indicate the presence of specific known petroleum-related chemicals at concentrations indicating the presence of fresh or weathered petroleum-derived fuel products.

This hydrant was resampled on August 6, 2024, and submitted to (b) (4) Massachusetts, for the Tier 2 analyses identified in the extended drinking water monitoring plan, specifically paraffins, isoparaffins, aromatics, naphthenes, and olefins volatile organics by SW-846 Method 8260D, parent and alkylated polycyclic aromatic hydrocarbons by SW-846 Method 8270E with selected ion monitoring, and saturated hydrocarbons by SW-846 Method 8015D (modified). All results were non-detect, further suggesting that the original detection was due to contamination with a lubricating grease present in the hydrant fitting at the time of sampling.

AECOM has concluded that the chromatographic evidence from the original Method 8015D, Tier 1 and Tier 2 analyses points to the presence of a heavy, lubricating oil type substance unrelated to JP-5. The TPH detection is attributed to residual lubricating oil in the hydrant fitting that was not removed during decontamination procedures or was located in a part of the hydrant that was not accessible to the sampling team during decontamination.

Questions regarding this letter should be addressed to (b) (6).

Yours sincerely,

(b) (6)

(b) (6)
Senior Project Chemist
(b) (6)

CLEAN Program Manager

Attachments
Attachment 1 Tier 1 Evaluation, Sample D2-DL-0017711-24092-N

## Attachment 1 Tier 1 Evaluation, Sample D2-DL-0017711-24092-N

Appendix C. Tier 1 Analysis Tech Memos

**Attachment 1:**

**Tier 1 Evaluation, Sample D2-DL-0017711-24092-N**

**(Laboratory ID: DA65684-2)**

Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125444.D
Acq On : 30 Jul 2024 8:48 pm
Operator : (b) (6)
Sample : MB
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 30 22:38:39 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | | |
| 17) o-Terphenyl | 10.305 | 230 | 26985321m | 26985321.00 | | | -0.15 |
| Target Compounds | | | | | | Qvalue | |
| 1) Undecane (C11) | 0.000 | | 0 | N.D. | d | | |
| 2) Diethylnaphthalene | 0.000 | | 0 | N.D. | d | | |
| 3) 1-Methylnaphthalene | 0.000 | | 0 | N.D. | d | | |
| 4) 1-Ethylpropylbenzene | 0.000 | | 0 | N.D. | d | | |
| 5) Cyclohexane | 0.000 | | 0 | N.D. | d | | |
| 6) Tridecane (C13) | 0.000 | | 0 | N.D. | d | | |
| 7) Dodecane (C12) | 0.000 | | 0 | N.D. | d | | |
| 8) Sesquiterpanes | 0.000 | | 0 | N.D. | d | | |
| 9) Benzocyclohexane | 0.000 | | 0 | N.D. | d | | |
| 10) Propylbutylbenzene | 0.000 | | 0 | N.D. | d | | |
| 11) Cyclic Isoprenoid | 0.000 | | 0 | N.D. | d | | |
| 12) Trimethylbenzene | 0.000 | | 0 | N.D. | d | | |
| 13) Bromo-Xa | 0.000 | | 0 | N.D. | | | |
| 14) Bromo-Xb | 0.000 | | 0 | N.D. | | | |
| 15) n-Hexadecanoic Acid | 0.000 | | 0 | N.D. | | | |
| 16) n-Octadecanoic Acid | 0.000 | | 0 | N.D. | | | |
| 18) Bromo-o-Terphenyl | 0.000 | | 0 | N.D. | d | | |
| 19) Chloro-o-Terphenyl | 0.000 | | 0 | N.D. | d | | |
| 20) n-Alkane | 12.113 | 57 | 3795635m | 3795635.00 | | | |
| 21) n-Octane (C8) | 0.000 | | 0 | N.D. | d | | |
| 22) n-Nonane (C9) | 6.491 | 57 | 108341 | No Calib | | # | |
| 23) n-Decane (C10) | 0.000 | | 0 | N.D. | d | | |
| 24) n-Dodecane (C12) | 0.000 | | 0 | N.D. | d | | |
| 25) n-Tetradecane (C14) | 0.000 | | 0 | N.D. | d | | |
| 26) n-Hexadecane (C16) | 0.000 | | 0 | N.D. | d | | |
| 27) n-Octadecane (C18) | 0.000 | | 0 | N.D. | d | | |
| 28) n-Eicosane (C20) | 0.000 | | 0 | N.D. | d | | |
| 29) n-Heneicosane (C21) | 0.000 | | 0 | N.D. | d | | |
| 30) n-Docosane (C22) | 0.000 | | 0 | N.D. | d | | |
| 31) n-Tricosane (C23) | 0.000 | | 0 | N.D. | d | | |
| 32) n-Tetracosane (C24) | 0.000 | | 0 | N.D. | d | | |
| 33) n-Pentacosane (C25) | 0.000 | | 0 | N.D. | d | | |
| 34) n-Hexacosane (C26) | 0.000 | | 0 | N.D. | d | | |
| 35) n-Heptacosane (C27) | 0.000 | | 0 | N.D. | d | | |
| 36) n-Octacosane (C28) | 12.985 | 57 | 57295 | 57295.00 | | # | 74 |
| 37) n-Nonacosane (C29) | 0.000 | | 0 | N.D. | d | | |
| 38) n-Triacontane (C30) | 13.562 | 57 | 44416 | 44416.00 | | # | 72 |
| 39) n-Doatriacontane (C32) | 0.000 | | 0 | N.D. | d | | |
| 40) n-Tetratriacontane (C34) | 0.000 | | 0 | N.D. | d | | |
| 41) n-Hexatriacontane (C36) | 0.000 | | 0 | N.D. | d | | |
| 42) n-Octatriacontane (C38) | 0.000 | | 0 | N.D. | d | | |
| 43) n-Tetracontane (C40) | 0.000 | | 0 | N.D. | d | | |
| 44) Siloxane | 9.792 | 429 | 16067230m | 16067230.00 | | | |
| 45) Butyl benzyl phthalate | 0.000 | | 0 | N.D. | d | | |
| 46) Bis(2-ethylhexyl)phtha... | 0.000 | | 0 | N.D. | d | | |
| 47) Di-n-octylphthalate | 0.000 | | 0 | N.D. | d | | |
| 48) Diethyl Phthalate | 0.000 | | 0 | N.D. | d | | |

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

Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
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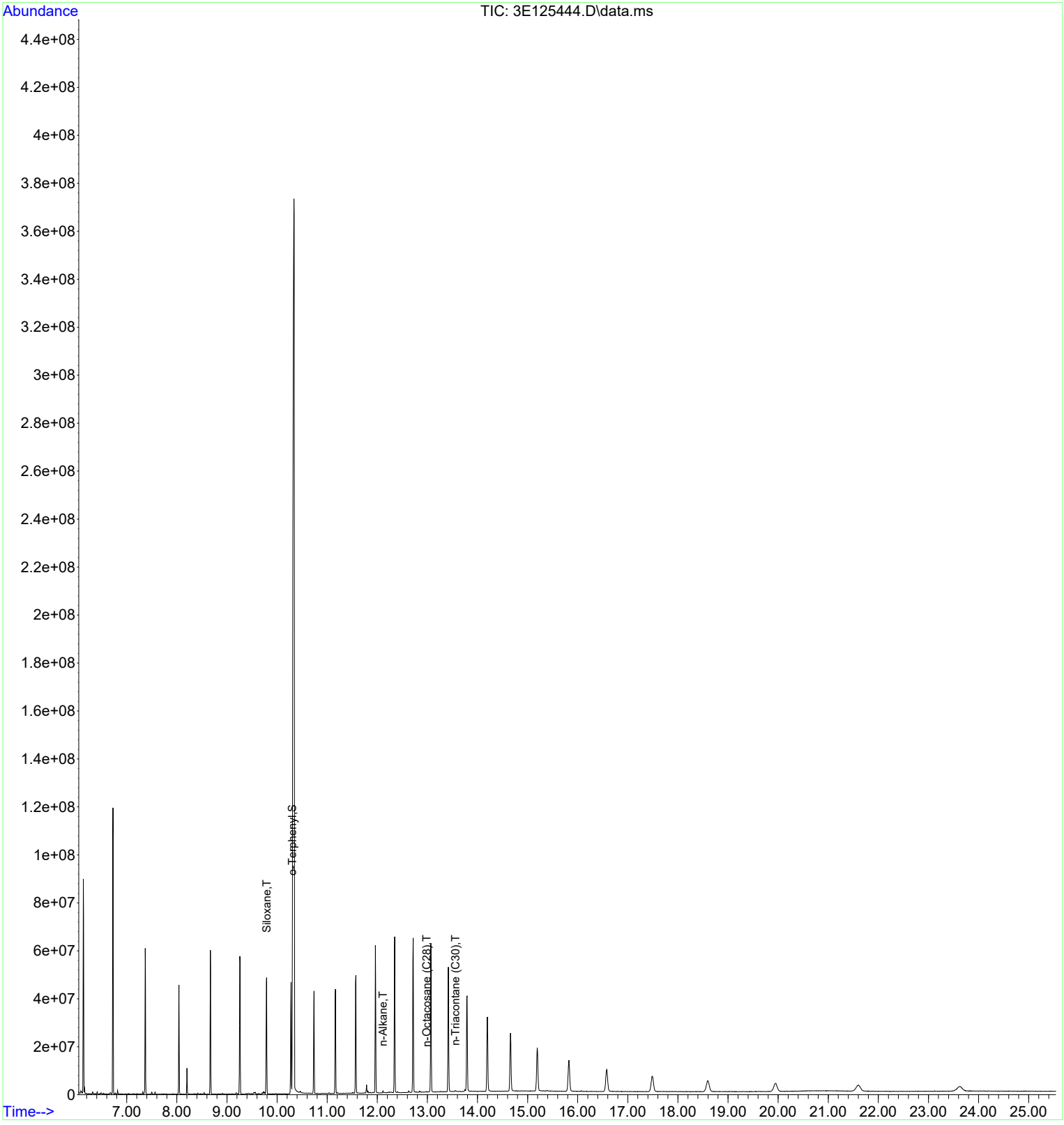
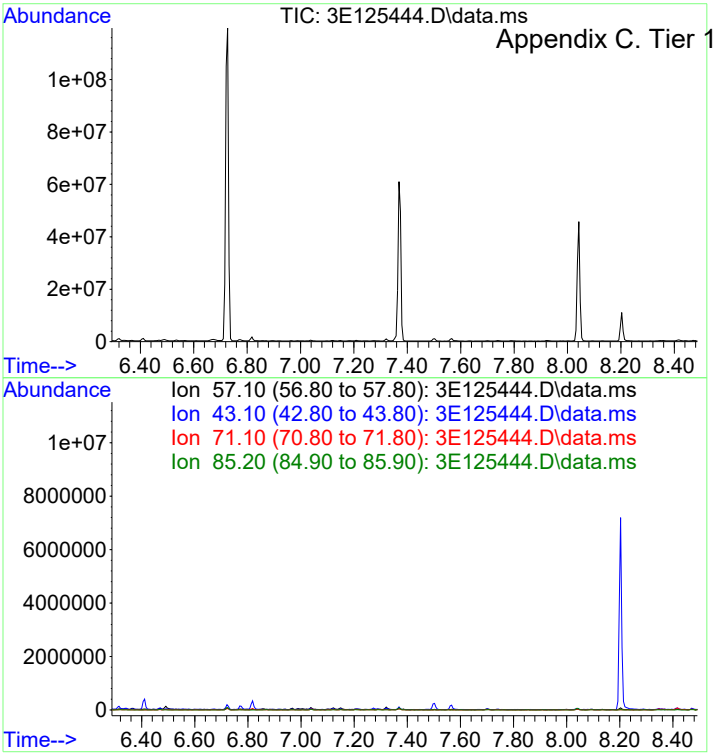
Quant Time: Jul 30 22:38:39 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration



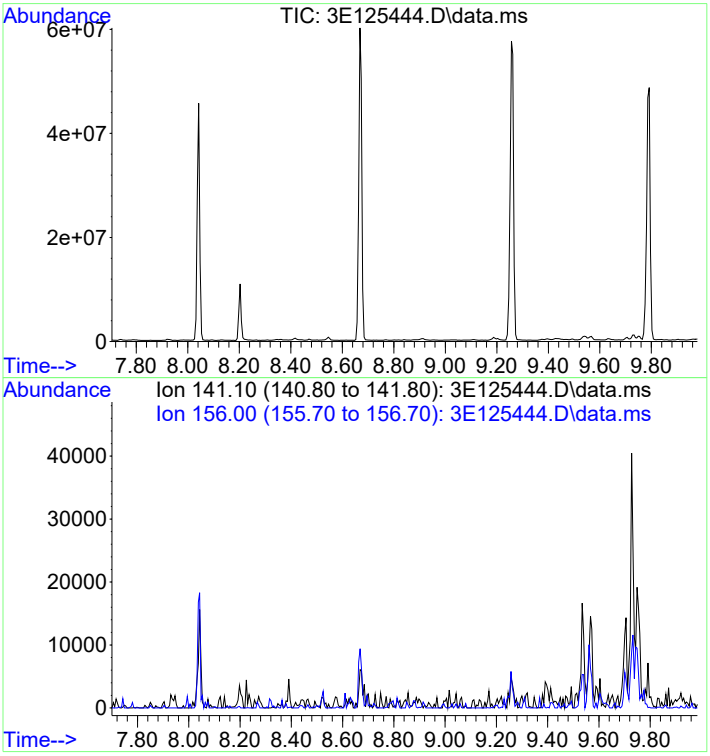



#1
Undecane (C11)
Concen: N.D.
Expected RT: 7.39 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 15.7 |
| 71 | 6.9 |
| 85 | 0.0 |

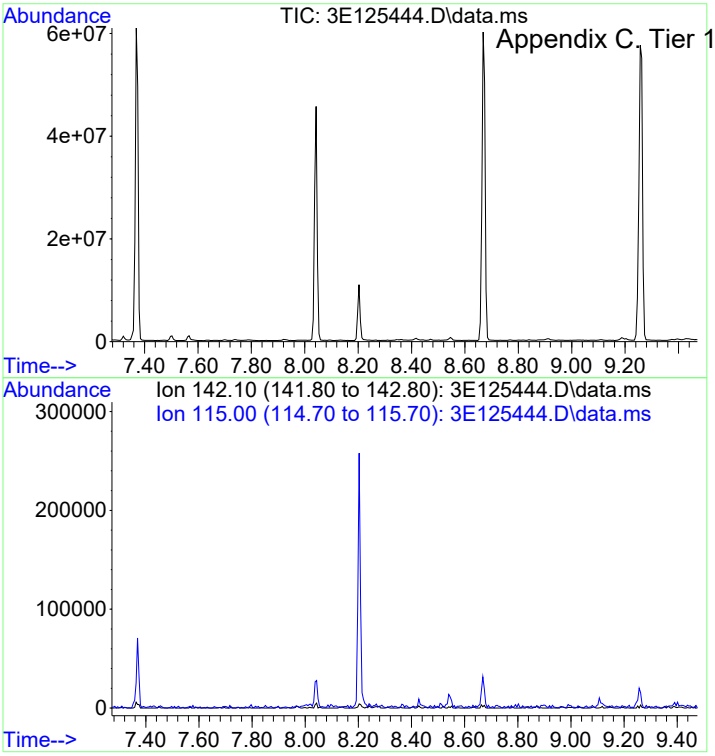



#2
Diethylnaphthalene
Concen: N.D.
Expected RT: 8.80 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 141

| Sig | Exp Ratio |
|---|---|
| 141 | 100 |
| 156 | 0.0 |

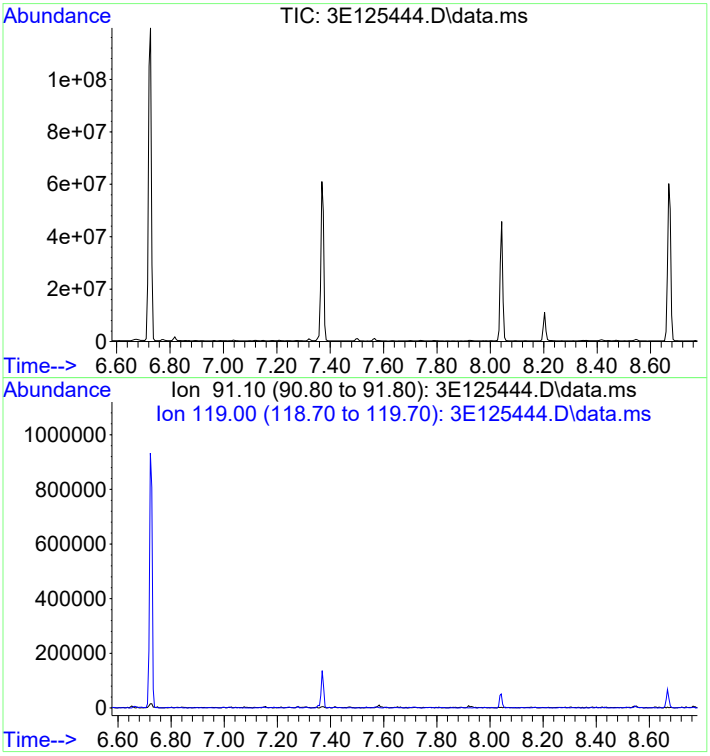



#3
1-Methylnaphthalene
Concen: N.D.
Expected RT: 8.37 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 142

| Sig | Exp Ratio |
|---|---|
| 142 | 100 |
| 115 | 0.0 |

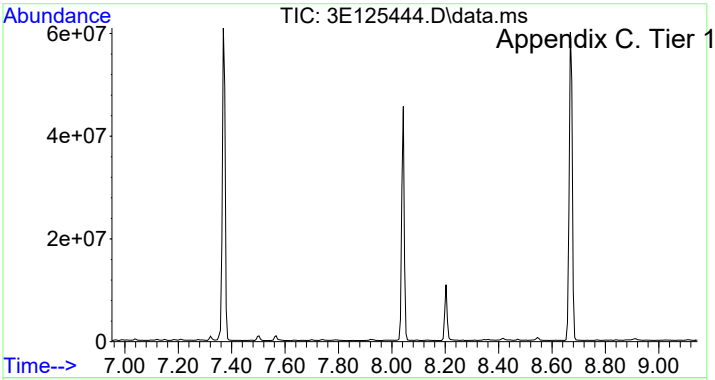


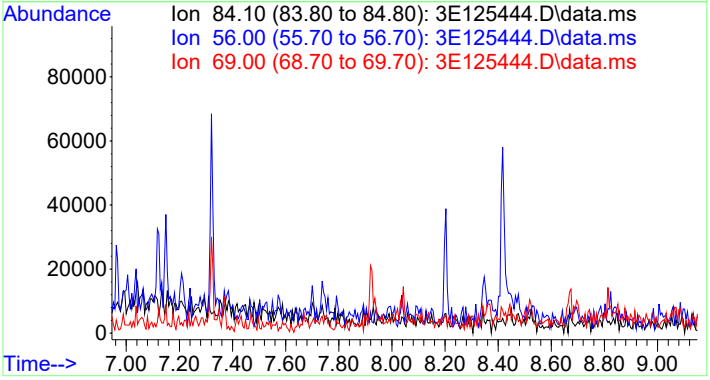

#4
1-Ethylpropylbenzene
Concen: N.D.
Expected RT: 7.68 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 91

| Sig | Exp Ratio |
|---|---|
| 91 | 100 |
| 119 | 0.0 |



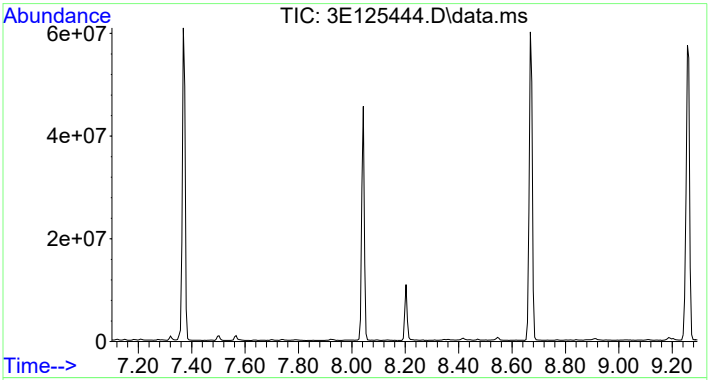



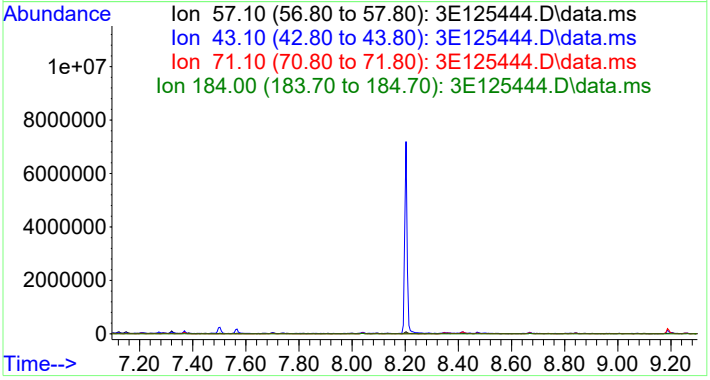

#5
Cyclohexane
Concen: N.D.
Expected RT: 8.05 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 84

| Sig | Exp Ratio |
|---|---|
| 84 | 100 |
| 56 | 0.0 |
| 69 | 0.0 |



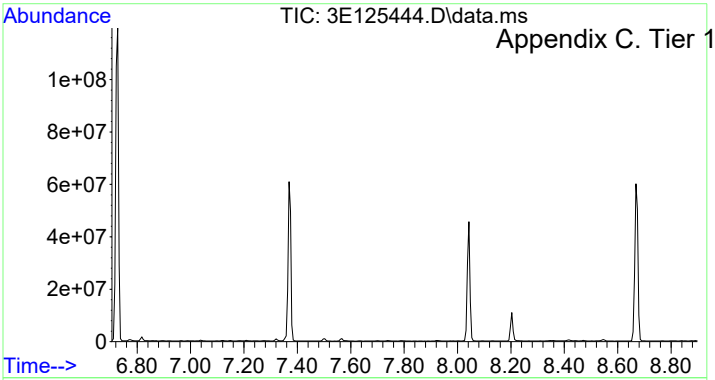



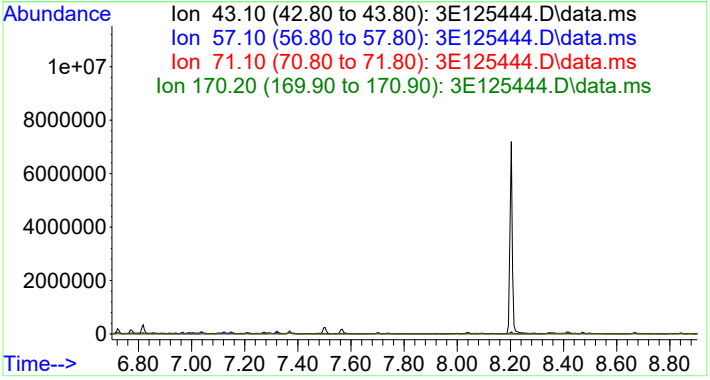

#6
Tridecane (C13)
Concen: N.D.
Expected RT: 8.20 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 6.1 |
| 71 | 0.0 |
| 184 | 0.0 |



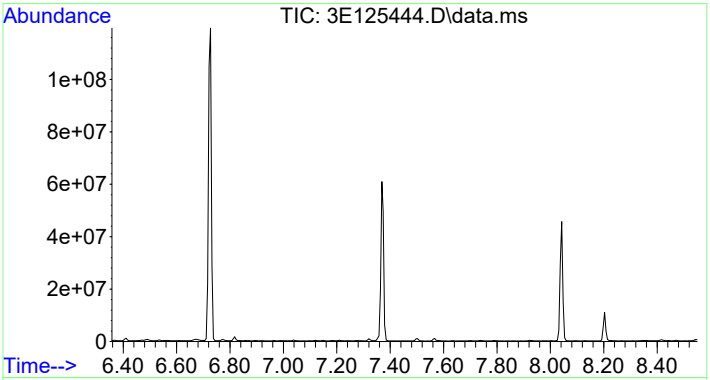



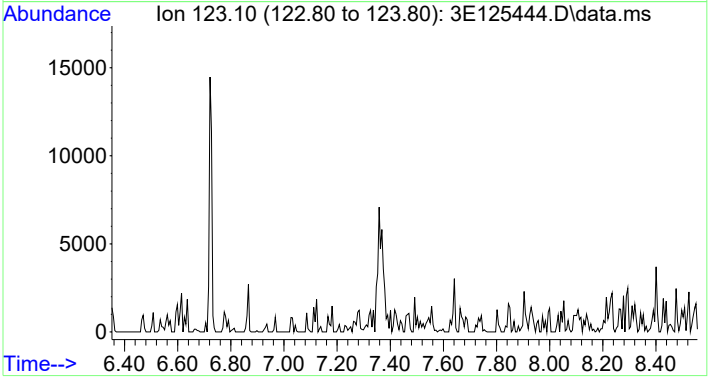

#7
Dodecane (C12)
Concen: N.D.
Expected RT: 7.80 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 43

| Sig | Exp Ratio |
|---|---|
| 43 | 100 |
| 57 | 165.0 |
| 71 | 64.9 |
| 170 | 0.0 |

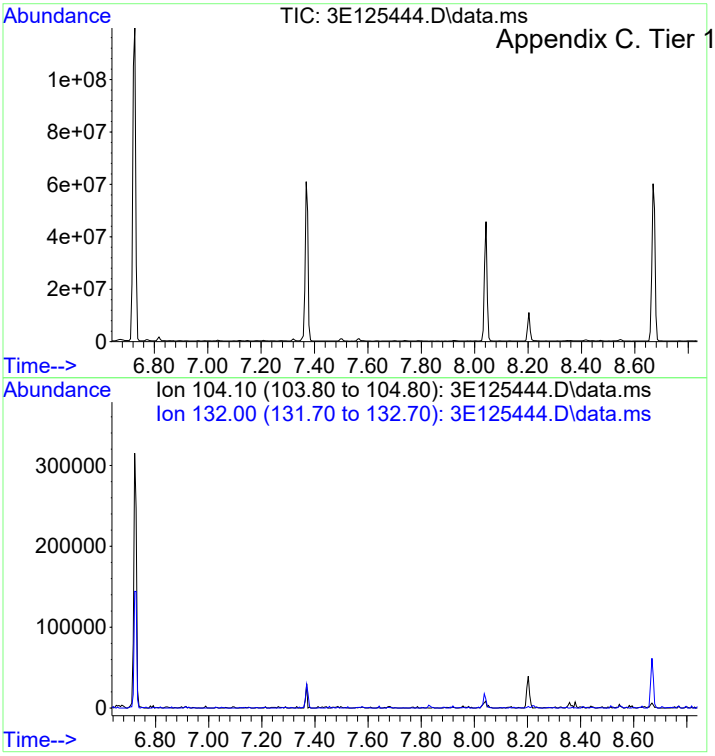



#8
Sesquiterpanes
Concen: N.D.
Expected RT: 7.45 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 123

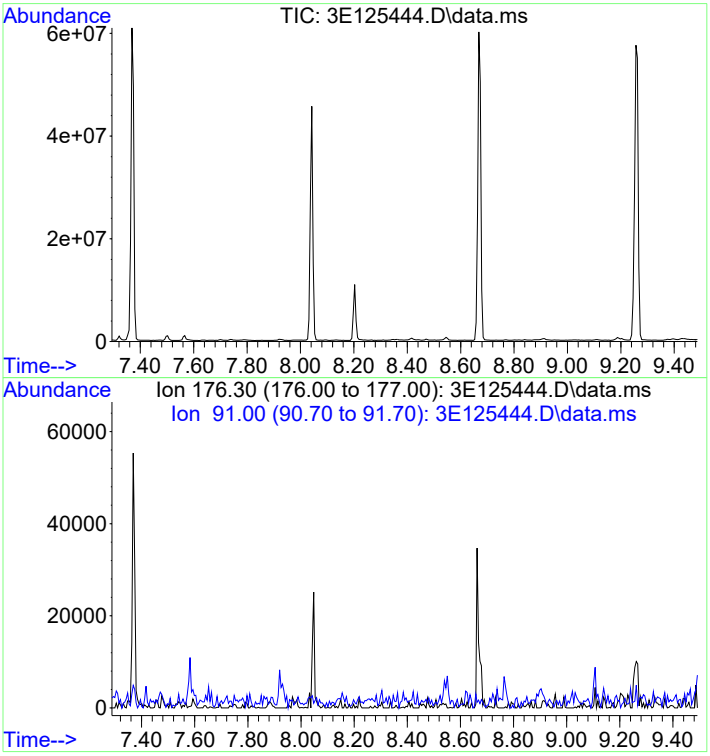



#9
Benzocyclohexane
Concen: N.D.
Expected RT: 7.74 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 104

| Sig | Exp Ratio |
|---|---|
| 104 | 100 |
| 132 | 0.0 |

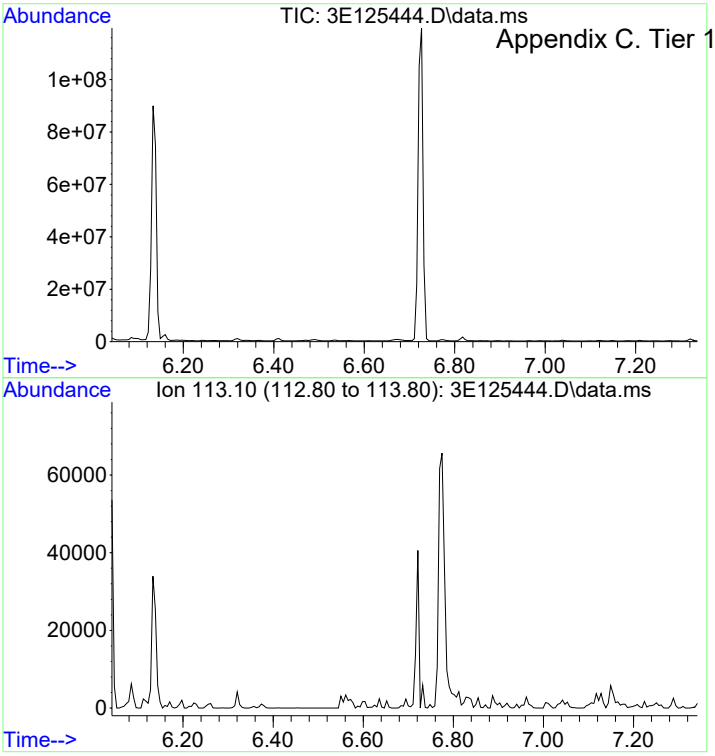



#10
Propylbutylbenzene
Concen: N.D.
Expected RT: 8.39 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 176

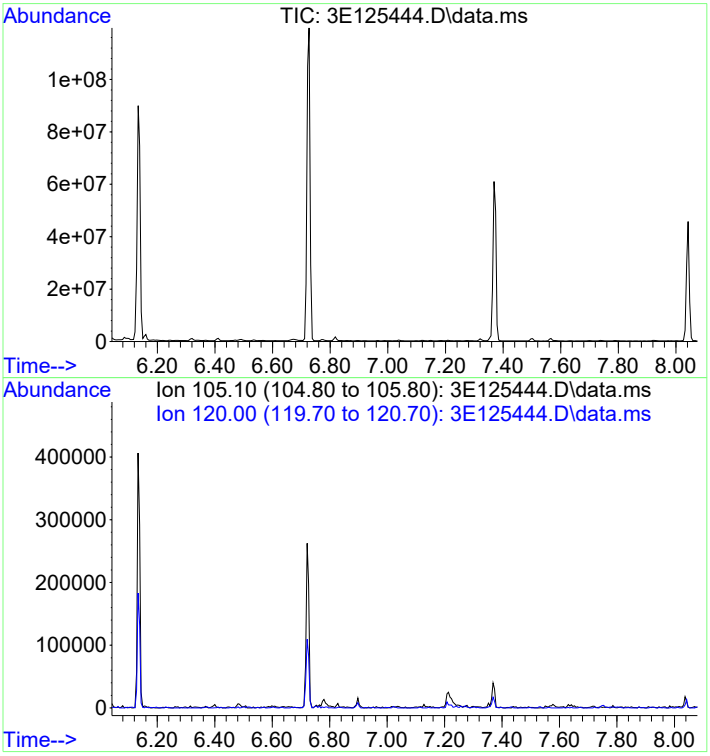
| Sig | Exp Ratio |
|---|---|
| 176 | 100 |
| 91 | 0.0 |




#11
Cyclic Isoprenoid
Concen: N.D.
Expected RT: 6.24 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 113

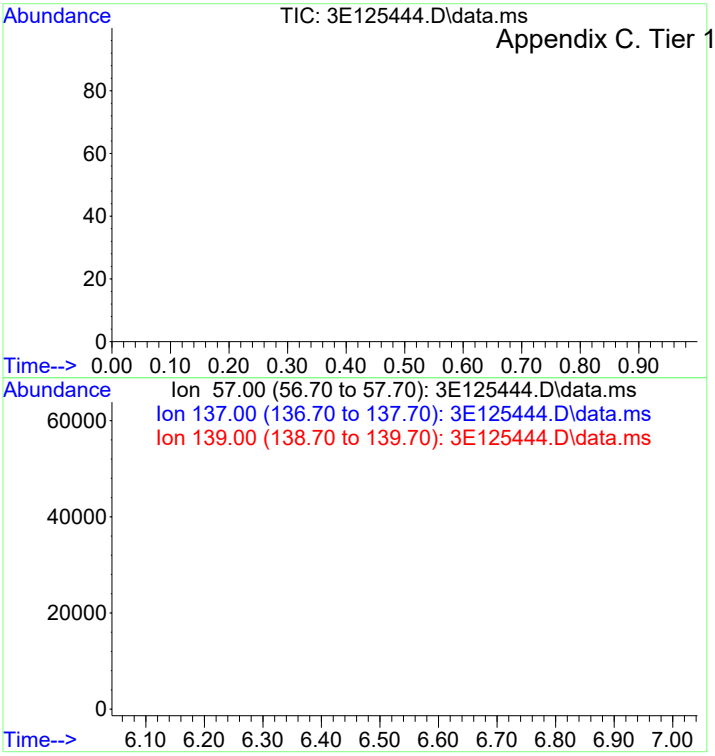



#12
Trimethylbenzene
Concen: N.D.
Expected RT: 6.98 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 105

| Sig | Exp Ratio |
|---|---|
| 105 | 100 |
| 120 | 0.0 |

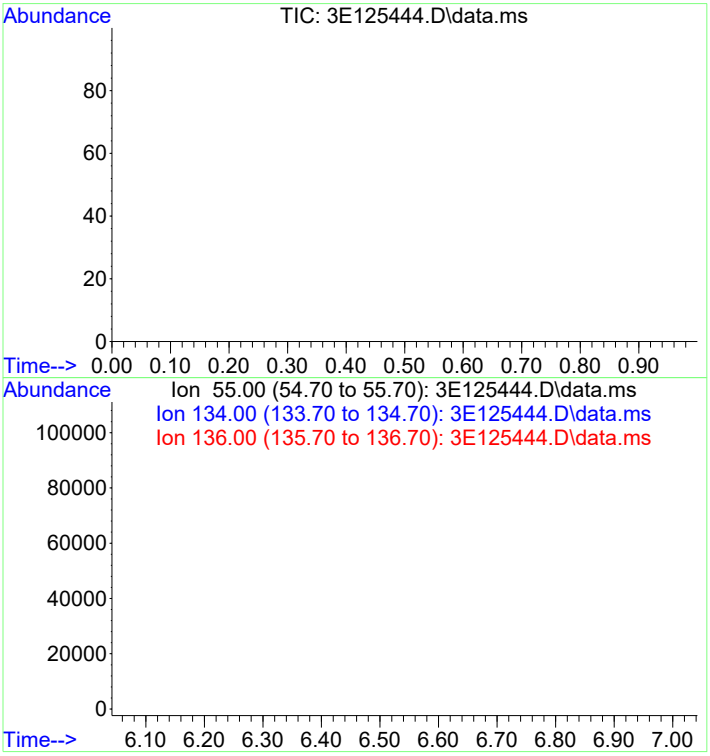



#13
Bromo-Xa
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 137 | 0.0 |
| 139 | 0.0 |

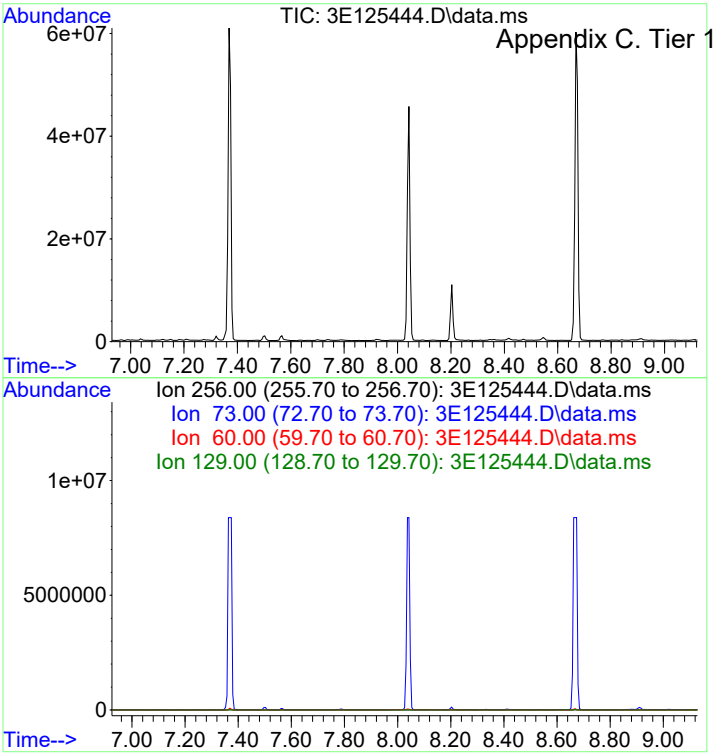



#14
Bromo-Xb
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 55

| Sig | Exp Ratio |
|---|---|
| 55 | 100 |
| 134 | 0.0 |
| 136 | 0.0 |

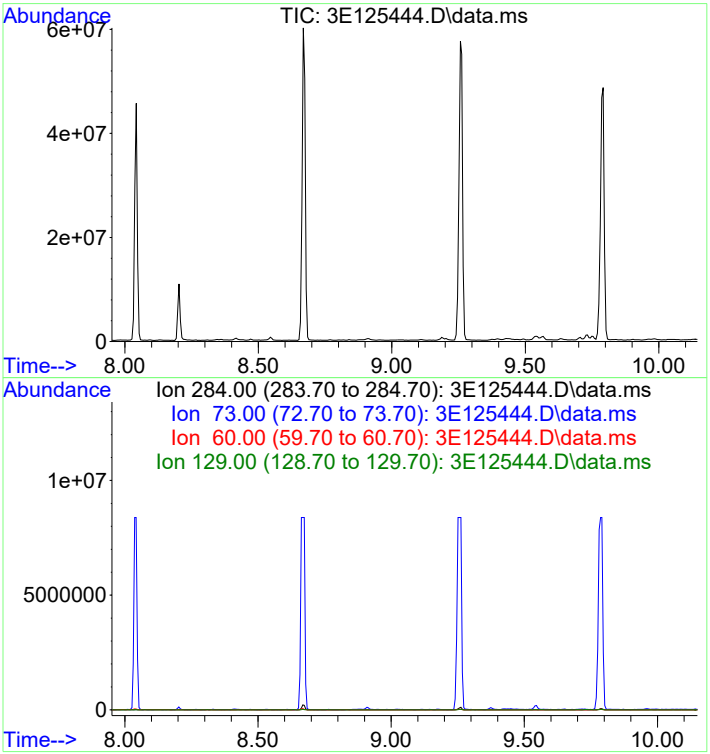



#15
n-Hexadecanoic Acid
Concen: N.D.
Expected RT: 8.03 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 256

| Sig | Exp Ratio |
|---|---|
| 256 | 100 |
| 73 | 117.8 |
| 60 | 50.7 |
| 129 | 36.1 |

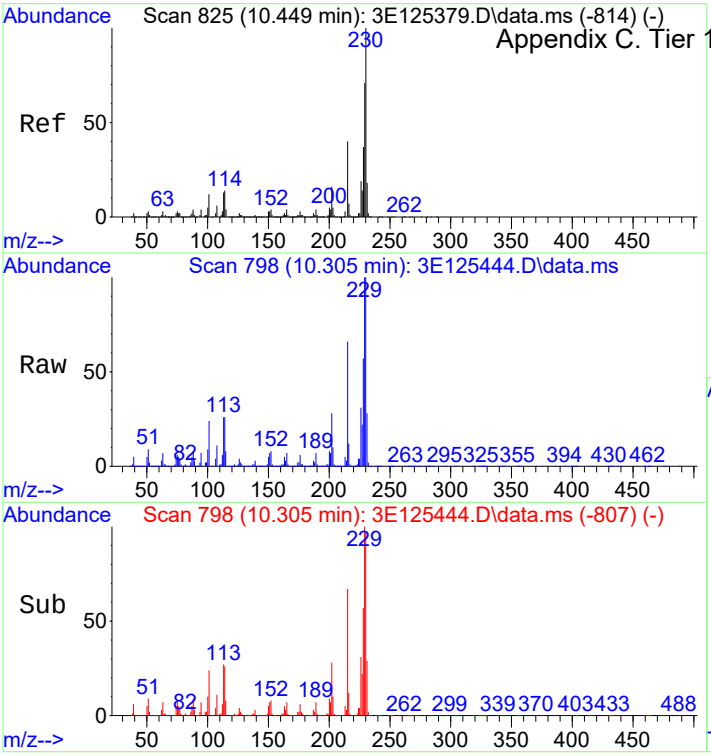



#16
n-Octadecanoic Acid
Concen: N.D.
Expected RT: 9.05 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 284

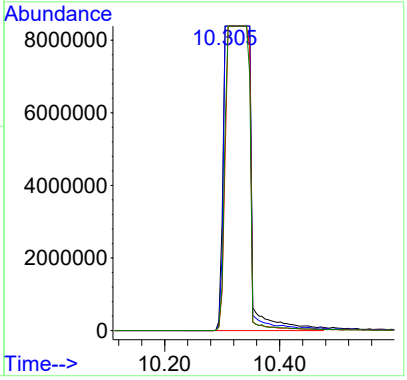
| Sig | Exp Ratio |
|---|---|
| 284 | 100 |
| 73 | 62.7 |
| 60 | 46.4 |
| 129 | 50.0 |

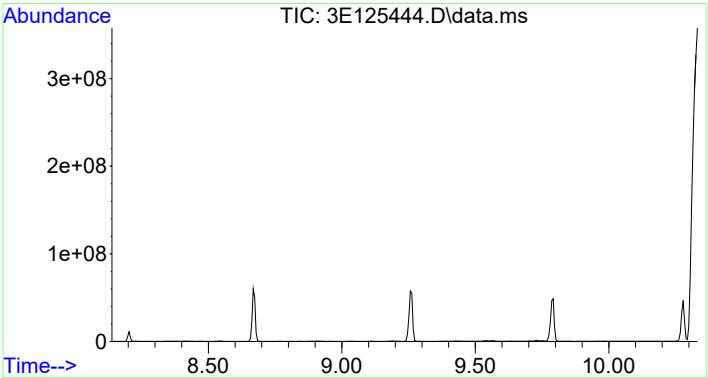


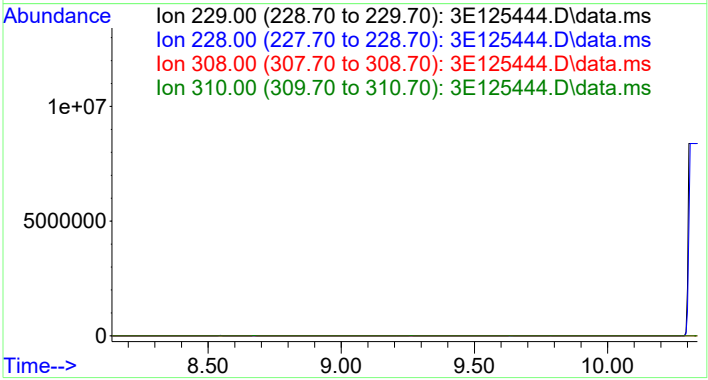

#17
o-Terphenyl
Concen: 26985321.00 m
RT: 10.305 min Scan# 798
Delta R.T. -0.150 min
Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion:230 Resp:26985321

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 230 | 100 | | |
| 229 | 0.0 | 43.0 | 83.0# |
| 228 | 0.0 | 27.3 | 67.3# |
| 215 | 0.0 | 30.0 | 70.0# |



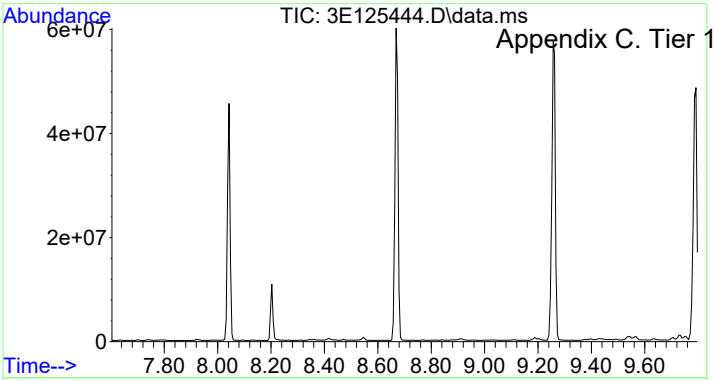




#18
Bromo-o-Terphenyl
Concen: N.D.
Expected RT: 9.24 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 229

| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 135.4 |
| 308 | 79.5 |
| 310 | 0.0 |

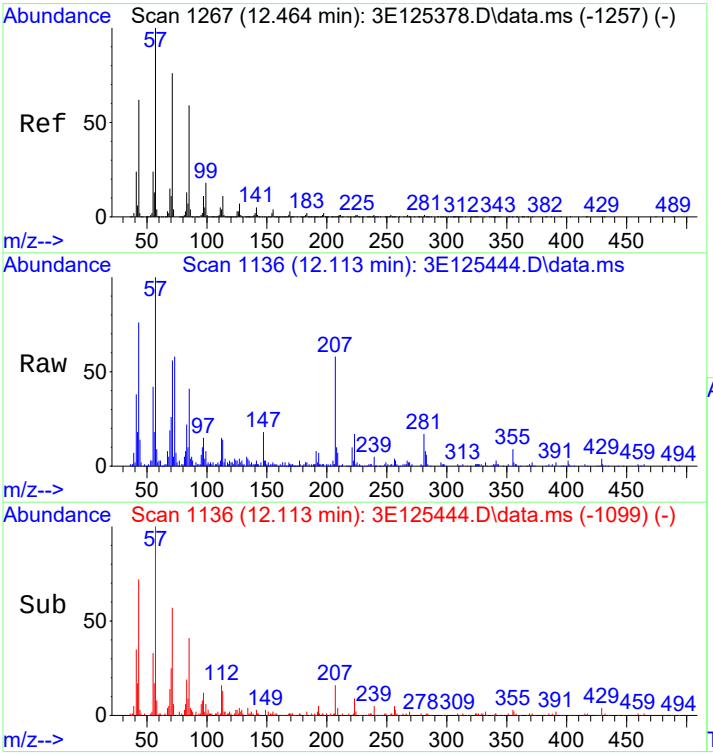



#19
Chloro-o-Terphenyl
Concen: N.D.
Expected RT: 8.70 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 229

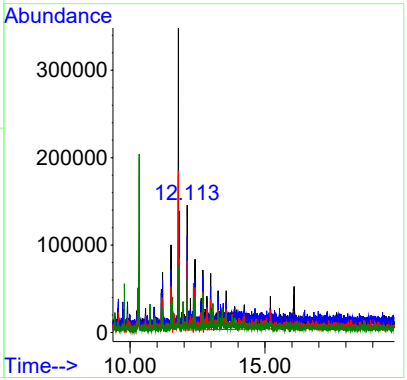
| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 63.1 |
| 264 | 48.7 |
| 266 | 0.0 |

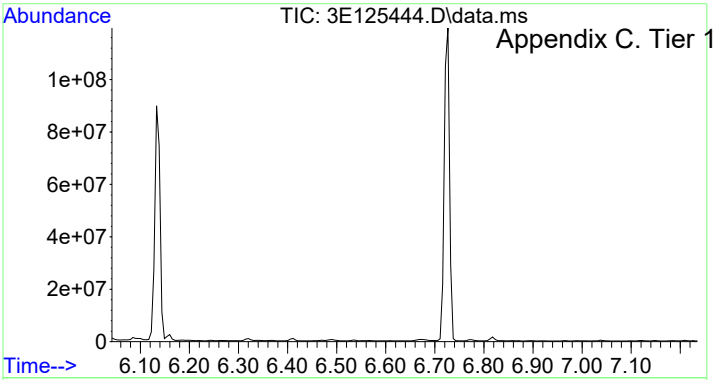


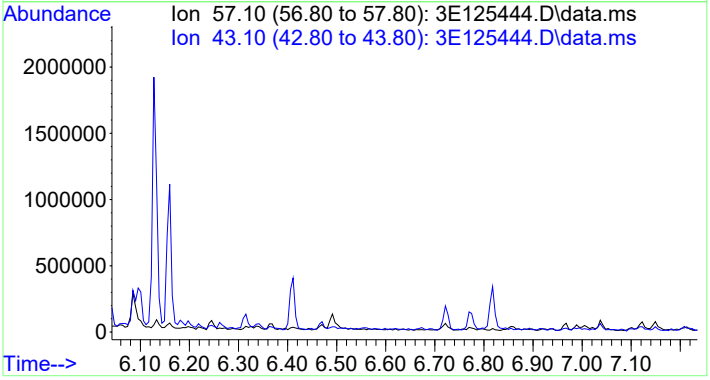

#20
n-Alkane
Concen: 3795635.00 m
RT: 12.113 min Scan# 1136
Delta R.T. 0.097 min
Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57 Resp: 3795635

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 0.2 | 0.0 | 20.0 |
| 71 | 0.1 | 162.1 | 202.1# |
| 85 | 0.2 | 0.0 | 20.0 |





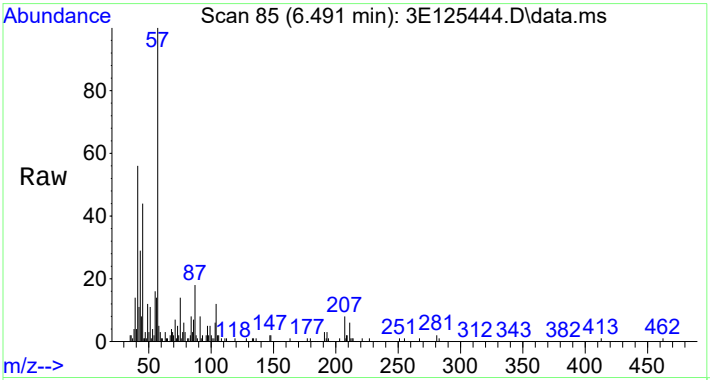



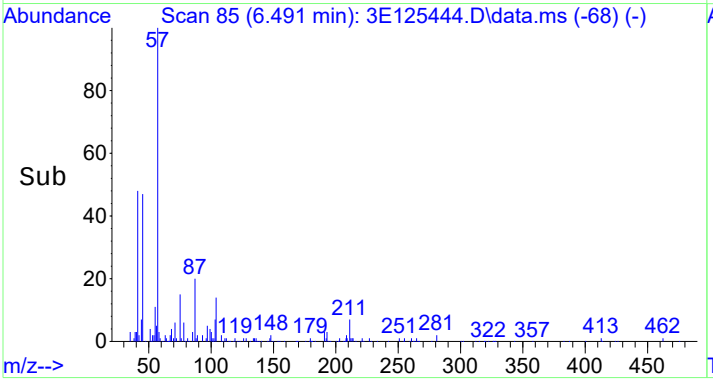

#21
n-Octane (C8)
Concen: N.D.
Expected RT: 6.14 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 235.9 |

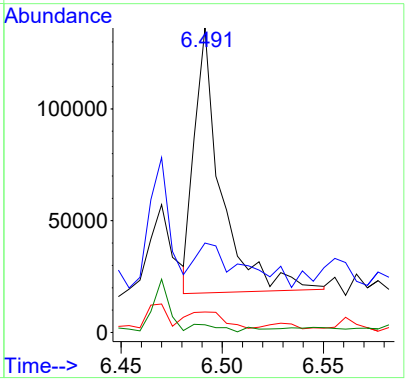


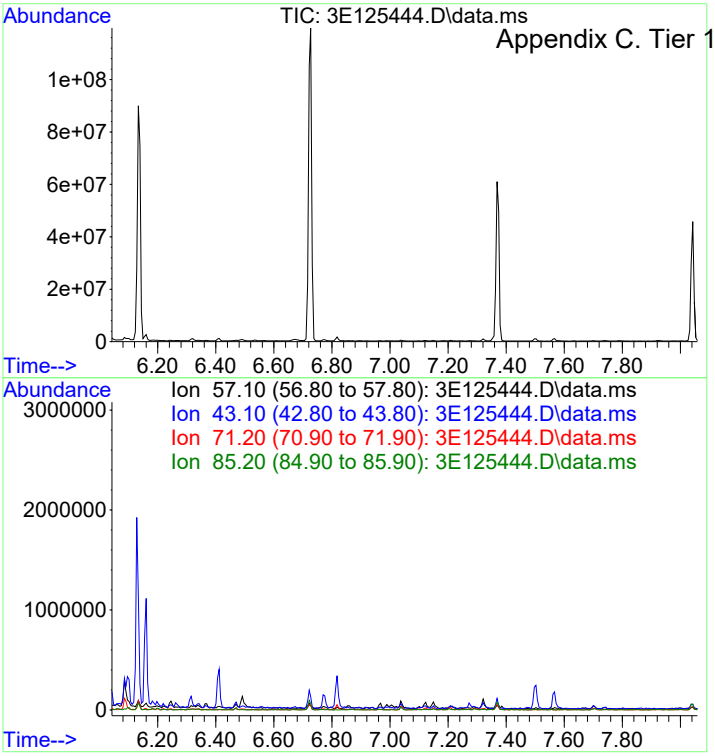




#22
n-Nonane (C9)
Concen: N.D.
RT: 6.491 min Scan# 85
Delta R.T. -0.009 min
Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57 Resp: 108341

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 30.3 | 0.1 | 0.1# |
| 71 | 9.9 | 0.1 | 0.1# |
| 85 | 0.0 | 0.0 | 0.0 |



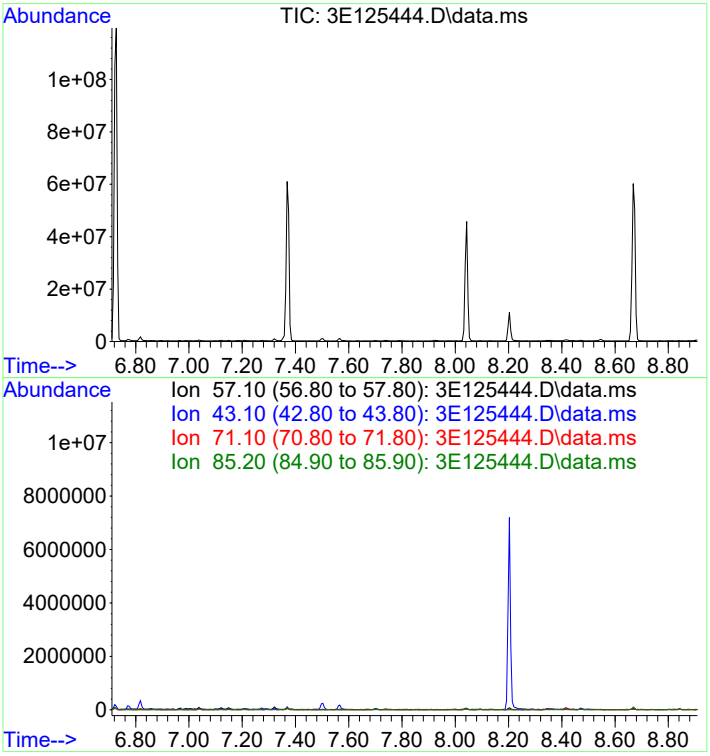



#23
n-Decane (C10)
Concen: N.D.
Expected RT: 6.96 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 90.4 |
| 71 | 39.1 |
| 85 | 27.8 |

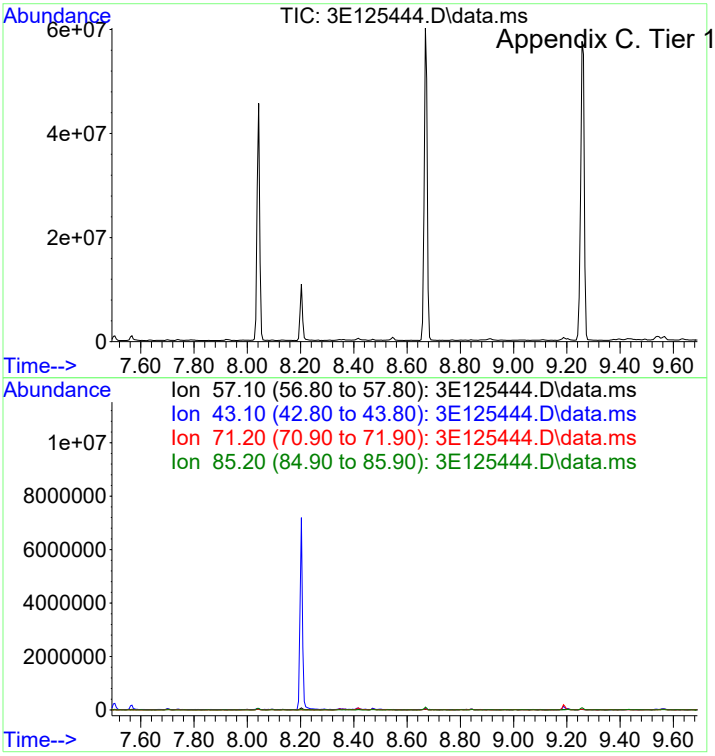



#24
n-Dodecane (C12)
Concen: N.D.
Expected RT: 7.81 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 77.7 |
| 71 | 53.0 |
| 85 | 32.4 |

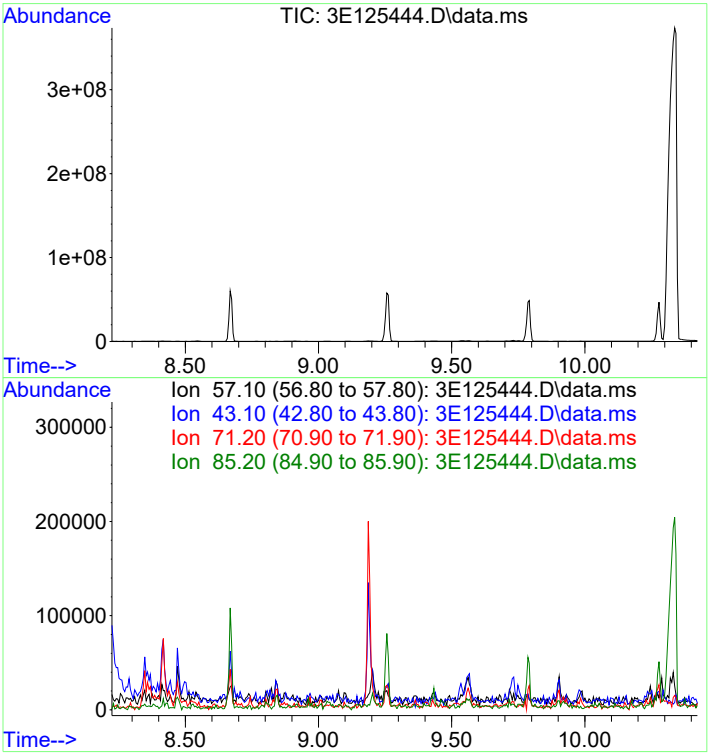



#25
n-Tetradecane (C14)
Concen: N.D.
Expected RT: 8.59 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 72.0 |
| 71 | 60.8 |
| 85 | 40.6 |

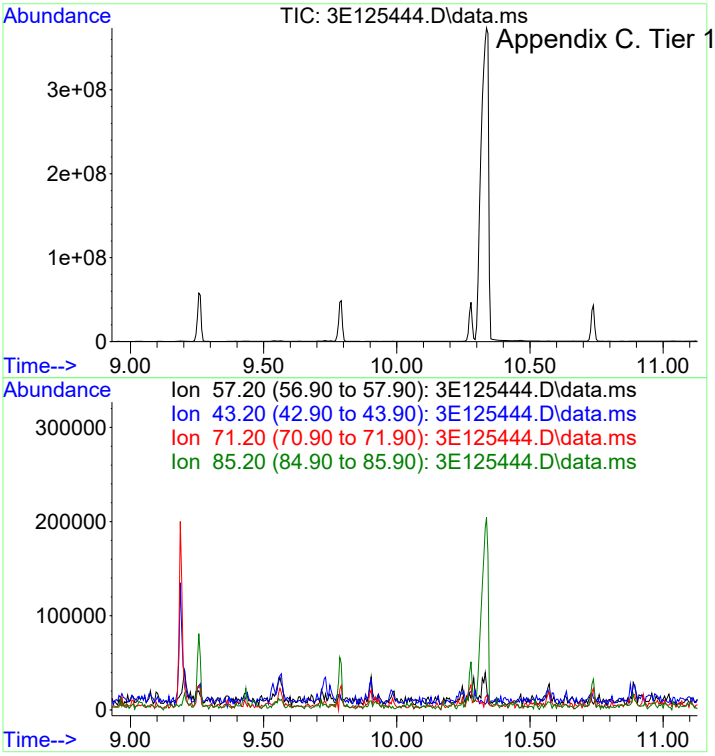



#26
n-Hexadecane (C16)
Concen: N.D.
Expected RT: 9.32 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 68.5 |
| 71 | 65.4 |
| 85 | 46.0 |

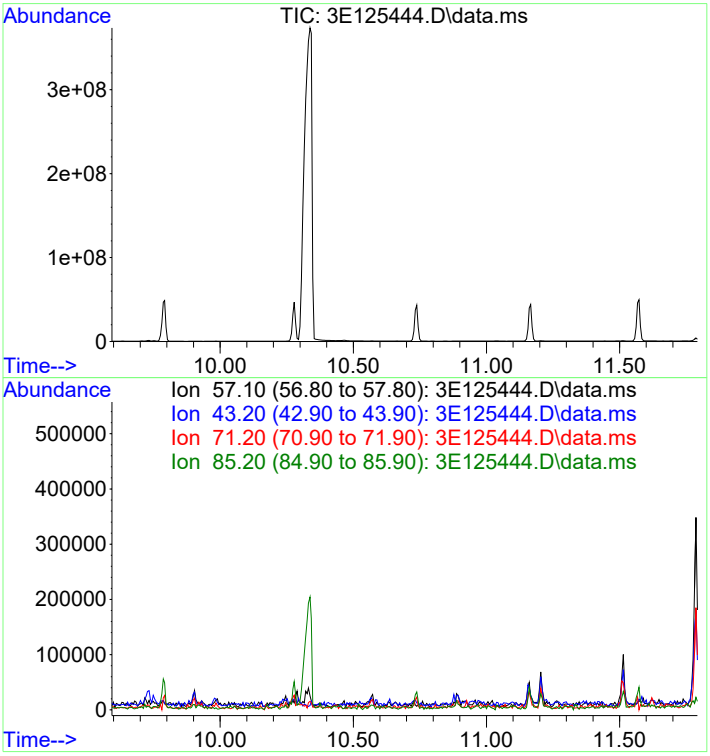



#27
n-octadecane (C18)
Concen: N.D.
Expected RT: 10.03 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.7 |
| 71 | 68.9 |
| 85 | 49.4 |

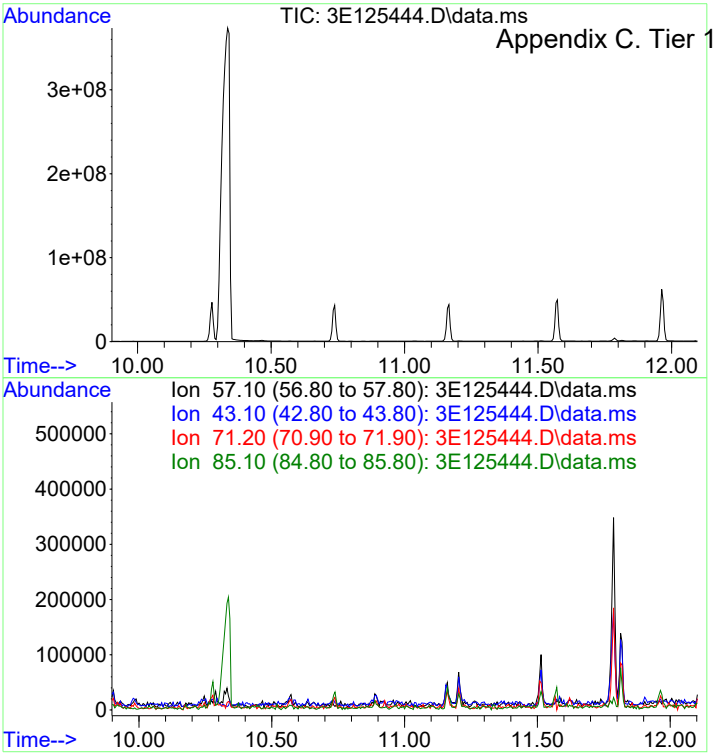



#28
n-Eicosane (C20)
Concen: N.D.
Expected RT: 10.69 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 65.8 |
| 71 | 70.2 |
| 85 | 51.9 |

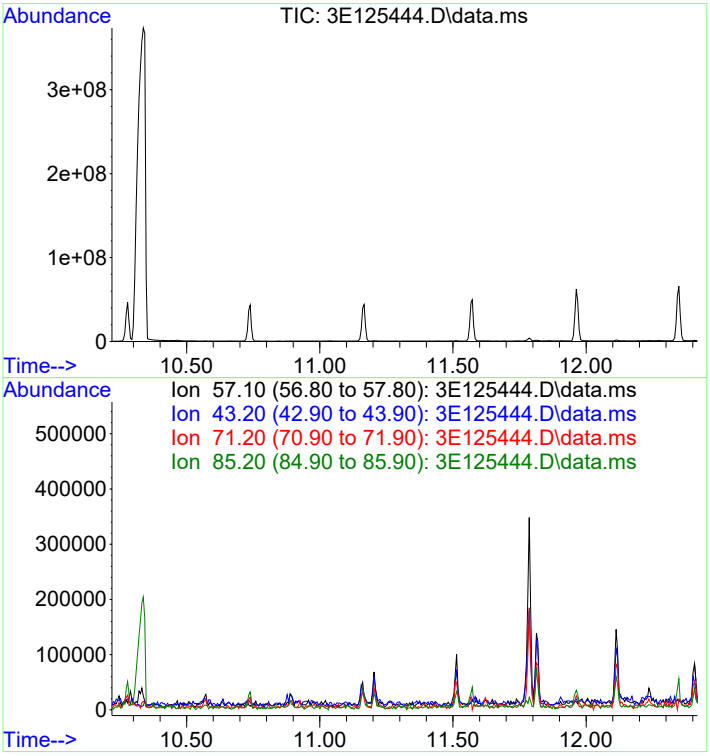



#29
n-Heneicosane (C21)
Concen: N.D.
Expected RT: 11.00 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 65.1 |
| 85 | 51.7 |

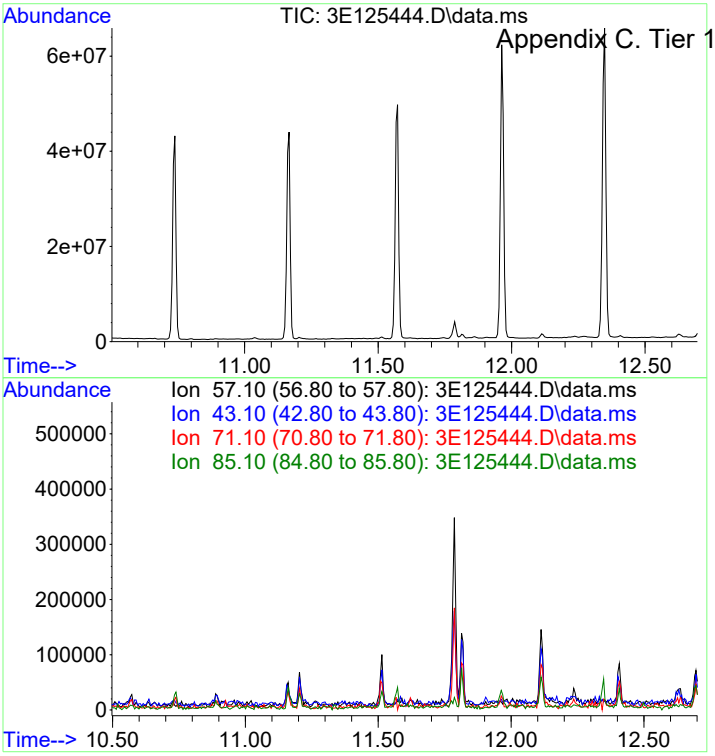



#30
n-Docosane (C22)
Concen: N.D.
Expected RT: 11.32 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.5 |
| 71 | 71.3 |
| 85 | 53.9 |

