May 4, 2023
SCS Project No. 16219108.00

Mr. Arten Avakian
MSW Permits Section (MC-124)
Waste Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Subject: Subchapter T Development Permit Application for Enclosed Structure
Closed Marina Landfill in Waco, TX. (Sub T Enclosed Permit No. 62021)
Proposed Development Permit Application No. 62048
Response to Supplemental Notice of Deficiency
McLennan County, Texas.
Tracking No. 27801621; RN111002176/CN600128334

Dear Mr. Avakian:

Please find below the following items as requested in the recent email from TCEQ dated April 26, 2023.

Comment:

1. A better copy of the survey drawing.

Response:

*A clear copy of the survey drawing has been provided in Section 8, Attachment A.*

Comment:

2. Gas sampling and analysis.

Response:

*The results of the gas sampling and analysis has been provided in Appendix G*

Comment:

3. Revisions to sections 20.7 and 20.8 of the application to reflect that the sampling has now been done, and to be consistent with how it was done (2 samples rather than 4?), and reference to results in Appendix G.

Response:

*The texts in sections 20.7 and 20.8 have been revised.*

Comment:

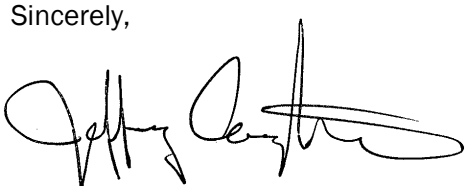
4. State required posting.

Response:

*These revisions are being posted on the SCS website.*

A copy of the NOD response with the revised documents has been sent to the Waco office of the TCEQ Region 9. Should you have any comments or questions after reviewing this request, please call Jeff Arrington at (817) 358-6111.

Sincerely,



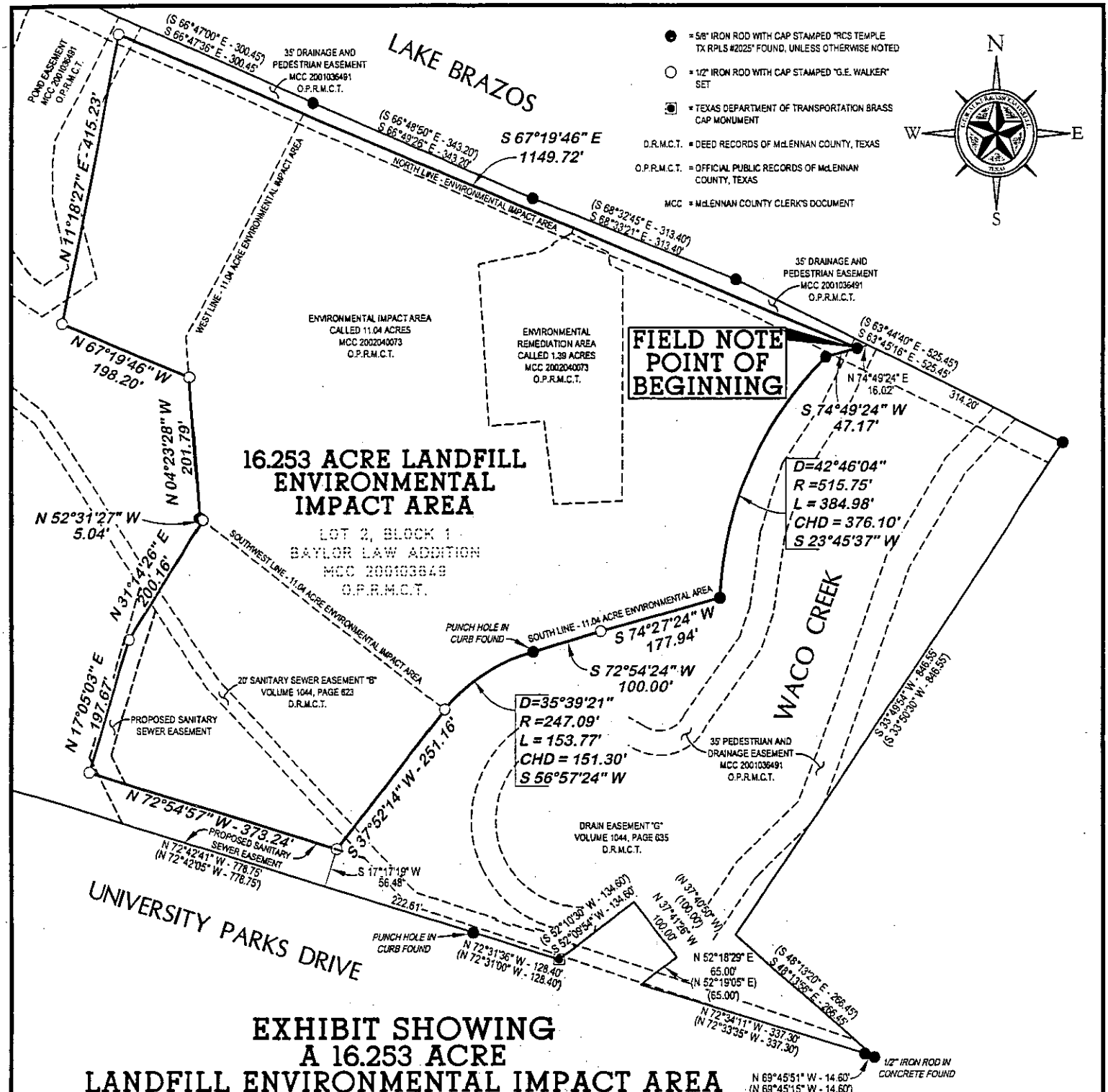
Jeff Arrington, P.E.
Project Engineer
SCS ENGINEERS
TBPE Registration No. F-3407

Attachments

cc: TCEQ Region 9, Waco
Mr. J.D. Dethrow, Baylor University (e-copy)

SECTION 8
ATTACHMENT A

BOUNDARY SURVEY
AND LEGAL DESCRIPTION




# EXHIBIT SHOWING
# A 16.253 ACRE
# LANDFILL ENVIRONMENTAL IMPACT AREA

BEING A PORTION OF LOT 2, BLOCK 1, BAYLOR LAW ADDITION RECORDED IN McLENNAN COUNTY CLERK'S DOCUMENT 200103649 OF THE OFFICIAL PUBLIC RECORDS OF McLENNAN COUNTY, TEXAS

FIELD NOTES ATTACHED HERETO, MADE A PART HEREOF AND TITLED: 16.253 ACRE LANDFILL ENVIRONMENTAL IMPACT AREA LOCATED IN THE T.J. CHAMBERS SURVEY, ABSTRACT 7, CITY OF WACO, McLENNAN COUNTY, TEXAS

NOTE: BEARINGS BASED UPON TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, TEXAS CENTRAL ZONE, ACQUIRED FROM GLOBAL POSITIONING SYSTEM OBSERVATIONS.


G. E. WALKER & ASSOCIATES, L.L.C.
ENGINEERS ★ SURVEYORS
TEXAS
600 AUSTIN AVENUE, SUITE 20 • WACO, TEXAS 76701 • PHONE: 1-254-714-1402


0 100 200 400
GRAPHIC SCALE IN FEET

REVISIONS

PLAT NO. A1-0172 DRAFT DATE 08/22/08 FB/PG 49/41
PROJ. NO. 1-01086 TAB NO. NA FIELD NOTE NO. 01
DWG. NAME 1-01086 LANDFILL EXH DRAWN BY MPP

G:\Projects\1-01086\dwg\1-01086 LANDFILL EXHIBIT.dwg, Model, 8/23/2007 11:10:41 AM, mpolk, 1:200

# Appendix G

# Landfill Gas Analysis

**Baylor Football Operation Center – Sampling and Analysis of Landfill Gas**

Soil gas sampling, at the Baylor Football Operation Center, was conducted on April 5, 2023. Two approximate 4-inch diameter soil borings were advanced 4-5 feet below ground surface (bgs). Locations of the soil borings (SB-1 and SB-2) are shown on the attached map. Temporary probes were installed in each boring for sample collection. A filter pack consisting of 20/40 silica sand was placed from the terminal depth of each boring to approximately one foot below ground surface. A hydrated bentonite annular seal was placed on top of the filter pack material up to ground surface to limit communication with atmospheric conditions. Each borehole was evaluated initially using a GEM 5000 landfill gas monitor designed to monitor $O_2$, $CH_4$, $CO_2$ and $H_2S$ concentrations. The gas monitor was connected to the temporary probe through a valve system designed to eliminate atmospheric influences from the sampling train. Field measurements determined using the landfill gas monitor were recorded and are provided in the table below. Factory and daily calibration sheets for the landfill gas monitor are provided as an attachment to this letter.

**Field Measurement Data**

| ID | Time | $CH_4$ | $H_2S$ | CO | $CO_2$ | $O_2$ | Temperature °F | Balance Gas |
|---|---|---|---|---|---|---|---|---|
| SB-1 | 10:03 | ND | ND | ND | 0.1 | 21.0 | 68.4 | 78.6 |
| SB-2 | 12:37 | ND | ND | 1.0 | 0.9 | 20.0 | 69.9 | 79.1 |

Following field measurements, the valve connecting the temporary probe to the landfill gas monitor was closed and the valves connecting the 6-Liter Suma Canister with flow controller and Ammonia sampling pump system were opened. As the landfill gas monitor had removed any residual direct atmospheric influences on the borehole and sampling train, sample collection was initiated. Soil gas was evacuated from the borehole at continuous rates for the time required for sample collection. Sampling time was approximately 1.5 hours for each sample collection device. Sampling times and beginning psi for each Summa Canister is provided in the table below. Start and end times for the ammonia sampling collection are also presented in the referenced table.

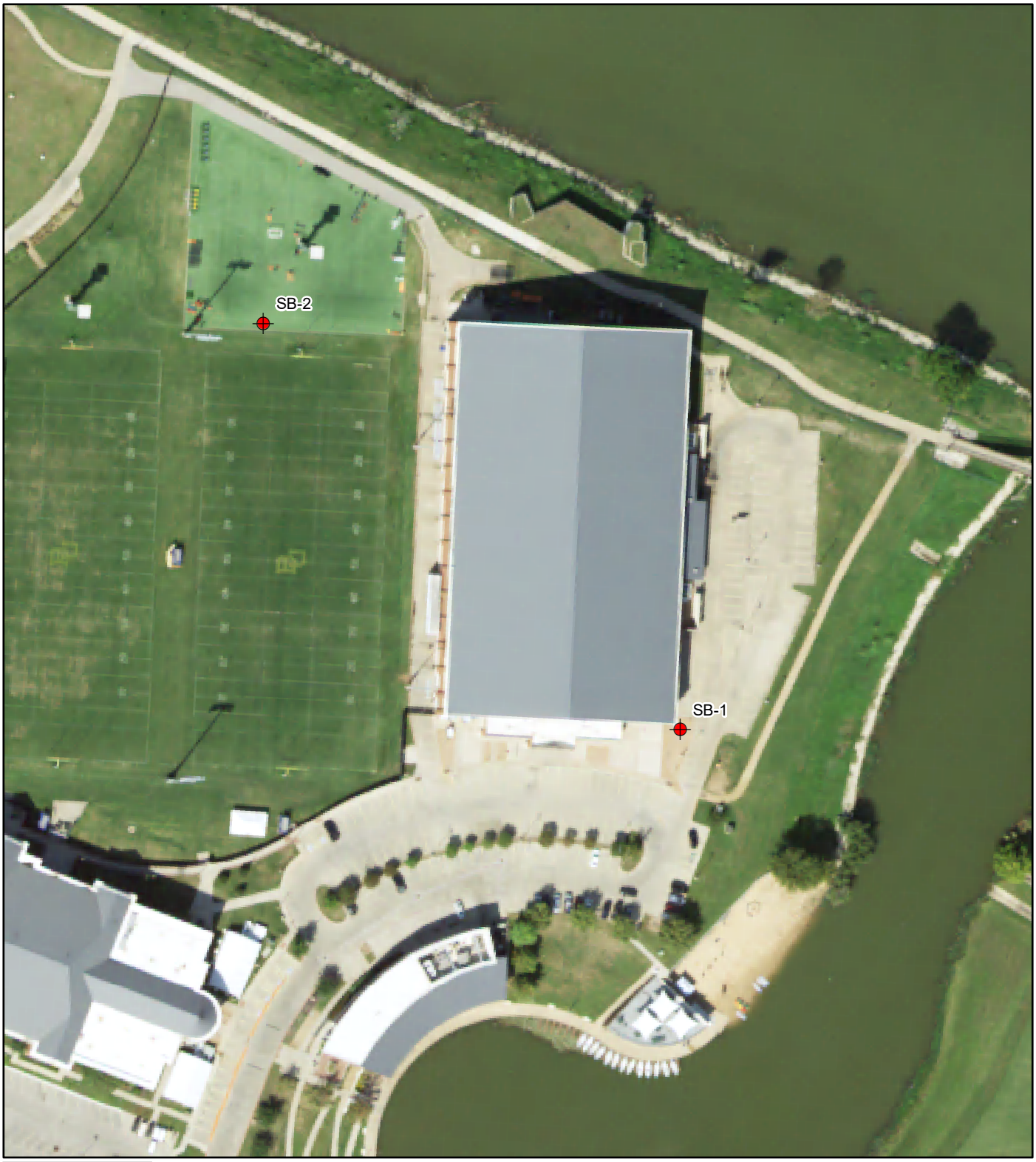
**Sample Collection Information**

| Sample Container | Start Time | End Time | Start PSI | End PSI |
|---|---|---|---|---|
| Canister SB-1 | 10:12 | 11:42 | -30 | -5 |
| Canister SB-2 | 12:26 | 2:13 | -22 | -3 |
| Tube SB-1 | 10:12 | 11:42 | NA | NA |
| Tube SB-2 | 12:26 | 2:13 | NA | NA |

Following sample collection and completion of necessary sample handling procedures (preservation with ice, etc.), the sample containers were packaged for shipment to a Texas-accredited laboratory for analysis. Gas samples collected from the temporary probes were analyzed for the following constituents and compounds.

Methane and other light hydrocarbons, carbon dioxide, and water vapor
Hydrogen sulfide, mercaptans, and ammonia
VOCs

The results of the laboratory analyses and required QA/QC data are included in the attached laboratory report.




BASEMAP SOURCE:

Legend
Soil Boring

N

Hydrex ENVIRONMENTAL

# Baylor Football Operation Center
# Soil Boring Locations

**Football Operation Center**
**Soil Gas Sampling**
**Waco, Texas**

| Map Revised: 04/25/2023 | Project Number: L-10-1678 | GIS Analyst: JLD |
|---|---|---|

# Hydrex Environmental

1120 NW Stallings Drive
Nacogdoches, TX 75964

## Baylor Football Operation Center

Waco, TX

## Analytical Report
## (0423-940)

## *TO-14A*

Volatile Organic Compounds

## *ASTM D1946*

Carbon monoxide

## *ASTM D5504*

Speciated mercaptans

## *NIOSH Method 6016*

Ammonia


**Enthalpy Analytical, LLC**

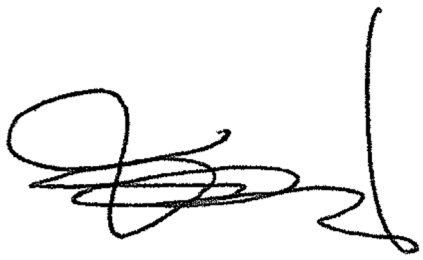
Phone: (281) 984 - 7021 / www.enthalpy.com

931 Seaco Ct. Deer Park, TX 77536-3187

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF). This report shall not be reproduced except in full without approval of the laboratory. This will provide assurance that parts of a report are not taken out of context.



QA Review Performed by: Furqaan Sayed, QA Associate

Report Issued: 04/25/2023

ENTHALPY ANALYTICAL

# Summary of Results

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## Summary

| Sample ID | SB-1 | | SB-2 | |
|---|---|---|---|---|
| Compound | ppbv | | ppbv | |
| Ethylene | 1,915 | | 8.51 | |
| Acetylene | 0.502 | ND | 0.476 | |
| Ethane | 355 | | 11.3 | |
| Propylene | 414 | | 2.67 | |
| Propane | 42.5 | | 5.65 | |
| Isobutane | 1.78 | | 3.56 | |
| Isobutylene | 11.2 | | 2.89 | |
| 1-Butene | 0.0514 | ND | 6.44 | |
| 1,3-Butadiene | 0.0510 | ND | 0.0482 | ND |
| Butane | 2.28 | | 0.104 | ND |
| trans-2-Butene | 0.131 | J | 0.0457 | ND |
| cis-2-Butene | 0.0512 | ND | 0.0484 | ND |
| Isopentane | 22.7 | | 0.0503 | ND |
| 1-Pentene | 0.327 | J | 0.365 | J |
| Pentane | 1.31 | | 11.2 | |
| Isoprene | 0.402 | J | 0.160 | J |
| trans-2-Pentene | 0.174 | J | 0.314 | J |
| cis-2-Pentene | 0.0475 | ND | 0.102 | J |
| 2,2-Dimethylbutane | 0.0506 | ND | 0.356 | J |
| Cyclopentane | 0.0477 | ND | 0.411 | J |
| 2,3-Dimethylbutane | 0.0508 | ND | 0.281 | J |
| 2-Methylpentane | 2.67 | | 2.14 | |
| 3-Methylpentane | 0.403 | J | 0.883 | |
| 1-Hexene | 0.636 | | 0.299 | J |
| Hexane | 0.450 | J | 1.05 | |
| Methylcyclopentane | 0.277 | J | 0.506 | |
| 2,4-Dimethylpentane | 0.0501 | ND | 0.0474 | ND |
| Benzene | 11.4 | | 18.4 | |
| Cyclohexane | 0.221 | J | 0.400 | J |
| 2-Methylhexane | 0.610 | | 0.499 | |
| 2,3-Dimethylpentane | 0.199 | J | 0.0463 | ND |
| 3-Methylhexane | 0.0499 | ND | 2.49 | |
| 2,2,4-Trimethylpentane | 0.324 | J | 0.477 | J |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## Summary

| Sample ID | SB-1 | | SB-2 | |
|---|---|---|---|---|
| Compound | ppbv | | ppbv | |
| Heptane | 0.802 | | 0.779 | |
| Methylcyclohexane | 0.538 | | 0.503 | |
| 2,3,4-Trimethylpentane | 0.247 | J | 0.371 | J |
| Toluene | 15.8 | | 16.4 | |
| 2-Methylheptane | 0.284 | J | 0.305 | J |
| 3-Methylheptane | 0.179 | J | 0.246 | J |
| n-Octane | 0.900 | | 1.01 | |
| Ethylbenzene | 5.78 | | 20.4 | |
| m-Xylene | 7.75 | | 32.7 | |
| p-Xylene | 2.09 | | 10.9 | |
| Styrene | 1.41 | | 2.48 | |
| o-Xylene | 3.23 | | 18.4 | |
| n-Nonane | 1.34 | | 5.39 | |
| Isopropylbenzene | 4.96 | | 11.2 | |
| alpha-Pinene | 31.6 | | 78.2 | |
| n-Propylbenzene | 0.269 | J | 3.18 | |
| 3-Ethyltoluene | 0.999 | | 8.37 | |
| 4-Ethyltoluene | 3.68 | | 17.0 | |
| 1,3,5-Trimethylbenzene | 1.34 | | 10.0 | |
| 2-Ethyltoluene | 0.196 | J | 4.54 | |
| 1,2,4-Trimethylbenzene | 2.21 | | 23.5 | |
| n-Decane | 1.61 | | 25.4 | |
| 1,2,3-Trimethylbenzene | 0.966 | | 18.5 | |
| 1,3-Diethylbenzene | 0.991 | | 9.48 | |
| 1,4-Diethylbenzene | 0.491 | J | 4.61 | |
| n-Undecane | 0.801 | | 10.6 | |
| n-Dodecane | 2.13 | | 2.49 | |

## Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-2  EPA Method TO-14A Analysis

Client No.: L-10-1678  Site: Baylor Football Operation Center-Waco, TX

## Summary

| Sample ID | SB-1 C70523 | SB-2 C70527 |
|---|---|---|
| Compound | ppmv | ppmv |
| Methane | 16.6 | 2.19 |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-3  ASTM D1946 Analysis

Client No.: L-10-1678  Site: Baylor Football Operation Center-Waco, TX

## Summary

| Sample ID | SB-1 | | SB-2 | |
|---|---|---|---|---|
| Compound | % | | % | |
| Carbon monoxide | 0.00830 | ND | 0.00784 | ND |

## Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-4 ASTM D5504 Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## Summary

| Sample ID | SB-1 C70523 | | SB-2 C70527 | |
|---|---|---|---|---|
| Compound | ppmv | | ppmv | |
| Hydrogen Sulfide | 0.197 | ND | 0.186 | ND |
| Methyl Mercaptan | 0.197 | ND | 0.186 | ND |
| Ethyl Mercaptan | 0.197 | ND | 0.186 | ND |
| Isopropyl Mercaptan | 0.197 | ND | 0.186 | ND |
| t-Butyl Mercaptan | 0.197 | ND | 0.186 | ND |
| n-Propyl Mercaptan | 0.197 | ND | 0.186 | ND |
| sec-Butyl Mercaptan | 0.197 | ND | 0.186 | ND |
| Isobutyl Mercaptan | 0.197 | ND | 0.186 | ND |
| n-Butyl Mercaptan | 0.197 | ND | 0.186 | ND |

# Results

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## Ethylene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _009_003F0901.D | 0.0297 | 3.38 | 96.2 | 19.90 | 1,915 | |
| SB-2 | _008_004F0801.D | 0.0297 | 3.39 | 4.53 | 1.88 | 8.51 | |

## Acetylene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _009_003F0901.D | 0.0253 | NA | 0.0253 | 19.90 | 0.502 | ND |
| SB-2 | _008_004F0801.D | 0.0253 | 3.54 | 0.253 | 1.88 | 0.476 | |

## Ethane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _009_003F0901.D | 0.0503 | 3.59 | 17.8 | 19.90 | 355 | |
| SB-2 | _008_004F0801.D | 0.0503 | 3.64 | 6.02 | 1.88 | 11.3 | |

## Propylene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _009_003F0901.D | 0.0378 | 5.21 | 20.8 | 19.90 | 414 | |
| SB-2 | _008_004F0801.D | 0.0378 | 5.35 | 1.42 | 1.88 | 2.67 | |

## Propane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0392 | 5.40 | 21.4 | 1.99 | 42.5 | |
| SB-2 | _008_004F0801.D | 0.0392 | 5.50 | 3.00 | 1.88 | 5.65 | |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## Isobutane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0262 | 7.51 | 0.895 | 1.99 | 1.78 | |
| SB-2 | _008_004F0801.D | 0.0262 | 7.58 | 1.89 | 1.88 | 3.56 | |

## Isobutylene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0248 | 8.38 | 5.64 | 1.99 | 11.2 | |
| SB-2 | _008_004F0801.D | 0.0248 | 8.40 | 1.54 | 1.88 | 2.89 | |

## 1-Butene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0258 | NA | 0.0258 | 1.99 | 0.0514 | ND |
| SB-2 | _008_004F0801.D | 0.0258 | 8.44 | 3.43 | 1.88 | 6.44 | |

## 1,3-Butadiene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0256 | NA | 0.0256 | 1.99 | 0.0510 | ND |
| SB-2 | _008_004F0801.D | 0.0256 | NA | 0.0256 | 1.88 | 0.0482 | ND |

## Butane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0553 | 8.70 | 1.15 | 1.99 | 2.28 | |
| SB-2 | _008_004F0801.D | 0.0553 | NA | 0.0553 | 1.88 | 0.104 | ND |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## trans-2-Butene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0243 | 9.07 | 0.0657 | 1.99 | 0.131 | J |
| SB-2 | _008_004F0801.D | 0.0243 | NA | 0.0243 | 1.88 | 0.0457 | ND |

## cis-2-Butene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0257 | NA | 0.0257 | 1.99 | 0.0512 | ND |
| SB-2 | _008_004F0801.D | 0.0257 | NA | 0.0257 | 1.88 | 0.0484 | ND |

## Isopentane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0268 | 11.15 | 11.4 | 1.99 | 22.7 | |
| SB-2 | _008_004F0801.D | 0.0268 | NA | 0.0268 | 1.88 | 0.0503 | ND |

## 1-Pentene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0261 | 11.63 | 0.164 | 1.99 | 0.327 | J |
| SB-2 | _008_004F0801.D | 0.0261 | 11.68 | 0.194 | 1.88 | 0.365 | J |

## Pentane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0270 | 11.99 | 0.660 | 1.99 | 1.31 | |
| SB-2 | _008_004F0801.D | 0.0270 | 12.03 | 5.97 | 1.88 | 11.2 | |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## Isoprene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0256 | 12.12 | 0.202 | 1.99 | 0.402 | J |
| SB-2 | _008_004F0801.D | 0.0256 | 12.17 | 0.0853 | 1.88 | 0.160 | J |

## trans-2-Pentene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0296 | 12.23 | 0.0872 | 1.99 | 0.174 | J |
| SB-2 | _008_004F0801.D | 0.0296 | 12.29 | 0.167 | 1.88 | 0.314 | J |

## cis-2-Pentene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0239 | NA | 0.0239 | 1.99 | 0.0475 | ND |
| SB-2 | _008_004F0801.D | 0.0239 | 12.52 | 0.0543 | 1.88 | 0.102 | J |

## 2,2-Dimethylbutane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0254 | NA | 0.0254 | 1.99 | 0.0506 | ND |
| SB-2 | _008_004F0801.D | 0.0254 | 13.10 | 0.189 | 1.88 | 0.356 | J |

## Cyclopentane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0240 | NA | 0.0240 | 1.99 | 0.0477 | ND |
| SB-2 | _008_004F0801.D | 0.0240 | 13.92 | 0.219 | 1.88 | 0.411 | J |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## 2,3-Dimethylbutane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0256 | NA | 0.0256 | 1.99 | 0.0508 | ND |
| SB-2 | _008_004F0801.D | 0.0256 | 13.99 | 0.149 | 1.88 | 0.281 | J |

## 2-Methylpentane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0251 | 14.10 | 1.34 | 1.99 | 2.67 | |
| SB-2 | _008_004F0801.D | 0.0251 | 14.13 | 1.14 | 1.88 | 2.14 | |

## 3-Methylpentane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0252 | 14.48 | 0.203 | 1.99 | 0.403 | J |
| SB-2 | _008_004F0801.D | 0.0252 | 14.52 | 0.470 | 1.88 | 0.883 | |

## 1-Hexene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0250 | 14.65 | 0.320 | 1.99 | 0.636 | |
| SB-2 | _008_004F0801.D | 0.0250 | 14.68 | 0.159 | 1.88 | 0.299 | J |

## Hexane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0255 | 14.96 | 0.226 | 1.99 | 0.450 | J |
| SB-2 | _008_004F0801.D | 0.0255 | 15.00 | 0.559 | 1.88 | 1.05 | |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## Methylcyclopentane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0253 | 15.69 | 0.139 | 1.99 | 0.277 | J |
| SB-2 | _008_004F0801.D | 0.0253 | 15.72 | 0.269 | 1.88 | 0.506 | |

## 2,4-Dimethylpentane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0252 | NA | 0.0252 | 1.99 | 0.0501 | ND |
| SB-2 | _008_004F0801.D | 0.0252 | NA | 0.0252 | 1.88 | 0.0474 | ND |

## Benzene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0259 | 16.33 | 5.73 | 1.99 | 11.4 | |
| SB-2 | _008_004F0801.D | 0.0259 | 16.36 | 9.81 | 1.88 | 18.4 | |

## Cyclohexane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0248 | 16.58 | 0.111 | 1.99 | 0.221 | J |
| SB-2 | _008_004F0801.D | 0.0248 | 16.61 | 0.213 | 1.88 | 0.400 | J |

## 2-Methylhexane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0259 | 16.77 | 0.307 | 1.99 | 0.610 | |
| SB-2 | _008_004F0801.D | 0.0259 | 16.79 | 0.266 | 1.88 | 0.499 | |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## 2,3-Dimethylpentane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0247 | 16.83 | 0.100 | 1.99 | 0.199 | J |
| SB-2 | _008_004F0801.D | 0.0247 | NA | 0.0247 | 1.88 | 0.0463 | ND |