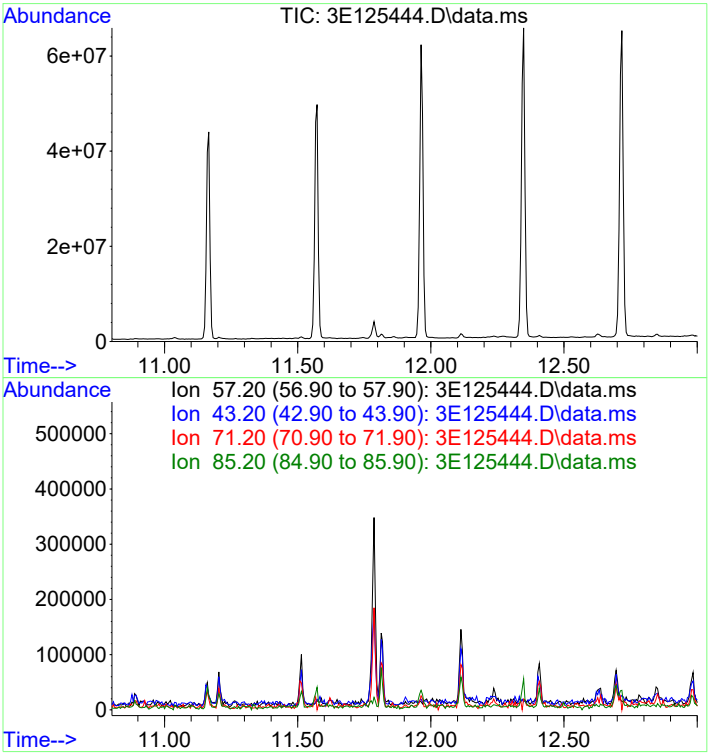



#31
n-Hentriacontane (C31)
Concen: N.D.
Expected RT: 11.60 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 62.0 |
| 71 | 53.9 |
| 85 | 45.7 |

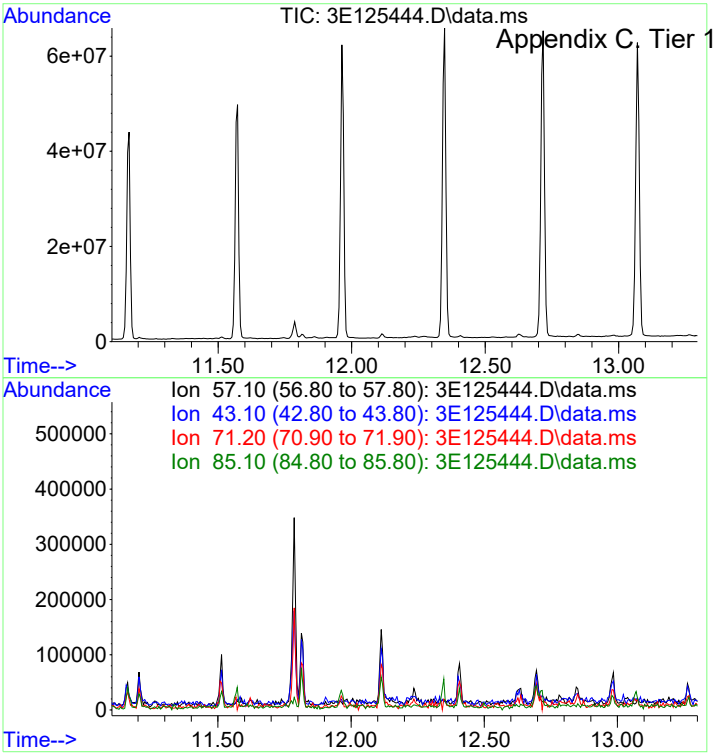



#32
n-Tetracosane (C24)
Concen: N.D.
Expected RT: 11.90 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.4 |
| 71 | 72.3 |
| 85 | 55.2 |

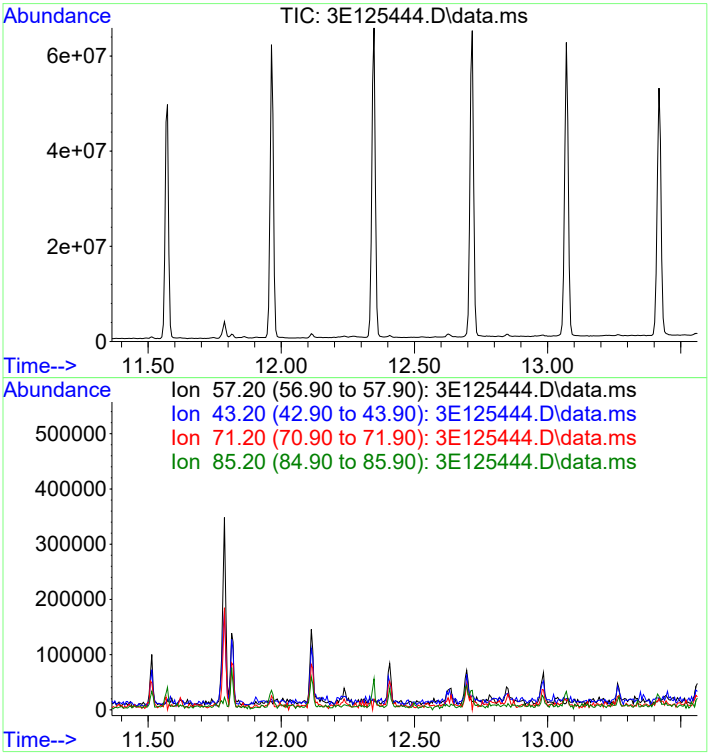



#33
n-Pentacosane (C25)
Concen: N.D.
Expected RT: 12.20 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 79.9 |
| 71 | 70.5 |
| 85 | 42.5 |

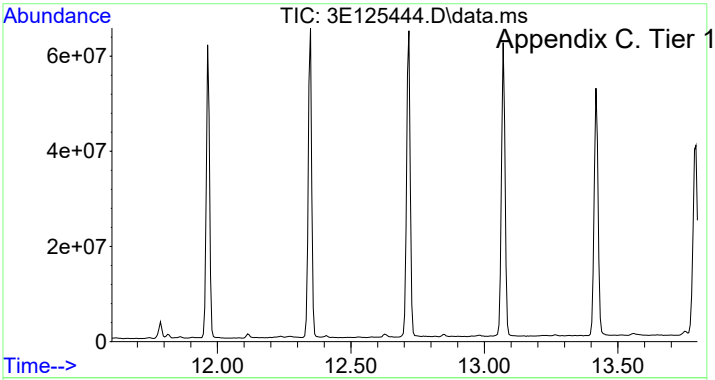



#34
n-Hexacosane (C26)
Concen: N.D.
Expected RT: 12.46 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.1 |
| 71 | 73.2 |
| 85 | 56.6 |

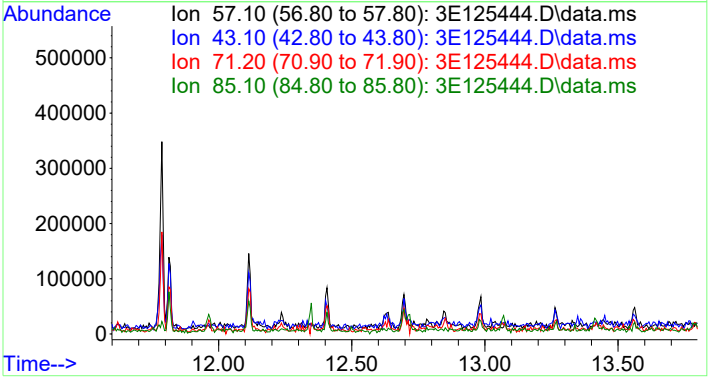


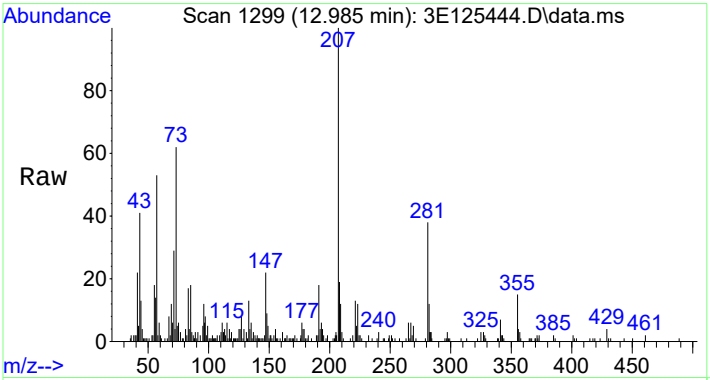

#35
n-Heptacosane (C27)
Concen: N.D.
Expected RT: 12.70 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 76.1 |
| 71 | 90.4 |
| 85 | 86.7 |

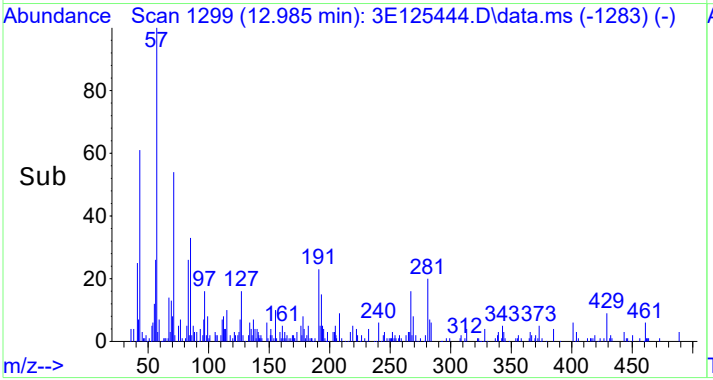


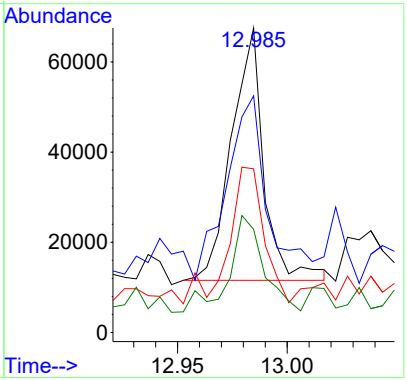



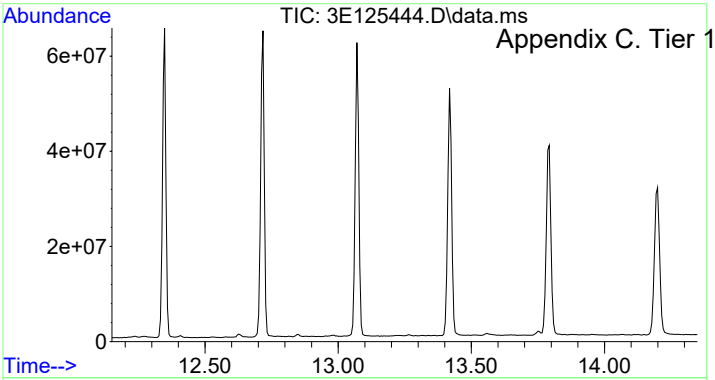

#36
n-Octacosane (C28)
Concen: 57295.00
RT: 12.985 min Scan# 1299
Delta R.T. -0.015 min
Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

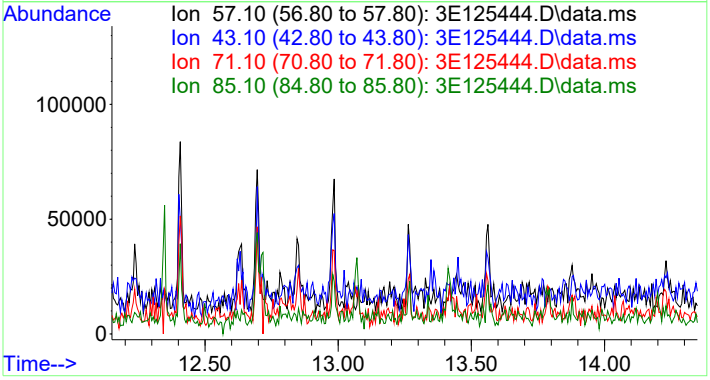
Tgt Ion: 57 Resp: 57295

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 92.7 | 48.6 | 73.0# |
| 71 | 59.5 | 58.3 | 87.5 |
| 85 | 41.3 | 45.0 | 67.6# |





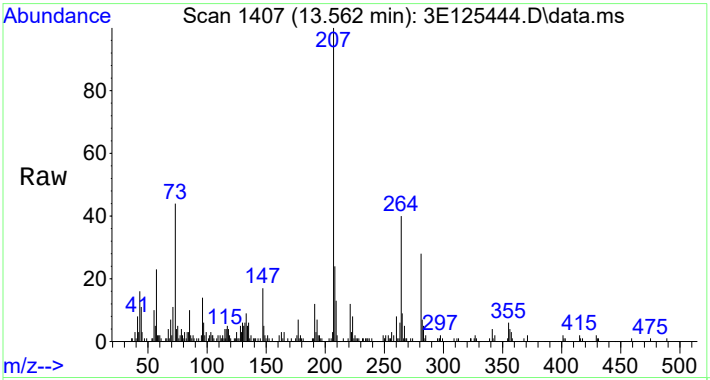




#37
n-Nonacosane (C29)
Concen: N.D.
Expected RT: 13.25 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

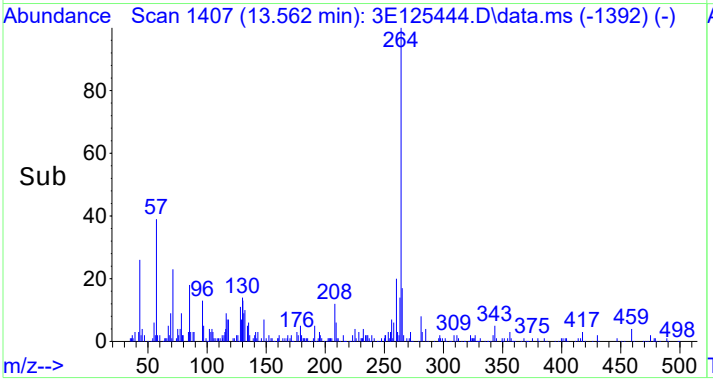
| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.1 |
| 71 | 78.4 |
| 85 | 67.7 |

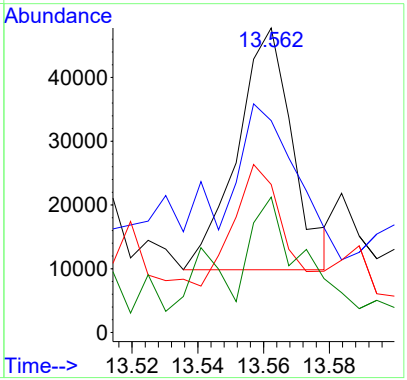


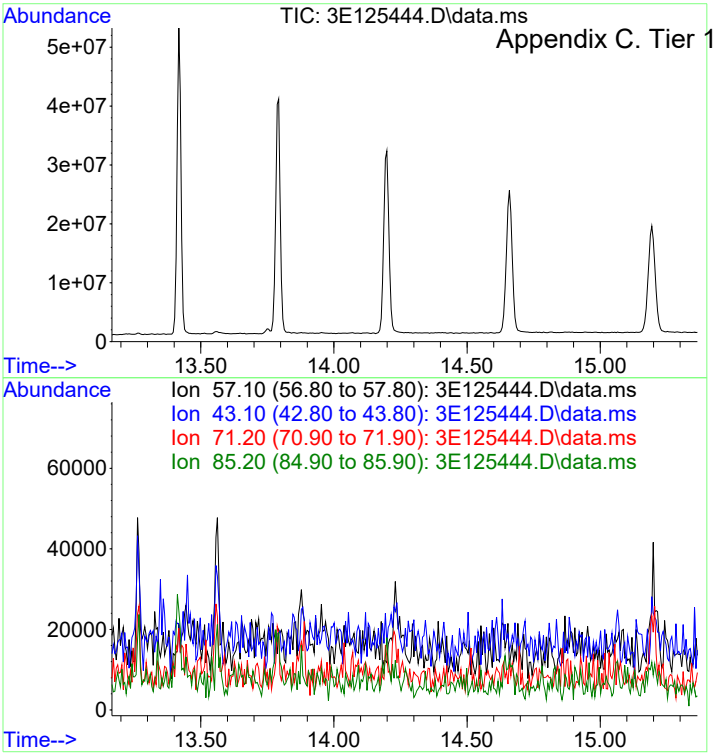

#38
n-Triacontane (C30)
Concen: 44416.00
RT: 13.562 min Scan# 1407
Delta R.T. -0.019 min
Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57 Resp: 44416

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 77.5 | 47.7 | 71.5# |
| 71 | 43.0 | 58.2 | 87.4# |
| 85 | 39.2 | 45.5 | 68.3# |



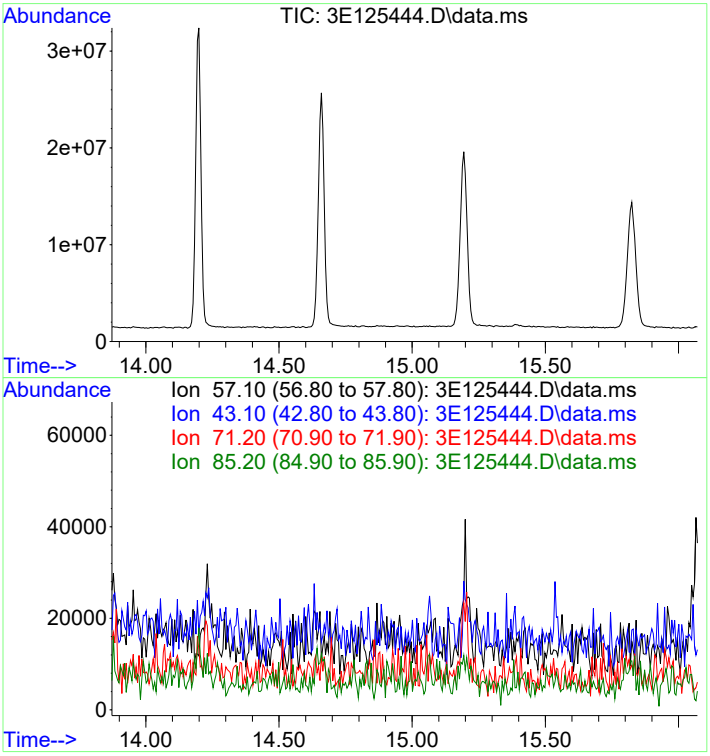



#39
n-Dotriacontane (C32)
Concen: N.D.
Expected RT: 14.27 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 58.6 |
| 71 | 71.7 |
| 85 | 55.6 |

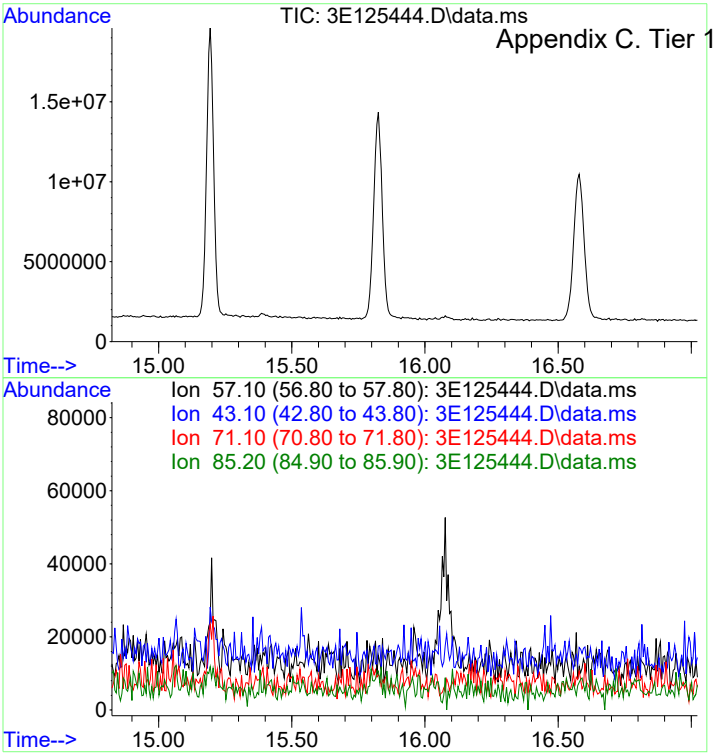



#40
n-Tetratriacontane (C34)
Concen: N.D.
Expected RT: 14.97 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 57.4 |
| 71 | 71.0 |
| 85 | 54.6 |

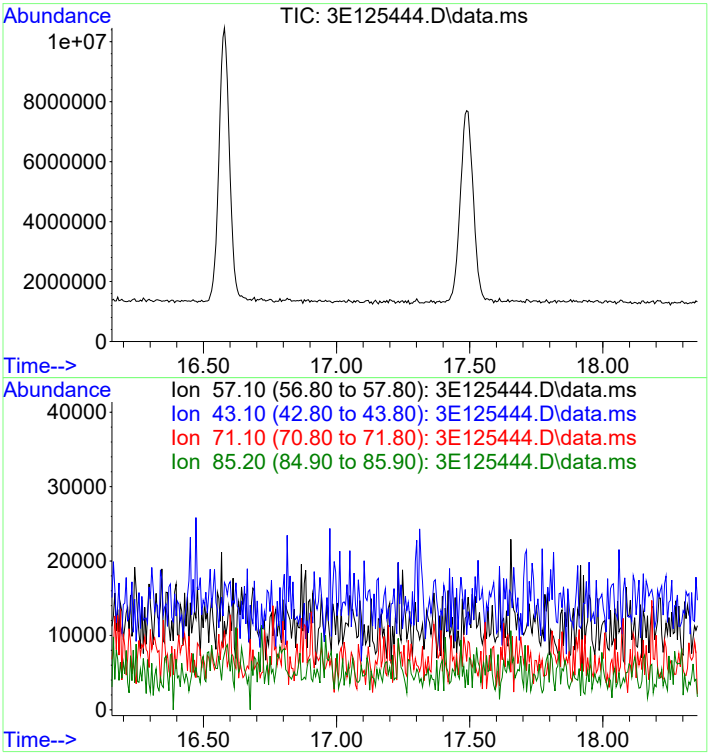



#41
n-Hexatriacontane (C36)
Concen: N.D.
Expected RT: 15.92 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 56.3 |
| 71 | 71.0 |
| 85 | 54.4 |

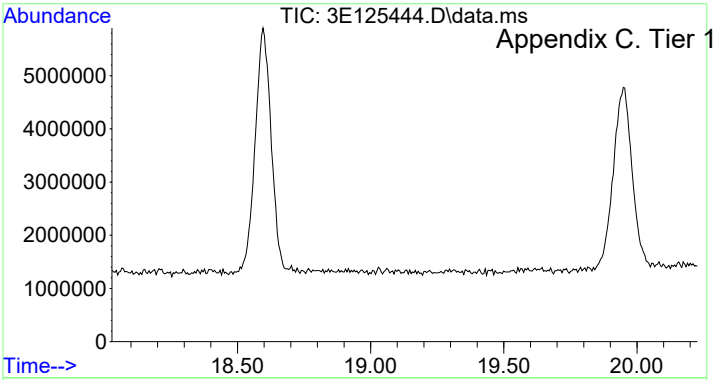



#42
n-Octatriacontane (C38)
Concen: N.D.
Expected RT: 17.26 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 55.0 |
| 71 | 70.8 |
| 85 | 53.9 |

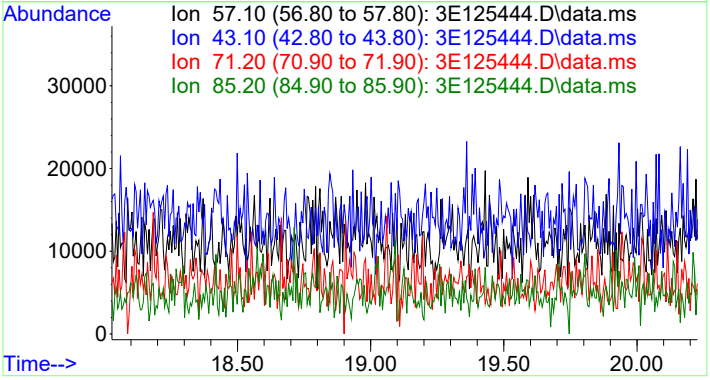


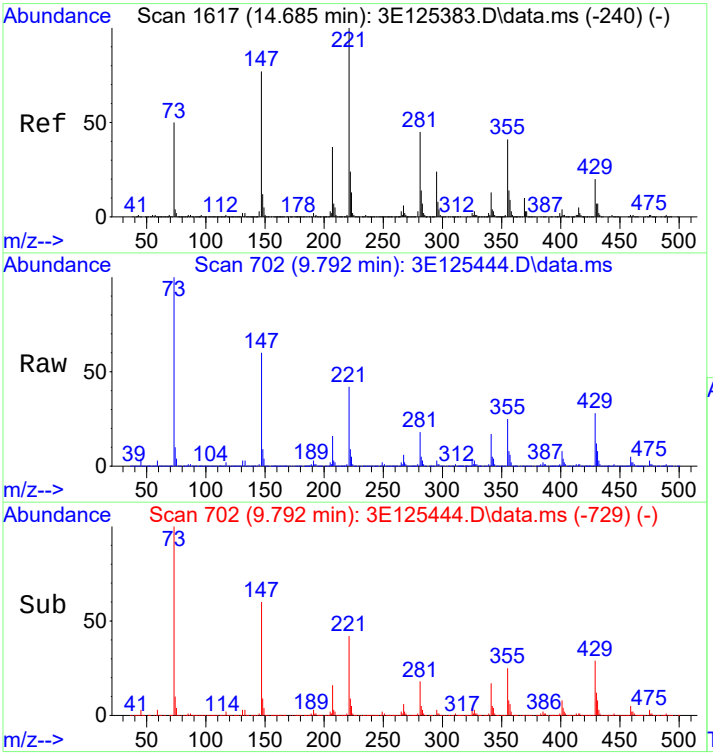

#43
n-Tetracontane (C40)
Concen: N.D.
Expected RT: 19.13 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 70.6 |
| 85 | 53.9 |

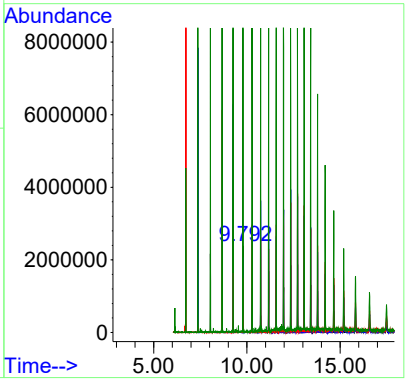


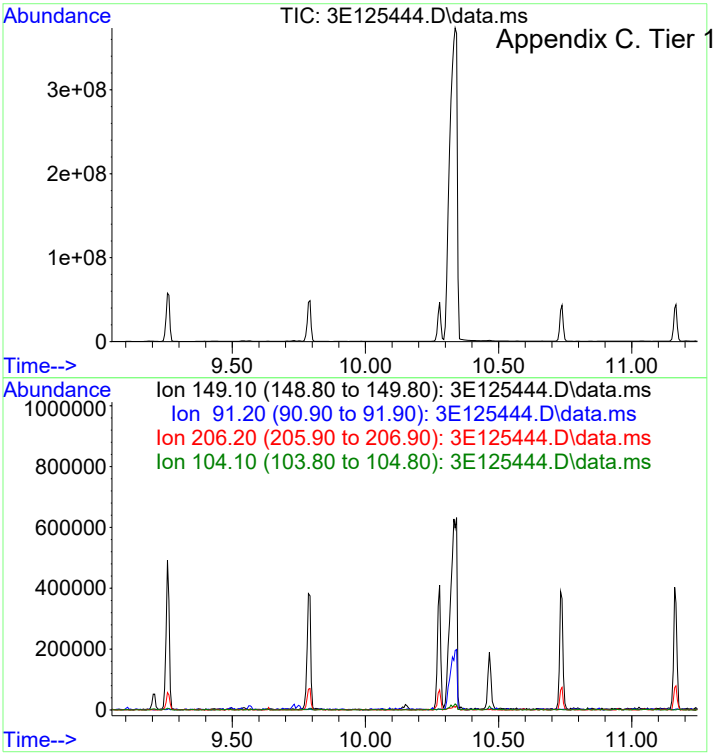




#44
Siloxane
Concen: 16067230.00 m
RT: 9.792 min Scan# 702
Delta R.T. -0.244 min
Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion:429 Resp:16067230

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 429 | 100 | | |
| 355 | 0.0 | 0.0 | 20.0 |
| 281 | 0.0 | 0.0 | 20.0 |
| 73 | 0.0 | 0.0 | 20.0 |



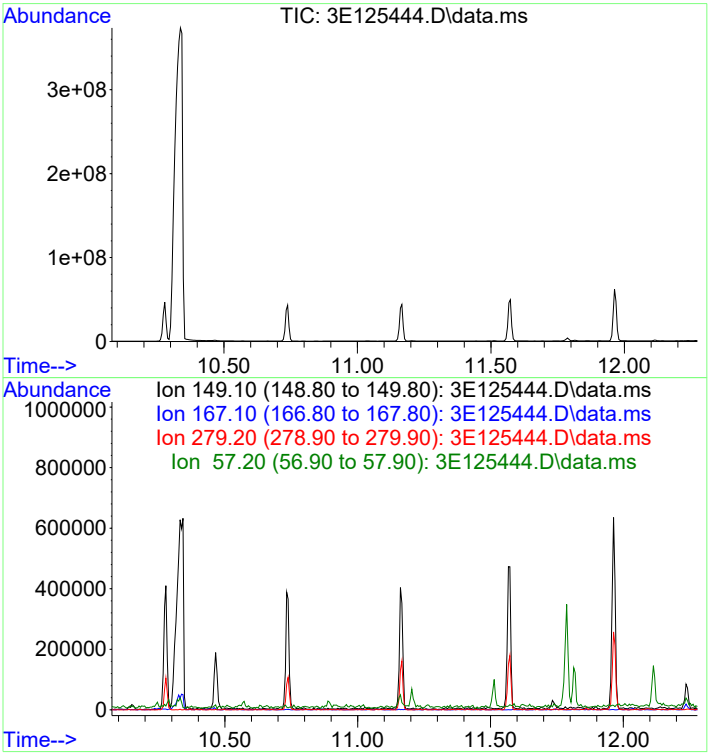



#45
Butyl benzyl phthalate
Concen: N.D.
Expected RT: 10.15 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 91 | 97.4 |
| 206 | 28.9 |
| 104 | 19.1 |

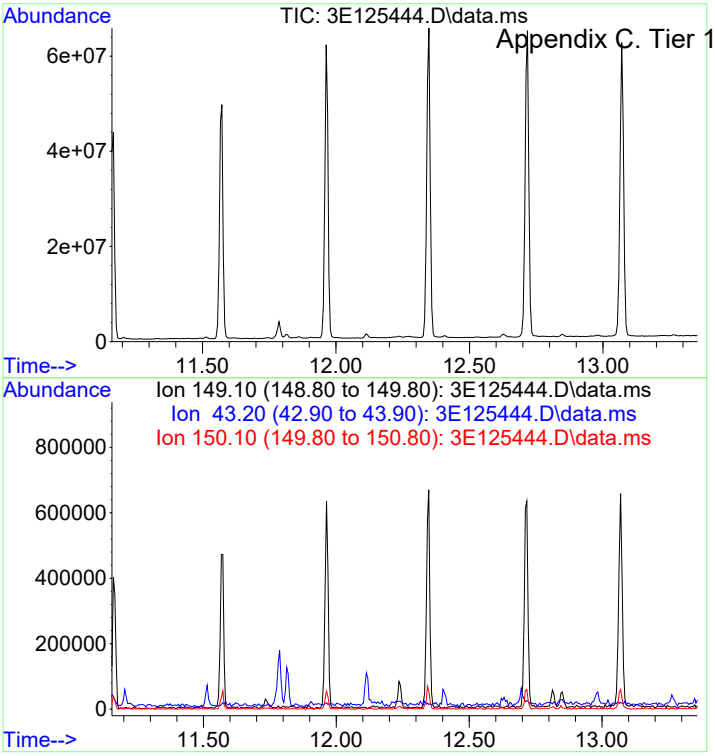



#46
Bis(2-ethylhexyl)phthalate
Concen: N.D.
Expected RT: 11.18 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 167 | 34.3 |
| 279 | 10.6 |
| 57 | 34.0 |

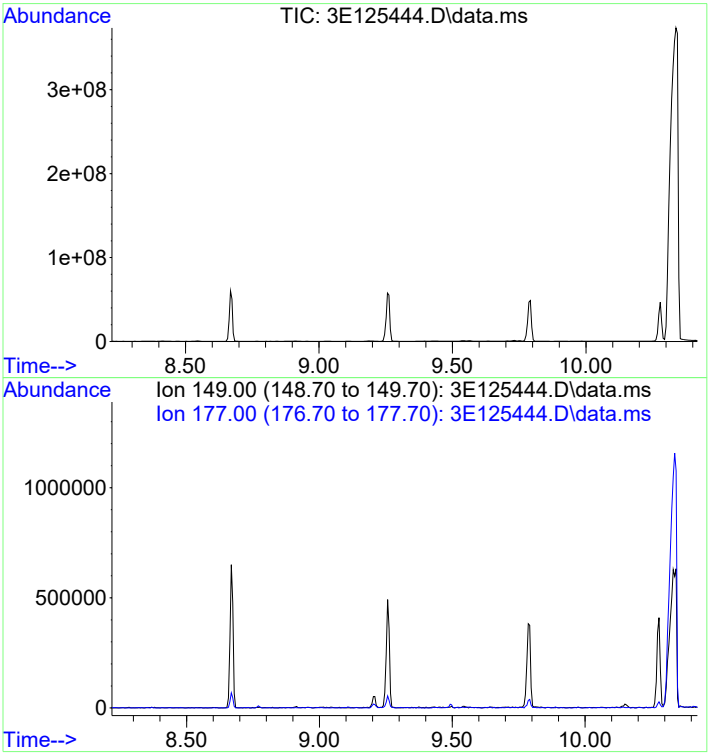



#47
Di-n-octyl phthalate
Concen: N.D.
Expected RT: 12.26 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 43 | 12.1 |
| 150 | 10.0 |




#48
Diethyl Phthalate
Concen: N.D.
Expected RT: 9.32 min

Lab File: 3E125444.D
Acq: 30 Jul 2024 8:48 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 177 | 21.3 |

Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 22:31:14 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration

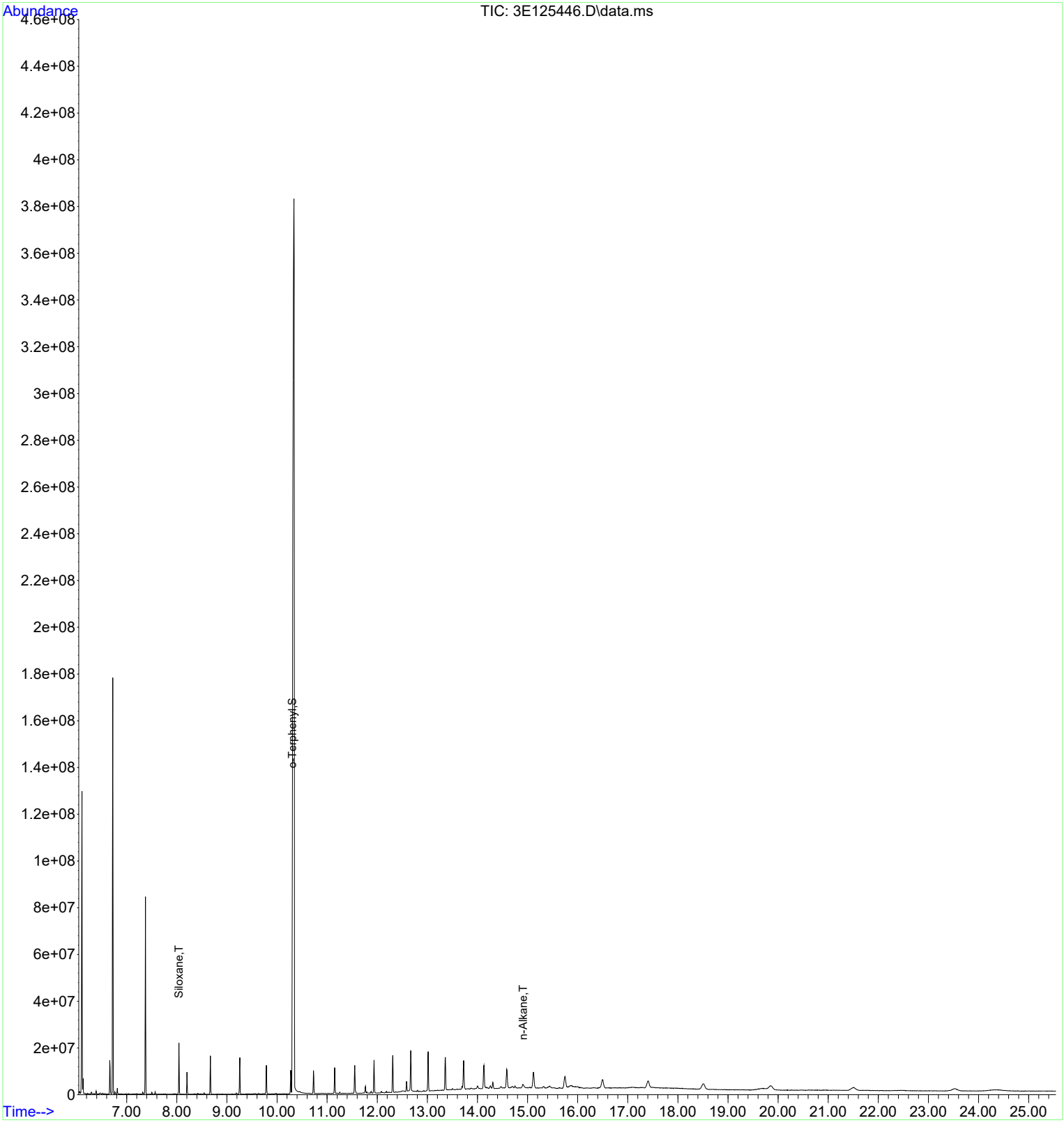
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 17) o-Terphenyl | 10.305 | 230 | 28146944m | 28146944.00 | | -0.15 |
| Target Compounds | | | | | | Qvalue |
| 1) Undecane (C11) | 0.000 | | 0 | N.D. | d | |
| 2) Diethylnaphthalene | 0.000 | | 0 | N.D. | d | |
| 3) 1-Methylnaphthalene | 0.000 | | 0 | N.D. | d | |
| 4) 1-Ethylpropylbenzene | 0.000 | | 0 | N.D. | d | |
| 5) Cyclohexane | 0.000 | | 0 | N.D. | d | |
| 6) Tridecane (C13) | 0.000 | | 0 | N.D. | d | |
| 7) Dodecane (C12) | 0.000 | | 0 | N.D. | d | |
| 8) Sesquiterpanes | 0.000 | | 0 | N.D. | | |
| 9) Benzocyclohexane | 0.000 | | 0 | N.D. | d | |
| 10) Propylbutylbenzene | 0.000 | | 0 | N.D. | d | |
| 11) Cyclic Isoprenoid | 0.000 | | 0 | N.D. | d | |
| 12) Trimethylbenzene | 0.000 | | 0 | N.D. | d | |
| 13) Bromo-Xa | 0.000 | | 0 | N.D. | | |
| 14) Bromo-Xb | 0.000 | | 0 | N.D. | | |
| 15) n-Hexadecanoic Acid | 0.000 | | 0 | N.D. | | |
| 16) n-Octadecanoic Acid | 0.000 | | 0 | N.D. | | |
| 18) Bromo-o-Terphenyl | 0.000 | | 0 | N.D. | | |
| 19) Chloro-o-Terphenyl | 0.000 | | 0 | N.D. | | |
| 20) n-Alkane | 14.910 | 57 | 44963904m | 44963904.00 | | |
| 21) n-Octane (C8) | 0.000 | | 0 | N.D. | d | |
| 22) n-Nonane (C9) | 0.000 | | 0 | N.D. | d | |
| 23) n-Decane (C10) | 0.000 | | 0 | N.D. | d | |
| 24) n-Dodecane (C12) | 0.000 | | 0 | N.D. | d | |
| 25) n-Tetradecane (C14) | 0.000 | | 0 | N.D. | d | |
| 26) n-Hexadecane (C16) | 0.000 | | 0 | N.D. | d | |
| 27) n-Octadecane (C18) | 0.000 | | 0 | N.D. | d | |
| 28) n-Eicosane (C20) | 0.000 | | 0 | N.D. | d | |
| 29) n-Heneicosane (C21) | 0.000 | | 0 | N.D. | d | |
| 30) n-Docosane (C22) | 0.000 | | 0 | N.D. | d | |
| 31) n-Tricosane (C23) | 0.000 | | 0 | N.D. | d | |
| 32) n-Tetracosane (C24) | 0.000 | | 0 | N.D. | d | |
| 33) n-Pentacosane (C25) | 0.000 | | 0 | N.D. | d | |
| 34) n-Hexacosane (C26) | 0.000 | | 0 | N.D. | d | |
| 35) n-Heptacosane (C27) | 0.000 | | 0 | N.D. | d | |
| 36) n-Octacosane (C28) | 0.000 | | 0 | N.D. | d | |
| 37) n-Nonacosane (C29) | 0.000 | | 0 | N.D. | d | |
| 38) n-Triacontane (C30) | 0.000 | | 0 | N.D. | d | |
| 39) n-Doatriacontane (C32) | 0.000 | | 0 | N.D. | d | |
| 40) n-Tetratriacontane (C34) | 0.000 | | 0 | N.D. | d | |
| 41) n-Hexatriacontane (C36) | 0.000 | | 0 | N.D. | d | |
| 42) n-Octatriacontane (C38) | 0.000 | | 0 | N.D. | d | |
| 43) n-Tetracontane (C40) | 0.000 | | 0 | N.D. | d | |
| 44) Siloxane | 8.043 | 429 | 10042749m | 10042749.00 | | |
| 45) Butyl benzyl phthalate | 0.000 | | 0 | N.D. | d | |
| 46) Bis(2-ethylhexyl)phtha... | 0.000 | | 0 | N.D. | d | |
| 47) Di-n-octylphthalate | 0.000 | | 0 | N.D. | d | |
| 48) Diethyl Phthalate | 0.000 | | 0 | N.D. | d | |

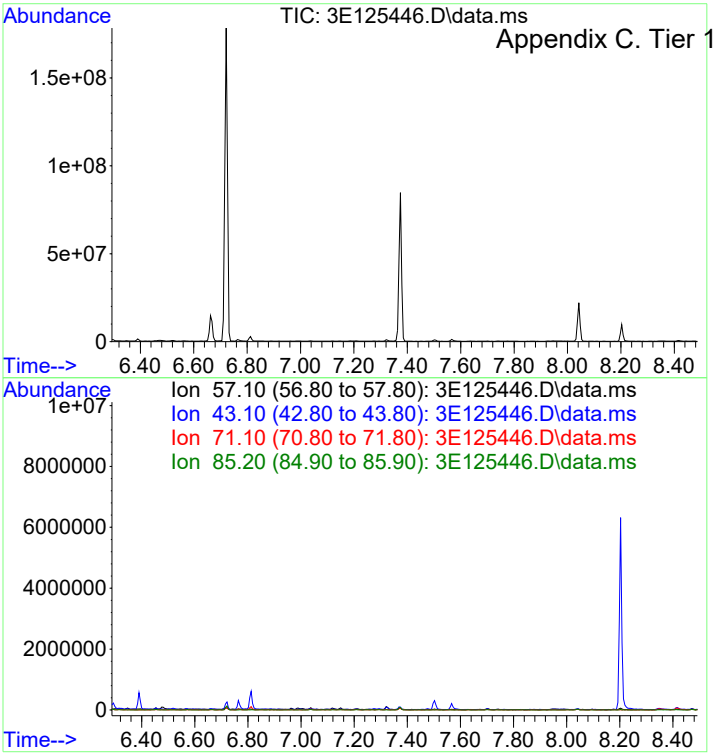
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\Users\(b) (6) Desktop\AECOM\AECOM Screens\
Data File : 3E125446.D
Acq On : 30 Jul 2024 9:31 pm
Operator : (b) (6)
Sample : 889-3
Misc : op52156,e3e5838,1000,,,1,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 22:31:14 2024
Quant Method : C:\Users\(b) (6) Desktop\AECOM SCREENS\AECOM_e3g_TPHEXT.M
Quant Title : 8270C Calibration
QLast Update : Sat Jul 20 18:21:47 2024
Response via : Initial Calibration



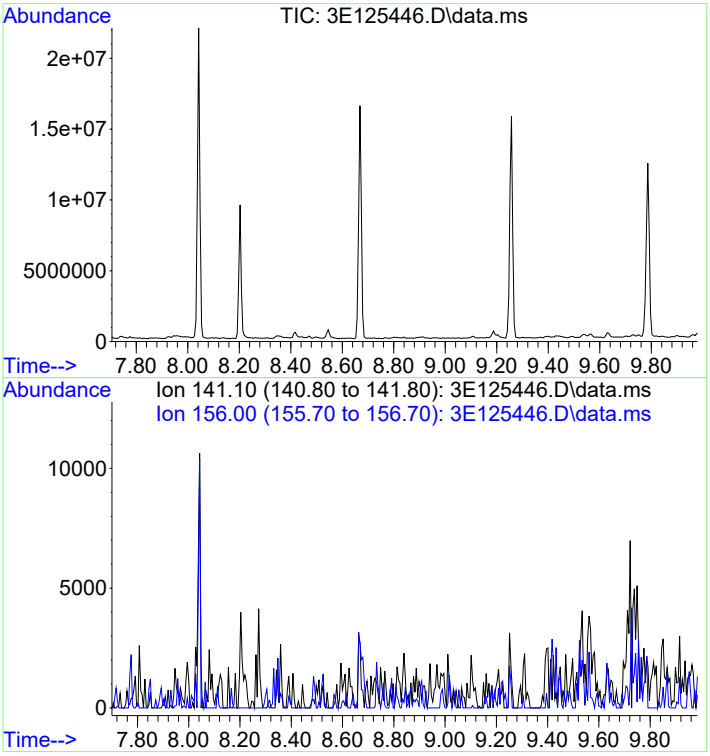



#1
Undecane (C11)
Concen: N.D.
Expected RT: 7.39 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 15.7 |
| 71 | 6.9 |
| 85 | 0.0 |

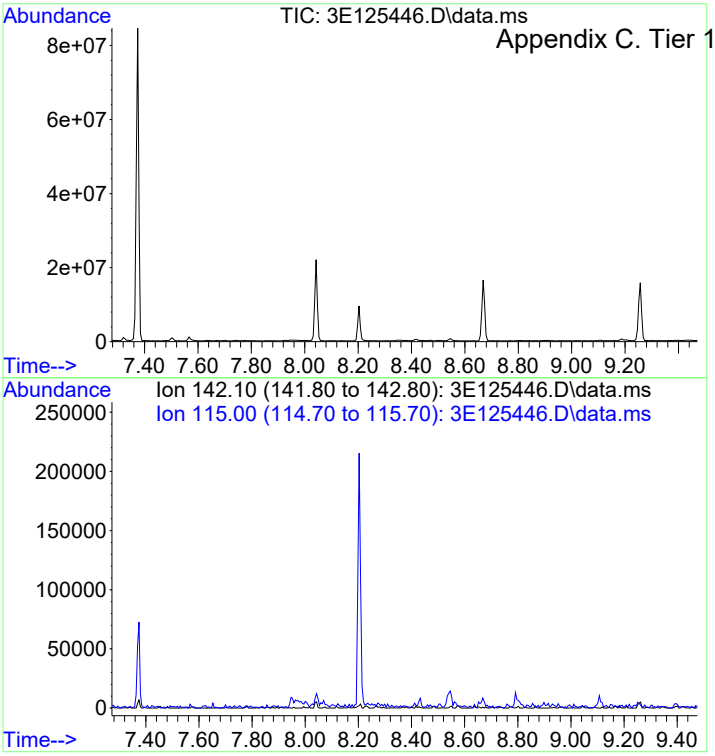



#2
Diethylnaphthalene
Concen: N.D.
Expected RT: 8.80 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 141

| Sig | Exp Ratio |
|---|---|
| 141 | 100 |
| 156 | 0.0 |

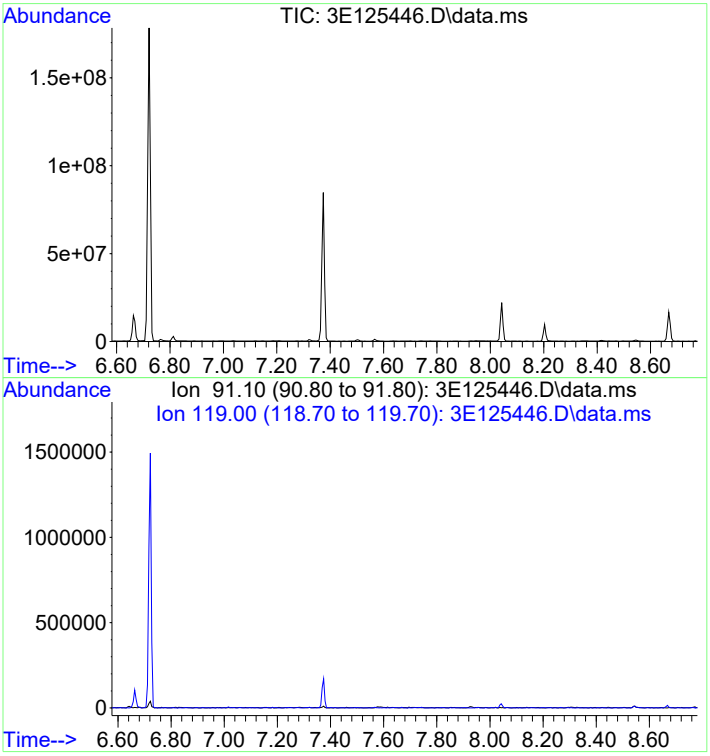



#3
1-Methylnaphthalene
Concen: N.D.
Expected RT: 8.37 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 142

| Sig | Exp Ratio |
|---|---|
| 142 | 100 |
| 115 | 0.0 |

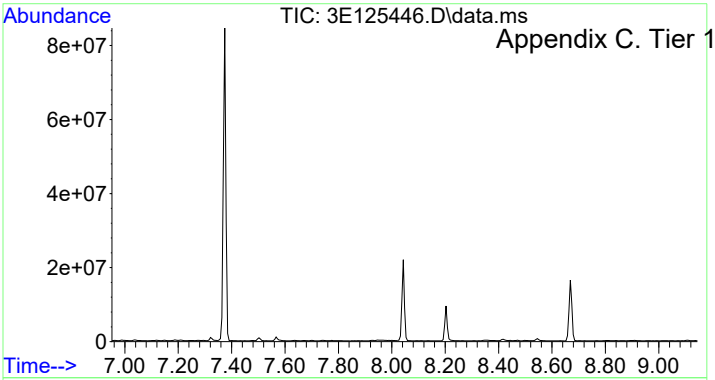


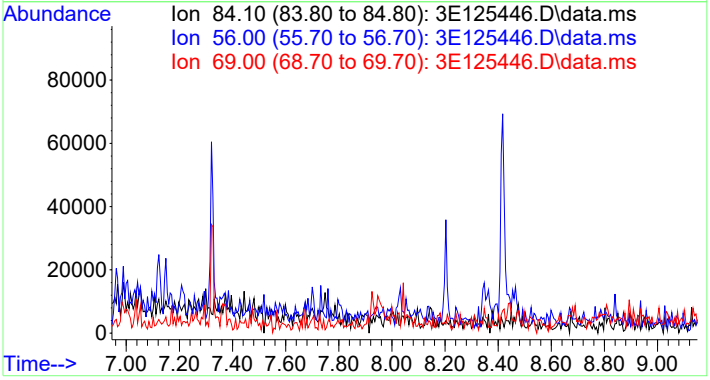

#4
1-Ethylpropylbenzene
Concen: N.D.
Expected RT: 7.68 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 91

| Sig | Exp Ratio |
|---|---|
| 91 | 100 |
| 119 | 0.0 |



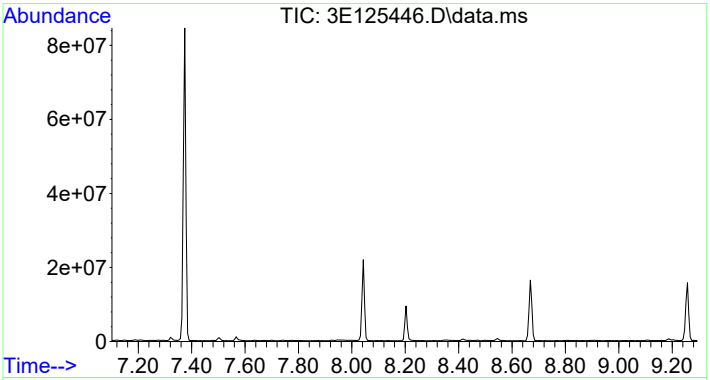



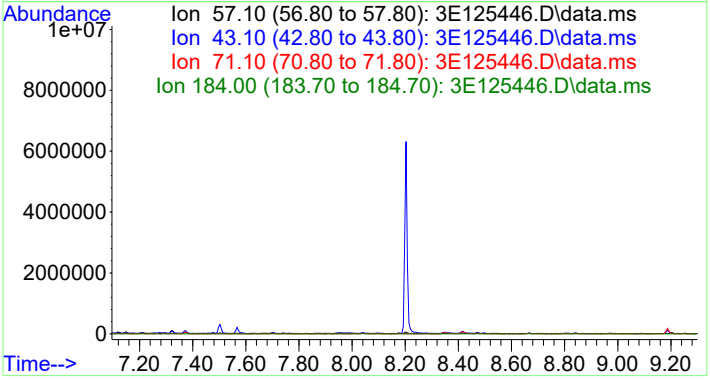

#5
Cyclohexane
Concen: N.D.
Expected RT: 8.05 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 84

| Sig | Exp Ratio |
|---|---|
| 84 | 100 |
| 56 | 0.0 |
| 69 | 0.0 |



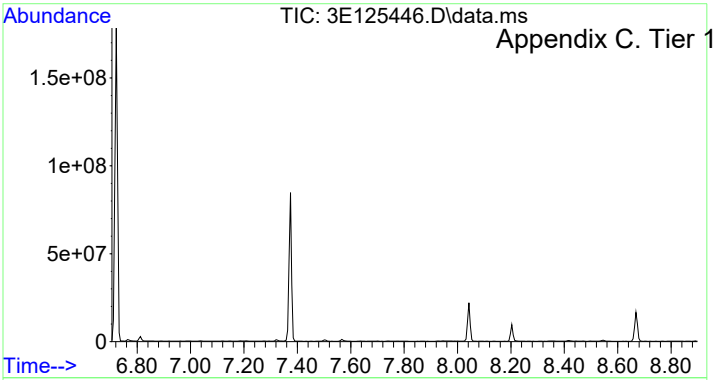



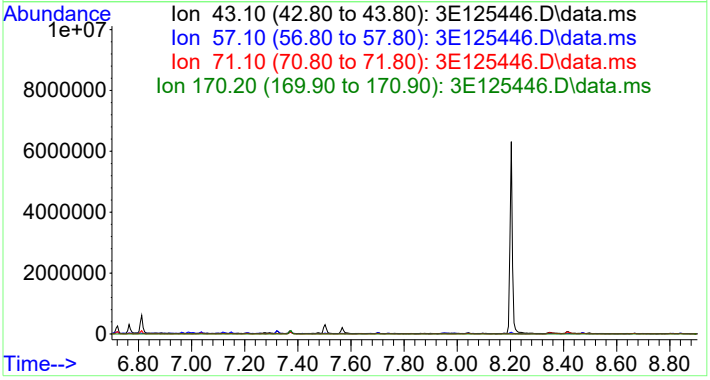

#6
Tridecane (C13)
Concen: N.D.
Expected RT: 8.20 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 6.1 |
| 71 | 0.0 |
| 184 | 0.0 |



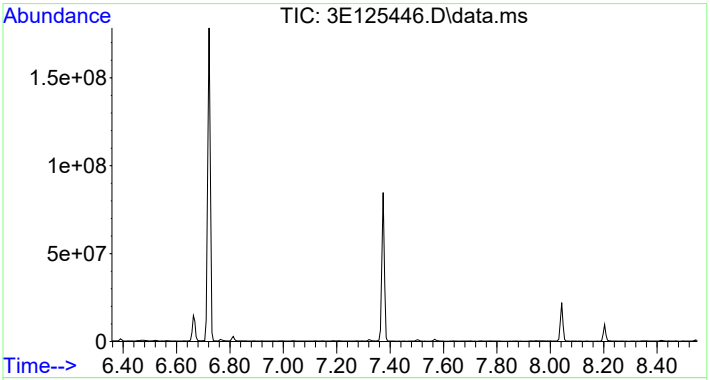



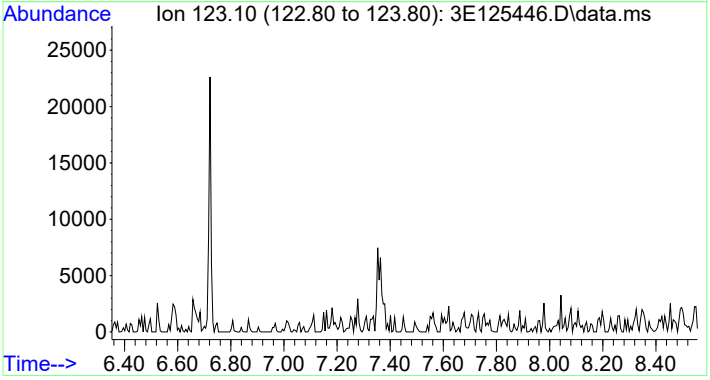

#7
Dodecane (C12)
Concen: N.D.
Expected RT: 7.80 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 43

| Sig | Exp Ratio |
|---|---|
| 43 | 100 |
| 57 | 165.0 |
| 71 | 64.9 |
| 170 | 0.0 |

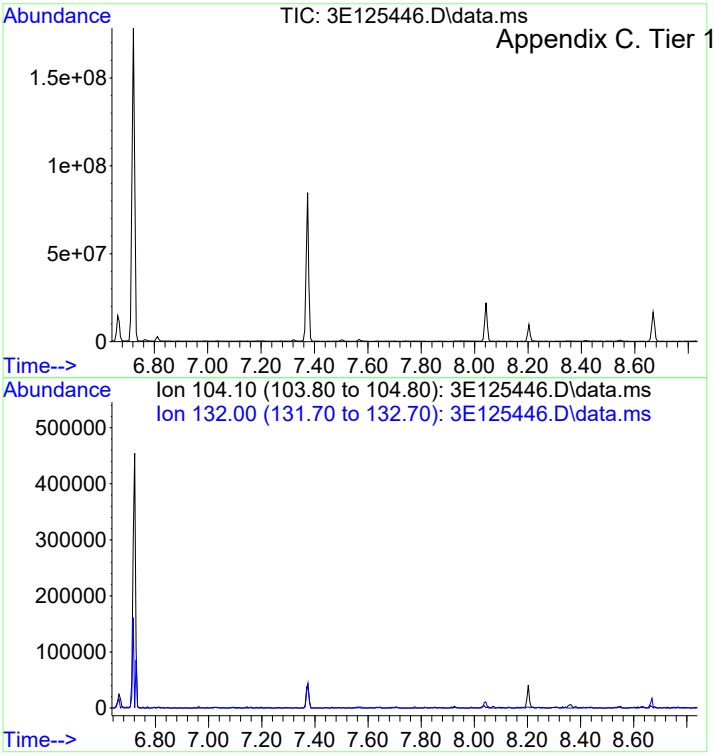



#8
Sesquiterpanes
Concen: N.D.
Expected RT: 7.45 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 123

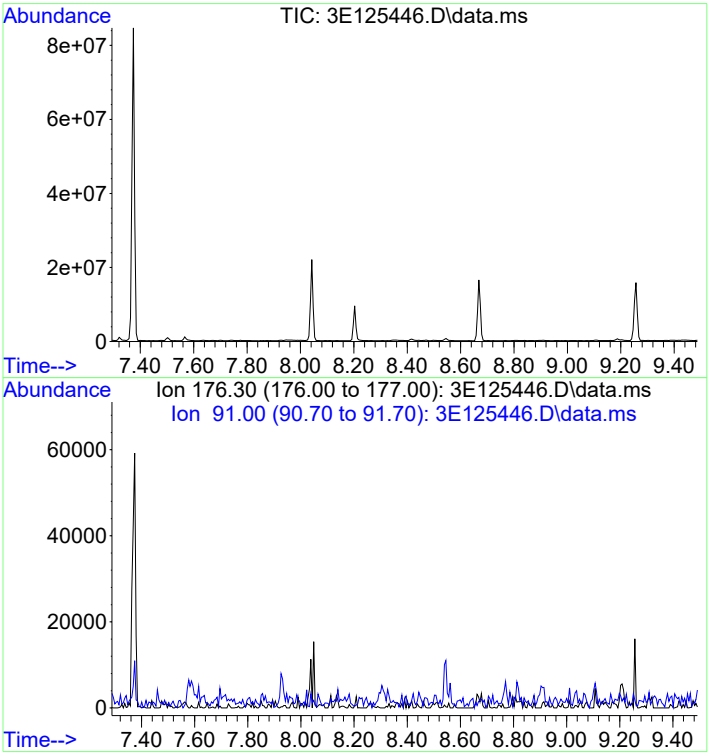



#9
Benzocyclohexane
Concen: N.D.
Expected RT: 7.74 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 104

| Sig | Exp Ratio |
|---|---|
| 104 | 100 |
| 132 | 0.0 |

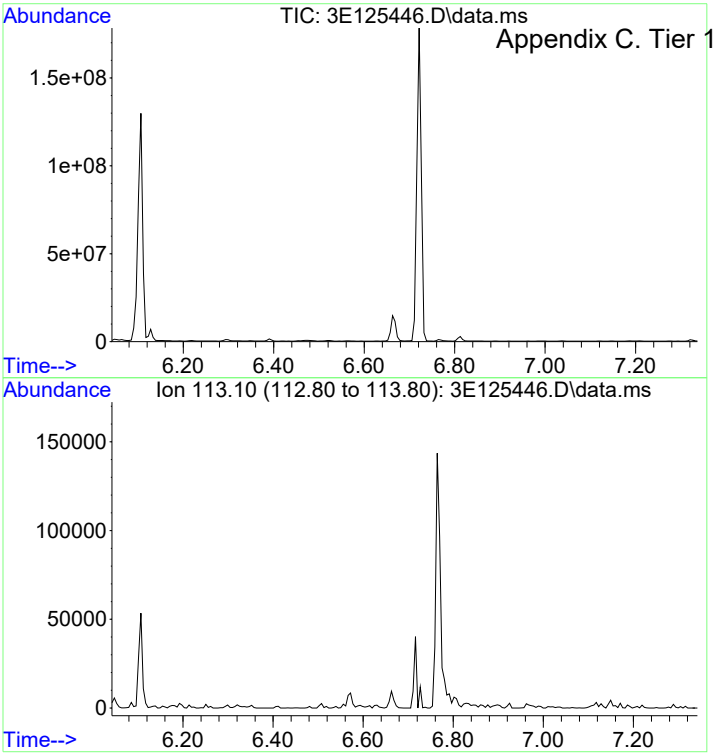



#10
Propylbutylbenzene
Concen: N.D.
Expected RT: 8.39 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 176

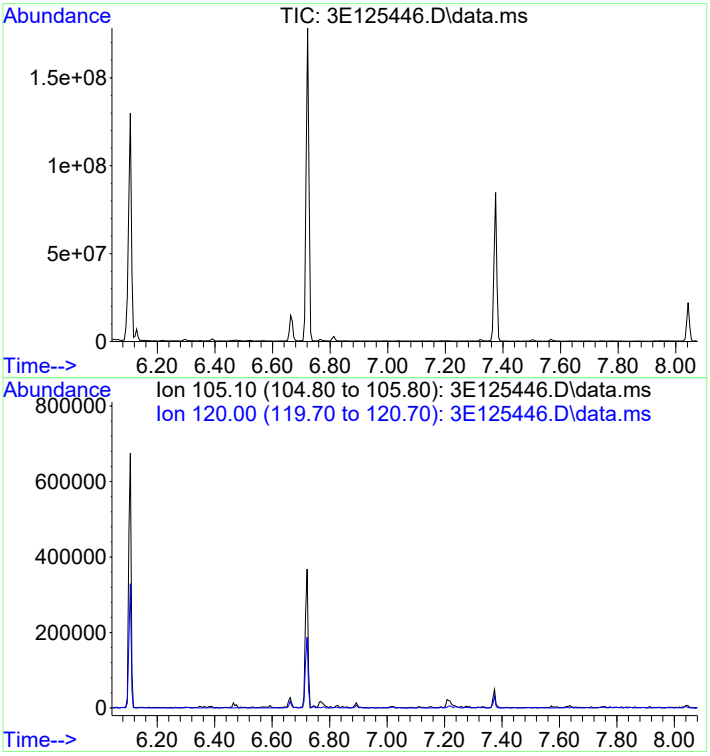
| Sig | Exp Ratio |
|---|---|
| 176 | 100 |
| 91 | 0.0 |




#11
Cyclic Isoprenoid
Concen: N.D.
Expected RT: 6.24 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 113

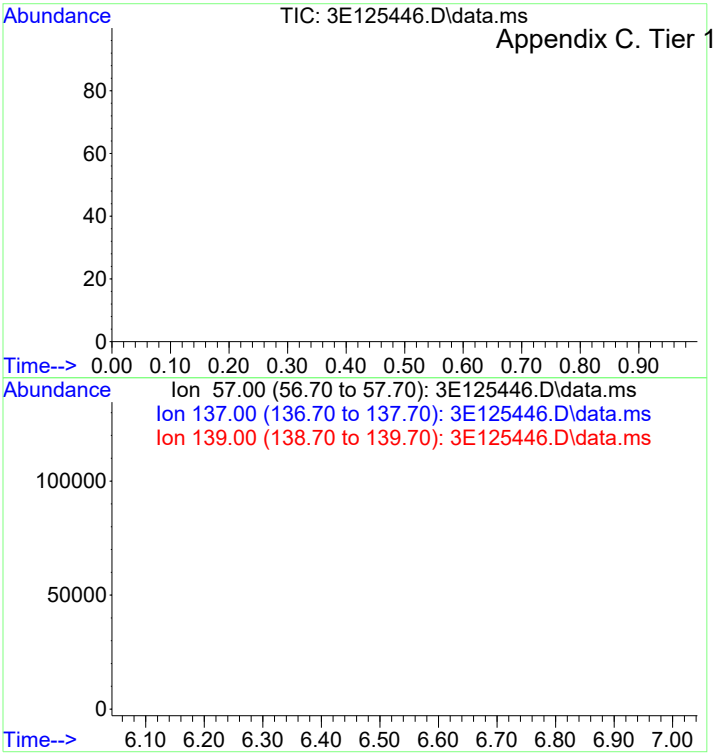



#12
Trimethylbenzene
Concen: N.D.
Expected RT: 6.98 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 105

| Sig | Exp Ratio |
|---|---|
| 105 | 100 |
| 120 | 0.0 |

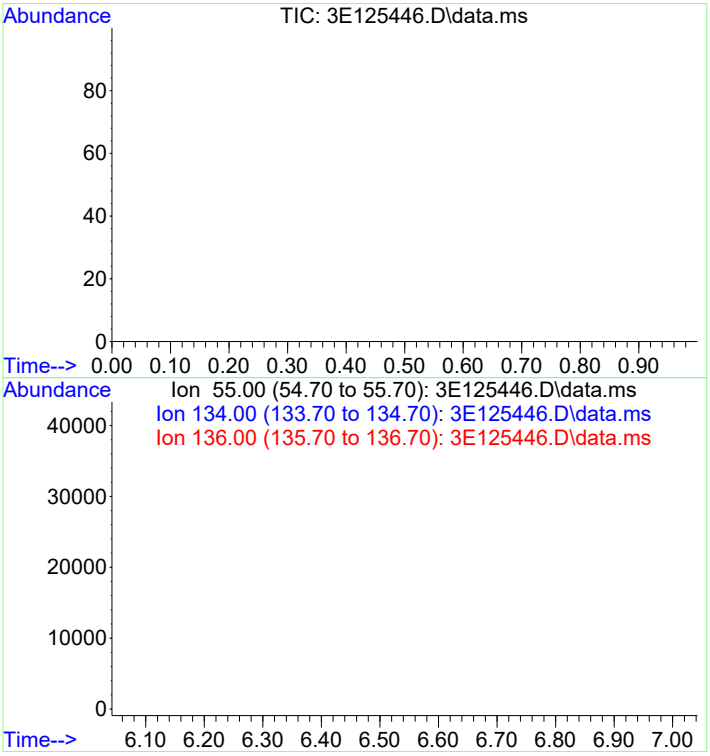



#13
Bromo-Xa
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 137 | 0.0 |
| 139 | 0.0 |