## 3-Methylhexane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0251 | NA | 0.0251 | 1.99 | 0.0499 | ND |
| SB-2 | _008_004F0801.D | 0.0251 | 17.00 | 1.33 | 1.88 | 2.49 | |

## 2,2,4-Trimethylpentane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0261 | 17.36 | 0.163 | 1.99 | 0.324 | J |
| SB-2 | _008_004F0801.D | 0.0261 | 17.38 | 0.254 | 1.88 | 0.477 | J |

## Heptane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0256 | 17.61 | 0.403 | 1.99 | 0.802 | |
| SB-2 | _008_004F0801.D | 0.0256 | 17.63 | 0.415 | 1.88 | 0.779 | |

## Methylcyclohexane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0254 | 18.20 | 0.270 | 1.99 | 0.538 | |
| SB-2 | _008_004F0801.D | 0.0254 | 18.21 | 0.268 | 1.88 | 0.503 | |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## 2,3,4-Trimethylpentane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0256 | 18.88 | 0.124 | 1.99 | 0.247 | J |
| SB-2 | _008_004F0801.D | 0.0256 | 18.89 | 0.197 | 1.88 | 0.371 | J |

## Toluene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0252 | 19.02 | 7.93 | 1.99 | 15.8 | |
| SB-2 | _008_004F0801.D | 0.0252 | 19.03 | 8.74 | 1.88 | 16.4 | |

## 2-Methylheptane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0255 | 19.23 | 0.143 | 1.99 | 0.284 | J |
| SB-2 | _008_004F0801.D | 0.0255 | 19.24 | 0.162 | 1.88 | 0.305 | J |

## 3-Methylheptane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0249 | 19.41 | 0.0898 | 1.99 | 0.179 | J |
| SB-2 | _008_004F0801.D | 0.0249 | 19.42 | 0.131 | 1.88 | 0.246 | J |

## n-Octane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0251 | 20.01 | 0.452 | 1.99 | 0.900 | |
| SB-2 | _008_004F0801.D | 0.0251 | 20.02 | 0.539 | 1.88 | 1.01 | |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## Ethylbenzene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0244 | 21.22 | 2.91 | 1.99 | 5.78 | |
| SB-2 | _008_004F0801.D | 0.0244 | 21.22 | 10.9 | 1.88 | 20.4 | |

## m-Xylene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0172 | 21.40 | 3.90 | 1.99 | 7.75 | |
| SB-2 | _008_004F0801.D | 0.0172 | 21.40 | 17.4 | 1.88 | 32.7 | |

## p-Xylene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0188 | 21.42 | 1.05 | 1.99 | 2.09 | |
| SB-2 | _008_004F0801.D | 0.0188 | 21.42 | 5.79 | 1.88 | 10.9 | |

## Styrene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0257 | 21.77 | 0.708 | 1.99 | 1.41 | |
| SB-2 | _008_004F0801.D | 0.0257 | 21.77 | 1.32 | 1.88 | 2.48 | |

## o-Xylene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0245 | 21.88 | 1.62 | 1.99 | 3.23 | |
| SB-2 | _008_004F0801.D | 0.0245 | 21.89 | 9.77 | 1.88 | 18.4 | |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## n-Nonane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0250 | 22.12 | 0.674 | 1.99 | 1.34 | |
| SB-2 | _008_004F0801.D | 0.0250 | 22.13 | 2.87 | 1.88 | 5.39 | |

## Isopropylbenzene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0248 | 22.44 | 2.49 | 1.99 | 4.96 | |
| SB-2 | _008_004F0801.D | 0.0248 | 22.44 | 5.95 | 1.88 | 11.2 | |

## alpha-Pinene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0225 | 22.78 | 15.9 | 1.99 | 31.6 | |
| SB-2 | _008_004F0801.D | 0.0225 | 22.78 | 41.6 | 1.88 | 78.2 | |

## n-Propylbenzene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0250 | 22.88 | 0.135 | 1.99 | 0.269 | J |
| SB-2 | _008_004F0801.D | 0.0250 | 22.89 | 1.69 | 1.88 | 3.18 | |

## 3-Ethyltoluene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0245 | 22.97 | 0.502 | 1.99 | 0.999 | |
| SB-2 | _008_004F0801.D | 0.0245 | 22.98 | 4.45 | 1.88 | 8.37 | |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## 4-Ethyltoluene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0241 | 23.00 | 1.85 | 1.99 | 3.68 | |
| SB-2 | _008_004F0801.D | 0.0241 | 23.00 | 9.05 | 1.88 | 17.0 | |

## 1,3,5-Trimethylbenzene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0243 | 23.08 | 0.674 | 1.99 | 1.34 | |
| SB-2 | _008_004F0801.D | 0.0243 | 23.07 | 5.33 | 1.88 | 10.0 | |

## 2-Ethyltoluene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0245 | 23.23 | 0.0984 | 1.99 | 0.196 | J |
| SB-2 | _008_004F0801.D | 0.0245 | 23.23 | 2.41 | 1.88 | 4.54 | |

## 1,2,4-Trimethylbenzene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0247 | 23.42 | 1.11 | 1.99 | 2.21 | |
| SB-2 | _008_004F0801.D | 0.0247 | 23.42 | 12.5 | 1.88 | 23.5 | |

## n-Decane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0250 | 23.52 | 0.810 | 1.99 | 1.61 | |
| SB-2 | _008_004F0801.D | 0.0250 | 23.53 | 13.5 | 1.88 | 25.4 | |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-1 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## 1,2,3-Trimethylbenzene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0236 | 23.77 | 0.485 | 1.99 | 0.966 | |
| SB-2 | _008_004F0801.D | 0.0236 | 23.77 | 9.85 | 1.88 | 18.5 | |

## 1,3-Diethylbenzene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0228 | 24.04 | 0.498 | 1.99 | 0.991 | |
| SB-2 | _008_004F0801.D | 0.0228 | 24.04 | 5.04 | 1.88 | 9.48 | |

## 1,4-Diethylbenzene

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0249 | 24.09 | 0.247 | 1.99 | 0.491 | J |
| SB-2 | _008_004F0801.D | 0.0249 | 24.10 | 2.45 | 1.88 | 4.61 | |

## n-Undecane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0251 | 24.52 | 0.403 | 1.99 | 0.801 | |
| SB-2 | _008_004F0801.D | 0.0251 | 24.52 | 5.61 | 1.88 | 10.6 | |

## n-Dodecane

| Sample ID | Filename | MDL (ppb) | Ret Time (min) | Conc (ppb) | DF | Final Conc (ppbv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | _007_003F0701.D | 0.0240 | 25.29 | 1.07 | 1.99 | 2.13 | |
| SB-2 | _008_004F0801.D | 0.0240 | 25.29 | 1.32 | 1.88 | 2.49 | |

## Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-2 EPA Method TO-14A Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## Methane

| Sample ID | Filename #1 | MDL (ppmv) | Ret. Time (min.) | Conc 1 (ppmv) | DF | Final Conc (ppmv) | Flag |
|---|---|---|---|---|---|---|---|
| SB-1 | 014F0801.D | 0.497 | 0.64 | 8.33 | 1.99 | 16.6 | |
| SB-2 | 009F0901.D | 0.497 | 0.65 | 1.16 | 1.88 | 2.19 | |

# Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-3 ASTM D1946 Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## Carbon monoxide

| Sample ID | Filename #1 | Filename #2 | MDL (%) | Ret Time (min) | Ret Time (min) | %dif RT | Conc #1 (%) | Conc #2 (%) | %dif conc | DF | Avg Conc (%) | Final Conc (%) | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-1 | 001F2003.D | 001F2004.D | 0.00417 | NA | NA | NA | 0.00417 | 0.00417 | | 1.99 | 0.00417 | 0.00830 | ND |
| SB-2 | 001F2103.D | 001F2104.D | 0.00417 | NA | NA | NA | 0.00417 | 0.00417 | | 1.88 | 0.00417 | 0.00784 | ND |

## Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-4 ASTM D5504 Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## Hydrogen Sulfide

| Sample ID | Filename #1 | MDL (ppmv) | Conc 1 (ppmv) | DF | Final Conc (ppmv) | Flag |
|---|---|---|---|---|---|---|
| SB-1 | 012B0401.D | 0.0992 | 0.0992 | 1.99 | 0.197 | ND |
| SB-2 | 013B0701.D | 0.0992 | 0.0992 | 1.88 | 0.186 | ND |

## Methyl Mercaptan

| Sample ID | Filename #1 | MDL (ppmv) | Conc 1 (ppmv) | DF | Final Conc (ppmv) | Flag |
|---|---|---|---|---|---|---|
| SB-1 | 012B0401.D | 0.0992 | 0.0992 | 1.99 | 0.197 | ND |
| SB-2 | 013B0701.D | 0.0992 | 0.0992 | 1.88 | 0.186 | ND |

## Ethyl Mercaptan

| Sample ID | Filename #1 | MDL (ppmv) | Conc 1 (ppmv) | DF | Final Conc (ppmv) | Flag |
|---|---|---|---|---|---|---|
| SB-1 | 012B0401.D | 0.0992 | 0.0992 | 1.99 | 0.197 | ND |
| SB-2 | 013B0701.D | 0.0992 | 0.0992 | 1.88 | 0.186 | ND |

## Isopropyl Mercaptan

| Sample ID | Filename #1 | MDL (ppmv) | Conc 1 (ppmv) | DF | Final Conc (ppmv) | Flag |
|---|---|---|---|---|---|---|
| SB-1 | 012B0401.D | 0.0992 | 0.0992 | 1.99 | 0.197 | ND |
| SB-2 | 013B0701.D | 0.0992 | 0.0992 | 1.88 | 0.186 | ND |

## t-Butyl Mercaptan

| Sample ID | Filename #1 | MDL (ppmv) | Conc 1 (ppmv) | DF | Final Conc (ppmv) | Flag |
|---|---|---|---|---|---|---|
| SB-1 | 012B0401.D | 0.0992 | 0.0992 | 1.99 | 0.197 | ND |
| SB-2 | 013B0701.D | 0.0992 | 0.0992 | 1.88 | 0.186 | ND |

## Enthalpy Analytical

Company: Hydrex Environmental Consulting, LLC

Job No.: 0423-940-4 ASTM D5504 Analysis

Client No.: L-10-1678 Site: Baylor Football Operation Center-Waco, TX

## n-Propyl Mercaptan

| Sample ID | Filename #1 | MDL (ppmv) | Conc 1 (ppmv) | DF | Final Conc (ppmv) | Flag |
|---|---|---|---|---|---|---|
| SB-1 | 012B0401.D | 0.0992 | 0.0992 | 1.99 | 0.197 | ND |
| SB-2 | 013B0701.D | 0.0992 | 0.0992 | 1.88 | 0.186 | ND |

## sec-Butyl Mercaptan

| Sample ID | Filename #1 | MDL (ppmv) | Conc 1 (ppmv) | DF | Final Conc (ppmv) | Flag |
|---|---|---|---|---|---|---|
| SB-1 | 012B0401.D | 0.0992 | 0.0992 | 1.99 | 0.197 | ND |
| SB-2 | 013B0701.D | 0.0992 | 0.0992 | 1.88 | 0.186 | ND |

## Isobutyl Mercaptan

| Sample ID | Filename #1 | MDL (ppmv) | Conc 1 (ppmv) | DF | Final Conc (ppmv) | Flag |
|---|---|---|---|---|---|---|
| SB-1 | 012B0401.D | 0.0992 | 0.0992 | 1.99 | 0.197 | ND |
| SB-2 | 013B0701.D | 0.0992 | 0.0992 | 1.88 | 0.186 | ND |

## n-Butyl Mercaptan

| Sample ID | Filename #1 | MDL (ppmv) | Conc 1 (ppmv) | DF | Final Conc (ppmv) | Flag |
|---|---|---|---|---|---|---|
| SB-1 | 012B0401.D | 0.0992 | 0.0992 | 1.99 | 0.197 | ND |
| SB-2 | 013B0701.D | 0.0992 | 0.0992 | 1.88 | 0.186 | ND |

# Narrative Summary

# Enthalpy Analytical Narrative Summary

| | |
|---|---|
| **Company** | Hydrex Environmental Consulting, LLC |
| **Job #** | 0423-940 TO-14A |
| **Client #** | L-10-1678 |

| | |
|---|---|
| **Custody** | Erika Garcia received the samples on 04/10/23 at ambient temperature after being relinquished by Hydrex. The samples were received in good condition.<br><br>The tube samples were sent to Enthalpy, Durham for analysis.<br><br>Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC. |
| **Analysis** | The canister samples were analyzed for volatile organic compounds using the analytical procedures in EPA Compendium Method TO-14A, Determination of Volatile Organic Compounds (VOCs) In Ambient Air Using Specially Prepared Canisters With Subsequent Analysis By Gas Chromatography.<br><br>The canister samples were analyzed for carbon dioxide using the analytical procedures in ASTM D1946, Standard Practice for Analysis of Reformed Gas by Gas Chromatography.<br><br>The canister samples were analyzed for speciated mercaptans using the analytical procedures in ASTM D5504, Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence, using a Pulsed Flame Photometric Detector.<br><br>The analytes were all referenced to certified gas phase standards.<br><br>GCs #5, #6, #8, and #9 were used for these analyses. |
| **Calibration** | The calibration curve(s) used met all required acceptance criteria.<br><br>The ASTM D5504 calibration curve uses the hydrogen sulfide response factor, with the linearity of other sulfur species established and response factors verified to be within 20% of hydrogen sulfide.<br><br>The calibration verification for undecane at the end of the analytical sequence failed slightly low at approximately 68% versus the acceptance limit of 70-130%. |
| **QC Notes** | The analytes of interest were not identified at concentrations greater than the detection limit in the analyses of the laboratory blanks with the exception of 1-Butene which was present below the reporting limit. |

ENTHALPY
ANALYTICAL

# Enthalpy Analytical Narrative Summary

| | |
|---|---|
| **Company** | Hydrex Environmental Consulting, LLC |
| **Job #** | 0423-940 TO-14A |
| **Client #** | L-10-1678 |

| | |
|---|---|
| | The duplicate analyzed with the batch on GC #9 met the % difference criteria. The duplicate was analyzed on the CCV for the batch rather than a sample. |
| **Reporting Notes** | Due to unknown interference in the samples, TO-14A results other than methane may be reported with a high bias.<br><br>Data resulting from ASTM D1946 analyses are reported in mole %, and are not normalized.<br><br>These analyses met the requirements of the TNI Standard. Any deviations from the requirements of the reference method or TNI Standard have been stated above.<br><br>Durham results for the tube samples are included in full at the end of this report.<br><br>The results presented in this report are representative of the samples as provided to the laboratory. |

ENTHALPY
ANALYTICAL

# General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, LLC data reports, unless specifically noted otherwise.

- Any analysis which refers to the method as ***"Type"*** represents a planned deviation from the reference method. For instance a Hydrogen Sulfide assay from a Tedlar bag would be labeled as "EPA Method 16-Type" because Tedlar bags are not mentioned as one of the collection options in EPA Method 16.

- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.

- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.

- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.

- The letter ***J*** in the Qualifier or Flag column in the results indicates that the value is between the MDL and the LOQ. The laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.

- The letter ***E*** in the Qualifier or Flag column indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.

- Sample results are presented 'as measured' for single injection methodologies, or an average value if multiple injections are made. If all injections are below the MDL, the sample is considered non-detect and the ND value is presented. If one, but not all, are below the MDL, the MDL value is used for any injections that are below the MDL. For example, if the MDL is 0.500 and LOQ is 1.00, and the instrument measures 0.355, 0.620, and 0.442 - the result reported is the average of 0.500, 0.620, and 0.500 - - - i.e. 0.540 with a J flag.

- When a spike recovery (Bag Spike, Collocated Spike Train, or liquid matrix spike) is being calculated, the native (unspiked) sample result is used in the calculations, as long as the value is above the MDL. If a sample is ND, then 0 is used as the native amount (not the MDL value).

- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.

- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. The MS analysis indicates what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).

ENTHALPY
ANALYTICAL

# General Reporting Notes
**(continued)**

- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as a MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.

- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).

- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.

- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two spikes are retained as LCSs. The LCSs are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection, and/or sample transport.

- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits. In the case of small numbers, generally 3 significant figures are presented, but still only 2 should be used with confidence. Many neat materials are only certified to 3 digits, and as the mathematically correct final result is always 1 digit less than all its pre-cursors - 2 significant figures are what are most defensible.

- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations on sample chromatograms, if provided in the report. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name on the chromatogram.

ENTHALPY
ANALYTICAL

# Sample Custody

0423-940

ENTHALPY ANALYTICAL

# Chain of Custody Record

Page 1 of 1

**Special Handling:**
- ☑ Standard Turn Around Time (10 business days)
- ☐ Rush Turn Around Time -- Date Needed: _____
- All TATs Subject to Approval by Enthalpy Analytical, Inc.
- All Bag/Can Samples Disposed of 1 Month from Receipt.
- All Other Samples Disposed of 4 Months from Receipt.

Client Name: Hydrex
Project Manager: Trae Scarborough
Report To: Trae Scarborough

Project Number: L-10-1678
Site Name: Baylor Football Operation Center
Location: Waco, TX

PO#: ———
Telephone#: 936 568 9451
Email: tscarborough@hydrexinc.com

For spiked or duplicate samples: please provide sample volumes for recovery calculations.
For Particulates: please provide tare weights and/or condensed water volumes.

Special Instructions:

A=Air 1=H2SO4 2=NaOH W=Water O=Other
X=XAD C=Charcoal SG=Silica Gel
G=Grab C=Composite Q=Quality Control O=Other

| | Sample ID | Date | Time | Sample Volume | Type | Matrix | Sample Containers: # of VOA Vials | # of Glass | # of Plastic | # of Bags | # of Canisters | # of Tubes | # Other | Analyses: TO-14A - std list | TO-14A - CH4 | ASTM D1946 - CO | **ASTM D5504 | NIOSH 6016 - NH3 | | | | Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | SB-1 | 4/5/23 | 10:12-11:12 | 6L | G | A | | | | | 1 | | | | X | X | X | | | C70523 | | **ASTM D5504 - H2S, Mercaptans |
| 002 | SB-2 | 4/5/23 | 12:43-13:34 | 6L | G | A | | | | | 1 | | | | X | X | X | | | | | C70527 |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | Ref quote: 20230303-01JLE |
| | | | | | | | | | | | | | | | | | | | | | APR 10 '23 AM 9:30 | |

| Relinquished By: | Date: | Received By: | Date: | Time: | Sample Condition Upon Receipt: |
|---|---|---|---|---|---|
| Jordan Mezza | 4/6/23 | ① | 4/10/23 | 09:30 | ☑ Iced ☐ Ambient ☐ °C 23.3 PUCE GUN |
| | | | | | ☐ Iced ☐ Ambient ☐ °C _____ |
| | | | | | ☐ Iced ☐ Ambient ☐ °C _____ |

931 Seaco Court • Deer Park, TX 77536 • (281) 984-7021 • www.enthalpy.com

① EF 406 4/10/23

FORM
Chain of Custody
EAH-DR1001-001, Revision 2019-01, Effective 03/18/19

0423-940

ENTHALPY ANALYTICAL

# Chain of Custody Record

Page 1 of 1

**Special Handling:**
- ☑ Standard Turn Around Time (10 business days)
- ☐ Rush Turn Around Time -- Date Needed: _____
- All TATs Subject to Approval by Enthalpy Analytical, Inc.
- All Bag/Can Samples Disposed of 1 Month from Receipt.
- All Other Samples Disposed of 4 Months from Receipt.

Client Name: Hydrex
Project Manager: Trae Scarborough
Report To: Trae Scarborough

Project Number: L-10-12678
Site Name: Baylor Football Op. Center
Location: Waco Tx

PO#: ——
Telephone#: 936-568-9451
Email: tscarborough@hydrex-inc.

For spiked or duplicate samples: please provide sample volumes for recovery calculations.
For Particulates: please provide tare weights and/or condensed water volumes.

Special Instructions:

A=Air 1=H2SO4 2=NaOH W=Water O=Other
X=XAD C=Charcoal SG=Silica Gel
G=Grab C=Composite Q=Quality Control O=Other

| | Sample ID | Date | Time | Sample Volume | Type | Matrix | Sample Containers: # of VOA Vials | # of Glass | # of Plastic | # of Bags | # of Canisters | # of Tubes | #Other | Analyses: TO-14A - std list | TO-14A - CH4 | ASTM D1946 - CO | **ASTM D5504 | NIOSH 6016 - NH3 | | | | Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~~SB-1-T1~~ | ~~4/5/23~~ | ~~10:12-10:42~~ | ~~G~~ | ~~G~~ | ~~A~~ | | | | | | ~~1~~ | | | | | | | | | | |
| 002 | SB-2-T2 | 4/5/23 | 12:43-2:13 | N/A | G | A | | | | | | 1 | | | | | | X | | | | Tube # 9653012190 |
| 001 | SB-1-T1 | 4/5/23 | 10:12-10:42 | NA | G | A | | | | | | 1 | | | | | | X | | | | Tube # 9653011193 |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | APR 10 '23 PM 9:50 | |
| | | | | | | | | | | | | | | | | | | | | | | Ref quote: 20230303-01JLE |
| | | | | | | | | | | | | | | | | | | | | | | 20.6°C FUCEON |
| | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished By: | Date: | Received By: | Date: | Time: | Sample Condition Upon Receipt: |
|---|---|---|---|---|---|
| Gordon D. Mezo | 4/6/23 | Ela G | ① 4/6/23 4/10/23 | 09:50 | ☑ Iced ☐ Ambient ☑ °C 20.6 FUCEON |
| | | | | | ☐ Iced ☐ Ambient ☐ °C _____ |
| | | | | | ☐ Iced ☐ Ambient ☐ °C _____ |

931 Seaco Court • Deer Park, TX 77536 • (281) 984-7021 • www.enthalpy.com

①EF 406 4/10/23

FORM
Chain of Custody
EAH-DR1001-001, Revision 2019-01, Effective 03/18/19

ENTHALPY ANALYTICAL

2625 Denison Drive, Suite D, Mt. Pleasant, MI 48858
Tel: 989-772-5088
Fax: 989-772-5870
Email: mtpinfo@enthalpy.com
www.enthalpy.com

0423-940

# Chain of Custody

**IAQ Home Survey™** **IAQ Commercial Survey™**

COC No. _____
Enthalpy Use Only – Do Not Fill In

| CONTACT INFORMATION | |
|---|---|
| Sampling Professional: Trae Scarborough | Phone: 9365898451 |
| Company: Hydrex Environmental | Email: tscarborough@hydrex-inc.com |
| Billing Address: 312 Old Tyler Road Nacogdoches TX 75961 | |

| LOCATION TESTED | |
|---|---|
| Project Name: Baylor Football Oper. Facility Center | Project No. L-10-1678 |
| Address: | |

It is important to fill out all information so your results can be correctly calculated and returned to you.
Please notify lab when a sample is shipped for any 1 business day (1 BD) rush turnaround request and by checking the box at bottom of page.

*Required Field - Please Write Legibly

| | Sample Information | | | | | | Analysis Requested* | | | | | | | | | Sample Name |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Residential | | | Commercial | | | Other | | | |
| Sample Number Enthalpy Use Only | Tube Number* Ex: AA123 | Date Collected* | Pump Start Time* | Pump Stop Time* | Temperature | Humidity | A2-IAQHSB (IAQHS-Basic) | A2-IAQHSP (IAQHS-Predict) | A14-IAQHSF (Formaldehyde) *Max. 30 min. sample* | A2-IAQCSB (IAQCS-Basic) | A2-IAQCSP (IAQCS-Predict) | A14-IAQCSF (Formaldehyde) *Max. 30 min. sample* | A2-TSC (Tobacco Smoke) | NIOSH 6016 NH3 | | Note: Briefly describe the actual sample collection location. Ex. Kitchen |
| | 96530-1193 | 4/5/23 | 12:43 | 2:13 | 96°F | 57% | | | | | | | | X | | SB-1-T1 |
| | 96530-12190 | 4/5/23 | 10:12 | 11:42 | 95°F | 44% | | | | | | | | X | | SB-2-T2 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

Location, notes, and comments about testing:

APR 10 '23 AM 9:50
20.6°C PUCE6W

Custody

| Sent By: | Date: | Time: |
|---|---|---|
| Jordan McMazo | 4/6/23 | |
| Received By: (At Prism) | Date: | Time: |
| | | |

| Turn Around Time (TAT): | Requested Service: |
|---|---|
| STD: Within 2 business days of receipt for Basic, Predict, Formaldehyde. Within 5 business days for TSC. STD is default.<br>1 BD: 1 Business Day (2x $) | ☑ Standard<br>☐ 1 BD<br>Note: *STD is default* |

[form: IAQS-COC-1221]

Retention of records is seven years. Records older than seven years will be destroyed without notification.