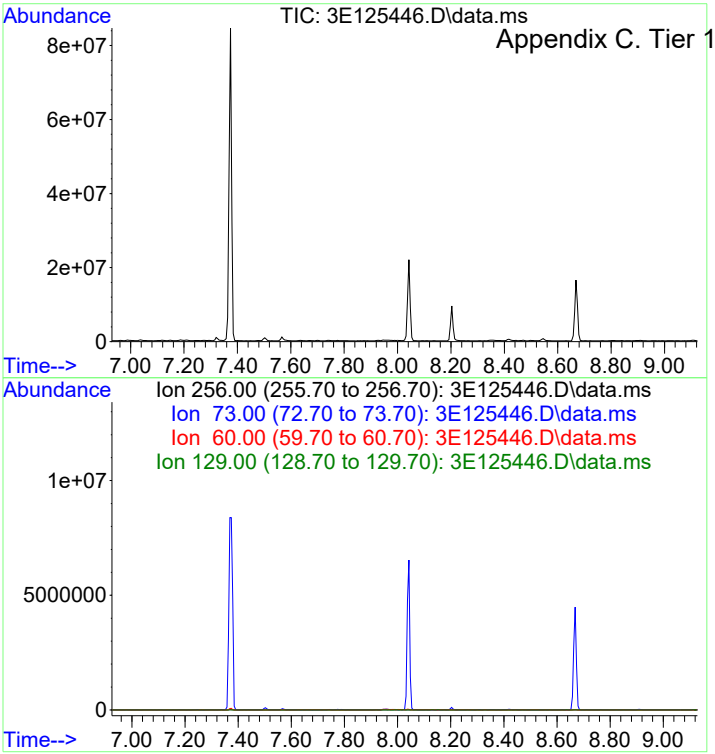



#14
Bromo-Xb
Concen: N.D.
Expected RT: 4.50 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 55

| Sig | Exp Ratio |
|---|---|
| 55 | 100 |
| 134 | 0.0 |
| 136 | 0.0 |

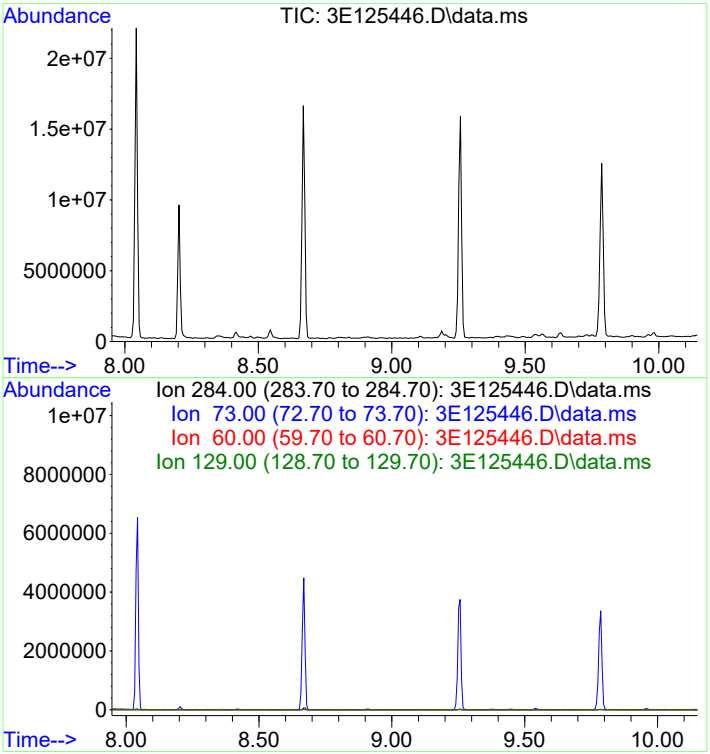



#15
n-Hexadecanoic Acid
Concen: N.D.
Expected RT: 8.03 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 256

| Sig | Exp Ratio |
|---|---|
| 256 | 100 |
| 73 | 117.8 |
| 60 | 50.7 |
| 129 | 36.1 |

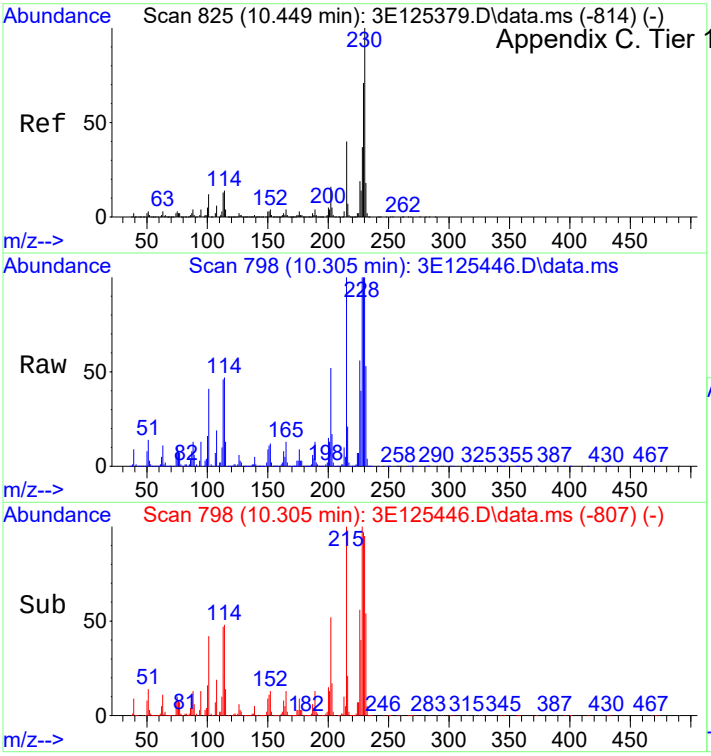



#16
n-Octadecanoic Acid
Concen: N.D.
Expected RT: 9.05 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 284

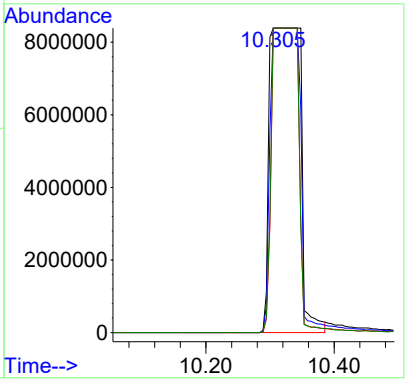
| Sig | Exp Ratio |
|---|---|
| 284 | 100 |
| 73 | 62.7 |
| 60 | 46.4 |
| 129 | 50.0 |

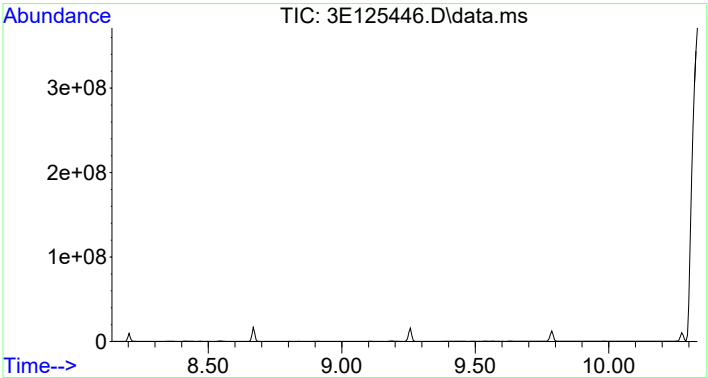


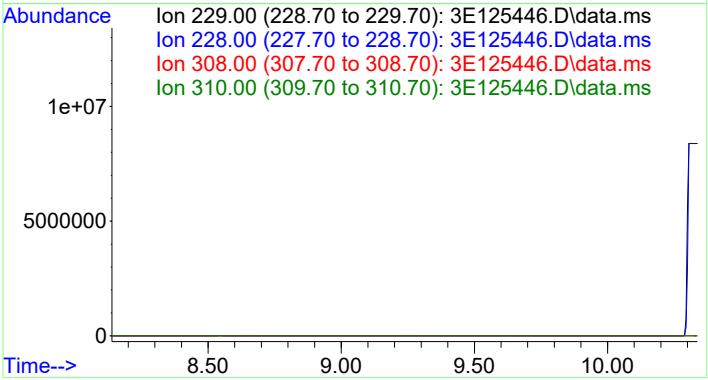

#17
o-Terphenyl
Concen: 28146944.00 m
RT: 10.305 min Scan# 798
Delta R.T. -0.150 min
Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion:230 Resp:28146944

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 230 | 100 | | |
| 229 | 0.0 | 43.0 | 83.0# |
| 228 | 0.0 | 27.3 | 67.3# |
| 215 | 0.1 | 30.0 | 70.0# |



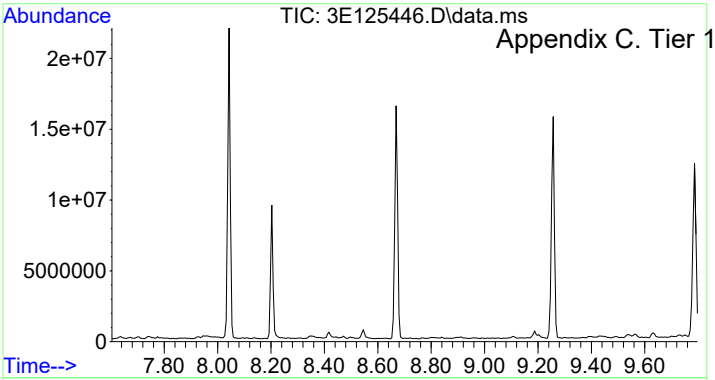



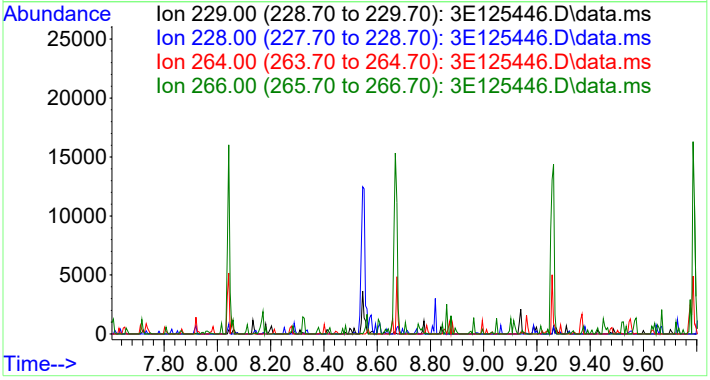

#18
Bromo-o-Terphenyl
Concen: N.D.
Expected RT: 9.24 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 229

| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 135.4 |
| 308 | 79.5 |
| 310 | 0.0 |



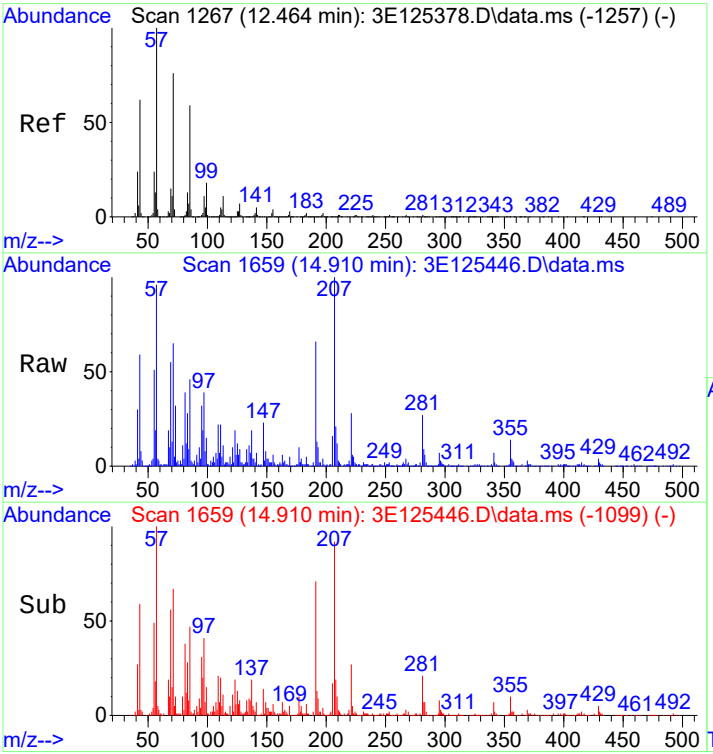




#19
Chloro-o-Terphenyl
Concen: N.D.
Expected RT: 8.70 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 229

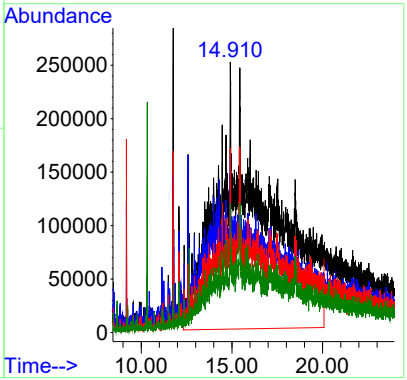
| Sig | Exp Ratio |
|---|---|
| 229 | 100 |
| 228 | 63.1 |
| 264 | 48.7 |
| 266 | 0.0 |

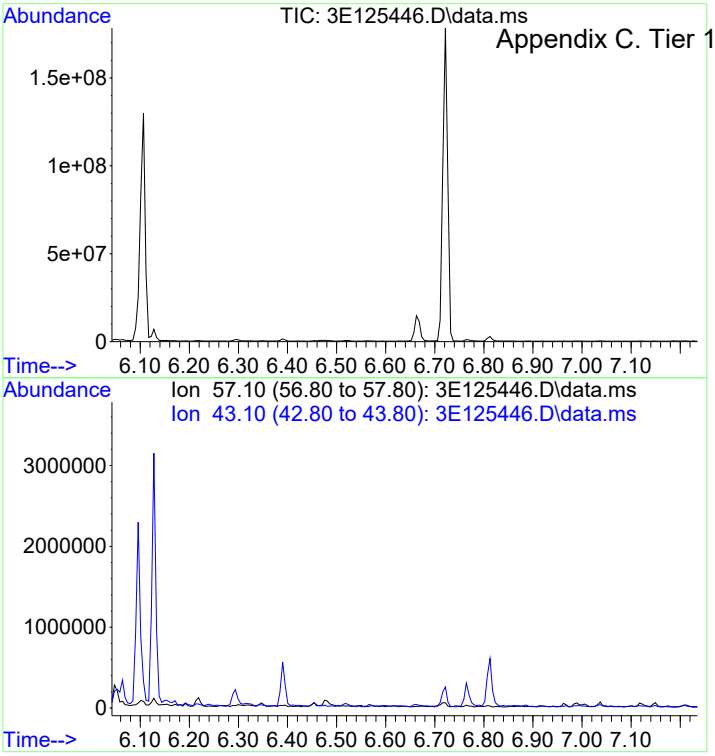



#20
n-Alkane
Concen: 44963904.00 m
RT: 14.910 min Scan# 1659
Delta R.T. 2.894 min
Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57 Resp:44963904

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 43 | 0.0 | 0.0 | 20.0 |
| 71 | 0.0 | 162.1 | 202.1# |
| 85 | 0.0 | 0.0 | 20.0 |



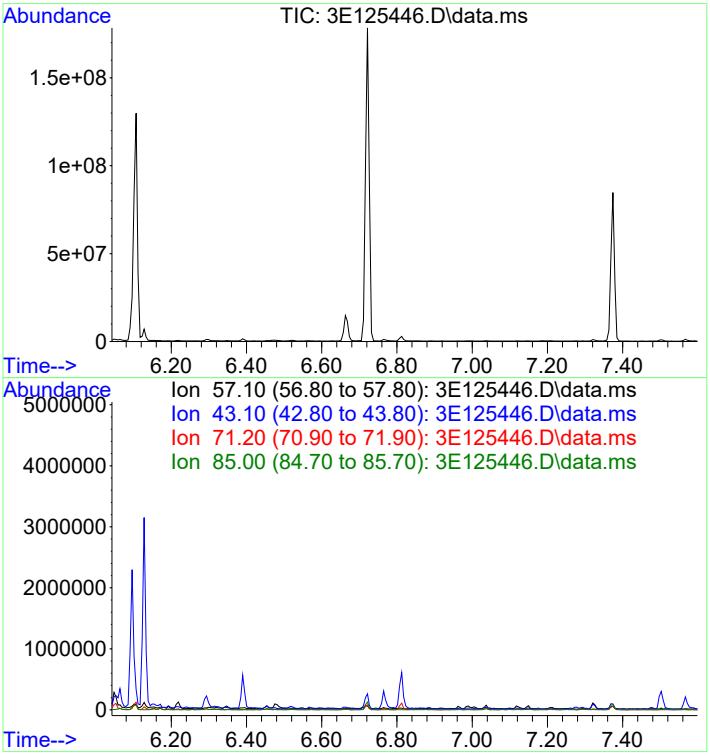



#21
n-Octane (C8)
Concen: N.D.
Expected RT: 6.14 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 235.9 |

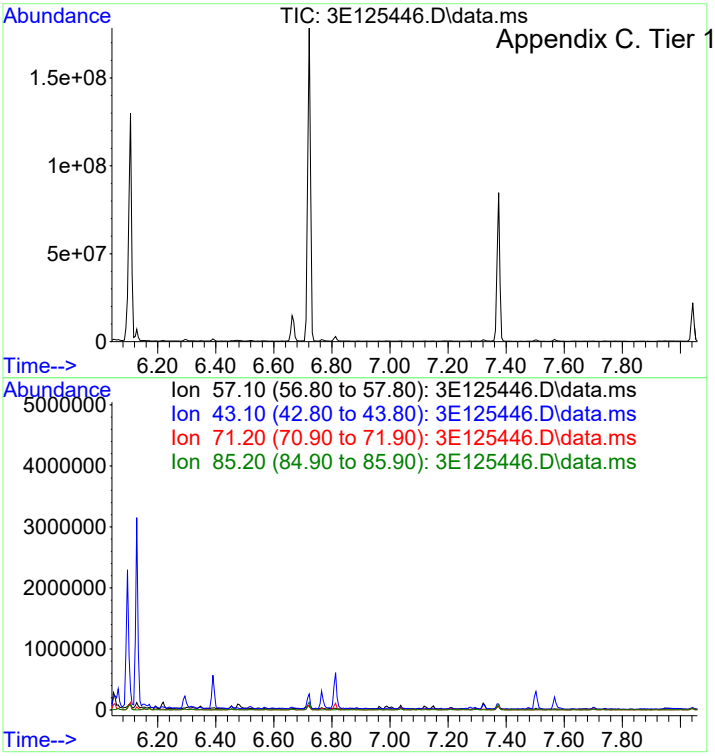



#22
n-Nonane (C9)
Concen: N.D.
Expected RT: 6.50 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 0.1 |
| 71 | 0.1 |
| 85 | 0.0 |

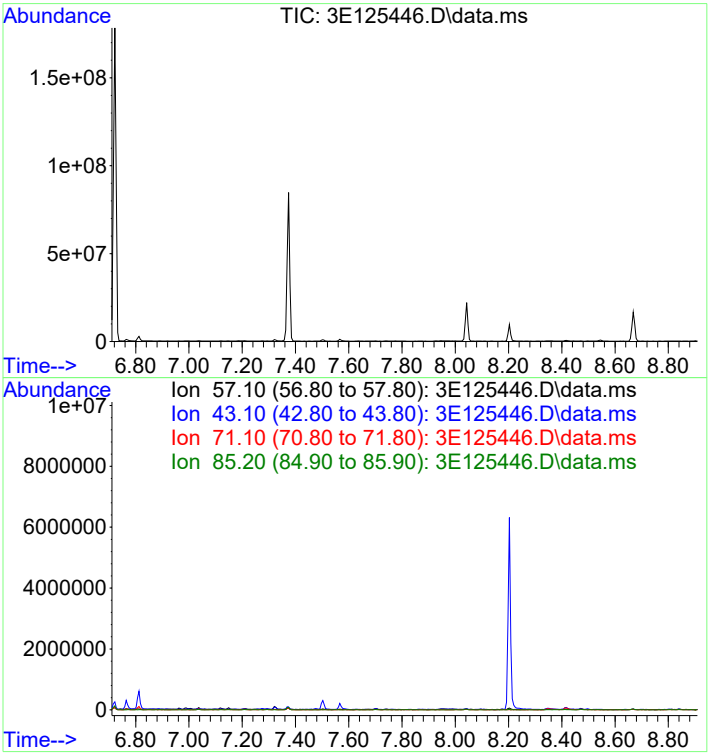



#23
n-Decane (C10)
Concen: N.D.
Expected RT: 6.96 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 90.4 |
| 71 | 39.1 |
| 85 | 27.8 |

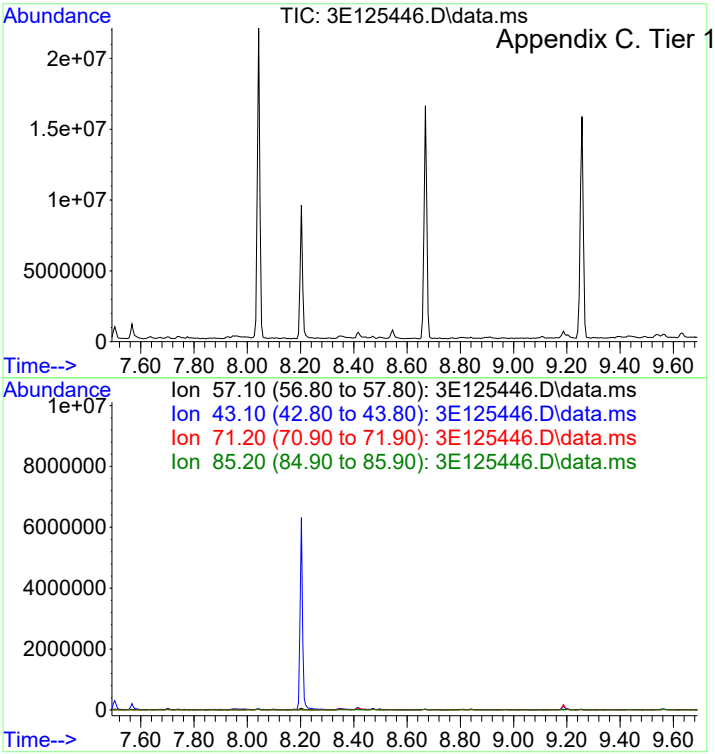



#24
n-Dodecane (C12)
Concen: N.D.
Expected RT: 7.81 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 77.7 |
| 71 | 53.0 |
| 85 | 32.4 |

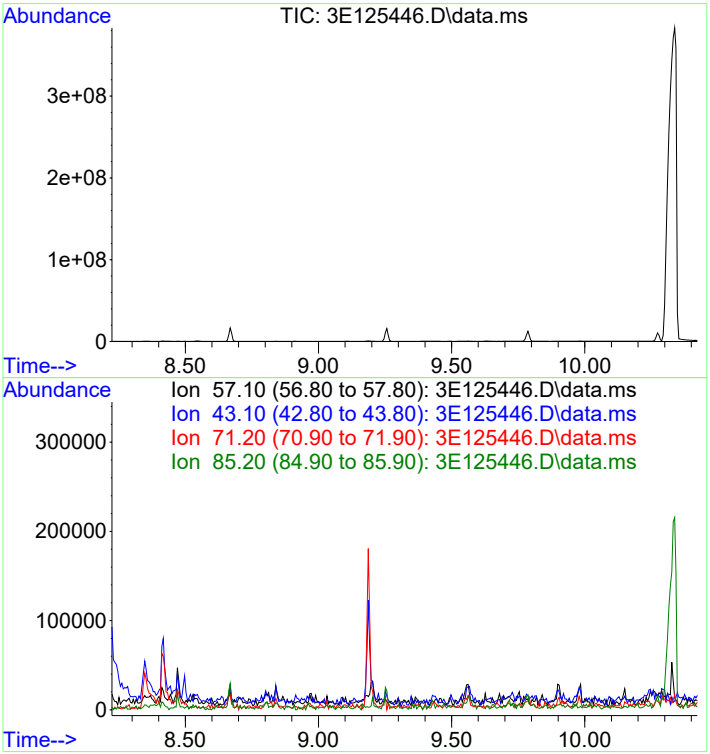



#25
n-Tetradecane (C14)
Concen: N.D.
Expected RT: 8.59 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 72.0 |
| 71 | 60.8 |
| 85 | 40.6 |

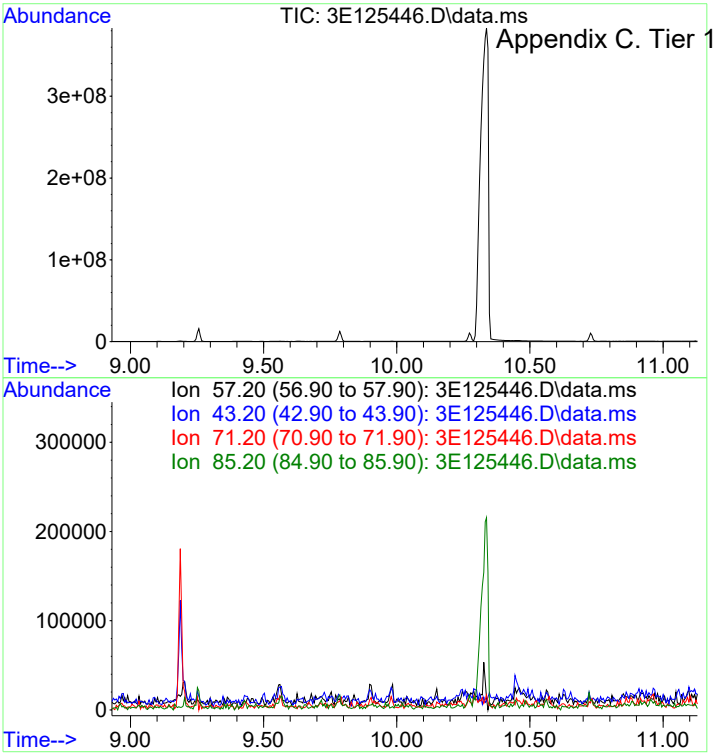



#26
n-Hexadecane (C16)
Concen: N.D.
Expected RT: 9.32 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 68.5 |
| 71 | 65.4 |
| 85 | 46.0 |

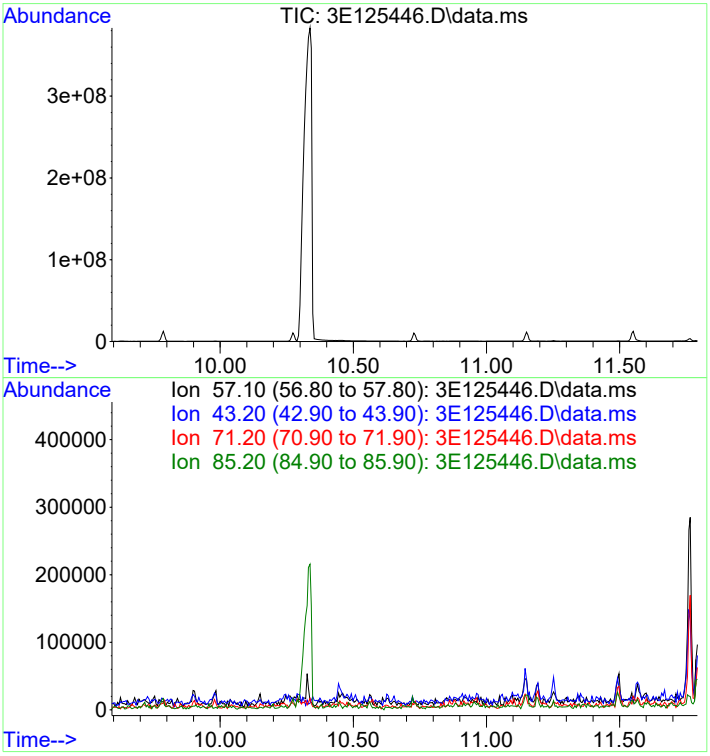



#27
n-octadecane (C18)
Concen: N.D.
Expected RT: 10.03 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.7 |
| 71 | 68.9 |
| 85 | 49.4 |

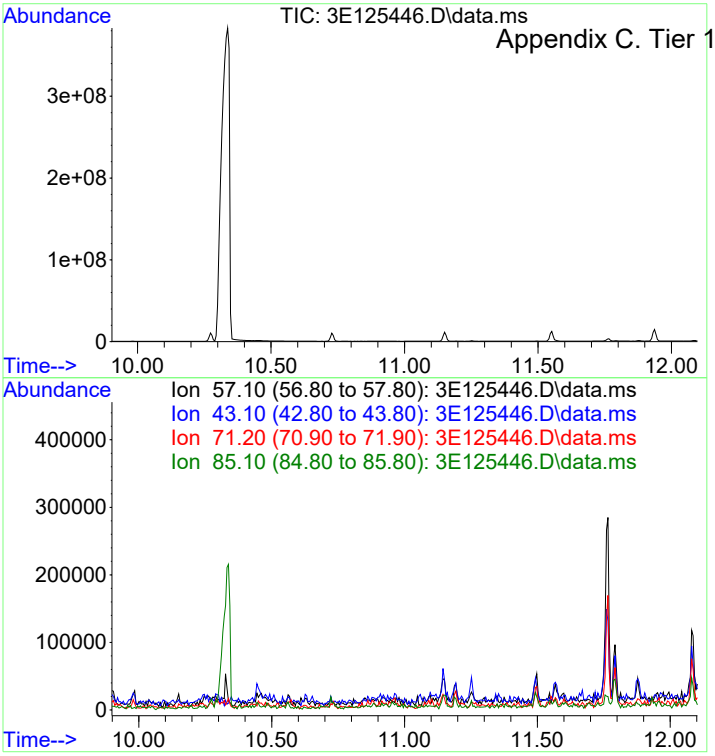



#28
n-Eicosane (C20)
Concen: N.D.
Expected RT: 10.69 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 65.8 |
| 71 | 70.2 |
| 85 | 51.9 |

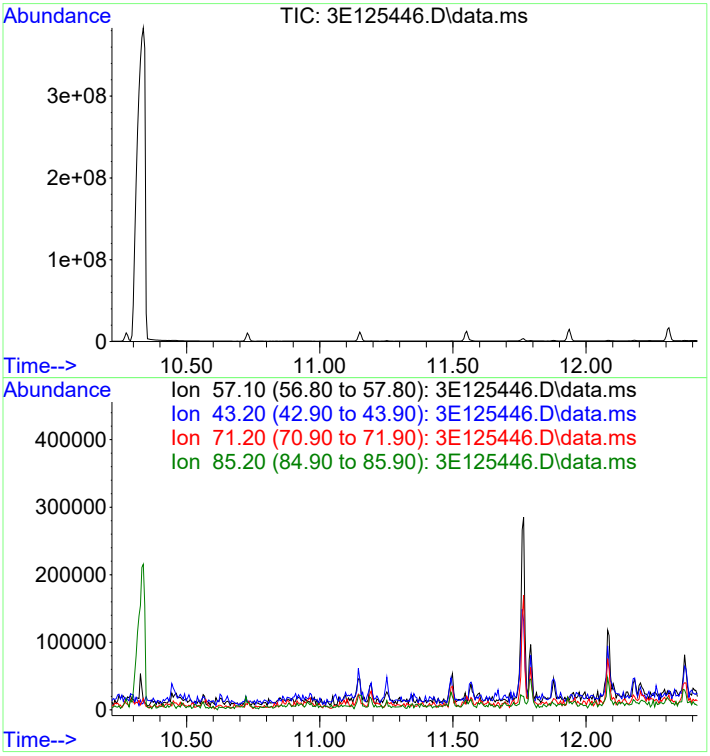



#29
n-Heneicosane (C21)
Concen: N.D.
Expected RT: 11.00 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 65.1 |
| 85 | 51.7 |

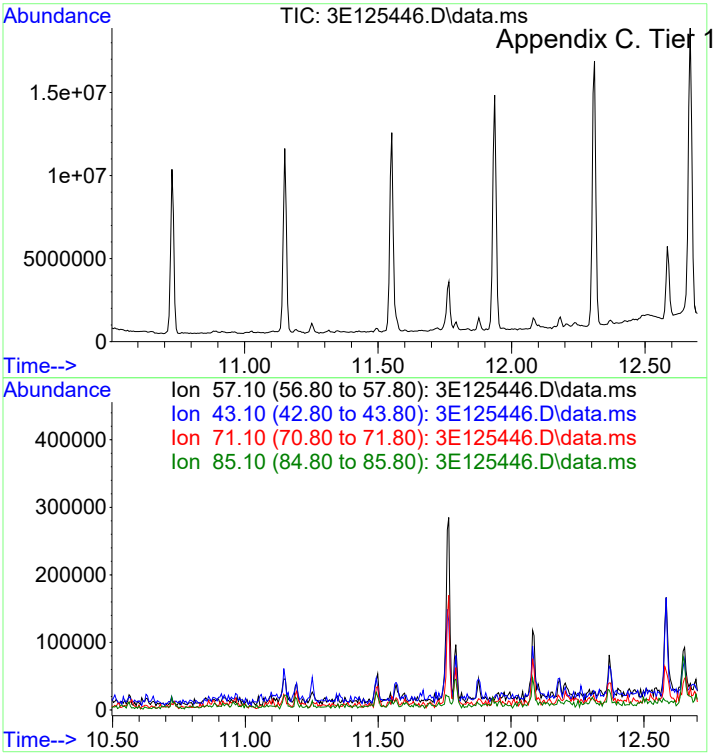



#30
n-Docosane (C22)
Concen: N.D.
Expected RT: 11.32 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.5 |
| 71 | 71.3 |
| 85 | 53.9 |

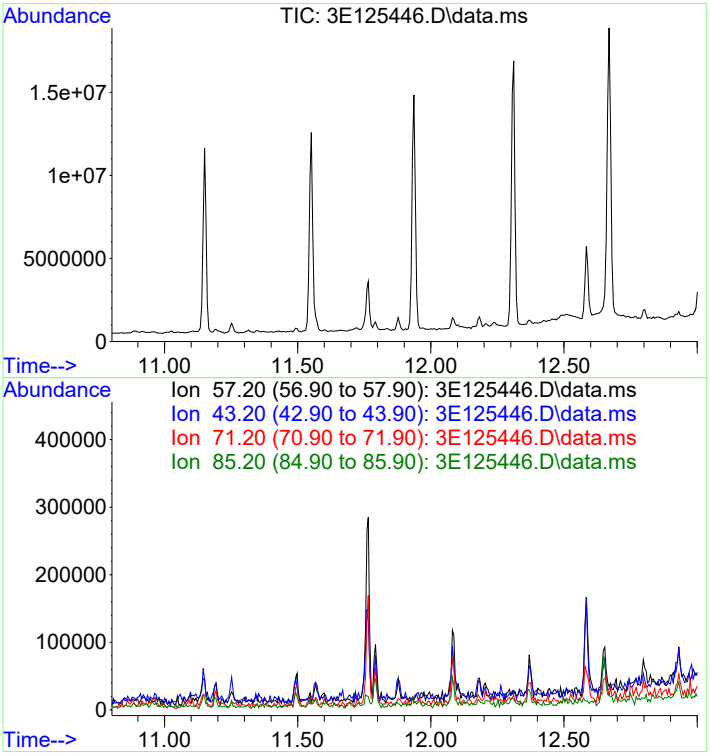



#31
n-Hexacosane (C26)
Concen: N.D.
Expected RT: 11.60 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 62.0 |
| 71 | 53.9 |
| 85 | 45.7 |

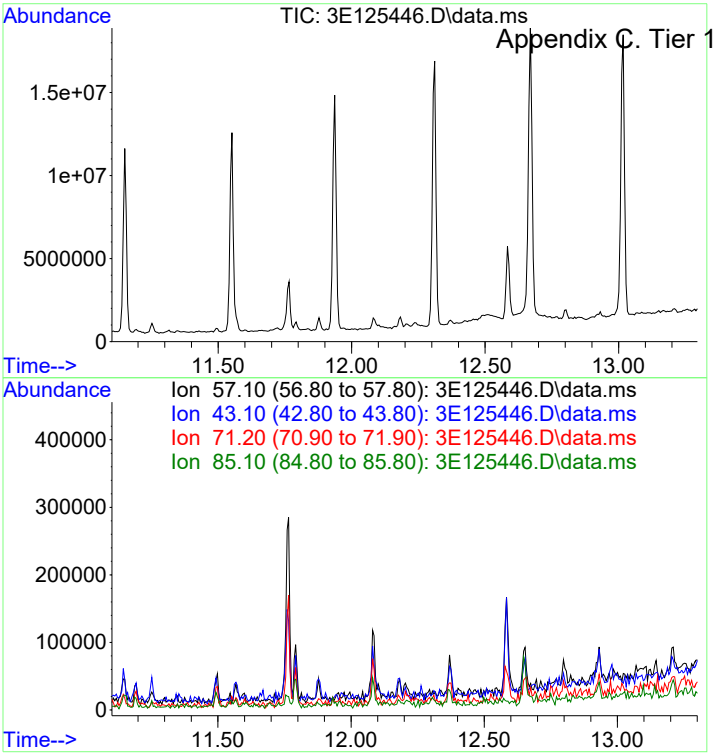



#32
n-Tetracosane (C24)
Concen: N.D.
Expected RT: 11.90 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.4 |
| 71 | 72.3 |
| 85 | 55.2 |

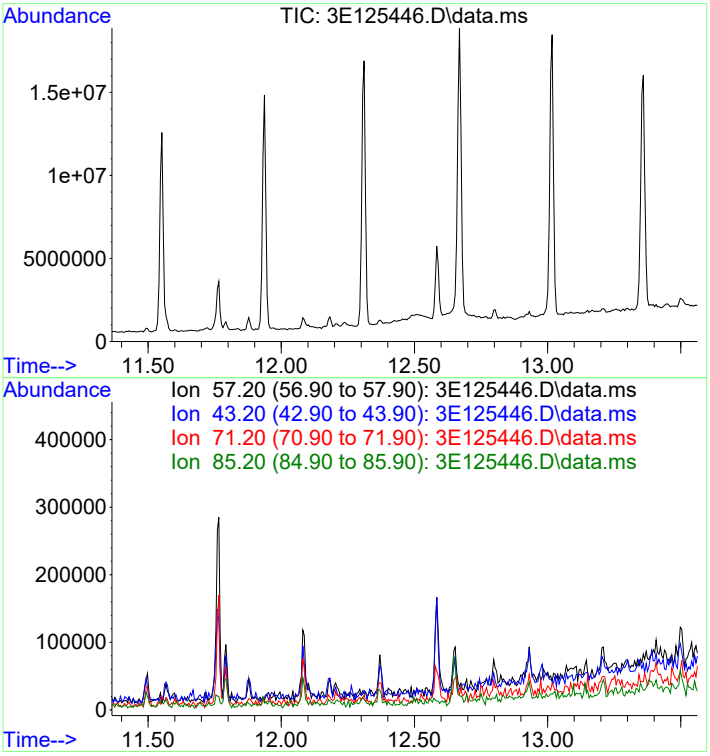



#33
n-Pentacosane (C25)
Concen: N.D.
Expected RT: 12.20 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 79.9 |
| 71 | 70.5 |
| 85 | 42.5 |

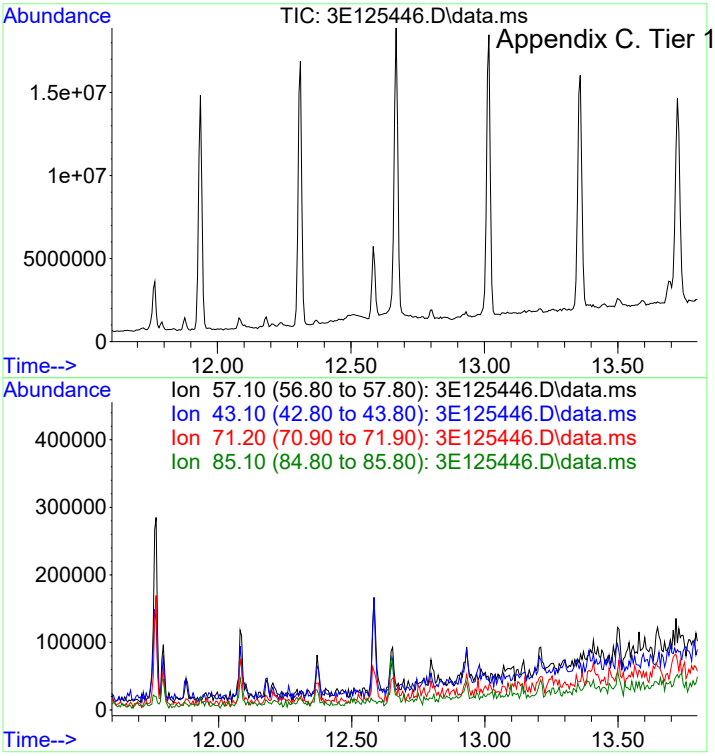



#34
n-Hexacosane (C26)
Concen: N.D.
Expected RT: 12.46 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 63.1 |
| 71 | 73.2 |
| 85 | 56.6 |

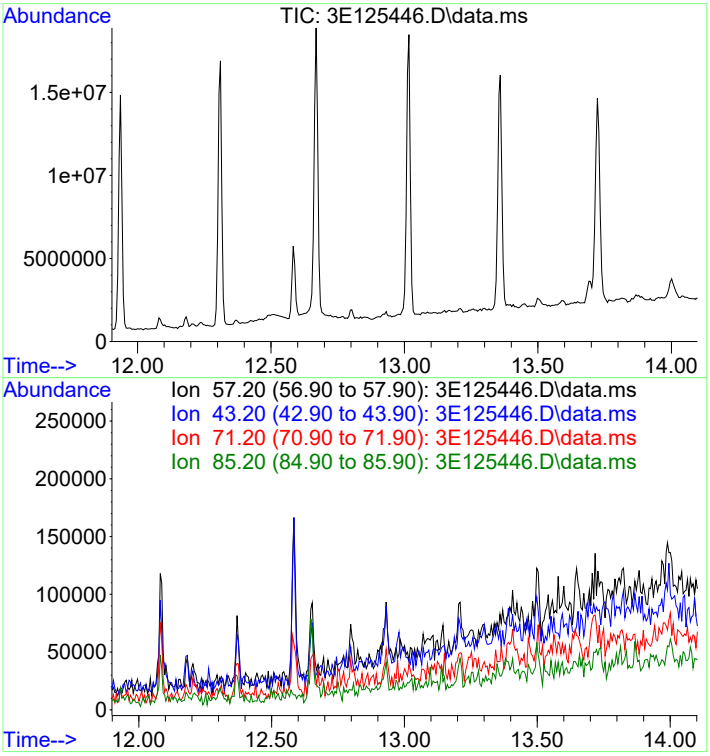



#35
n-Heptacosane (C27)
Concen: N.D.
Expected RT: 12.70 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 76.1 |
| 71 | 90.4 |
| 85 | 86.7 |

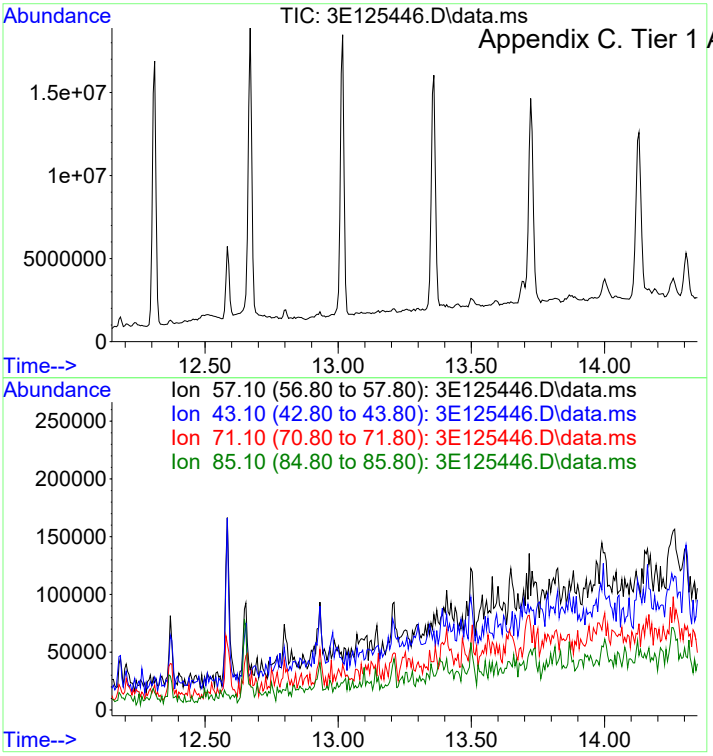



#36
n-Octacosane (C28)
Concen: N.D.
Expected RT: 13.00 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 60.8 |
| 71 | 72.9 |
| 85 | 56.3 |

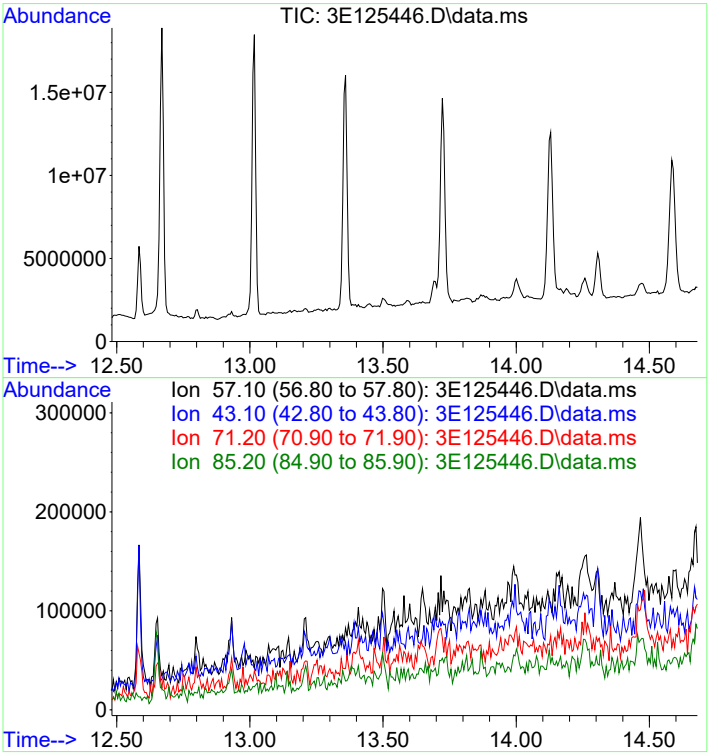



#37
n-Nonacosane (C29)
Concen: N.D.
Expected RT: 13.25 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 66.1 |
| 71 | 78.4 |
| 85 | 67.7 |

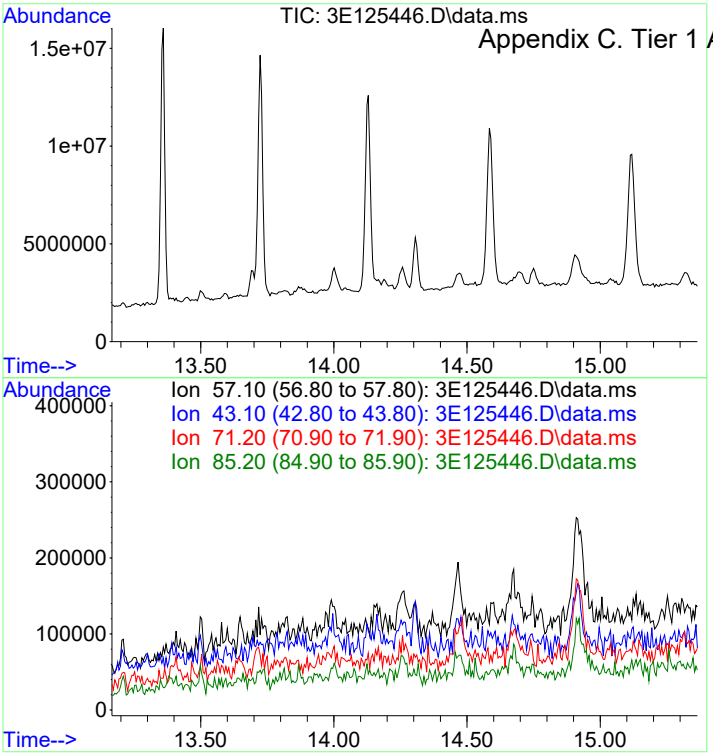



#38
n-Triacontane (C30)
Concen: N.D.
Expected RT: 13.58 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 59.6 |
| 71 | 72.8 |
| 85 | 56.9 |

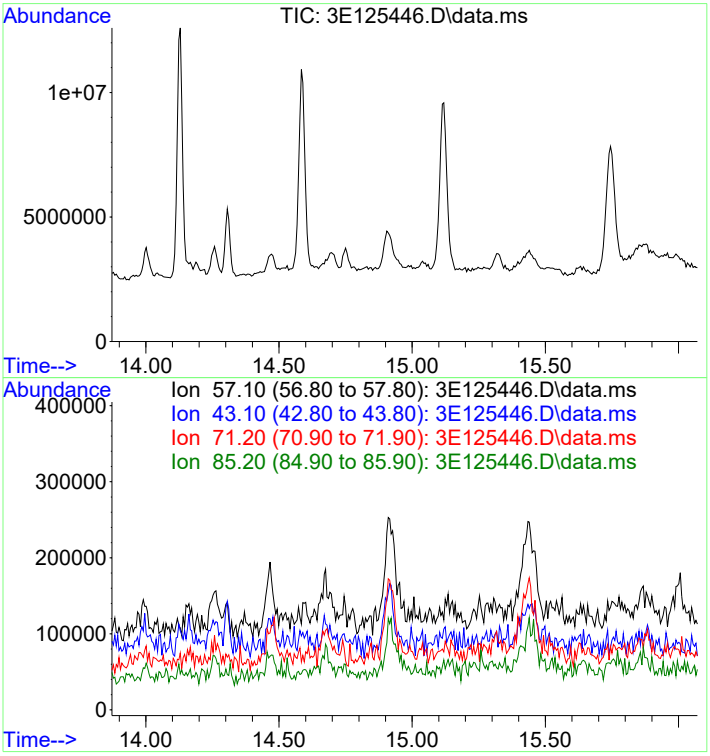



#39
n-Dotriacontane (C32)
Concen: N.D.
Expected RT: 14.27 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 58.6 |
| 71 | 71.7 |
| 85 | 55.6 |

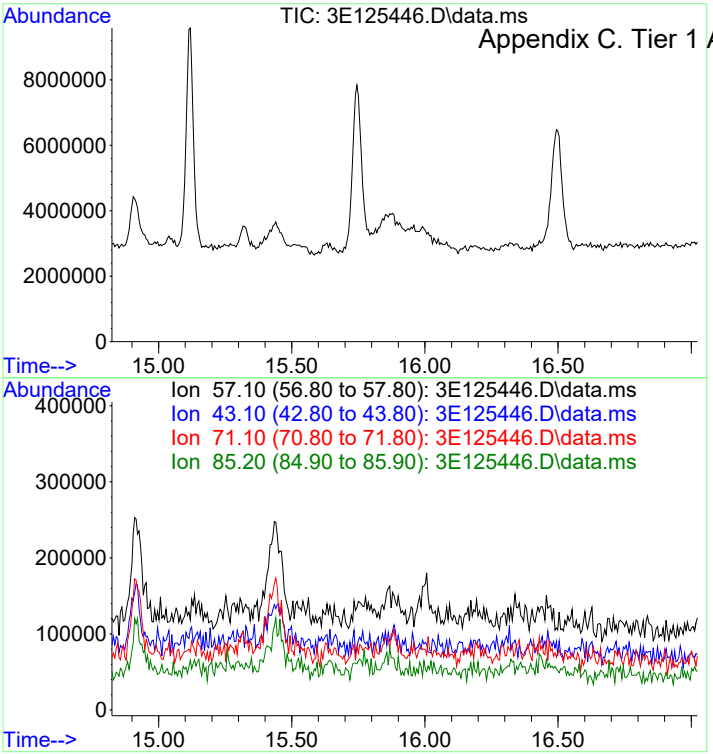



#40
n-Tetratriacontane (C34)
Concen: N.D.
Expected RT: 14.97 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 57.4 |
| 71 | 71.0 |
| 85 | 54.6 |

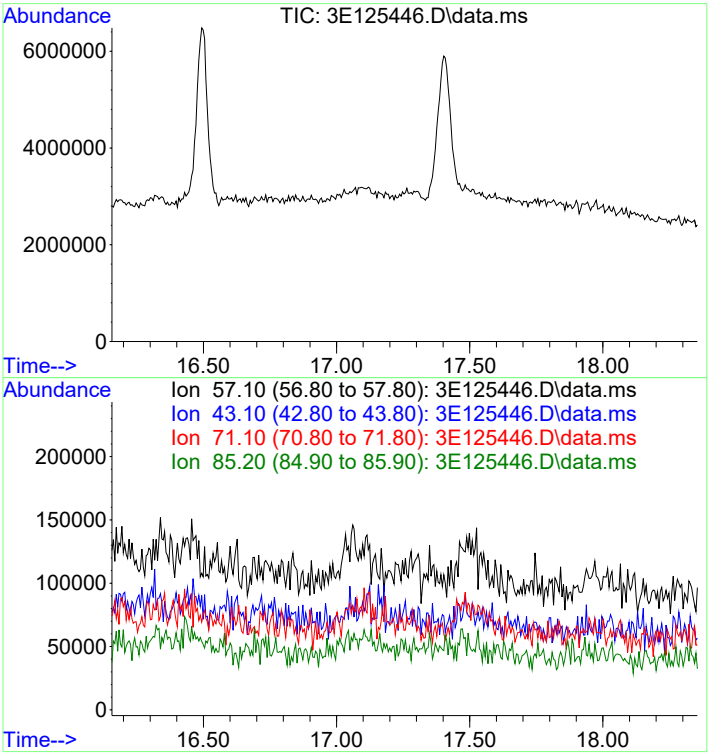



#41
n-Hexatriacontane (C36)
Concen: N.D.
Expected RT: 15.92 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 56.3 |
| 71 | 71.0 |
| 85 | 54.4 |

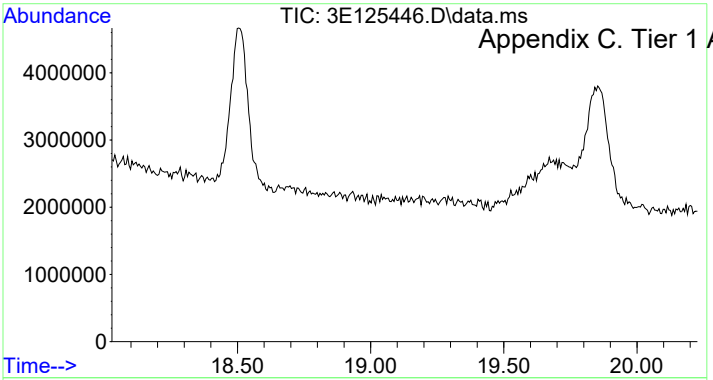


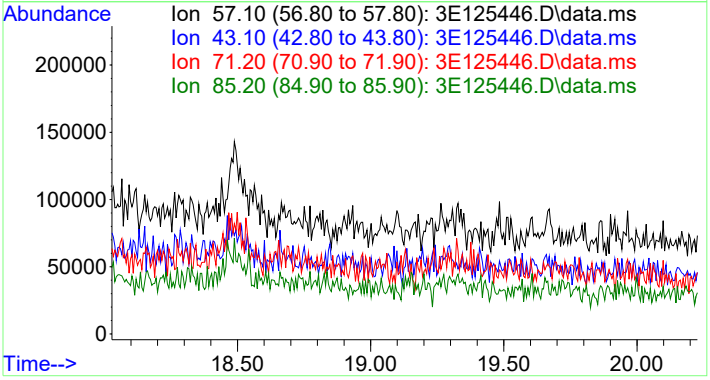

#42
n-Octatriacontane (C38)
Concen: N.D.
Expected RT: 17.26 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 55.0 |
| 71 | 70.8 |
| 85 | 53.9 |



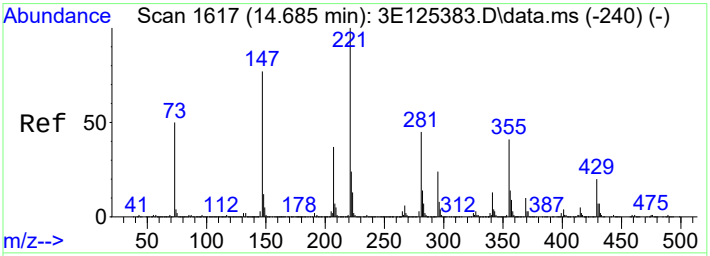



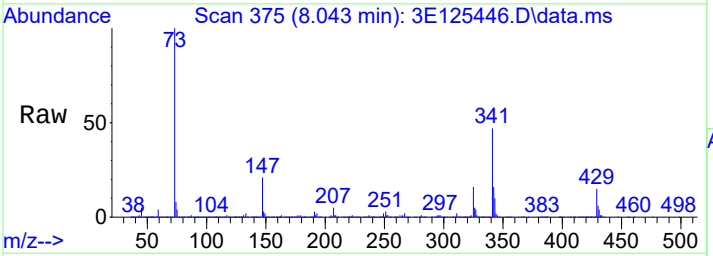

#43
n-Tetracontane (C40)
Concen: N.D.
Expected RT: 19.13 min

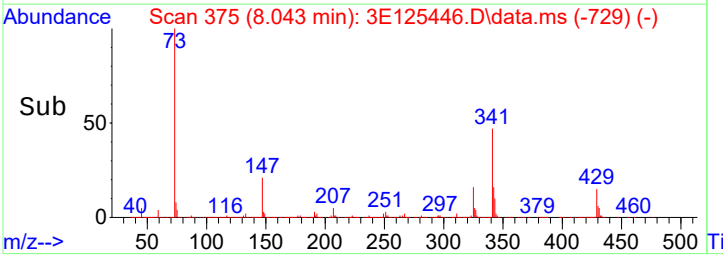
Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 57

| Sig | Exp Ratio |
|---|---|
| 57 | 100 |
| 43 | 53.0 |
| 71 | 70.6 |
| 85 | 53.9 |



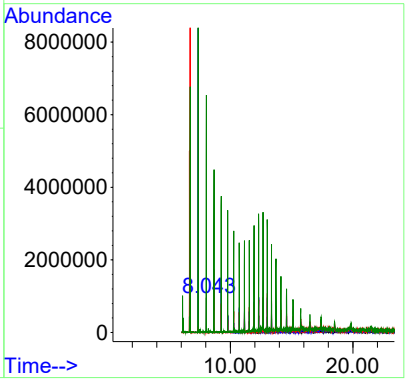



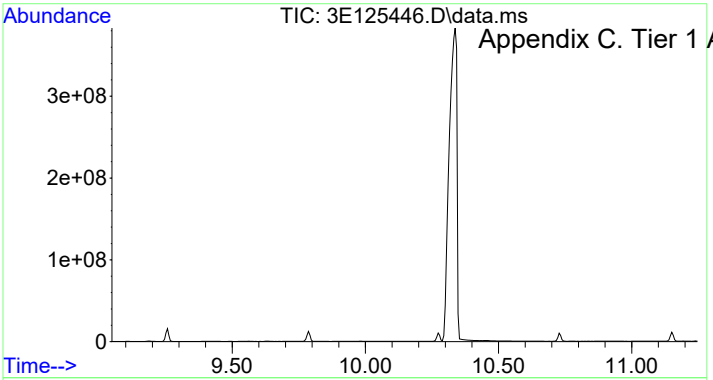



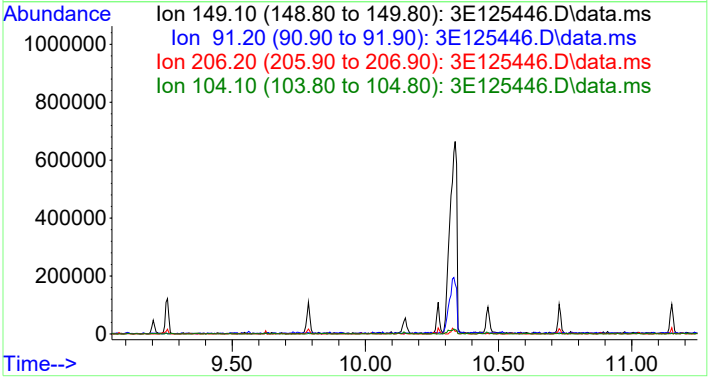

#44
Siloxane
Concen: 10042749.00 m
RT: 8.043 min Scan# 375
Delta R.T. -1.993 min
Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion:429 Resp:10042749

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 429 | 100 | | |
| 355 | 0.0 | 0.0 | 20.0 |
| 281 | 0.0 | 0.0 | 20.0 |
| 73 | 0.0 | 0.0 | 20.0 |





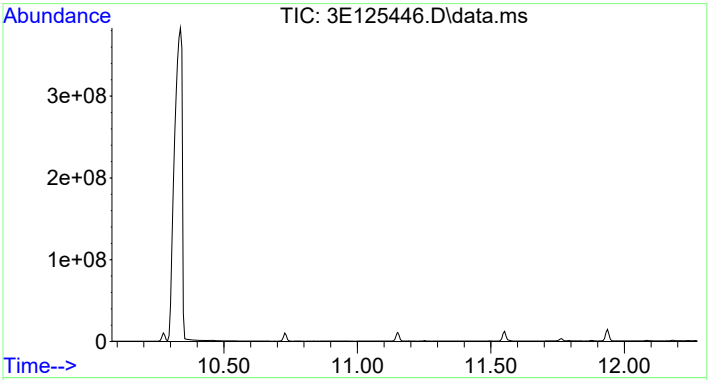



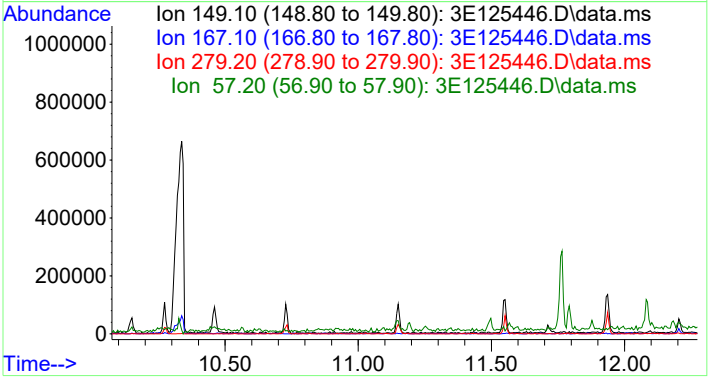

#45
Butyl benzyl phthalate
Concen: N.D.
Expected RT: 10.15 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 91 | 97.4 |
| 206 | 28.9 |
| 104 | 19.1 |



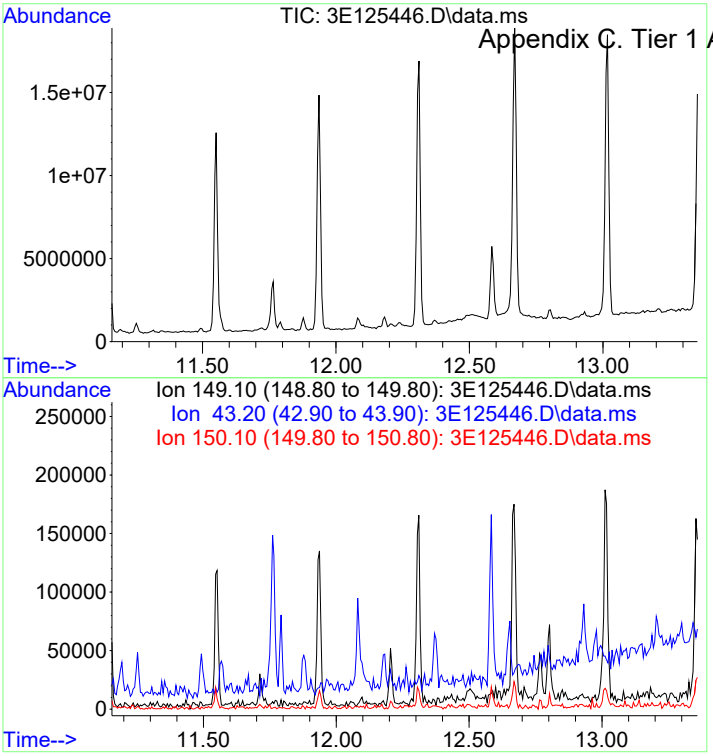




#46
Bis(2-ethylhexyl)phthalate
Concen: N.D.
Expected RT: 11.18 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 167 | 34.3 |
| 279 | 10.6 |
| 57 | 34.0 |

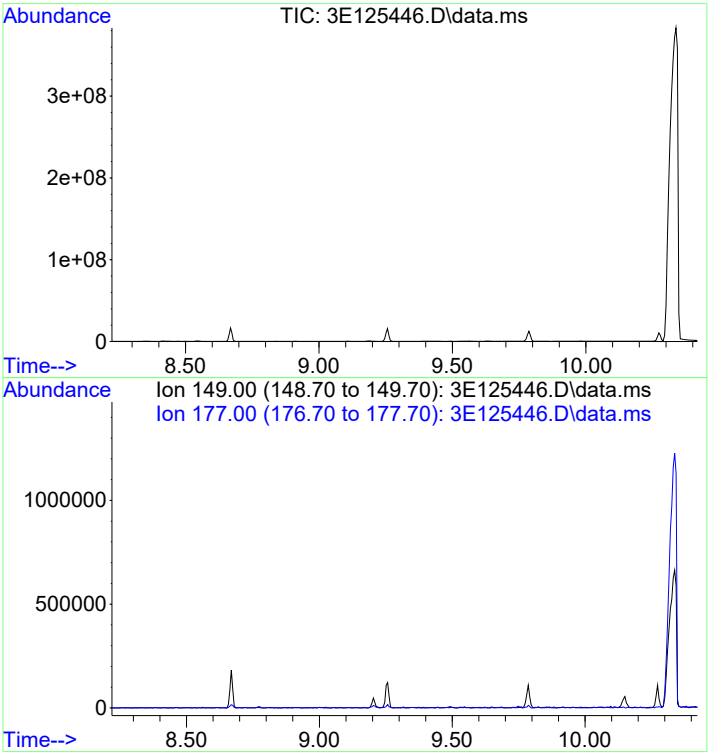



#47
Di-n-octyl Phthalate
Concen: N.D.
Expected RT: 12.26 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 43 | 12.1 |
| 150 | 10.0 |




#48
Diethyl Phthalate
Concen: N.D.
Expected RT: 9.32 min

Lab File: 3E125446.D
Acq: 30 Jul 2024 9:31 pm

Tgt Ion: 149

| Sig | Exp Ratio |
|---|---|
| 149 | 100 |
| 177 | 21.3 |

Appendix C. Tier 1 Analysis Tech Memos

**Appendix D. Second Quarter (July – September 2024) of EDWM MS Results**

| Sample ID | Sample Date | Matrix Spike Concentration (ppb) | Laboratory Result (ppb) | Percent Difference |
|---|---|---|---|---|
| OP25989-MS | 7/3/2024 | 72.3 | 84.3 | 117 |
| OP25992-MS | 7/5/2024 | 68.1 | 103 | 151 |
| OP26005-MS | 7/8/2024 | 67.9 | 54.1 | 80 |
| OP26047-MS | 7/16/2024 | 67.9 | 58 | 85 |
| OP26068-MS | 7/22/2024 | 68 | 59.1 | 87 |
| OP26101-MS | 7/26/2024 | 69.6 | 48 | 69 |
| OP26114-MS | 7/29/2024 | 67.5 | 83.1 | 123 |
| OP26137-MS | 8/1/2024 | 72.3 | 73.9 | 102 |
| OP26141-MS | 8/2/2024 | 69.9 | 74.2 | 106 |
| OP26173-MS | 8/7/2024 | 67.5 | 60 | 89 |
| OP26192-MS | 8/9/2024 | 67.2 | 53.7 | 80 |
| OP26213-MS | 8/14/2024 | 68.8 | 63.1 | 92 |
| OP26220-MS | 8/16/2024 | 69.6 | 52.3 | 75 |
| OP26255-MS | 8/23/2024 | 68.3 | 83.6 | 122 |
| OP26319-MS | 9/4/2024 | 69.4 | 72.4 | 104 |
| OP26327-MS | 9/5/2024 | 70.2 | 71.9 | 102 |
| OP26333-MS | 9/6/2024 | 69 | 80.4 | 117 |
| OP26334-MS | 9/6/2024 | 72.1 | 89.4 | 124 |
| OP26367-MS | 9/12/2024 | 70.1 | 58.8 | 84 |
| OP26461-MS | 9/30/2024 | 69.6 | 86.6 | 124 |

**Notes**

Within the analytical laboratory acceptable percent difference limits of 70 - 130%.