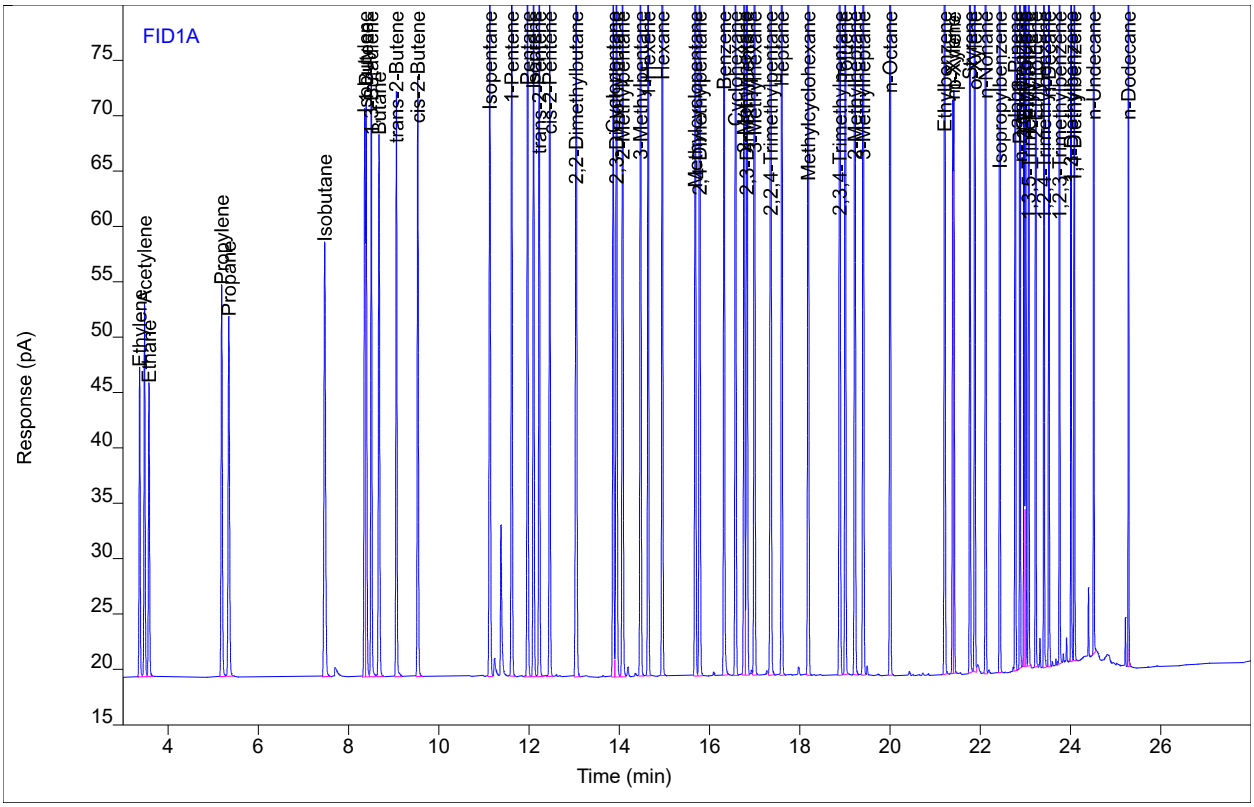
# Raw Data

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | S16588 #S16588 |
| Sequence Name | DPGC9-041223 ver.5 |
| Inj Data File | _001_014F0101.D |
| File Location | 3 - Houston Lab/Data/GC9/2023_Q2 |
| Injection Date | 4/12/2023 9:52 AM |
| File Modified | 4/25/2023 11:41 AM |
| Instrument | DP-GC09 |
| Operator | disconnected |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 14 |
| Injection Volume | NA |
| Injection | 1 of 1 |
| Acquisition Method | DPGC9-ACQ_122822A.M |
| Analysis Method | DPGC9-F_122822-LIMS.M |
| Method Modified | 4/25/2023 11:41 AM |
| Printed | 4/25/2023 12:53 PM |




| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Ethylene | BV | 3.37 | 46.0777 | 27.9596 | 18.4886 | 1 | 18.4886 | ppb |
| Acetylene | VV | 3.48 | 56.9926 | 33.7199 | 18.7568 | 1 | 18.7568 | ppb |
| Ethane | VB | 3.58 | 45.6839 | 26.5150 | 19.2627 | 1 | 19.2627 | ppb |
| Propylene | BB | 5.19 | 69.2213 | 35.4195 | 18.6568 | 1 | 18.6568 | ppb |
| Propane | BB | 5.35 | 70.8646 | 32.5255 | 19.0374 | 1 | 19.0374 | ppb |
| Isobutane | BB | 7.47 | 94.7992 | 39.2640 | 19.8222 | 1 | 19.8222 | ppb |
| Isobutylene | BV | 8.36 | 89.9178 | 51.2919 | 18.6325 | 1 | 18.6325 | ppb |
| 1-Butene | VV | 8.39 | 97.5224 | 51.8283 | 19.4828 | 1 | 19.4828 | ppb |
| 1,3-Butadiene | VB | 8.51 | 92.4183 | 55.1864 | 18.4813 | 1 | 18.4813 | ppb |
| Butane | BB | 8.68 | 93.5191 | 48.9232 | 19.5963 | 1 | 19.5963 | ppb |
| trans-2-Butene | BB | 9.06 | 88.5861 | 52.7975 | 18.5865 | 1 | 18.5865 | ppb |
| cis-2-Butene | BB | 9.54 | 93.1759 | 54.1767 | 19.4059 | 1 | 19.4059 | ppb |
| Isopentane | BV | 11.13 | 120.668 | 62.3547 | 20.0142 | 1 | 20.0142 | ppb |
| 1-Pentene | BB | 11.62 | 117.591 | 69.4339 | 19.6962 | 1 | 19.6962 | ppb |
| Pentane | VB | 11.97 | 121.043 | 70.4184 | 20.1967 | 1 | 20.1967 | ppb |
| Isoprene | BB | 12.10 | 115.999 | 68.5946 | 19.4526 | 1 | 19.4526 | ppb |
| trans-2-Pentene | BB | 12.23 | 115.527 | 71.7695 | 19.4185 | 1 | 19.4185 | ppb |
| cis-2-Pentene | BB | 12.46 | 107.283 | 64.5328 | 18.0659 | 1 | 18.0659 | ppb |
| 2,2-Dimethylbutane | BB | 13.05 | 135.927 | 65.1204 | 19.2530 | 1 | 19.2530 | ppb |
| 2,3-Dimethylbutane | VB | 13.94 | 137.401 | 72.9270 | 19.2995 | 1 | 19.2995 | ppb |

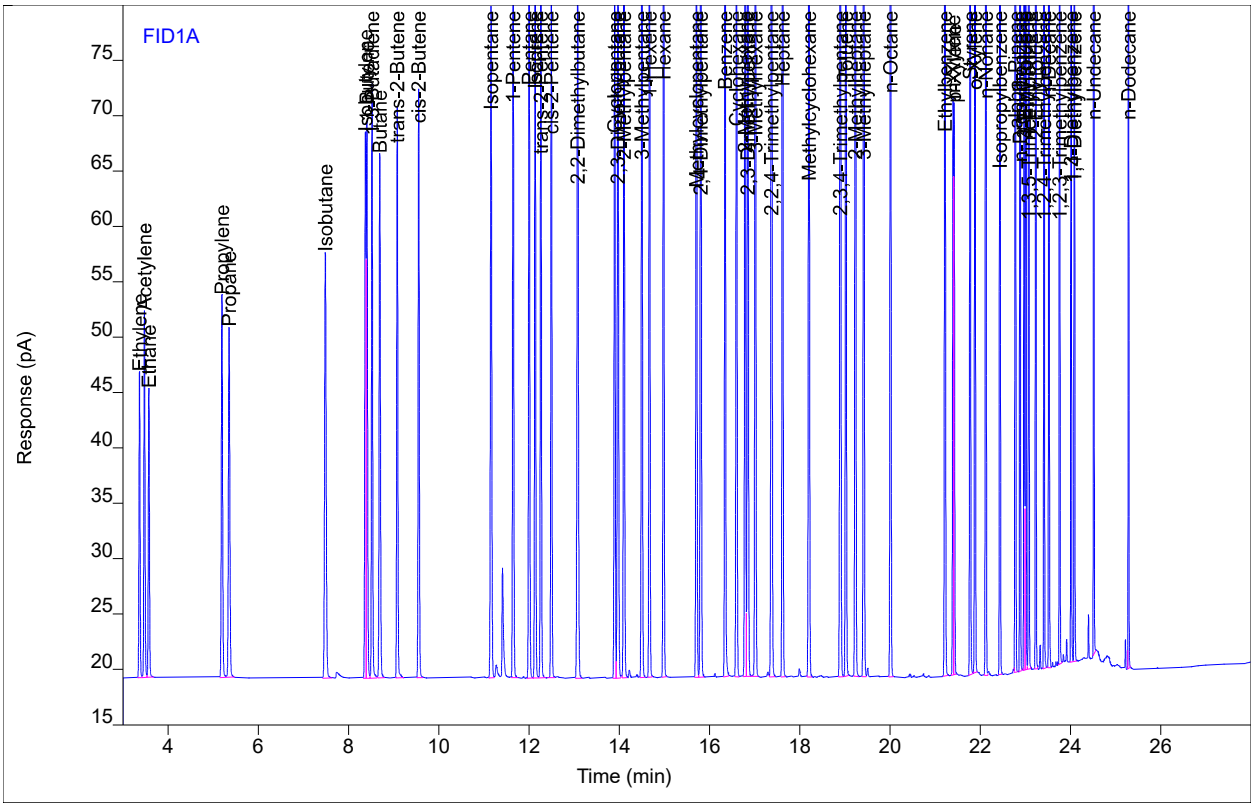
| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Cyclopentane | BV | 13.87 | 107.276 | 63.4727 | 18.0583 | 1 | 18.0583 | ppb |
| 2-Methylpentane | BB | 14.08 | 134.922 | 77.3071 | 18.9025 | 1 | 18.9025 | ppb |
| 3-Methylpentane | BB | 14.47 | 134.418 | 77.1664 | 18.9737 | 1 | 18.9737 | ppb |
| 1-Hexene | BB | 14.64 | 132.936 | 85.4199 | 18.7436 | 1 | 18.7436 | ppb |
| Hexane | BB | 14.96 | 134.802 | 85.1985 | 19.1242 | 1 | 19.1242 | ppb |
| Methylcyclopentane | BV | 15.69 | 136.498 | 81.0310 | 19.1342 | 1 | 19.1342 | ppb |
| 2,4-Dimethylpentane | VB | 15.78 | 156.444 | 88.9068 | 19.0404 | 1 | 19.0404 | ppb |
| Benzene | BB | 16.33 | 136.484 | 87.4589 | 19.9058 | 1 | 19.9058 | ppb |
| Cyclohexane | BB | 16.58 | 132.349 | 77.7447 | 18.6579 | 1 | 18.6579 | ppb |
| 2-Methylhexane | BV | 16.77 | 156.330 | 97.0081 | 19.3755 | 1 | 19.3755 | ppb |
| 2,3-Dimethylpentane | VB | 16.83 | 155.457 | 88.6004 | 18.4156 | 1 | 18.4156 | ppb |
| 3-Methylhexane | VB | 17.00 | 155.241 | 92.5531 | 18.5096 | 1 | 18.5096 | ppb |
| 2,2,4-Trimethylpentane | VB | 17.36 | 181.406 | 98.6261 | 19.4607 | 1 | 19.4607 | ppb |
| Heptane | BB | 17.60 | 155.093 | 99.3199 | 19.1874 | 1 | 19.1874 | ppb |
| Methylcyclohexane | BB | 18.19 | 155.955 | 92.1177 | 18.9065 | 1 | 18.9065 | ppb |
| 2,3,4-Trimethylpentane | BB | 18.89 | 176.915 | 100.542 | 19.0155 | 1 | 19.0155 | ppb |
| Toluene | BB | 19.01 | 142.814 | 93.4500 | 18.8668 | 1 | 18.8668 | ppb |
| 2-Methylheptane | BB | 19.22 | 173.001 | 109.000 | 19.1092 | 1 | 19.1092 | ppb |
| 3-Methylheptane | BV | 19.41 | 168.518 | 104.567 | 18.5868 | 1 | 18.5868 | ppb |
| n-Octane | BB | 20.01 | 165.745 | 108.674 | 18.5994 | 1 | 18.5994 | ppb |
| Ethylbenzene | BB | 21.21 | 148.147 | 96.4427 | 17.9578 | 1 | 17.9578 | ppb |
| m-Xylene | BV | 21.40 | 74.5389 | 51.8441 | 9.16131 | 1 | 9.16131 | ppb |
| p-Xylene | VB | 21.42 | 75.1328 | 52.7552 | 9.35793 | 1 | 9.35793 | ppb |
| Styrene | BB | 21.77 | 134.065 | 100.097 | 17.3674 | 1 | 17.3674 | ppb |
| o-Xylene | BB | 21.88 | 142.221 | 104.357 | 17.9086 | 1 | 17.9086 | ppb |
| n-Nonane | BB | 22.12 | 169.606 | 134.727 | 17.6405 | 1 | 17.6405 | ppb |
| Isopropylbenzene | BB | 22.44 | 162.909 | 131.289 | 17.6633 | 1 | 17.6633 | ppb |
| alpha-Pinene | VB | 22.78 | 155.657 | 124.055 | 15.9754 | 1 | 15.9754 | ppb |
| n-Propylbenzene | BB | 22.88 | 149.854 | 133.393 | 17.1167 | 1 | 17.1167 | ppb |
| 3-Ethyltoluene | BV | 22.98 | 142.503 | 130.135 | 16.6393 | 1 | 16.6393 | ppb |
| 4-Ethyltoluene | VV | 23.01 | 141.608 | 131.255 | 16.3258 | 1 | 16.3258 | ppb |
| 1,3,5-Trimethylbenzene | VB | 23.08 | 138.748 | 128.037 | 16.0263 | 1 | 16.0263 | ppb |
| 2-Ethyltoluene | BB | 23.23 | 139.247 | 128.683 | 16.2246 | 1 | 16.2246 | ppb |
| 1,2,4-Trimethylbenzene | BB | 23.42 | 133.956 | 129.979 | 15.7269 | 1 | 15.7269 | ppb |
| n-Decane | BB | 23.52 | 158.841 | 155.350 | 15.8335 | 1 | 15.8335 | ppb |
| 1,2,3-Trimethylbenzene | VB | 23.76 | 120.180 | 118.363 | 14.5112 | 1 | 14.5112 | ppb |
| 1,3-Diethylbenzene | BV | 24.02 | 121.368 | 123.851 | 13.2842 | 1 | 13.2842 | ppb |
| 1,4-Diethylbenzene | VB | 24.09 | 128.736 | 132.597 | 14.0550 | 1 | 14.0550 | ppb |
| n-Undecane | BB | 24.52 | 135.777 | 147.635 | 13.7030 | 1 | 13.7030 | ppb |
| n-Dodecane | BB | 25.29 | 113.656 | 135.353 | 14.2899 | 1 | 14.2899 | ppb |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | S16588 #S16588 Dup |
| Sequence Name | DPGC9-041223 ver.5 |
| Inj Data File | _002_014F0201.D |
| File Location | 3 - Houston Lab/Data/GC9/2023_Q2 |
| Injection Date | 4/12/2023 10:34 AM |
| File Modified | 4/21/2023 4:27 PM |
| Instrument | DP-GC09 |
| Operator | disconnected |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 14 |
| Injection Volume | NA |
| Injection | 1 of 1 |
| Acquisition Method | DPGC9-ACQ_122822A.M |
| Analysis Method | DPGC9-F_122822-LIMS.M |
| Method Modified | 4/21/2023 4:27 PM |
| Printed | 4/25/2023 12:53 PM |




| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Ethylene | BV | 3.37 | 45.2891 | 27.6405 | 18.1722 | 1 | 18.1722 | ppb |
| Acetylene | VV | 3.48 | 55.9270 | 33.0870 | 18.4061 | 1 | 18.4061 | ppb |
| Ethane | VB | 3.58 | 45.0546 | 26.0970 | 18.9974 | 1 | 18.9974 | ppb |
| Propylene | BV | 5.20 | 67.8389 | 34.5640 | 18.2842 | 1 | 18.2842 | ppb |
| Propane | VB | 5.35 | 69.7473 | 31.6533 | 18.7372 | 1 | 18.7372 | ppb |
| Isobutane | BB | 7.49 | 93.0263 | 38.4708 | 19.4515 | 1 | 19.4515 | ppb |
| Isobutylene | BV | 8.38 | 86.8697 | 49.3230 | 18.0009 | 1 | 18.0009 | ppb |
| 1-Butene | VV | 8.41 | 95.6262 | 50.2789 | 19.1040 | 1 | 19.1040 | ppb |
| 1,3-Butadiene | VB | 8.52 | 90.2830 | 53.6335 | 18.0543 | 1 | 18.0543 | ppb |
| Butane | BB | 8.69 | 91.8810 | 47.3583 | 19.2531 | 1 | 19.2531 | ppb |
| trans-2-Butene | BB | 9.08 | 86.7228 | 51.5240 | 18.1956 | 1 | 18.1956 | ppb |
| cis-2-Butene | BB | 9.56 | 91.3600 | 53.1362 | 19.0277 | 1 | 19.0277 | ppb |
| Isopentane | BV | 11.16 | 118.446 | 60.6356 | 19.6457 | 1 | 19.6457 | ppb |
| 1-Pentene | BB | 11.65 | 115.349 | 67.3359 | 19.3207 | 1 | 19.3207 | ppb |
| Pentane | BV | 12.01 | 118.644 | 69.2032 | 19.7965 | 1 | 19.7965 | ppb |
| Isoprene | VV | 12.14 | 113.758 | 67.9160 | 19.0769 | 1 | 19.0769 | ppb |
| trans-2-Pentene | VB | 12.27 | 113.209 | 69.9676 | 19.0289 | 1 | 19.0289 | ppb |
| cis-2-Pentene | BB | 12.50 | 105.159 | 63.8016 | 17.7082 | 1 | 17.7082 | ppb |
| 2,2-Dimethylbutane | BB | 13.08 | 133.377 | 64.7671 | 18.8918 | 1 | 18.8918 | ppb |
| Cyclopentane | BV | 13.90 | 105.151 | 62.7873 | 17.7006 | 1 | 17.7006 | ppb |

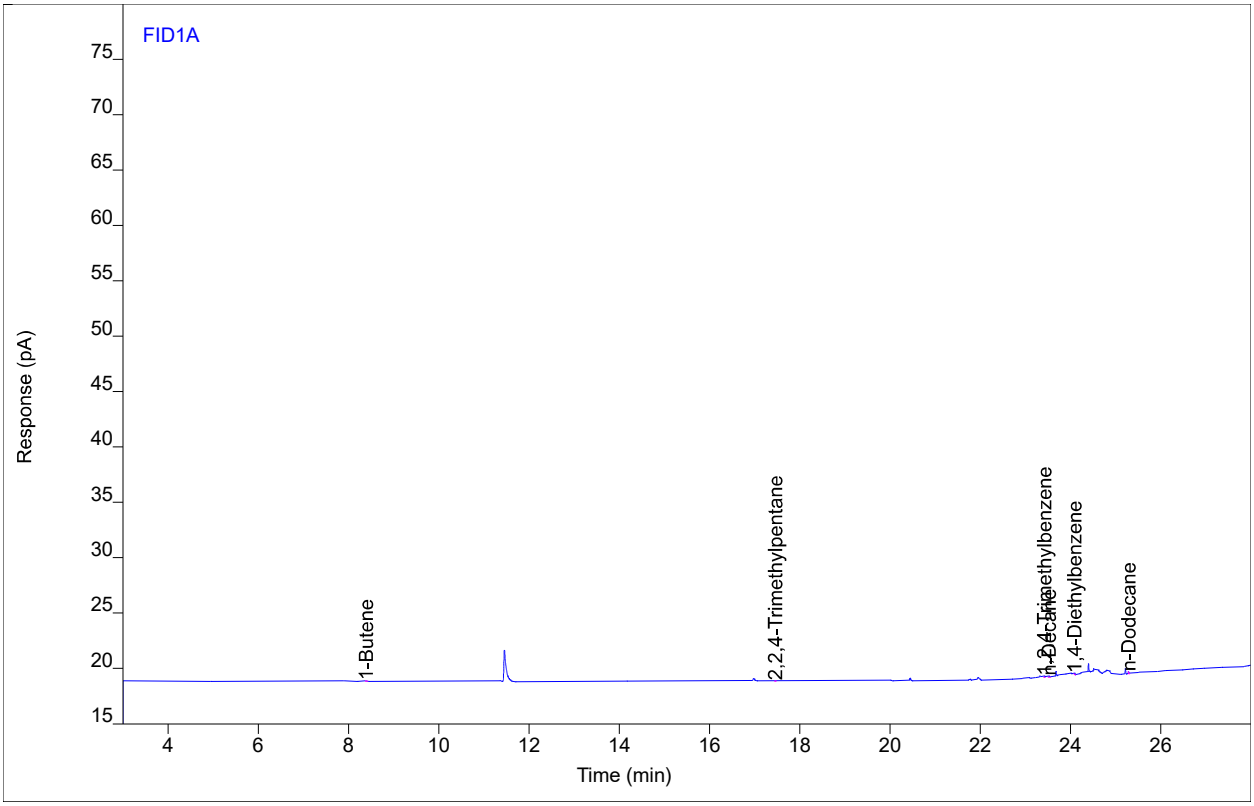
| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| 2,3-Dimethylbutane | VB | 13.97 | 134.726 | 71.5084 | 18.9237 | 1 | 18.9237 | ppb |
| 2-Methylpentane | BB | 14.11 | 131.913 | 76.6375 | 18.4808 | 1 | 18.4808 | ppb |
| 3-Methylpentane | BB | 14.50 | 131.910 | 75.6581 | 18.6196 | 1 | 18.6196 | ppb |
| 1-Hexene | BB | 14.67 | 130.299 | 83.0622 | 18.3718 | 1 | 18.3718 | ppb |
| Hexane | BB | 14.98 | 132.308 | 83.8703 | 18.7705 | 1 | 18.7705 | ppb |
| Methylcyclopentane | BV | 15.71 | 133.945 | 80.1536 | 18.7763 | 1 | 18.7763 | ppb |
| 2,4-Dimethylpentane | VB | 15.81 | 153.565 | 87.5581 | 18.6900 | 1 | 18.6900 | ppb |
| Benzene | BB | 16.35 | 133.160 | 86.1351 | 19.4211 | 1 | 19.4211 | ppb |
| Cyclohexane | BB | 16.60 | 129.820 | 75.8385 | 18.3014 | 1 | 18.3014 | ppb |
| 2-Methylhexane | BV | 16.79 | 153.180 | 94.1804 | 18.9850 | 1 | 18.9850 | ppb |
| 2,3-Dimethylpentane | VB | 16.85 | 152.652 | 87.4361 | 18.0834 | 1 | 18.0834 | ppb |
| 3-Methylhexane | BB | 17.02 | 152.256 | 91.4785 | 18.1536 | 1 | 18.1536 | ppb |
| 2,2,4-Trimethylpentane | VB | 17.38 | 178.033 | 98.5709 | 19.0989 | 1 | 19.0989 | ppb |
| Heptane | BB | 17.62 | 152.109 | 98.3905 | 18.8182 | 1 | 18.8182 | ppb |
| Methylcyclohexane | BB | 18.21 | 153.154 | 91.6438 | 18.5670 | 1 | 18.5670 | ppb |
| 2,3,4-Trimethylpentane | BB | 18.90 | 173.719 | 99.4275 | 18.6720 | 1 | 18.6720 | ppb |
| Toluene | BB | 19.02 | 140.036 | 92.1640 | 18.4998 | 1 | 18.4998 | ppb |
| 2-Methylheptane | BB | 19.24 | 169.861 | 108.383 | 18.7624 | 1 | 18.7624 | ppb |
| 3-Methylheptane | BV | 19.42 | 165.465 | 102.103 | 18.2501 | 1 | 18.2501 | ppb |
| n-Octane | BB | 20.01 | 162.527 | 105.984 | 18.2384 | 1 | 18.2384 | ppb |
| Ethylbenzene | BB | 21.22 | 145.570 | 94.8804 | 17.6454 | 1 | 17.6454 | ppb |
| m-Xylene | BV | 21.40 | 73.5934 | 52.1221 | 9.04510 | 1 | 9.04510 | ppb |
| p-Xylene | VB | 21.42 | 73.2926 | 51.7386 | 9.12873 | 1 | 9.12873 | ppb |
| Styrene | BB | 21.78 | 131.614 | 96.2426 | 17.0499 | 1 | 17.0499 | ppb |
| o-Xylene | BB | 21.89 | 139.380 | 103.161 | 17.5508 | 1 | 17.5508 | ppb |
| n-Nonane | BB | 22.13 | 166.503 | 130.391 | 17.3178 | 1 | 17.3178 | ppb |
| Isopropylbenzene | BB | 22.44 | 160.281 | 130.760 | 17.3782 | 1 | 17.3782 | ppb |
| alpha-Pinene | BB | 22.78 | 152.935 | 121.968 | 15.6961 | 1 | 15.6961 | ppb |
| n-Propylbenzene | BB | 22.89 | 147.713 | 133.383 | 16.8722 | 1 | 16.8722 | ppb |
| 3-Ethyltoluene | BV | 22.98 | 140.363 | 125.773 | 16.3894 | 1 | 16.3894 | ppb |
| 4-Ethyltoluene | VV | 23.01 | 139.630 | 126.096 | 16.0978 | 1 | 16.0978 | ppb |
| 1,3,5-Trimethylbenzene | VB | 23.08 | 136.800 | 123.714 | 15.8013 | 1 | 15.8013 | ppb |
| 2-Ethyltoluene | BB | 23.23 | 137.082 | 126.101 | 15.9724 | 1 | 15.9724 | ppb |
| 1,2,4-Trimethylbenzene | BB | 23.42 | 131.270 | 123.693 | 15.4114 | 1 | 15.4114 | ppb |
| n-Decane | BB | 23.53 | 155.862 | 149.921 | 15.5367 | 1 | 15.5367 | ppb |
| 1,2,3-Trimethylbenzene | VB | 23.76 | 117.981 | 115.516 | 14.2458 | 1 | 14.2458 | ppb |
| 1,3-Diethylbenzene | BV | 24.02 | 119.044 | 119.581 | 13.0299 | 1 | 13.0299 | ppb |
| 1,4-Diethylbenzene | VB | 24.09 | 125.752 | 127.824 | 13.7291 | 1 | 13.7291 | ppb |
| n-Undecane | BB | 24.52 | 132.789 | 141.267 | 13.4015 | 1 | 13.4015 | ppb |
| n-Dodecane | BB | 25.29 | 109.693 | 130.040 | 13.7917 | 1 | 13.7917 | ppb |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | N2 #MB Humid |
| Sequence Name | DPGC9-041223 ver.5 |
| Inj Data File | _004_001F0401.D |
| File Location | 3 - Houston Lab/Data/GC9/2023_Q2 |
| Injection Date | 4/12/2023 12:05 PM |
| File Modified | 4/21/2023 4:28 PM |
| Instrument | DP-GC09 |
| Operator | disconnected |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 1 |
| Injection Volume | NA |
| Injection | 1 of 1 |
| Acquisition Method | DPGC9-ACQ_122822A.M |
| Analysis Method | DPGC9-F_122822-LIMS.M |
| Method Modified | 4/21/2023 4:27 PM |
| Printed | 4/25/2023 12:53 PM |




| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Ethylene | | (3.40) | | | | 1 | | ppb |
| Acetylene | | (3.50) | | | | 1 | | ppb |
| Ethane | | (3.60) | | | | 1 | | ppb |
| Propylene | | (5.23) | | | | 1 | | ppb |
| Propane | | (5.39) | | | | 1 | | ppb |
| Isobutane | | (7.43) | | | | 1 | | ppb |
| Isobutylene | | (8.37) | | | | 1 | | ppb |
| 1-Butene | MM | 8.39 | 0.13881 | 0.09096 | 0.02773 | 1 | 0.02773 | ppb |
| 1,3-Butadiene | | (8.52) | | | | 1 | | ppb |
| Butane | | (8.69) | | | | 1 | | ppb |
| trans-2-Butene | | (9.08) | | | | 1 | | ppb |
| cis-2-Butene | | (9.55) | | | | 1 | | ppb |
| Isopentane | | (11.16) | | | | 1 | | ppb |
| 1-Pentene | | (11.60) | | | | 1 | | ppb |
| Pentane | | (11.97) | | | | 1 | | ppb |
| Isoprene | | (12.10) | | | | 1 | | ppb |
| trans-2-Pentene | | (12.22) | | | | 1 | | ppb |
| cis-2-Pentene | | (12.46) | | | | 1 | | ppb |
| 2,2-Dimethylbutane | | (13.08) | | | | 1 | | ppb |
| Cyclopentane | | (13.87) | | | | 1 | | ppb |