Exceeds the QSM Limits (DRO) of 36 -- 132%

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 1-20059 |
| Call Date/Time | 7/8/2024 10:26:20 AM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 7/8/2024 10:45:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | 6001 Farm Street |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 6/4/2024 12:00:00 AM |
| Number of adults under 65 | 3 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 0 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 1 |
| Call Center Complaint Summary / Initial Notes | Oily film on cooking water, drinking water tastes strange, and resident is experiencing headaches and nausea  wanted water 3 and one pet in the home |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | Yes |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | Multiple instances intermittently |
| Do you see any issues with the appearance or odor the water in your home? | No |
| Color or Appearance of Water | Sheen |
| | Resident reported concern after noticing what they believed to be an oily sheen on both the hot and cold water coming from the kitchen sink, the resident stated they noticed the sheen when cooking only in the pans. |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | None |
| | None reported |
| Staining | None |
| | None reported |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | Yes |
| Skin | None |
| | Skin sensitivity after showering. |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | None |
| | Resident also stated that they have been getting headaches since moving in |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | None |
| | None reported |

# In-Person Site Visit

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | Kitchen,Bathroom,Upstairs,Downstairs |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | Both hot & cold water |
| Does it occur only when you first turn on the water or does it occur continuously? | Continuously |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

## Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Kitchen |
| pH (standard units) | 7.18 |
| Conductivity (µS/cm) | 241.55 |
| FreeChlorine (mg/L or ppm) | 0.46 |
| Cold Temp (degrees F) | 79.53 |
| Hot water Sampling Location | Kitchen |
| pH (standard units) | 7.40 |
| Conductivity (µS/cm) | 252.47 |
| FreeChlorine (mg/L or ppm) | 0.63 |
| Hot Temp (degrees F) | 100.41 |
| Water Quality Notes | Unit was not previously sampled.<br>No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.<br>The resident attempted to display the sheen from hot and cold water using an oily cooking pan.<br>Little to no sheen was observed, suspected to be oily residual from the cooking pan. This effect<br>was not observed when water was collected in a 250 mL beaker.<br>No unusual observations.<br>TURB: 0.07 NTU (cold), 0.22 NTU (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | No |
| | none |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

# Call Center - WQI Checklist

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Scaling / Debris / Particulates present |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | |
| Bathroom - second floor - Condition of aerator | |
| Bathroom - other - Specific inspection point | |
| Bathroom - other - Condition of aerator | |

## Other Concerns

| | |
|---|---|
| Water Presure | |
| Hot Water Temperature | |
| Cross-Connection | |
| Irrigation | |

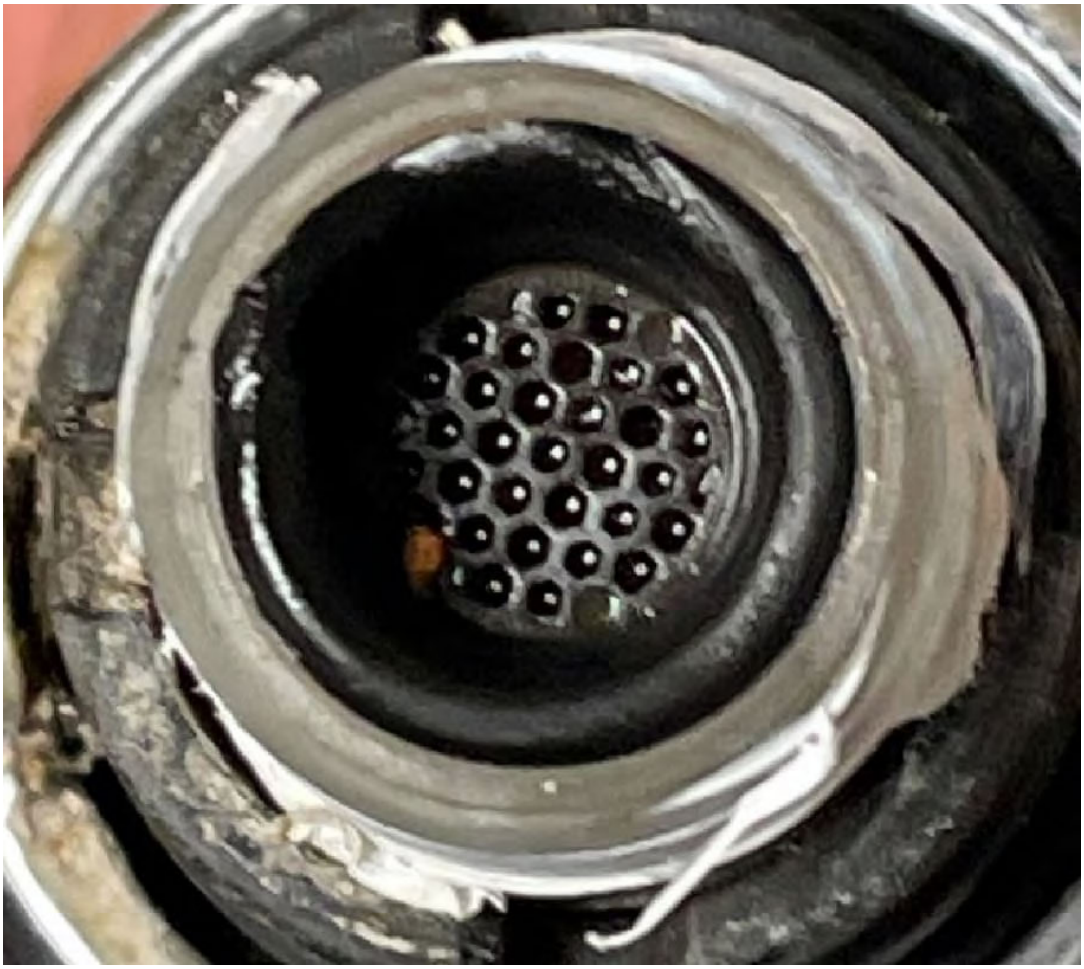
## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | No |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>Upon receiving/reviewing the water heater maintenance records, further assessment will be provided, if applicable.<br>No additional actions required. |
| Other Site Visit Notes | Kitchen sink aerator: Upon visual inspection, small debris of unknown material was observed.<br><br>Downstairs hallway bathroom sink aerator: Upon visual inspection, small unknown debris was observed.<br><br>Master bathroom sink aerator: Upon visual inspection, small debris of unknown material was observed.<br><br>80-gallon electric water heater manufactured by American Water Heater Company in March 2015.<br>Visual observation of the water heater to be in good condition with no signs of external corrosion.<br>No visible maintenance records found on the water heater.<br>The pipe material is copper. |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20059 |
| Location | Other |
| Title | Interior View of Kitchen Sink Aerator |



# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20059 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior View of Downstairs Hallway Bathroom Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20059 |
| Location | Other |
| Title | Interior View of Master Bathroom Sink Aerator |

Monday, 8 July 2024, 1045

Zone – A1, 6001 Farm Ave
Location Code: A1-FARM6001

A. Resident Demographic/ Concerns

- Household consists of three (3) adults and one (1) pet.
- Resident since 4 June 2024.
- Resident reported concern after noticing what they believed to be an oily sheen on both the hot and cold water coming from the kitchen sink, the resident stated they noticed the sheen when cooking only in the pans. Resident also stated that they have been getting headaches since moving in and experiencing skin sensitivity after showering. The resident has confirmed that no medical attention has been sought. The resident wanted testing for confirmation that water quality is safe.

B. **Water Quality Observations and Results**

- Unit was not previously sampled.
  - No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.
  - The resident attempted to display the sheen from hot and cold water using an oily cooking pan. Little to no sheen was observed, suspected to be oily residual from the cooking pan. This effect was not observed when water was collected in a 250 mL beaker.
  - No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) - Collected cold water samples from the kitchen, the master bedroom sink and tub, and the hallway bathroom sink and tub for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation Water Monitoring (WQIWM) – EDWM collected hot/cold water samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.18 (cold)
    - 7.40 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 241.55 µS/cm (cold)
    - 252.47 µS/cm (hot)
  - Turbidity - (Acceptable Range: < 1.0 NTU)
    - 0.07 NTU (cold)
    - 0.22 NTU (hot)
  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.46 mg/L (cold)
    - 0.63 mg/L (hot)
  - Temperature -

- 79.53 °F (cold)
- 100.41 °F (hot)

- Figure 1. Interior view of kitchen sink aerator. Upon visual inspection, small debris of unknown material was observed.

- Figure 2. Interior view of downstairs hallway bathroom sink aerator. Upon visual inspection, small unknown debris was observed.

- Figure 3. Interior view of master bathroom sink aerator. Upon visual inspection, small debris of unknown material was observed.

C. Hot Water Heater
- 80-gallon electric water heater manufactured by American Water Heater Company in March 2015.
- Visual observation of the water heater to be in good condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

D. Point-of-Use Treatment

No filters installed.

E. Overall Assessment
- No unusual observations.
- Since the oily sheen that was displayed on the cooking pan could not be replicated in different containers, it is likely that the "sheen" that was observed by the resident may have resulted from left-over oil that was observed on the cooking pan prior to water collection.
- Water quality field parameters were within recommended limits at the time of inspection.
- EDWM analytical results will determine if drinking water is in compliance with the applicable standards.

F. Recommendations
- Follow up with EDWM water quality results when available.
- Upon receiving/reviewing the water heater maintenance records, further assessment will be provided, if applicable.
- No additional actions required.

**Table X-X**
**EDWM A1 Zone Residential Sampling**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | 6001 Farm Street | 6001 Farm Street |
| Field Sample ID: | | | A1-TW-0001252-24092-N-WQI | A1-TW-0001252-24092-N-H-WQI |
| Sample Date: | | | 2024-07-08 | 2024-07-08 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240708-2568-568** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (MPN/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240708-2568-568** | **SDG: 240708-2568-568** |
| Heterotrophic Plate Count | None | None | 2.00 U | 2.00 U |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.460-0.630 | 0.460-0.630 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65500** | |
| Alkalinity, Total (as CaCO3) | None | None | **53.0** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65500** | |
| Petroleum Hydrocarbons (as Diesel) | None | None | 47.0 U | -- |

**Table X-X**
**EDWM A1 Zone Residential Sampling**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 U | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 47.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |

| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65500** | |
|---|---|---|---|---|
| Copper | 1300 | 1300 | **14.3** | -- |
| Lead | 15 | 15 | 0.130 U | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |

| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65500** | |
|---|---|---|---|---|
| 1-Methylnaphthalene | None | None | 0.250 U | -- |
| 2-Methylnaphthalene | None | None | 0.250 U | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | 0.0100 U | -- |
| Naphthalene | None | None | 0.250 U | -- |

| **VOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65500** | |
|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | 0.300 U | -- |
| Chloroform | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | 0.250 U | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |
| o-Xylene | None | None | 0.250 U | -- |
| Toluene | 1000 | 1000 | 0.250 U | -- |

**Table X-X**
**EDWM A1 Zone Residential Sampling**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Total Trihalomethanes | 80 | None | ND | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison

mg/L = Milligrams per Liter

MPN/ml = Most Probable Number per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

**From:** (b) (6) H CIV USN NAVFAC HAWAII PEARL (USA)
**Sent on:** Monday, July 15, 2024 4:45:02 PM
**To:** (b) (6)
[redacted]
**Signed by:** (b) (6) A.1624725367 on Monday, July 15, 2024 4:42:54 PM
**Subject:** RE: Maintenance Records
**Attachments:** Nameless.txt (10.38 KB)

Appendix E: EDWM Quarter 2 WQAT Summary Tech Memos/Checklists

Aloha (b) (6),

We've received the below records for homes in the Navy/Ohana Military Communities areas. We are still waiting on records from Hickam Communities.

OMC homes:

- 4755 Kamehameha Loop (Ford Island)

  - Unknown age, as OMC does not have this information on hand

  - Preventative Maintenance (Flushing) - 08May2024

  - Work Orders related to water:

    - master bath drain slow - 09 Feb 2023

    - resident requested assistance with solar timer box; replaced box due to being bad - 03 Jan 2024

    - solar panels leaking - replaced panels - 01 Sep 2023

    - preventative maintenance - 06 Jul 2023

    - Red Hill Water Flushing - 07 Jan 2022

- 6001 Farm Street

  - Unknown age, as OMC does not have this information on hand

  - Preventative Maintenance (Flushing) - completed during the COM on 03 May 2024

  - Work Orders related to water:

    - water testing - 26 April 2024 - vacant home testing

    - not hot water; replaced water heater timer – 01 Dec 2023

    - annual preventative maintenance - 13 Jun 2023

    - Red Hill Water Flushing - 25 Dec 2021

    - annual preventative maintenance - 11 July 2022

    - kitchen sink leaking; repairs made to faucet – 14 Mar 2022

Please let me know if you have any questions.

Very respectfully,
(b) (6)

Community Planning and Liaison Officer
Environment & Remediation, NCTF-Red Hill
Naval Facilities Engineering Systems Command (NAVFAC), Hawai'i
(b) (6)

---

**From:** (b) (6) CIV USN NAVFAC HAWAII PEARL (USA) (b) (6)
**Sent:** Tuesday, July 2, 2024 12:09 PM
**To:** (b) (6) >
**Cc:** (b) (6)
**Subject:** Re: Maintenance Records

Hi (b) (6),

I've made the request but haven't received anything yet. I'll definitely send as soon as we receive anything.

Very respectfully,
Lila Castellano

Community Planning and Liaison Officer
Environment & Remediation, NCTF-Red Hill
Naval Facilities Engineering Systems Command (NAVFAC), Hawai'i
(b) (6)

---

**From:** (b) (6)
**Sent:** Tuesday, July 2, 2024 12:07 PM
**To:** (b) (6)
**Cc:** (b) (6)
**Subject:** [Non-DoD Source] RE: Maintenance Records

Hi (b) (6),

Has a request been made for maintenance records today's appointments?

---

**From:** (b) (6)
**Sent:** Friday, June 28, 2024 3:11 PM
**To:** (b) (6)
**Cc:** (b) (6)
**Subject:** RE: Maintenance Records

Hi Cristian,

Here's the records received from Kapilina Beach Homes. She said that if a house isn't listed, they didn't have records. Some of the appointment requests that came later in the week were not included in this initial pull so we may receive more later.

Thank you!

Very respectfully,
(b) (6)

Community Planning and Liaison Officer
Environment & Remediation, NCTF-Red Hill
Naval Facilities Engineering Systems Command (NAVFAC), Hawai'i
(b) (6)

---

**From:** (b) (6) H CIV USN NAVFAC HAWAII PEARL (USA)
**Sent:** Wednesday, June 26, 2024 4:48 PM
**To:** (b) (6) >
**Cc:** (b) (6)
**Subject:** RE: Maintenance Records

(b) (6)

Hi (b) (6),

Thank you for creating this thread. Below is the only record I've received so far. Kapilina Beach Homes has notified that they hope to have an update with records by Friday.

Here is information shared from housing for 5561 Bennion Drive, appointment at 0900 on 28 June.

- Age of Water Heater – Unknown
- Last Preventative Maintenance (Flushing) - Annual PM conducted 28 Feb 2024
- Maintenance Work Orders – Annual PM conducted 25 April 2023
    - Flushing for Red Hill 8 Jan 2022
        - ***No work orders associated with the water heater after Red Hill Flushing

Very respectfully,
(b) (6)

Community Planning and Liaison Officer
Environment & Remediation, NCTF-Red Hill
Naval Facilities Engineering Systems Command (NAVFAC), Hawai'i
(b) (6)

---

**From:** (b) (6) >
**Sent:** Wednesday, June 26, 2024 3:30 PM
**To:**
<(b) (6) >
**Subject:** [Non-DoD Source] Maintenance Records

Hello (b) (6)!

I understand that we received additional appointments this week last minute, thus I don't believe maintenance records were received. However, once you do receive them, would you mind sending them on this thread?



Let me know your thoughts,

(b) (6)

Environmental Scientist I, (AME ENV) Federal US, Environment

(b) (6)

**AECOM**

1001 Bishop Street

Suite 1600

Honolulu, HI 96813, United States

(b) (6)

aecom.com

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# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 3-19971 |
| Call Date/Time | 6/28/2024 2:45:01 PM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 7/3/2024 1:30:00 PM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | 4755 Kamehameha Loop |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 9/1/2022 12:00:00 AM |
| Number of adults under 65 | 2 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 2 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 2 dogs |
| Call Center Complaint Summary / Initial Notes | 1330; Connect with Navy/WQI prior to entering.<br>Resident reported concern about water quality after experiencing two miscarriages and being told by doctor to only drink filtered water. The resident wanted testing for confirmation that water quality is safe. |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | No |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | |
| Do you see any issues with the appearance or odor the water in your home? | No |
| Color or Appearance of Water | None |
| | None reported |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | None |
| | None reported |
| Staining | None |
| | None reported |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | Yes |
| Skin | None |
| | None reported |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | None |
| | None reported |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | Adults |
| | Resident reported concern about water quality after experiencing two miscarriages and being told by doctor to only drink filtered water. The resident wanted testing for confirmation that water quality is safe |

# In-Person Site Visit

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | |
| Does it occur only when you first turn on the water or does it occur continuously? | |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

## Premise Plumbing History

Premise Plumbing History

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Other |
| pH (standard units) | 7.19 |
| Conductivity (µS/cm) | 268.20 |
| FreeChlorine (mg/L or ppm) | 0.52 |
| Cold Temp (degrees F) | 82.04 |
| Hot water Sampling Location | Other |
| pH (standard units) | 7.30 |
| Conductivity (µS/cm) | 296.88 |
| FreeChlorine (mg/L or ppm) | 0.26 |
| Hot Temp (degrees F) | 118.40 |
| Water Quality Notes | Unit was previously sampled on October 19, 2023.<br>Traces of Copper, Lead, Barium, Petroleum Hydrocarbons (as Deisel) and Selenium were found.<br>All results were reported under their respective screening levels.<br>No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.<br>No unusual observations.<br>TURB: 0.99 NTU (cold), 0.55 NTU (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | No |
| | none |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Looks new / clean |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Looks new / clean |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | |
| Bathroom - second floor - Condition of aerator | |
| Bathroom - other - Specific inspection point | |
| Bathroom - other - Condition of aerator | |

# Call Center - WQI Checklist

## Other Concerns

| | |
|---|---|
| Water Presure | |
| Hot Water Temperature | |
| Cross-Connection | |
| Irrigation | |

## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | No |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>Upon receiving/reviewing the water heater maintenance records, further assessment will be provided, if applicable.<br>No additional actions required. |
| Other Site Visit Notes | Kitchen sink aerator: Upon visual inspection, no debris was observed.<br><br>Downstairs hallway bathroom sink aerator: Upon visual inspection, no debris was observed.<br><br>Upstairs hallway bathroom sink aerator: Upon visual inspection, debris consisting of small black of unknown material was observed.<br><br>80-gallon water heater manufactured by Sun Earth Inc. on 17 December 2019.<br>Visual observation of the water heater to be in good condition with no signs of external corrosion.<br>No visible maintenance records found on the water heater.<br>The pipe material is copper. |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 19971 |
| Location | Other |
| Title | Interior View of Kitchen Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 19971 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior View of Downstairs Hallway Bathroom Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 19971 |
| Location | Second Floor - Bathroom 1 - Sink |
| Title | Interior View of Upstairs Hallway Bathroom Sink Aerator |

Wednesday, July 3, 2024, 1330

Zone – A2, 4755 Kamehameha Loop
Location Code: A2-KAME4755

A. Resident Demographic/ Concerns

- Household consists of two (2) adults, two (2) children and two (2) dogs.
- Resident since September 2022.
- Resident reported concern about water quality after experiencing two miscarriages and being told by doctor to only drink filtered water. The resident wanted testing for confirmation that water quality is safe.

B. **Water Quality Observations and Results**

- Unit was previously sampled on October 19, 2023.
  - Traces of Copper, Lead, Barium, Petroleum Hydrocarbons (as Deisel) and Selenium were found. All results were reported under their respective screening levels.
  - No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.
  - No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) - Collected cold water samples from the upstairs hallway bathroom sink and tub, the downstairs hallway bathroom sink, and the kitchen sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6)
  - Water Quality Investigation Water Monitoring (WQIWM) – EDWM collected hot/cold water samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the downstairs hallway bathroom.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.19 (cold)
    - 7.30 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 268.20 µS/cm (cold)
    - 296.88 µS/cm (hot)
  - Turbidity - (Acceptable Range: < 1.0 NTU)
    - 0.99 NTU (cold)
    - 0.55 NTU (hot)
  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.52 mg/L (cold)
    - 0.26 mg/L (hot)
  - Temperature
    - 82.04 °F (cold)
    - 118.4°F (hot)

- Figure 1. Interior view of kitchen sink aerator. Upon visual inspection, no debris was observed.

- Figure 2. Interior view of downstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed.

- Figure 3. Interior view of upstairs hallway bathroom sink aerator. Upon visual inspection, debris consisting of small black of unknown material was observed.

C. Hot Water Heater
- 80-gallon water heater manufactured by Sun Earth Inc. on 17 December 2019.
- Visual observation of the water heater to be in good condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

D. Point-of-Use Treatment

No filters were installed.

E. Overall Assessment
- No unusual observations.
- Water quality field parameters were within recommended limits at the time of inspection.
- EDWM analytical results will determine if drinking water is in compliance with the applicable standards.

F. Recommendations
- Follow up with EDWM water quality results when available.
- Upon receiving/reviewing the water heater maintenance records, further assessment will be provided, if applicable.
- No additional actions required.

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | 4755 Kamehameha Loop | 4755 Kamehameha Loop |
| Field Sample ID: | | | A2-TW-0001857-24092-N-WQI | A2-TW-0001857-24092-N-H-WQI |
| Sample Date: | | | 2024-07-03 | 2024-07-03 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240703-2568-549** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (MPN/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240703-2568-549** | **SDG: 240703-2568-549** |
| Heterotrophic Plate Count | None | None | 2.00 U | 2.00 U |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.260-0.520 | 0.260-0.520 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65466** | |
| Alkalinity, Total (as CaCO3) | None | None | **51.9** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65466** | |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Diesel) | None | None | 47.0 U | -- |
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 U | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 47.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |
| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65466** | |
| Copper | 1300 | 1300 | **36.7** | -- |
| Lead | 15 | 15 | 0.130 U | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |
| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65466** | |
| 1-Methylnaphthalene | None | None | 0.250 U | -- |
| 2-Methylnaphthalene | None | None | 0.250 U | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | 0.0100 U | -- |
| Naphthalene | None | None | 0.250 U | -- |
| **VOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65466** | |
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | 0.300 U | -- |
| Chloroform | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | 0.250 U | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| o-Xylene | None | None | 0.250 U | -- |
| Toluene | 1000 | 1000 | 0.250 U | -- |
| Total Trihalomethanes | 80 | None | ND | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison
mg/L = Milligrams per Liter

MPN/ml = Most Probable Number per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 3-19968 |
| Call Date/Time | 6/28/2024 11:13:06 AM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 7/3/2024 8:20:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | 6099 Heron Avenue |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 7/1/2023 12:00:00 AM |
| Number of adults under 65 | 2 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 2 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 2 dogs and 2 cats |
| Call Center Complaint Summary / Initial Notes | 0800; connect with NAVY/WQI prior to entering<br>Resident reported that upon moving, they noticed skin irritation and a reoccurring rash that would appear after bathing. No professional medical help was sought out. The resident also reported that they observed the water to appear cloudy when compared to bottled water. Resident reported not have consumed the water since those concerns appeared. The resident wanted testing to confirm that the water quality is safe. |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | Yes |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | Ongoing |
| Do you see any issues with the appearance or odor the water in your home? | Yes |
| Color or Appearance of Water | Cloudy / Foamy / Milky |
| | The resident also reported that they observed the water to appear cloudy when compared to bottled water. |
| Floating Particles | None |
| | None reported. |
| Taste | None |
| | None reported. |
| Odor | None |
| | None reported. |
| Staining | Other |
| | None reported. |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

### Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | Yes |
| Skin | Adults,Children |
| | Resident reported that upon moving, they noticed skin irritation and a reoccurring rash that would appear after bathing. |
| Respiratory | None |
| | None reported. |
| Gastrointestinal | None |
| | None reported. |
| Headache | None |
| | None reported. |
| Dizziness | None |
| | None reported. |
| Cough | None |
| | None reported. |
| Vision | None |
| | None reported. |
| Other | None |
| | None reported. |

## In-Person Site Visit

### General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | Kitchen,Bathroom,Upstairs,Downstairs |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | Both hot & cold water |
| Does it occur only when you first turn on the water or does it occur continuously? | Continuously |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

### Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | |
| pH (standard units) | 7.00 |
| Conductivity (µS/cm) | 269.43 |
| FreeChlorine (mg/L or ppm) | 0.48 |
| Cold Temp (degrees F) | 81.10 |
| Hot water Sampling Location | |
| pH (standard units) | 7.11 |
| Conductivity (µS/cm) | 286.47 |
| FreeChlorine (mg/L or ppm) | 0.31 |
| Hot Temp (degrees F) | 102.39 |
| Water Quality Notes | Unit was previously sampled on September 27, 2022.<br>Traces of Chromium, Copper, Lead, Barium, Dibromochloromethane and Bromoform were found. All results were reported under their respective screening levels.<br>No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.<br>No unusual observations.<br>TURB: 0.34 NTU (cold), 0.39 NTU (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | No |
| | none |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Looks new / clean |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | |
| Bathroom - second floor - Condition of aerator | |
| Bathroom - second floor - Specific inspection point | |
| Bathroom - second floor - Condition of aerator | |
| Bathroom - other - Specific inspection point | Other |
| Bathroom - other - Condition of aerator | Mold / Mildew |

# Call Center - WQI Checklist

## Other Concerns

Water Presure

Hot Water Temperature

Cross-Connection

Irrigation

## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | Yes |
| Fixture Replacement | No |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>The resident was informed that a solution containing water and acetic acid (vinegar) can be used to remove the mold.<br>The water heater has a set-point temperature of between 120-130°F, considering the hot water in both fixtures are below the suggested 115°F, the debris collected on the aerator, and the age of 14 years it is recommended to schedule maintenance/or replace unit.<br>No additional actions required. |
| Other Site Visit Notes | Kitchen sink aerator: Upon visual inspection, no debris was observed.<br><br>Downstairs hallway bathroom sink aerator: Upon visual inspection, debris was observed.<br><br>Drain of the hallway bathroom shower: The black residue on the rubber drain plug appear to be mold.<br><br>40-gallon water heater manufactured by Rheem Mfg Co. in September 2010.<br>Visual observation of the water heater to be in adequate condition with little signs of external corrosion.<br>No visible maintenance records found on the water heater.<br>The pipe material is copper. |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 19968 |
| Location | Other |
| Title | Interior View of Kitchen Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 19968 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior View of Downstairs Hallway Bathroom Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 19968 |
| Location | Other |
| Title | Interior View of the Drain of Hallway Bathroom Shower |

Wednesday, July 3, 2024, 0820

Zone – A3, 6099 Heron Avenue
Location Code: A3-HERO6099

## A. Resident Demographic/ Concerns

- Household consists of two (2) adults, two (2) children, two (2) dogs and two (2) cats.
- Resident since July 2023.
- Resident reported that upon moving, they noticed skin irritation and a reoccurring rash that would appear after bathing. No professional medical help was sought out. The resident also reported that they observed the water to appear cloudy when compared to bottled water. Resident reported not have consumed the water since those concerns appeared. The resident wanted testing to confirm that the water quality is safe.

### B. Water Quality Observations and Results

- Unit was previously sampled on September 27, 2022.
  - Traces of Chromium, Copper, Lead, Barium, Dibromochloromethane and Bromoform were found. All results were reported under their respective screening levels.
  - No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.
  - No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) - Collected cold water samples from the hallway bathroom sink/tub and kitchen sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – Lila Castellano.
  - Water Quality Investigation Water Monitoring (WQIWM) – EDWM collected hot/cold water samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the downstairs hallway bathroom.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.00 (cold)
    - 7.11 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 269.43 µS/cm (cold)
    - 286.47 µS/cm (hot)
  - Turbidity - (Acceptable Range: < 1.0 NTU)
    - 0.34 NTU (cold)
    - 0.39 NTU (hot)
  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.48 mg/L (cold)
    - 0.31 mg/L (hot)
  - Temperature -
    - 81.10 °F (cold)

- 102.39°F (hot)

visual inspection, no debris was observed.

- **Figure 2.** Interior view of downstairs hallway bathroom sink aerator. Upon visual inspection, debris was observed.

- **Figure 3.** Interior view of the drain of the hallway bathroom shower. The black residue on the rubber drain plug appear to be mold.

## C. Hot Water Heater

- 40-gallon water heater manufactured by Rheem Mfg Co. in September 2010.
- Visual observation of the water heater to be in adequate condition with little signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

## D. Point-of-Use Treatment

No filters were installed.

## E. Overall Assessment

- The presence of mold on the rubber drain plug can possibly contribute to some of the dermatological issues.
- Temperature measured from the kitchen sink was below the recommended 115°F threshold. An additional measurement taken from the hallway bathroom sink was 112°F. The thermostat dial on the water heater was set to approximately 120-130°F.
- Remaining Water quality field parameters were within recommended limits at the time of inspection.
- EDWM analytical results will determine if drinking water is in compliance with the applicable standards.

## F. Recommendations

- Follow up with EDWM water quality results when available.
- The resident was informed that a solution containing water and acetic acid (vinegar) can be used to remove the mold.
- The water heater has a set-point temperature of between 120-130°F, considering the hot water in both fixtures are below the suggested 115°F, the debris collected on the aerator, and the age of 14 years it is recommended to schedule maintenance/or replace unit.
- No additional actions required.

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | 6099 Heron Avenue | 6099 Heron Avenue |
| Field Sample ID: | | | A3-TW-0017138-24092-N-WQI | A3-TW-0017138-24092-N-H-WQI |
| Sample Date: | | | 2024-07-03 | 2024-07-03 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240703-2568-542** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (MPN/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240703-2568-542** | **SDG: 240703-2568-542** |
| Heterotrophic Plate Count | None | None | 2.00 U | **4.00** |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.310-0.480 | 0.310-0.480 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65467** | |
| Alkalinity, Total (as CaCO3) | None | None | **52.4** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65467** | |
| Petroleum Hydrocarbons (as Diesel) | None | None | 47.0 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 U | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 47.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |

| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65467** | |
|---|---|---|---|---|
| Copper | 1300 | 1300 | **21.1** | -- |
| Lead | 15 | 15 | **0.370 J** | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |

| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65467** | |
|---|---|---|---|---|
| 1-Methylnaphthalene | None | None | 0.250 U | -- |
| 2-Methylnaphthalene | None | None | 0.250 U | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | 0.0100 U | -- |
| Naphthalene | None | None | 0.250 U | -- |

| **VOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65467** | |
|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | 0.300 U | -- |
| Chloroform | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | 0.250 U | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |
| o-Xylene | None | None | 0.250 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Toluene | 1000 | 1000 | 0.250 U | -- |
| Total Trihalomethanes | 80 | None | ND | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison
mg/L = Milligrams per Liter

MPN/ml = Most Probable Number per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 1-19928 |
| Call Date/Time | 6/25/2024 1:39:52 PM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 7/1/2024 8:00:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | 4917D Mokupea Place |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 7/1/2023 12:00:00 AM |
| Number of adults under 65 | 4 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 2 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 2 dogs |
| Call Center Complaint Summary / Initial Notes | in the home for a year, has drank the water with no issues that whole time, daughter in law who lives in the home is now pregnant and experiencing headaches, they want a test. want water 6 in the home |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | No |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | |
| Do you see any issues with the appearance or odor the water in your home? | No |
| Color or Appearance of Water | |
| | None reported |
| Floating Particles | |
| | None reported |
| Taste | |
| | None reported |
| Odor | |
| | None reported |
| Staining | |
| | None reported |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | Yes |
| Skin | None |
| | None reported |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | Adults |
| | Yes - One of the pregnant residents experienced headaches |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | None |
| | None reported |

# In-Person Site Visit

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | Kitchen,Bathroom |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | Both hot & cold water |
| Does it occur only when you first turn on the water or does it occur continuously? | I don't know |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

## Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |
| | None reported |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Other |
| pH (standard units) | 7.24 |
| Conductivity (µS/cm) | 267.05 |
| FreeChlorine (mg/L or ppm) | 0.53 |
| Cold Temp (degrees F) | 76.14 |
| Hot water Sampling Location | Other |
| pH (standard units) | 7.31 |
| Conductivity (µS/cm) | 284.63 |
| FreeChlorine (mg/L or ppm) | 0.41 |
| Hot Temp (degrees F) | 103.30 |
| Water Quality Notes | Unit was not previously samples.<br>No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water. No unusual observations.<br>TURB: 0.28 NTU (cold), 0.36 NTU (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | No |
| | None |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Looks new / clean |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Looks new / clean |
| Bathroom - second floor - Specific inspection point | |
| Bathroom - second floor - Condition of aerator | |
| Bathroom - second floor - Specific inspection point | |
| Bathroom - second floor - Condition of aerator | |
| Bathroom - other - Specific inspection point | |
| Bathroom - other - Condition of aerator | |

# Call Center - WQI Checklist

## Other Concerns

Water Presure

Hot Water Temperature

Cross-Connection

Irrigation

## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | No |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>Schedule maintenance to determine and address cause of hot water heater leak.<br>No additional actions required. |
| Other Site Visit Notes | Interior view of kitchen sink aerator. Upon visual inspection, no debris was observed.<br><br>Interior view of downstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed.<br><br>Close-up view of the drain pan located on the lower section of a 119-gallon electric water heater. The drain pan contains approximately 1-2 cm of water indicative of a potential leak warranting maintenance.<br><br>119-gallon electric water heater manufactured by American Water Heater Co. on December 2013.<br>Visual observation of the water heater, shown in Figure 3, depicts approximately 1-2 cm of water present in the drain pan. This may indicate a possible leak due to either failure of the water heater liner or a compromised pressure relief valve.<br>Maintenance record documentation found on the water heater indicate the last service date was on 14 December 2022.<br>The pipe material is copper. |

# Call Center - WQI Checklist

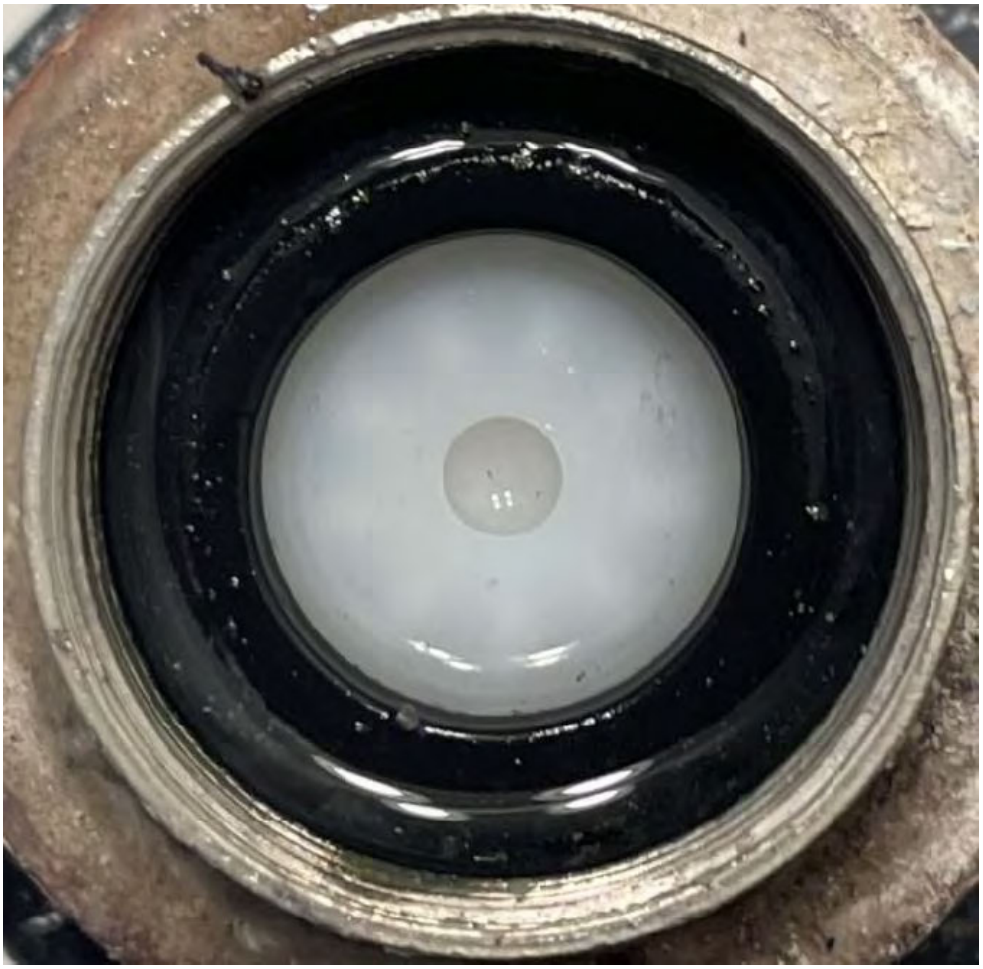
## Photos

| | |
|---|---|
| Ticket Number | 19928 |
| Location | Other |
| Title | Interior view of Kitchen Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 19928 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior view of Downstairs Hallway Bathroom Sink Aerator |



## Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 19928 |
| Location | First Floor - Bathroom - Sink |
| Title | Close-up View of Drain Pain Located Under Water Heater |

Monday, 1 July 2024, 0800

Zone – A3, 4917D Mokupea Place
Location Code: A3-MOKU4917D

## A. Resident Demographic/ Concerns

- Household consists of four (4) adults, two (2) children, and two (2) dogs.
- Resident for approximately one (1) year.
- Resident reported not experiencing any identifiable water quality concerns. However, in the past month, one of the pregnant residents experienced headaches thus, they wanted to rule out the possibility of water contamination as a cause.

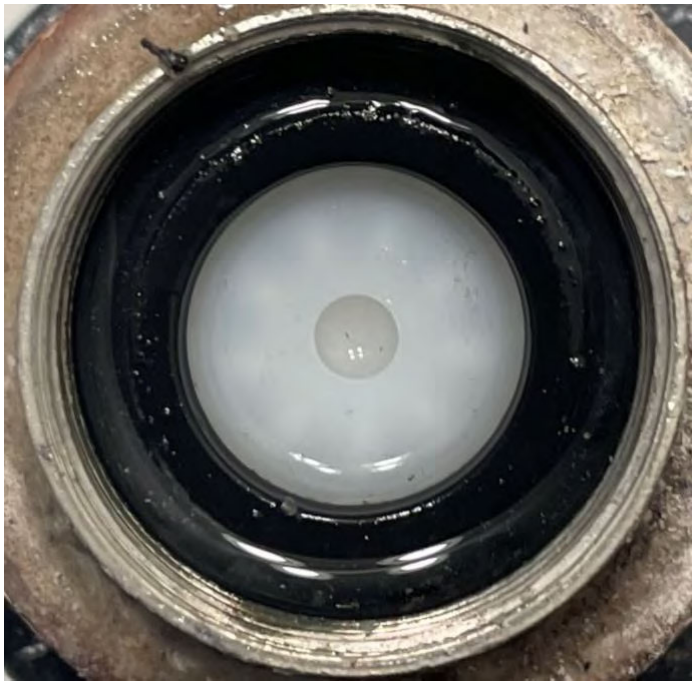
## B. Water Quality Observations and Results

- Unit was not previously sampled.
  - No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.
  - No unusual observations

- Personnel on-site
  - Water Quality Action Team (WQAT) - Collected cold water samples from faucets located on the downstairs hallway bathroom and kitchen for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation Water Monitoring (WQIWM) – EDWM collected hot/cold water samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the upper-level hallway bathroom.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.24 (cold)
    - 7.31 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 267.05 µS/cm (cold)
    - 284.63 µS/cm (hot)
  - Turbidity - (Acceptable Range: < 1.0 NTU)
    - 0.28 NTU (cold)
    - 0.36 NTU (hot)
  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.53 mg/L (cold)
    - 0.41 mg/L (hot)
  - Temperature -
    - 76.14°F (cold)
    - 103.3°F (hot)

- **Figure 1.** Interior view of kitchen sink aerator. Upon visual inspection, no debris was observed.



- **Figure 2.** Interior view of downstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed.

- **Figure 3.** Close-up view of the drain pan located on the lower section of a 119-gallon electric water heater. The drain pan contains approximately 1-2 cm of water indicative of a potential leak warranting maintenance.

## C. Hot Water Heater

- 119-gallon electric water heater manufactured by American Water Heater Co. on December 2013.
- Visual observation of the water heater, shown in **Figure 3,** depicts approximately 1-2 cm of water present in the drain pan. This may indicate a possible leak due to either failure of the water heater liner or a compromised pressure relief valve.
- Maintenance record documentation found on the water heater indicate the last service date was on 14 December 2022.
- The pipe material is copper.

## D. Point-of-Use Treatment

No filters

## E. Overall Assessment

- No unusual observations.
- Water quality field parameters were within recommended limits at the time of inspection.
- EDWM analytical results will determine if drinking water is in compliance with the applicable standards.

## F. Recommendations

- Follow up with EDWM water quality results when available.
- Schedule maintenance to determine and address cause of hot water heater leak.
- No additional actions required.

**Table X-X**
**EDWM A3 Zone Residential Sampling**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | 4917D Mokupea Place | 4917D Mokupea Place |
| Field Sample ID: | | | A3-TW-0016717-24092-N-WQI | A3-TW-0016717-24092-N-H-WQI |
| Sample Date: | | | 2024-07-01 | 2024-07-01 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240701-2568-517** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (MPN/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240701-2568-517** | **SDG: 240701-2568-517** |
| Heterotrophic Plate Count | None | None | 2.00 U | 2.00 U |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.410-0.530 | 0.410-0.530 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65377** | |
| Alkalinity, Total (as CaCO3) | None | None | **52.9** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65377** | |
| Petroleum Hydrocarbons (as Diesel) | None | None | 47.0 U | -- |

**Table X-X**
**EDWM A3 Zone Residential Sampling**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 U | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 47.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |

| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65377** | |
|---|---|---|---|---|
| Copper | 1300 | 1300 | **3.00** | -- |
| Lead | 15 | 15 | 0.130 U | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |

| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65377** | |
|---|---|---|---|---|
| 1-Methylnaphthalene | None | None | 0.250 U | -- |
| 2-Methylnaphthalene | None | None | 0.250 U | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | 0.0100 U | -- |
| Naphthalene | None | None | 0.250 U | -- |

| **VOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65377** | |
|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | **0.510** | -- |
| Chloroform | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | **0.350 J** | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |
| o-Xylene | None | None | 0.250 U | -- |
| Toluene | 1000 | 1000 | 0.250 U | -- |

**Table X-X**
**EDWM A3 Zone Residential Sampling**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Total Trihalomethanes | 80 | None | **0.86** | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison

mg/L = Milligrams per Liter

MPN/ml = Most Probable Number per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 1-20667 |
| Call Date/Time | 8/8/2024 8:22:17 AM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 8/8/2024 11:00:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | 4775A West Elua Way |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 9/1/2022 12:00:00 AM |
| Number of adults under 65 | 2 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 4 |
| Number of infants under the age of 2 | 1 |
| Number and type of pets | 0 |
| Call Center Complaint Summary / Initial Notes | 2 adults, 5 children |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | Yes |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | Ongoing |
| Do you see any issues with the appearance or odor the water in your home? | Yes |
| Color or Appearance of Water | None |
| | None reported |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | Chlorine |
| | The resident reported a “strange metal and chlorine like smell” coming from the sinks and drains in the kitchen, dishwasher, laundry room and master bathroom. |
| Staining | None |
| | None reported |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | Yes |
| Skin | Adults |
| | The wife reported recently experiencing skin irritation. Did not seek medical attention. |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | None |
| | None reported |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | None |
| | None reported |

# In-Person Site Visit

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | Kitchen,Bathroom |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | Both hot & cold water |
| Does it occur only when you first turn on the water or does it occur continuously? | I don't know |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

## Premise Plumbing History

Premise Plumbing History

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Kitchen |
| pH (standard units) | 7.21 |
| Conductivity (µS/cm) | 253.24 |
| FreeChlorine (mg/L or ppm) | 0.67 |
| Cold Temp (degrees F) | 78.35 |
| Hot water Sampling Location | Kitchen |
| pH (standard units) | 7.11 |
| Conductivity (µS/cm) | 246.53 |
| FreeChlorine (mg/L or ppm) | 0.40 |
| Hot Temp (degrees F) | 112.26 |
| Water Quality Notes | Unit was not previously sampled.<br>No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.<br>No unusual observations<br>TURB: 0.66 (cold), 0.69 (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | No |
| | none |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | True |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Mold / Mildew |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - other - Specific inspection point | |
| Bathroom - other - Condition of aerator | |

# Call Center - WQI Checklist

## Other Concerns

| | |
|---|---|
| Water Presure | |
| Hot Water Temperature | |
| Cross-Connection | |
| Irrigation | |

## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | Yes |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>Replace the aerators in all bathrooms.<br>When the shower in the upstairs hallway bathroom was turned on the tub began to fill with water faster than the water could drain, this could potentially be caused by clogged drain. It is recommended to request maintenance to flush the upstairs hallway bathroom shower drain to ensure there is no clog.<br>Request maintenance to fix the hot water pressure in the kitchen sink. |
| Other Site Visit Notes | Kitchen sink aerator: Upon visual inspection, a slimy black substance can be observed, the slimy texture of the substance indicates it could potentially be biofilm.<br><br>Hallway bathroom sink aerator: Upon visual inspection, scale build up can be observed.<br><br>Master bathroom sink aerator: Upon visual inspection, significant scale build up can be observed as well as the deteriorated rubber seal of the aerator.<br><br>Upstairs hallway bathroom sink aerator: Upon visual inspection, significant scale build up can be observed as well as the deteriorated rubber seal of the aerator.<br><br>119-gallon electric water heater manufactured by American Water Heater Company. Date of manufacture could not be determined due to unreadable label.<br>Visual observation showed the water heater to be in good condition with no signs of external corrosion.<br>No visible maintenance records found on the water heater.<br>The pipe material is copper. |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20667 |
| Location | Other |
| Title | Interior View of Kitchen Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20667 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior View of Hallway Bathroom Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20667 |
| Location | Second Floor - Bathroom 1 - Sink |
| Title | Interior View of Master Bathroom Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20667 |
| Location | Second Floor - Bathroom 2 - Sink |
| Title | Interior View of Upstairs Hallway Bathroom Sink Aerator |

Thursday 8 August 2024, 1100

Zone – A3, 4775A West Elua Way
Location Code: A3-WELU4775A

## BLUF

The resident reported a "strange metal and chlorine like smell" coming from the sinks and drains in the kitchen, dishwasher, laundry room and master bathroom. This WQI is the response to determine the conditions and safety of their water quality. The residents stated their main concern was that the chlorine level in their water was at a safe level. Chlorine levels, as well as all other water quality parameters collected during the inspection are within recommended ranges.

### A. Resident Demographic/ Concerns

- Household consists of two (2) adults and five (5) children.
- Resident since September 2022.
- Resident reported a "strange metal and chlorine like smell" coming from the sinks and drains in the kitchen, dishwasher, laundry room and master bathroom. The resident stated that the smell is the worst in the upstairs hallway bathroom that is used by the kids, and that the kids have complained that the shower drain "smells like vomit sometimes". The wife reported recently experiencing skin irritation but has not sought out medical help. The residents stated their main concern was that the chlorine level in their water was at a safe level.

### B. Water Quality Observations and Results

- Unit was not previously sampled.
- No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.
- No unusual observations

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the kitchen sink and the upstairs hallway bathroom sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM) collected hot and cold samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.21 (cold)
    - 7.11 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 253.24 (cold)
    - 246.53 (hot)

- Turbidity - (Acceptable Range: < 5.0 NTU)
  - 0.66 (cold)
  - 0.69 (hot)

- Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
  - 0.67 mg/L (cold)
  - 0.40 mg/L (hot)
- Temperature -
  - 78.35 °F (cold)
  - 112.26 °F (hot)

- **Figure 1.** Interior view of kitchen sink aerator. Upon visual inspection, a slimy black substance can be observed, the slimy texture of the substance indicates it could potentially be biofilm.

- **Figure 2.** Interior view of the hallway bathroom sink aerator. Upon visual inspection, scale build up can be observed.

- **Figure 3.** Interior view of the master bathroom sink aerator. Upon visual inspection, significant scale build up can be observed as well as the deteriorated rubber seal of the aerator.

- **Figure 4.** Interior view of the upstairs hallway bathroom sink aerator. Upon visual inspection, significant scale build up can be observed as well as the deteriorated rubber seal of the aerator.

## C. Hot Water Heater

- 119-gallon electric water heater manufactured by American Water Heater Company. Date of manufacture could not be determined due to unreadable label.
- Visual observation showed the water heater to be in good condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

**D. Point-of-Use Treatment**

No filters installed.

**E. Overall Assessment**

- Temperature was measured at all available fixtures during inspection; all hot water fixtures were measured at 112 °F or above.
- Chlorine levels, as well as all other water quality parameters collected during the inspection were within acceptable ranges.
- Very low water pressure was observed coming from the hot water side of the kitchen sink. This is not a water quality concern. However, it is a customer satisfaction issue.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

**F. Recommendations**

- Follow up with EDWM water quality results when available.
- Replace the aerators in all bathrooms.
- When the shower in the upstairs hallway bathroom was turned on the tub began to fill with water faster than the water could drain, this could potentially be caused by clogged drain. It is recommended to request maintenance to flush the upstairs hallway bathroom shower drain to ensure there is no clog.
- Request maintenance to fix the hot water pressure in the kitchen sink.

## Conclusion

This inspection was conducted to determine if the residents water meets applicable standards and is safe for use. No unusual observations regarding water quality were identified during the inspection. Chlorine levels are within recommended limits and resident was informed of this during the inspection. EDWM analytical results will determine if the water is safe, and the resident will then be informed by CPLO.

**Summary of Chemistry Results**
**Zone A3**
**Drinking Water Sampling, Joint Base Pearl Harbor - Hickam, Oahu, Hawaii**

| **Notes:** |
|---|
| ND = Not Detected |
| ISP = Incident Specific Parameter |
| EAL = DOH Environmental Action Level |
| EPA MCL = EPA Maximum Contaminant Level |
| All Results shown in Parts per Billion (ppb), with the exception of Field and Bacterial Test results |
| Parts per Million (ppm) |
| Parts per Thousand (ppth) |
| § - Exceeds Screening Level |
| -- = No Information Available |
| N (Normal) = Full compliance sample |
| FD (Field Duplicate) = Extra sample taken for quality control |
| N (Grab, Resample) = Additional follow-up sample |
| MPN/mL = Most probable number per milliliter |

| | | | | | |
|---|---|---|---|---|---|
| | | | **Location ID:** | A3-WELU4775A | |
| | | | **Location Type:** | Residence | |
| | | | **Address:** | 4775A West Elua Way | |
| | | | **Field Sample ID:** | A3-TW-0016833-24092-N-WQI | A3-TW-0016833-24092-N-H-WQI |
| | | | **Sample Date:** | 2024-08-08 | 2024-08-08 |
| | | | **Sample Type:** | N (Normal) | N (Normal) |
| **Method Group** | **Analyte** | **DOH Project Screening Level** | **Basis of Project Screening Level** | | |
| Bacterial Test (in 100 mL) | Coliform | -- | -- | Absent | -- |
| | E. coli | -- | -- | Absent | -- |
| Bacterial Test (MPN/mL) | Heterotrophic Plate Count | -- | -- | ND | ND |
| Field Test (ppb) | Free Chlorine | 4000 | MCL | 670 | 400 |
| Field Test (pH) | pH | -- | -- | 7.21 | 7.11 |
| Field Test (ms/cm) | Specific Conductivity | -- | -- | 0.250 | 0.250 |
| Field Test (degrees Celcuis) | Temperature | -- | -- | 27.5 | 45.3 |
| Field Test (nephelometric turbidity unit) | Turbidity | 5 | MCL | 0.660 | 0.690 |
| General Chemistry (ppb) | Alkalinity, Total (as CaCO3) | -- | -- | 57200 | -- |
| | Total Organic Carbon | -- | -- | ND | -- |
| Hydrocarbons (ppb) | Petroleum Hydrocarbons (as Diesel) | -- | -- | ND | -- |
| | Petroleum Hydrocarbons (as Gasoline) | -- | -- | ND | -- |
| | Petroleum Hydrocarbons (as Oil) | -- | -- | ND | -- |
| | Petroleum Hydrocarbons, Total | -- | -- | ND | -- |
| Metals (ppb) | Copper | 1300 | MCL | 3.90 | -- |
| | Lead | 15 | MCL | ND | -- |
| | Mercury | 2 | MCL | ND | -- |
| Synthetic Organic Compounds (ppb) | 1-Methylnaphthalene | -- | -- | ND | -- |
| | 2-Methylnaphthalene | -- | -- | ND | -- |
| | Acenaphthylene | -- | -- | ND | -- |
| | Anthracene | -- | -- | ND | -- |
| | Benzo(a)pyrene | 0.2 | MCL | ND | -- |
| | Benzo(b)fluoranthene | -- | -- | ND | -- |

**Summary of Chemistry Results**
**Zone A3**
**Drinking Water Sampling, Joint Base Pearl Harbor - Hickam, Oahu, Hawaii**

| **Notes:** |
|---|
| ND = Not Detected |
| ISP = Incident Specific Parameter |
| EAL = DOH Environmental Action Level |
| EPA MCL = EPA Maximum Contaminant Level |
| All Results shown in Parts per Billion (ppb), with the exception of Field and Bacterial Test results |
| Parts per Million (ppm) |
| Parts per Thousand (ppth) |
| § - Exceeds Screening Level |
| -- = No Information Available |
| N (Normal) = Full compliance sample |
| FD (Field Duplicate) = Extra sample taken for quality control |
| N (Grab, Resample) = Additional follow-up sample |
| MPN/mL = Most probable number per milliliter |

| | | | | | |
|---|---|---|---|---|---|
| | | | **Location ID:** | A3-WELU4775A | |
| | | | **Location Type:** | Residence | |
| | | | **Address:** | 4775A West Elua Way | |
| | | | **Field Sample ID:** | A3-TW-0016833-24092-N-WQI | A3-TW-0016833-24092-N-H-WQI |
| | | | **Sample Date:** | 2024-08-08 | 2024-08-08 |
| | | | **Sample Type:** | N (Normal) | N (Normal) |
| **Method Group** | **Analyte** | **DOH Project Screening Level** | **Basis of Project Screening Level** | | |
| Synthetic Organic Compounds (ppb) | Benzo(g,h,i)perylene | -- | -- | ND | -- |
| | Benzo(k)fluoranthene | -- | -- | ND | -- |
| | Chrysene | -- | -- | ND | -- |
| | Dibenz(a,h)anthracene | -- | -- | ND | -- |
| | Fluorene | -- | -- | ND | -- |
| | Indeno(1,2,3-c,d)pyrene | -- | -- | ND | -- |
| | Naphthalene | -- | -- | ND | -- |
| | Phenanthrene | -- | -- | ND | -- |
| | Pyrene | -- | -- | ND | -- |
| Volatile Organic Compounds (ppb) | 1,2,4-Trimethylbenzene | -- | -- | ND | -- |
| | 1,3,5-Trimethylbenzene | -- | -- | ND | -- |
| | Benzene | 5 | MCL | ND | -- |
| | Cumene | -- | -- | ND | -- |
| | Ethylbenzene | 700 | MCL | ND | -- |
| | m,p-Xylene | -- | -- | ND | -- |
| | n-Butylbenzene | -- | -- | ND | -- |
| | n-Propylbenzene | -- | -- | ND | -- |
| | o-Xylene | -- | -- | ND | -- |
| | sec-Butylbenzene | -- | -- | ND | -- |
| | tert-Butylbenzene | -- | -- | ND | -- |
| | Toluene | 1000 | MCL | ND | -- |
| | Xylenes, Total | 10000 | MCL | ND | -- |
| Trihalomethanes (ppb) | Bromodichloromethane | -- | -- | ND | -- |

**Summary of Chemistry Results**
**Zone A3**
**Drinking Water Sampling, Joint Base Pearl Harbor - Hickam, Oahu, Hawaii**

| **Notes:** |
|---|
| ND = Not Detected |
| ISP = Incident Specific Parameter |
| EAL = DOH Environmental Action Level |
| EPA MCL = EPA Maximum Contaminant Level |
| All Results shown in Parts per Billion (ppb), with the exception of Field and Bacterial Test results |
| Parts per Million (ppm) |
| Parts per Thousand (ppth) |
| § - Exceeds Screening Level |
| -- = No Information Available |
| N (Normal) = Full compliance sample |
| FD (Field Duplicate) = Extra sample taken for quality control |
| N (Grab, Resample) = Additional follow-up sample |
| MPN/mL = Most probable number per milliliter |

| | | | | | |
|---|---|---|---|---|---|
| | | | **Location ID:** | A3-WELU4775A | |
| | | | **Location Type:** | Residence | |
| | | | **Address:** | 4775A West Elua Way | |
| | | | **Field Sample ID:** | A3-TW-0016833-24092-N-WQI | A3-TW-0016833-24092-N-H-WQI |
| | | | **Sample Date:** | 2024-08-08 | 2024-08-08 |
| | | | **Sample Type:** | N (Normal) | N (Normal) |
| **Method Group** | **Analyte** | **DOH Project Screening Level** | **Basis of Project Screening Level** | | |
| Trihalomethanes (ppb) | Bromoform | -- | -- | ND | -- |
| | Chloroform | -- | -- | ND | -- |
| | Dibromochloromethane | -- | -- | 0.280 | -- |
| | Total Trihalomethanes | 80 | MCL | 0.280 | -- |

Friday 27 September 2024, 1100

Zone – A3, 4838B West Eha Way
Location Code: A3-WEST4838B

## BLUF

The resident requested a WQI to determine their water quality after experiencing a rash that appeared after bathing. Hot water temperature was below the recommended range. All other water quality parameters collected were within expected ranges. No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water. Based on the observations made during the WQI inspection, it is recommended maintenance set the water heater to a temperature of 115°F or above.

### A. Resident Demographic / Concerns

- Household consists of two (2) adults, two (2) children, and one (1) dog.
- Resident since 2021.
- Resident reported approximately two weeks ago all family members developed rashes. The family went to a doctor but was not comfortable sharing medical outcomes. Since seeking treatment, the rashes have subsided but are still present. The resident stated that they have made no changes to their use of the water since the rashes appeared two weeks ago. The resident stated that they no longer believed their water caused the rash, but still wanted testing.

### B. Water Quality Observations and Results

- Unit was not previously sampled.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the kitchen sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM) – collected hot and cold samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink
  - pH – (Expected Range: 6.5 to 8.5)
    - 7.37 (cold)
    - 7.34 (hot)

  - Conductivity - (Expected Range 0 to 800 µS/cm)
    - 251.83 µS/cm (cold)
    - 265.50 µS/cm (hot)

- Turbidity - (Expected Range: < 5.0 NTU)
  - 0.00 NTU (cold)
  - 1.19 NTU (hot)

- Free Chlorine - (Expected Range: 0.20 to 4.00 mg/L)
  - 0.56 mg/L (cold)
  - 0.16 mg/L (hot)

- Temperature
  - 77.63 °F (cold)
  - 85.29 °F (hot) **See section E**

- WQI hot water temperature results collected.
  - Downstairs hallway bathroom sink – 88.5 °F. **See section E.**
  - Water heater thermostat dial – approximately 90.0 °F. **See section E.**

- **Figure 1.** Interior view of hallway bathroom sink aerator. No debris was observed. The aerator is in good condition.

- **Figure 2.** Interior view of the kitchen sink aerator. No debris was observed. The aerator is in good condition.

## C. Hot Water Heater

- 119-gallon electric water heater manufactured by American Water Heater Company in July 2013.
- Water heater thermostat dial – approximately 90.0 °F. **See section E**
- Visual observation showed the water heater to be in good condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

## D. Point-of-Use Treatment

- Kangen 8 water filter installed in kitchen.
- Kangen 8 filter is NSF/ANSI 372, CSA B483.1, NSF/ANSI 18 for food certified.

## E. Overall Assessment

- The resident requested that the teams stay on the main level of the home. Temperature was measured at the kitchen sink and from the downstairs hallway bathroom sink during inspection. Hot water temperature was measured by both EDWM team and WQI teams. The WQI team took hot water temperatures with an instant read digital thermometer and the EDWM team took measurements with an Aqua Troll 600. The difference in decimal places in the two hot water temperatures listed is due to the different instruments.
- The WQI team observed the water heater to be set at a temperature of 90.0 °F, this is below the recommend range of 115-125 °F. It is recommended that the resident submit a maintenance request to have the water heater set to 115 °F or higher.

- No unusual observations were made from the hot or cold water; water was clear.
- All other water quality parameters collected during the EDWM sampling were within expected ranges.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

**F. Recommendations**

- Follow up with EDWM water quality results when available.
- Recommended maintenance set the water heater to a temperature of 115°F or above.

## Conclusion

The inspection was conducted at the request of the resident after experiencing skin irritation. The resident and family developed a rash approximately two weeks ago after bathing. These issues have begun to dissipate, and the resident stated they no longer believe the water caused the rash. Hot water temperature was not within the recommended range. All other water quality parameters collected were within expected ranges. Based on the observations made during the inspection, it is recommended maintenance set the water heater to a temperature of 115°F or above. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed of their results by the CPLO.

Friday 27 September 2024, 0900

Zone – A3, 6331B Ibis Ave
Location Code: A3-IBIS6331B

## BLUF

The resident requested a WQI after experiencing dry skin and rashes. All water quality parameters collected were within expected ranges. No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water. Based on the observations made during the WQI inspection, no immediate concerns regarding water quality were identified.

### A. Resident Demographic / Concerns

- Household consists of three (3) adults, three (3) children, and no pets.
- Resident since 2017.
- Resident reported ongoing issues with dry, itchy skin and scalp. The resident stated that she and her husband are affected but not their children. Their skin irritation has fluctuated in severity since 2021. In 2021 the husband went to the emergency room to receive care for these issues; no diagnosis was made. No one else in the family has sought medical help.

### B. Water Quality Observations and Results

- Unit was not previously sampled.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the kitchen sink and hallway bathroom tub for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM) – collected hot and cold samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink
  - pH – (Expected Range: 6.5 to 8.5)
    - 7.23 (cold)
    - 7.29 (hot)

  - Conductivity - (Expected Range 0 to 800 µS/cm)
    - 252.39 µS/cm (cold)
    - 265.20 µS/cm (hot)

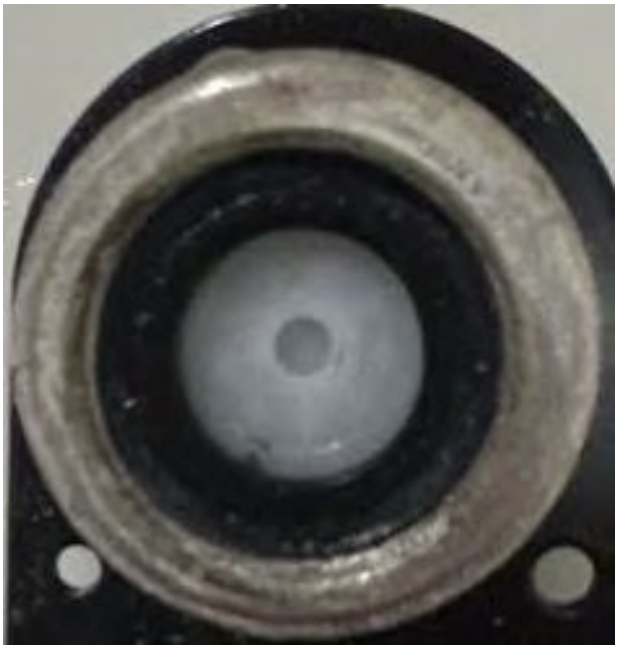
- Turbidity - (Expected Range: < 5.0 NTU)
  - 0.00 NTU (cold)
  - 0.26 NTU (hot)

- Free Chlorine - (Expected Range: 0.20 to 4.00 mg/L)
  - 0.50 mg/L (cold)
  - 0.53 mg/L (hot)

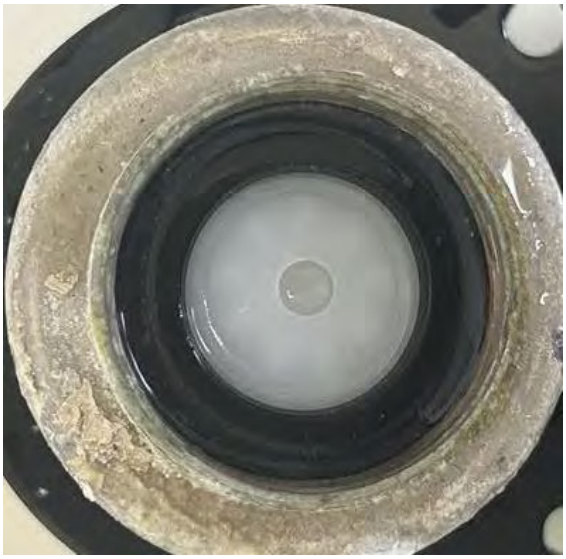
- Temperature
  - 79.25 °F (cold)
  - 106.77 °F (hot)

- WQI hot water temperature results collected.
  - Hallway bathroom sink – 116.2 °F
  - Master bathroom sink – 117.1 °F
  - Water heater thermostat dial – approximately 120.0 °F

- **Figure 1.** Interior view of kitchen sink aerator. No debris was observed. The mesh screen on the aerator is in poor condition. Replacement is recommended.



- **Figure 2.** Interior view of the hallway bathroom sink aerator. No debris was observed. The aerator is in good condition.



- **Figure 3.** Interior view of the master bathroom sink aerator. No debris was observed. The aerator is in good condition.

- **Figure 4.** View of master bathroom shower head. Shower head is in poor condition and appears to be corroded Recommend replacing shower head.

## C. Hot Water Heater

- 40-gallon gas water heater manufactured by Bradford White Corp. on 29 March 2006.
- Water heater thermostat dial – approximately 120.0 °F
- Visual observation showed the water heater to be in fair condition with little signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

## D. Point-of-Use Treatment

No filters installed.

## E. Overall Assessment

- Temperature was measured at all available fixtures during inspection. Hot water temperature was measured by both EDWM team and WQI team. WQI team took hot water temperatures with an instant read digital thermometer and the EDWM team took measurements with an Aqua Troll 600. The difference in decimal places in the two hot water temperatures listed is due to the different instruments. The WQI team confirmed all hot water fixtures except the kitchen sink could reach a temperature of 115°F or above.
- No unusual observations were made from the hot or cold water; water was clear.
- All water quality parameters collected during the EDWM sampling were within expected ranges.

- EDWM analytical results will determine if drinking water complies with the applicable standards.

**F. Recommendations**

- Follow up with EDWM water quality results when available.
- Recommend replacing kitchen sink aerator.
- Recommend replacing the master bathroom shower head.
- Recommend seeing a dermatologist to address skin irritation.