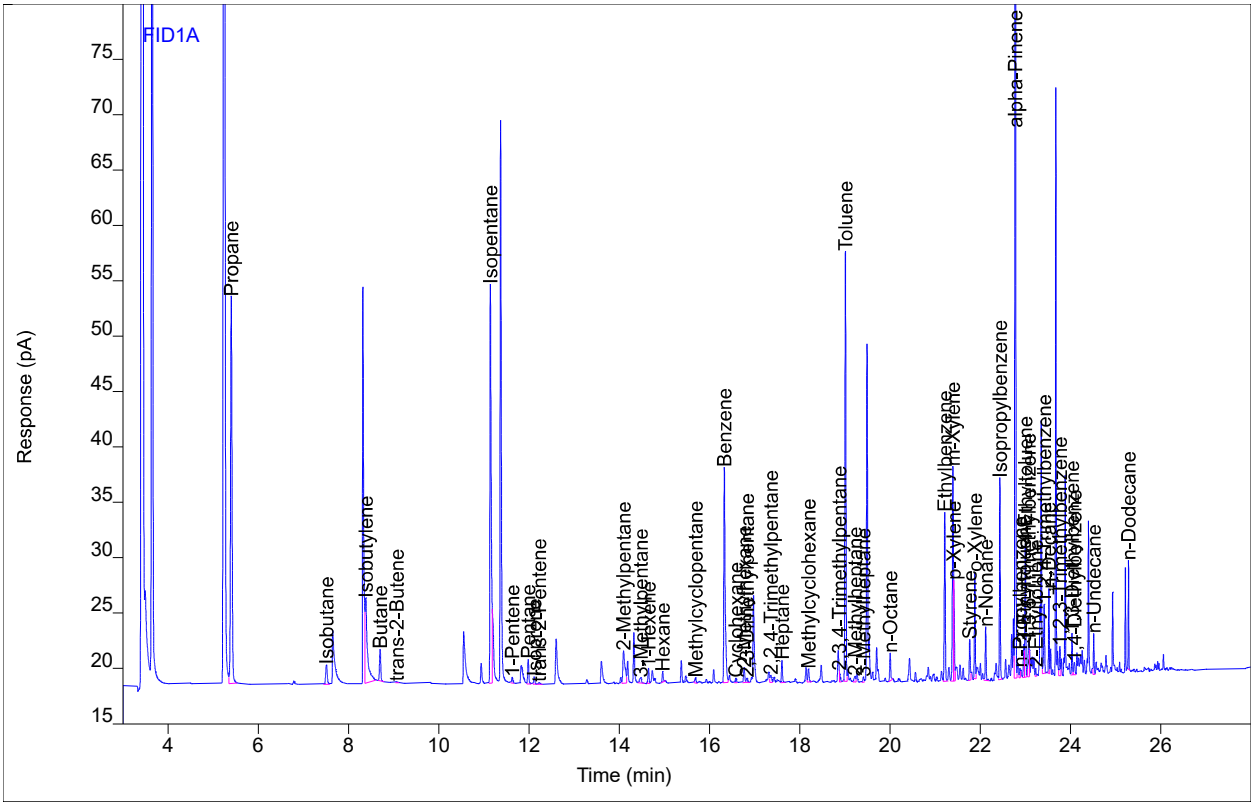
| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| 2,3-Dimethylbutane | | (13.94) | | | | 1 | | ppb |
| 2-Methylpentane | | (14.14) | | | | 1 | | ppb |
| 3-Methylpentane | | (14.54) | | | | 1 | | ppb |
| 1-Hexene | | (14.71) | | | | 1 | | ppb |
| Hexane | | (15.02) | | | | 1 | | ppb |
| Methylcyclopentane | | (15.67) | | | | 1 | | ppb |
| 2,4-Dimethylpentane | | (15.79) | | | | 1 | | ppb |
| Benzene | | (16.39) | | | | 1 | | ppb |
| Cyclohexane | | (16.64) | | | | 1 | | ppb |
| 2-Methylhexane | | (16.78) | | | | 1 | | ppb |
| 2,3-Dimethylpentane | | (16.87) | | | | 1 | | ppb |
| 3-Methylhexane | | (17.04) | | | | 1 | | ppb |
| 2,2,4-Trimethylpentane | MM | 17.46 | 0.13424 | 0.08746 | 0.01440 | 1 | 0.01440 | ppb |
| Heptane | | (17.67) | | | | 1 | | ppb |
| Methylcyclohexane | | (18.19) | | | | 1 | | ppb |
| 2,3,4-Trimethylpentane | | (18.95) | | | | 1 | | ppb |
| Toluene | | (19.07) | | | | 1 | | ppb |
| 2-Methylheptane | | (19.28) | | | | 1 | | ppb |
| 3-Methylheptane | | (19.41) | | | | 1 | | ppb |
| n-Octane | | (20.06) | | | | 1 | | ppb |
| Ethylbenzene | | (21.19) | | | | 1 | | ppb |
| m-Xylene | | (21.39) | | | | 1 | | ppb |
| p-Xylene | | (21.42) | | | | 1 | | ppb |
| Styrene | | (21.82) | | | | 1 | | ppb |
| o-Xylene | | (21.91) | | | | 1 | | ppb |
| n-Nonane | | (22.12) | | | | 1 | | ppb |
| Isopropylbenzene | | (22.48) | | | | 1 | | ppb |
| alpha-Pinene | | (22.82) | | | | 1 | | ppb |
| n-Propylbenzene | | (22.92) | | | | 1 | | ppb |
| 3-Ethyltoluene | | (22.97) | | | | 1 | | ppb |
| 4-Ethyltoluene | | (23.01) | | | | 1 | | ppb |
| 1,3,5-Trimethylbenzene | | (23.12) | | | | 1 | | ppb |
| 2-Ethyltoluene | | (23.27) | | | | 1 | | ppb |
| 1,2,4-Trimethylbenzene | MM | 23.42 | 0.18162 | 0.14588 | 0.02132 | 1 | 0.02132 | ppb |
| n-Decane | MM | 23.52 | 0.18912 | 0.16526 | 0.01885 | 1 | 0.01885 | ppb |
| 1,2,3-Trimethylbenzene | | (23.80) | | | | 1 | | ppb |
| 1,3-Diethylbenzene | | (24.05) | | | | 1 | | ppb |
| 1,4-Diethylbenzene | MM | 24.09 | 0.11047 | 0.14896 | 0.01206 | 1 | 0.01206 | ppb |
| n-Undecane | | (24.56) | | | | 1 | | ppb |
| n-Dodecane | MM | 25.29 | 0.15275 | 0.24177 | 0.01920 | 1 | 0.01920 | ppb |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-1 C70523.Bag |
| Sequence Name | DPGC9-041223 ver.5 |
| Inj Data File | _007_003F0701.D |
| File Location | 3 - Houston Lab/Data/GC9/2023_Q2 |
| Injection Date | 4/12/2023 2:20 PM |
| File Modified | 4/25/2023 12:33 PM |
| Instrument | DP-GC09 |
| Operator | disconnected |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 3 |
| Injection Volume | NA |
| Injection | 1 of 1 |
| Acquisition Method | DPGC9-ACQ_122822A.M |
| Analysis Method | DPGC9-F_122822-LIMS.M |
| Method Modified | 4/25/2023 12:31 PM |
| Printed | 4/25/2023 12:53 PM |




| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Propane | VB | 5.40 | 79.5411 | 34.9704 | 21.3683 | 1.99 | 42.5229 | ppb |
| Isobutane | BB | 7.51 | 4.28247 | 1.80085 | 0.89545 | 1.99 | 1.78194 | ppb |
| Isobutylene | VB | 8.38 | 27.2073 | 7.69745 | 5.63783 | 1.99 | 11.2193 | ppb |
| 1-Butene | | (8.41) | | | | 1.99 | | ppb |
| 1,3-Butadiene | | (8.52) | | | | 1.99 | | ppb |
| Butane | BB | 8.70 | 5.47438 | 2.91569 | 1.14712 | 1.99 | 2.28277 | ppb |
| trans-2-Butene | BB | 9.07 | 0.31301 | 0.14893 | 0.06567 | 1.99 | 0.13069 | ppb |
| cis-2-Butene | | (9.55) | | | | 1.99 | | ppb |
| Isopentane | MF | 11.15 | 68.8492 | 36.1595 | 11.4195 | 1.99 | 22.7247 | ppb |
| 1-Pentene | BV | 11.63 | 0.97955 | 0.55827 | 0.16407 | 1.99 | 0.32651 | ppb |
| Pentane | VB | 11.99 | 3.95554 | 2.28053 | 0.66001 | 1.99 | 1.31341 | ppb |
| Isoprene | BB | 12.12 | 1.20594 | 0.71453 | 0.20223 | 1.99 | 0.40244 | ppb |
| trans-2-Pentene | BB | 12.23 | 0.51907 | 0.22499 | 0.08725 | 1.99 | 0.17362 | ppb |
| cis-2-Pentene | | (12.46) | | | | 1.99 | | ppb |
| 2,2-Dimethylbutane | | (13.08) | | | | 1.99 | | ppb |
| Cyclopentane | | (13.90) | | | | 1.99 | | ppb |
| 2,3-Dimethylbutane | | (13.95) | | | | 1.99 | | ppb |
| 2-Methylpentane | VV | 14.10 | 9.59005 | 2.96606 | 1.34356 | 1.99 | 2.67368 | ppb |
| 3-Methylpentane | BB | 14.48 | 1.43529 | 0.50547 | 0.20260 | 1.99 | 0.40317 | ppb |
| 1-Hexene | BB | 14.65 | 2.26845 | 1.38479 | 0.31985 | 1.99 | 0.63649 | ppb |

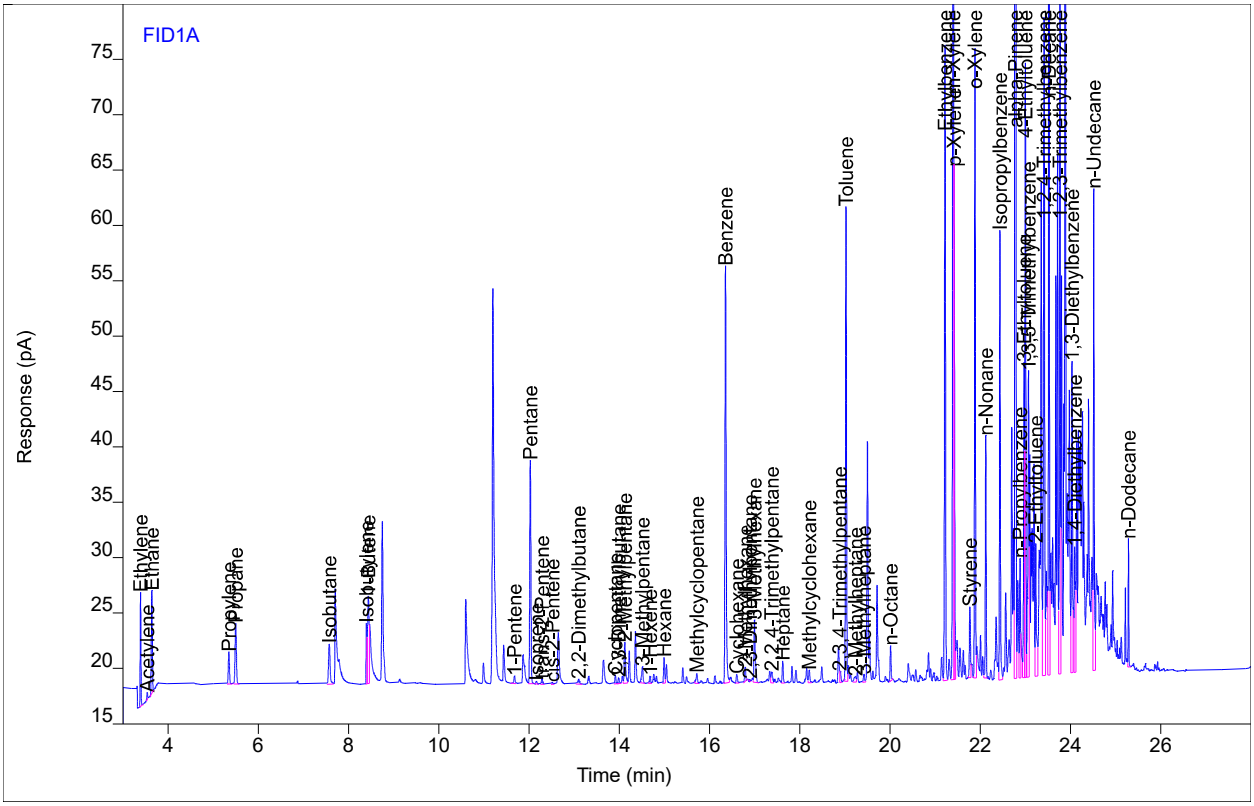
| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Hexane | BB | 14.96 | 1.59564 | 0.96515 | 0.22637 | 1.99 | 0.45048 | ppb |
| Methylcyclopentane | BB | 15.69 | 0.99310 | 0.50422 | 0.13921 | 1.99 | 0.27703 | ppb |
| 2,4-Dimethylpentane | | (15.79) | | | | 1.99 | | ppb |
| Benzene | BV | 16.33 | 39.2986 | 19.4599 | 5.73161 | 1.99 | 11.4059 | ppb |
| Cyclohexane | MF | 16.58 | 0.78771 | 0.47357 | 0.11105 | 1.99 | 0.22098 | ppb |
| 2-Methylhexane | BV | 16.77 | 2.47453 | 1.34945 | 0.30669 | 1.99 | 0.61032 | ppb |
| 2,3-Dimethylpentane | VB | 16.83 | 0.84582 | 0.44438 | 0.10020 | 1.99 | 0.19939 | ppb |
| 3-Methylhexane | | (17.04) | | | | 1.99 | | ppb |
| 2,2,4-Trimethylpentane | VV | 17.36 | 1.51622 | 0.68596 | 0.16266 | 1.99 | 0.32369 | ppb |
| Heptane | BB | 17.61 | 3.25618 | 2.06763 | 0.40284 | 1.99 | 0.80165 | ppb |
| Methylcyclohexane | VB | 18.20 | 2.23095 | 1.22281 | 0.27046 | 1.99 | 0.53821 | ppb |
| 2,3,4-Trimethylpentane | FM | 18.88 | 1.15610 | 1.02144 | 0.12426 | 1.99 | 0.24728 | ppb |
| Toluene | BV | 19.02 | 60.0014 | 38.8176 | 7.92663 | 1.99 | 15.7740 | ppb |
| 2-Methylheptane | BV | 19.23 | 1.29238 | 0.58119 | 0.14275 | 1.99 | 0.28408 | ppb |
| 3-Methylheptane | BV | 19.41 | 0.81455 | 0.48322 | 0.08984 | 1.99 | 0.17878 | ppb |
| n-Octane | BB | 20.01 | 4.02804 | 2.55344 | 0.45202 | 1.99 | 0.89951 | ppb |
| Ethylbenzene | VB | 21.22 | 23.9820 | 15.3093 | 2.90701 | 1.99 | 5.78494 | ppb |
| m-Xylene | MF | 21.40 | 31.7016 | 19.4147 | 3.89633 | 1.99 | 7.75370 | ppb |
| p-Xylene | FM | 21.42 | 8.44928 | 9.06427 | 1.05237 | 1.99 | 2.09422 | ppb |
| Styrene | MF | 21.77 | 5.46367 | 3.71436 | 0.70779 | 1.99 | 1.40850 | ppb |
| o-Xylene | BV | 21.88 | 12.8726 | 9.66519 | 1.62092 | 1.99 | 3.22564 | ppb |
| n-Nonane | VB | 22.12 | 6.48166 | 4.84399 | 0.67415 | 1.99 | 1.34156 | ppb |
| Isopropylbenzene | VB | 22.44 | 22.9893 | 18.2465 | 2.49259 | 1.99 | 4.96025 | ppb |
| alpha-Pinene | VV | 22.78 | 154.862 | 120.070 | 15.8938 | 1.99 | 31.6287 | ppb |
| n-Propylbenzene | MF | 22.88 | 1.18325 | 0.94040 | 0.13515 | 1.99 | 0.26896 | ppb |
| 3-Ethyltoluene | BV | 22.97 | 4.30087 | 3.07254 | 0.50219 | 1.99 | 0.99936 | ppb |
| 4-Ethyltoluene | VV | 23.00 | 16.0576 | 12.0542 | 1.85127 | 1.99 | 3.68402 | ppb |
| 1,3,5-Trimethylbenzene | MF | 23.08 | 5.83946 | 3.13213 | 0.67450 | 1.99 | 1.34225 | ppb |
| 2-Ethyltoluene | VB | 23.23 | 0.84410 | 0.79406 | 0.09835 | 1.99 | 0.19572 | ppb |
| 1,2,4-Trimethylbenzene | VB | 23.42 | 9.44673 | 6.29934 | 1.10907 | 1.99 | 2.20706 | ppb |
| n-Decane | BV | 23.52 | 8.12233 | 7.68464 | 0.80965 | 1.99 | 1.61120 | ppb |
| 1,2,3-Trimethylbenzene | VV | 23.77 | 4.02019 | 2.70548 | 0.48542 | 1.99 | 0.96599 | ppb |
| 1,3-Diethylbenzene | VV | 24.04 | 4.54799 | 3.79869 | 0.49780 | 1.99 | 0.99062 | ppb |
| 1,4-Diethylbenzene | VV | 24.09 | 2.26100 | 1.17697 | 0.24685 | 1.99 | 0.49123 | ppb |
| n-Undecane | FM | 24.52 | 3.99004 | 3.74844 | 0.40269 | 1.99 | 0.80135 | ppb |
| n-Dodecane | BB | 25.29 | 8.51292 | 9.90720 | 1.07033 | 1.99 | 2.12995 | ppb |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-2 C70527.Bag |
| Sequence Name | DPGC9-041223 ver.5 |
| Inj Data File | _008_004F0801.D |
| File Location | 3 - Houston Lab/Data/GC9/2023_Q2 |
| Injection Date | 4/12/2023 3:02 PM |
| File Modified | 4/25/2023 12:37 PM |
| Instrument | DP-GC09 |
| Operator | disconnected |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 4 |
| Injection Volume | NA |
| Injection | 1 of 1 |
| Acquisition Method | DPGC9-ACQ_122822A.M |
| Analysis Method | DPGC9-F_122822-LIMS.M |
| Method Modified | 4/25/2023 12:35 PM |
| Printed | 4/25/2023 12:53 PM |




| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Ethylene | BB | 3.39 | 11.2836 | 10.3376 | 4.52754 | 1.88 | 8.51177 | ppb |
| Acetylene | MM | 3.54 | 0.76950 | 0.65054 | 0.25325 | 1.88 | 0.47611 | ppb |
| Ethane | MM | 3.64 | 14.2797 | 9.30021 | 6.02108 | 1.88 | 11.3196 | ppb |
| Propylene | BB | 5.35 | 5.27273 | 2.92515 | 1.42113 | 1.88 | 2.67172 | ppb |
| Propane | BB | 5.50 | 11.1823 | 5.51030 | 3.00405 | 1.88 | 5.64761 | ppb |
| Isobutane | BB | 7.58 | 9.04464 | 3.69979 | 1.89120 | 1.88 | 3.55546 | ppb |
| Isobutylene | BV | 8.40 | 7.40822 | 5.54035 | 1.53511 | 1.88 | 2.88602 | ppb |
| 1-Butene | MF | 8.44 | 17.1532 | 7.92254 | 3.42682 | 1.88 | 6.44243 | ppb |
| 1,3-Butadiene | | (8.52) | | | | 1.88 | | ppb |
| Butane | | (8.69) | | | | 1.88 | | ppb |
| trans-2-Butene | | (9.08) | | | | 1.88 | | ppb |
| cis-2-Butene | | (9.55) | | | | 1.88 | | ppb |
| Isopentane | | (11.15) | | | | 1.88 | | ppb |
| 1-Pentene | BV | 11.68 | 1.15787 | 0.68433 | 0.19394 | 1.88 | 0.36461 | ppb |
| Pentane | VB | 12.03 | 35.7789 | 20.1991 | 5.96993 | 1.88 | 11.2235 | ppb |
| Isoprene | BB | 12.17 | 0.50849 | 0.30434 | 0.08527 | 1.88 | 0.16031 | ppb |
| trans-2-Pentene | BB | 12.29 | 0.99278 | 0.49963 | 0.16687 | 1.88 | 0.31372 | ppb |
| cis-2-Pentene | BB | 12.52 | 0.32233 | 0.20861 | 0.05428 | 1.88 | 0.10204 | ppb |
| 2,2-Dimethylbutane | BB | 13.10 | 1.33694 | 0.46067 | 0.18937 | 1.88 | 0.35601 | ppb |
| Cyclopentane | BB | 13.92 | 1.29856 | 0.80524 | 0.21859 | 1.88 | 0.41096 | ppb |

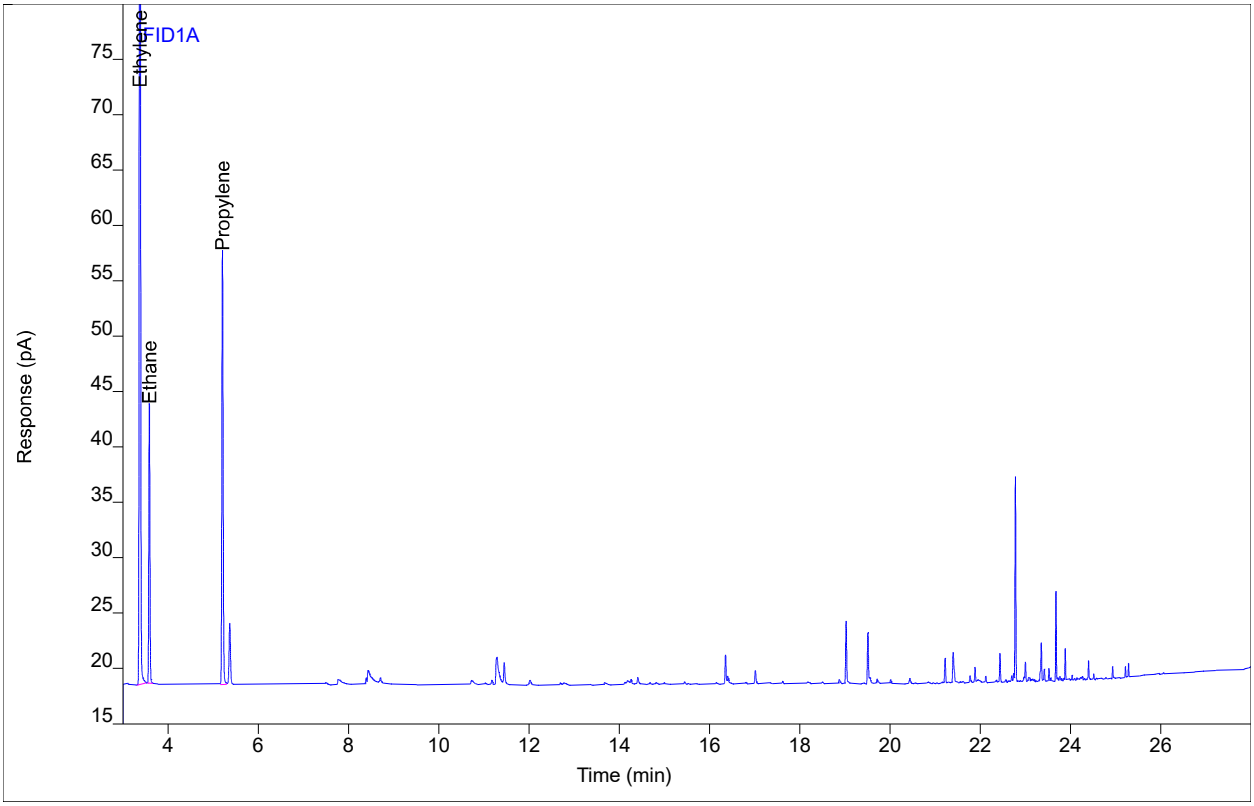
| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| 2,3-Dimethylbutane | BB | 13.99 | 1.06258 | 0.59590 | 0.14925 | 1.88 | 0.28059 | ppb |
| 2-Methylpentane | VB | 14.13 | 8.10721 | 3.75337 | 1.13581 | 1.88 | 2.13533 | ppb |
| 3-Methylpentane | BB | 14.52 | 3.32775 | 1.52440 | 0.46973 | 1.88 | 0.88309 | ppb |
| 1-Hexene | BB | 14.68 | 1.12655 | 0.69120 | 0.15884 | 1.88 | 0.29862 | ppb |
| Hexane | BV | 15.00 | 3.94159 | 2.36106 | 0.55919 | 1.88 | 1.05128 | ppb |
| Methylcyclopentane | BB | 15.72 | 1.91963 | 0.94373 | 0.26909 | 1.88 | 0.50589 | ppb |
| 2,4-Dimethylpentane | | (15.79) | | | | 1.88 | | ppb |
| Benzene | BB | 16.36 | 67.2358 | 37.6941 | 9.80618 | 1.88 | 18.4356 | ppb |
| Cyclohexane | BB | 16.61 | 1.50973 | 0.81761 | 0.21283 | 1.88 | 0.40013 | ppb |
| 2-Methylhexane | BB | 16.79 | 2.14329 | 1.31069 | 0.26564 | 1.88 | 0.49940 | ppb |
| 2,3-Dimethylpentane | BV | 16.90 | 0.10882 | 0.20141 | 0.01289 | 1.88 | 0.02423 | ppb |
| 3-Methylhexane | VB | 17.00 | 11.1177 | 5.62751 | 1.32558 | 1.88 | 2.49209 | ppb |
| 2,2,4-Trimethylpentane | VV | 17.38 | 2.36645 | 1.06035 | 0.25387 | 1.88 | 0.47727 | ppb |
| Heptane | VB | 17.63 | 3.35124 | 2.02029 | 0.41460 | 1.88 | 0.77945 | ppb |
| Methylcyclohexane | VB | 18.21 | 2.20793 | 1.16245 | 0.26767 | 1.88 | 0.50322 | ppb |
| 2,3,4-Trimethylpentane | FM | 18.89 | 1.83628 | 1.03609 | 0.19737 | 1.88 | 0.37106 | ppb |
| Toluene | BV | 19.03 | 66.1762 | 42.8014 | 8.74238 | 1.88 | 16.4357 | ppb |
| 2-Methylheptane | VV | 19.24 | 1.47025 | 0.53295 | 0.16240 | 1.88 | 0.30531 | ppb |
| 3-Methylheptane | BV | 19.42 | 1.18705 | 0.68707 | 0.13093 | 1.88 | 0.24614 | ppb |
| n-Octane | BB | 20.02 | 4.79969 | 3.20206 | 0.53861 | 1.88 | 1.01258 | ppb |
| Ethylbenzene | VV | 21.22 | 89.6141 | 57.4312 | 10.8627 | 1.88 | 20.4218 | ppb |
| m-Xylene | MF | 21.40 | 141.466 | 89.1221 | 17.3871 | 1.88 | 32.6878 | ppb |
| p-Xylene | FM | 21.42 | 46.5115 | 46.2084 | 5.79309 | 1.88 | 10.8910 | ppb |
| Styrene | MF | 21.77 | 10.1916 | 6.43207 | 1.32027 | 1.88 | 2.48210 | ppb |
| o-Xylene | BV | 21.89 | 77.5785 | 56.7892 | 9.76876 | 1.88 | 18.3653 | ppb |
| n-Nonane | VB | 22.13 | 27.5818 | 22.0022 | 2.86874 | 1.88 | 5.39324 | ppb |
| Isopropylbenzene | VV | 22.44 | 54.8406 | 40.7406 | 5.94603 | 1.88 | 11.1785 | ppb |
| alpha-Pinene | VV | 22.78 | 405.229 | 310.954 | 41.5896 | 1.88 | 78.1885 | ppb |
| n-Propylbenzene | MF | 22.89 | 14.8005 | 10.8867 | 1.69056 | 1.88 | 3.17825 | ppb |
| 3-Ethyltoluene | VV | 22.98 | 38.1089 | 28.5383 | 4.44978 | 1.88 | 8.36558 | ppb |
| 4-Ethyltoluene | VV | 23.00 | 78.4673 | 55.5614 | 9.04640 | 1.88 | 17.0072 | ppb |
| 1,3,5-Trimethylbenzene | VV | 23.07 | 46.1568 | 27.7416 | 5.33142 | 1.88 | 10.0231 | ppb |
| 2-Ethyltoluene | VV | 23.23 | 20.7064 | 12.0527 | 2.41265 | 1.88 | 4.53579 | ppb |
| 1,2,4-Trimethylbenzene | VV | 23.42 | 106.689 | 59.4039 | 12.5256 | 1.88 | 23.5482 | ppb |
| n-Decane | VV | 23.53 | 135.482 | 120.382 | 13.5051 | 1.88 | 25.3896 | ppb |
| 1,2,3-Trimethylbenzene | VV | 23.77 | 81.6121 | 62.2278 | 9.85434 | 1.88 | 18.5262 | ppb |
| 1,3-Diethylbenzene | VV | 24.04 | 46.0646 | 28.2125 | 5.04197 | 1.88 | 9.47890 | ppb |
| 1,4-Diethylbenzene | VV | 24.10 | 22.4665 | 11.3740 | 2.45281 | 1.88 | 4.61128 | ppb |
| n-Undecane | VV | 24.52 | 55.6296 | 43.6629 | 5.61431 | 1.88 | 10.5549 | ppb |
| n-Dodecane | VB | 25.29 | 10.5267 | 11.6759 | 1.32352 | 1.88 | 2.48823 | ppb |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-1 C70523.Bag |
| Sequence Name | DPGC9-041223 ver.5 |
| Inj Data File | _009_003F0901.D |
| File Location | 3 - Houston Lab/Data/GC9/2023_Q2 |
| Injection Date | 4/12/2023 3:42 PM |
| File Modified | 4/25/2023 11:47 AM |
| Instrument | DP-GC09 |
| Operator | disconnected |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 3 |
| Injection Volume | NA |
| Injection | 1 of 1 |
| Acquisition Method | DPGC9-ACQ_122822A.M |
| Analysis Method | DPGC9-F_122822-LIMS.M |
| Method Modified | 4/25/2023 11:41 AM |
| Printed | 4/25/2023 12:53 PM |



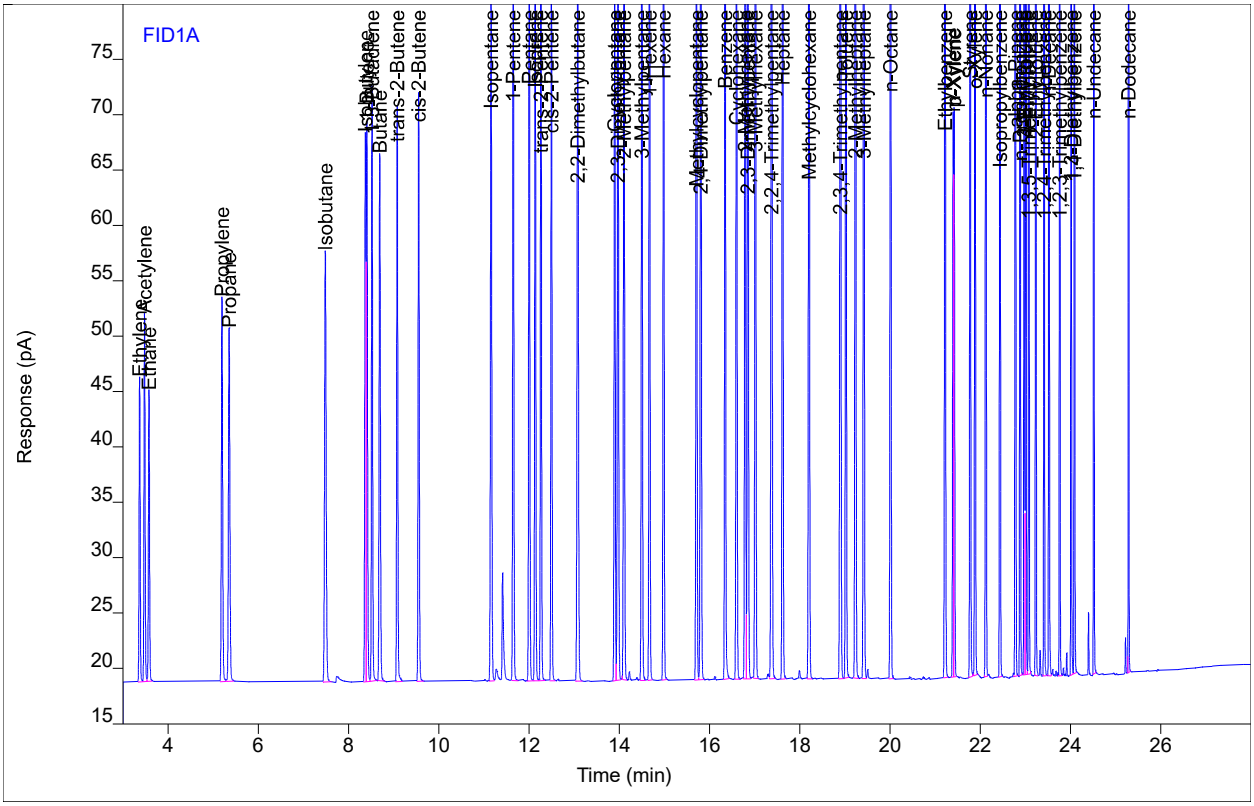

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Ethylene | BB | 3.38 | 239.778 | 136.775 | 96.2106 | 19.9 | 1914.59 | ppb |
| Acetylene | | (3.50) | | | | 19.9 | | ppb |
| Ethane | BB | 3.59 | 42.2599 | 25.2299 | 17.8190 | 19.9 | 354.598 | ppb |
| Propylene | BB | 5.21 | 77.1240 | 39.2047 | 20.7867 | 19.9 | 413.656 | ppb |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | S16588 #S16588 |
| Sequence Name | DPGC9-041223 ver.5 |
| Inj Data File | _015_014F1501.D |
| File Location | 3 - Houston Lab/Data/GC9/2023_Q2 |
| Injection Date | 4/12/2023 8:06 PM |
| File Modified | 4/21/2023 4:51 PM |
| Instrument | DP-GC09 |
| Operator | disconnected |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 14 |
| Injection Volume | NA |
| Injection | 1 of 1 |
| Acquisition Method | DPGC9-ACQ_122822A.M |
| Analysis Method | DPGC9-F_122822-LIMS.M |
| Method Modified | 4/21/2023 4:51 PM |
| Printed | 4/25/2023 12:53 PM |




| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Ethylene | BV | 3.37 | 45.5120 | 27.5213 | 18.2616 | 1 | 18.2616 | ppb |
| Acetylene | VV | 3.48 | 56.0440 | 33.2653 | 18.4446 | 1 | 18.4446 | ppb |
| Ethane | VB | 3.58 | 45.0306 | 26.2978 | 18.9873 | 1 | 18.9873 | ppb |
| Propylene | BB | 5.20 | 68.1081 | 34.7163 | 18.3567 | 1 | 18.3567 | ppb |
| Propane | BB | 5.36 | 70.0503 | 31.8888 | 18.8186 | 1 | 18.8186 | ppb |
| Isobutane | BB | 7.49 | 93.4267 | 38.9083 | 19.5352 | 1 | 19.5352 | ppb |
| Isobutylene | BV | 8.38 | 87.0472 | 49.6414 | 18.0377 | 1 | 18.0377 | ppb |
| 1-Butene | VV | 8.41 | 95.9421 | 50.6210 | 19.1671 | 1 | 19.1671 | ppb |
| 1,3-Butadiene | VB | 8.52 | 89.9194 | 53.7439 | 17.9816 | 1 | 17.9816 | ppb |
| Butane | BB | 8.69 | 91.6933 | 47.5918 | 19.2137 | 1 | 19.2137 | ppb |
| trans-2-Butene | BB | 9.08 | 87.0163 | 51.9147 | 18.2572 | 1 | 18.2572 | ppb |
| cis-2-Butene | BB | 9.56 | 91.8176 | 53.1774 | 19.1230 | 1 | 19.1230 | ppb |
| Isopentane | BV | 11.16 | 118.937 | 61.1616 | 19.7271 | 1 | 19.7271 | ppb |
| 1-Pentene | BB | 11.65 | 115.877 | 68.2686 | 19.4092 | 1 | 19.4092 | ppb |
| Pentane | BB | 12.01 | 119.242 | 69.6819 | 19.8962 | 1 | 19.8962 | ppb |
| Isoprene | BV | 12.14 | 114.318 | 68.0220 | 19.1707 | 1 | 19.1707 | ppb |
| trans-2-Pentene | VB | 12.27 | 113.688 | 70.2916 | 19.1095 | 1 | 19.1095 | ppb |
| cis-2-Pentene | BB | 12.50 | 105.737 | 64.1459 | 17.8054 | 1 | 17.8054 | ppb |
| 2,2-Dimethylbutane | BB | 13.08 | 133.899 | 64.6667 | 18.9658 | 1 | 18.9658 | ppb |
| Cyclopentane | BV | 13.90 | 105.420 | 62.9301 | 17.7458 | 1 | 17.7458 | ppb |

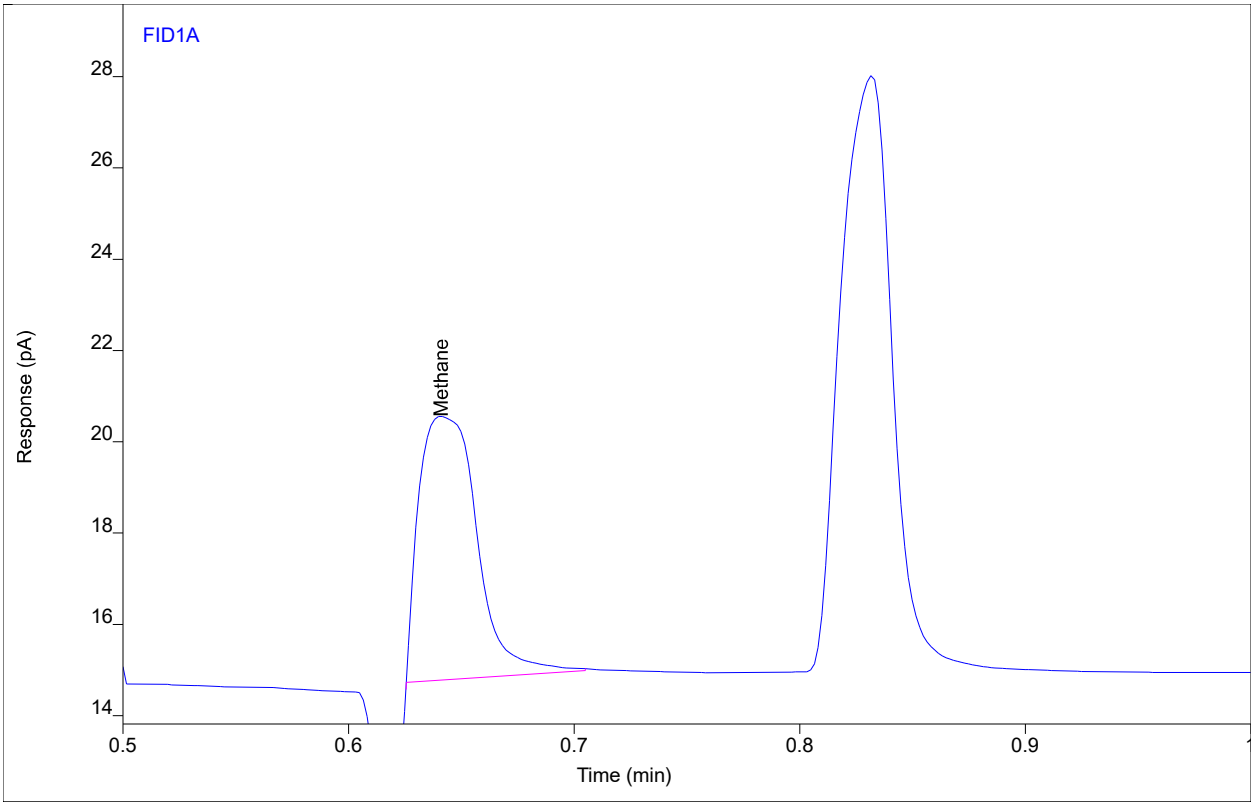
| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| 2,3-Dimethylbutane | VB | 13.97 | 134.877 | 73.0459 | 18.9450 | 1 | 18.9450 | ppb |
| 2-Methylpentane | BB | 14.11 | 131.945 | 77.3239 | 18.4853 | 1 | 18.4853 | ppb |
| 3-Methylpentane | BB | 14.50 | 132.496 | 76.2107 | 18.7023 | 1 | 18.7023 | ppb |
| 1-Hexene | BB | 14.67 | 130.874 | 82.5616 | 18.4529 | 1 | 18.4529 | ppb |
| Hexane | BB | 14.98 | 132.868 | 84.1444 | 18.8499 | 1 | 18.8499 | ppb |
| Methylcyclopentane | BV | 15.71 | 134.430 | 80.1463 | 18.8443 | 1 | 18.8443 | ppb |
| 2,4-Dimethylpentane | VB | 15.81 | 154.159 | 88.3084 | 18.7624 | 1 | 18.7624 | ppb |
| Benzene | BB | 16.35 | 133.628 | 85.9139 | 19.4893 | 1 | 19.4893 | ppb |
| Cyclohexane | BB | 16.60 | 130.335 | 76.7652 | 18.3739 | 1 | 18.3739 | ppb |
| 2-Methylhexane | BV | 16.79 | 153.756 | 95.4244 | 19.0565 | 1 | 19.0565 | ppb |
| 2,3-Dimethylpentane | VB | 16.85 | 153.304 | 88.2688 | 18.1606 | 1 | 18.1606 | ppb |
| 3-Methylhexane | BB | 17.02 | 152.467 | 91.5886 | 18.1788 | 1 | 18.1788 | ppb |
| 2,2,4-Trimethylpentane | VB | 17.38 | 178.632 | 97.6796 | 19.1632 | 1 | 19.1632 | ppb |
| Heptane | BB | 17.62 | 152.630 | 99.4427 | 18.8827 | 1 | 18.8827 | ppb |
| Methylcyclohexane | BB | 18.21 | 153.803 | 92.0078 | 18.6456 | 1 | 18.6456 | ppb |
| 2,3,4-Trimethylpentane | BB | 18.90 | 174.325 | 99.1004 | 18.7371 | 1 | 18.7371 | ppb |
| Toluene | BB | 19.03 | 140.509 | 92.0052 | 18.5623 | 1 | 18.5623 | ppb |
| 2-Methylheptane | BB | 19.24 | 170.500 | 107.306 | 18.8330 | 1 | 18.8330 | ppb |
| 3-Methylheptane | BV | 19.42 | 166.033 | 102.976 | 18.3127 | 1 | 18.3127 | ppb |
| n-Octane | BB | 20.02 | 163.038 | 106.457 | 18.2957 | 1 | 18.2957 | ppb |
| Ethylbenzene | BB | 21.22 | 145.867 | 94.3509 | 17.6814 | 1 | 17.6814 | ppb |
| m-Xylene | BV | 21.40 | 72.8183 | 51.0218 | 8.94984 | 1 | 8.94984 | ppb |
| p-Xylene | VB | 21.42 | 74.4595 | 51.4348 | 9.27408 | 1 | 9.27408 | ppb |
| Styrene | BB | 21.78 | 131.968 | 96.4082 | 17.0958 | 1 | 17.0958 | ppb |
| o-Xylene | BB | 21.89 | 139.924 | 103.218 | 17.6193 | 1 | 17.6193 | ppb |
| n-Nonane | BB | 22.13 | 166.442 | 130.260 | 17.3114 | 1 | 17.3114 | ppb |
| Isopropylbenzene | BB | 22.44 | 160.604 | 130.816 | 17.4134 | 1 | 17.4134 | ppb |
| alpha-Pinene | VB | 22.78 | 153.309 | 121.146 | 15.7344 | 1 | 15.7344 | ppb |
| n-Propylbenzene | BB | 22.89 | 147.674 | 129.743 | 16.8677 | 1 | 16.8677 | ppb |
| 3-Ethyltoluene | BV | 22.98 | 140.299 | 126.097 | 16.3819 | 1 | 16.3819 | ppb |
| 4-Ethyltoluene | VV | 23.01 | 139.786 | 126.099 | 16.1158 | 1 | 16.1158 | ppb |
| 1,3,5-Trimethylbenzene | VB | 23.08 | 136.973 | 127.035 | 15.8213 | 1 | 15.8213 | ppb |
| 2-Ethyltoluene | BB | 23.23 | 137.621 | 125.546 | 16.0352 | 1 | 16.0352 | ppb |
| 1,2,4-Trimethylbenzene | BB | 23.42 | 131.531 | 125.142 | 15.4421 | 1 | 15.4421 | ppb |
| n-Decane | BB | 23.53 | 156.467 | 151.300 | 15.5969 | 1 | 15.5969 | ppb |
| 1,2,3-Trimethylbenzene | VB | 23.76 | 118.086 | 117.123 | 14.2584 | 1 | 14.2584 | ppb |
| 1,3-Diethylbenzene | BV | 24.02 | 118.732 | 117.983 | 12.9957 | 1 | 12.9957 | ppb |
| 1,4-Diethylbenzene | VB | 24.09 | 125.688 | 129.000 | 13.7221 | 1 | 13.7221 | ppb |
| n-Undecane | BB | 24.52 | 132.954 | 142.240 | 13.4181 | 1 | 13.4181 | ppb |
| n-Dodecane | BB | 25.29 | 107.334 | 125.919 | 13.4951 | 1 | 13.4951 | ppb |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p340 #C6 ENV(1=0,4=495) |
| Sequence Name | DPGC8-041023 ver.5 |
| Inj Data File | 015F0201.D |
| File Location | 3 - Houston Lab/Data/GC8/2023_Q2 |
| Injection Date | 4/10/2023 10:43 AM |
| File Modified | 4/17/2023 10:59 PM |
| Instrument | DP-GC08 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 15 |
| Injection Volume | 250 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC8-ACQ-083122.M |
| Analysis Method | DPGC8-F_010323_TO14A.M |
| Method Modified | 1/23/2023 10:36 AM |
| Printed | 4/24/2023 12:22 PM |



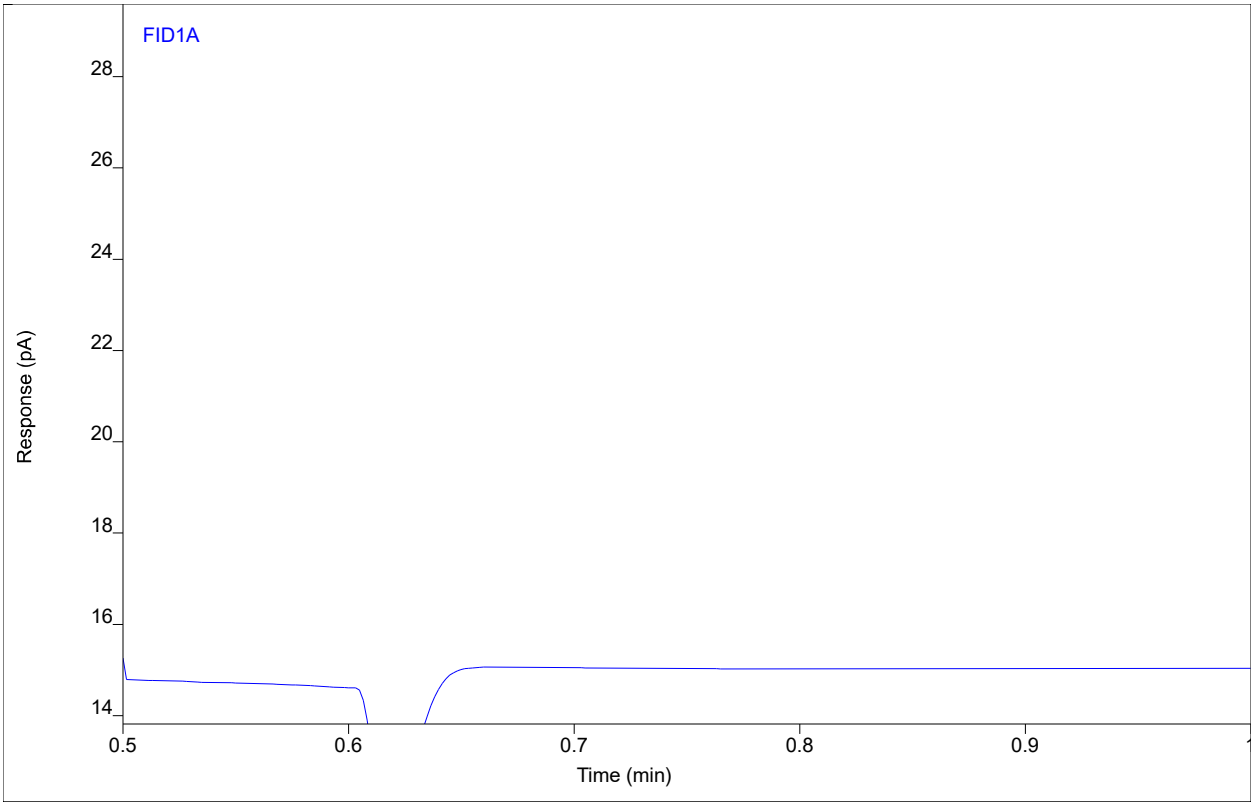

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Methane | PB | 0.64 | 10.3681 | 5.77962 | 10.0692 | 1 | 10.0692 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | N2 #MB Humid |
| Sequence Name | DPGC8-041023 ver.5 |
| Inj Data File | 001F0301.D |
| File Location | 3 - Houston Lab/Data/GC8/2023_Q2 |
| Injection Date | 4/10/2023 12:05 PM |
| File Modified | 4/17/2023 10:59 PM |
| Instrument | DP-GC08 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | 250 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC8-ACQ-083122.M |
| Analysis Method | DPGC8-F_010323_TO14A.M |
| Method Modified | 1/23/2023 10:36 AM |
| Printed | 4/24/2023 12:22 PM |



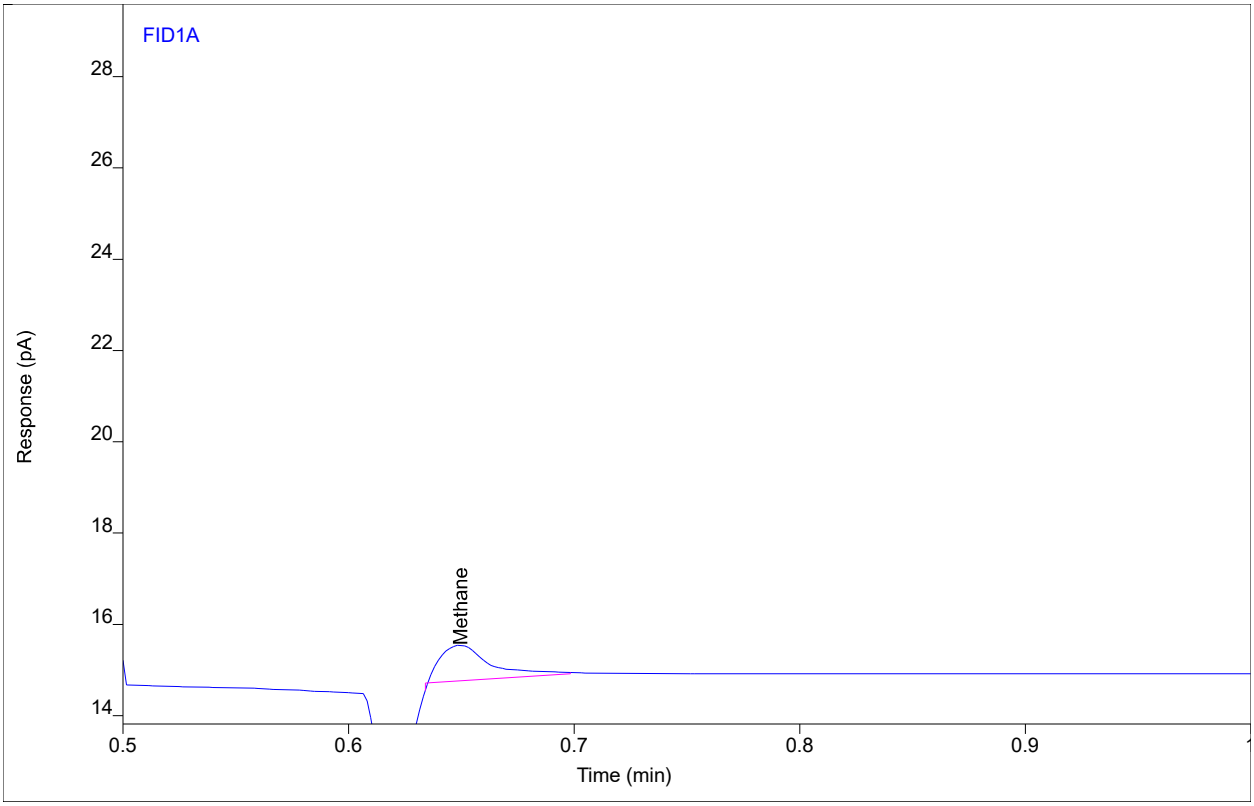

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Methane | | (0.64) | | | | 1 | | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-2 C70527.Bag |
| Sequence Name | DPGC8-041023 ver.5 |
| Inj Data File | 009F0901.D |
| File Location | 3 - Houston Lab/Data/GC8/2023_Q2 |
| Injection Date | 4/10/2023 2:40 PM |
| File Modified | 4/17/2023 11:00 PM |
| Instrument | DP-GC08 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 9 |
| Injection Volume | 250 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC8-ACQ-083122.M |
| Analysis Method | DPGC8-F_010323_TO14A.M |
| Method Modified | 1/23/2023 10:36 AM |
| Printed | 4/24/2023 12:22 PM |



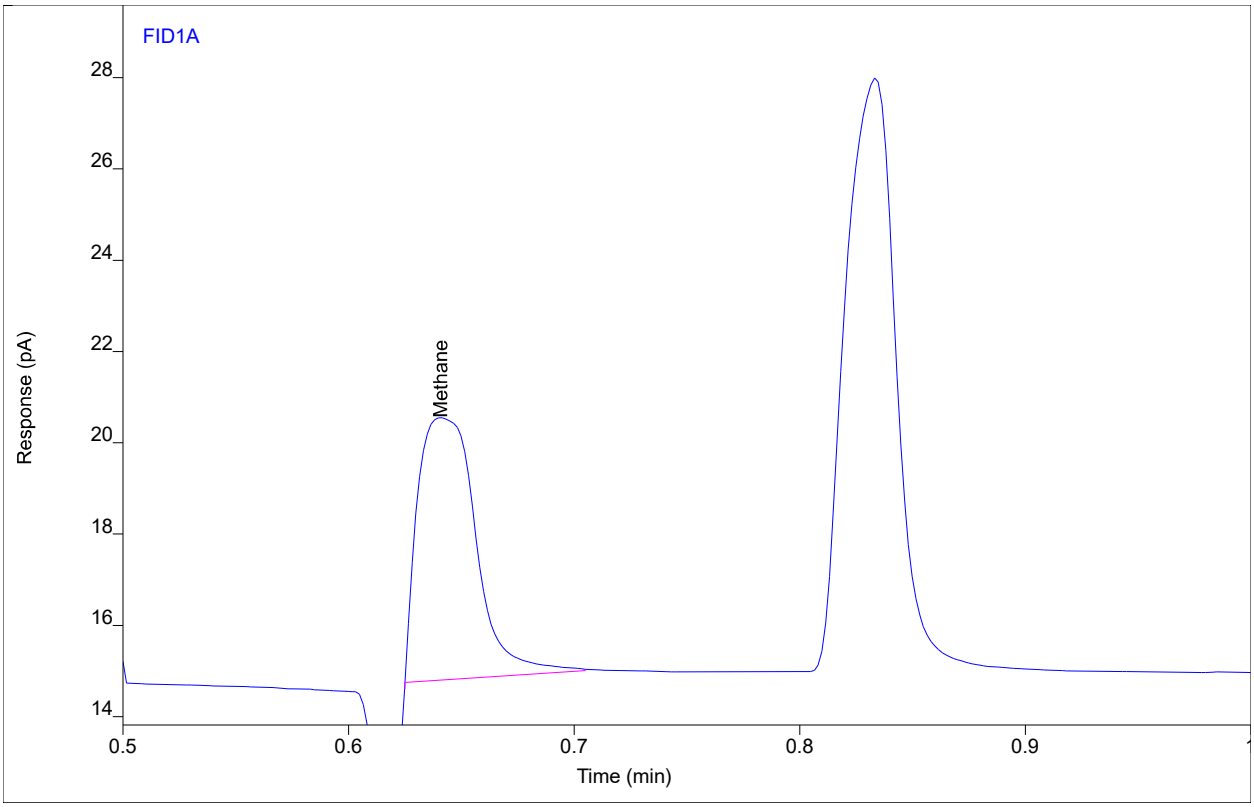

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Methane | PB | 0.65 | 1.19924 | 0.78511 | 1.16467 | 1.88 | 2.18958 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p340 #C6 LCS |
| Sequence Name | DPGC8-041023 ver.5 |
| Inj Data File | 002F1101.D |
| File Location | 3 - Houston Lab/Data/GC8/2023_Q2 |
| Injection Date | 4/10/2023 3:32 PM |
| File Modified | 4/17/2023 11:00 PM |
| Instrument | DP-GC08 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 2 |
| Injection Volume | 250 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC8-ACQ-083122.M |
| Analysis Method | DPGC8-F_010323_TO14A.M |
| Method Modified | 1/23/2023 10:36 AM |
| Printed | 4/24/2023 12:22 PM |