## Conclusion

The inspection was conducted at the request of the resident to determine water quality. The resident reported concern that the water could be the cause of their skin irritation. It is recommended that the resident replace the master bathroom shower head and the kitchen sink aerator, as well as see a dermatologist to address skin irritation. All water quality parameters collected during the inspection were within expected ranges. Based on the observations made during the inspection, no further action is required regarding this WQI event. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed of their results by the CPLO.

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 3-20569 |
| Call Date/Time | 8/1/2024 9:02:53 AM |
| Call Center Operator | (b) (6) |
| Location Type | Non-Residence |
| Scheduled Visit (Date/Time) | 8/2/2024 10:00:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | |
| Address | Building 1588 (b) (3) (A) NSSC |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | |
| Number of adults under 65 | 0 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 0 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 0 |
| Call Center Complaint Summary / Initial Notes | 1000 - connect with Navy/WQI prior to sampling.<br>This facility is occupied by both military and civilian personnel that work for the (b) (6) The BLDG manager requested this sample after a staff member reported noticing a “weird” taste in the water. The water source in question is an old water cooler that a staff member brought in after the building second floor water fountain broke. The staff member described the “weird” taste in the water as “sharp metallic taste.” They indicated that the taste was not noticeable when the cold water was initially dispensed from the water cooler but was noticeable only after the water had sat out. The staff member said that they use a new two (2) gallon metal water bottle to drink from on a daily basis, but they said they had noticed the same taste in their plastic water bottle they used previously. |

# Call Center - WQI Checklist

## Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | Yes |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | Ongoing |
| Do you see any issues with the appearance or odor the water in your home? | No |
| Color or Appearance of Water | None |
| | None reported |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | Staff member reported noticing a “weird” taste in the water dispensed from a water cooler. The staff member described the “weird” taste in the water as “sharp metallic taste.” |
| Odor | None |
| | None reported |
| Staining | None |
| | None reported |
| Scaling (visible surface buildup) | No |

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | No |
| Skin | None |
| | None reported |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | None |
| | None reported |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | None |
| | None reported |

# In-Person Site Visit

# Call Center - WQI Checklist

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | Other |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | |
| Does it occur only when you first turn on the water or does it occur continuously? | I don't know |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

## Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |
| | None reported |

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Other |
| pH (standard units) | 7.47 |
| Conductivity (µS/cm) | 234.34 |
| FreeChlorine (mg/L or ppm) | 0.43 |
| Cold Temp (degrees F) | 76.76 |
| Hot water Sampling Location | Other |
| pH (standard units) | 7.54 |
| Conductivity (µS/cm) | 265.02 |
| FreeChlorine (mg/L or ppm) | 0.41 |
| Hot Temp (degrees F) | 96.62 |
| Water Quality Notes | BLDG 1588 was previously sampled on 5 May 2022. Traces of chromium, copper, barium, selenium, and total trihalomethanes were found. The results from this sample were below project screening levels.<br>No sheen, particles, discoloration, cloudiness, or odors were observed in hot or cold water.<br>No unusual taste was detected.<br>No unusual observations.<br>TURB (cold): 0.02 NTU / TURB (hot): 0.42 NTU |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | |
| Do you have point-of-use filters? | |
| | A filtered water cooler was brought in by one of the staff members after the water fountain on the second floor broke. The staff member, who brought in the water cooler, stated they already had the water cooler in their possession and that it was approximately 10 years old or older. The staff member also said they have never replaced any of the filters or done maintenance of any kind to the water cooler. |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

# Call Center - WQI Checklist

## Water Fixtures

- Staining or Scale visible buildup on water fixtures
- Kitchen sink - Specific inspection point
- Kitchen sink - Condition of aerator
- Refrigerator - Specific inspection point
- Refrigerator - Condition of aerator
- Bathroom - first floor - Specific inspection point
- Bathroom - first floor - Condition of aerator
- Bathroom - second floor - Specific inspection point
- Bathroom - second floor - Condition of aerator
- Bathroom - second floor - Specific inspection point
- Bathroom - second floor - Condition of aerator
- Bathroom - other - Specific inspection point
- Bathroom - other - Condition of aerator

## Other Concerns

- Water Presure
- Hot Water Temperature
- Cross-Connection
- Irrigation

## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | No |
| Navy to follow-up | No |
| Other | No |
| Other Site Visit Notes | The water heater was not located or inspected. |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20569 |
| Location | Other |
| Title | On the left is the water cooler; this is the drinking water source in question where a staff member reported a “weird” taste in the water. |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20569 |
| Location | Other |
| Title | Filters in the water cooler |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20569 |
| Location | Other |
| Title | Connection point where water cooler is connected to the water system. |

Friday, 2 August 2024, 1000

Zone – C1, Waterfront Street JBPHH BLDG 1588
Location Code: C1-BLDG1588

## BLUF

The BLDG manager requested this sample after a staff member reported noticing a "weird" taste in the water dispensed from a water cooler with water filters that were reported to be at least 10 years old. This WQI is the response to determine the conditions and safety of their water quality. The WQI team recommends that routine maintenance is conducted on the water cooler including changing the filters to improve water taste.

### A. Occupants Concerns

This facility is occupied by both military and civilian personnel that work for the (b) (6) [redacted]. The BLDG manager requested this sample after a staff member reported noticing a "weird" taste in the water. The water source in question is an old water cooler that a staff member brought in after the building second floor water fountain broke. The staff member described the "weird" taste in the water as "sharp metallic taste." They indicated that the taste was not noticeable when the cold water was initially dispensed from the water cooler but was noticeable only after the water had sat out. The staff member said that they use a new two (2) gallon metal water bottle to drink from on a daily basis, but they said they had noticed the same taste in their plastic water bottle they used previously.

### B. Water Quality Observations and Results

- BLDG 1588 was previously sampled on 5 May 2022. Traces of chromium, copper, barium, selenium, and total trihalomethanes were found. The results from this sample were below project screening levels.
- No sheen, particles, discoloration, cloudiness, or odors were observed in hot or cold water.
- No unusual taste was detected.
- No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the second-floor coed bathroom (room 203) sink, the black water cooler, and the water fountain for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – Not present
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM) collected hot and cold samples from the second-floor bathroom sink (room 203).
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the bathroom sink.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.47 (cold)
    - 7.54 (hot)

Friday, 2 August 2024, 1000

Zone – C1, Waterfront Street JBPHH BLDG 1588
Location Code: C1-BLDG1588

- Conductivity - (Acceptable Range 0 to 800 µS/cm)
  - 234.34 µS/cm (cold)
  - 265.02 µS/cm (hot)
- Turbidity - (Acceptable Range: < 1.0 NTU)
  - 0.02 NTU (cold)
  - 0.42 NTU (hot) –
- Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
  - 0.43 mg/L (cold)
  - 0.41 mg/L (hot)
- Temperature -
  - 76.76 °F (cold)
  - 96.62 °F (hot) - See section E.

- **Figure 1.** On the left is the water cooler; this is the drinking water source in question where a staff member reported a “weird” taste in the water.

Friday, 2 August 2024, 1000

Zone – C1, Waterfront Street JBPHH BLDG 1588
Location Code: C1-BLDG1588

- **Figure 2.** Filters in the water cooler.

- **Figure 3.** Connection point where water cooler is connected to the water system.

## C. Hot Water Heater

- The water heater was not located or inspected.

## D. Point-of-Use Treatment

A filtered water cooler was brought in by one of the staff members after the water fountain on the second floor broke. The staff member, who brought in the water cooler, stated they already had the water cooler in their possession and that it was approximately 10 years old or older. The staff member also said they have never replaced any of the filters or done maintenance of any kind to the water cooler.

Friday, 2 August 2024, 1000

Zone – C1, Waterfront Street JBPHH BLDG 1588
Location Code: C1-BLDG1588

**E. Overall Assessment**

- The hot water temperature taken from the second-floor bathroom sink (room 203) was measured at 96.62 °F, this is lower than the recommend hot water temperature of 115 °F.
- Remaining water quality field parameters were within recommended limits at the time of inspection.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

**F. Recommendations**

- Follow up with EDWM water quality results when available.
- Recommend replacing the filters in the water cooler on a periodic basis as recommended by the manufacturer.
- Recommend water heater be checked by maintenance personnel to ensure proper temperature is maintained and water heater is fully operational.

## Conclusion

This inspection was conducted to determine if the buildings water met applicable standards and is safe to utilize. No unusual immediate observations regarding the water were found. EDWM analytical results will determine if the water is safe, and the BLDG manager will then be informed by CPLO. The WQI team recommends that routine maintenance is conducted on the water cooler including changing the filters to improve water taste.

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | Building 1588,TORP RETREIVER BOATHSE NSSC | Building 1588,TORP RETREIVER BOATHSE NSSC |
| Field Sample ID: | | | C1-TW-0014745-24092-N-WQI | C1-TW-0014745-24092-N-H-WQI |
| Sample Date: | | | 2024-08-02 | 2024-08-02 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240802-2568-800** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (MPN/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240802-2568-800** | **SDG: 240802-2568-800** |
| Heterotrophic Plate Count | None | None | **156** | **8.00** |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.410-0.430 | 0.410-0.430 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66113** | |
| Alkalinity, Total (as CaCO3) | None | None | **59.3** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66113** | |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Diesel) | None | None | 48.0 U | -- |
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 U | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 48.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |

| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66113** | |
|---|---|---|---|---|
| Copper | 1300 | 1300 | **6.30** | -- |
| Lead | 15 | 15 | 0.130 U | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |

| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66113** | |
|---|---|---|---|---|
| 1-Methylnaphthalene | None | None | 0.250 U | -- |
| 2-Methylnaphthalene | None | None | 0.250 U | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | 0.0100 U | -- |
| Naphthalene | None | None | 0.250 U | -- |

| **VOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66113** | |
|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | **1.10** | -- |
| Chloroform | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | **0.740** | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |
| o-Xylene | None | None | 0.250 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Toluene | 1000 | 1000 | 0.250 U | -- |
| Total Trihalomethanes | 80 | None | **1.84** | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison

mg/L = Milligrams per Liter

MPN/ml = Most Probable Number per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

Monday 16 September 2024, 0800

Zone – C2, 250 Hospital Way (BLDG 371A)
Location Code: C2-BLDG371A

## BLUF

An employee of BLDG 371A reported discolored water coming from all their fixtures, no sheen or odor were reported. The WQI replicated the observed discoloration following a 15-minute flush. Based on the observations made during the WQI inspection on 16 September 2024, it is recommended to inspect plumbing for corrosion and to have their cross-contamination control operator conduct a further investigation. It is also believed that construction occurring in the south-east portion of the building may have released sediment/mineral deposits into the system. The site was revisited to confirm an anomalous water quality parameter on 17 September 2024. During this inspection, the water was observed to be clear with no discoloration. Additional recommendations include replacing and reconfiguring the kitchen sink water filter.

## A. Resident Demographic / Concerns

- Non-residential building contains approximately 20 employees.
- Building occupation timeline was not provided.
- Employees observed discolored water from the kitchen and men's and women's bathroom sinks.

## B. **Water Quality Observations** & Results

- Unit was previously sampled on 7 April 2022. Chromium, copper, lead, total trihalomethanes, bromoform, and barium were found. All detections were below project screening levels.
- Discoloration in the cold water was observed. No sheen or odor were observed.

- Personnel on-site for 16 September 2024 inspection unless noted otherwise.
  - Water Quality Action Team (WQAT) – Collected rapid TPH test samples from the kitchen and men's and women's bathroom sinks.
  - Community Public Liaison Officer (CPLO) –Lila Castellano/CDR Dunn. Bill Kavanagh on 17 September 2024.
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM) – collected cold samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink on 16 September 2024.
  - pH – (Expected Range: 6.5 to 8.5)
    - 7.26 (cold)

  - Conductivity - (Expected Range 0 to 800 µS/cm).
    - 38,378,200 µS/cm (cold) – Anomalous reading that was not confirmed during the 17 September 2024 inspection. **See below and Section E.**

  - Turbidity - (Expected Range: < 5.0 NTU) **See Section E.**

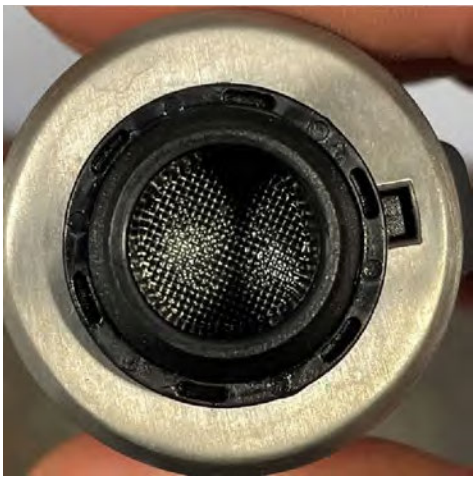
    - 22.32 NTU (cold)

- Free Chlorine - (Expected Range: 0.20 to 4.00 mg/L)
    - 0.17 mg/L (cold)

- Temperature -
    - 76.89 °F (cold)

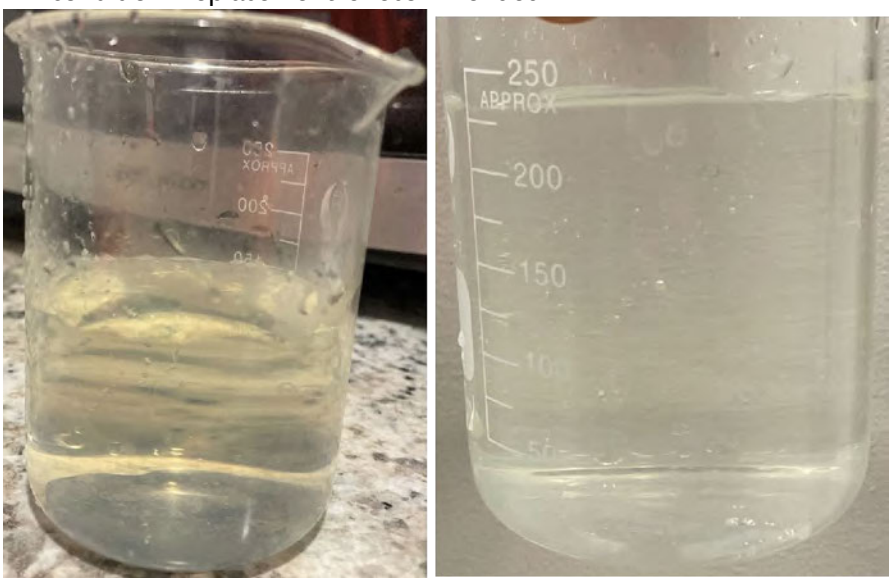
- Table 1. Results of field testing from the kitchen sink on 17 September 2024. Water was clear and water quality parameters were within expected ranges.

| Water Quality Parameters | Initial Collection (pre-flush) | Post 5-minute Flush | Post 10-minute Flush | Post 15-minute Flush | Post 20-minute Flush |
|---|---|---|---|---|---|
| pH | 7.31 | 7.36 | 7.35 | 7.30 | 7.34 |
| Specific Conductivity (µS/cm) | 247.07 | 239.39 | 240.41 | 241.80 | 239.72 |
| Turbidity (NTU) | 0.22 | 0.27 | 0.24 | 0.24 | 0.21 |
| Temperature (°F) | 80.17 | 86.04 | 87.46 | 87.60 | 85.1 |
| TDS (ppm) | 160.60 | 155.60 | 156.26 | 157.17 | 155.82 |



- Figure 1. Interior view of kitchen sink aerator. Debris of unknown material were observed. This material appears to be entrapped within the aerator. The aerator appears to be in good condition.

- Figure 2. Interior view of the women's bathroom left sink aerator. A collection of rust particles was observed. The aerator appears to be in poor condition; replacement is recommended. Note: The aerators on both sinks in the men's bathroom and the right sink of the women's bathroom could not be removed. Visual inspection of the exterior of the fixtures suggests the aerators are in poor condition. Replacement is recommended.




- Figure 3. A 250 mL beaker of discolored water collected from the kitchen sink and women's bathroom left sink, respectively. Water collected from other sinks (not shown here) presented with the same discoloration. The employee stated that all fixtures were flushed for 15 minutes prior to the 16 September 2024 appointment.

- Figure 4. Potential source of cross-connection contamination located at adjacent building, Building 371B (C2-BLDG371B). A vacuum-breaker on hose bib was not observed.

## C. Hot Water Heater

- Hot water measurements/observations were not collected.

## D. Point-of-Use Treatment

- An in-line filter was installed underneath the kitchen sink which services an external water fountain. This filter was connected downstream from the cold-water samples collected.

## E. Overall Assessment

- During the 16 September 2024 inspection, turbidity was measured as 22.23 NTU and specific conductivity was measured at 38,378,200 µS/cm. These readings are outside the expected ranges. As a result, the team collected a Total Dissolved Solids (TDS) reading, which was recorded at 0.024 ppm, below the EPA action value of 500 ppm. An elevated TDS value should accompany an elevated specific conductivity reading. As a result of this the specific conductivity reading is understood as inaccurate.
- The WQI team revisited Building 371A on 17 September to collect confirmatory water quality parameters from the kitchen sink across 5-minute intervals of flushing (as shown in Table 1). The water coming from the kitchen sink at the time of the revisit did not reflect the same conditions as observed the day prior, as the water was clear and parameters were within expected ranges. To conclude, the initial water quality parameters collected on 16 September 2024, including specific conductivity, appeared to be the result of an equipment error. The observed discoloration suggests the true specific conductivity may have been outside of expected ranges, but the extent of this cannot be determined. Ultimately, it is likely that the discoloration of the water is the result of a cross-connection contamination or corrosion from the plumbing.
- Turbidity values also show significant elevated measurements which can be seen in Figure 3.
- Remodeling operations were observed in a structurally connected building, Building 371B (C2-BLDG371B). The site manager was not aware if the water lines are connected between both buildings. Additionally, the water coming from outside spigots and functional sinks were inspected, water was clear. This issue appears to be localized. A potential cross-connection source was identified to the site-manager as shown in Figure 4.

- EDWM analytical results will determine if drinking water complies with the applicable standards.

## F. Recommendations

- Follow up with EDWM water quality results when available.
- It is recommended for further investigation by cross-contamination control operator to address cross-connection concerns.
- It is recommended to inspect plumbing for corrosion.
- It is recommended that the in-line kitchen sink filter is changed and reconfigured to service water coming from kitchen sink.

## Conclusion

The inspection was conducted following an initial complaint of an employee of BLDG 371A reporting discoloration of the water. No sheen or odor were reported. Based on the observations made during the inspection, it is recommended that an investigation by the cross-contamination control operator be conducted, as well as a plumbing inspection. We recommend changing and reconfiguring in-line filter that services the kitchen sink. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed of their results by the CPLO.

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 1-20712 |
| Call Date/Time | 8/8/2024 12:08:26 PM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 8/9/2024 8:00:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | |
| Address | 214 16th Street |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 8/1/2019 12:00:00 AM |
| Number of adults under 65 | 4 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 0 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 2 cats 1 dog |
| Call Center Complaint Summary / Initial Notes | The resident reported that the entire family including the pets have been experiencing gastrointestinal issues. |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | No |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | |
| Do you see any issues with the appearance or odor the water in your home? | No |
| Color or Appearance of Water | None |
| | None reported |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | None |
| | None reported |
| Staining | None |
| | None reported |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | Yes |
| Skin | None |
| | None reported |
| Respiratory | None |
| | None reported |
| Gastrointestinal | Adults,Pets |
| | The resident reported that the entire family including the pets have been experiencing gastrointestinal issues. |
| Headache | None |
| | None reported |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | None |
| | None reported |

# In-Person Site Visit

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | Kitchen,Bathroom |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | Both hot & cold water |
| Does it occur only when you first turn on the water or does it occur continuously? | Continuously |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

## Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |
| | None reported |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Kitchen |
| pH (standard units) | 7.10 |
| Conductivity (µS/cm) | 240.88 |
| FreeChlorine (mg/L or ppm) | 0.69 |
| Cold Temp (degrees F) | 75.38 |
| Hot water Sampling Location | Kitchen |
| pH (standard units) | 7.25 |
| Conductivity (µS/cm) | 264.50 |
| FreeChlorine (mg/L or ppm) | 0.14 |
| Hot Temp (degrees F) | 114.85 |
| Water Quality Notes | Unit was previously sampled on 1 February 2024. Traces of chromium, copper, barium, selenium, and arsenic were found. These detections were all below project screening levels.<br>Unit was previously sampled on 1 January 2023. Traces of benzopyrene, chromium, copper, lead, barium, total petroleum hydrocarbons, and total trihalomethanes. These detections were all below project screening levels.<br>No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.<br>No unusual observations.<br>TURB: 0.00 (cold), 0.00 (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | No |
| | none |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | |
| Kitchen sink - Specific inspection point | |
| Kitchen sink - Condition of aerator | |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | |
| Bathroom - second floor - Condition of aerator | |
| Bathroom - other - Specific inspection point | |
| Bathroom - other - Condition of aerator | |

# Call Center - WQI Checklist

## Other Concerns

| | |
|---|---|
| Water Presure | |
| Hot Water Temperature | |
| Cross-Connection | |
| Irrigation | |

## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | No |
| Navy to follow-up | No |
| Other | Yes |
| | Clean sink aerators every six months to prevent debris build up.<br>Follow up with EDWM water quality results when available.<br><br>This inspection was conducted to determine if the residents' water meets applicable standards and is safe for use. It is recommended that the resident cleans the sink aerators every six months to prevent debris build up. Based on the observations made during the inspection and all water quality parameters being within acceptable ranges (other than chlorine in hot water), no further action is required regarding this WQI event. Pending EDWM analytical results will determine if the water is safe to drink, and the resident will then be informed by the CPLO. |
| Other Site Visit Notes | Hallway bathroom sink aerator: Upon visual inspection, small black opaque debris of unknown material were observed. Debris had no odor and was soft, when touched it left a black smudge residue, this could possibly be degrading rubber.<br><br>Master bathroom sink aerator: Upon visual inspection, small black opaque debris of unknown material were observed.<br><br>80-gallon electric water heater manufactured by Bradford White Corporation on 02 December 2010.<br>Visual observation showed the water heater to be in good condition with no signs of external corrosion.<br>No visible maintenance records found on the water heater.<br>The pipe material is copper.<br>Resident stated that maintenance flushed the water heater on 13 March 2024. |

# Call Center - WQI Checklist

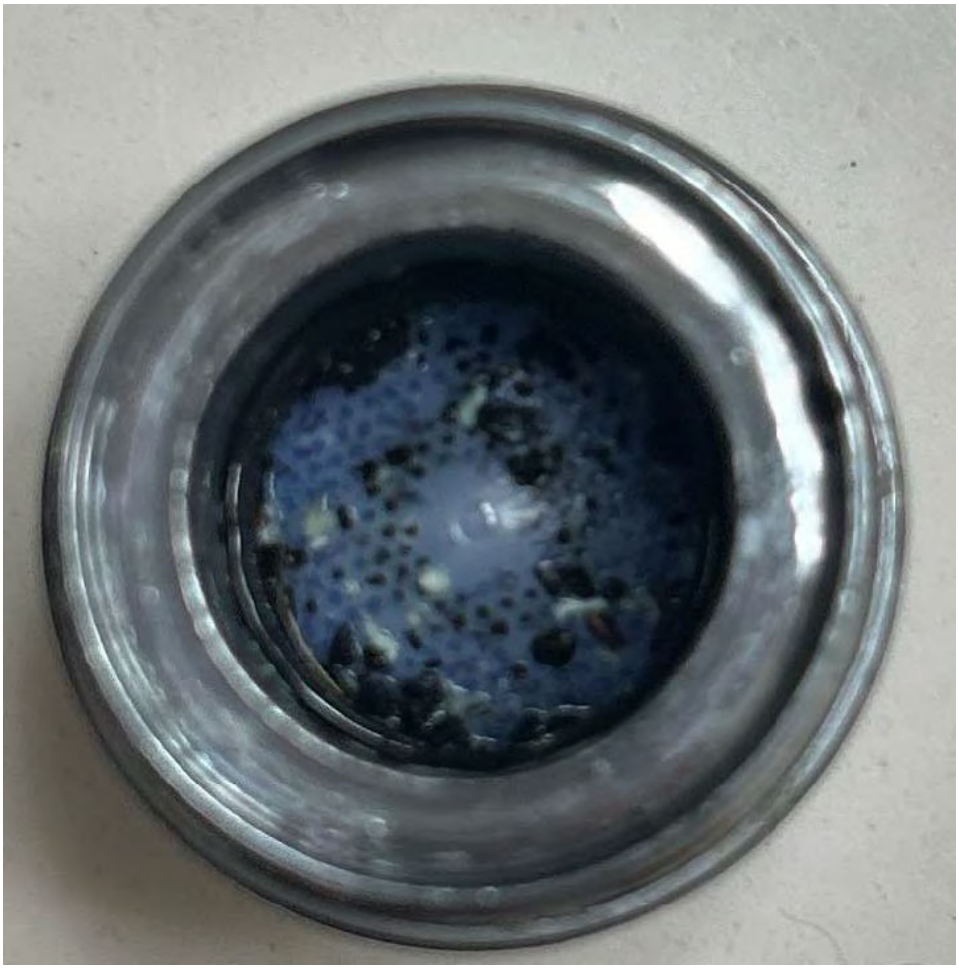
## Photos

| | |
|---|---|
| Ticket Number | 20712 |
| Location | Other |
| Title | Interior View of Kitchen Sink Aerator |

# Call Center - WQI Checklist

## Photos

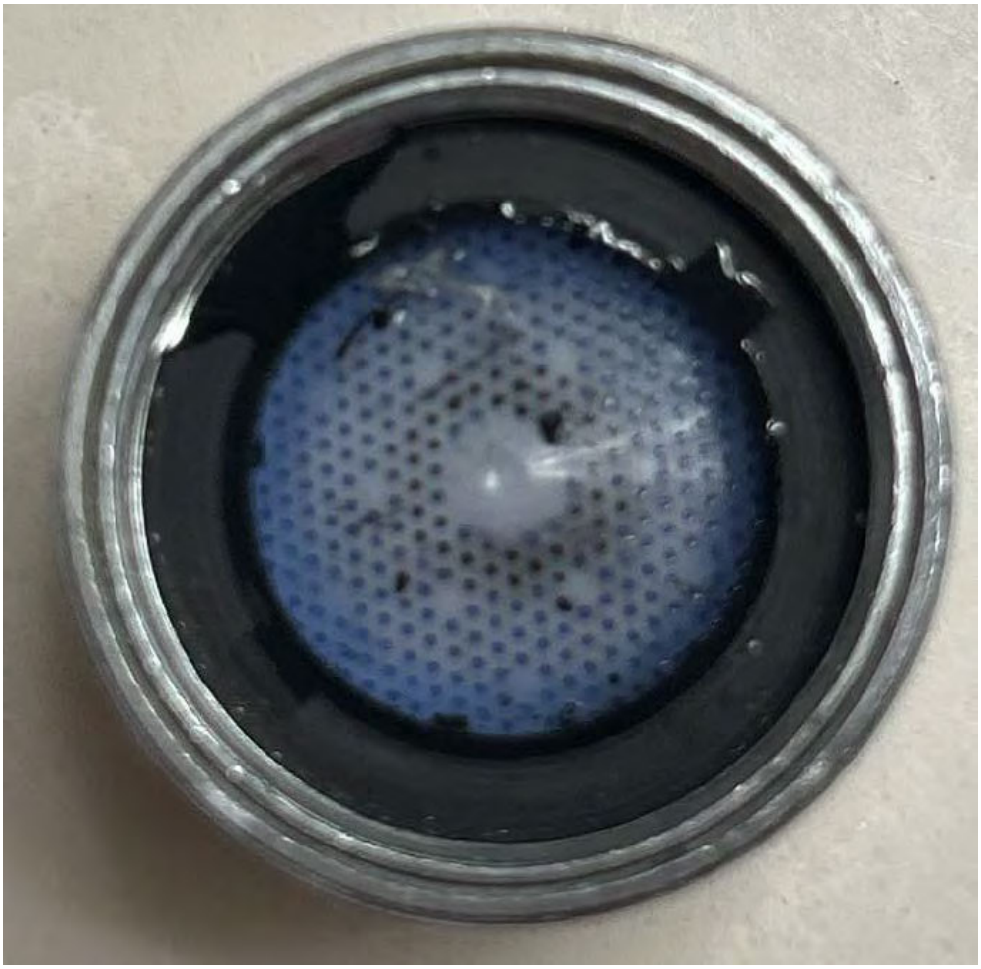
| | |
|---|---|
| Ticket Number | 20712 |
| Location | Other |
| Title | Interior View of Hallway Bathroom Sink Aerator |



# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20712 |
| Location | Other |
| Title | Interior View of Master Bathroom Sink Aerator |



Friday 9 August 2024, 0800

Zone – D2, 214 16th Street
Location Code: D2-16TH0214

## BLUF

The resident reported that the entire family including the pets have been experiencing gastrointestinal issues. This WQI is the response to determine the conditions and safety of their water quality. Water quality parameters (other than chlorine in hot water) collected during the inspection were within acceptable ranges. Based on the observations made during the inspection, no immediate concerns regarding water quality were identified.

### A. Resident Demographic / Concerns

- Household consists of four (4) adults, two (2) pet cats, and one (1) pet foster dog.
- Resident since August 2019.
- Resident reported that about three weeks ago everyone in the household started experiencing gastrointestinal issues daily including diarrhea and stomach pains. The resident stated that nobody in the household including the pets drink the water. Water is only used for bathing and washing the dishes. The resident stated that the household stopped drinking the water 2 years ago and that they get their drinking water from a third-party source. The resident began having additional concerns about their water and requested a WQI about four days ago when their pets became sick and vomited after bathing in the tap water. In addition to their pet's illness, the resident stated that their son has been vomiting everyday and went to urgent care for help, where he was given Zofran and told to drink electrolytes and stay hydrated. The resident stated that they have a gastrointestinal doctor appointment scheduled for September. The resident emphasized that this is solely a gastrointestinal issue and that no one in the household is showing other signs of sickness, such as fever or body aches.
- The Hawaii Department of Health (HDOH) requested that an EPA split sample be collected in addition to an EDWM sample.

### B. Water Quality Observations and Results

- Unit was previously sampled on 1 February 2024. Traces of chromium, copper, barium, selenium, and arsenic were found. These detections were all below project screening levels.
- Unit was previously sampled on 1 January 2023. Traces of benzopyrene, chromium, copper, lead, barium, total petroleum hydrocarbons, and total trihalomethanes. These detections were all below project screening levels.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

- Personnel on-site
- Water Quality Action Team (WQAT) – Collected samples from the kitchen sink and the hallway bathroom sink for rapid TPH test.

- Community Public Liaison Officer (CPLO) – (b) (6) .
- Water Quality Investigation (WQI) Team.
- Extended Drinking Water Monitoring (EDWM) collected hot and cold samples from the kitchen sink.
- Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – David Kawahara.

  - Results of field testing from the kitchen sink.
- pH – (Acceptable Range: 6.5 to 8.5)
  - 7.10 (cold)
  - 7.25 (hot)

- Conductivity - (Acceptable Range 0 to 800 µS/cm)
  - 240.88 (cold)
  - 264.50 (hot)

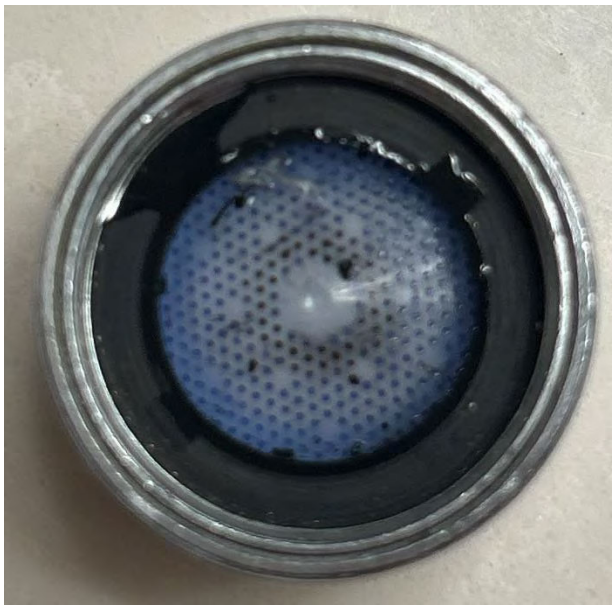
- Turbidity - (Acceptable Range: < 5.0 NTU)
  - 0.00 (cold)
  - 0.00 (hot)

- Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
  - 0.69 mg/L (cold)
  - 0.14 mg/L (hot) – See section E.

- Temperature -
  - 75.38 °F (cold)
  - 114.85 °F (hot)

- **Figure 1.** Interior view of kitchen sink aerator. Upon visual inspection, aerator looks to be in good condition and no debris was present.

- **Figure 2.** Interior view of the hallway bathroom sink aerator. Upon visual inspection, small black opaque debris of unknown material were observed. Debris had no odor and was soft, when touched it left a black smudge residue, this could possibly be degrading rubber.



- **Figure 3.** Interior view of the master bathroom sink aerator. Upon visual inspection, small black opaque debris of unknown material were observed.

## C. Hot Water Heater

- 80-gallon electric water heater manufactured by Bradford White Corporation on 02 December 2010.
- Visual observation showed the water heater to be in good condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.
- Resident stated that maintenance flushed the water heater on 13 March 2024.
- Resident stated that maintenance installed a new AC unit in the house at the end of June or early July. The resident stated that new system transfers heat captured from the AC to the hot water heater. The resident stated that now the AC powers the water heater during the day and that the AC drains through the water heater.

## D. Point-of-Use Treatment

No filters installed.

## E. Overall Assessment

- Temperature was measured at all available fixtures during inspection; all hot water fixtures were measured at 114 °F or above. Hot water temperature measured in the hallway bathroom and master bathroom was 120 °F or above.
- Free chlorine in hot water was measured at 0.14 mg/L, which is outside the acceptable range of 0.20 to 4.00 mg/L. Chlorine decay rate increases with increasing temperature. Given that the free chlorine measured in cold water was within the acceptable range, this loss of residual chlorine in the hot water is likely due to the high hot water temperature.
- Water quality parameters (other than chlorine in hot water) collected during the inspection were within acceptable ranges.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

**F. Recommendations**

- Clean sink aerators every six months to prevent debris build up.
- Follow up with EDWM water quality results when available.

## Conclusion

This inspection was conducted to determine if the residents' water meets applicable standards and is safe for use. It is recommended that the resident cleans the sink aerators every six months to prevent debris build up. Based on the observations made during the inspection and all water quality parameters being within acceptable ranges (other than chlorine in hot water), no further action is required regarding this WQI event. Pending EDWM analytical results will determine if the water is safe to drink, and the resident will then be informed by the CPLO.

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | 214 16th Street | 214 16th Street |
| Field Sample ID: | | | D2-TW-0007823-24092-N-WQI | D2-TW-0007823-24092-N-H-WQI |
| Sample Date: | | | 2024-08-09 | 2024-08-09 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240809-OLT-34** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (CFU/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240809-OLT-34** | **SDG: 240809-OLT-34** |
| Heterotrophic Plate Count | None | None | **4.00** | **5.00** |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.140-0.690 | 0.140-0.690 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66314** | |
| Alkalinity, Total (as CaCO3) | None | None | **56.8** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66314** | |
| Petroleum Hydrocarbons (as Diesel) | None | None | 47.0 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 U | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 47.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |

| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66314** | |
|---|---|---|---|---|
| Copper | 1300 | 1300 | **3.50** | -- |
| Lead | 15 | 15 | 0.130 U | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |

| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66314** | |
|---|---|---|---|---|
| 1-Methylnaphthalene | None | None | 0.250 U | -- |
| 2-Methylnaphthalene | None | None | 0.250 U | -- |
| Acenaphthylene | None | None | 0.250 U | -- |
| Anthracene | None | None | 0.250 U | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | 0.0100 U | -- |
| Benzo(b)fluoranthene | None | None | 0.250 U | -- |
| Benzo(g,h,i)perylene | None | None | 0.250 U | -- |
| Benzo(k)fluoranthene | None | None | 0.250 U | -- |
| Chrysene | None | None | 0.250 U | -- |
| Dibenz(a,h)anthracene | None | None | 0.250 U | -- |
| Fluorene | None | None | 0.250 U | -- |
| Indeno(1,2,3-c,d)pyrene | None | None | 0.250 U | -- |
| Naphthalene | None | None | 0.250 U | -- |
| Phenanthrene | None | None | 0.250 U | -- |
| Pyrene | None | None | 0.250 U | -- |

| **VOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66314** | |
|---|---|---|---|---|

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | 0.300 U | -- |
| Chloroform | None | None | 0.250 U | -- |
| Cumene | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | 0.250 U | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |
| n-Butylbenzene | None | None | 0.250 U | -- |
| n-Propylbenzene | None | None | 0.250 U | -- |
| o-Xylene | None | None | 0.250 U | -- |
| sec-Butylbenzene | None | None | 0.400 U | -- |
| tert-Butylbenzene | None | None | 0.400 U | -- |
| Toluene | 1000 | 1000 | 0.250 U | -- |
| Total Trihalomethanes | 80 | None | ND | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison

mg/L = Milligrams per Liter

CFU/ml = Colony Forming Units per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 3-19972 |
| Call Date/Time | 7/1/2024 8:05:55 AM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 7/2/2024 11:00:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | 108 1st Street |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 8/1/2021 12:00:00 AM |
| Number of adults under 65 | 2 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 2 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 0 |
| Call Center Complaint Summary / Initial Notes | 1100; Connect with Navy/WQI prior to entering. Resident reported observing calcium deposits in the kitchen sink and was concerned about hard water. |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | Yes |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | Ongoing |
| Do you see any issues with the appearance or odor the water in your home? | No |
| Color or Appearance of Water | None |
| | None reported |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | None |
| | None reported |
| Staining | Fixtures (sink / toilet / shower / tub) |
| | Calcium deposits |
| Scaling (visible surface buildup) | Yes |

# Call Center - WQI Checklist

### Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | No |
| Skin | None |
| | None reported |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | None |
| | None reported |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | None |
| | None reported |

# In-Person Site Visit

### General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | Kitchen |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | Both hot & cold water |
| Does it occur only when you first turn on the water or does it occur continuously? | Continuously |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

### Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Other |
| pH (standard units) | 7.27 |
| Conductivity (µS/cm) | 246.34 |
| FreeChlorine (mg/L or ppm) | 0.20 |
| Cold Temp (degrees F) | 76.82 |
| Hot water Sampling Location | Other |
| pH (standard units) | 7.37 |
| Conductivity (µS/cm) | 261.67 |
| FreeChlorine (mg/L or ppm) | 0.42 |
| Hot Temp (degrees F) | 112.22 |
| Water Quality Notes | Unit was not previously sampled.<br>No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.<br>Calcium deposits were observed around the kitchen sink.<br>TURB: 0.49 NTU (cold), 0.51 NTU (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | No |
| | none |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | False |
| Kitchen sink - Specific inspection point | |
| Kitchen sink - Condition of aerator | |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Looks new / clean |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Looks new / clean |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Looks new / clean |
| Bathroom - other - Specific inspection point | |
| Bathroom - other - Condition of aerator | |

# Call Center - WQI Checklist

## Other Concerns

| | |
|---|---|
| Water Presure | |
| Hot Water Temperature | |
| Cross-Connection | |
| Irrigation | |

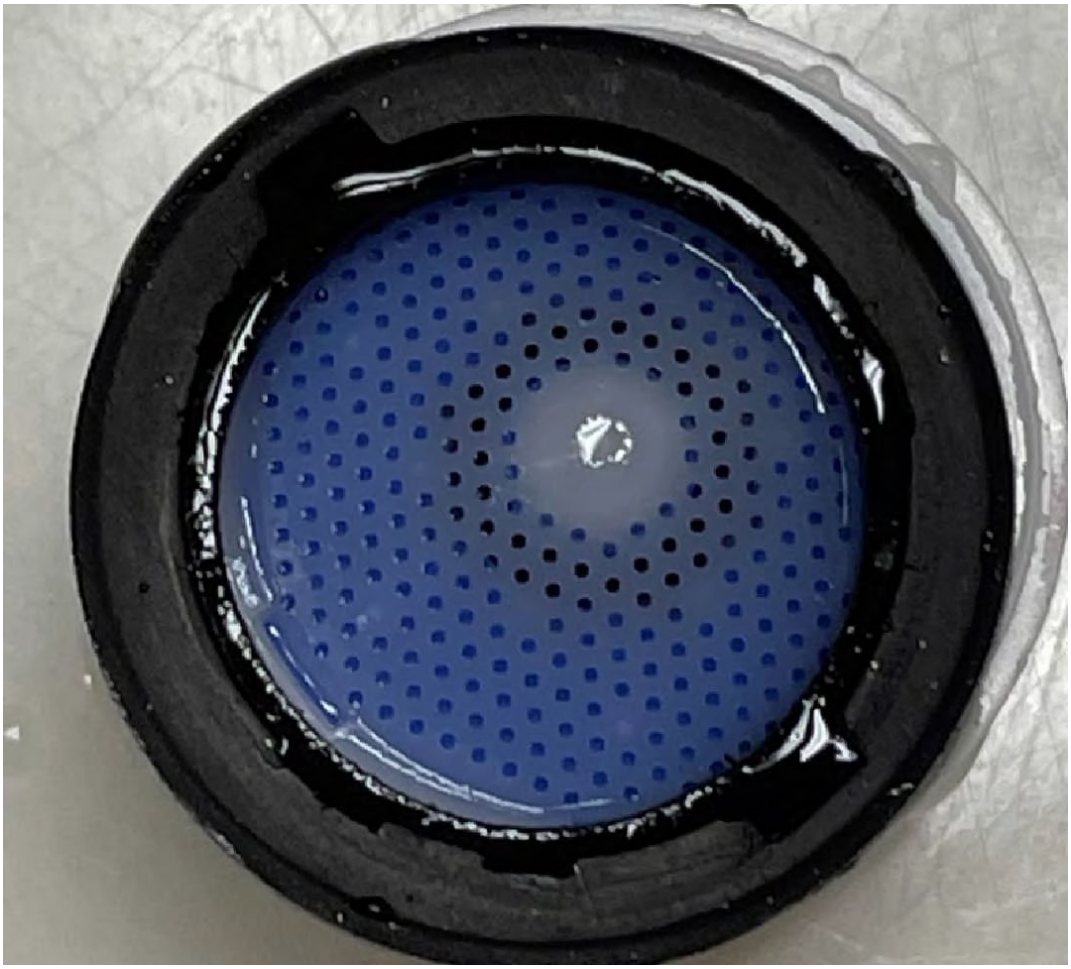
## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | Yes |
| Fixture Replacement | No |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>The resident was informed that hardness can be mediated with a water softener if deemed necessary.<br>Consider replacement of water heater unit.<br>No additional actions required. |
| Other Site Visit Notes | Downstairs hallway bathroom sink aerator: Upon visual inspection, no debris was observed.<br><br>Upstairs hallway bathroom sink aerator: Upon visual inspection, no debris was observed.<br><br>Upstairs master bathroom sink aerator: Upon visual inspection, no debris was observed.<br><br>80-gallon electric water heater manufactured by Ruud in October 2003. Visual observation of the water heater to be in adequate condition with little signs of external corrosion.<br>No visible maintenance records found on the water heater. The pipe material is copper. The deposits observed around the kitchen sink were consistent with typical mineral deposits resulting from calcium and magnesium carbonates that occur naturally in water. Hot water temperature was measured lower than the acceptable range. Remaining water quality field parameters were within recommended limits at the time of inspection. |

# Call Center - WQI Checklist

## Photos

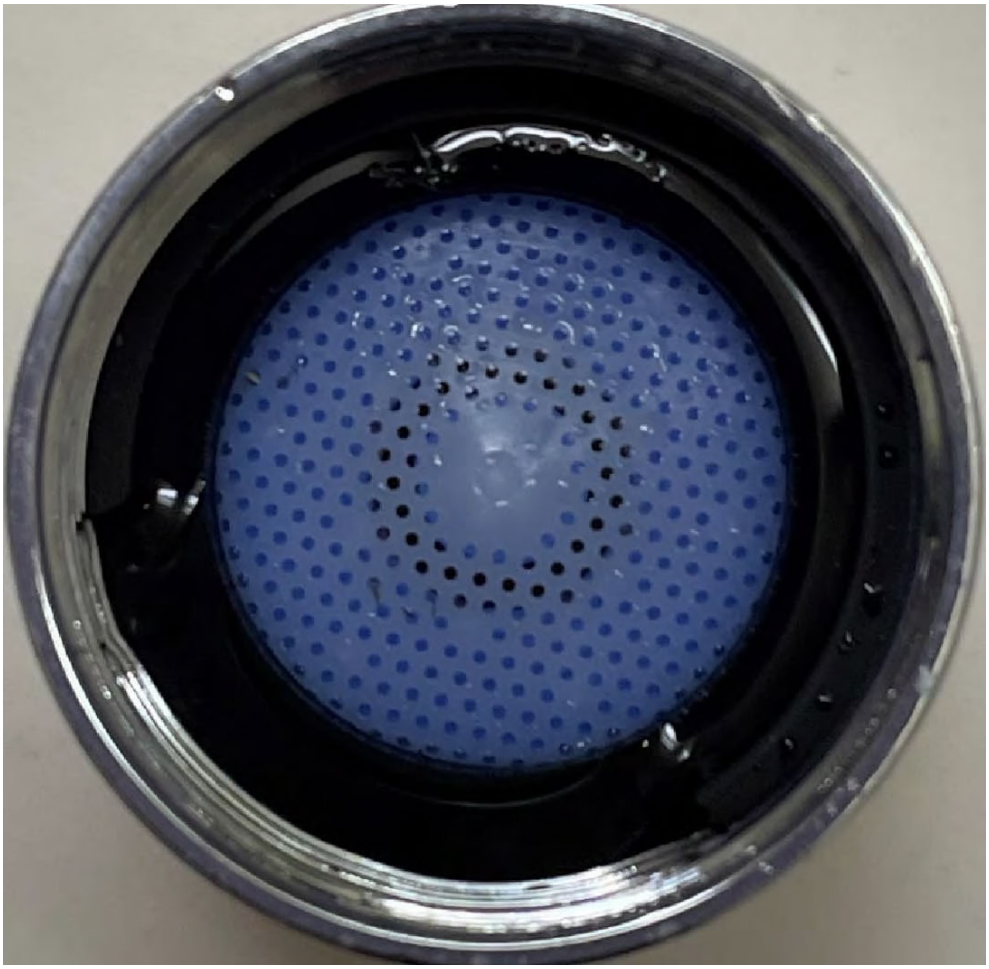
| | |
|---|---|
| Ticket Number | 19972 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior View of Downstairs Hallway Bathroom Sink Aerator |



# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 19972 |
| Location | Second Floor - Bathroom 1 - Sink |
| Title | Interior View of Upstairs Hallway Bathroom Sink Aerator |



# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 19972 |
| Location | Second Floor - Bathroom 2 - Sink |
| Title | Interior View of Upstairs Master Bathroom Sink Aerator |

Tuesday, 2 July 2024, 1100

Zone – D2, 108 1st Street
Location Code: D2-1ST0108

A. Resident Demographic/ Concerns

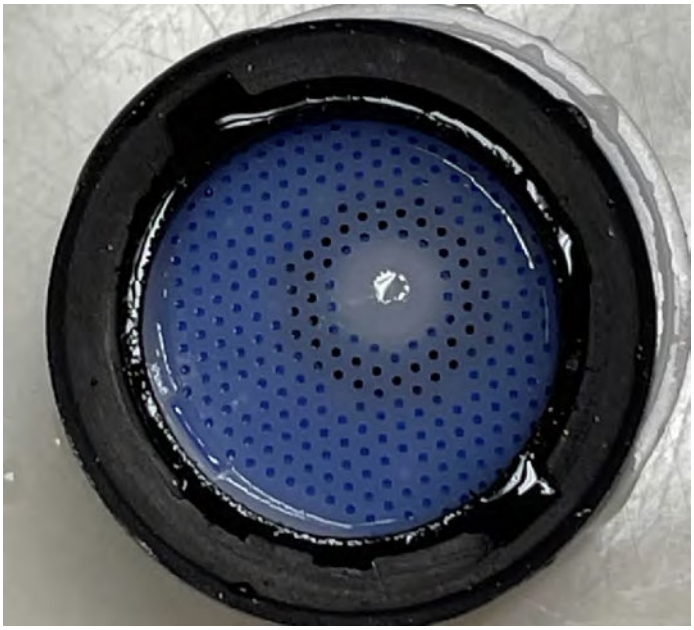
- Household consists of two (2) adults and two (2) children.
- Resident since August 2021.
- Resident reported observing calcium deposits in the kitchen sink and was concerned about hard water.

B. **Water Quality Observations and Results**

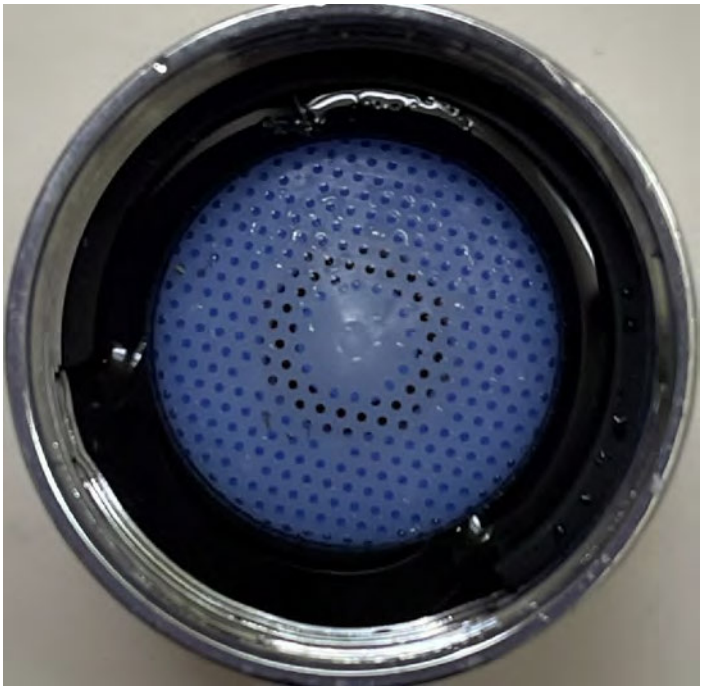
- Unit was not previously sampled.
  - No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.
  - Calcium deposits were observed around the kitchen sink

- Personnel on-site
  - Water Quality Action Team (WQAT) - Collected cold water samples from faucets located on the upstairs master bathroom sinks, downstairs hallway bathroom, and kitchen for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6)
  - Water Quality Investigation Water Monitoring (WQIWM) – EDWM collected hot/cold water samples from the hallway bathroom sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the downstairs hallway bathroom.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.27 (cold)
    - 7.37 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 246.34 µS/cm (cold)
    - 261.67 µS/cm (hot)
  - Turbidity - (Acceptable Range: < 1.0 NTU)
    - 0.49 NTU (cold)
    - 0.51 NTU (hot)
  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.2 mg/L (cold)
    - 0.42 mg/L (hot)
  - Temperature –
    - 76.82 °F (cold)
    - 112.22°F (hot)



- Figure 1. Interior view of downstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed.



- Figure 2. Interior view of upstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed.

- Figure 3. Interior view of upstairs master bathroom sink aerator. Upon visual inspection, no debris was observed.

C. Hot Water Heater
- 80-gallon electric water heater manufactured by Ruud in October 2003.
- Visual observation of the water heater to be in adequate condition with little signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

D. Point-of-Use Treatment

No filter was installed.

E. Overall Assessment
- The deposits observed around the kitchen sink were consistent with typical mineral deposits resulting from calcium and magnesium carbonates that occur naturally in water.
- Hot water temperature was measured lower than the acceptable range. Remaining water quality field parameters were within recommended limits at the time of inspection.
- EDWM analytical results will determine if drinking water is in compliance with the applicable standards.

F. Recommendations
- Follow up with EDWM water quality results when available.
- The resident was informed that hardness can be mediated with a water softener if deemed necessary.
- Consider replacement of water heater unit.
- No additional actions required.

**Summary of Chemistry Results**
**Zone D2**
**Drinking Water Sampling, Joint Base Pearl Harbor - Hickam, Oahu, Hawaii**

| **Notes:** |
|---|
| ND = Not Detected |
| ISP = Incident Specific Parameter |
| EAL = DOH Environmental Action Level |
| EPA MCL = EPA Maximum Contaminant Level |
| All Results shown in Parts per Billion (ppb), with the exception of Field and Bacterial Test results |
| Parts per Million (ppm) |
| Parts per Thousand (ppth) |
| § - Exceeds Screening Level |
| -- = No Information Available |
| N (Normal) = Full compliance sample |
| FD (Field Duplicate) = Extra sample taken for quality control |
| N (Grab, Resample) = Additional follow-up sample |
| MPN/mL = Most probable number per milliliter |

| | | | **Location ID:** | D2-1ST0108 | |
|---|---|---|---|---|---|
| | | | **Location Type:** | Residence | |
| | | | **Address:** | 108 1st Street | |
| | | | **Field Sample ID:** | D2-TW-0007730-24092-N-WQI | D2-TW-0007730-24092-N-H-WQI |
| | | | **Sample Date:** | 2024-07-02 | 2024-07-02 |
| | | | **Sample Type:** | N (Normal) | N (Normal) |
| **Method Group** | **Analyte** | **DOH Project Screening Level** | **Basis of Project Screening Level** | | |
| Bacterial Test (in 100 mL) | Coliform | -- | -- | Absent | -- |
| | E. coli | -- | -- | Absent | -- |
| Bacterial Test (MPN/mL) | Heterotrophic Plate Count | -- | -- | ND | ND |
| Field Test (ppb) | Free Chlorine | 4000 | MCL | 200 | 420 |
| Field Test (pH) | pH | -- | -- | 7.28 | 7.37 |
| Field Test (ms/cm) | Specific Conductivity | -- | -- | 0.250 | 0.260 |
| Field Test (degrees Celcuis) | Temperature | -- | -- | 24.9 | 44.6 |
| Field Test (nephelometric turbidity unit) | Turbidity | 5 | MCL | 0.490 | 0.520 |
| General Chemistry (ppb) | Alkalinity, Total (as CaCO3) | -- | -- | 52800 | -- |
| | Total Organic Carbon | -- | -- | ND | -- |
| Hydrocarbons (ppb) | Petroleum Hydrocarbons (as Diesel) | -- | -- | ND | -- |
| | Petroleum Hydrocarbons (as Gasoline) | -- | -- | ND | -- |
| | Petroleum Hydrocarbons (as Oil) | -- | -- | ND | -- |
| | Petroleum Hydrocarbons, Total | -- | -- | ND | -- |
| Metals (ppb) | Copper | 1300 | MCL | 49.4 | -- |
| | Lead | 15 | MCL | 0.270 | -- |
| | Mercury | 2 | MCL | ND | -- |
| Synthetic Organic Compounds (ppb) | 1-Methylnaphthalene | -- | -- | ND | -- |
| | 2-Methylnaphthalene | -- | -- | ND | -- |
| | Benzo(a)pyrene | 0.2 | MCL | ND | -- |
| | Naphthalene | -- | -- | ND | -- |
| Volatile Organic Compounds (ppb) | 1,2,4-Trimethylbenzene | -- | -- | ND | -- |
| | 1,3,5-Trimethylbenzene | -- | -- | ND | -- |

**Summary of Chemistry Results**
**Zone D2**
**Drinking Water Sampling, Joint Base Pearl Harbor - Hickam, Oahu, Hawaii**

| Notes: |
|---|
| ND = Not Detected |
| ISP = Incident Specific Parameter |
| EAL = DOH Environmental Action Level |
| EPA MCL = EPA Maximum Contaminant Level |
| All Results shown in Parts per Billion (ppb), with the exception of Field and Bacterial Test results |
| Parts per Million (ppm) |
| Parts per Thousand (ppth) |
| § - Exceeds Screening Level |
| -- = No Information Available |
| N (Normal) = Full compliance sample |
| FD (Field Duplicate) = Extra sample taken for quality control |
| N (Grab, Resample) = Additional follow-up sample |
| MPN/mL = Most probable number per milliliter |

| | | | | | |
|---|---|---|---|---|---|
| | | | **Location ID:** | D2-1ST0108 | |
| | | | **Location Type:** | Residence | |
| | | | **Address:** | 108 1st Street | |
| | | | **Field Sample ID:** | D2-TW-0007730-24092-N-WQI | D2-TW-0007730-24092-N-H-WQI |
| | | | **Sample Date:** | 2024-07-02 | 2024-07-02 |
| | | | **Sample Type:** | N (Normal) | N (Normal) |
| **Method Group** | **Analyte** | **DOH Project Screening Level** | **Basis of Project Screening Level** | | |
| Volatile Organic Compounds (ppb) | Benzene | 5 | MCL | ND | -- |
| | Ethylbenzene | 700 | MCL | ND | -- |
| | m,p-Xylene | -- | -- | ND | -- |
| | o-Xylene | -- | -- | ND | -- |
| | Toluene | 1000 | MCL | ND | -- |
| | Xylenes, Total | 10000 | MCL | ND | -- |
| Trihalomethanes (ppb) | Bromodichloromethane | -- | -- | ND | -- |
| | Bromoform | -- | -- | ND | -- |
| | Chloroform | -- | -- | ND | -- |
| | Dibromochloromethane | -- | -- | ND | -- |
| | Total Trihalomethanes | 80 | MCL | ND | -- |

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 3-19970 |
| Call Date/Time | 6/28/2024 12:36:01 PM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 7/2/2024 8:00:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | 194 20th Street |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 4/1/2024 12:00:00 AM |
| Number of adults under 65 | 2 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 1 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 1 dog |
| Call Center Complaint Summary / Initial Notes | 0800 - connect with Navy/WQI prior to entering |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | No |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | |
| Do you see any issues with the appearance or odor the water in your home? | No |
| Color or Appearance of Water | None |
| | None reported |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | None |
| | None reported |
| Staining | None |
| | None reported |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | No |
| Skin | None |
| | None reported |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | None |
| | None reported |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | None |
| | None reported |

# In-Person Site Visit

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | None |
| Are your neighbors experiencing the same issue? | |
| Does it occur with just the cold water, the hot water, or both? | |
| Does it occur only when you first turn on the water or does it occur continuously? | |
| Are you aware of any recent nearby construction or maintenance activities? | |

## Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |
| | None reported |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Other |
| pH (standard units) | 7.07 |
| Conductivity (µS/cm) | 252.09 |
| FreeChlorine (mg/L or ppm) | 0.35 |
| Cold Temp (degrees F) | 76.34 |
| Hot water Sampling Location | Other |
| pH (standard units) | 7.24 |
| Conductivity (µS/cm) | 270.46 |
| FreeChlorine (mg/L or ppm) | 0.01 |
| Hot Temp (degrees F) | 103.71 |
| Water Quality Notes | Unit was previously sampled on 27 July 2023.<br>Traces of Copper, Lead, Barium, and Selenium were found. All results were reported under their<br>respective screening levels.<br>No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.<br>No unusual observations.<br>TURB: 0.07 NTU (cold), 0.24 NTU (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | |
| Do you have point-of-use filters? | |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Scaling / Debris / Particulates present |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Looks new / clean |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Looks new / clean |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Looks new / clean |
| Bathroom - other - Specific inspection point | Sink faucet |
| Bathroom - other - Condition of aerator | Looks new / clean |

# Call Center - WQI Checklist

## Other Concerns

| | |
|---|---|
| Water Presure | |
| Hot Water Temperature | |
| Cross-Connection | |
| Irrigation | |

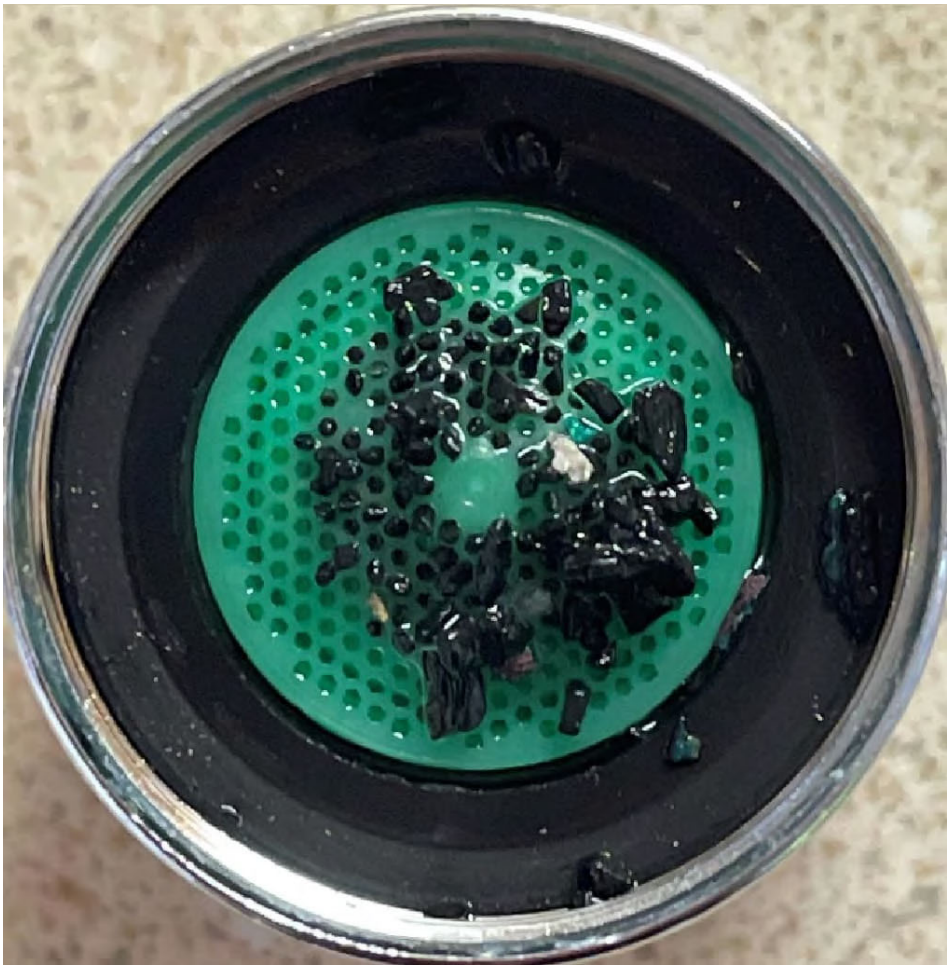
## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | No |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>Recommend adjusting the water temperature to be set to at least 115°F to prevent bacterial growth.<br>Recommend consider replacing water heater, as the unit is over 10 years old and has leakage.<br>Recommend premise plumbing flushing to reestablish chlorine residual levels. |
| Other Site Visit Notes | Kitchen sink aerator. Upon visual inspection, flakes of debris were observed.<br><br>Downstairs hallway bathroom sink aerator: Upon visual inspection, no debris was observed.<br><br>Upstairs master bathroom left and right sink aerators, respectively: Upon visual inspection, no debris was observed.<br><br>80-gallon electric water heater manufactured by Ruud in December 2005.<br>Visual observation of the water heater to be in adequate condition, no corrosion was observed.<br>Resident stated that they discovered leaks from the overflow pipe.<br>No visible maintenance records found on the water heater.<br>The pipe material is copper. |

# Call Center - WQI Checklist

## Photos

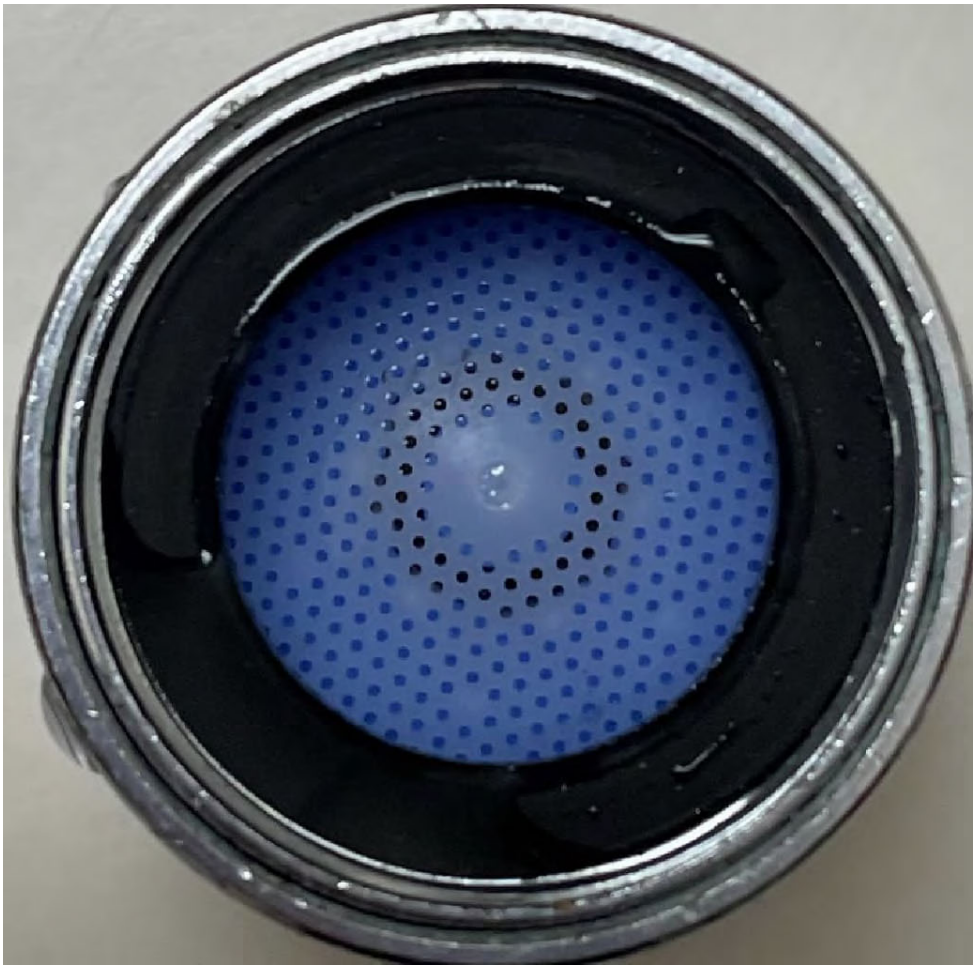
| | |
|---|---|
| Ticket Number | 19970 |
| Location | Other |
| Title | Interior View of Kitchen Sink Aerator |



# Call Center - WQI Checklist

## Photos

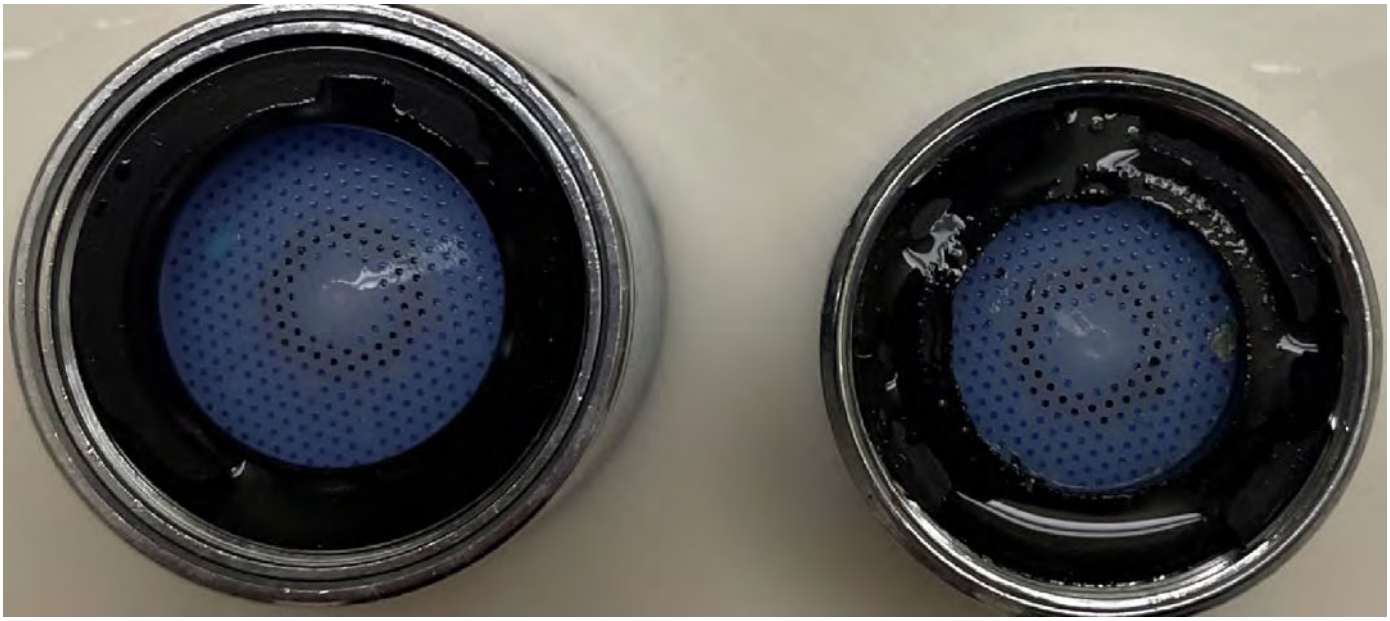
| | |
|---|---|
| Ticket Number | 19970 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior View of Downstairs Hallway Bathroom Sink Aerator |



## Call Center - WQI Checklist

## Photos

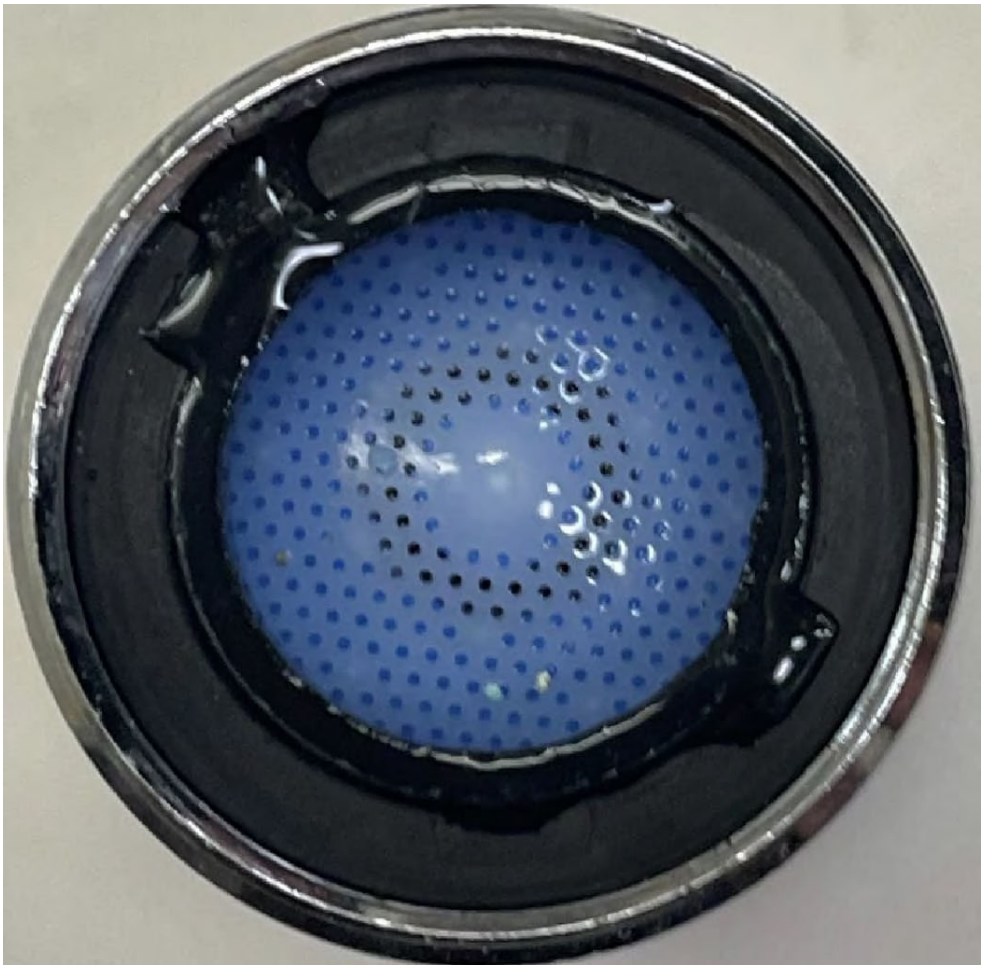
| | |
|---|---|
| Ticket Number | 19970 |
| Location | Second Floor - Bathroom 1 - Sink |
| Title | Interior View of Upstairs Master Bathroom Left and Right Sink Aerators |



# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 19970 |
| Location | Second Floor - Bathroom 2 - Sink |
| Title | Interior View of Upstairs Hallway Bathroom Sink Aerator |



Tuesday, 2 July 2024, 0800

Zone – D2, 194 20th St
Location Code: D2-20TH0194

A. Resident Demographic/ Concerns

- Household consists of two (2) adults, one (1) child, and one (1) dog.
- Resident since April 2024.
- Resident reported no specific water quality concerns but had viewed an unspecified video online depicting the flammability of an individual's tap water.