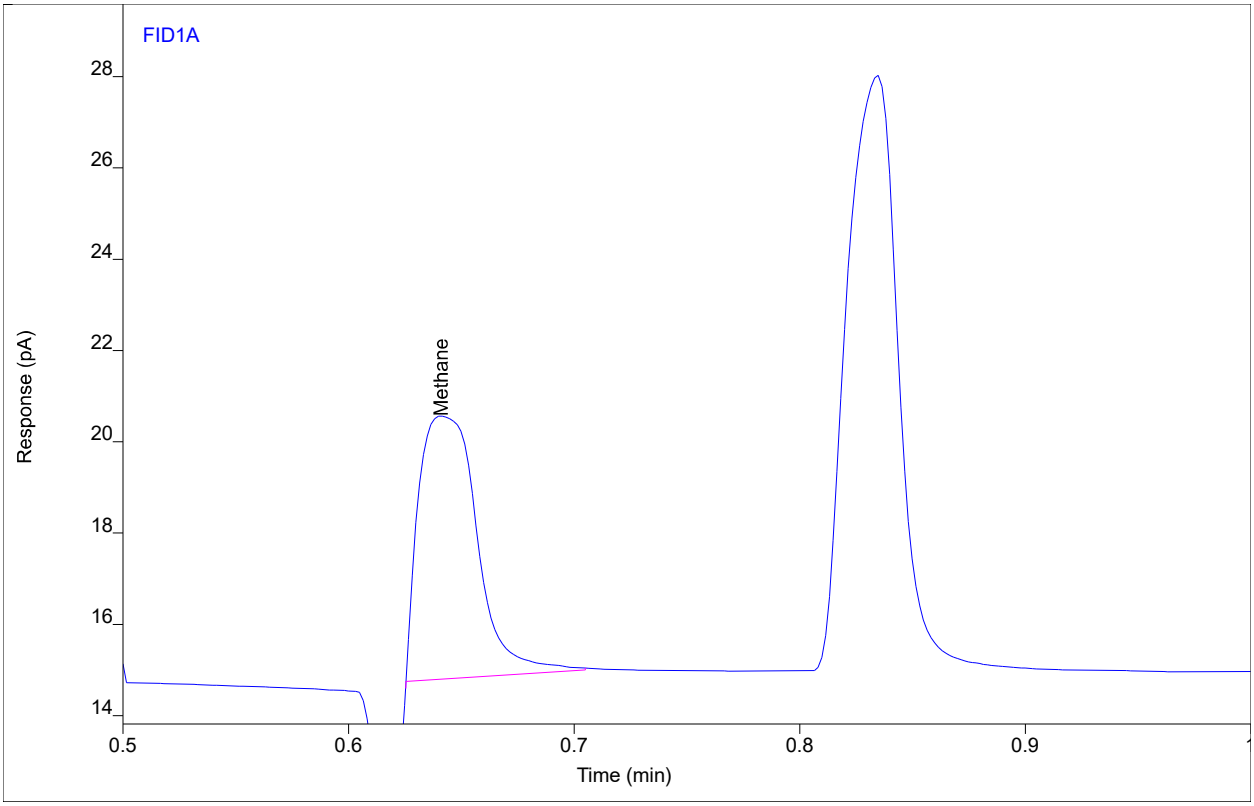

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Methane | PB | 0.64 | 10.3104 | 5.75276 | 10.0132 | 1 | 10.0132 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p340 #C6 ENV(1=0,4=495) |
| Sequence Name | DPGC8-041023 ver.5 |
| Inj Data File | 015F1701.D |
| File Location | 3 - Houston Lab/Data/GC8/2023_Q2 |
| Injection Date | 4/10/2023 9:43 PM |
| File Modified | 4/17/2023 11:02 PM |
| Instrument | DP-GC08 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 15 |
| Injection Volume | 250 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC8-ACQ-083122.M |
| Analysis Method | DPGC8-F_010323_TO14A.M |
| Method Modified | 1/23/2023 10:36 AM |
| Printed | 4/24/2023 12:22 PM |



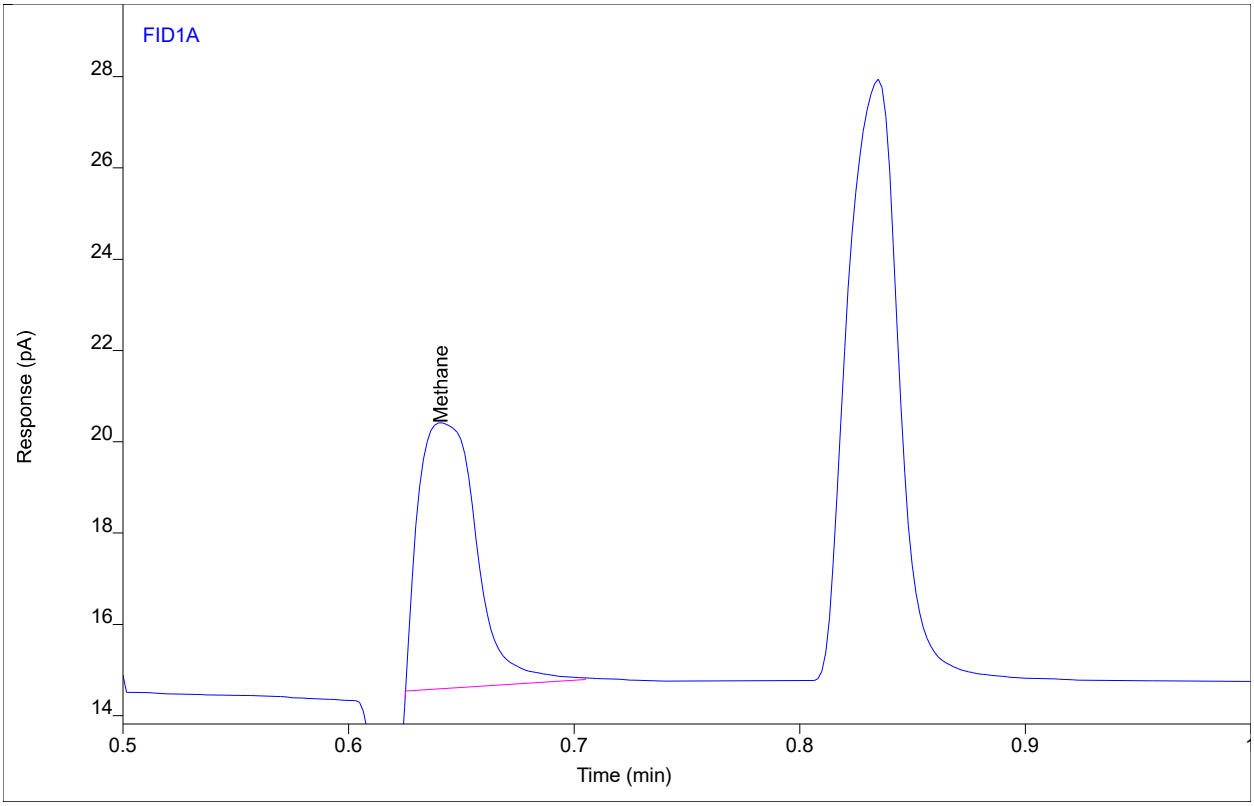

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Methane | PB | 0.64 | 10.3942 | 5.76702 | 10.0945 | 1 | 10.0945 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p340 #C6 ENV(1=0,4=495) |
| Sequence Name | DPGC8-042423 ver.4 |
| Inj Data File | 015F0401.D |
| File Location | 3 - Houston Lab/Data/GC8/2023_Q2 |
| Injection Date | 4/24/2023 5:59 AM |
| File Modified | 4/24/2023 12:15 PM |
| Instrument | DP-GC08 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 15 |
| Injection Volume | 250 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC8-ACQ-083122.M |
| Analysis Method | DPGC8-F_010323_TO14A.M |
| Method Modified | 1/23/2023 10:36 AM |
| Printed | 4/24/2023 12:22 PM |



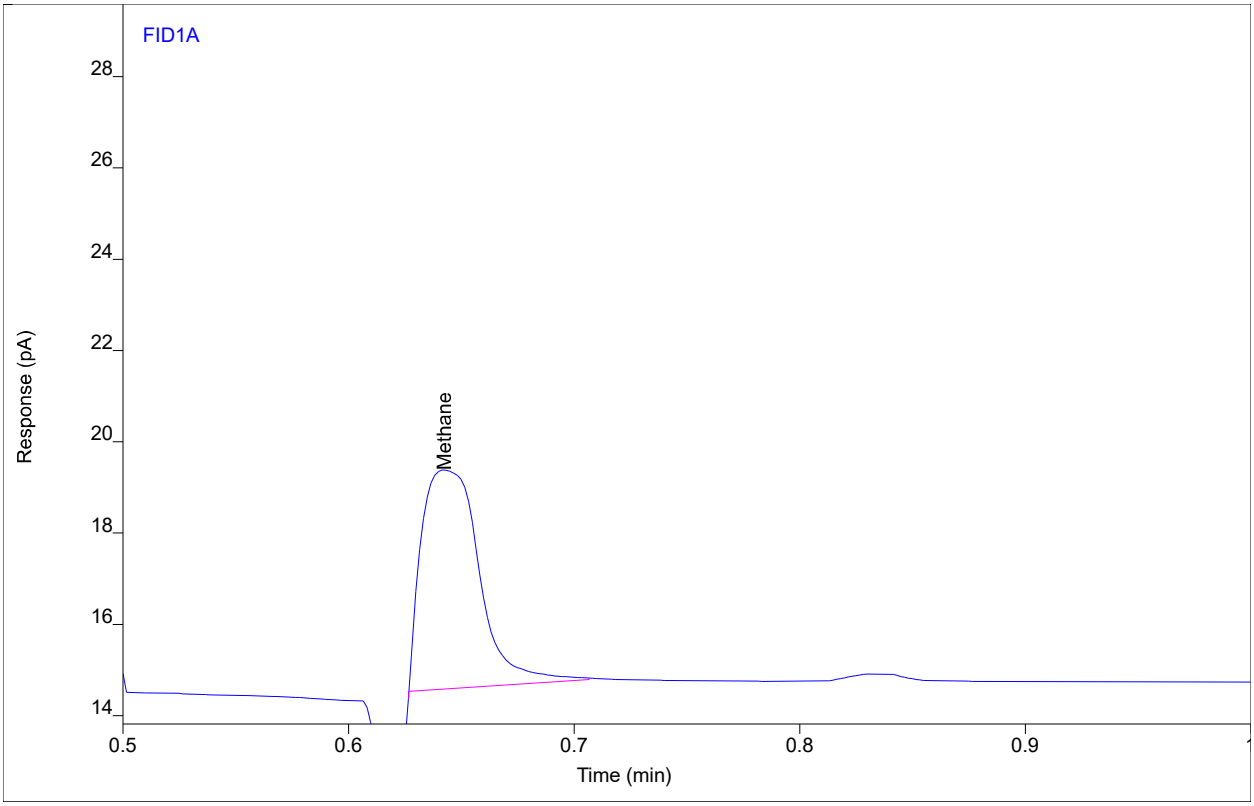

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Methane | PB | 0.64 | 10.4509 | 5.82690 | 10.1496 | 1 | 10.1496 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-1 C70523.Bag |
| Sequence Name | DPGC8-042423 ver.4 |
| Inj Data File | 014F0801.D |
| File Location | 3 - Houston Lab/Data/GC8/2023_Q2 |
| Injection Date | 4/24/2023 9:57 AM |
| File Modified | 4/24/2023 12:16 PM |
| Instrument | DP-GC08 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 14 |
| Injection Volume | 250 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC8-ACQ-083122.M |
| Analysis Method | DPGC8-F_010323_TO14A.M |
| Method Modified | 1/23/2023 10:36 AM |
| Printed | 4/24/2023 12:22 PM |



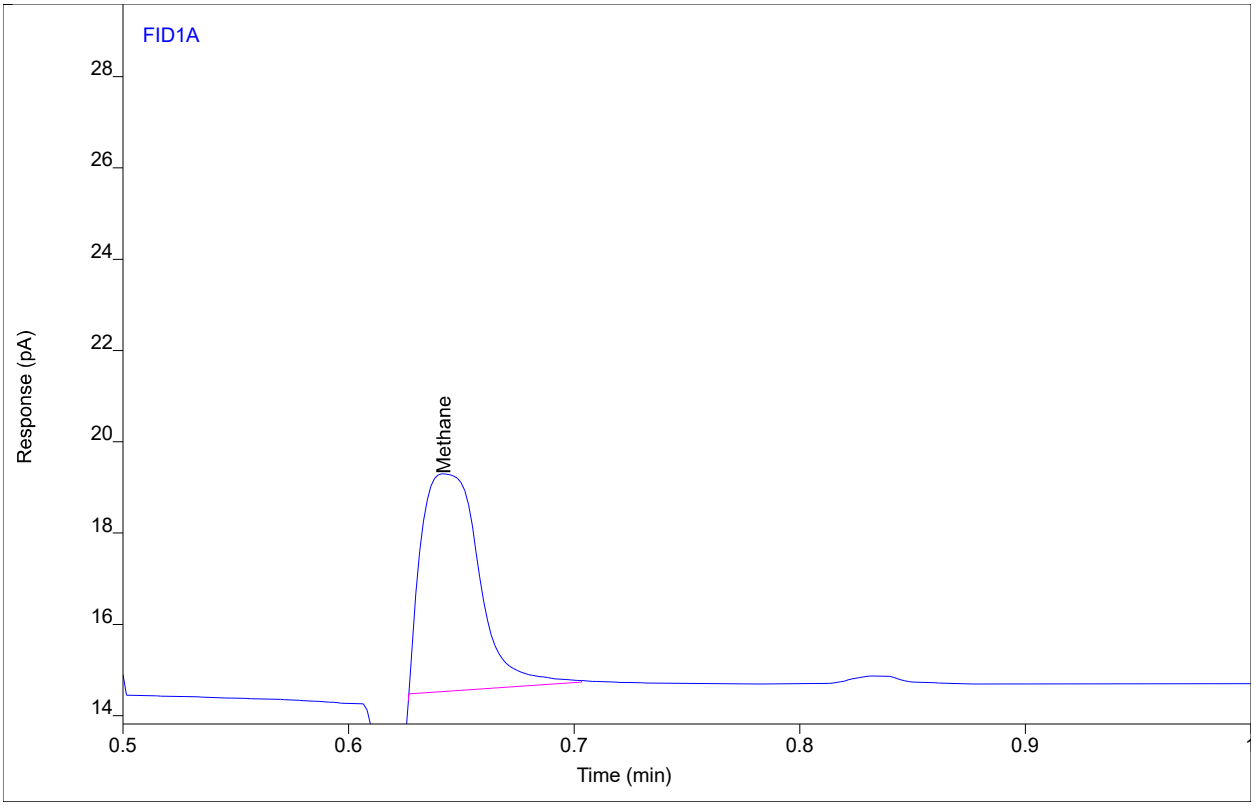

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Methane | PB | 0.64 | 8.57912 | 4.80488 | 8.33178 | 1.99 | 16.5802 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-1 C70523 Dup.Bag |
| Sequence Name | DPGC8-042423 ver.4 |
| Inj Data File | 014F0901.D |
| File Location | 3 - Houston Lab/Data/GC8/2023_Q2 |
| Injection Date | 4/24/2023 10:15 AM |
| File Modified | 4/24/2023 12:16 PM |
| Instrument | DP-GC08 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 14 |
| Injection Volume | 250 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC8-ACQ-083122.M |
| Analysis Method | DPGC8-F_010323_TO14A.M |
| Method Modified | 1/23/2023 10:36 AM |
| Printed | 4/24/2023 12:22 PM |



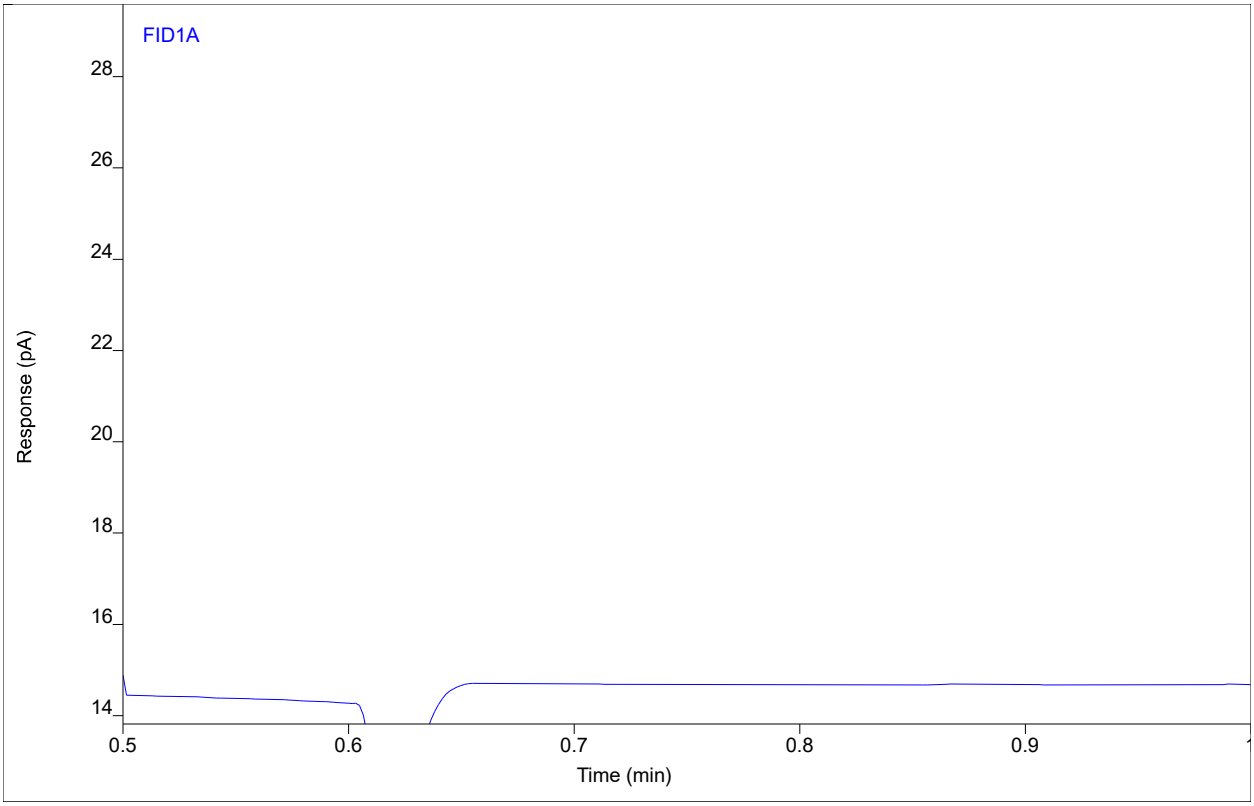

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Methane | PB | 0.64 | 8.49920 | 4.77460 | 8.25416 | 1.99 | 16.4258 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | N2 #MB Humid |
| Sequence Name | DPGC8-042423 ver.4 |
| Inj Data File | 001F1001.D |
| File Location | 3 - Houston Lab/Data/GC8/2023_Q2 |
| Injection Date | 4/24/2023 10:32 AM |
| File Modified | 4/24/2023 12:16 PM |
| Instrument | DP-GC08 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | 250 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC8-ACQ-083122.M |
| Analysis Method | DPGC8-F_010323_TO14A.M |
| Method Modified | 1/23/2023 10:36 AM |
| Printed | 4/24/2023 12:22 PM |



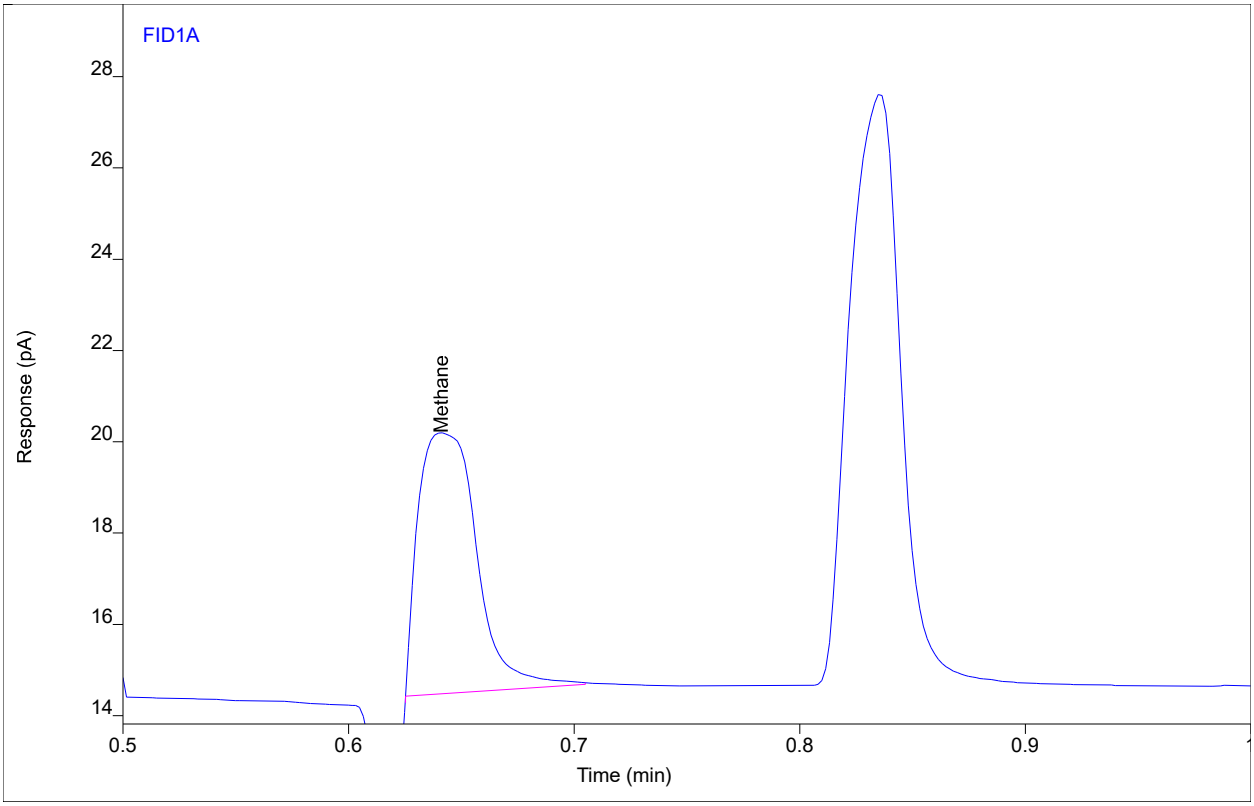

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Methane | | (0.64) | | | | 1 | | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p340 #C6 LCS |
| Sequence Name | DPGC8-042423 ver.4 |
| Inj Data File | 003F1201.D |
| File Location | 3 - Houston Lab/Data/GC8/2023_Q2 |
| Injection Date | 4/24/2023 11:09 AM |
| File Modified | 4/24/2023 12:16 PM |
| Instrument | DP-GC08 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 3 |
| Injection Volume | 250 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC8-ACQ-083122.M |
| Analysis Method | DPGC8-F_010323_TO14A.M |
| Method Modified | 1/23/2023 10:36 AM |
| Printed | 4/24/2023 12:22 PM |



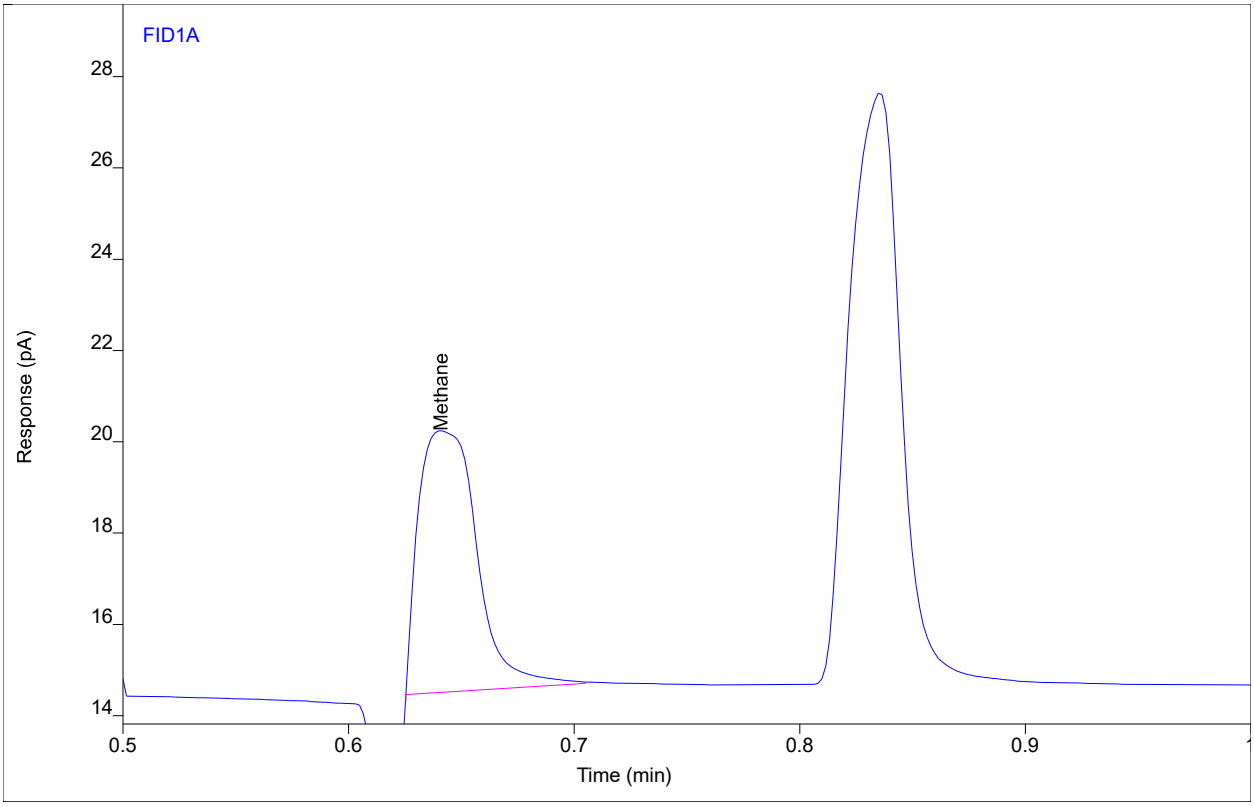

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Methane | PB | 0.64 | 10.3046 | 5.71669 | 10.0075 | 1 | 10.0075 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p340 #C6 ENV(1=0,4=495) |
| Sequence Name | DPGC8-042423 ver.4 |
| Inj Data File | 015F1301.D |
| File Location | 3 - Houston Lab/Data/GC8/2023_Q2 |
| Injection Date | 4/24/2023 11:30 AM |
| File Modified | 4/24/2023 12:16 PM |
| Instrument | DP-GC08 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 15 |
| Injection Volume | 250 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC8-ACQ-083122.M |
| Analysis Method | DPGC8-F_010323_TO14A.M |
| Method Modified | 1/23/2023 10:36 AM |
| Printed | 4/24/2023 12:22 PM |