B. **Water Quality Observations and Results**

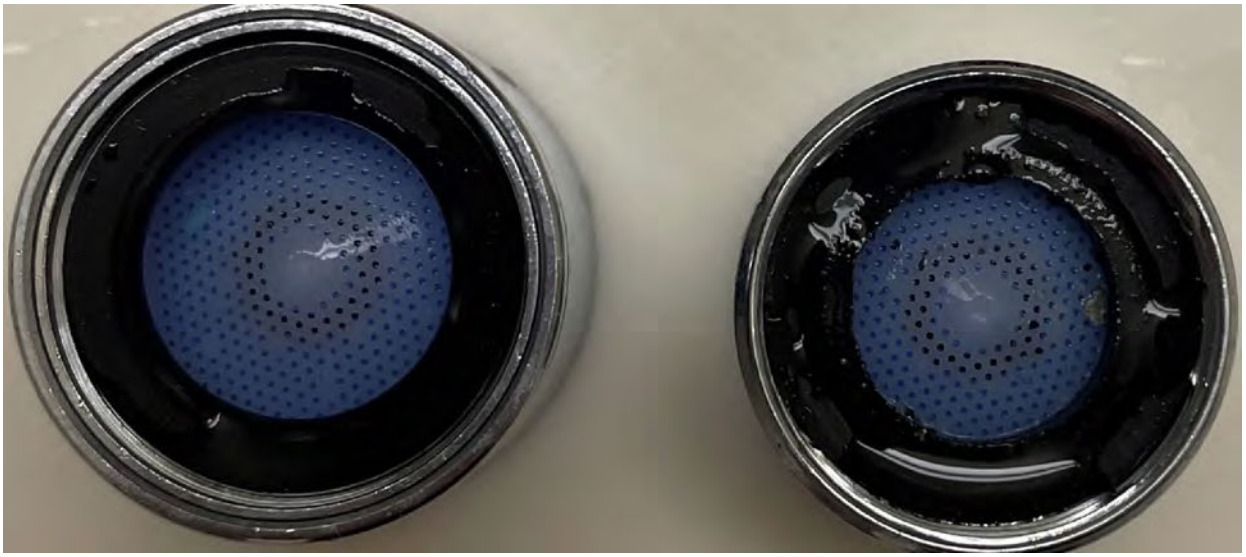
- Unit was previously sampled on 27 July 2023.
  - Traces of Copper, Lead, Barium, and Selenium were found. All results were reported under their respective screening levels.
  - No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.
  - No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) - Collected cold water samples from faucets located on the upstairs master bathroom sink/bathtub, upstairs hallway bathroom sink/tub, downstairs hallway bathroom, and kitchen for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6)
  - Water Quality Investigation Water Monitoring (WQIWM) – EDWM collected hot/cold water samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

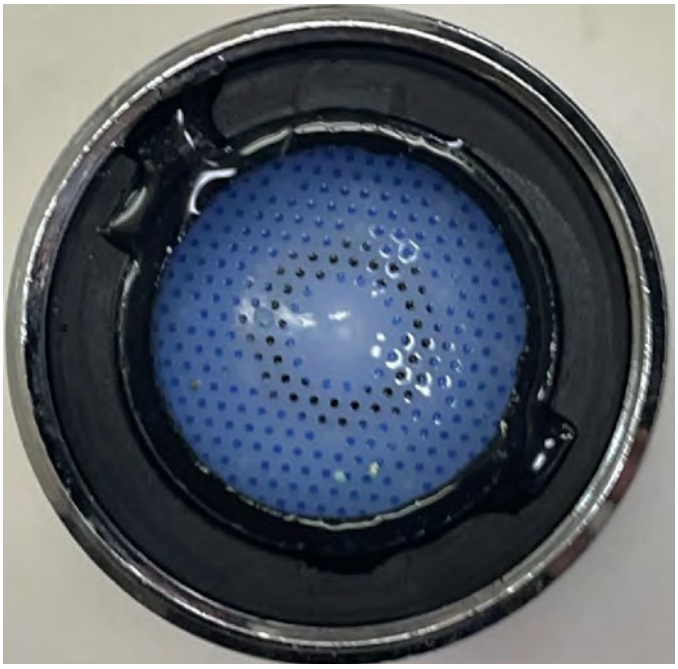
- Results of field testing from the upper-level hallway bathroom.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.07 (cold)
    - 7.24 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 252.09 µS/cm (cold)
    - 270.46 µS/cm (hot)
  - Turbidity - (Acceptable Range: < 1.0 NTU)
    - 0.07 NTU (cold)
    - 0.24 NTU (hot)
  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.35 mg/L (cold)
    - 0.01 mg/L (hot) -See Section E
  - Temperature
    - 76.34 °F (cold)
    - 103.71°F (hot)

- Figure 1. Interior view of kitchen sink aerator. Upon visual inspection, flakes of debris were observed.

- Figure 2. Interior view of downstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed.



- Figure 3. Interior view of upstairs master bathroom left and right sink aerators, respectively. Upon visual inspection, no debris was observed.



- Figure 4. Interior view of upstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed.

## C. Hot Water Heater

- 80-gallon electric water heater manufactured by Ruud in December 2005.
- Visual observation of the water heater to be in adequate condition, no corrosion was observed.
- Resident stated that they discovered leaks from the overflow pipe.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

## D. Point-of-Use Treatment

No water filters installed.

## E. Overall Assessment

- No unusual observations.
- Sampling team flushed hot water for 15 minutes in three 5-minute intervals following a measurement. Each measurement was recorded at 0.01 mg/l. This loss of disinfectant residual may be the result of different issues such as sediment in the water heater lines, biofilm accumulation, etc.
- Temperature taken at the kitchen sink was lower than the recommended 115°F.
- Remaining water quality field parameters were within recommended limits at the time of inspection.
- EDWM analytical results will determine if drinking water is in compliance with the applicable standards.

## F. Recommendations

- Follow up with EDWM water quality results when available.
- Recommend adjusting the water temperature to be set to at least 115°F to prevent bacterial growth.
- Recommend consider replacing water heater, as the unit is over 10 years old and has leakage.
- Recommend premise plumbing flushing to reestablish chlorine residual levels.

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | 194 20th Street | 194 20th Street |
| Field Sample ID: | | | D2-TW-0007182-24092-N-WQI | D2-TW-0007182-24092-N-H-WQI |
| Sample Date: | | | 2024-07-02 | 2024-07-02 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240702-2568-528** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (MPN/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240702-2568-528** | **SDG: 240702-2568-528** |
| Heterotrophic Plate Count | None | None | **2.00** | 2.00 U |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.0100-0.350 | 0.0100-0.350 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65421** | |
| Alkalinity, Total (as CaCO3) | None | None | **50.5** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65421** | |
| Petroleum Hydrocarbons (as Diesel) | None | None | 46.0 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 U | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 46.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |

| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65421** | |
|---|---|---|---|---|
| Copper | 1300 | 1300 | **33.7** | -- |
| Lead | 15 | 15 | 0.130 U | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |

| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65421** | |
|---|---|---|---|---|
| 1-Methylnaphthalene | None | None | 0.250 U | -- |
| 2-Methylnaphthalene | None | None | 0.250 U | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | 0.0100 U | -- |
| Naphthalene | None | None | 0.250 U | -- |

| **VOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65421** | |
|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | 0.300 U | -- |
| Chloroform | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | 0.250 U | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |
| o-Xylene | None | None | 0.250 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Toluene | 1000 | 1000 | 0.250 U | -- |
| Total Trihalomethanes | 80 | None | ND | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison
mg/L = Milligrams per Liter

MPN/ml = Most Probable Number per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 3-19961 |
| Call Date/Time | 6/27/2024 4:57:44 PM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 7/2/2024 1:00:00 PM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | 201A Signer Boulevard |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 6/30/2024 12:00:00 AM |
| Number of adults under 65 | 2 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 0 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 1 dog |
| Call Center Complaint Summary / Initial Notes | 1300 - Connect with Navy / WQI Team prior to sampling |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | No |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | |
| Do you see any issues with the appearance or odor the water in your home? | No |
| Color or Appearance of Water | None |
| | None reported |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | None |
| | None reported |
| Staining | None |
| | None reported |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | No |
| Skin | None |
| | None reported |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | None |
| | None reported |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | None |
| | None reported |

# In-Person Site Visit

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | None |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | |
| Does it occur only when you first turn on the water or does it occur continuously? | |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

## Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |
| | None reported |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Kitchen |
| pH (standard units) | 7.08 |
| Conductivity (µS/cm) | 245.13 |
| FreeChlorine (mg/L or ppm) | 0.43 |
| Cold Temp (degrees F) | 75.88 |
| Hot water Sampling Location | Kitchen |
| pH (standard units) | 7.20 |
| Conductivity (µS/cm) | 271.89 |
| FreeChlorine (mg/L or ppm) | 0.69 |
| Hot Temp (degrees F) | 108.06 |
| Water Quality Notes | Unit was previously sampled on 22 June 2022.<br>Traces of Chromium, Copper, Lead, Barium, Bromoform, Dibromochloromethane, and Bromodichloromethane, Selenium, and Total Trihalomethanes found. All results were reported under their respective screening levels.<br>No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.<br><br>No unusual observations.<br><br>Hot water turbidity had a measurement of 14.49 NTU while cold water turbidity measured at 0.34 NTU. The hot-water reading is greater than the acceptable maximum turbidity range of 1 NTU. Since no cloudiness was observed in the hot water, and the previous cold-water reading was within the acceptable range, it is believed that the recording was made in error. Further, Water quality field parameters were within recommended limits at the time of inspection. EDWM analytical results will determine if drinking water is in compliance with the applicable standards.<br>TURB: 0.34 NTU (cold), 14.49 NTU (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | No |
| | none |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

# Call Center - WQI Checklist

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Looks new / clean |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Looks new / clean |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Looks new / clean |
| Bathroom - second floor - Specific inspection point | |
| Bathroom - second floor - Condition of aerator | |
| Bathroom - other - Specific inspection point | |
| Bathroom - other - Condition of aerator | |

## Other Concerns

| | |
|---|---|
| Water Presure | |
| Hot Water Temperature | |
| Cross-Connection | |
| Irrigation | |

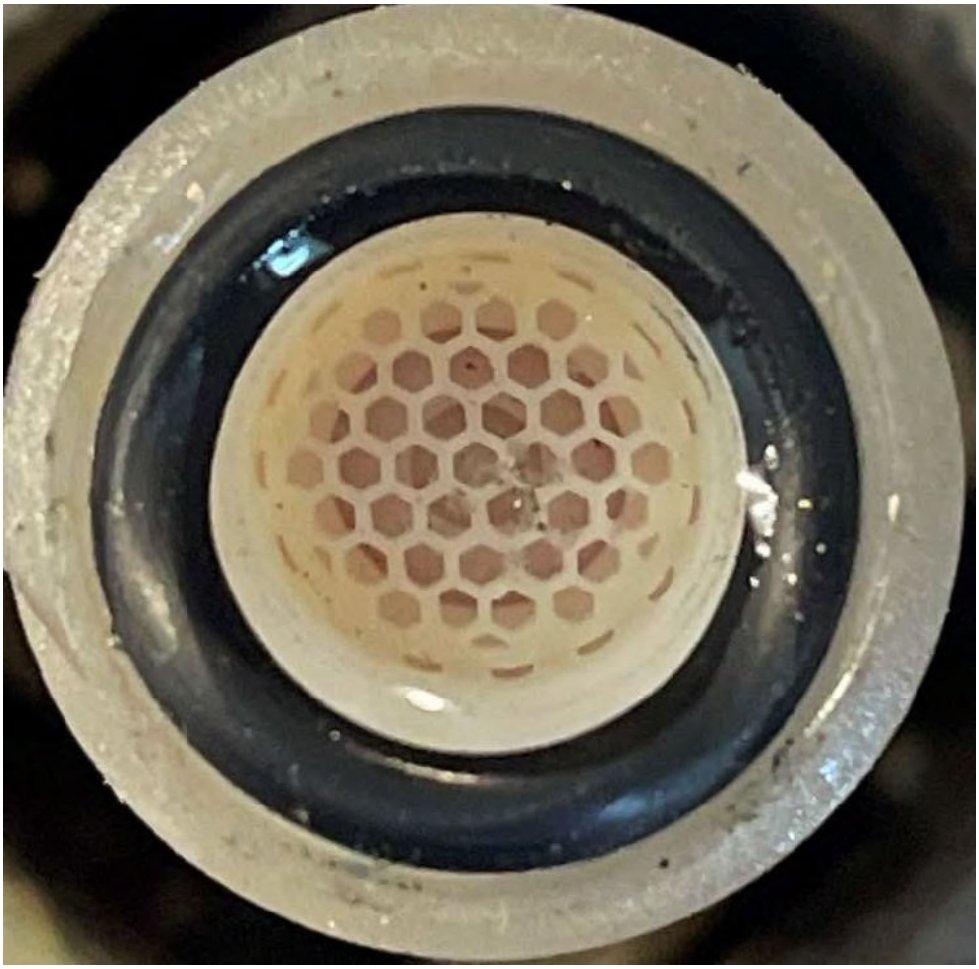
## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | No |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>Upon receiving/reviewing the water heater maintenance records, further assessment will be provided, if applicable.<br>No additional actions required. |
| Other Site Visit Notes | Kitchen sink aerator: Upon visual inspection, no debris was observed<br><br>Hallway bathroom sink aerator: Upon visual inspection, no debris was observed.<br><br>Upstairs master bathroom sink aerator. Upon visual inspection, no debris was observed.<br><br>50-gallon water heater manufactured by Ruud June 2013.<br>Visual observation of the water heater to be in good condition with little signs of external corrosion.<br>No visible maintenance records found on the water heater.<br>The pipe material is copper. |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 19961 |
| Location | Other |
| Title | Interior View of Kitchen Sink Aerator |



# Call Center - WQI Checklist

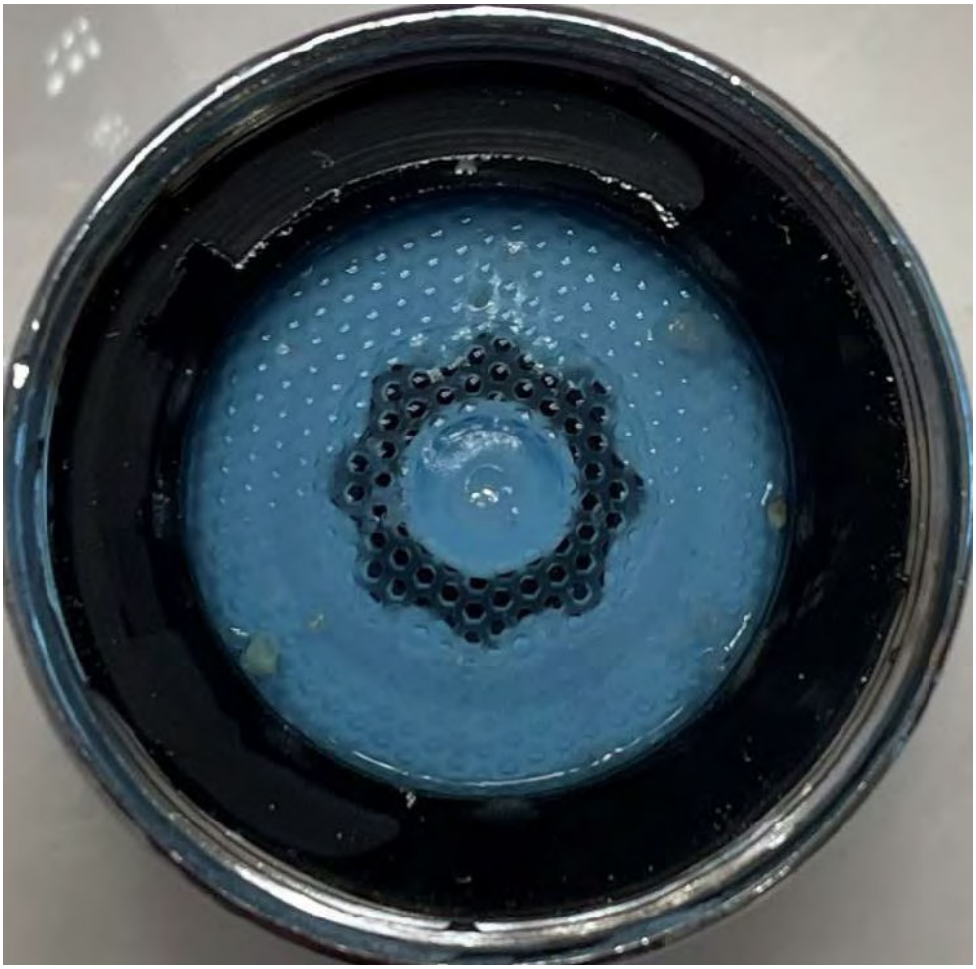
## Photos

| | |
|---|---|
| Ticket Number | 19961 |
| Location | Other |
| Title | Interior View of Downstairs Hallway Bathroom Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 19961 |
| Location | Other |
| Title | Interior View of Upstairs Master Bathroom Sink Aerator |



Tuesday, 2 July 2024, 1300

Zone – D2, 201A Signer Boulevard
Location Code: D2-SING0201A

## A. Resident Demographic/ Concerns

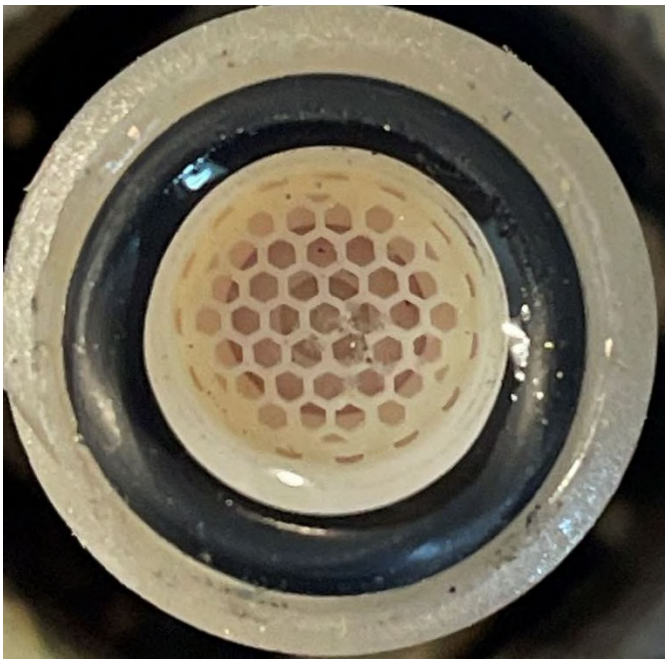
- Household consists of two (2) adults and one (1) pet dog.
- Resident since end of June 2024.
- Resident reported that it was advised by the leasing office to have their water tested.

### B. Water Quality Observations and Results

- Unit was previously sampled on 22 June 2022.
  - Traces of Chromium, Copper, Lead, Barium, Bromoform, Dibromochloromethane, and Bromodichloromethane, Selenium, and Total Trihalomethanes found. All results were reported under their respective screening levels.
  - No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.
  - No unusual observations.

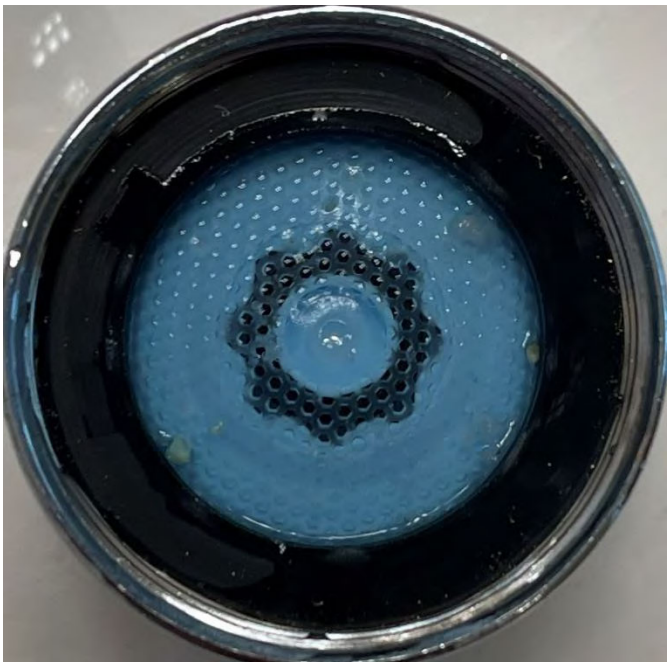
- Personnel on-site
  - Water Quality Action Team (WQAT) - Collected cold water samples from the downstairs hallway bathroom sink faucet and the kitchen sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation Water Monitoring (WQIWM) – EDWM collected hot/cold water samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.08 (cold)
    - 7.20 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 245.13 µS/cm (cold)
    - 271.89 µS/cm (hot)
  - Turbidity - (Acceptable Range: < 1.0 NTU)
    - 0.34 NTU (cold)
    - 14.49 NTU (hot) -See Section E.
  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.43 mg/L (cold)
    - 0.69 mg/L (hot)
  - Temperature
    - 75.88°F (cold)
    - 108.06°F (hot)



- **Figure 1.** Interior view of kitchen sink aerator. Upon visual inspection, no debris was observed

- **Figure 2.** Interior view of downstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed.



- **Figure 3.** Interior view of upstairs master bathroom sink aerator. Upon visual inspection, no debris was observed.

## C. Hot Water Heater

- 50-gallon water heater manufactured by Ruud June 2013.
- Visual observation of the water heater to be in good condition with little signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

## D. Point-of-Use Treatment

No filter was installed.

## E. Overall Assessment

- No unusual observations.
- Hot water turbidity had a measurement of 14.49 NTU while cold water turbidity measured at 0.34 NTU. The hot-water reading is greater than the acceptable maximum turbidity range of 1 NTU. Since no cloudiness was observed in the hot water, and the previous cold-water reading was within the acceptable range, it is believed that the recording was made in error. Further, Water quality field parameters were within recommended limits at the time of inspection.
- EDWM analytical results will determine if drinking water is in compliance with the applicable standards.

## F. Recommendations

- Follow up with EDWM water quality results when available.
- Upon receiving/reviewing the water heater maintenance records, further assessment will be provided, if applicable.
- No additional actions required.

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | 201A Signer Boulevard | 201A Signer Boulevard |
| Field Sample ID: | | | D2-TW-0007932-24092-N-WQI | D2-TW-0007932-24092-N-H-WQI |
| Sample Date: | | | 2024-07-02 | 2024-07-02 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240702-2568-539** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (MPN/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240702-2568-539** | **SDG: 240702-2568-539** |
| Heterotrophic Plate Count | None | None | 2.00 U | 2.00 U |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.430-0.690 | 0.430-0.690 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65421** | |
| Alkalinity, Total (as CaCO3) | None | None | **50.5** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65421** | |
| Petroleum Hydrocarbons (as Diesel) | None | None | 47.0 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 U | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 47.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |

| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65421** | |
|---|---|---|---|---|
| Copper | 1300 | 1300 | **24.0** | -- |
| Lead | 15 | 15 | 0.130 U | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |

| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65421** | |
|---|---|---|---|---|
| 1-Methylnaphthalene | None | None | 0.250 U | -- |
| 2-Methylnaphthalene | None | None | 0.250 U | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | 0.0100 U | -- |
| Naphthalene | None | None | 0.250 U | -- |

| **VOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65421** | |
|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | 0.300 U | -- |
| Chloroform | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | 0.250 U | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |
| o-Xylene | None | None | 0.250 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Toluene | 1000 | 1000 | 0.250 U | -- |
| Total Trihalomethanes | 80 | None | ND | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison
mg/L = Milligrams per Liter

MPN/ml = Most Probable Number per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 1-20022 |
| Call Date/Time | 7/5/2024 11:03:08 AM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 7/8/2024 9:30:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | 507 Worthington Avenue |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 2/1/2024 12:00:00 AM |
| Number of adults under 65 | 2 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 3 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 0 |
| Call Center Complaint Summary / Initial Notes | Previously sampled, got results and saw higher levels of Pb. Has concerns. Resident reported concern about elevated levels of lead after reading the JBPHH Water System Water Quality Report (2024). The resident wanted testing for confirmation that water quality is safe. |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | No |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | |
| Do you see any issues with the appearance or odor the water in your home? | No |
| Color or Appearance of Water | None |
| | None reported. |
| Floating Particles | None |
| | None reported. |
| Taste | None |
| | None reported. |
| Odor | None |
| | None reported. |
| Staining | None |
| | None reported. |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

### Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | No |
| Skin | None |
| | None reported. |
| Respiratory | None |
| | None reported. |
| Gastrointestinal | None |
| | None reported. |
| Headache | None |
| | None reported. |
| Dizziness | None |
| | None reported. |
| Cough | None |
| | None reported. |
| Vision | None |
| | None reported. |
| Other | None |
| | None reported. |

# In-Person Site Visit

### General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | None |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | |
| Does it occur only when you first turn on the water or does it occur continuously? | |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

### Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Kitchen |
| pH (standard units) | 7.18 |
| Conductivity (µS/cm) | 234.73 |
| FreeChlorine (mg/L or ppm) | 0.75 |
| Cold Temp (degrees F) | 75.27 |
| Hot water Sampling Location | Kitchen |
| pH (standard units) | 7.45 |
| Conductivity (µS/cm) | 254.07 |
| FreeChlorine (mg/L or ppm) | 0.23 |
| Hot Temp (degrees F) | 95.18 |
| Water Quality Notes | Unit was previously sampled on October 13, 2022.<br>Traces of Chromium, Copper, Lead, Barium, and Petroleum Hydrocarbons (as Diesel). All results<br>were reported under their respective screening levels.<br>No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.<br>No unusual observations.<br>TURB: 0.00 NTU (cold), 0.34 NTU (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | No |
| | none |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Scaling / Debris / Particulates present |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Looks new / clean |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Looks new / clean |
| Bathroom - other - Specific inspection point | Sink faucet |
| Bathroom - other - Condition of aerator | Scaling / Debris / Particulates present |

# Call Center - WQI Checklist

## Other Concerns

Water Presure

Hot Water Temperature

Cross-Connection

Irrigation

## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | No |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>Upon receiving/reviewing the water heater maintenance records, further assessment will be provided, if applicable.<br>No additional actions required. |
| Other Site Visit Notes | Kitchen sink aerator: Upon visual inspection, small debris of unknown material was observed.<br><br>Downstairs hallway bathroom sink aerator: Upon visual inspection, small debris of unknown material was observed<br><br>Upstairs master bathroom right sink aerator: Upon visual inspection, no debris was observed.<br><br>Upstairs master bathroom left sink aerator: Upon visual inspection, no debris was observed.<br><br>Upstairs hallway bathroom sink aerator: Upon visual inspection, small debris likely consisting of a deteriorated gasket/O-ring was observed<br><br>80-gallon electric water heater manufactured by Bradford White Corporation in November 2019.<br>Visual observation of the water heater to be in great condition with no signs of external corrosion.<br>No visible maintenance records found on the water heater.<br>The pipe material is copper. |

# Call Center - WQI Checklist

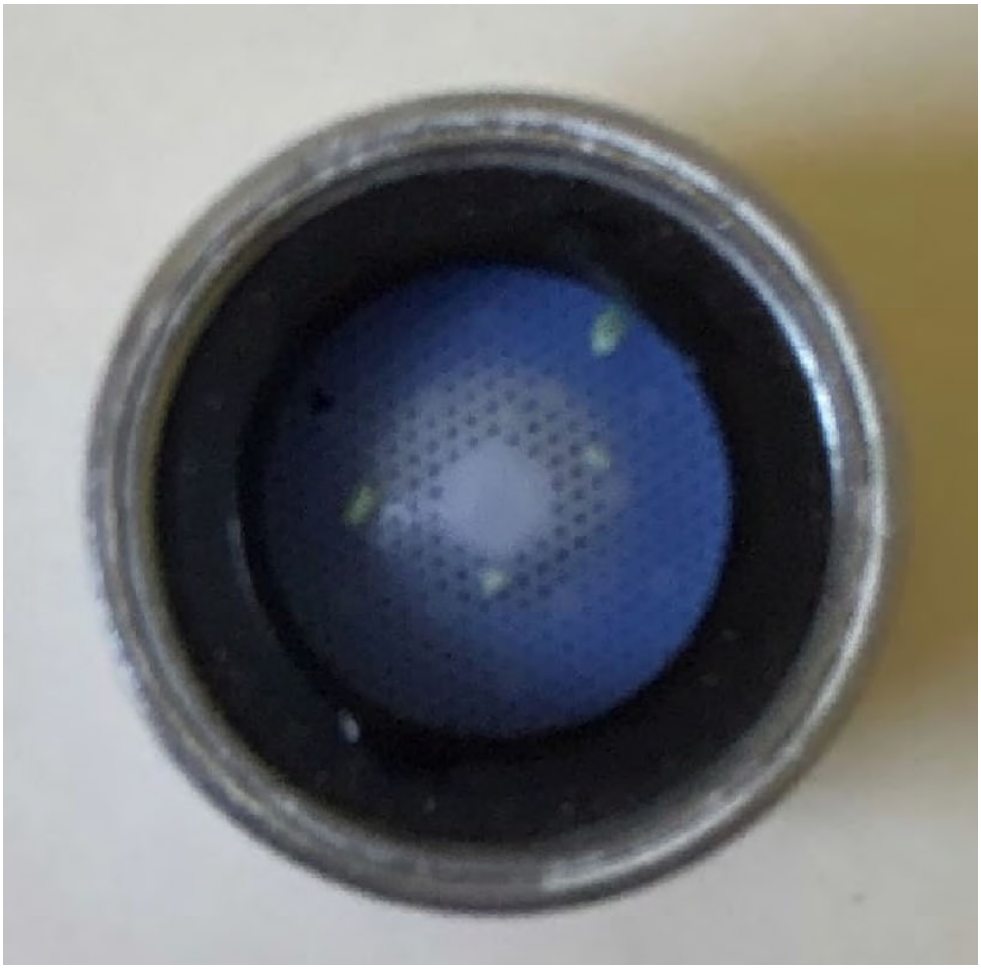
## Photos

| | |
|---|---|
| Ticket Number | 20022 |
| Location | Other |
| Title | Interior View of Kitchen Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20022 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior View of Bathroom Hallway Bathroom Sink Aerator |



## Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20022 |
| Location | Second Floor - Bathroom 1 - Sink |
| Title | Interior View of Upstairs Master Bathroom Sink Aerator (right) |

# Call Center - WQI Checklist

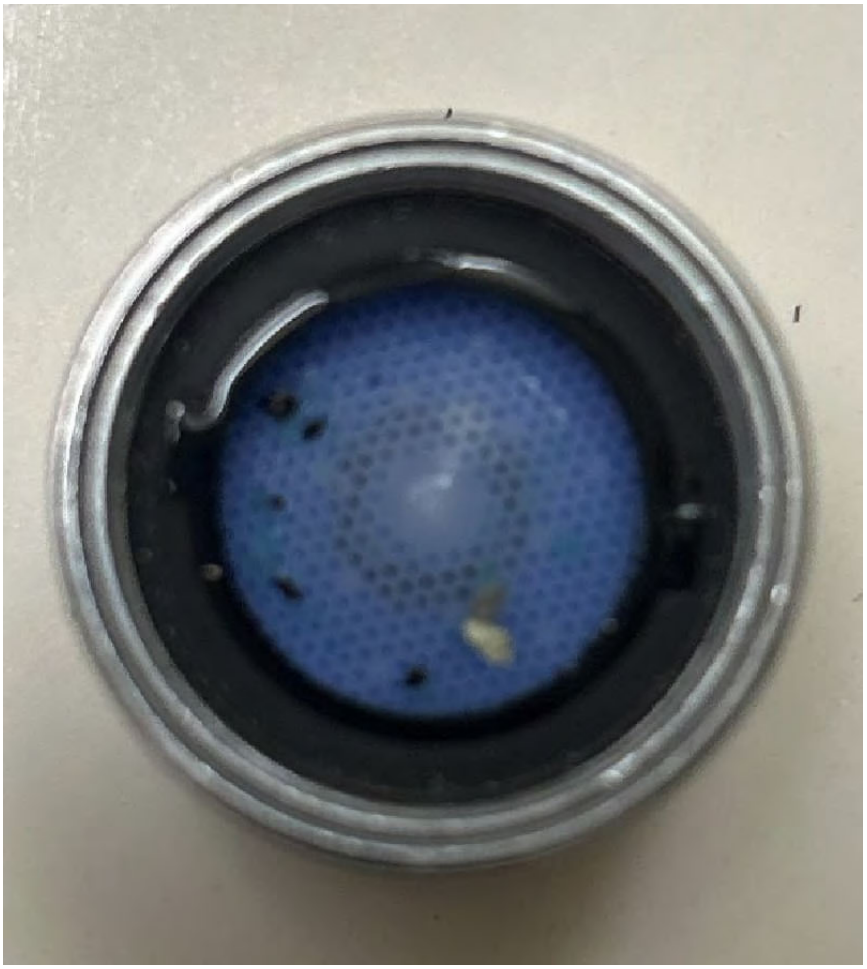
## Photos

| | |
|---|---|
| Ticket Number | 20022 |
| Location | Second Floor - Bathroom 1 - Sink |
| Title | Interior View of Upstairs Master Bathroom Sink Aerator (left) |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20022 |
| Location | Second Floor - Bathroom 2 - Sink |
| Title | Interior View of Upstairs Hallway Bathroom Sink Aerator |



Monday, 8 July 2024, 0930

Zone – D2, 507 Worthington Avenue
Location Code: D2-WORT0507

A. Resident Demographic/ Concerns

- Household consists of two (2) adults and three (3) children.
- Resident since February 2024.
- Resident reported concern about elevated levels of lead after reading the JBPHH Water System Water Quality Report (2024). The resident wanted testing for confirmation that water quality is safe.

B. **Water Quality Observations and Results**

- Unit was previously sampled on October 13, 2022.
  - Traces of Chromium, Copper, Lead, Barium, and Petroleum Hydrocarbons (as Diesel). All results were reported under their respective screening levels.
  - No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.
  - No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) - Collected cold water samples from the kitchen, downstairs hallway bathroom, upstairs hallway bathroom tub and sink, and the master bathroom tub and sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation Water Monitoring (WQIWM) – EDWM collected hot/cold water samples from the hallway bathroom sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.18 (cold)
    - 7.45 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 234.73 µS/cm (cold)
    - 254.07 µS/cm (hot)
  - Turbidity - (Acceptable Range: < 1.0 NTU)
    - 0.00 NTU (cold)
    - 0.34 NTU (hot)
  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.75 mg/L (cold)
    - 0.23 mg/L (hot)
  - Temperature -
    - 75.27°F (cold)
    - 95.18°F (hot)

Figure 1. Interior view of kitchen sink aerator. Upon visual inspection, small debris of unknown material was observed.

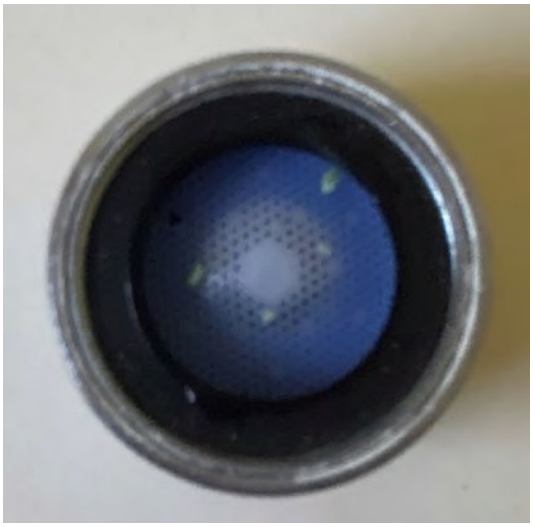


Figure 2. Interior view of downstairs hallway bathroom sink aerator. Upon visual inspection, small debris of unknown material was observed.

Figure 3. Interior view of upstairs master bathroom right sink aerator. Upon visual inspection, no debris was observed.

Figure 4. Interior view of upstairs master bathroom left sink aerator. Upon visual inspection, no debris was observed.

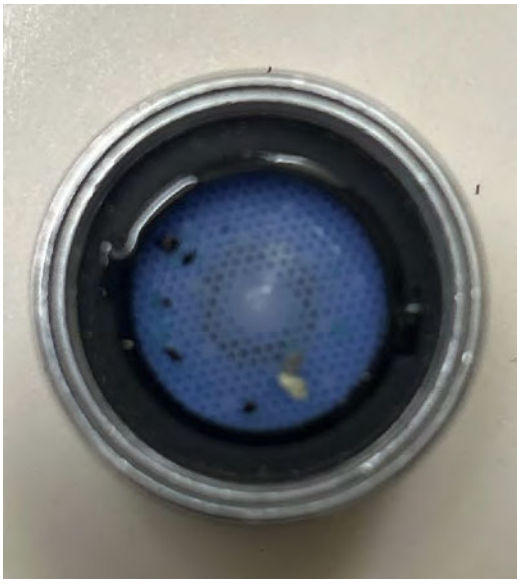


Figure 5. Interior view of upstairs hallway bathroom sink aerator. Upon visual inspection, small debris likely consisting of a deteriorated gasket/O-ring was observed.

C. Hot Water Heater
- 80-gallon electric water heater manufactured by Bradford White Corporation in November 2019.
- Visual observation of the water heater to be in great condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

D. Point-of-Use Treatment

No filters installed.

E. Overall Assessment
- No unusual observations.
- Water heater was recently replaced the week prior to appointment.
- Water quality field parameters were within recommended limits at the time of inspection.
- EDWM analytical results will determine if drinking water is in compliance with the applicable standards.

F. Recommendations
- Follow up with EDWM water quality results when available.
- Upon receiving/reviewing the water heater maintenance records, further assessment will be provided, if applicable.
- No additional actions required.

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | 507 Worthington Avenue | 507 Worthington Avenue |
| Field Sample ID: | | | D2-TW-0007890-24092-N-WQI | D2-TW-0007890-24092-N-H-WQI |
| Sample Date: | | | 2024-07-08 | 2024-07-08 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240708-2568-565** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (MPN/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240708-2568-565** | **SDG: 240708-2568-565** |
| Heterotrophic Plate Count | None | None | **2.00** | **2.00** |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.230-0.750 | 0.230-0.750 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65503** | |
| Alkalinity, Total (as CaCO3) | None | None | **53.8** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65503** | |
| Petroleum Hydrocarbons (as Diesel) | None | None | 47.0 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 U | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 47.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |
| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65503** | |
| Copper | 1300 | 1300 | **52.6** | -- |
| Lead | 15 | 15 | **0.130 J** | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |
| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65503** | |
| 1-Methylnaphthalene | None | None | 0.250 U | -- |
| 2-Methylnaphthalene | None | None | 0.250 U | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | 0.0100 U | -- |
| Naphthalene | None | None | 0.250 U | -- |
| **VOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65503** | |
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | 0.300 U | -- |
| Chloroform | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | 0.250 U | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |
| o-Xylene | None | None | 0.250 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Toluene | 1000 | 1000 | 0.250 U | -- |
| Total Trihalomethanes | 80 | None | ND | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison
mg/L = Milligrams per Liter

MPN/ml = Most Probable Number per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 6-20182 |
| Call Date/Time | 7/11/2024 12:32:09 PM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 7/16/2024 1:00:00 PM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | 1902 Porter Avenue |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 7/9/2024 12:00:00 AM |
| Number of adults under 65 | 2 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 1 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 1 |
| Call Center Complaint Summary / Initial Notes | 1300 |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | No |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | |
| Do you see any issues with the appearance or odor the water in your home? | |
| Color or Appearance of Water | None |
| | None reported |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | None |
| | None reported |
| Staining | None |
| | None reported |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | No |
| Skin | None |
| | None reported |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | None |
| | None reported |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | None |
| | None reported |

# In-Person Site Visit

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | Kitchen,Bathroom |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | |
| Does it occur only when you first turn on the water or does it occur continuously? | |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

## Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |
| | None reported |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Kitchen |
| pH (standard units) | 7.15 |
| Conductivity (µS/cm) | 254.00 |
| FreeChlorine (mg/L or ppm) | 0.40 |
| Cold Temp (degrees F) | 81.32 |
| Hot water Sampling Location | Kitchen |
| pH (standard units) | 7.92 |
| Conductivity (µS/cm) | 285.00 |
| FreeChlorine (mg/L or ppm) | 0.07 |
| Hot Temp (degrees F) | 114.08 |
| Water Quality Notes | No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.<br>No unusual observations.<br>TURB: 0.48 NTU (cold) / 0.00 NTU (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | No |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Scaling / Debris / Particulates present |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - other - Specific inspection point | |
| Bathroom - other - Condition of aerator | |

# Call Center - WQI Checklist

## Other Concerns

| | |
|---|---|
| Water Presure | |
| Hot Water Temperature | |
| Cross-Connection | |
| Irrigation | |

## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | No |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>No additional actions required.<br><br>This inspection was conducted to determine if the residents water met applicable standards and is safe to utilize. No unusual immediate observations regarding the water were found. EDWM analytical results will determine if the water is safe, and the resident will then be informed by CPLO. |
| Other Site Visit Notes | Kitchen sink aerator: Upon visual inspection, debris of unknown material were observed, this could possibly be related to the recent replacement of the old water heater and any flushing that would have been done during the replacement process.<br><br>Sink aerator: Upon visual inspection, small black opaque debris of unknown material were observed.<br><br>Master bedroom bathroom left sink aerator: Upon visual inspection, small black opaque debris of unknown material were observed.<br><br>Master bedroom bathroom right sink aerator: Upon visual inspection, small black opaque debris of unknown material were observed.<br><br>55-gallon electric water heater manufactured by Bradford White Corporation in March 2022. Visual observation showed the water heater to be in in great condition with no signs of external corrosion. No visible maintenance records found on the water heater. The pipe material is copper. |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20182 |
| Location | Other |
| Title | Kitchen Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20182 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior view of sink aerator |

# Call Center - WQI Checklist

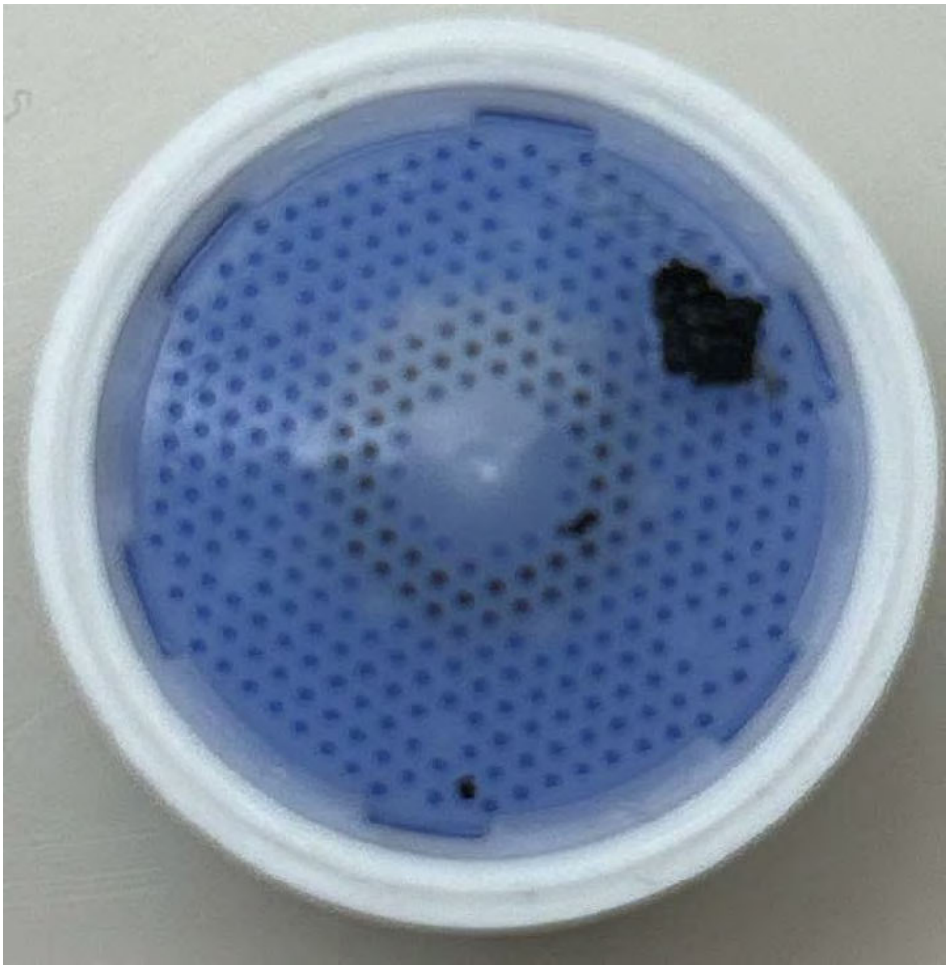
## Photos

| | |
|---|---|
| Ticket Number | 20182 |
| Location | Second Floor - Bathroom 1 - Sink |
| Title | Interior view of the master bedroom bathroom left sink aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20182 |
| Location | Second Floor - Bathroom 2 - Sink |
| Title | Interior view of the master bedroom bathroom right sink aerator |



Tuesday, 16 July 2024, 1300

Zone – D2, 1902 Porter Ave
Location Code: D2-PORT1902

## BLUF

The resident recently moved into their home and is interested in learning more about their water quality due to recent conversations with neighbors surrounding the November 2021 release. This WQI is the response to determine the conditions and safety of their water quality.

### A. Resident Demographic/ Concerns

- Household consists of two (2) adults, one (1) child, and one (1) pet.
- Resident since 9 July 2024
- Resident reported no concerns regarding their water quality and wanted testing to confirm water safety.

### B. Water Quality Observations and Results

- Unit was not previously sampled.
- No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.
- No unusual observations

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the kitchen sink, the hallway bathroom sink, and the master bathroom left sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) [redacted]
  - Water Quality Investigation (WQI) Team
  - Extended Drinking Water Monitoring (EDWM) collected hot and cold samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

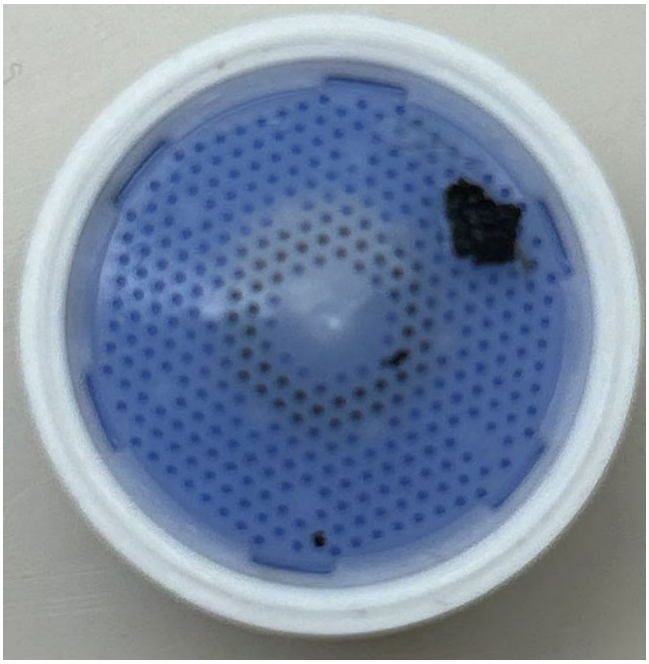
- Results of field testing from the kitchen sink.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.15 (cold)
    - 7.92 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 254 µS/cm (cold)
    - 285 µS/cm (hot)
  - Turbidity - (Acceptable Range: < 1.0 NTU)
    - 0.48 NTU (cold)
    - 0.00 NTU (hot)
  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.40 mg/L (cold)
    - 0.07 mg/L (hot)
  - Temperature -

- 81.32 °F (cold)
- 114.08 °F (hot)

- **Figure 1.** Interior view of kitchen sink aerator. Upon visual inspection, debris of unknown material were observed, this could possibly be related to the recent replacement of the old water heater and any flushing that would have been done during the replacement process.

- **Figure 2.** Interior view of sink aerator. Upon visual inspection, small black opaque debris of unknown material were observed.

- **Figure 3.** Interior view of the master bedroom bathroom left sink aerator. Upon visual inspection, small black opaque debris of unknown material were observed.



- **Figure 4.** Interior view of the master bedroom bathroom right sink aerator. Upon visual inspection, small black opaque debris of unknown material were observed.

## C. Hot Water Heater

- 55-gallon electric water heater manufactured by Bradford White Corporation in March 2022.
- Visual observation showed the water heater to be in in great condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

**D. Point-of-Use Treatment**

No filters were installed.

**E. Overall Assessment**

- Temperature was measured at all available fixtures during inspection, all fixtures were measured above 113 °F or above.
- Remaining water quality field parameters were within recommended limits at the time of inspection.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

**F. Recommendations**

- Follow up with EDWM water quality results when available.
- No additional actions required.

## Conclusion

This inspection was conducted to determine if the residents water met applicable standards and is safe to utilize. No unusual immediate observations regarding the water were found. EDWM analytical results will determine if the water is safe, and the resident will then be informed by CPLO.

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | 1902 Porter Avenue | 1902 Porter Avenue |
| Field Sample ID: | | | D2-TW-0007740-24092-N-WQI | D2-TW-0007740-24092-N-H-WQI |
| Sample Date: | | | 2024-07-16 | 2024-07-16 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240716-2568-650** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (MPN/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240716-2568-650** | **SDG: 240716-2568-650** |
| Heterotrophic Plate Count | None | None | 2.00 U | **2.00** |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.0700-0.400 | 0.0700-0.400 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65710** | |
| Alkalinity, Total (as CaCO3) | None | None | **55.8** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65710** | |
| Petroleum Hydrocarbons (as Diesel) | None | None | 47.0 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 UJ | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 47.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |
| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65710** | |
| Copper | 1300 | 1300 | **127** | -- |
| Lead | 15 | 15 | 0.130 U | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |
| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65710** | |
| 1-Methylnaphthalene | None | None | 0.250 U | -- |
| 2-Methylnaphthalene | None | None | 0.250 U | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | 0.0200 U | -- |
| Naphthalene | None | None | 0.250 U | -- |
| **VOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65710** | |
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | 0.300 U | -- |
| Chloroform | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | 0.250 U | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |
| o-Xylene | None | None | 0.250 U | -- |
| Toluene | 1000 | 1000 | 0.250 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Total Trihalomethanes | 80 | None | ND | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison

mg/L = Milligrams per Liter

MPN/ml = Most Probable Number per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 1-20814 |
| Call Date/Time | 8/15/2024 8:28:42 AM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 8/15/2024 9:00:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | 206 13th Street |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 2/1/2022 12:00:00 AM |
| Number of adults under 65 | 2 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 0 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 0 |
| Call Center Complaint Summary / Initial Notes | |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | Yes |
| When did you first notice the issue? | 7/21/2024 12:00:00 AM |
| Is this an ongoing issue/concern, or does it only happen at certain times? | Ongoing |
| Do you see any issues with the appearance or odor the water in your home? | Yes |
| Color or Appearance of Water | |
| | The resident recently noticed the water from the kitchen and bathrooms has a murky appearance |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | None |
| | None reported |
| Staining | None |
| | None reported |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | No |
| Skin | None |
| | None reported |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | None |
| | None reported |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | None |
| | None reported |

# In-Person Site Visit

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | Kitchen,Bathroom |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | Both hot & cold water |
| Does it occur only when you first turn on the water or does it occur continuously? | Continuously |
| Are you aware of any recent nearby construction or maintenance activities? | Yes |

## Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |
| | None reported |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Kitchen |
| pH (standard units) | 7.19 |
| Conductivity (µS/cm) | 320.06 |
| FreeChlorine (mg/L or ppm) | 0.34 |
| Cold Temp (degrees F) | 77.57 |
| Hot water Sampling Location | Kitchen |
| pH (standard units) | 7.44 |
| Conductivity (µS/cm) | 303.08 |
| FreeChlorine (mg/L or ppm) | 0.22 |
| Hot Temp (degrees F) | 95.10 |
| Water Quality Notes | Unit was previously sampled on 8 February 2024. Traces of chromium, copper, barium, selenium, total petroleum hydrocarbons and total haloacetic acids were found. These detections were all below project screening levels.<br>No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.<br>No unusual observations.<br>TURB: 2.42 (cold), 3.48 (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | |
| Do you have point-of-use filters? | |
| | The residents use a PUR brand water filter. PUR water filter is NSF/ ANSI Standard 42 (Aesthetic Effects), 53 (Lead/pH) and 401 (Emerging Compounds) certified.<br>Resident stated that they replace the filter every thirty days. |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Scaling / Debris / Particulates present |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | |
| Bathroom - second floor - Condition of aerator | |
| Bathroom - second floor - Specific inspection point | |
| Bathroom - second floor - Condition of aerator | |
| Bathroom - other - Specific inspection point | Sink faucet |
| Bathroom - other - Condition of aerator | Looks new / clean |

# Call Center - WQI Checklist

## Other Concerns

Water Presure

Hot Water Temperature

Cross-Connection

Irrigation

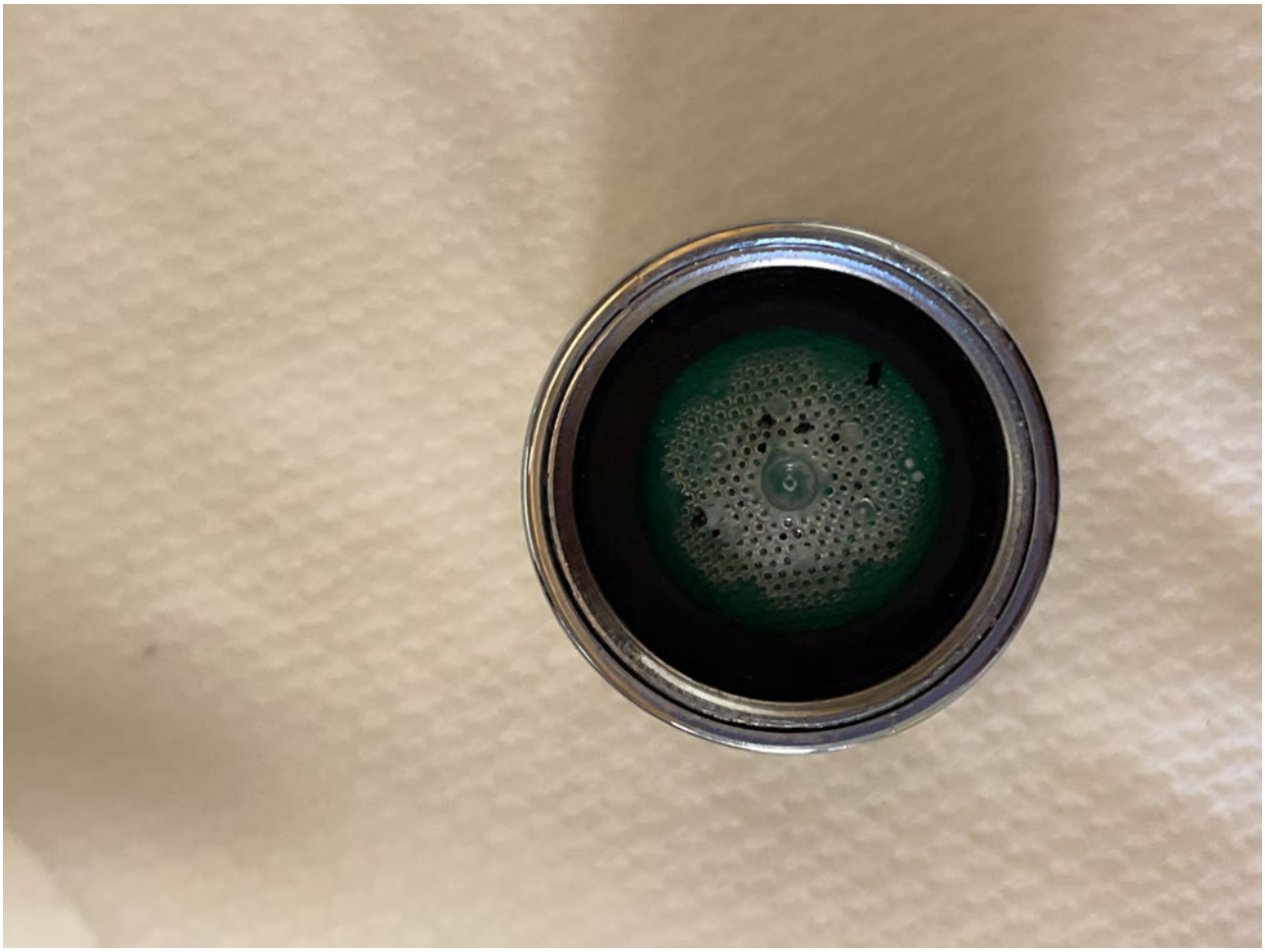
## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | No |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br><br>Replace the master bathroom aerator due to its deteriorating condition and inspect the remaining aerators periodically.<br><br>Keep the water filter dispenser inside the refrigerator to prevent biological growth.<br><br>The particles found in the water filter pitcher were not observed anywhere else in the residence and did not appear to be related to the cloudy water appearance observed by the resident. It is believed that the source of these particles comes from the ion exchange material added to filter itself. Recommend the resident to replace and inspect the filters on a regular basis. |
| Other Site Visit Notes | Kitchen sink aerator: Upon visual inspection, black debris less than 1 mm in size can be seen. Debris is of unknown material. The aerator looks to be in overall good condition.<br>Interior view of the guest bathroom sink. Upon visual inspection, many pieces of black debris 1 -2 mm in size can be seen. Debris is of unknown material, particles were solid, dense, odorless and left no residual stains when touched.<br><br>Master bathroom sink aerator: Upon visual inspection, no debris can be seen. However, the outside of the aerator was deteriorating. Recommend replacement.<br>Interior view of the top portion of the filtered water pitcher. Black and tan-colored particles can be seen in the water. The arrow in the Figure 4 points out some of the particles that appeared perfectly round and bead like. This is believed to be ion exchange material from the filter itself. |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20814 |
| Location | Other |
| Title | [No title] |



# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20814 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior view of the guest bathroom sink. |

# Call Center - WQI Checklist

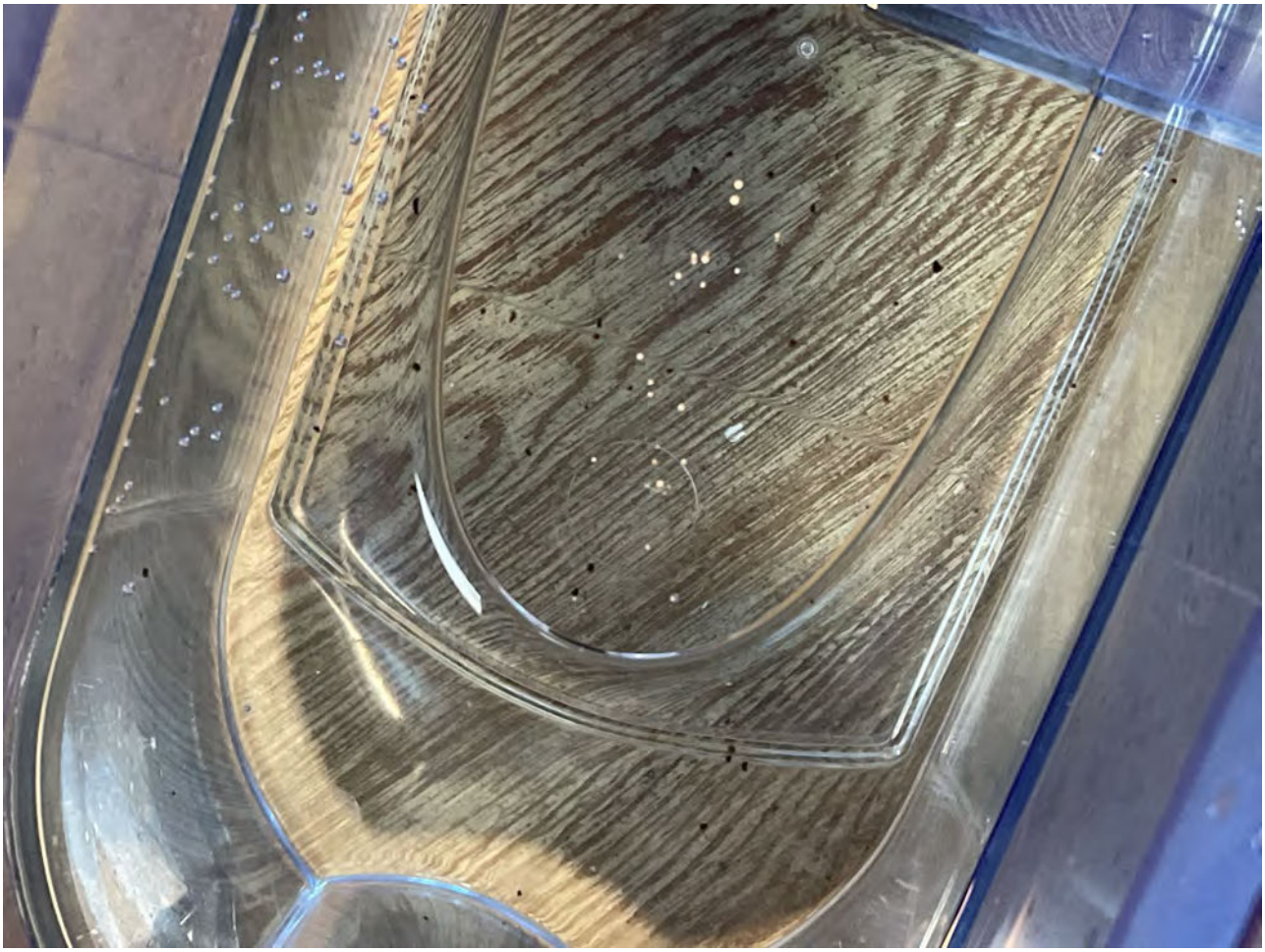
## Photos

| | |
|---|---|
| Ticket Number | 20814 |
| Location | Second Floor - Bathroom 1 - Sink |
| Title | Interior view of master bathroom sink aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20814 |
| Location | Other |
| Title | Interior view of the top portion of the filtered water pitcher. |



Thursday 15 August 2024, 0900

Zone – D2, 206 13th Street
Location Code: D2-13TH0206

## BLUF

The resident recently noticed the water from the kitchen and bathrooms has a murky appearance. The resident also noticed black and tan solid particles collecting in the top portion of their water filter pitcher. This is believed to be from the water filter itself. The resident stated that they noticed mildew growing on lid of the water filter pitcher despite daily cleaning. The resident stated that these are new issues that began approximately three weeks ago. The resident stated that these issues have been persistent problems that occur throughout the day. The resident requested that the kitchen sink and both bathroom sinks be sampled. This WQI was conducted to determine the conditions and safety of their water quality. All water quality parameters collected during the inspection were within acceptable ranges. Based on the observations made during the inspection, no immediate concerns regarding water quality were identified. No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water. It should also be noted that maintenance of the distribution system in the neighborhood occurred within the last few weeks. This is believed to be a possible source of the resident's concerns about turbidity.

### A. Resident Demographic / Concerns

- Household consists of two (2) adults.
- Resident since February 2022.
- The resident has recently noticed the water from the kitchen and bathroom sinks has an unusual appearance, and described the water be of murky, milky or cloudy appearance. Furthermore, the resident observed black and tan solid particles collecting in the top portion (i.e. before the filter) of their water filter pitcher, as well as the continuous presence of mildew underneath the cover of the pitcher's lid, despite daily cleaning. It should be noted that the water filter is stored on the countertop. The resident claims that this issue has been ongoing for the last three weeks. The resident does not have taste or odor concerns regarding the water. The resident stated that they have not experienced any health issues resulting from these concerns.
- Resident stated that there has been ongoing construction on the water distribution system near Fox Street, as well as construction near 14th street, which is the adjacent street.

### B. Water Quality Observations and Results

- Unit was previously sampled on 8 February 2024. Traces of chromium, copper, barium, selenium, total petroleum hydrocarbons and total haloacetic acids were found. These detections were all below project screening levels.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the master bathroom sink (right of kitchen), the guest bathroom (left of kitchen) and the kitchen sink for rapid TPH test.