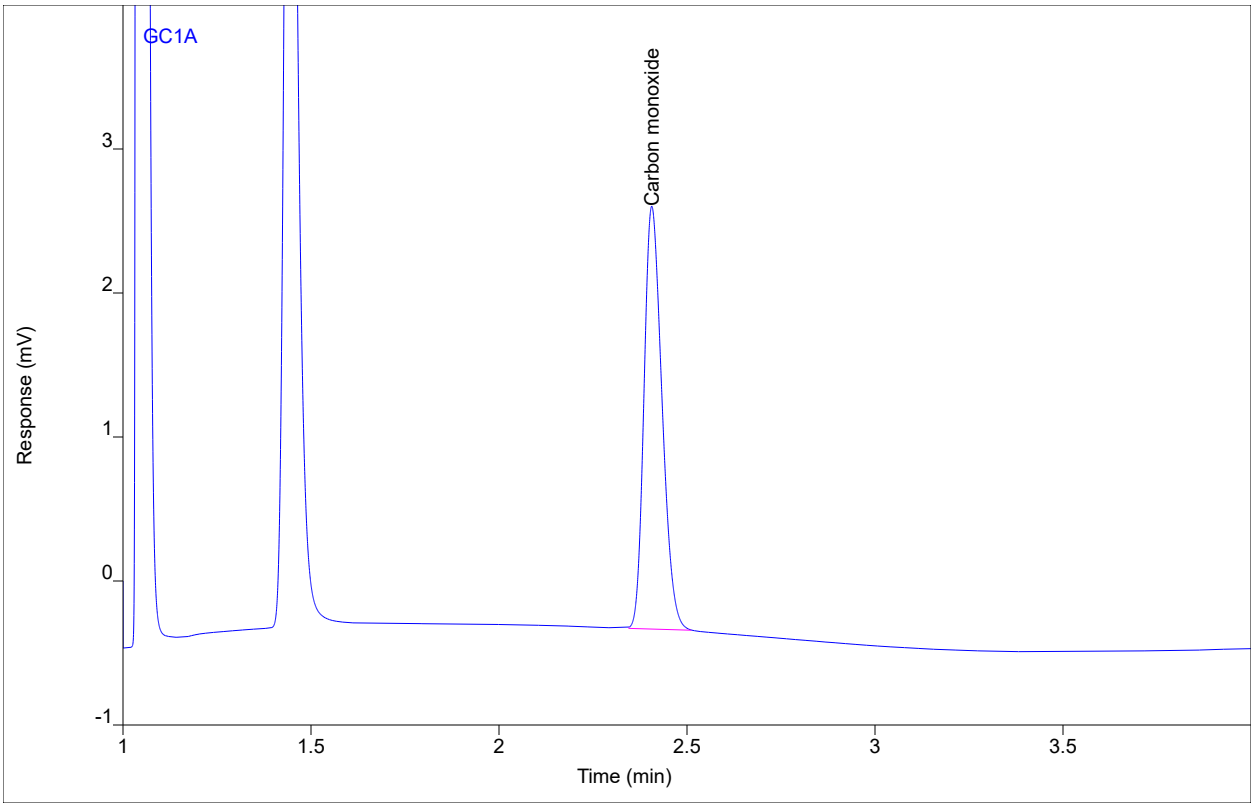

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Methane | PB | 0.64 | 10.3089 | 5.73326 | 10.0117 | 1 | 10.0117 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p277 #LVL1 V(2,0) |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F0203.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/10/2023 11:41 AM |
| File Modified | 4/12/2023 2:13 PM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 3 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/12/2023 12:16 PM |
| Printed | 4/24/2023 9:41 AM |



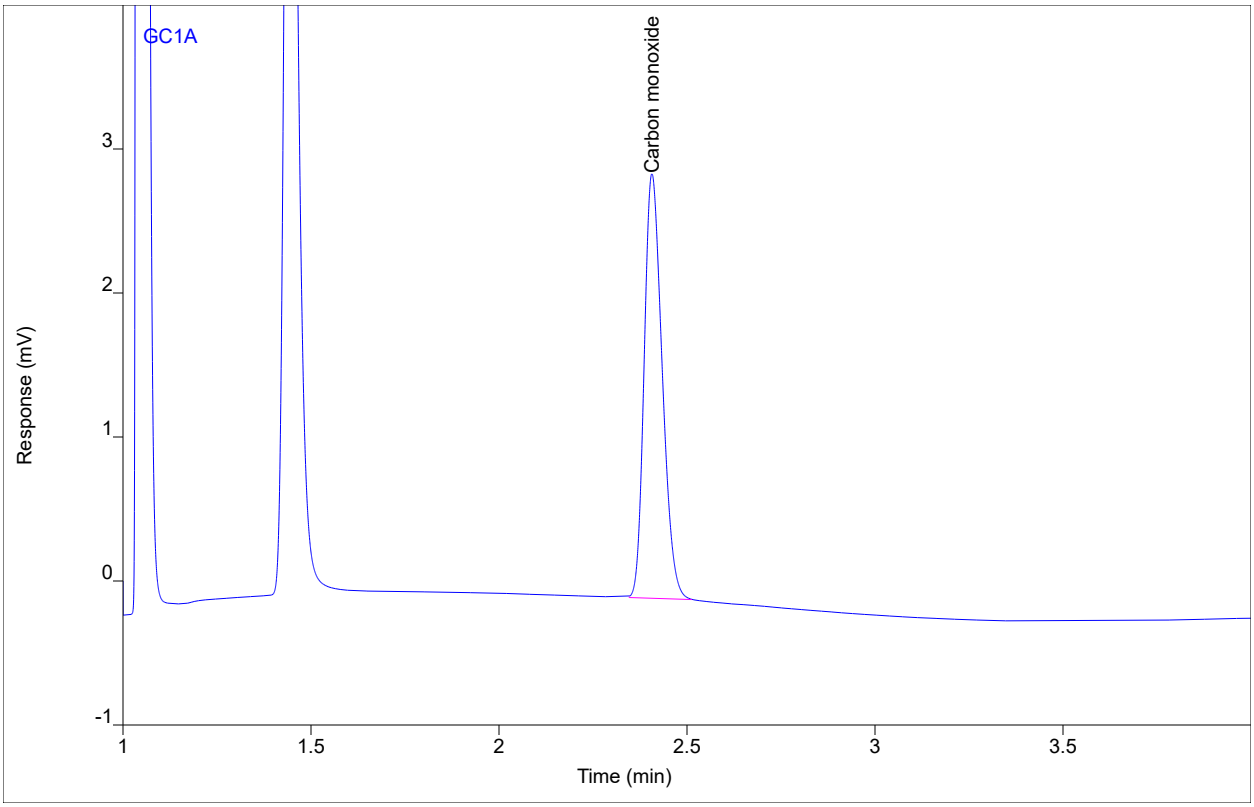

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | BB | 2.41 | 9.77026 | 2.93728 | 3.83757 | 1 | 3.83757 | % |

# Chromatogram Report

| | |
|---|---|
| Sample Name | Prep1p277 #LVL1 V(2,0) |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F0204.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/10/2023 11:51 AM |
| File Modified | 4/12/2023 2:12 PM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

# Enthalpy Analytical

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 4 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/12/2023 12:16 PM |
| Printed | 4/24/2023 9:41 AM |



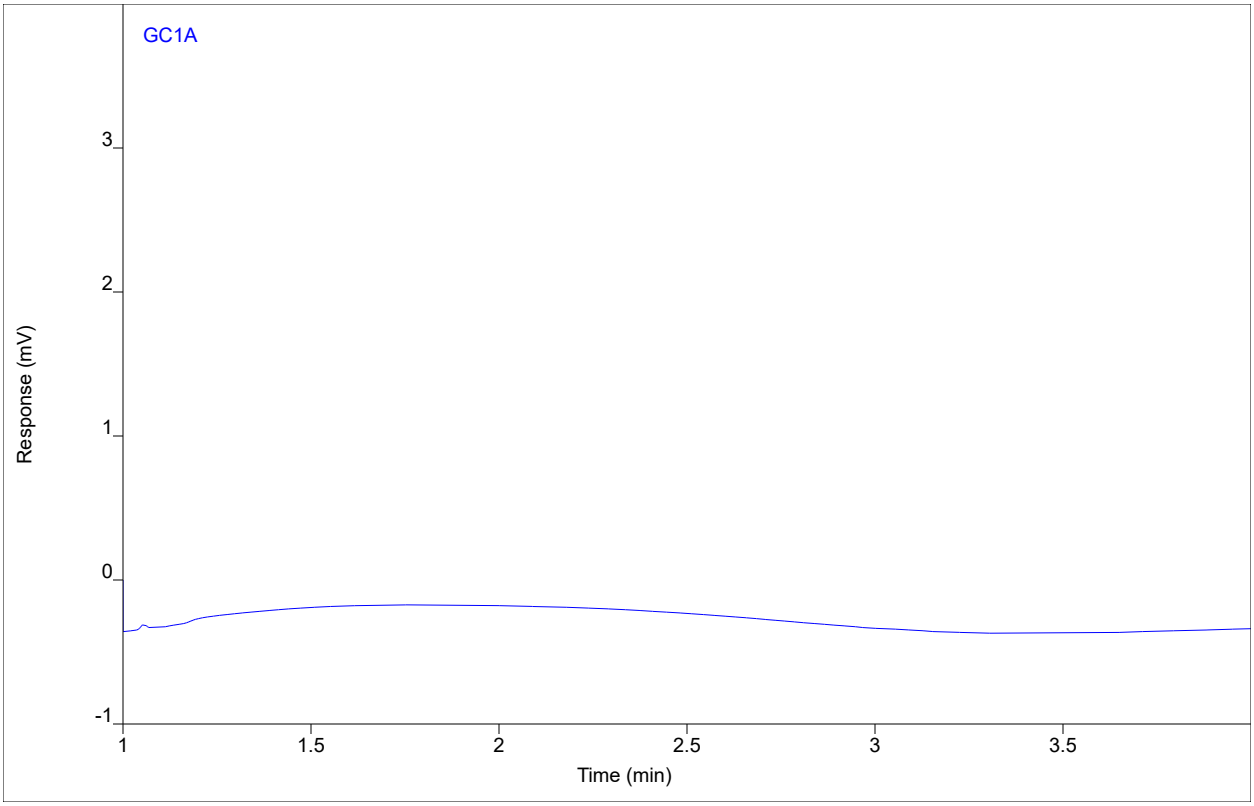

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | BB | 2.41 | 9.79169 | 2.95063 | 3.84597 | 1 | 3.84597 | % |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Argon #MB V(1,0) |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F0303.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/10/2023 12:22 PM |
| File Modified | 4/12/2023 12:21 PM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 3 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/12/2023 12:16 PM |
| Printed | 4/24/2023 9:41 AM |



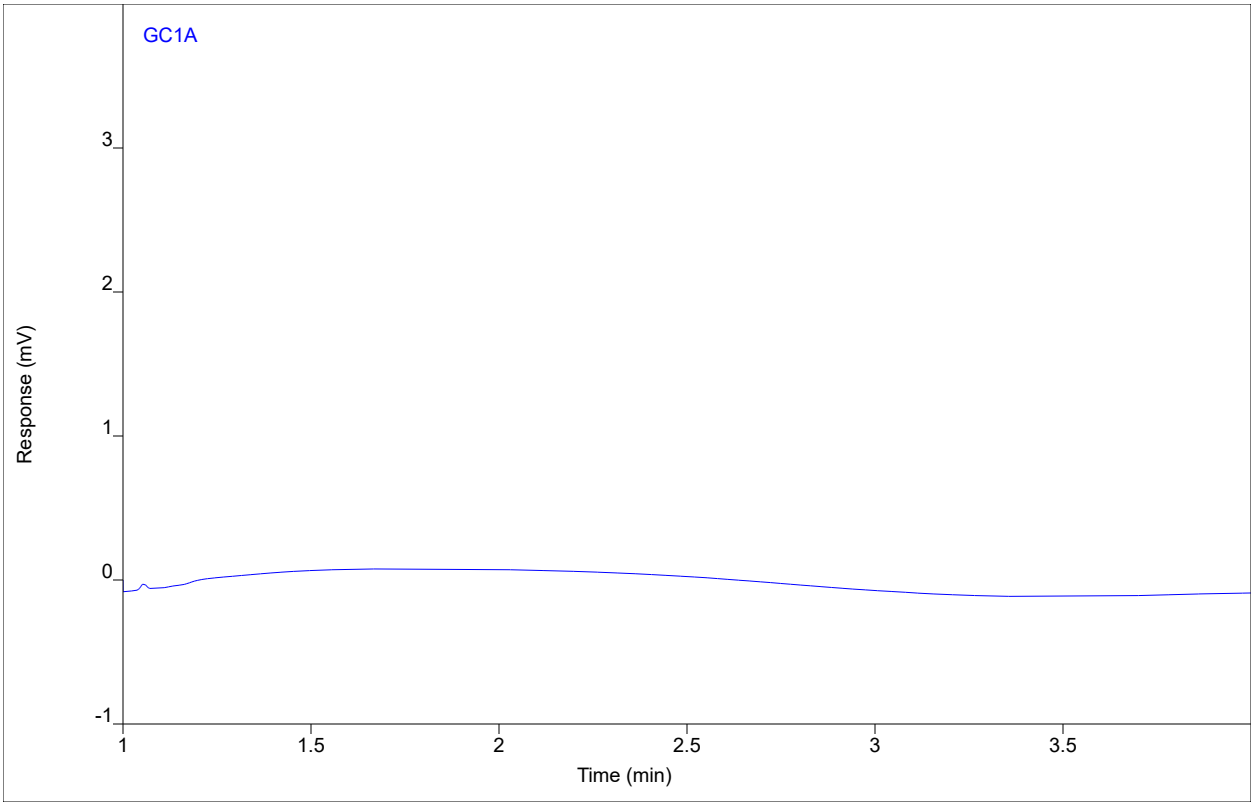

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | | (2.41) | | | | 1 | | % |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Argon #MB V(1,0) |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F0304.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/10/2023 12:32 PM |
| File Modified | 4/12/2023 12:21 PM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 4 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/12/2023 12:16 PM |
| Printed | 4/24/2023 9:41 AM |



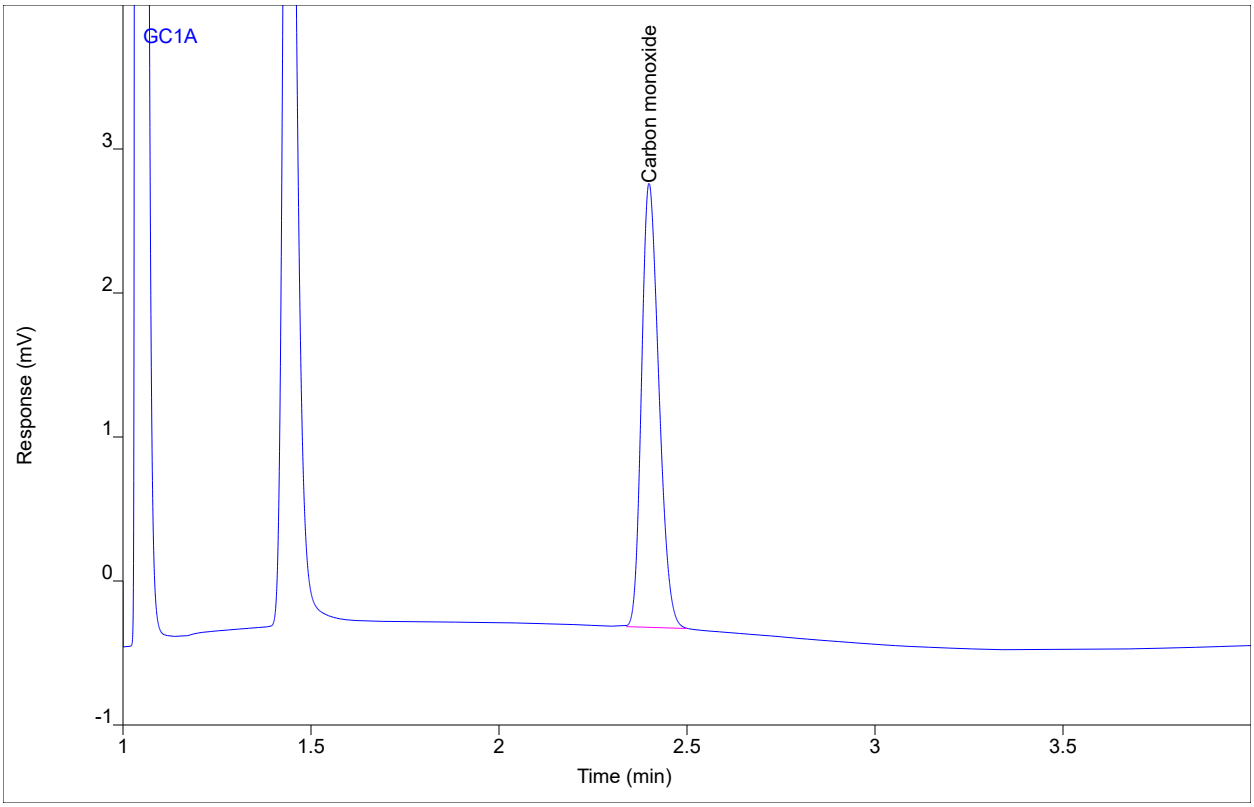

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | | (2.41) | | | | 1 | | % |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p277 #LVL1 LCS V(3,0) |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F0703.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/10/2023 2:50 PM |
| File Modified | 4/12/2023 2:21 PM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 3 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/12/2023 2:20 PM |
| Printed | 4/24/2023 9:41 AM |



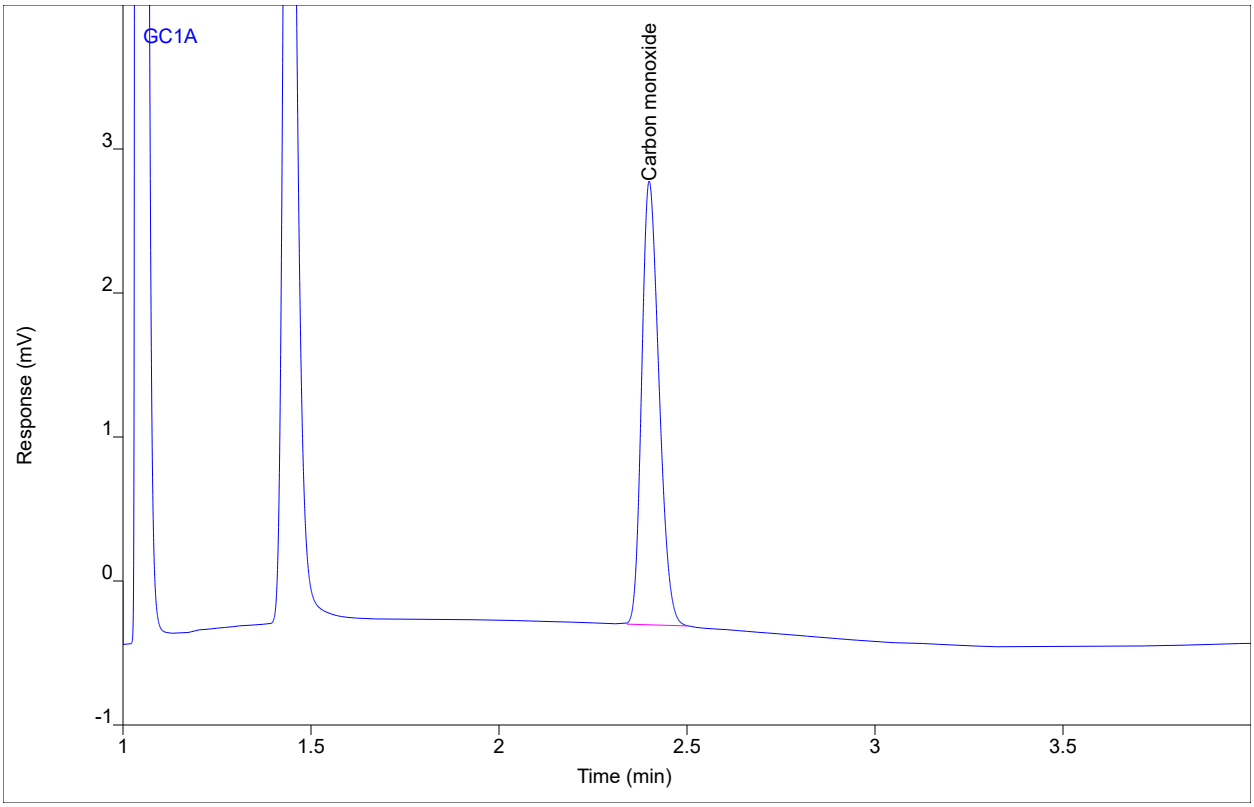

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | BB | 2.40 | 9.89251 | 3.08657 | 3.88550 | 1 | 3.88550 | % |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p277 #LVL1 LCS V(3,0) |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F0704.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/10/2023 3:01 PM |
| File Modified | 4/12/2023 2:20 PM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 4 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/12/2023 2:20 PM |
| Printed | 4/24/2023 9:41 AM |



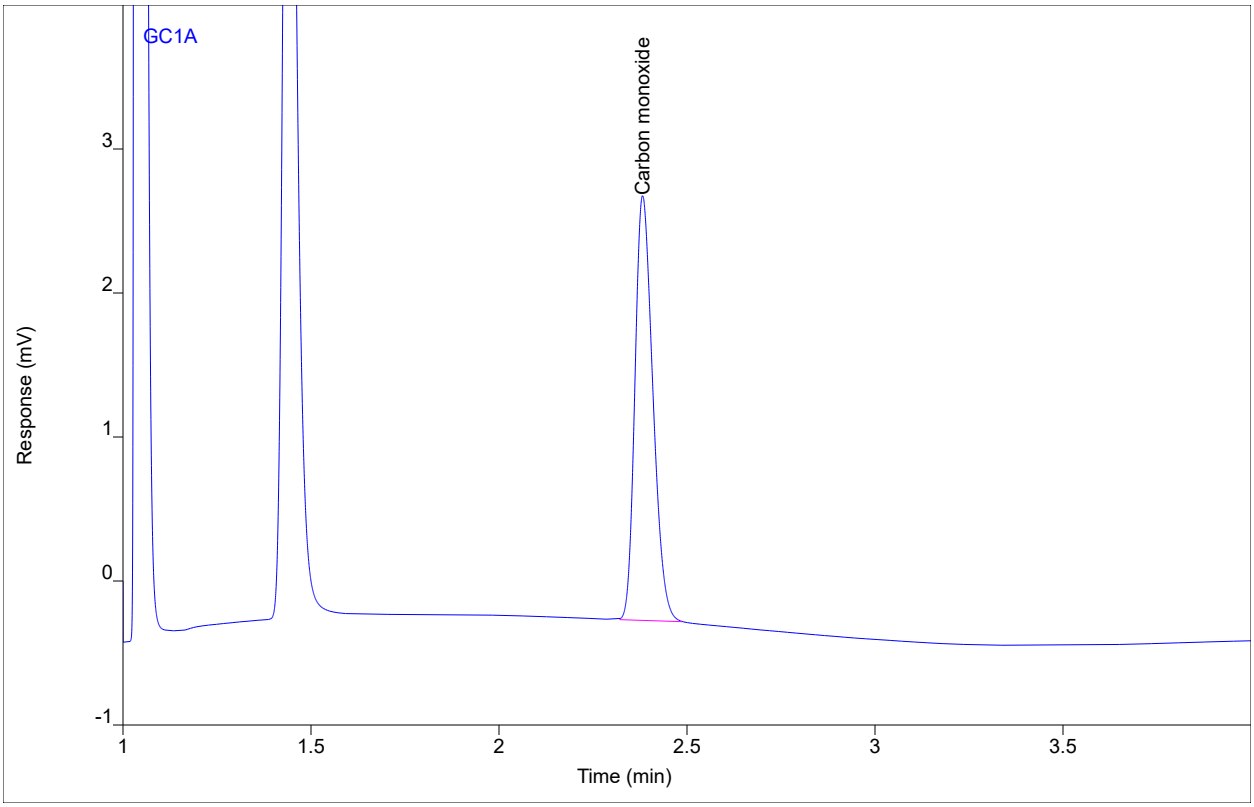

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | BB | 2.40 | 9.86549 | 3.08353 | 3.87491 | 1 | 3.87491 | % |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p277 #LVL1 V(2,0) |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F1603.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/10/2023 9:11 PM |
| File Modified | 4/12/2023 2:24 PM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 3 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/12/2023 2:23 PM |
| Printed | 4/24/2023 9:41 AM |



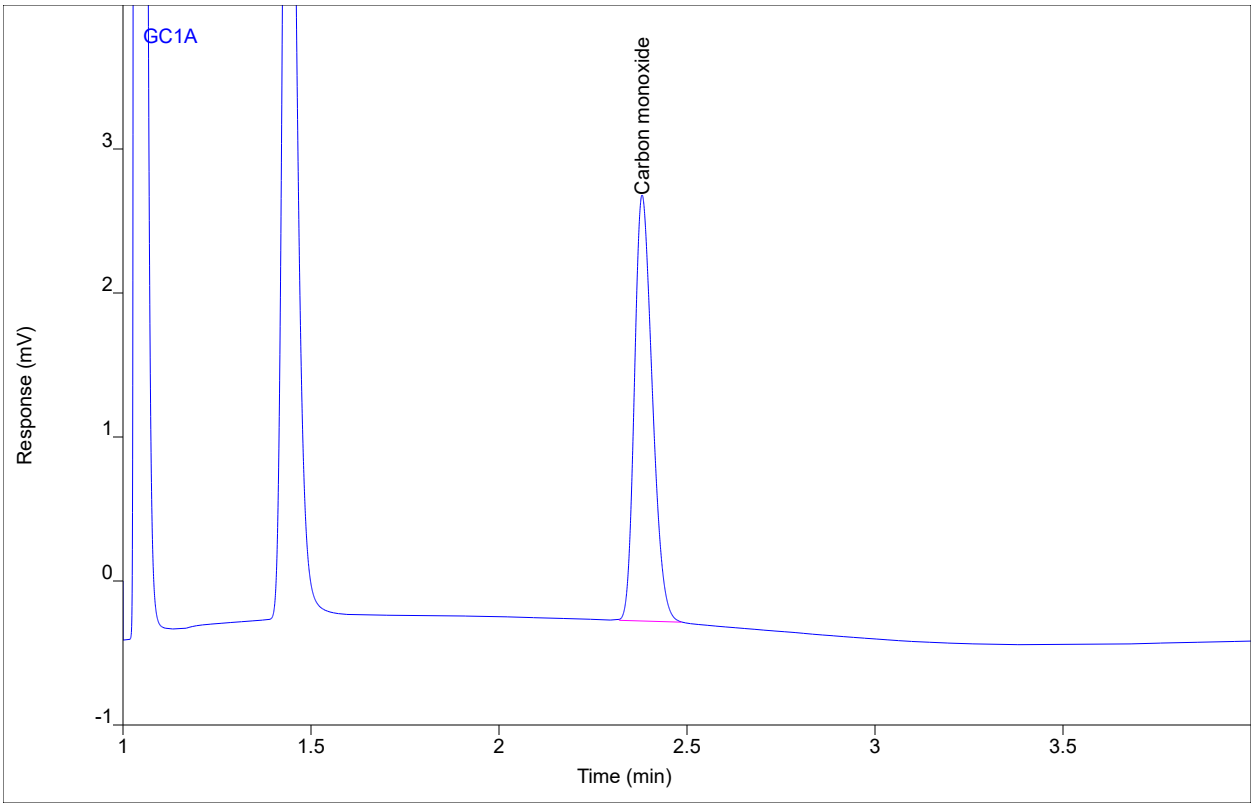

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | BB | 2.38 | 9.76711 | 2.95253 | 3.83634 | 1 | 3.83634 | % |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p277 #LVL1 V(2,0) |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F1604.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/10/2023 9:21 PM |
| File Modified | 4/12/2023 2:23 PM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 4 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/12/2023 2:23 PM |
| Printed | 4/24/2023 9:41 AM |