- Community Public Liaison Officer (CPLO) – (b) (6) .
- Water Quality Investigation (WQI) Team
- Extended Drinking Water Monitoring (EDWM)- collected hot and cold samples from the kitchen sink, guest bathroom sink and master bathroom sink.
- Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.19 (cold)
    - 7.44 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 320.06 (cold)
    - 303.08 (hot)
  - Turbidity - (Acceptable Range: < 5.0 NTU)
    - 2.42 (cold)
    - 3.48 (hot)
  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.34 mg/L (cold)
    - 0.22 mg/L (hot)
  - Temperature -
    - 77.57 °F (cold)
    - 95.10 °F (hot)
    - 116.3 °F (hot) – Measured by WQI team. See section E.

- Results of field testing from the guest bathroom sink.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.27 (cold)
    - 7.56 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 277.73 (cold)
    - 287.03 (hot)
  - Turbidity - (Acceptable Range: < 5.0 NTU)
    - 0.69 (cold)
    - 0.81 (hot)

- Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
  - 0.46 mg/L (cold)
  - 0.77 mg/L (hot)

- Temperature -
  - 81.89 °F (cold)
  - 102.83 °F (hot)
  - 117.2 °F (hot) – Measured by WQI team. See section E.

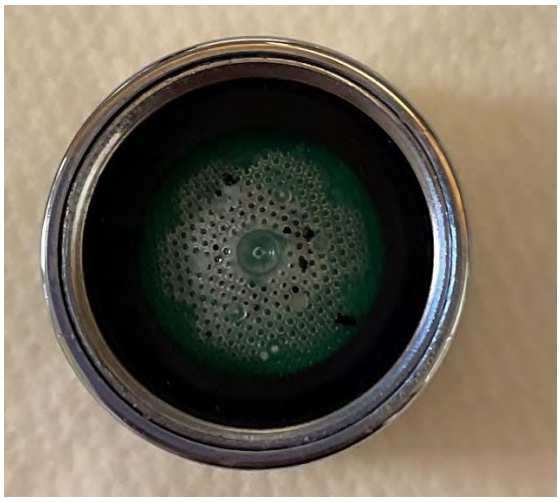
- Results of field testing from the master bathroom sink.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.31 (cold)
    - 7.58 (hot)

  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 279.28 (cold)
    - 286.68 (hot)

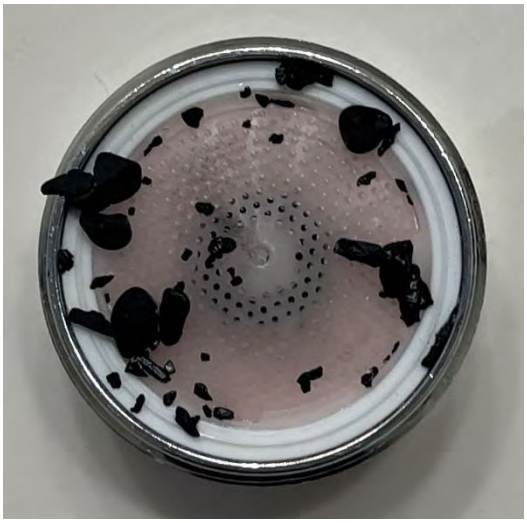
  - Turbidity - (Acceptable Range: < 5.0 NTU)
    - 0.42 (cold)
    - 0.24 (hot)

  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.42 mg/L (cold)
    - 0.24 mg/L (hot)

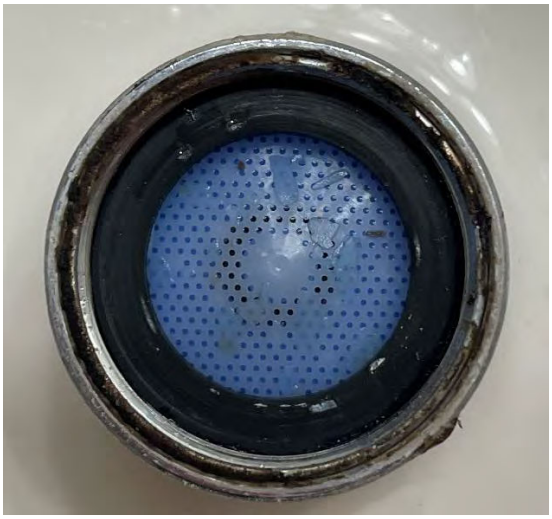
  - Temperature -
    - 81.66 °F (cold)
    - 103.83 °F (hot)
    - 115.9 °F (hot) - Measured by WQI team. See section E.



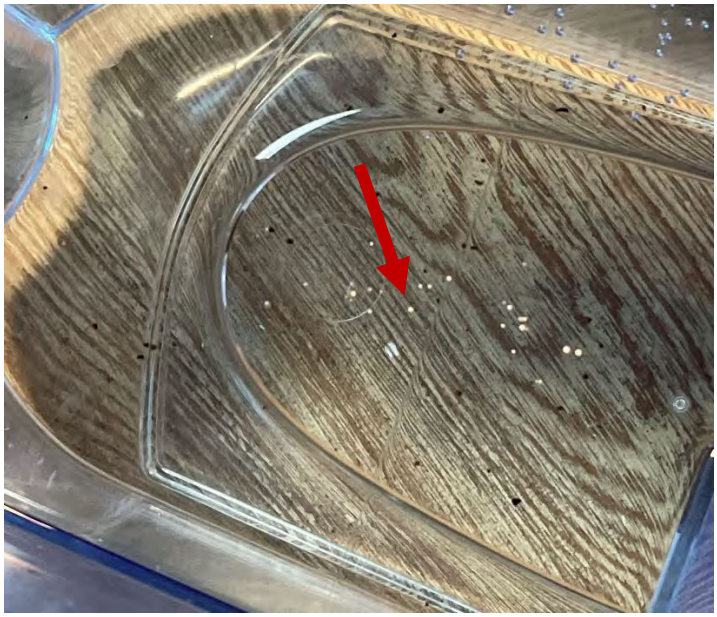
- **Figure 1.** Interior view of kitchen sink aerator. Upon visual inspection, black debris less than 1 mm in size can be seen. Debris is of unknown material. The aerator looks to be in overall good condition.



- **Figure 2.** Interior view of the guest bathroom sink. Upon visual inspection, many pieces of black debris 1-2 mm in size can be seen. Debris is of unknown material, particles were solid, dense, odorless and left no residual stains when touched.



- **Figure 3.** Interior view of master bathroom sink aerator. Upon visual inspection, no debris can be seen. However, the outside of the aerator was deteriorating. Recommend replacement.



- **Figure 4.** Interior view of the top portion of the filtered water pitcher. Black and tan-colored particles can be seen in the water. The arrow in the Figure 4 points out some of the particles that appeared perfectly round and bead like. This is believed to be ion exchange material from the filter itself.

## C. Hot Water Heater

- 50-gallon electric water heater manufactured by Rheem Mfg. Co. in September 2010.
- Water heater temperature was set to 125 °F.
- Visual observation showed the water heater to be in good condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.

- The pipe material is copper.

### D. Point-of-Use Treatment

- No filters installed.
- The residents use a PUR brand water filter. PUR water filter is NSF/ ANSI Standard 42 (Aesthetic Effects), 53 (Lead/pH) and 401 (Emerging Compounds) certified.
- Resident stated that they replace the filter every thirty days.

### E. Overall Assessment

- Temperature was measured at all available fixtures during inspection. Hot water temperature was measured by both EDWM team and WQI team. WQI team took hot water temperatures with an instant read digital thermometer and the EDWM team took measurements with an Aqua Troll, the different instruments used are the reason for the difference in decimal places in the two hot water temperatures listed. The WQI team and EDWM team took the hot water temperature readings at different times and flushed different volumes of water, this is the reason for the range in measurements. The WQI team confirmed all hot water fixtures could reach a temperature of 115°F or above.
- No unusual observations were made from both hot and cold water; water was clear.
- The resident stated that there has been ongoing construction of on the water distribution system near Fox Street, as well as construction near 14th street, which is the adjacent street. No utility construction was observed during time of inspection. It's possible that the distribution system construction the resident observed caused the cloudy/milky appearance they described. This is not conclusive because the resident did not provide specific time ranges for these events and therefore it is difficult to establish the connection between the resident's concerns and the adjacent construction.
- All water quality parameters collected during the inspection were within acceptable ranges.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

### F. Recommendations

- Follow up with EDWM water quality results when available.
- Replace the master bathroom aerator due to its deteriorating condition and inspect the remaining aerators periodically.
- Keep the water filter dispenser inside the refrigerator to prevent biological growth.
- The particles found in the water filter pitcher were not observed anywhere else in the residence and did not appear to be related to the cloudy water appearance observed by the resident. It is believed that the source of these particles comes from the ion exchange material added to filter itself. Recommend the resident to replace and inspect the filters on a regular basis.

## Conclusion

This inspection was conducted to determine if the residents' water meets applicable standards and is safe for use. It is recommended that the resident cleans the sink aerators every six months to prevent debris build up and replaces the aerator in the master bathroom. It is recommended that the resident changes the PUR water filter, as well as keep the water filter in the fridge. All water quality parameters collected during the inspection were within acceptable ranges. Based on the observations made during the inspection, no immediate concerns regarding water quality were identified. No further action is

required regarding this WQI event. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed by the CPLO.

**Summary of Chemistry Results**
**Zone D2**
**Drinking Water Sampling, Joint Base Pearl Harbor - Hickam, Oahu, Hawaii**

| **Notes:** |
|---|
| ND = Not Detected |
| ISP = Incident Specific Parameter |
| EAL = DOH Environmental Action Level |
| EPA MCL = EPA Maximum Contaminant Level |
| All Results shown in Parts per Billion (ppb), with the exception of Field and Bacterial Test results |
| Parts per Million (ppm) |
| Parts per Thousand (ppth) |
| § - Exceeds Screening Level |
| -- = No Information Available |
| N (Normal) = Full compliance sample |
| FD (Field Duplicate) = Extra sample taken for quality control |
| N (Grab, Resample) = Additional follow-up sample |
| MPN/mL = Most probable number per milliliter |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | **Location ID:** | D2-13TH0206 | | | | | |
| | | | **Location Type:** | Residence | | | | | |
| | | | **Address:** | 206 13th Street | | | | | |
| | | | **Field Sample ID:** | D2-TW-0008395-24092-N-WQI | D2-TW-0008395-24092-N-H-WQI | D2-TW-0008395-24092-N-1-WQI | D2-TW-0008395-24092-N-1-H-WQI | D2-TW-0008395-24092-N-2-WQI | D2-TW-0008395-24092-N-2-H-WQI |
| | | | **Sample Date:** | 2024-08-15 | 2024-08-15 | 2024-08-15 | 2024-08-15 | 2024-08-15 | 2024-08-15 |
| | | | **Sample Type:** | N (Normal) | N (Normal) | N (Normal) | N (Normal) | N (Normal) | N (Normal) |
| | | | **Sample Type:** | N (Normal) | N (Normal) | N (Normal) | N (Normal) | N (Normal) | N (Normal) |
| **Method Group** | **Analyte** | **DOH Project Screening Level** | **Basis of Project Screening Level** | | | | | | |
| Bacterial Test (in 100 mL) | Coliform | -- | -- | Absent | -- | Absent | -- | Absent | -- |
| | E. coli | -- | -- | Absent | -- | Absent | -- | Absent | -- |
| Bacterial Test (MPN/mL) | Heterotrophic Plate Count | -- | -- | 50.0 | 5.00 | 14.0 | 15.0 | 3.00 | 18.0 |
| Field Test (ppb) | Free Chlorine | 4000 | MCL | 340 | 220 | 460 | 770 | 420 | 240 |
| Field Test (pH) | pH | -- | -- | 7.20 | 7.44 | 7.27 | 7.57 | 7.31 | 7.59 |
| Field Test (ms/cm) | Specific Conductivity | -- | -- | 0.320 | 0.300 | 0.280 | 0.290 | 0.280 | 0.290 |
| Field Test (degrees Celcuis) | Temperature | -- | -- | 25.3 | 35.6 | 27.8 | 39.4 | 27.6 | 39.9 |
| Field Test (nephelometric turbidity unit) | Turbidity | 5 | MCL | 2.43 | 3.49 | 0.700 | 0.820 | 0.430 | 0.240 |
| General Chemistry (ppb) | Alkalinity, Total (as CaCO3) | -- | -- | 56100 | -- | 55500 | -- | -- | -- |
| | Total Organic Carbon | -- | -- | ND | -- | ND | -- | -- | -- |
| Hydrocarbons (ppb) | Petroleum Hydrocarbons (as Diesel) | -- | -- | ND | -- | ND | -- | -- | -- |
| | Petroleum Hydrocarbons (as Gasoline) | -- | -- | ND | -- | ND | -- | -- | -- |
| | Petroleum Hydrocarbons (as Oil) | -- | -- | ND | -- | ND | -- | -- | -- |
| | Petroleum Hydrocarbons, Total | -- | -- | ND | -- | ND | -- | -- | -- |
| Metals (ppb) | Copper | 1300 | MCL | 9.80 | -- | 21.6 | -- | -- | -- |
| | Lead | 15 | MCL | ND | -- | 0.420 | -- | -- | -- |
| | Mercury | 2 | MCL | ND | -- | ND | -- | -- | -- |
| Synthetic Organic Compounds (ppb) | 1-Methylnaphthalene | -- | -- | ND | -- | ND | -- | -- | -- |
| | 2-Methylnaphthalene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Acenaphthylene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Anthracene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Benzo(a)pyrene | 0.2 | MCL | ND | -- | ND | -- | -- | -- |
| | Benzo(b)fluoranthene | -- | -- | ND | -- | ND | -- | -- | -- |

**Summary of Chemistry Results**
**Zone D2**
**Drinking Water Sampling, Joint Base Pearl Harbor - Hickam, Oahu, Hawaii**

| **Notes:** |
|---|
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| EAL = DOH Environmental Action Level |
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| All Results shown in Parts per Billion (ppb), with the exception of Field and Bacterial Test results |
| Parts per Million (ppm) |
| Parts per Thousand (ppth) |
| § - Exceeds Screening Level |
| -- = No Information Available |
| N (Normal) = Full compliance sample |
| FD (Field Duplicate) = Extra sample taken for quality control |
| N (Grab, Resample) = Additional follow-up sample |
| MPN/mL = Most probable number per milliliter |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | **Location ID:** | D2-13TH0206 | | | | | |
| | | | **Location Type:** | Residence | | | | | |
| | | | **Address:** | 206 13th Street | | | | | |
| | | | **Field Sample ID:** | D2-TW-0008395-24092-N-WQI | D2-TW-0008395-24092-N-H-WQI | D2-TW-0008395-24092-N-1-WQI | D2-TW-0008395-24092-N-1-H-WQI | D2-TW-0008395-24092-N-2-WQI | D2-TW-0008395-24092-N-2-H-WQI |
| | | | **Sample Date:** | 2024-08-15 | 2024-08-15 | 2024-08-15 | 2024-08-15 | 2024-08-15 | 2024-08-15 |
| | | | **Sample Type:** | N (Normal) | N (Normal) | N (Normal) | N (Normal) | N (Normal) | N (Normal) |
| | | | **Sample Type:** | N (Normal) | N (Normal) | N (Normal) | N (Normal) | N (Normal) | N (Normal) |
| **Method Group** | **Analyte** | **DOH Project Screening Level** | **Basis of Project Screening Level** | | | | | | |
| Synthetic Organic Compounds (ppb) | Benzo(g,h,i)perylene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Benzo(k)fluoranthene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Chrysene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Dibenz(a,h)anthracene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Fluorene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Indeno(1,2,3-c,d)pyrene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Naphthalene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Phenanthrene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Pyrene | -- | -- | ND | -- | ND | -- | -- | -- |
| Volatile Organic Compounds (ppb) | 1,2,4-Trimethylbenzene | -- | -- | ND | -- | ND | -- | -- | -- |
| | 1,3,5-Trimethylbenzene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Benzene | 5 | MCL | ND | -- | ND | -- | -- | -- |
| | Cumene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Ethylbenzene | 700 | MCL | ND | -- | ND | -- | -- | -- |
| | m,p-Xylene | -- | -- | ND | -- | ND | -- | -- | -- |
| | n-Butylbenzene | -- | -- | ND | -- | ND | -- | -- | -- |
| | n-Propylbenzene | -- | -- | ND | -- | ND | -- | -- | -- |
| | o-Xylene | -- | -- | ND | -- | ND | -- | -- | -- |
| | sec-Butylbenzene | -- | -- | ND | -- | ND | -- | -- | -- |
| | tert-Butylbenzene | -- | -- | ND | -- | ND | -- | -- | -- |
| | Toluene | 1000 | MCL | ND | -- | ND | -- | -- | -- |
| | Xylenes, Total | 10000 | MCL | ND | -- | ND | -- | -- | -- |
| Trihalomethanes (ppb) | Bromodichloromethane | -- | -- | ND | -- | ND | -- | -- | -- |

**Summary of Chemistry Results**
**Zone D2**
**Drinking Water Sampling, Joint Base Pearl Harbor - Hickam, Oahu, Hawaii**

| **Notes:** |
|---|
| ND = Not Detected |
| ISP = Incident Specific Parameter |
| EAL = DOH Environmental Action Level |
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| All Results shown in Parts per Billion (ppb), with the exception of Field and Bacterial Test results |
| Parts per Million (ppm) |
| Parts per Thousand (ppth) |
| § - Exceeds Screening Level |
| -- = No Information Available |
| N (Normal) = Full compliance sample |
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| N (Grab, Resample) = Additional follow-up sample |
| MPN/mL = Most probable number per milliliter |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Location ID:** | D2-13TH0206 | | | | | | | |
| | | | **Location Type:** | Residence | | | | | | | |
| | | | **Address:** | 206 13th Street | | | | | | | |
| | | | **Field Sample ID:** | D2-TW-0008395-24092-N-WQI | D2-TW-0008395-24092-N-H-WQI | D2-TW-0008395-24092-N-1-WQI | D2-TW-0008395-24092-N-1-H-WQI | D2-TW-0008395-24092-N-2-WQI | D2-TW-0008395-24092-N-2-H-WQI |
| | | | **Sample Date:** | 2024-08-15 | 2024-08-15 | 2024-08-15 | 2024-08-15 | 2024-08-15 | 2024-08-15 |
| | | | **Sample Type:** | N (Normal) | N (Normal) | N (Normal) | N (Normal) | N (Normal) | N (Normal) |
| **Method Group** | **Analyte** | **DOH Project Screening Level** | **Basis of Project Screening Level** | | | | | | |
| Trihalomethanes (ppb) | Bromoform | -- | -- | ND | -- | ND | -- | -- | -- |
| | Chloroform | -- | -- | ND | -- | ND | -- | -- | -- |
| | Dibromochloromethane | -- | -- | ND | -- | ND | -- | -- | -- |
| | Total Trihalomethanes | 80 | MCL | ND | -- | ND | -- | -- | -- |

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 1-20943 |
| Call Date/Time | 8/21/2024 8:58:31 AM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 8/21/2024 11:30:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | 922 Apollo Avenue |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 6/1/2023 12:00:00 AM |
| Number of adults under 65 | 2 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 2 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 0 |
| Call Center Complaint Summary / Initial Notes | The resident's family members have been experiencing various health issues such as skin rashes and infections since moving into the home one year ago |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | No |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | |
| Do you see any issues with the appearance or odor the water in your home? | |
| Color or Appearance of Water | None |
| | None reported |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | None |
| | None reported |
| Staining | None |
| | None reported |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | Yes |
| Skin | Adults,Children |
| | The resident’s wife has experienced skin irritation. Their daughter has been experiencing skin irritation and has been diagnosed with milia, a skin condition that causes painful itchy skin and white bumps to form on skin. |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | None |
| | None reported |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | Adults |
| | The resident’s wife has experienced four yeast infections and two kidney infections |

# In-Person Site Visit

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | Kitchen,Bathroom,Upstairs,Downstairs |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | Both hot & cold water |
| Does it occur only when you first turn on the water or does it occur continuously? | Continuously |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

## Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |
| | None reported |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Other |
| pH (standard units) | 7.33 |
| Conductivity (µS/cm) | 242.52 |
| FreeChlorine (mg/L or ppm) | 0.60 |
| Cold Temp (degrees F) | 81.62 |
| Hot water Sampling Location | Other |
| pH (standard units) | 7.42 |
| Conductivity (µS/cm) | 277.89 |
| FreeChlorine (mg/L or ppm) | 0.24 |
| Hot Temp (degrees F) | 104.99 |
| Water Quality Notes | Unit was not previously sampled. EDMW team sampled the unit on 20 August 2024; these sampling results are not yet available.<br>No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.<br>No unusual observations.<br>TURB: 0.54 (cold), 0.72 (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | |
| Do you have point-of-use filters? | |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Scaling / Debris / Particulates present |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Looks new / clean |
| Bathroom - other - Specific inspection point | Shower head |
| Bathroom - other - Condition of aerator | Staining present |

# Call Center - WQI Checklist

## Other Concerns

| | |
|---|---|
| Water Presure | |
| Hot Water Temperature | |
| Cross-Connection | |
| Irrigation | |

## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | Yes |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>Replace the downstairs hallway bathroom aerator due to the deteriorating rubber gasket and inspect/ clean the remaining aerators periodically.<br>Replace the shower head in both upstairs bathrooms. |
| Other Site Visit Notes | Downstairs hallway bathroom sink aerator: Upon visual inspection, many pieces of black debris 1-2 mm in size can be seen. Debris is of unknown material, particles were solid, dense, odorless and left residual stains when touched. This could possibly be from a deteriorating rubber gasket (rubber gasket not photographed). Recommend replacing aerator.<br><br>Master bathroom shower head: Upon visual inspection the brown/pinkish color described by the resident can be seen. The shower head is new and is made of plastic. Serratia marcescens and Aureobasidium pullulans are bacteria that are commonly found in showers/tubs, they thrive in moist environments and feed on fatty deposits left by soap and shampoo residue. They leave behind a pink slime or residue. This could be the cause of the discoloration in the shower head. |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20943 |
| Location | Other |
| Title | Interior View of Kitchen Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20943 |
| Location | Other |
| Title | Interior View of Master Bathroom Left and Right Sink Aerators |

## Call Center - WQI Checklist

### Photos

| | |
|---|---|
| Ticket Number | 20943 |
| Location | Second Floor - Bathroom 1 - Sink |
| Title | Interior View of Upstairs Hallway Bathroom Left and Right Sink Aerators |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20943 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior View of Downstairs Hallway Bathroom Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20943 |
| Location | Other |
| Title | Interior View of Master Bathroom Shower Head |

Wednesday 21 August 2024, 1130

Zone – D2, 922 Apollo Ave
Location Code: D2-APOL0922

## BLUF

The resident's family members have been experiencing various health issues such as skin rashes and infections since moving into the home one year ago. They have been seeing their primary care provider and received a recommendation to investigate environmental factors that may be contributing to their health issues. The resident had no concerns with the water otherwise. This WQI was requested during EDWM sampling conducted the day prior, on 20 August 2024. The WQI was conducted to determine the quality and safety of their water. All water quality parameters collected on the 20 August 2024 EDWM sampling were within acceptable ranges. Based on the observations made during the WQI inspection, no immediate concerns regarding water quality were identified. No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.

### A. Resident Demographic / Concerns

- Household consists of two (2) adults and two (2) children.
- Resident since June 2023.
- The resident explained that their wife and one of their daughters have been experiencing various health issues that began in October 2023. The resident's wife has experienced skin irritation, four yeast infections and two kidney infections. Their daughter has been experiencing skin irritation and has been diagnosed with milia, a skin condition that causes painful itchy skin and white bumps to form on skin. The family has been seeing their primary care provider, who prescribed antibiotics for the infections and a skin cream for the milia. The doctor recommended considering environmental factors that may be causing their health issues. Since receiving care from the doctor, the family's health issues have improved, but have not gone away entirely. The resident does not have taste or odor concerns regarding the water but has noticed a brown/ pinkish color that appeared at the showerhead connection. The resident stated that no one in the home drinks or cooks with the water and that the family gets their water from a third-party source.

### B. Water Quality Observations and Results

- Unit was not previously sampled.
- EDMW team sampled the unit on 20 August 2024; these sampling results are not yet available.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the downstairs hallway bathroom sink, the upstairs hallway bathroom right sink, the master bathroom left sink, and the kitchen sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .

- Water Quality Investigation (WQI) Team.
- Extended Drinking Water Monitoring (EDWM)- collected hot and cold samples from the upstairs hallway bathroom right sink on 20 August 2024.
- Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the upstairs hallway bathroom sink on 20 August 2024.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.33 (cold)
    - 7.42 (hot)

  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 242.52 (cold)
    - 277.89 (hot)

  - Turbidity - (Acceptable Range: < 5.0 NTU)
    - 0.54 (cold)
    - 0.72 (hot)

  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.60 mg/L (cold)
    - 0.24 mg/L (hot)

  - Temperature -
    - 81.62 °F (cold)
    - 104.99 °F (hot)

- WQI hot water temperature results collected on 21 August 2024.

  - Downstairs hallway bathroom sink - 116.5 °F
  - Upstairs hallway bathroom left sink - 127.4 °F
  - Upstairs hallway bathroom right sink - 117.6 °F
  - Master bathroom right sink - 127.2 °F
  - Master bathroom left sink – 126.1 °F

- **Figure 1.** Interior view of kitchen sink aerator. Upon visual inspection, black and white debris less than 1 mm in size can be seen. Debris is of unknown material. The aerator looks to be in overall good condition.

- **Figure 2.** Interior view of the upstairs master bathroom left and right sink aerators, respectively. Upon visual inspection, no debris can be seen in the left aerator. In the right aerator, black debris less than 1 mm in size can be seen. Debris is of unknown material. Both aerators look to be in overall very good condition.

- **Figure 3.** Interior view of upstairs hallway bathroom left and right sink aerators, respectively. Right aerator gasket not photographed. Upon visual inspection no debris can be seen. Both aerators look to be in very good condition.

- **Figure 4.** Interior view of the downstairs hallway bathroom sink aerator. Upon visual inspection, many pieces of black debris 1-2 mm in size can be seen. Debris is of unknown material, particles were solid, dense, odorless and left residual stains when touched. This could possibly be from a deteriorating rubber gasket (rubber gasket not photographed). Recommend replacing aerator.

- **Figure 5.** Interior view of the master bathroom shower head. Upon visual inspection the brown/pinkish color described by the resident can be seen. The shower head is new and is made of plastic. *Serratia marcescens and Aureobasidium pullulans* are bacteria that are commonly found in showers/tubs, they thrive in moist environments and feed on fatty deposits left by soap and shampoo residue. They leave behind a pink slime or residue. This could be the cause of the discoloration in the shower head.

## C. Hot Water Heater

- 80-gallon electric water heater manufactured by Sun Earth Inc. in June 2011.
- Visual observation showed the water heater to be in good condition with little to no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

## D. Point-of-Use Treatment

- No filters installed.

## E. Overall Assessment

- Temperature was measured at all available fixtures during inspection. Hot water temperature was measured by both EDWM team and WQI team. WQI team took hot water temperatures on

21 August 2024 with an instant read digital thermometer and the EDWM team took measurements on 20 August 2024 with an Aqua Troll. The difference in decimal places in the two hot water temperatures listed is due to the different instruments used. The WQI team and EDWM team took the hot water temperature readings on different days and flushed different volumes of water. This may be the reason for the range in measurements. The WQI team confirmed all hot water fixtures could reach a temperature of 115°F or above.

- No unusual observations were made from the hot or cold water; water was clear.
- All water quality parameters collected on 20 August 2024 during the EDWM sampling were within acceptable ranges.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

**F. Recommendations**

- Follow up with EDWM water quality results when available.
- Replace the downstairs hallway bathroom aerator due to the deteriorating rubber gasket and inspect/ clean the remaining aerators periodically.
- Replace the shower head in both upstairs bathrooms.

## Conclusion

This inspection requested at the time of EDWM sampling on 20 August 2024. The inspection was conducted to determine if the residents' water meets applicable standards and is safe for use. It is recommended that the resident clean the sink aerators every six months to prevent debris build up and replace the aerator in the downstairs hallway bathroom sink. It is recommended that the resident consider replacing their shower head in both upstairs bathrooms. All water quality parameters collected during the inspection were within acceptable ranges. Based on the observations made during the inspection, no immediate concerns regarding water quality were identified. No further action is required regarding this WQI event. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed of their results by the CPLO.

**Summary of Chemistry Results**
**Zone D2**
**Drinking Water Sampling, Joint Base Pearl Harbor - Hickam, Oahu, Hawaii**

| **Notes:** |
|---|
| ND = Not Detected |
| ISP = Incident Specific Parameter |
| EAL = DOH Environmental Action Level |
| EPA MCL = EPA Maximum Contaminant Level |
| All Results shown in Parts per Billion (ppb), with the exception of Field and Bacterial Test results |
| Parts per Million (ppm) |
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| § - Exceeds Screening Level |
| -- = No Information Available |
| N (Normal) = Full compliance sample |
| FD (Field Duplicate) = Extra sample taken for quality control |
| N (Grab, Resample) = Additional follow-up sample |
| MPN/mL = Most probable number per milliliter |

| | | | | | |
|---|---|---|---|---|---|
| | | | **Location ID:** | D2-APOL0922 | |
| | | | **Location Type:** | Residence | |
| | | | **Address:** | 922 Apollo Avenue | |
| | | | **Field Sample ID:** | D2-TW-0007212-24092-N-WQI | D2-TW-0007212-24092-N-H-WQI |
| | | | **Sample Date:** | 2024-08-20 | 2024-08-20 |
| | | | **Sample Type:** | N (Normal) | N (Normal) |
| **Method Group** | **Analyte** | **DOH Project Screening Level** | **Basis of Project Screening Level** | | |
| Bacterial Test (in 100 mL) | Coliform | -- | -- | Absent | -- |
| | E. coli | -- | -- | Absent | -- |
| Bacterial Test (MPN/mL) | Heterotrophic Plate Count | -- | -- | 3.00 | ND |
| Field Test (ppb) | Free Chlorine | 4000 | MCL | 600 | 240 |
| Field Test (pH) | pH | -- | -- | 7.33 | 7.43 |
| Field Test (ms/cm) | Specific Conductivity | -- | -- | 0.240 | 0.280 |
| Field Test (degrees Celcuis) | Temperature | -- | -- | 27.6 | 40.6 |
| Field Test (nephelometric turbidity unit) | Turbidity | 5 | MCL | 0.550 | 0.720 |
| General Chemistry (ppb) | Alkalinity, Total (as CaCO3) | -- | -- | 54700 | -- |
| | Total Organic Carbon | -- | -- | ND | -- |
| Hydrocarbons (ppb) | Petroleum Hydrocarbons (as Diesel) | -- | -- | ND | -- |
| | Petroleum Hydrocarbons (as Gasoline) | -- | -- | ND | -- |
| | Petroleum Hydrocarbons (as Oil) | -- | -- | ND | -- |
| | Petroleum Hydrocarbons, Total | -- | -- | ND | -- |
| Metals (ppb) | Copper | 1300 | MCL | 9.50 | -- |
| | Lead | 15 | MCL | 0.140 | -- |
| | Mercury | 2 | MCL | ND | -- |
| Synthetic Organic Compounds (ppb) | 1-Methylnaphthalene | -- | -- | ND | -- |
| | 2-Methylnaphthalene | -- | -- | ND | -- |
| | Acenaphthylene | -- | -- | ND | -- |
| | Anthracene | -- | -- | ND | -- |
| | Benzo(a)pyrene | 0.2 | MCL | ND | -- |
| | Benzo(b)fluoranthene | -- | -- | ND | -- |

**Summary of Chemistry Results**
**Zone D2**
**Drinking Water Sampling, Joint Base Pearl Harbor - Hickam, Oahu, Hawaii**

| **Notes:** |
|---|
| ND = Not Detected |
| ISP = Incident Specific Parameter |
| EAL = DOH Environmental Action Level |
| EPA MCL = EPA Maximum Contaminant Level |
| All Results shown in Parts per Billion (ppb), with the exception of Field and Bacterial Test results |
| Parts per Million (ppm) |
| Parts per Thousand (ppth) |
| § - Exceeds Screening Level |
| -- = No Information Available |
| N (Normal) = Full compliance sample |
| FD (Field Duplicate) = Extra sample taken for quality control |
| N (Grab, Resample) = Additional follow-up sample |
| MPN/mL = Most probable number per milliliter |

| | | | | | |
|---|---|---|---|---|---|
| | | | **Location ID:** | D2-APOL0922 | |
| | | | **Location Type:** | Residence | |
| | | | **Address:** | 922 Apollo Avenue | |
| | | | **Field Sample ID:** | D2-TW-0007212-24092-N-WQI | D2-TW-0007212-24092-N-H-WQI |
| | | | **Sample Date:** | 2024-08-20 | 2024-08-20 |
| | | | **Sample Type:** | N (Normal) | N (Normal) |
| **Method Group** | **Analyte** | **DOH Project Screening Level** | **Basis of Project Screening Level** | | |
| Synthetic Organic Compounds (ppb) | Benzo(g,h,i)perylene | -- | -- | ND | -- |
| | Benzo(k)fluoranthene | -- | -- | ND | -- |
| | Chrysene | -- | -- | ND | -- |
| | Dibenz(a,h)anthracene | -- | -- | ND | -- |
| | Fluorene | -- | -- | ND | -- |
| | Indeno(1,2,3-c,d)pyrene | -- | -- | ND | -- |
| | Naphthalene | -- | -- | ND | -- |
| | Phenanthrene | -- | -- | ND | -- |
| | Pyrene | -- | -- | ND | -- |
| Volatile Organic Compounds (ppb) | 1,2,4-Trimethylbenzene | -- | -- | ND | -- |
| | 1,3,5-Trimethylbenzene | -- | -- | ND | -- |
| | Benzene | 5 | MCL | ND | -- |
| | Cumene | -- | -- | ND | -- |
| | Ethylbenzene | 700 | MCL | ND | -- |
| | m,p-Xylene | -- | -- | ND | -- |
| | n-Butylbenzene | -- | -- | ND | -- |
| | n-Propylbenzene | -- | -- | ND | -- |
| | o-Xylene | -- | -- | ND | -- |
| | sec-Butylbenzene | -- | -- | ND | -- |
| | tert-Butylbenzene | -- | -- | ND | -- |
| | Toluene | 1000 | MCL | ND | -- |
| | Xylenes, Total | 10000 | MCL | ND | -- |
| Trihalomethanes (ppb) | Bromodichloromethane | -- | -- | ND | -- |

**Summary of Chemistry Results**
**Zone D2**
**Drinking Water Sampling, Joint Base Pearl Harbor - Hickam, Oahu, Hawaii**

| **Notes:** |
|---|
| ND = Not Detected |
| ISP = Incident Specific Parameter |
| EAL = DOH Environmental Action Level |
| EPA MCL = EPA Maximum Contaminant Level |
| All Results shown in Parts per Billion (ppb), with the exception of Field and Bacterial Test results |
| Parts per Million (ppm) |
| Parts per Thousand (ppth) |
| § - Exceeds Screening Level |
| -- = No Information Available |
| N (Normal) = Full compliance sample |
| FD (Field Duplicate) = Extra sample taken for quality control |
| N (Grab, Resample) = Additional follow-up sample |
| MPN/mL = Most probable number per milliliter |

| | | | **Location ID:** | D2-APOL0922 | |
|---|---|---|---|---|---|
| | | | **Location Type:** | Residence | |
| | | | **Address:** | 922 Apollo Avenue | |
| | | | **Field Sample ID:** | D2-TW-0007212-24092-N-WQI | D2-TW-0007212-24092-N-H-WQI |
| | | | **Sample Date:** | 2024-08-20 | 2024-08-20 |
| | | | **Sample Type:** | N (Normal) | N (Normal) |
| **Method Group** | **Analyte** | **DOH Project Screening Level** | **Basis of Project Screening Level** | | |
| Trihalomethanes (ppb) | Bromoform | -- | -- | ND | -- |
| | Chloroform | -- | -- | ND | -- |
| | Dibromochloromethane | -- | -- | ND | -- |
| | Total Trihalomethanes | 80 | MCL | ND | -- |

Tuesday 17 September 2024, 1200

Zone – D2, 504 Beard Ave
Location Code: D2-BEAR0504

## BLUF

The resident recently moved into the neighborhood and requested a WQI to determine water quality. The resident had no water quality concerns. All water quality parameters collected were within expected ranges. No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water. Based on the observations made during the WQI inspection, no immediate concerns regarding water quality were identified.

## A. Resident Demographic / Concerns

- Household consists of two (2) adults, and 1 dog.
- Resident since 27 August 2024.
- Resident had no water quality concerns.

## B. **Water Quality Observations and Results**

- Unit was previously sampled on 27 April 2022. Chromium, copper, lead, barium, and selenium were detected below project screening levels.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the hallway bathroom sink/bathtub, master bathroom sink/bathtub and the kitchen sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM)- collected hot and cold samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink
  - pH – (Expected Range: 6.5 to 8.5)
    - 7.22 (cold)
    - 7.41 (hot)

  - Conductivity - (Expected Range 0 to 800 µS/cm)
    - 351 µS/cm (cold)
    - 311 µS/cm (hot)

  - Turbidity - (Expected Range: < 5.0 NTU)
    - 0.06 NTU (cold)
    - 0.00 NTU (hot)

- Free Chlorine - (Expected Range: 0.20 to 4.00 mg/L)
  - 0.62 mg/L (cold)
  - 0.56 mg/L (hot)

- Temperature
  - 82.96 °F (cold)
  - 107.6 °F (hot)

- WQI hot water temperature results collected.

  - Downstairs hallway bathroom sink – 117.5 °F
  - Master bathroom sink – 122.3 °F

- Figure 1. Interior view of kitchen sink aerator. Small debris were observed, appearing to be a combination of metal and plastic shavings. The aerator appears to be in good condition. The debris was removed from aerator.

- Figure 2. Interior view of the hallway bathroom sink aerator. Significant amount of debris, appearing to be caulk, were observed. The aerator appears to be in good condition. The debris was removed from aerator.

- Figure 3. Interior view of the master bathroom sink aerator. No debris was observed. The aerator appears to be in good condition.

C. Hot Water Heater
- 80-gallon electric water heater manufactured by Ruud in August 2012.
- Visual observation showed the water heater to be in good condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

D. Point-of-Use Treatment
- No filters installed.

E. Overall Assessment
- Temperature was measured at all available fixtures during inspection. Hot water temperature was measured by both EDWM team and WQI team. WQI team took hot water temperatures with an instant read digital thermometer and the EDWM team took measurements with an Aqua Troll 600. The difference in decimal places in the two hot water temperatures listed is due to the different instruments. The WQI team confirmed all hot water fixtures except the kitchen sink could reach a temperature of 115°F or above.
- No unusual observations were made from the hot or cold water; water was clear.
- All water quality parameters collected during the EDWM sampling were within expected ranges.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

F. Recommendations
- Follow up with EDWM water quality results when available.
- No additional actions recommended.

## Conclusion

The inspection was conducted at the request of the resident after recently moving in to determine the status of water quality. The resident had no water quality concerns to address. All water quality parameters collected during the inspection were within expected ranges. Based on the observations made during the inspection, no further action is required regarding this WQI event. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed of their results by the CPLO.

Wednesday 18 September 2024, 1200

Zone – D2, 302 Julian Ave
Location Code: D2-JULI0302

## BLUF

The resident recently moved into the neighborhood and requested a WQI to determine water quality. The resident observed rashes on their children after showering; no other water quality concerns were reported. The resident was advised to consider replacing their AISMIHO shower filter to a product that is NSF/ASNI rated. All water quality parameters collected were within expected ranges. No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water. Based on the observations made during the WQI inspection, no immediate concerns regarding water quality were identified.

### A. Resident Demographic / Concerns

- Household consists of two (2) adults, three (3) children.
- Resident since 10 July 2024.
- Resident reported their child's rashes appeared two weeks after moving into residence.

### B. Water Quality Observations and Results

- Unit was not previously sampled.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the hallway bathroom sink/bathtub for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM) – collected hot and cold samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink
  - pH – (Expected Range: 6.5 to 8.5)
    - 7.19 (cold)
    - 7.59 (hot)

  - Conductivity - (Expected Range 0 to 800 µS/cm)
    - 278.64 µS/cm (cold)
    - 315.12 µS/cm (hot)

  - Turbidity - (Expected Range: < 5.0 NTU)
    - 0.50 NTU (cold)
    - 0.00 NTU (hot)

- Free Chlorine - (Expected Range: 0.20 to 4.00 mg/L)
  - 0.60 mg/L (cold)
  - 0.16 mg/L (hot)

- Temperature
  - 81.43 °F (cold)
  - 128.21 °F (hot)

- WQI hot water temperature results collected.

  - Hallway bathroom sink – 130.2 °F
  - Master bathroom sink – 134.1 °F

- Figure 1. Interior view of kitchen sink aerator. No debris was observed. The aerator is in good condition.

- Figure 2. Interior view of the hallway bathroom sink aerator. No debris was observed. The aerator is in good condition.

- Figure 3. Interior view of the master bathroom sink aerator. No debris was observed. The aerator is in good condition.

C. Hot Water Heater
   - 80-gallon electric water heater manufactured by Ruud. Manufacture date could not be determined.
   - Visual observation showed the water heater to be in good condition with no signs of external corrosion.
   - No visible maintenance records found on the water heater.
   - The pipe material is copper.

D. Point-of-Use Treatment
   - Resident installed 30 Stage AISMIHO shower filters in hallway and master bathrooms. This product appears to be available only on Amazon. Based on product description, shower filter is not NSF/ANSI 177/44 rated, despite claims to remove heavy metals, chlorine, etc.

E. Overall Assessment
   - Temperature was measured at all available fixtures during inspection. Hot water temperature was measured by both EDWM team and WQI team. WQI team took hot water temperatures with an instant read digital thermometer and the EDWM team took measurements with an Aqua Troll 600. The difference in decimal places in the two hot water temperatures listed is due to the different instruments. The WQI team confirmed all hot water fixtures except the kitchen sink could reach a temperature of 115°F or above.
   - No unusual observations were made from the hot or cold water; water was clear.
   - All water quality parameters collected during the EDWM sampling were within expected ranges.
   - EDWM analytical results will determine if drinking water complies with the applicable standards.

F. Recommendations
   - Follow up with EDWM water quality results when available.
   - Consider replacement of shower filter with a NSF/ANSI rated filter.
   - No additional actions recommended.

## Conclusion

The inspection was conducted at the request of the resident after observing rashes on their children when they used the hallway bathroom shower. The resident had no additional water quality concerns to address. All water quality parameters collected during the inspection were within expected ranges. Based on the observations made during the inspection, no further action is required regarding this WQI event. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed of their results by the CPLO.

Wednesday 25 September 2024, 1000

Zone – D2, 377 Lewahana Loop
Location Code: D2-LEWA0377

## BLUF

The resident requested a WQI to determine water quality. The resident recently moved into their home and was concerned with a chemical-like taste in the water. The resident stated that the taste has been present since they moved into their home and that this taste is noticeable in both the kitchen sink and the master bathroom. All water quality parameters collected were within expected ranges. No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water. Based on the observations made during the WQI inspection, no immediate concerns regarding water quality were identified.

### A. Resident Demographic / Concerns

- Household consists of three (3) adults and one (1) dog.
- Resident since June 2024.
- Resident was concerned by chemical-like taste in water.

### B. Water Quality Observations and Results

- Unit was previously sampled on 18 September 2023. Chromium, Copper, Lead, Barium, Total Petroleum Hydrocarbons, and Selenium were found. All detections were below project screening levels.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the kitchen sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM) – collected hot and cold samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink
  - pH – (Expected Range: 6.5 to 8.5)
    - 7.20 (cold)
    - 7.21 (hot)

  - Conductivity - (Expected Range 0 to 800 µS/cm)
    - 244.96 µS/cm (cold)
    - 268.45 µS/cm (hot)

- Turbidity - (Expected Range: < 5.0 NTU)
  - 0.11 NTU (cold)
  - 0.00 NTU (hot)

- Free Chlorine - (Expected Range: 0.20 to 4.00 mg/L)
  - 0.63 mg/L (cold)
  - 0.29 mg/L (hot)

- Temperature
  - 76.11 °F (cold)
  - 108.75 °F (hot)

- WQI hot water temperature results collected.
  - Hallway bathroom sink – 120.2 °F
  - Master bathroom left sink – 117.8 °F
  - Master bathroom right sink – 118.4 °F
  - Upstairs hallway bathroom left sink – 122.8 °F
  - Upstairs hallway bathroom right sink – 121.6 °F

- **Figure 1.** Interior view of kitchen sink aerator. A small black piece of unknown debris less than 2mm can be observed. The aerator is in good condition.

- **Figure 2.** Interior view of the hallway bathroom sink aerator. No debris was observed. The aerator is in good condition.

- **Figure 3.** Interior view of the upstairs hallway bathroom left sink aerator. No debris was observed. The aerator is in good condition.

- **Figure 4.** Interior view of the upstairs hallway bathroom right sink aerator. No debris was observed. The aerator is in good condition.

### C. Hot Water Heater

- 80-gallon electric water heater manufactured by Sun Earth Inc in May 2010.
- Visual observation showed the water heater to be in fair condition with little signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

### D. Point-of-Use Treatment

A filter was installed on the shower head in the master bathroom, no visible information was present on the showerhead filter. Filter brand was unable to be determined.

### E. Overall Assessment

- Temperature was measured at all available fixtures during inspection. Hot water temperature was measured by both EDWM team and WQI team. WQI team took hot water temperatures with an instant read digital thermometer and the EDWM team took measurements with an Aqua Troll 600. The difference in decimal places in the two hot water temperatures listed is due to the different instruments. The WQI team confirmed all hot water fixtures except the kitchen sink could reach a temperature of 115°F or above.
- Adjacent construction operations by Shinco Construction were observed. Upon interviewing one of the employees, it was stated that the work being done was installation of new fences. No intrusive work was being conducted.
- No unusual observations were made from the hot or cold water; water was clear.
- All water quality parameters collected during the EDWM sampling were within expected ranges.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

### F. Recommendations

- Follow up with EDWM water quality results when available.
- Change shower filter such that it is NSF/ANSI 177 rated.
- Water heater displayed signs of leaks around the outer rim of the unit, it is recommended to consider maintenance/replacement.
- No additional actions recommended.

## Conclusion

The inspection was conducted at the request of the resident after noticing a chemical-like taste in their water. All water quality parameters collected during the inspection were within expected ranges. Based on the observations made during the inspection, no further action is required regarding this WQI event. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed of their results by the CPLO.

Wednesday 11 September 2024, 0800

Zone – D3, 201 Ohana Nui Circle
Location Code: D3-OHAN0201

## BLUF

The employees of AMERESCO reported concerns of rotten egg odors emanating from all fixtures. During the flushing of the hot water in hallway bathrooms, suspended organic material, likely biofilm, and a rotten egg odor was observed. Cold water in these fixtures remained clear. Hot water residual chlorine was below the expected range which may facilitate the proliferation of bacteria. Sulfate-reducing bacteria are a likely source of these water quality issues, likely due to stagnant water and a malfunctioning water heater. Based on the observations made during the WQI inspection, it is recommended to replace the water heater, thoroughly flush the plumbing, and to inspect the building's piping system for corrosion and biofouling.

## A. Resident Demographic / Concerns

- Non-residential building with 3 employees.
- Employees have occupied the building for approximately 2 years.
- Employees reported concerns of rotten egg odor originating from the fixtures of the building.

## B. **Water Quality Observations and Results**

- Building was not previously sampled.
- Discoloration with the presence of suspended organic material was observed in the hot water. Rotten egg odor was observed from all fixtures in hot water.
- Observations were consistent with the complaints of the employees.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from 3 hallway bathroom sinks and the kitchen sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM)- collected hot and cold samples from the kitchen sink.
  - Environmental Protection Agency (EPA) – Robert Hopeman
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink
  - pH – (Expected Range: 6.5 to 8.5)
    - 7.40 (cold)
    - 7.39 (hot)

  - Conductivity - (Expected Range 0 to 800 µS/cm)
    - 281.29 µS/cm (cold)
    - 266.96 µS/cm (hot)

- Turbidity - (Expected Range: < 5.0 NTU) **Refer to Section E.**
  - 0.55 NTU (cold)
  - 39.66 NTU (hot)

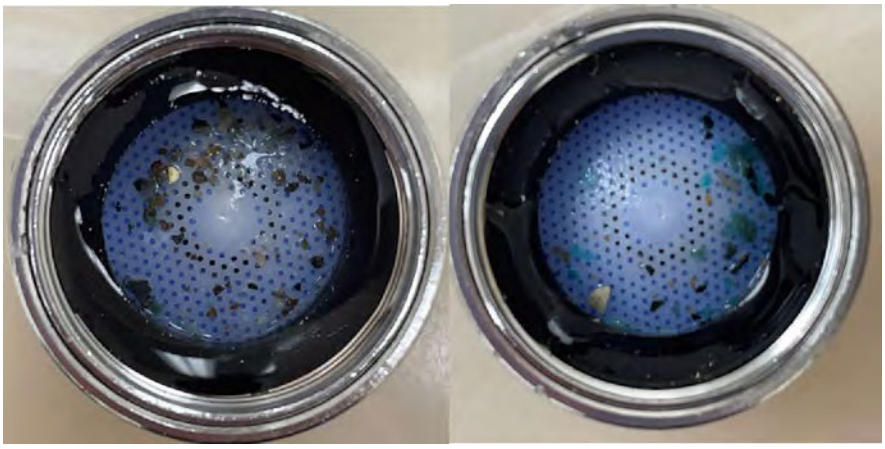
- Free Chlorine - (Expected Range: 0.20 to 4.00 mg/L) **Refer to Section E.**
  - 0.13 mg/L (cold)
  - 0.02 mg/L (hot)

- Temperature
  - 79.08 °F (cold)
  - 76.42 °F (hot)

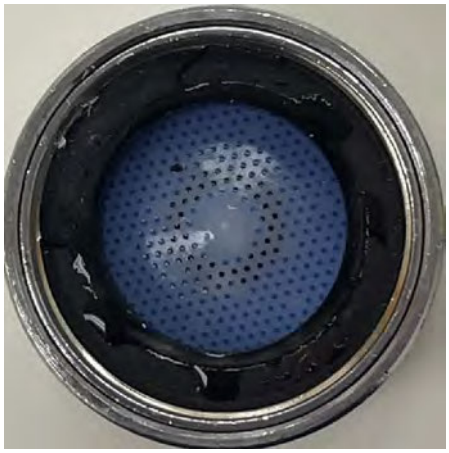
- WQI hot water temperature/Residual chlorine results collected.
  - General hallway bathroom sink – 80.05 °F/ less than 0.01 mg/L
  - Men's hallway bathroom sink – 79.87 °F/ less than 0.01 mg/L
  - Women's bathroom left sink – 81.23 °F/ less than 0.01 mg/L

- Figure 1. Interior view of kitchen sink aerator. Small debris of sediment and corroded material were observed. The aerator appears to be in fair condition.

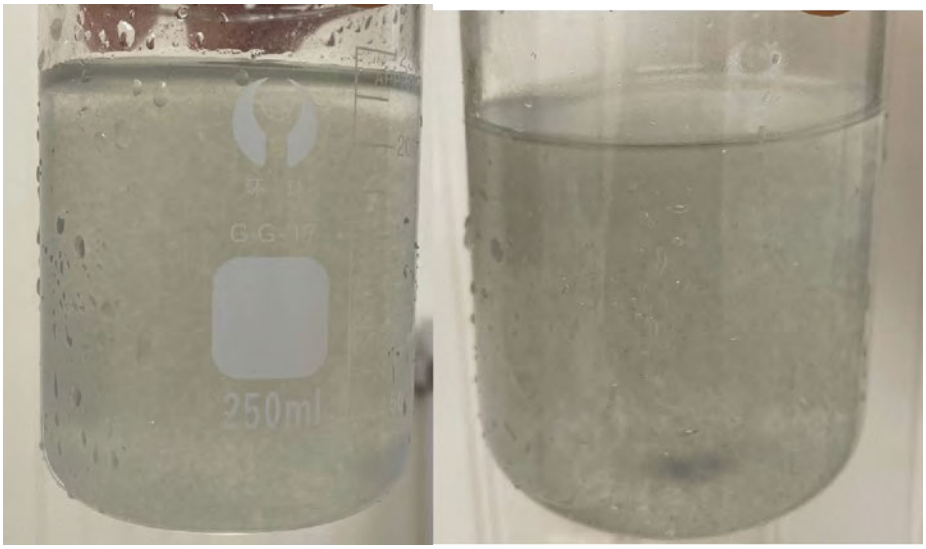
- Figure 2. Interior view of the general hallway bathroom sink aerator. Debris of sediment and corroded material were observed. The aerator appears to be in fair condition.



- Figure 3. Interior view of the men's bathroom left and right sink aerators, respectively. Sediment and corroded material were observed. The aerator appears to be in good condition.



- Figure 4. Interior view of the women's hallway bathroom sink aerator. No debris was observed. The aerator appears to be in good condition.




- Figure 4. Hot water collected in a 250 mL beaker contains suspended organic material after 6 minutes of flushing; see left image. Suspended material persisted after 15 minutes of flushing, see right image. Material consistent with corroded pipes was observed but not photographed.

- Figure 4. 50-gallon electric water heater with visible external corrosion.

C. Hot Water Heater
- 50-gallon electric water heater manufactured by Sun Earth Inc. in July 2015.
- Visual observation showed the water heater to be in poor condition with signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

D. Point-of-Use Treatment
- No filters installed.

E. Overall Assessment
- All bathrooms were flushed for 10 minutes of cold water and a minimum of 10 minutes hot water. The rotten egg odor was observed in both hot and cold, with greater fragrance from hot water. Suspended organic material was observed in all hot water after 5 minutes of flushing. This organic material is believed to be accumulated biofilm, which is conducive to the growth of bacteria, specifically sulfate-reducing bacteria, as indicated by the presence of the rotten egg odor. Temperature and residual chlorine measurements taken at the hallway bathrooms for hot water in which all temperatures ranged between 76.42 °F and 81.23 °F, and residual chlorine measured below 0.01 mg/L. Note that the assumed presence of hydrogen sulfide may cause significant corrosion in piping materials.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

F. Recommendations
- Follow up with EDWM water quality results when available.
- Replace water heater.

- Flush plumbing while ventilated.
- Inspect the piping of the building for presence of extensive biofilm and corrosion.

## Conclusion

The inspection was conducted at the request of the employees of AMERESCO experiencing a heavy rotten egg odor coming from the fixtures located in the kitchen and bathroom sinks. Taking into consideration the condition of the water heater, absence of residual chlorine in hot water, rotten egg odor, organic material accumulated during hot water flushing, and the presence of corroded material, it appears that sulfate-reducing bacteria are present in the hot water piping. While flushing the plumbing thoroughly and replacing the water heater will likely resolve this issue, it is recommended to have the plumbing system inspected to evaluate the overall condition of the piping. Pending EDWM analytical results will determine if the water is safe to drink. The employees will then be informed of their results by the CPLO.

Thursday 12 September 2024, 1000

Zone – D3, 120 Puuloa Circle
Location Code: D3-PUUL0120

## BLUF

This WQI is a response to a resident complaint of a heavy chlorine smell from their bathroom and kitchen sinks. All water quality parameters collected were within expected ranges. Based on the observations made during the WQI inspection, no immediate concerns regarding water quality were present. The resident uses an unidentifiable shower head filter of unknown NSF/ANSI rating. The resident was informed to purchase an NSF/ANSI 42 & 177 rated filter for their kitchen sink and shower head to remove chlorine. Mold was found on the ceilings of the master bathroom, removal is warranted. No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.

## A. Resident Demographic / Concerns

- Household consists of four (4) adults, one (1) child, & two (2) dogs.
- Resident since 2017.
- The resident reported strong chlorine odor from the kitchen sink and bathroom shower. No other water quality concerns were reported.

## B. **Water Quality Observations** & Results

- Unit was previously sampled on 10 October 2023 & 2 May 2022. Chromium, copper, lead, barium, selenium, and total petroleum hydrocarbons were found all below project screening levels.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the hallway bathroom sink & the kitchen sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM)- collected hot & cold samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.11 (cold)
    - 7.00 (hot)

  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 261.28 µS/cm (cold)
    - 288.61 µS/cm (hot)

  - Turbidity - (Acceptable Range: < 5.0 NTU)

  - 0.49 NTU (cold)
  - 0.00 NTU (hot)

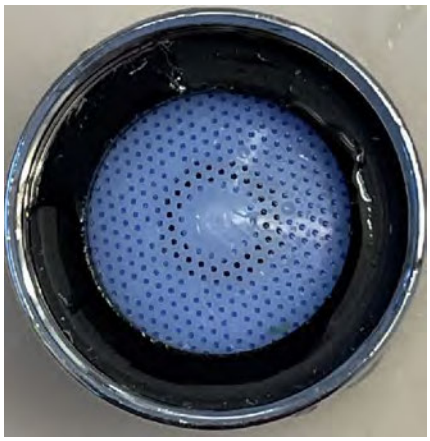
- Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
  - 0.43 mg/L (cold)
  - 0.28 mg/L (hot)

- Temperature -
  - 80.29 °F (cold)
  - 112.95 °F (hot)

- WQI hot water temperature results collected.
  - hallway bathroom sink – 116.2 °F
  - Master bathroom sink – 120.4 °F

- Figure 1. Interior view of kitchen sink aerator. No debris was observed. The aerator appears to be in good condition.

- Figure 2. Interior view of the hallway bathroom sink aerator. No debris was observed. The aerator appears to be in good condition.



- Figure 3. Interior view of the hallway bathroom sink aerator. No debris was observed. The aerator appears to be in good condition.

- Figure 4. Corner view of the master bathroom ceiling. Mold can be seen along the edges of the ceiling.

## C. Hot Water Heater

- 80-gallon electric water heater manufactured by A.O Smith. in June 2012.
- Visual observation showed the water heater to be in good condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

## D. Point-of-Use Treatment

- Resident had an unidentifiable shower head filter installed.

## E. Overall Assessment

- Temperature was measured at all available fixtures during inspection. Hot water temperature was measured by both EDWM team & WQI team. WQI team took hot water temperatures with an instant read digital thermometer & the EDWM team took measurements with an Aqua Troll 600. The difference in decimal places in the two hot water temperatures listed is due to the different instruments used. The WQI team confirmed all hot water fixtures could reach a minimum temperature of 115°F.
- No unusual observations were made from the hot or cold water; water was clear.
- Resident was informed to purchase a filter that is NSF/ANSI 42 & 177 rated for the removal of chlorine from the kitchen sink and shower head.
- All water quality parameters collected during the EDWM sampling were within expected ranges.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

## F. Recommendations

- Follow up with EDWM water quality results when available.
- Replace the showerhead filter such that the product is NSF/ANSI 177 rated.

## Conclusion

The inspection was conducted to investigate a reported chlorine odor coming from the kitchen and master bathroom. All water quality parameters collected during the inspection were within acceptable ranges. Based on the observations made during the inspection no further action is required regarding this WQI event. The resident was informed to purchase an NSF/ANSI 42 & 177 rated filter to remove chlorine from the kitchen sink and master bathroom shower head. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed of their results by the CPLO.

Thursday 12 September 2024, 1000

Zone – D3, 122 Puuloa Circle
Location Code: D3-PUUL0122

## BLUF

The resident complained of earthy/moldy odors emanating from their kitchen sink area. All water quality parameters collected were within expected ranges. Based on the observations made during the WQI inspection, no immediate concerns regarding water quality were present. The source of the odor is likely due to potential leaks/trapped debris (e.g., food) surrounding the dishwasher or garbage disposal. It is recommended to inspect both units for mold. No sheen, particles, discoloration, cloudiness, or odor were observed in the hot or cold water.

### A. Resident Demographic / Concerns

- Household consists of three (3) adults, two (2) children, & two (2) pets.
- Resident since February 2023.
- The resident observed an earthy/moldy odor emanating from their kitchen sink. The resident reported being continuously ill since moving in, they are currently seeking medical attention.

### B. **Water Quality Observations** & Results

- Unit was previously sampled on 1 April 2022. Chromium, copper, & barium were found, all detections were below project screening levels.
- No sheen, particles, discoloration, or cloudiness were observed in the hot or cold water.
- The earthy/moldy odor is believed to originate from the dishwasher or garbage disposal.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the master bathroom sink & the kitchen sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6)
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM)- collected hot & cold samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink on 12 September 2024.
  - pH – (Expected Range: 6.5 to 8.5)
    - 6.92 (cold)
    - 6.82 (hot)

  - Conductivity - (Expected Range 0 to 800 µS/cm)
    - 259.48 µS/cm (cold)
    - 287.15 µS/cm (hot)

  - Turbidity - (Expected Range: < 5.0 NTU)

  - 0.70 NTU (cold)
  - 0.13 NTU (hot)

- Free Chlorine - (Expected Range: 0.20 to 4.00 mg/L)
  - 0.50 mg/L (cold)
  - 0.20 mg/L (hot)

- Temperature -
  - 76.89 °F (cold)
  - 118.90 °F (hot)

- WQI hot water temperature results collected on 12 September 2024.

  - Hallway bathroom sink – 132.3 °F
  - Master bathroom sink – 134.7 °F

- Figure 1. Interior view of kitchen sink aerator. Debris of unknown material were observed. This material appears to be integrated with the aerator. The aerator appears to be in poor condition, replacement is recommended.

- Figure 2. Interior view of the hallway bathroom sink aerator. Unknown black material can be seen interwoven through the aerator. This material could not be removed from the aerator. The aerator appears to be in good condition; however, replacement is recommended.

- Figure 3. Interior view of upstairs hallway bathroom sink aerator. Unknown black material can be seen. This material could not be removed from the aerator. The exterior of the aerator appears to be in good condition; however, replacement is recommended.

## C. Hot Water Heater

- 119-gallon electric water heater manufactured by American Water Heater Co. in February 2006.
- Visual observation showed the water heater to be in good condition with little signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

## D. Point-of-Use Treatment

- No filters were installed.

## E. Overall Assessment

- Temperature was measured at all available fixtures during inspection. Hot water temperature was measured by both EDWM team & WQI team. WQI team took hot water temperatures with an instant read digital thermometer & the EDWM team took measurements with an Aqua Troll 600. The difference in decimal places in the two hot water temperatures listed is due to the different instruments used. The WQI team confirmed all hot water fixtures could reach a minimum temperature of 115°F.
- No unusual observations were made from the hot or cold water; water was clear. The odor reported by the resident was observed emanating from the dishwasher and the garbage disposal; however, it was difficult to establish origin. If the dishwasher is the source, maintenance may need to inspect unit for leaks. The resident informed that they have attempted to deodorize the garbage disposal with no success. It is suggested to remove garbage disposal to inspect for hidden debris.
    - All water quality parameters collected during the EDWM sampling were within expected ranges.

- EDWM analytical results will determine if drinking water complies with the applicable standards.

## F. Recommendations

- Follow up with EDWM water quality results when available.
- It is recommended that the aerators be replaced.
- It is recommended for maintenance to thoroughly inspect the dishwasher for potential leaks and to remove and inspect the garbage disposal for any trapped debris.
- Considering the age of the water heater, diagnostic testing may be warranted to determine if a replacement is needed.

## Conclusion

The inspection was conducted following an initial complaint of an earthy/moldy odor emanating from their kitchen sink area. All water quality parameters collected during the inspection were within expected ranges. Based on the observations made during the inspection, it is believed that the source of the odor can be attributed to dishwasher or garbage disposal. It is recommended that the dishwasher and garbage disposal be thoroughly inspected for potential leaks or trapped debris (e.g., food). It is also recommended to replace all aerators and to conduct diagnostic testing on the water heater to determine performance. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed of their results by the CPLO.

Thursday 26 September 2024, 0800

Zone – D3, 311 Ohana Nui Circle
Location Code: D3-OHAN0311

## BLUF

The resident requested a WQI to determine water quality upon recently moving in, no water quality concerns were reported. All water quality parameters collected were within expected ranges. No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water. Based on the observations made during the WQI inspection, no immediate concerns regarding water quality were identified.

### A. Resident Demographic / Concerns

- Household consists of two (2) adults, one (1) child, and one (1) dog.
- Resident since 21 September 2024.
- Resident reported no water quality concerns.

### B. Water Quality Observations and Results

- Unit was previously sampled on 3 May 2022. Chromium, Copper, Lead, and Barium were found. All detections were below project screening levels.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the kitchen sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – Lila Castellano.
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM) – collected hot and cold samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink
  - pH – (Expected Range: 6.5 to 8.5)
    - 7.13 (cold)
    - 7.24 (hot)

  - Conductivity - (Expected Range 0 to 800 µS/cm)
    - 243.05 µS/cm (cold)
    - 263.46 µS/cm (hot)

  - Turbidity - (Expected Range: < 5.0 NTU)
    - 0.02 NTU (cold)
    - 0.00 NTU (hot)

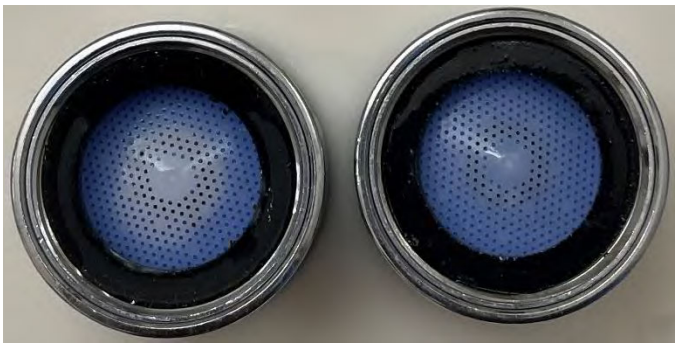
- Free Chlorine - (Expected Range: 0.20 to 4.00 mg/L)
  - 0.61 mg/L (cold)
  - 0.19 mg/L (hot)

- Temperature
  - 76.01 °F (cold)
  - 113.04 °F (hot)

- WQI hot water temperature results collected.
  - Downstairs hallway bathroom sink – 123.7 °F
  - Master bathroom left sink – 121.8 °F
  - Master bathroom right sink – 120.2 °F
  - Upstairs hallway bathroom sink – 122.5 °F

- Figure 1. Interior view of kitchen sink aerator. No debris was observed. The aerator is in good condition.

- Figure 2. Interior view of the upstairs hallway bathroom sink aerator. No debris was observed. The underside of the aerator is in poor condition. Replacement is recommended.



- Figure 3. Interior view of the master bathroom left and right sink aerator, respectively. No debris was observed. The aerator is in good condition.

- Figure 4. Interior view of the downstairs bathroom sink aerator. No debris was observed. The aerator is in good condition.

## C. Hot Water Heater

- 119.9-gallon electric water heater manufactured by Sun Earth Inc in April 2008.
- Visual observation showed the water heater to be in good condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

## D. Point-of-Use Treatment

No filters installed.

## E. Overall Assessment

- Temperature was measured at all available fixtures during inspection. Hot water temperature was measured by both EDWM team and WQI team. WQI team took hot water temperatures with an instant read digital thermometer and the EDWM team took measurements with an Aqua Troll 600. The difference in decimal places in the two hot water temperatures listed is due to the different instruments. The WQI team confirmed all hot water fixtures except the kitchen sink could reach a temperature of 115°F or above.
- No unusual observations were made from the hot or cold water; water was clear.
- All water quality parameters collected during the EDWM sampling were within expected ranges.

- EDWM analytical results will determine if drinking water complies with the applicable standards.

F. Recommendations

- Follow up with EDWM water quality results when available.
- It is recommended that the upstairs hallway bathroom aerator is replaced
- No additional actions recommended.

## Conclusion

The inspection was conducted at the request of the resident upon recently moving in to determine water quality, no water quality concerns were reported. All water quality parameters collected during the inspection were within expected ranges. Based on the observations made during the inspection, no further action is required regarding this WQI event. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed of their results by the CPLO.

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 6-20691 |
| Call Date/Time | 8/8/2024 10:17:21 AM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 8/13/2024 8:00:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | (b) (6) |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 1/1/2024 12:00:00 AM |
| Number of adults under 65 | 1 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 1 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 0 |
| Call Center Complaint Summary / Initial Notes | Did not provide survey response, resident is part of Navy Closure Task Force and wants to observe the sampling process and water delivery process. They plan to take photos. |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | No |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | |
| Do you see any issues with the appearance or odor the water in your home? | No |
| Color or Appearance of Water | None |
| | None reported |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | None |
| | None reported |
| Staining | None |
| | None reported |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | No |
| Skin | None |
| | None reported |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | None |
| | None reported |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | None |
| | None reported |

# In-Person Site Visit

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | None |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | |
| Does it occur only when you first turn on the water or does it occur continuously? | |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

## Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |
| | None reported |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Kitchen |
| pH (standard units) | 7.14 |
| Conductivity (µS/cm) | 253.07 |
| FreeChlorine (mg/L or ppm) | 0.61 |
| Cold Temp (degrees F) | 75.86 |
| Hot water Sampling Location | Kitchen |
| pH (standard units) | 7.28 |
| Conductivity (µS/cm) | 285.39 |
| FreeChlorine (mg/L or ppm) | 0.55 |
| Hot Temp (degrees F) | 121.71 |
| Water Quality Notes | Unit was previously sampled on 25 May 2022. Traces of chromium, copper, barium, and selenium were found. These detections were all below project screening levels.<br>No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.<br>No unusual observations.<br>TURB: 1.04 (cold), 0.78 (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | No |
| | none |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Looks new / clean,Scaling / Debris / Particulates present |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Looks new / clean,Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Looks new / clean |
| Bathroom - other - Specific inspection point | |
| Bathroom - other - Condition of aerator | |

# Call Center - WQI Checklist

## Other Concerns

Water Presure

Hot Water Temperature

Cross-Connection

Irrigation

## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | Yes |
| Navy to follow-up | No |
| Other | Yes |
| | Replace master bathroom sink aerator because aerator is damaged.<br>Follow up with EDWM water quality results when available. |
| Other Site Visit Notes | Kitchen sink aerator: Upon visual inspection, a small piece of black debris of unknown material can be seen. The aerator looks to be in overall good condition.<br><br>Hallway bathroom sink aerator: Upon visual inspection, a small piece of black debris of unknown material can be seen. The aerator looks to be in overall good condition.<br><br>Master bathroom sink aerator: Upon visual inspection, small black opaque debris of unknown material were observed. Debris had no odor and was soft, when touched it left a black smudge residue, which is a possible indicator of deteriorating rubber from a gasket/washer. A hole can also be seen in the screen of the aerator.<br><br>Upstairs hallway bathroom sink aerator: Upon visual inspection, aerator looks to be in good condition and no debris was present. |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20691 |
| Location | Other |
| Title | Interior View of Kitchen Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20691 |
| Location | Other |
| Title | Interior View of Hallway Bathroom Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20691 |
| Location | Other |
| Title | Interior View of Master Bathroom Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20691 |
| Location | Other |
| Title | Interior View of Upstairs Hallway Bathroom Sink Aerator |

Tuesday 13 August 2024, 0800

Zone – F1, (b) (6)
Location Code: F1-(b) (6) 5

## BLUF

The resident is with Navy Closure Task Force and wanted to observe and photograph the WQI process. No issues with water quality were reported. All water quality parameters collected during the inspection were within acceptable ranges. Based on the observations made during the inspection, no immediate concerns regarding water quality were identified.

### A. Resident Demographic / Concerns

- Household consists of one (1) adult and one (1) child.
- Resident since January 2024.
- The resident is with Navy Closure Task Force and wanted to observe and photograph the process. The resident stated that they have no immediate or specific concerns regarding their water quality. The resident stated that they appreciate that the water will be sampled and tested as it will provide assurance that the water is safe.

### B. Water Quality Observations and Results

- Unit was previously sampled on 25 May 2022. Traces of chromium, copper, barium, and selenium were found. These detections were all below project screening levels.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the downstairs hallway bathroom sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation (WQI) Team
  - Extended Drinking Water Monitoring (EDWM) collected hot and cold samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.14 (cold)
    - 7.28 (hot)

  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 253.07 (cold)
    - 285.39 (hot)

- Turbidity - (Acceptable Range: < 5.0 NTU)
  - 1.04 (cold)
  - 0.78 (hot)

- Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
  - 0.61 mg/L (cold)
  - 0.55 mg/L (hot)

- Temperature -
  - 75.86 °F (cold)
  - 121.71 °F (hot)

- **Figure 1.** Interior view of kitchen sink aerator. Upon visual inspection, a small piece of black debris of unknown material can be seen. The aerator looks to be in overall good condition.

- **Figure 2.** Interior view of the hallway bathroom sink aerator. Upon visual inspection, a small piece of black debris of unknown material can be seen. The aerator looks to be in overall good condition.

- **Figure 3.** Interior view of the master bathroom sink aerator. Upon visual inspection, small black opaque debris of unknown material were observed. Debris had no odor and was soft, when touched it left a black smudge residue, which is a possible indicator of deteriorating rubber from a gasket/washer. A hole can also be seen in the screen of the aerator.

- **Figure 4.** Interior view of the upstairs hallway bathroom sink aerator. Upon visual inspection, aerator looks to be in good condition and no debris was present.

### C. Hot Water Heater

- 80-gallon electric water heater manufactured by Sun Earth Inc. in April 2011.
- Visual observation showed the water heater to be in decent condition with some signs of minor external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

### D. Point-of-Use Treatment

- No filters installed.

### E. Overall Assessment

- Temperature was measured at all available fixtures during inspection; all hot water fixtures were measured at 121 °F or above.
- All water quality parameters collected during the inspection were within acceptable ranges.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

### F. Recommendations

- Replace master bathroom sink aerator because aerator is damaged.
- Follow up with EDWM water quality results when available.

## Conclusion

This inspection was conducted to determine if the residents' water meets applicable standards and is safe for use. It is recommended that the resident replace the aerator in the master bathroom sink because the aerator is damaged. No further action is required regarding this WQI event. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed by the CPLO.

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | (b) (6) | (b) (6) |
| Field Sample ID: | | | F1-TW-0008844-24092-N-WQI | F1-TW-0008844-24092-N-H-WQI |
| Sample Date: | | | 2024-08-13 | 2024-08-13 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240813-OLT-07** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (CFU/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240813-OLT-07** | **SDG: 240813-OLT-06** |
| Heterotrophic Plate Count | None | None | **4.00** | 1.00 U |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.550-0.610 | 0.550-0.610 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66375** | |
| Alkalinity, Total (as CaCO3) | None | None | **57.9** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66375** | |
| Petroleum Hydrocarbons (as Diesel) | None | None | 48.0 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 U | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 48.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |

| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66375** | |
|---|---|---|---|---|
| Copper | 1300 | 1300 | **31.8** | -- |
| Lead | 15 | 15 | 0.130 U | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |

| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66375** | |
|---|---|---|---|---|
| 1-Methylnaphthalene | None | None | 0.250 U | -- |
| 2-Methylnaphthalene | None | None | 0.250 U | -- |
| Acenaphthylene | None | None | 0.250 U | -- |
| Anthracene | None | None | 0.250 UJ | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | 0.0100 U | -- |
| Benzo(b)fluoranthene | None | None | 0.250 U | -- |
| Benzo(g,h,i)perylene | None | None | 0.250 U | -- |
| Benzo(k)fluoranthene | None | None | 0.250 U | -- |
| Chrysene | None | None | 0.250 U | -- |
| Dibenz(a,h)anthracene | None | None | 0.250 U | -- |
| Fluorene | None | None | 0.250 U | -- |
| Indeno(1,2,3-c,d)pyrene | None | None | 0.250 U | -- |
| Naphthalene | None | None | 0.250 U | -- |
| Phenanthrene | None | None | 0.250 U | -- |
| Pyrene | None | None | 0.250 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| VOC (µg/L) | DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents | Environmental Protection Agency Maximum Contaminant Levels | SDG: DA66375 | |
|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | 0.300 U | -- |
| Chloroform | None | None | 0.250 U | -- |
| Cumene | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | 0.250 U | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |
| n-Butylbenzene | None | None | 0.250 U | -- |
| n-Propylbenzene | None | None | 0.250 U | -- |
| o-Xylene | None | None | 0.250 U | -- |
| sec-Butylbenzene | None | None | 0.400 U | -- |
| tert-Butylbenzene | None | None | 0.400 U | -- |
| Toluene | 1000 | 1000 | 0.250 U | -- |
| Total Trihalomethanes | 80 | None | ND | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison
mg/L = Milligrams per Liter

CFU/ml = Colony Forming Units per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 6-20532 |
| Call Date/Time | 7/29/2024 12:43:38 PM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 7/31/2024 10:00:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | (b) (6) |
| Address | 3360 Kilmer Street |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 7/5/2022 12:00:00 AM |
| Number of adults under 65 | 2 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 2 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 0 |
| Call Center Complaint Summary / Initial Notes | The resident recently returned from a vacation in Japan. While abroad the skin rashes they have been<br>dealing with since moving into their home cleared up. Upon returning home and resuming the use of<br>their home showers, the rash has returned. |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | Yes |
| When did you first notice the issue? | 7/5/2022 12:00:00 AM |
| Is this an ongoing issue/concern, or does it only happen at certain times? | Ongoing |
| Do you see any issues with the appearance or odor the water in your home? | No |
| Color or Appearance of Water | None |
| | None reported |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | Other |
| | None reported |
| Staining | None |
| | None reported |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

### Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | Yes |
| Skin | Adults |
| | Resident reported that three weeks after moving into home in May 2022 that their wife began experiencing extreme constant skin irritation including red blotchy skin rashes, facial and eye swelling, and extremely dry skin that cracks and leaves sores. |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | None |
| | None reported |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | None |
| | None reported |

# In-Person Site Visit

### General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | Kitchen,Bathroom,Upstairs,Downstairs |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | Both hot & cold water |
| Does it occur only when you first turn on the water or does it occur continuously? | Continuously |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

### Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Kitchen |
| pH (standard units) | 6.97 |
| Conductivity (µS/cm) | 255.00 |
| FreeChlorine (mg/L or ppm) | 0.59 |
| Cold Temp (degrees F) | 77.00 |
| Hot water Sampling Location | Kitchen |
| pH (standard units) | 7.24 |
| Conductivity (µS/cm) | 271.00 |
| FreeChlorine (mg/L or ppm) | 0.57 |
| Hot Temp (degrees F) | 104.00 |
| Water Quality Notes | Unit was previously sampled on 25 March 2022. Traces of Total Organic Carbon, Chromium, Copper, Lead, and Barium were found. The results from this sample were under project screening levels.<br>No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.<br>No unusual observations.<br>TURB: 0.246 NTU (cold), 1.29 NTU (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | Yes |
| | Filter installed on the shower head in the master bathroom |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | Shower head |
| | Resident said they replace the filter monthly |
| Who installed the water filter | Resident |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | True |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Scaling / Debris / Particulates present |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | |
| Bathroom - second floor - Condition of aerator | |
| Bathroom - other - Specific inspection point | Sink faucet |
| Bathroom - other - Condition of aerator | Scaling / Debris / Particulates present |

# Call Center - WQI Checklist

## Other Concerns

Water Presure

Hot Water Temperature

Cross-Connection

Irrigation

## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | Yes |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>Replace the aerators in upstairs hallway bathroom and the master bathroom.<br>Request maintenance to flush the water heater. |
| Other Site Visit Notes | Kitchen sink aerator: Upon visual inspection, minor scale build up can be observed.<br><br>Hallway bathroom sink aerator: Upon visual inspection, small tan and black opaque debris of unknown material were observed.<br><br>Upstairs hallway bathroom sink aerator. Upon visual inspection, small black opaque debris of unknown material were observed as well as other debris that has a green tinge.<br><br>Interior view of the master bathroom left sink aerator: Upon visual inspection, some small black opaque debris of unknown material was observed.<br><br>Master bathroom right aerator: Upon visual inspection, small black opaque debris of unknown material was observed.<br><br>80-gallon electric water heater manufactured by Ruudglas Pacemaker in October 2007.<br>Visual observation showed the water heater to be in good condition with no signs of external corrosion.<br>No visible maintenance records found on the water heater.<br>The pipe material is copper. |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20532 |
| Location | Other |
| Title | Interior View of Kitchen Sink Aerator |

# Call Center - WQI Checklist

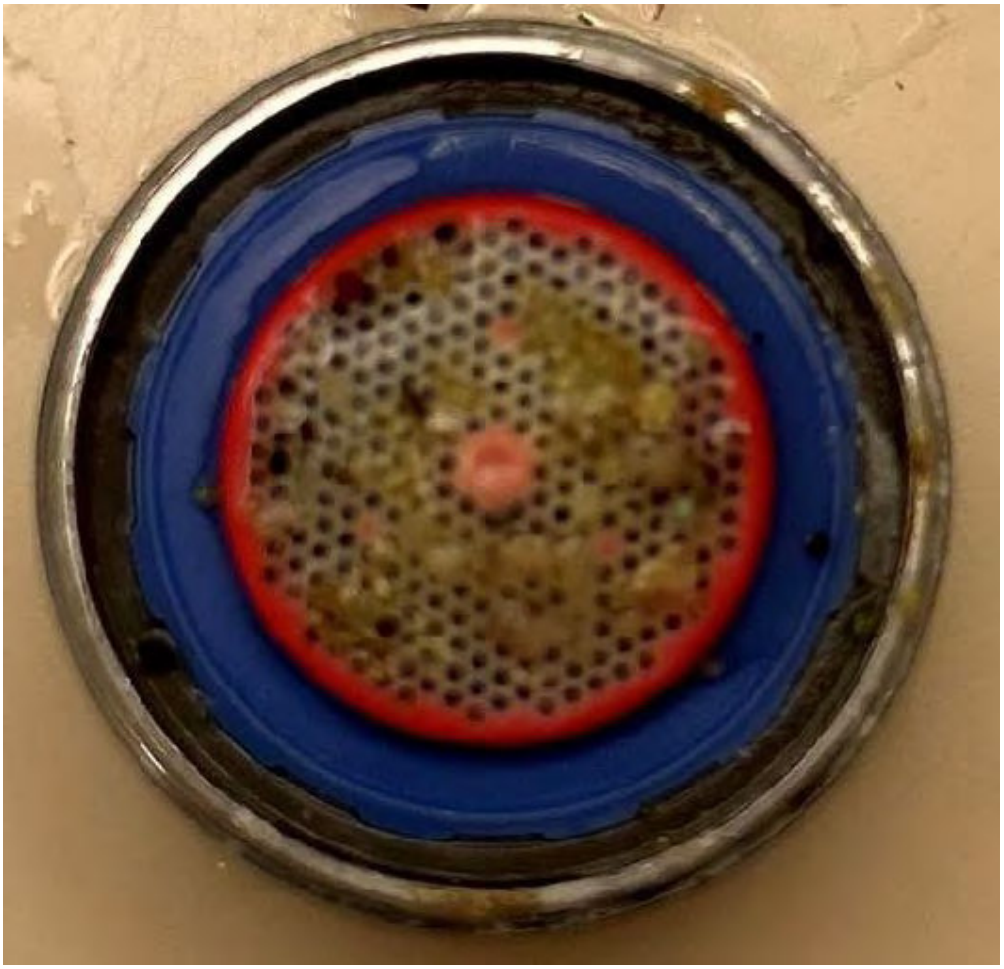
## Photos

| | |
|---|---|
| Ticket Number | 20532 |
| Location | Other |
| Title | Interior View of Hallway Bathroom Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20532 |
| Location | Second Floor - Bathroom 1 - Sink |
| Title | Interior View of Upstairs Hallway Bathroom Sink Aerator |



# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20532 |
| Location | Other |
| Title | Interior View of Master Bathroom Left Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20532 |
| Location | Other |
| Title | Interior View of Master Bathroom Right Sink Aerator |

Wednesday, 31 July 2024, 1000

Zone – F2, 3360 Kilmer Street
Location Code: F2-KILM3360

## BLUF

The resident recently returned from a vacation in Japan. While abroad the skin rashes they have been dealing with since moving into their home cleared up. Upon returning home and resuming the use of their home showers, the rash has returned. This WQI is the response to determine the conditions and safety of their water quality.

### A. Resident Demographic/ Concerns

- Household consists of two (2) adults and two (2) children.
- Resident since May 2022.
- Resident reported that approximately three (3) weeks after moving into their home in May 2022 that their wife began experiencing extreme constant skin irritation including red blotchy skin rashes, facial and eye swelling, and extremely dry skin that cracks and leaves sores. The resident explained that this began only after moving into the current residence and has been a constant issue since. The resident believes the water could potentially be a contributing factor because the family goes on vacation annually to Japan, and while on vacation the wife's skin rashes clear up and only return upon coming home and resuming use of their home water. The resident stated that their wife sought out professional medical help and now sees a dermatologist bimonthly. The resident also stated that their wife has gotten professional allergy testing done and test confirmed that she does not have allergies.

### B. Water Quality Observations and Results

- Unit was previously sampled on 25 March 2022. Traces of Total Organic Carbon, Chromium, Copper, Lead, and Barium were found. The results from this sample were under project screening levels.
- No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.
- No unusual observations

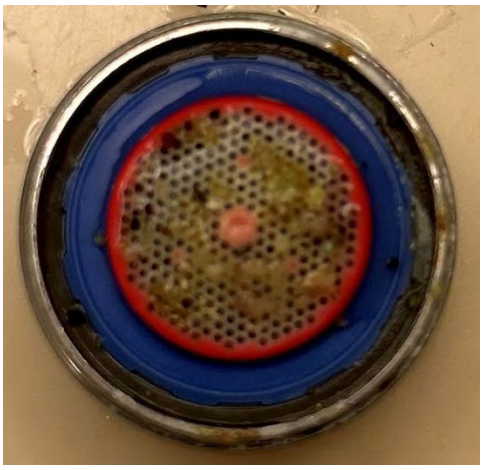
- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the kitchen sink and the master bathroom right sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM) collected hot and cold samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 6.97 (cold)
    - 7.24 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)

    - 255 µS/cm (cold)
    - 271 µS/cm (hot)
- Turbidity - (Acceptable Range: < 1.0 NTU)
    - 0.246 NTU (cold)
    - 1.29 NTU (hot) – See section E.
- Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.59 mg/L (cold)
    - 0.57 mg/L (hot)
- Temperature -
    - 77.0 °F (cold)
    - 104.0 °F (hot)

- **Figure 1.** Interior view of kitchen sink aerator. Upon visual inspection, minor scale build up can be observed.

- **Figure 2.** Interior view of the hallway bathroom sink aerator. Upon visual inspection, small tan and black opaque debris of unknown material were observed.



- **Figure 3.** Interior view of the upstairs hallway bathroom sink aerator. Upon visual inspection, small black opaque debris of unknown material were observed as well as other debris that has a green tinge.

- **Figure 4.** Interior view of the master bathroom left sink aerator. Upon visual inspection, some small black opaque debris of unknown material was observed.

- **Figure 5.** Interior view of the master bathroom right aerator. Upon visual inspection, small black opaque debris of unknown material was observed.

## C. Hot Water Heater

- 80-gallon electric water heater manufactured by Ruudglas Pacemaker in October 2007.
- Visual observation showed the water heater to be in good condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

## D. Point-of-Use Treatment

A filter was installed in the master bathroom shower. Upon visual inspection no identifiable information was present on the filter. The resident stated that the filter is a charcoal filter purchased from an online retailer, and filter is replaced monthly.

## E. Overall Assessment

- Temperature was measured at all available fixtures during inspection; all fixtures were measured at 104 °F or above.
- Hot water turbidity had a measurement of 1.29 NTU while cold water turbidity measured at 0.246 NTU. The hot-water reading is greater than the acceptable maximum turbidity range of 1 NTU. No cloudiness was observed in the hot water, and the prior cold-water reading was within the acceptable range. Although the hot water turbidity is slightly above 1.0 NTU this recording does not represent a health concern. Further, remaining water quality field parameters were within recommended limits at the time of inspection.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

## F. Recommendations

- Follow up with EDWM water quality results when available.
- Replace the aerators in upstairs hallway bathroom and the master bathroom.
- Request maintenance to flush the water heater.

## Conclusion

This inspection was conducted to determine if the residents water met applicable standards and is safe to utilize. No unusual immediate observations regarding the water were found. EDWM analytical results will determine if the water is safe, and the resident will then be informed by CPLO.

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | 3360 Kilmer Street | 3360 Kilmer Street |
| Field Sample ID: | | | F2-TW-0011732-24092-N-WQI | F2-TW-0011732-24092-N-H-WQI |
| Sample Date: | | | 2024-07-31 | 2024-07-31 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240731-2568-781** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (MPN/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240731-2568-781** | **SDG: 240731-2568-781** |
| Heterotrophic Plate Count | None | None | 2.00 U | **2.00** |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.570-0.590 | 0.570-0.590 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66042** | |
| Alkalinity, Total (as CaCO3) | None | None | **57.6** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66042** | |
| Petroleum Hydrocarbons (as Diesel) | None | None | 48.0 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 U | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 48.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |

| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66042** | |
|---|---|---|---|---|
| Copper | 1300 | 1300 | **13.0** | -- |
| Lead | 15 | 15 | 0.130 U | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |

| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66042** | |
|---|---|---|---|---|
| 1-Methylnaphthalene | None | None | 0.260 U | -- |
| 2-Methylnaphthalene | None | None | 0.260 U | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | **0.0190 J** | -- |
| Naphthalene | None | None | 0.260 U | -- |

| **VOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA66042** | |
|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | 0.300 U | -- |
| Chloroform | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | 0.250 U | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |
| o-Xylene | None | None | 0.250 U | -- |
| Toluene | 1000 | 1000 | 0.250 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Total Trihalomethanes | 80 | None | ND | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison

mg/L = Milligrams per Liter

MPN/ml = Most Probable Number per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 1-20027 |
| Call Date/Time | 7/5/2024 12:09:28 PM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 7/8/2024 9:30:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | no name provided |
| Address | 5239 Balsa Lane |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 1/26/2024 12:00:00 AM |
| Number of adults under 65 | 2 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 2 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 3 |
| Call Center Complaint Summary / Initial Notes | Previously sampled. Recently noticed an oily sheen from the kitchen sink and a funky smell from upstairs master bathroom right sink. Would like to get sampled. wanted water for 4 people and 3 pets in the home |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | Yes |
| When did you first notice the issue? | |
| Is this an ongoing issue/concern, or does it only happen at certain times? | Ongoing |
| Do you see any issues with the appearance or odor the water in your home? | Yes |
| Color or Appearance of Water | Sheen |
| | Resident reported concerns after observing an oily sheen on the hot water coming from the kitchen sink. |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | Foul / Sulfur / Rotten Egg / Sewage |
| | Resident stated they occasionally noticed what they described as a “muddy smell” coming from the right-side master bathroom sink. |
| Staining | None |
| | None reported. |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | No |
| Skin | None |
| | None reported. |
| Respiratory | None |
| | None reported. |
| Gastrointestinal | None |
| | None reported. |
| Headache | None |
| | None reported. |
| Dizziness | None |
| | None reported. |
| Cough | None |
| | None reported. |
| Vision | None |
| | None reported. |
| Other | None |
| | None reported. |

# In-Person Site Visit

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | Kitchen,Bathroom,Upstairs,Downstairs |
| Are your neighbors experiencing the same issue? | I don't know |
| Does it occur with just the cold water, the hot water, or both? | Both hot & cold water |
| Does it occur only when you first turn on the water or does it occur continuously? | Continuously |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

## Premise Plumbing History

Premise Plumbing History

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Kitchen |
| pH (standard units) | 6.96 |
| Conductivity (µS/cm) | 251.15 |
| FreeChlorine (mg/L or ppm) | 0.60 |
| Cold Temp (degrees F) | 79.50 |
| Hot water Sampling Location | Kitchen |
| pH (standard units) | 7.00 |
| Conductivity (µS/cm) | 258.26 |
| FreeChlorine (mg/L or ppm) | 0.29 |
| Hot Temp (degrees F) | 108.08 |
| Water Quality Notes | Unit was previously sampled on 29 June 2022.<br>Traces of Copper, Lead, Barium, Petroleum Hydrocarbons (as Diesel), Selenium, and Bromoform were found. All results were reported under their respective screening levels.<br>No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.<br>No unusual observations.<br>TURB: 0.02 NTU (cold), 0.27 NTU (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | No |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | False |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Scaling / Debris / Particulates present |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Looks new / clean |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Looks new / clean |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - other - Specific inspection point | Sink faucet |
| Bathroom - other - Condition of aerator | Scaling / Debris / Particulates present |

# Call Center - WQI Checklist

## Other Concerns

| | |
|---|---|
| Water Presure | Good |
| Hot Water Temperature | Good |
| Cross-Connection | |
| Irrigation | |

## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | Yes |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>Recommend replacing aerators.<br>Considering the age and apparent corrosion on the water heater unit, consider scheduling for maintenance or replacement.<br>Upon receiving/reviewing the water heater maintenance records, further assessment will be provided, if applicable.<br>No additional actions required. |
| Other Site Visit Notes | Kitchen sink aerator: Upon visual inspection, small debris of unknown material was observed.<br><br>Downstairs hallway bathroom sink aerator: Upon visual inspection, no debris was observed.<br><br>Upstairs master bathroom left sink aerator: Upon visual inspection, no debris was observed.<br><br>Interior and exterior view of upstairs master bathroom right sink aerator: Upon visual inspection, small debris of unknown material was observed on the exterior along with the gasket of the aerator to be degrading.<br><br>Interior and exterior view of upstairs hallway bathroom sink aerator. Upon visual inspection, small debris of unknown material was observed.<br><br>80-gallon electric water heater manufactured by Sun Earth Inc. in February 2010.<br>Visual observation of the water heater to be in fair condition with little signs of external corrosion.<br>No visible maintenance records found on the water heater.<br>The pipe material is copper. |

# Call Center - WQI Checklist

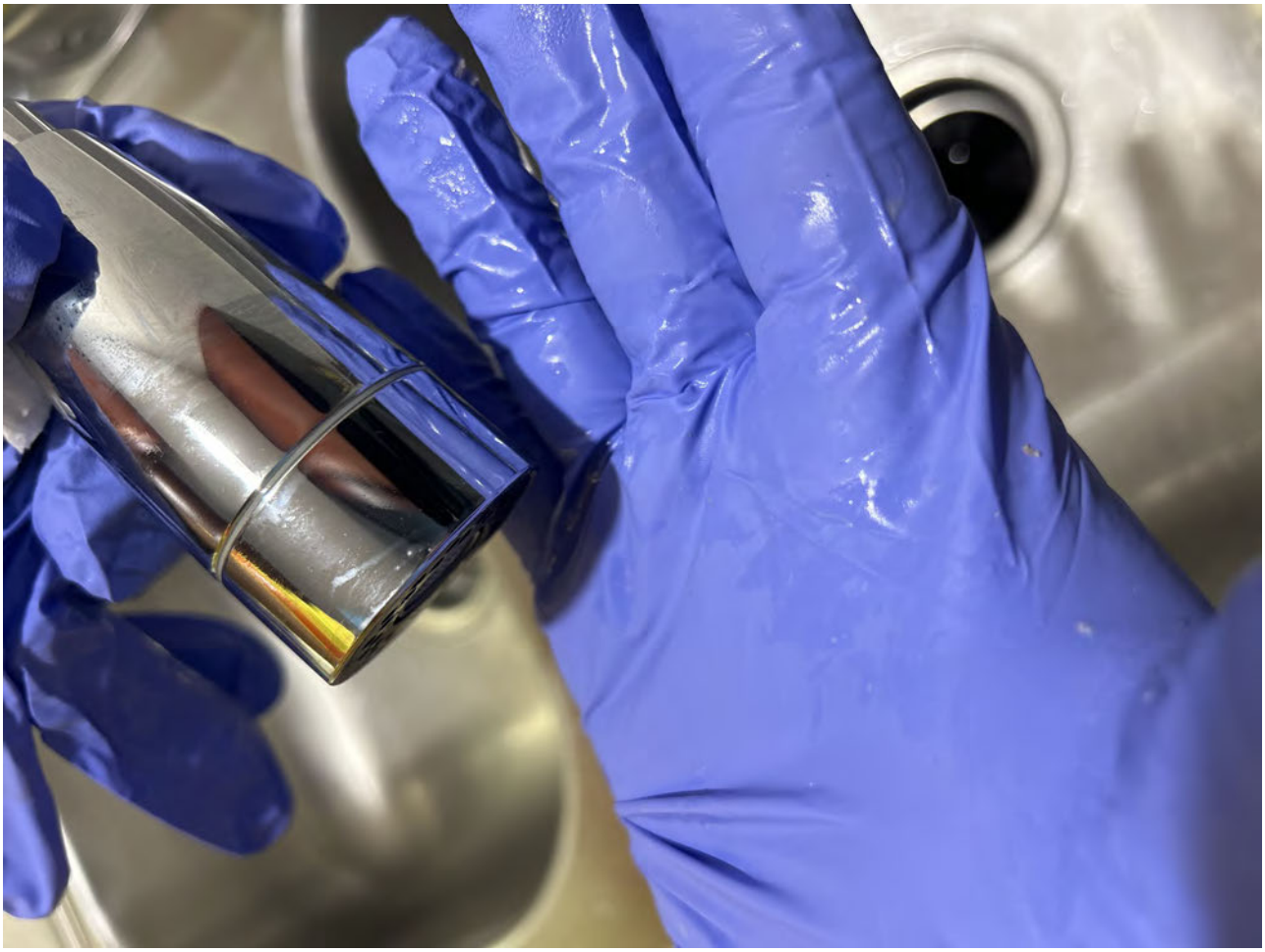
## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | [No Coverage] |
| Title | Down stairs hallway bathroom aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | [No Coverage] |
| Title | kitchen sink |



# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | [No Coverage] |
| Title | kitchen sink aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | [No Coverage] |
| Title | master bathroom left sink aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | [No Coverage] |
| Title | master bathroom left sink aerator exterior |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | [No Coverage] |
| Title | master bathroom left sink |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | [No Coverage] |
| Title | master bathroom right sink |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | [No Coverage] |
| Title | master bathroom right sink aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | [No Coverage] |
| Title | master bathroom right sink aerator exterior |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | [No Coverage] |
| Title | upstairs hallway bathroom aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | [No Coverage] |
| Title | upstairs hallway bathroom aerator exterior |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | [No Coverage] |
| Title | water heater |

## Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | [No Coverage] |
| Title | water heater |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | Other |
| Title | Interior View of Kitchen Sink Aerator |

# Call Center - WQI Checklist

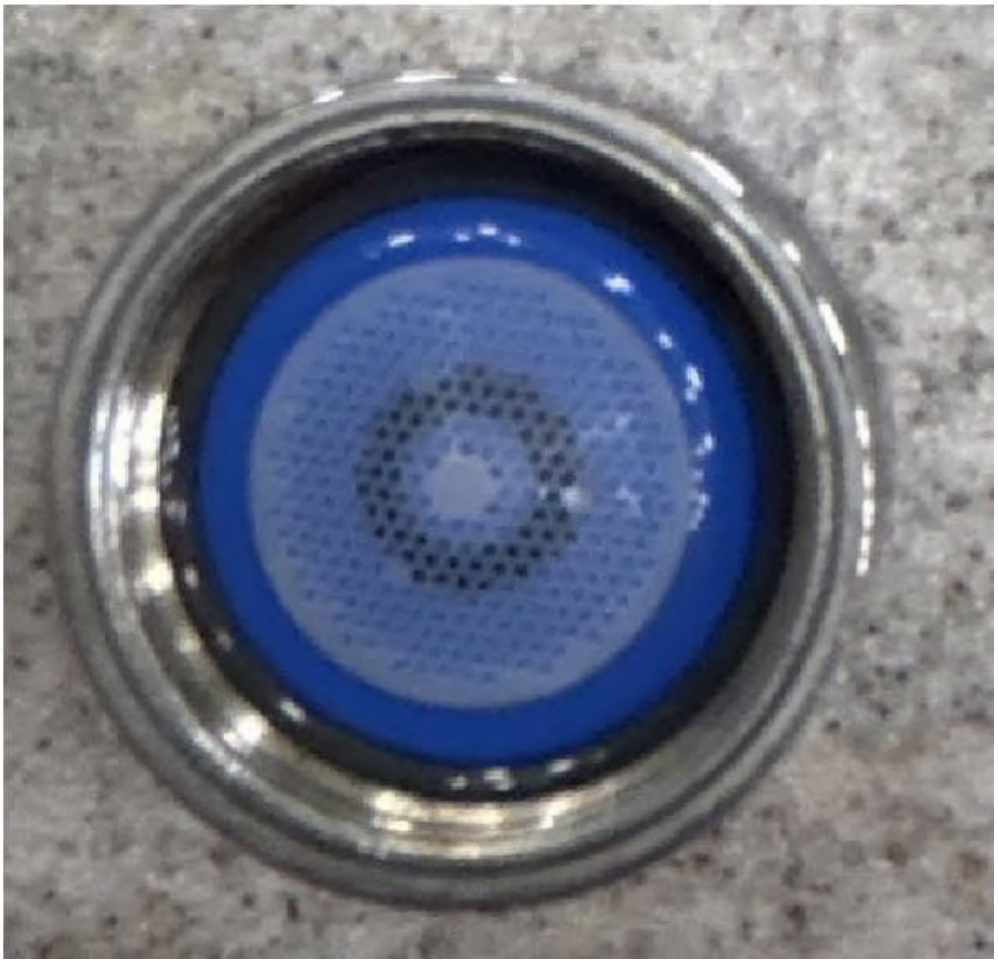
## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior View of Downstairs Hallway Bathroom Sink Aerator |

## Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior View of Upstairs Master Bathroom Left Sink Aerator |



# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | Other |
| Title | Interior and Exterior View of Upstairs Master Bathroom Right Sink Aerator |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 20027 |
| Location | Other |
| Title | Interior and Exterior View of Upstairs Hallway Bathroom Sink Aerator |

Monday, 8 July 2024, 0930

Zone – H2, 5239 Balsa Lane
Location Code: H2-BALS5239

## A. Resident Demographic/ Concerns

- Household consists of two (2) adults, two (2) children, three (3) pets.
- Resident since 26 January 2024.
- Resident reported concerns after observing an oily sheen on the hot water coming from the kitchen sink. Resident also stated they occasionally noticed what they described as a "muddy smell" coming from the right-side master bathroom sink. The resident wanted testing for confirmation that water quality is safe.

## B. **Water Quality Observations and Results**

- Unit was previously sampled on 29 June 2022.
  - Traces of Copper, Lead, Barium, Petroleum Hydrocarbons (as Diesel), Selenium, and Bromoform were found. All results were reported under their respective screening levels.
  - No sheen, particles, discoloration, cloudiness, or odors observed in hot or cold water.
  - Resident showed video of the suspected "sheen" coming from the hot water. It was visually confirmed that this observation was due to air bubbles.
  - Identification of the "muddy smell" source led to the discovery of the unknown material from the exterior of the aerators. This is shown in Figures 4 and 5.
  - No unusual observations.
- Personnel on-site
  - Water Quality Action Team (WQAT) - Collected cold water samples from the kitchen and the master bedroom right sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation Water Monitoring (WQIWM) – EDWM collected hot/cold water samples from the kitchen sink.
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 6.96 (cold)
    - 7.00 (hot)
  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 251.15 µS/cm (cold)
    - 258.26 µS/cm (hot)
  - Turbidity - (Acceptable Range: < 1.0 NTU)
    - 0.02 NTU (cold)
    - 0.27 NTU (hot)
  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.60 mg/L (cold)
    - 0.29 mg/L (hot)

- Temperature -
  - 79.50°F (cold)
  - 108.08°F (hot)

- Figure 1. Interior view of kitchen sink aerator. Upon visual inspection, small debris of unknown material was observed.

- Figure 2. Interior view of downstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed.

- Figure 3. Interior view of upstairs master bathroom left sink aerator. Upon visual inspection, no debris was observed.

- Figure 4. Interior and exterior view of upstairs master bathroom right sink aerator. Upon visual inspection, small debris of unknown material was observed on the exterior along with the gasket of the aerator to be degrading.

- Figure 5. Interior and exterior view of upstairs hallway bathroom sink aerator. Upon visual inspection, small debris of unknown material was observed.

## C. Hot Water Heater

- 80-gallon electric water heater manufactured by Sun Earth Inc. in February 2010.
- Visual observation of the water heater to be in fair condition with little signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

## D. Point-of-Use Treatment

No filters installed.

## E. Overall Assessment

- No unusual observations.
- Apparent sheen may have possibly resulted from misinterpretation of swirling air bubbles from hot water.
- The odor may have resulted from the unknown material that had collected on the exterior of the aerators.
- Water quality field parameters were within recommended limits at the time of inspection.

- EDWM analytical results will determine if drinking water is in compliance with the applicable standards.

F. Recommendations

- Follow up with EDWM water quality results when available.
- Recommend replacing aerators.
- Considering the age and apparent corrosion on the water heater unit, consider scheduling for maintenance or replacement.
- Upon receiving/reviewing the water heater maintenance records, further assessment will be provided, if applicable.
- No additional actions required.

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | 5239 Balsa Lane | 5239 Balsa Lane |
| Field Sample ID: | | | H2-TW-0013581-24092-A-WQI | H2-TW-0013581-24092-A-H-WQI |
| Sample Date: | | | 2024-07-08 | 2024-07-08 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240708-2568-565** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (MPN/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240708-2568-565** | **SDG: 240708-2568-565** |
| Heterotrophic Plate Count | None | None | 2.00 U | 2.00 U |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.290-0.600 | 0.290-0.600 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65502** | |
| Alkalinity, Total (as CaCO3) | None | None | **52.6** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65502** | |
| Petroleum Hydrocarbons (as Diesel) | None | None | 47.0 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 U | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 47.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |
| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65502** | |
| Copper | 1300 | 1300 | **8.70** | -- |
| Lead | 15 | 15 | **0.580** | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |
| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65502** | |
| 1-Methylnaphthalene | None | None | 0.250 U | -- |
| 2-Methylnaphthalene | None | None | 0.250 U | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | 0.0100 U | -- |
| Naphthalene | None | None | 0.250 U | -- |
| **VOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA65502** | |
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | 0.300 U | -- |
| Chloroform | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | 0.250 U | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |
| o-Xylene | None | None | 0.250 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Toluene | 1000 | 1000 | 0.250 U | -- |
| Total Trihalomethanes | 80 | None | ND | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison
mg/L = Milligrams per Liter

MPN/ml = Most Probable Number per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

Thursday 5 September 2024, 0800

Zone – H2, 4451 Kobashigawa St
Location Code: H2-KOBA4451

## BLUF

During the immediate response from WQAT & CPLO at *4455* Kobashigawa St. on Wednesday 4 September 2024, residents at *4451* Kobashigawa St. inquired with CPLO about the ongoing incident, refer to the separate WQI daily report for 4455 Kobashigawa St. for additional details. This led to the resident to discharge water from an outside spigot at their residence & observed discoloration of the water; resulting in the resident scheduling a WQI visit the following day, Thursday 5 September 2024. It should be noted that Aliamanu Military Reservation (AMR) Utilities had flushed a nearby hydrant as a response to related incident occurring next door. During the WQI investigation on 5 September 2024, the resident stated that no discoloration/odor was observed in any of the fixtures after the initial flushing of the outside spigot on 4 September 2024. Although the resident did not observe any water quality concerns after the initial flushing, a WQI visit occurred the following day to determine the quality & safety of the water. All water quality parameters collected on 5 September 2024 were within expected ranges. Based on the observations made during the WQI inspection, no immediate concerns regarding water quality were present. No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.

### A. Resident Demographic / Concerns

- Household consists of two (2) adults, one (1) child, & two (2) cats.
- Resident for approximately 6.5 years.
- The resident observed their water coming from a spigot outside of their residence to be discolored, as seen in Figure 5. This resident was flushing this spigot as a response to a water quality incident occurring at an adjacent residence. This effect was not observed in any of the upstairs bathrooms.

### B. **Water Quality Observations** & Results

- Unit was previously sampled on 10 October 2023. Traces of chromium, copper, lead, barium, selenium, total trihalomethanes, & total petroleum hydrocarbons were found. These detections were all below project screening levels.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the master bathroom sink & the kitchen sink for rapid TPH test on 5 September 2024.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM)- collected hot & cold samples from the kitchen sink on 5 September 2024.
  - Directorate of Public Works- Environmental Division (DPW) – (b) (6)
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink on 5 September 2024.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.19 (cold)
    - 7.10 (hot)

  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 281.47 (cold)
    - 314.33 (hot)

  - Turbidity - (Acceptable Range: < 5.0 NTU)
    - 0.47 (cold)
    - 1.36 (hot)

  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.53 mg/L (cold)
    - 0.25 mg/L (hot)

  - Temperature -
    - 80.35 °F (cold)
    - 120.55 °F (hot)

- WQI hot water temperature results collected on 5 September 2024.

  - Downstairs hallway bathroom sink – 137.2 °F
  - Upstairs hallway bathroom left sink – 131.4 °F
  - Master bathroom right sink – 131.3 °F
  - Master bathroom left sink – 132.0 °F

- Figure 1. Interior view of kitchen sink aerator. Upon visual inspection no debris was observed. The aerator appears to be in overall good condition.

- Figure 2. Interior view of the downstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed. The aerator appears to be in overall good condition.

- Figure 3. Interior view of upstairs hallway bathroom sink aerator. Upon visual inspection, no debris were observed. The exterior of the aerator appears to be in overall good condition.

- Figure 4. Interior view of the master bathroom left & right sink aerators, respectively. Upon visual inspection, little debris of unknown material can be observed from the left sink aerator. The aerators appears to be in overall great condition.

- Figure 5. Water captured from the outside spigot during initial incident from the resident. This water was saved by the resident on 4 September 2024 for later observation. This discoloration appears to be the result of a significant amount of sediment present. The resident did not confirm when the water became clear after flushing but did confirm that were no longer any concerns during the WQI visit on 5 September 2024.

## C. Hot Water Heater

- 80-gallon electric water heater manufactured by Sun Earth Inc. in 28 August 2014.
- Visual observation showed the water heater to be in great condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

## D. Point-of-Use Treatment

- Resident has installed an AquaBliss HD Multi-Stage Shower Filter (SF500) in their upstairs hallway bathroom. According to the manufacture's website, the filtration media is constructed to capture sediments, reduce hardness via redox media, and "decrease scale and reduce chlorine" via calcium sulfite. However, the website does not specify that this shower filter is rated NSF/ANSI 177 which directly applies to showerhead filters to be certified only to reduce free available chlorine or rated NSF/ANSI 44 which applies to filters using cation exchange resin to reduce hardness as claimed from the manufacture's website.

## E. Overall Assessment

- Temperature was measured at all available fixtures during inspection. Hot water temperature was measured by both EDWM team & WQI team. WQI team took hot water temperatures on 5 September 2024 with an instant read digital thermometer & the EDWM team took measurements on 5 September 2024 with an Aqua Troll 600. The difference in decimal places

in the two hot water temperatures listed is due to the different instruments used. The WQI team confirmed all hot water fixtures could reach a temperature of 115°F or above.

- No unusual observations were made from the hot or cold water; water was clear. This is expected as flushing occurred at a nearby hydrant and the outside spigot a day prior to inspection at which water became clear. This appears to be the result of the recent water distribution pipe replacement project incident as explained in the "2024-09-05 H2, 4455 Kobashigawa St" WQI daily report. The resident did not observe initial or additional water quality concerns since flushing occurred on 4 September 2024 and did not have unusual observations occurring inside their home.
- All water quality parameters collected on 5 September 2024 during the EDWM sampling were within expected ranges.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

F. Recommendations

- Follow up with EDWM water quality results when available.
- Replace the showerhead filter such that the product is NSF/ANSI rated.

## Conclusion

The inspection was conducted to determine if the resident's water meets applicable standards & is safe for use following an initial observation of discolored water discharging from a spigot outside their residence on 4 September 2024 as a result from a concurrent incident at an adjacent residence. AMR Utility has contacted and informed CPLO that during a water distribution pipe replacement project occurring nearby, sediment may have entered the system. The resident reported no concerns about the water quality of their fixtures, and the water discoloration did not return from the time of flushing until the WQI visit. All water quality parameters collected during the inspection were within acceptable ranges. Based on the observations made during the inspection & the water distribution pipe replacement project as mentioned by AMR Utilities, no further action is required regarding this WQI event. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed of their results by the CPLO.

# Call Center - WQI Checklist

## Complaint Ticket

| | |
|---|---|
| Assign Call Ticket Number | 1-21143 |
| Call Date/Time | 9/5/2024 10:58:00 AM |
| Call Center Operator | (b) (6) |
| Location Type | Residence |
| Scheduled Visit (Date/Time) | 9/5/2024 8:00:00 AM |

## Call Center Information

### Caller/Resident Information

| | |
|---|---|
| Name | |
| Address | 4455 Kobashigawa Street |
| Command | |
| Branch | |
| Property Manager | |
| Date of move-in | 1/1/2021 12:00:00 AM |
| Number of adults under 65 | 2 |
| Number of adults 65 and older | 0 |
| Number of school age children under 18 | 2 |
| Number of infants under the age of 2 | 0 |
| Number and type of pets | 2 cats |
| Call Center Complaint Summary / Initial Notes | The resident observed discolored/odorous water discharging from their kitchen and downstairs<br>bathroom sink on Wednesday 4 September 2024 at approximately 1600 |

### Water Complaint Related Questions

| | |
|---|---|
| Are you currently experiencing any issue or concern with your water? | Yes |
| When did you first notice the issue? | 9/4/2024 12:00:00 AM |
| Is this an ongoing issue/concern, or does it only happen at certain times? | One-time event only |
| Do you see any issues with the appearance or odor the water in your home? | Yes |
| Color or Appearance of Water | Brown / Yellow |
| | The resident described the water to be discolored and "yellowish." |
| Floating Particles | None |
| | None reported |
| Taste | None |
| | None reported |
| Odor | Foul / Sulfur / Rotten Egg / Sewage,Other |
| | The resident described the odor to be "unpleasant." |
| Staining | None |
| | None reported |
| Scaling (visible surface buildup) | No |

# Call Center - WQI Checklist

## Health Concerns

| | |
|---|---|
| Is anyone in your home experiencing any health concerns because of drinking or exposure to the water? | No |
| Skin | None |
| | None reported |
| Respiratory | None |
| | None reported |
| Gastrointestinal | None |
| | None reported |
| Headache | None |
| | None reported |
| Dizziness | None |
| | None reported |
| Cough | None |
| | None reported |
| Vision | None |
| | None reported |
| Other | None |
| | None reported |

# In-Person Site Visit

## General Issue Information

| | |
|---|---|
| Does the water problem occur at some or all inside taps? | Kitchen,Bathroom,Downstairs |
| Are your neighbors experiencing the same issue? | |
| Does it occur with just the cold water, the hot water, or both? | |
| Does it occur only when you first turn on the water or does it occur continuously? | |
| Are you aware of any recent nearby construction or maintenance activities? | I don't know |

## Premise Plumbing History

| | |
|---|---|
| Premise Plumbing History | None |
| | None reported |

# Call Center - WQI Checklist

## Water Quality Concerns

| | |
|---|---|
| Cold water Sampling Location | Kitchen |
| pH (standard units) | 7.06 |
| Conductivity (µS/cm) | 296.55 |
| FreeChlorine (mg/L or ppm) | 0.49 |
| Cold Temp (degrees F) | 75.82 |
| Hot water Sampling Location | Kitchen |
| pH (standard units) | 7.11 |
| Conductivity (µS/cm) | 303.72 |
| FreeChlorine (mg/L or ppm) | 0.49 |
| Hot Temp (degrees F) | 105.54 |
| Water Quality Notes | Unit was previously sampled on 12 July 2023. Traces of chromium, copper, lead, barium, total trihalomethanes, and total petroleum hydrocarbons were found. These detections were all below project screening levels.<br>No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.<br>No unusual observations.<br>TURB: 0.84 (cold), 1.21 (hot) |

## Filtration Systems

| | |
|---|---|
| Do you have a whole home water filtration system? | No |
| Do you have point-of-use filters? | No |
| Kitchen sink | |
| Refrigerator | |
| Bathroom - first floor | |
| Bathroom - second floor | |
| Bathroom - second floor | |
| Bathroom - other | |
| Who installed the water filter | |

## Water Fixtures

| | |
|---|---|
| Staining or Scale visible buildup on water fixtures | |
| Kitchen sink - Specific inspection point | Sink faucet |
| Kitchen sink - Condition of aerator | Looks new / clean |
| Refrigerator - Specific inspection point | |
| Refrigerator - Condition of aerator | |
| Bathroom - first floor - Specific inspection point | Sink faucet |
| Bathroom - first floor - Condition of aerator | Looks new / clean |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Scaling / Debris / Particulates present |
| Bathroom - second floor - Specific inspection point | Sink faucet |
| Bathroom - second floor - Condition of aerator | Looks new / clean |
| Bathroom - other - Specific inspection point | |
| Bathroom - other - Condition of aerator | |

# Call Center - WQI Checklist

## Other Concerns

Water Presure

Hot Water Temperature

Cross-Connection

Irrigation

## Summary and Recommendations

| | |
|---|---|
| Water Heater Replacement | No |
| Fixture Replacement | No |
| Navy to follow-up | No |
| Other | Yes |
| | Follow up with EDWM water quality results when available.<br>No additional actions required. |
| Other Site Visit Notes | Interior view of the downstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed. The aerator appears to be in overall fair condition.<br>Interior/exterior view of upstairs hallway bathroom sink aerator. Upon visual inspection, some debris of unidentified material were observed. The exterior of the aerator appears to be in<br>poor condition. Recommend aerator replacement.<br>Water captured from the kitchen sink during incident by the resident. This discoloration appears to be the result of a significant amount of sediment present. Water became clear after residence and a nearby hydrant was flushed.<br>80-gallon electric water heater manufactured by Sun Earth Inc. in June 2019.<br>Visual observation showed the water heater to be in great condition with no signs of external corrosion.<br>No visible maintenance records found on the water heater.<br>The pipe material is copper. |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 21143 |
| Location | Other |
| Title | Interior View of Kitchen Sink Aerator |

## Call Center - WQI Checklist

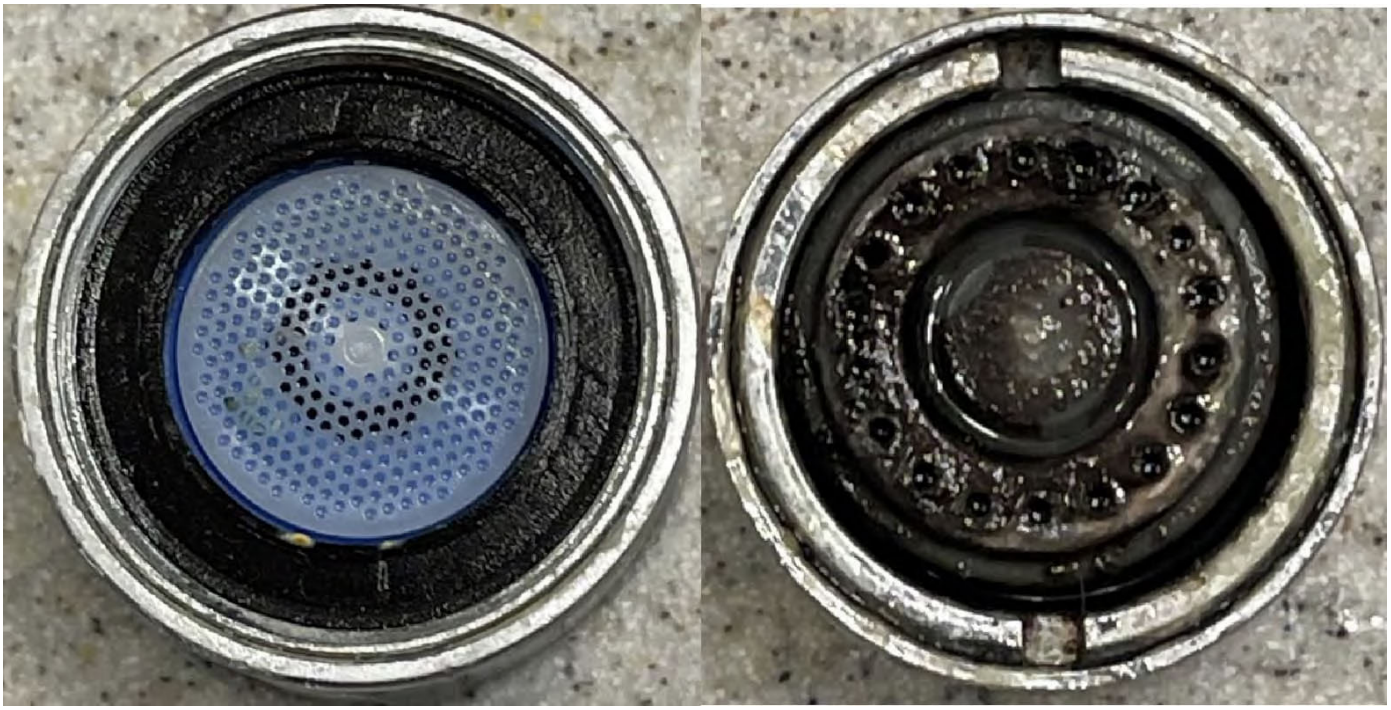
## Photos

| | |
|---|---|
| Ticket Number | 21143 |
| Location | First Floor - Bathroom - Sink |
| Title | Interior View of Downstairs Hallway Bathroom Sink Aerator |

## Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 21143 |
| Location | Second Floor - Bathroom 1 - Sink |
| Title | Interior/Exterior View of Upstairs Hallway Bathroom Sink Aerator |



## Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 21143 |
| Location | Other |
| Title | Interior View of the Master Bathroom Left and Right Sink Aerators |

# Call Center - WQI Checklist

## Photos

| | |
|---|---|
| Ticket Number | 21143 |
| Location | Other |
| Title | Water captured from the kitchen sink during the incident by the resident |

Thursday 5 September 2024, 0800

Zone – H2, 4455 Kobashigawa St
Location Code: H2-KOBA4455

## BLUF

The resident observed discolored/odorous water discharging from their kitchen and downstairs bathroom sink on Wednesday 4 September 2024 at approximately 1600. WQAT & CPLO arrived at the residence immediately after to collect rapid TPH samples and to schedule a WQI to occur the following day, Thursday 5 September 2024. The resident was instructed from Aliamanu Military Reservation (AMR) Housing to flush their residence. Furthermore, AMR Utilities contacted CPLO to inform that a water pipe replacement project was occurring nearby resulting in sediment entering the distribution system. Relevant hydrants were flushed because of this incident from AMR Utilities. The water became clear after flushing the residence and the hydrants. Response from AMR Utilities occurred concurrently with the response of WQAT & CPLO, after the resident requested a WQI visit. This visit occurred the following day to determine the quality and safety of the water. All water quality parameters collected on 5 September 2024 were within expected ranges. Based on the observations made during the WQI inspection, no immediate concerns regarding water quality were present. No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.

## A. Resident Demographic / Concerns

- Household consists of two (2) adults, two (2) children, and two (2) cats.
- Resident for approximately 3 years.
- At approximately 1600, the resident observed water coming from the kitchen sink and downstairs bathroom sink to be discolored and odorous, this was described to be "yellowish" and "unpleasant" as seen in Figure 5. This effect was not observed in any of the upstairs bathrooms. The resident believing this to be an emergency scheduled a WQI visit to determine the safety and quality of their water. After the flushing of their home (as well as at a nearby hydrant), the water became clear and odorless at approximately 1800.

## B. **Water Quality Observations and Results**

- Unit was previously sampled on 12 July 2023. Traces of chromium, copper, lead, barium, total trihalomethanes, and total petroleum hydrocarbons were found. These detections were all below project screening levels.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

## • Personnel on-site

- Water Quality Action Team (WQAT) – Collected samples from the downstairs hallway bathroom sink and the kitchen sink for rapid TPH test on 4 September 2024.
- Community Public Liaison Officer (CPLO) – (b) (6) .
- Water Quality Investigation (WQI) Team.
- Extended Drinking Water Monitoring (EDWM)- collected hot and cold samples from the kitchen sink on 5 September 2024.
- Directorate of Public Works- Environmental Division (DPW) – (b) (6)

- Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink on 4 September 2024.
  - pH – (Acceptable Range: 6.5 to 8.5)
    - 7.06 (cold)
    - 7.11 (hot)

  - Conductivity - (Acceptable Range 0 to 800 µS/cm)
    - 296.55 (cold)
    - 303.72 (hot)

  - Turbidity - (Acceptable Range: < 5.0 NTU)
    - 0.84 (cold)
    - 1.21 (hot)

  - Free Chlorine - (Acceptable Range: 0.20 to 4.00 mg/L)
    - 0.49 mg/L (cold)
    - 0.49 mg/L (hot)

  - Temperature -
    - 75.82 °F (cold)
    - 105.54 °F (hot)

- WQI hot water temperature results collected on 5 September 2024.

  - Downstairs hallway bathroom sink – 120.7 °F
  - Upstairs hallway bathroom left sink – 126.3 °F
  - Master bathroom right sink – 135.1 °F
  - Master bathroom left sink – 137.9 °F

- Figure 1. Interior view of kitchen sink aerator. Upon visual inspection no debris was observed. The aerator appears to be in overall fair condition.

- Figure 2. Interior view of the downstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed. The aerator appears to be in overall fair condition.

- Figure 3. Interior/exterior view of upstairs hallway bathroom sink aerator. Upon visual inspection, some debris of unidentified material were observed. The exterior of the aerator appears to be in poor condition. Recommend aerator replacement.

- Figure 4. Interior view of the master bathroom left and right sink aerators, respectively. Upon visual inspection, no debris was observed. The aerator appears to be in overall great condition.

- Figure 5. Water captured from the kitchen sink during incident by the resident. This discoloration appears to be the result of a significant amount of sediment present. Water became clear after residence and a nearby hydrant was flushed.

C. Hot Water Heater
- 80-gallon electric water heater manufactured by Sun Earth Inc. in June 2019.
- Visual observation showed the water heater to be in great condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.
- The pipe material is copper.

D. Point-of-Use Treatment
- No filters installed.

E. Overall Assessment
- Temperature was measured at all available fixtures during inspection. Hot water temperature was measured by both EDWM team and WQI team. WQI team took hot water temperatures on 5 September 2024 with an instant read digital thermometer and the EDWM team took measurements on 5 September 2024 with an Aqua Troll 600. The difference in decimal places in the two hot water temperatures listed is due to the different instruments used. The WQI team confirmed all hot water fixtures could reach a temperature of 115°F or above.
- No unusual observations were made from the hot or cold water; water was clear. This is expected as flushing was conducted a day prior to inspection at which water became clear at that time. The resident did not observe initial or additional water quality concerns since flushing occurred on 4 September 2024.
- All water quality parameters collected on 5 September 2024 during the EDWM sampling were within expected ranges.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

F. Recommendations

- Follow up with EDWM water quality results when available.
- No additional actions required.

## Conclusion

The inspection was conducted to determine if the residents' water meets applicable standards and is safe for use following an initial observation of discolored and odorous water discharging from their kitchen and downstairs bathroom sinks on 4 September 2024. The resident was recommended to clean the sink aerators every six months to prevent debris build up and replace the aerator in the upstairs hallway bathroom sink. All water quality parameters collected during the inspection were within acceptable ranges. Based on the observations made during the inspection and the water distribution pipe replacement project as mentioned by AMR Utilities, no further action is required regarding this WQI event. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed of their results by the CPLO.

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Residence: | | | 4455 Kobashigawa Street | 4455 Kobashigawa Street |
| Field Sample ID: | | | H2-TW-0013482-24092-A-WQI | H2-TW-0013482-24092-A-H-WQI |
| Sample Date: | | | 2024-09-05 | 2024-09-05 |
| Sample Type: | | | N | N |
| **BAC (CFU/100ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240905-OLT-01** | |
| Coliform | None | None | 0.00 U | -- |
| E. coli | None | None | 0.00 U | -- |
| **BAC (CFU/ml)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: 240905-OLT-01** | **SDG: 240905-OLT-01** |
| Heterotrophic Plate Count | None | None | **1.00** | **1.00** |
| **Field Tests (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | | |
| Free Chlorine | None | 4 | 0.490 | 0.490 |
| **GENCHEM (mg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA67005** | |
| Alkalinity, Total (as CaCO3) | None | None | **52.3** | -- |
| Total Organic Carbon | None | None | 0.200 U | -- |
| **HC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA67005** | |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| | | | | |
|---|---|---|---|---|
| Petroleum Hydrocarbons (as Diesel) | None | None | 49.0 U | -- |
| Petroleum Hydrocarbons (as Gasoline) | None | None | 50.0 UJ | -- |
| Petroleum Hydrocarbons (as Motor Oil) | None | None | 49.0 U | -- |
| Petroleum Hydrocarbons, Total | None | None | ND | -- |

| **METAL (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA67005** | |
|---|---|---|---|---|
| Copper | 1300 | 1300 | **9.30** | -- |
| Lead | 15 | 15 | **0.220 J** | -- |
| Mercury | 2 | 2 | 0.0250 U | -- |

| **SVOC (µg/L)** | **DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents** | **Environmental Protection Agency Maximum Contaminant Levels** | **SDG: DA67005** | |
|---|---|---|---|---|
| 1-Methylnaphthalene | None | None | 0.260 U | -- |
| 2-Methylnaphthalene | None | None | 0.260 U | -- |
| Acenaphthylene | None | None | 0.260 U | -- |
| Anthracene | None | None | 0.260 U | -- |
| Benzo(a)pyrene | 0.2 | 0.2 | 0.0100 U | -- |
| Benzo(b)fluoranthene | None | None | 0.260 U | -- |
| Benzo(g,h,i)perylene | None | None | 0.260 U | -- |
| Benzo(k)fluoranthene | None | None | 0.260 U | -- |
| Chrysene | None | None | 0.260 U | -- |
| Dibenz(a,h)anthracene | None | None | 0.260 U | -- |
| Fluorene | None | None | 0.260 U | -- |
| Indeno(1,2,3-c,d)pyrene | None | None | 0.260 U | -- |
| Naphthalene | None | None | 0.260 U | -- |
| Phenanthrene | None | None | 0.260 U | -- |
| Pyrene | None | None | 0.260 U | -- |

**Table X-X**
**Non-EDWM Water Quality Investigation (WQI) Requested Samples (via EOC)**
**Chemistry Results**
Drinking Water Sampling, JBPHH, Oahu, Hawaii

| VOC (µg/L) | DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents | Environmental Protection Agency Maximum Contaminant Levels | SDG: DA67005 | |
|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | None | None | 0.260 U | -- |
| 1,3,5-Trimethylbenzene | None | None | 0.250 U | -- |
| Benzene | 5 | 5 | 0.250 U | -- |
| Bromodichloromethane | None | None | 0.250 U | -- |
| Bromoform | None | None | **0.590** | -- |
| Chloroform | None | None | 0.250 U | -- |
| Cumene | None | None | 0.250 U | -- |
| Dibromochloromethane | None | None | **0.270 J** | -- |
| Ethylbenzene | 700 | 700 | 0.250 U | -- |
| m,p-Xylene | None | None | 0.400 U | -- |
| n-Butylbenzene | None | None | 0.250 U | -- |
| n-Propylbenzene | None | None | 0.250 U | -- |
| o-Xylene | None | None | 0.250 U | -- |
| sec-Butylbenzene | None | None | 0.400 U | -- |
| tert-Butylbenzene | None | None | 0.400 U | -- |
| Toluene | 1000 | 1000 | 0.250 U | -- |
| Total Trihalomethanes | 80 | None | **0.86** | -- |
| Xylenes, Total | 10000 | 10000 | ND | -- |

**Notes:**

-- indicates that the sample was Not Analyzed for the analyte
Results in green font also exceed the DOH MCL
Results in blue font also exceed the EPA MCL
Results from G1/G3 sampling, where the G3 result is greater than the G1 result, have a red border and the associated G1/G3 result in parentheses for comparison
mg/L = Milligrams per Liter

CFU/ml = Colony Forming Units per Milliliter

CFU/100ml = Colony Forming Units per 100 Milliliters

µg/L = Micrograms per Liter

Monday 9 September 2024, 1400

Zone – H2, 4520 Kobashigawa St
Location Code: H2-KOBA4520

## BLUF

The resident recently moved into the neighborhood and requested a WQI after hearing news reports on the water quality. The resident had no water quality concerns. All water quality parameters collected were within expected ranges. No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water. Based on the observations made during the WQI inspection, no immediate concerns regarding water quality were identified.

## A. Resident Demographic / Concerns

- Household consists of two (2) adults, two (2) children, and no pets.
- Resident since 8 August 2024.
- Resident had no water quality concerns.

## B. **Water Quality Observations and Results**

- Unit was previously sampled on 23 May 2024. Copper and lead were detected below project screening levels.
- No sheen, particles, discoloration, cloudiness, or odors were observed in the hot or cold water.
- No unusual observations.

- Personnel on-site
  - Water Quality Action Team (WQAT) – Collected samples from the upstairs hallway bathroom sink and the kitchen sink for rapid TPH test.
  - Community Public Liaison Officer (CPLO) – (b) (6) .
  - Water Quality Investigation (WQI) Team.
  - Extended Drinking Water Monitoring (EDWM)- collected hot and cold samples from the kitchen sink on 5 September 2024.
  - Directorate of Public Works- Environmental Division (DPW) – (b) (6) A.
  - Environmental Protection Agency (EPA) – (b) (6)
  - Hawaii Department of Health Safe Drinking Water Branch (HDOH SDWB) – Not present.

- Results of field testing from the kitchen sink
  - pH – (Expected Range: 6.5 to 8.5)
    - 7.01 (cold)
    - 7.06 (hot)

  - Conductivity - (Expected Range 0 to 800 µS/cm)
    - 266.88 µS/cm (cold)
    - 290.27 µS/cm (hot)

  - Turbidity - (Expected Range: < 5.0 NTU)

  - 0.89 NTU (cold)
  - 0.66 NTU (hot)

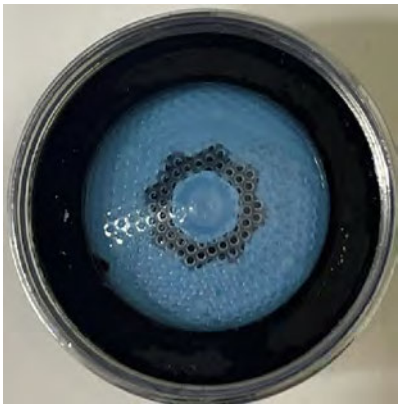
- Free Chlorine - (Expected Range: 0.20 to 4.00 mg/L)
  - 0.71 mg/L (cold)
  - 0.58 mg/L (hot)

- Temperature
  - 80.10 °F (cold)
  - 103.07 °F (hot)

- WQI hot water temperature results collected.

  - Downstairs hallway bathroom sink – 117.5 °F
  - Upstairs hallway bathroom sink – 116.3 °F
  - Master bathroom left sink – 115.2 °F
  - Master bathroom right sink – 115.1 °F

- Figure 1. Interior view of kitchen sink aerator. Upon visual inspection, small debris of unknown material were observed including build-up surrounding the outer rim of the aerator, appearing to be a combination of food material and soap scum. The aerator appears to be in overall fair condition.



- Figure 2. Interior view of the downstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed. The aerator appears to be in overall great condition.

- Figure 3. Interior view of the master bathroom left and right sink aerators, respectively. Upon visual inspection, no debris was observed. The aerator appears to be in overall great condition.

- Figure 4. Interior view of the upstairs hallway bathroom sink aerator. Upon visual inspection, no debris was observed. The aerator appears to be in overall great condition.

## C. Hot Water Heater

- 80-gallon electric water heater manufactured by Sun Earth Inc. in June 2008.
- Visual observation showed the water heater to be in fair condition with no signs of external corrosion.
- No visible maintenance records found on the water heater.

- The pipe material is copper.

D. Point-of-Use Treatment
- No filters installed.

E. Overall Assessment
- Temperature was measured at all available fixtures during inspection. Hot water temperature was measured by both EDWM team and WQI team. WQI team took hot water temperatures with an instant read digital thermometer and the EDWM team took measurements with an Aqua Troll 600. The difference in decimal places in the two hot water temperatures listed is due to the different instruments. The WQI team confirmed all hot water fixtures except the kitchen sink could reach a temperature of 115°F or above.
- No unusual observations were made from the hot or cold water; water was clear.
- All water quality parameters collected during the EDWM sampling were within expected ranges.
- EDWM analytical results will determine if drinking water complies with the applicable standards.

F. Recommendations
- Follow up with EDWM water quality results when available.
- No additional actions recommended.

## Conclusion

The inspection was conducted at the request of the resident after listening to news media outlets discussing water quality and the Red Hill spill. The resident had no water quality concerns to address. All water quality parameters collected during the inspection were within expected ranges. Based on the observations made during the inspection, no further action is required regarding this WQI event. Pending EDWM analytical results will determine if the water is safe to drink. The resident will then be informed of their results by the CPLO.