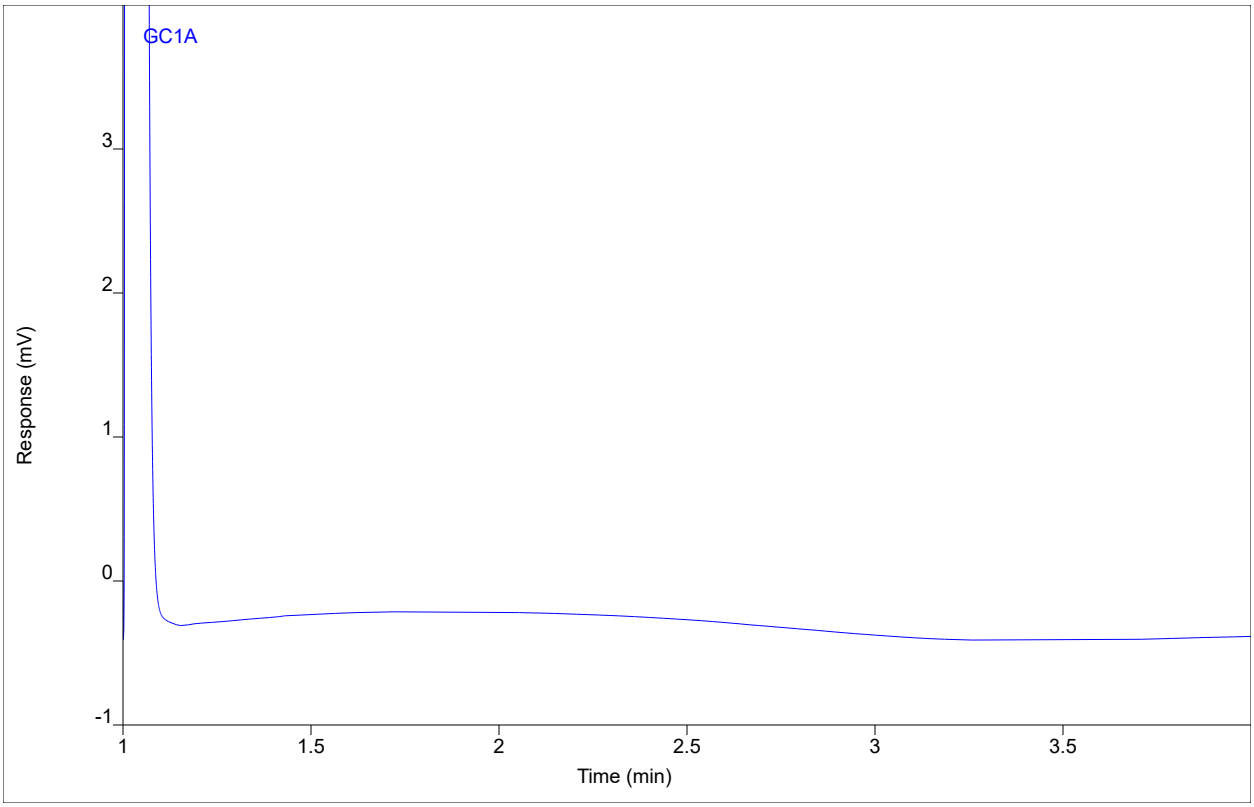

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | BB | 2.38 | 9.76320 | 2.96050 | 3.83480 | 1 | 3.83480 | % |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-1 C70523.Can |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F2003.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/10/2023 11:59 PM |
| File Modified | 4/12/2023 12:24 PM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 3 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/12/2023 12:16 PM |
| Printed | 4/24/2023 9:41 AM |



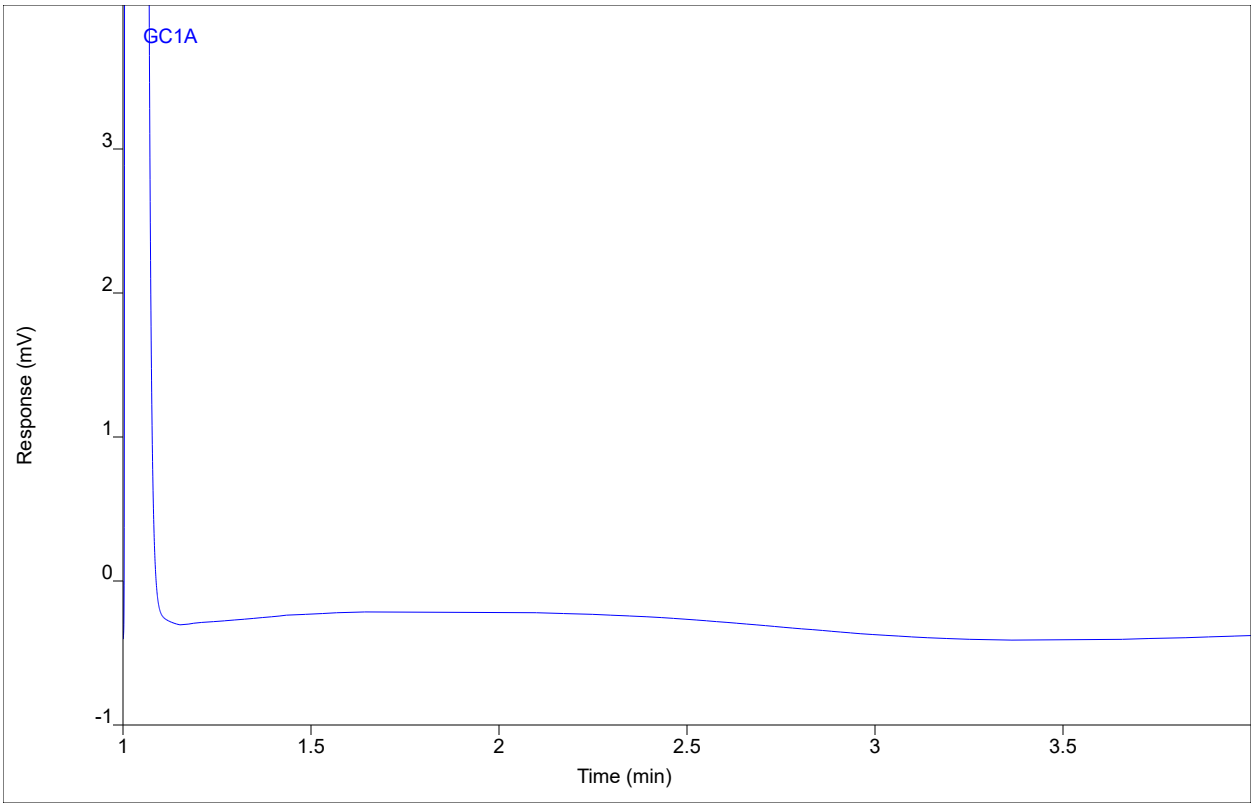

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | | (2.41) | | | | 1.99 | | % |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-1 C70523.Can |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F2004.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/11/2023 12:09 AM |
| File Modified | 4/12/2023 12:24 PM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 4 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/12/2023 12:16 PM |
| Printed | 4/24/2023 9:41 AM |



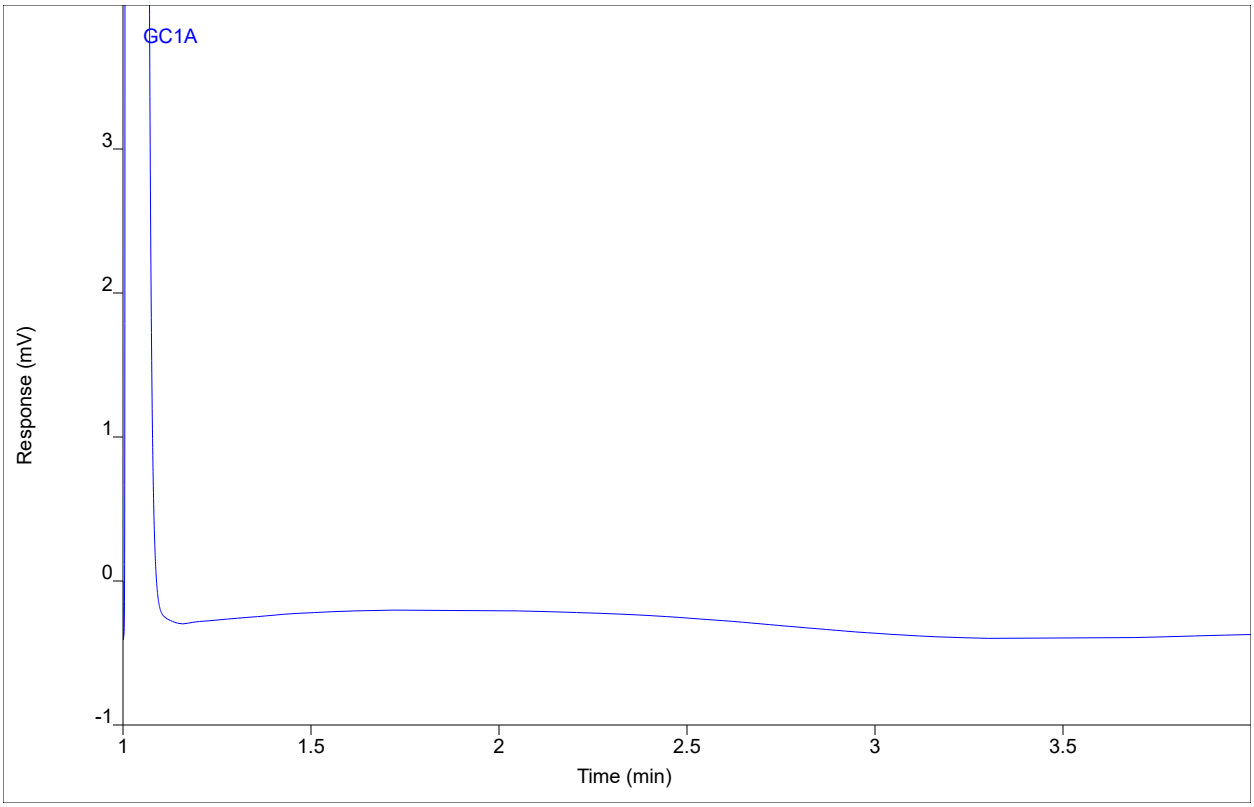

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | | (2.41) | | | | 1.99 | | % |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-2 C70527.Can |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F2103.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/11/2023 12:40 AM |
| File Modified | 4/12/2023 12:24 PM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 3 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/12/2023 12:16 PM |
| Printed | 4/24/2023 9:41 AM |



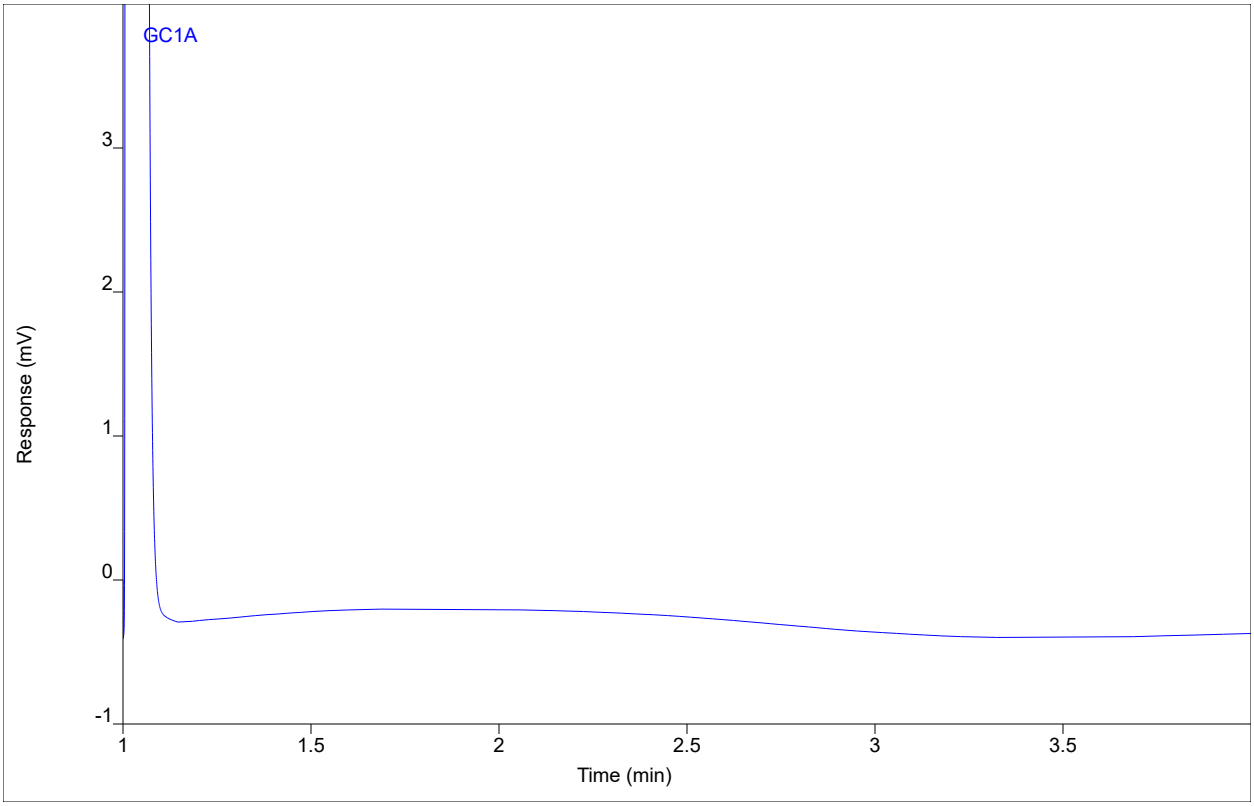

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | | (2.41) | | | | 1.88 | | % |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-2 C70527.Can |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F2104.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/11/2023 12:50 AM |
| File Modified | 4/12/2023 12:24 PM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 4 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/12/2023 12:16 PM |
| Printed | 4/24/2023 9:41 AM |



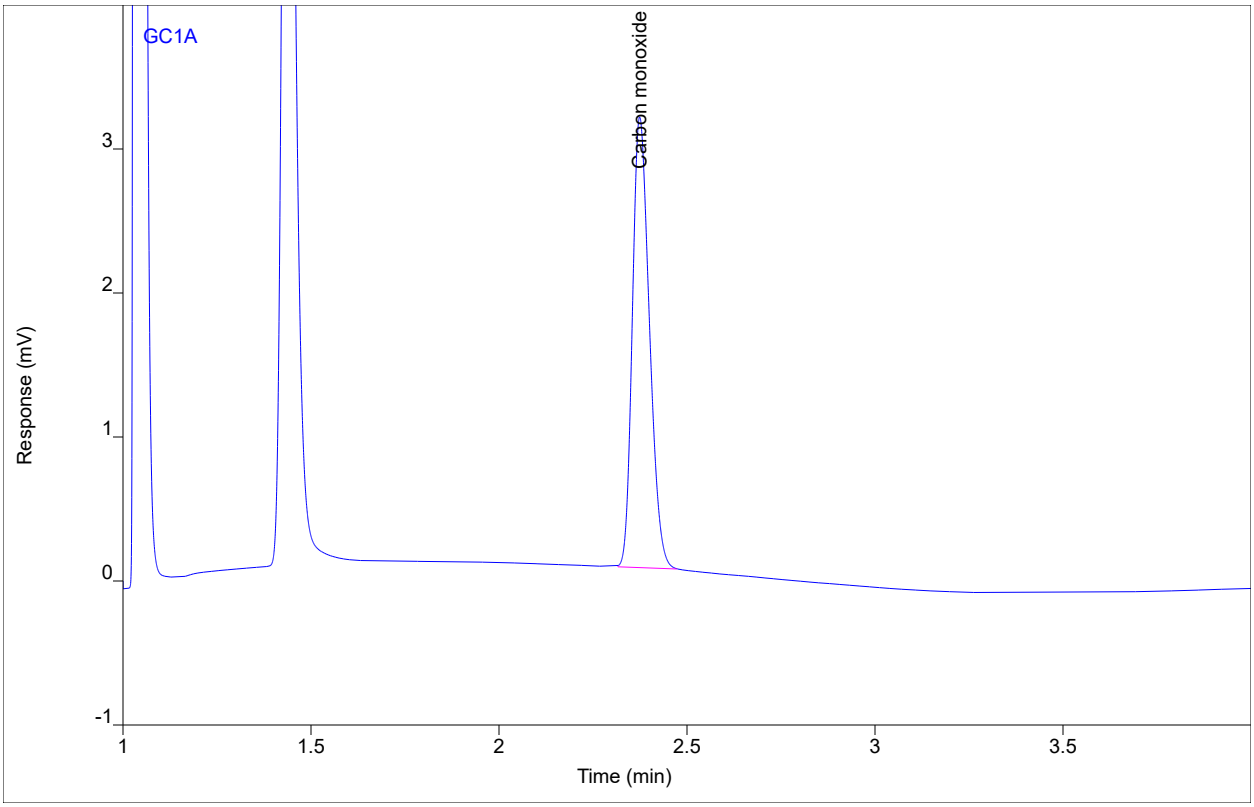

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | | (2.41) | | | | 1.88 | | % |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p277 #LVL1 V(2,0) |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F2203.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/11/2023 1:21 AM |
| File Modified | 4/12/2023 2:26 PM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 3 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/12/2023 2:25 PM |
| Printed | 4/24/2023 9:42 AM |



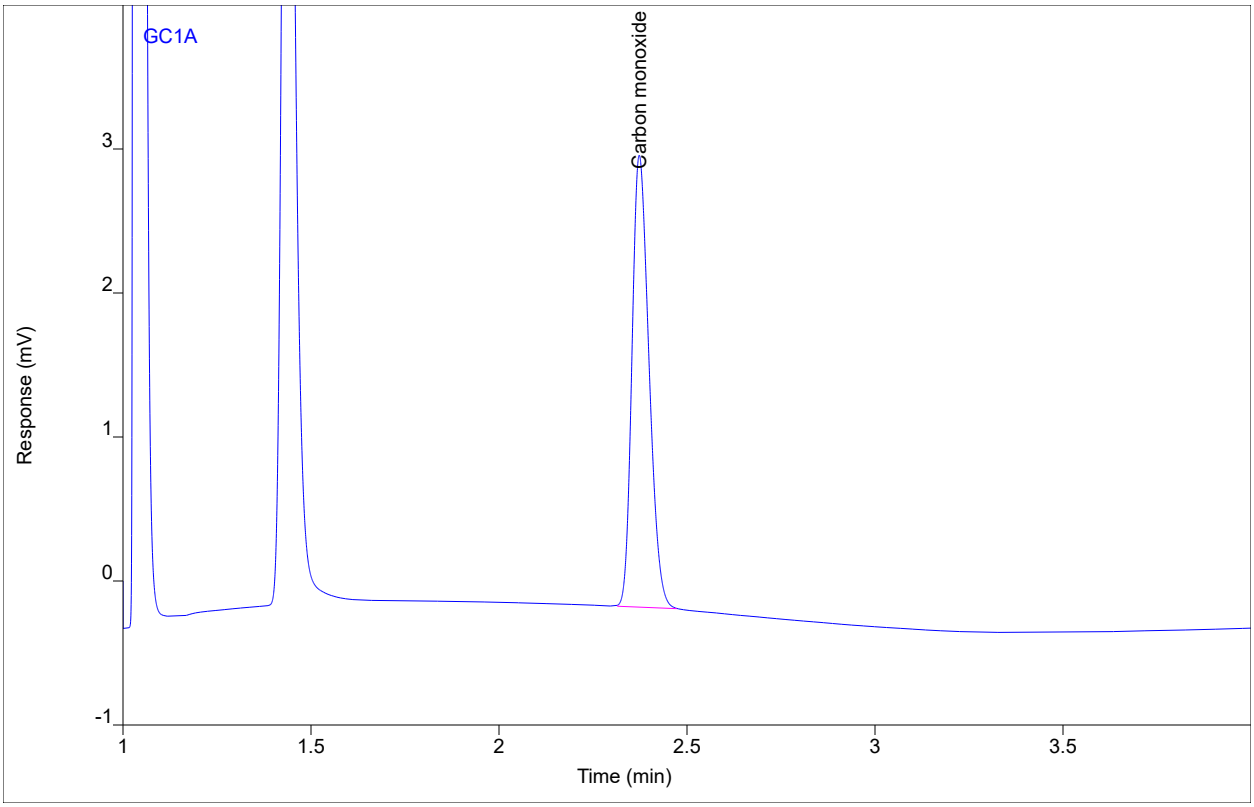

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | BB | 2.37 | 9.83712 | 3.13119 | 3.86378 | 1 | 3.86378 | % |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p277 #LVL1 V(2,0) |
| Sequence Name | DPGC6-041023 ver.8 |
| Inj Data File | 001F2204.D |
| File Location | 3 - Houston Lab/Data/GC6/2023_Q2 |
| Injection Date | 4/11/2023 1:31 AM |
| File Modified | 4/17/2023 11:27 AM |
| Instrument | DP-GC06 |
| Operator | Emily Decker |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | 1 |
| Injection Volume | NA |
| Injection | 4 of 4 |
| Acquisition Method | GC6-ACQ-022521.M |
| Analysis Method | DPGC6-101322C.M |
| Method Modified | 4/17/2023 11:27 AM |
| Printed | 4/24/2023 9:42 AM |



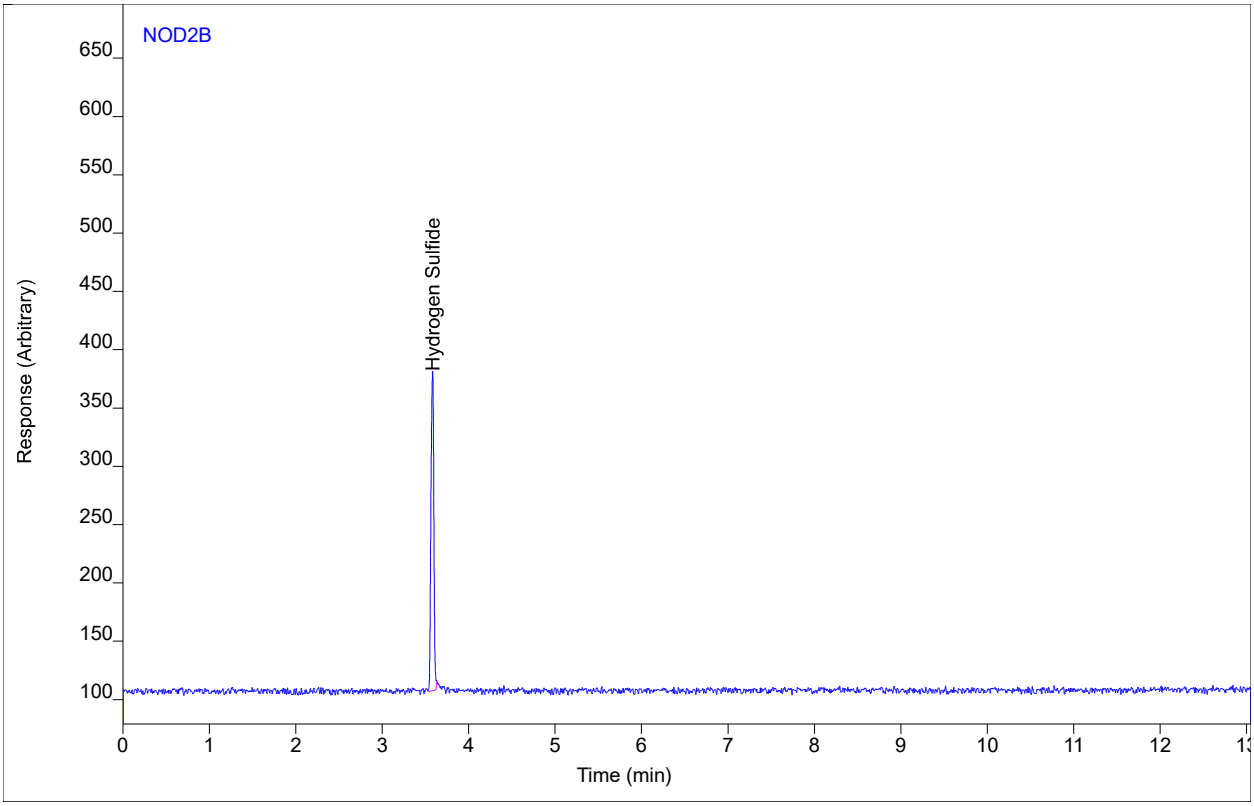

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Carbon monoxide | BB | 2.37 | 9.85233 | 3.13963 | 3.86975 | 1 | 3.86975 | % |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p355 #HS3 |
| Sequence Name | DPGC5-041023 ver.6 |
| Inj Data File | 001B0102.D |
| File Location | 3 - Houston Lab/Data/GC5/2023_Q2 |
| Injection Date | 4/11/2023 10:57 AM |
| File Modified | 4/19/2023 2:23 PM |
| Instrument | DP-GC05 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 1 |
| Injection Volume | 1000 |
| Injection | 2 of 4 |
| Acquisition Method | DPGC5-ACQ-072622.M |
| Analysis Method | DPGC5-R_040423.M |
| Method Modified | 4/19/2023 2:08 PM |
| Printed | 4/19/2023 2:35 PM |



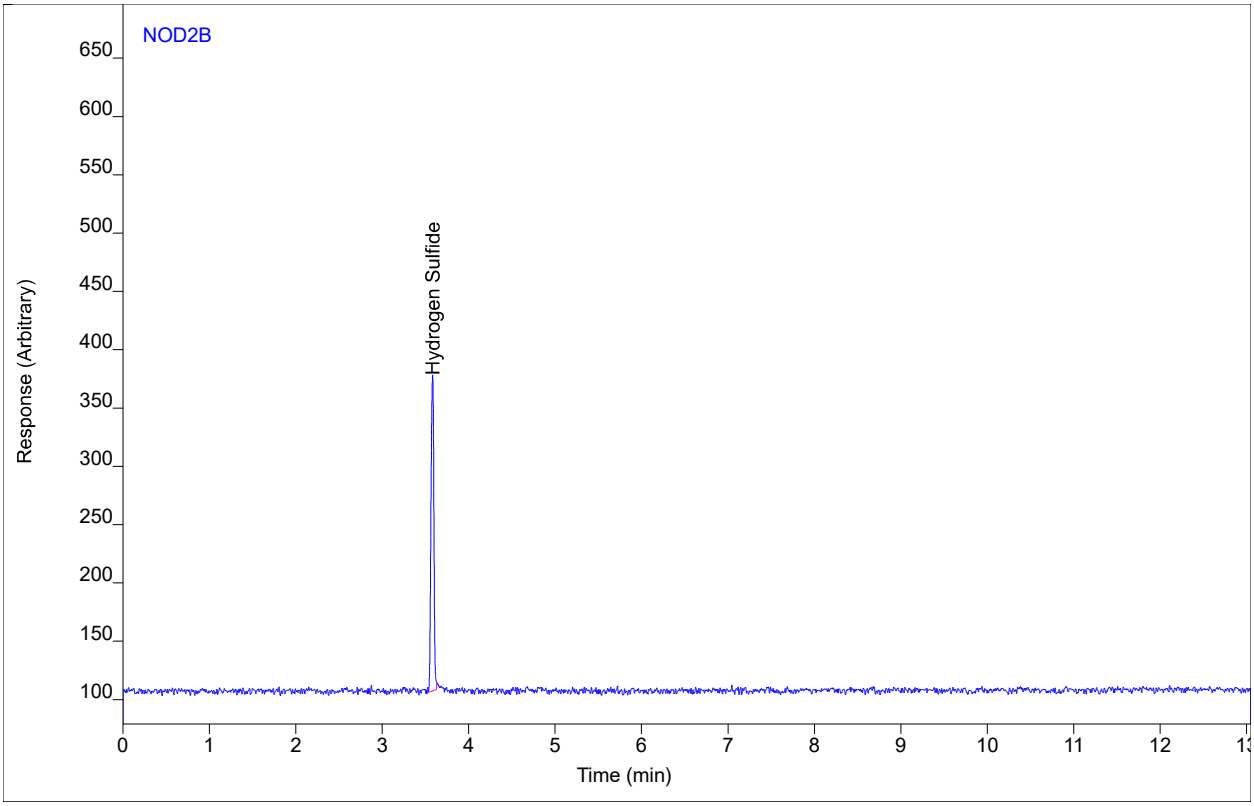

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Hydrogen Sulfide | BV | 3.58 | 630.704 | 274.272 | 1.13928 | 1 | 1.13928 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p355 #HS3 |
| Sequence Name | DPGC5-041023 ver.6 |
| Inj Data File | 001B0103.D |
| File Location | 3 - Houston Lab/Data/GC5/2023_Q2 |
| Injection Date | 4/11/2023 11:16 AM |
| File Modified | 4/19/2023 2:23 PM |
| Instrument | DP-GC05 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 1 |
| Injection Volume | 1000 |
| Injection | 3 of 4 |
| Acquisition Method | DPGC5-ACQ-072622.M |
| Analysis Method | DPGC5-R_040423.M |
| Method Modified | 4/19/2023 2:08 PM |
| Printed | 4/19/2023 2:35 PM |



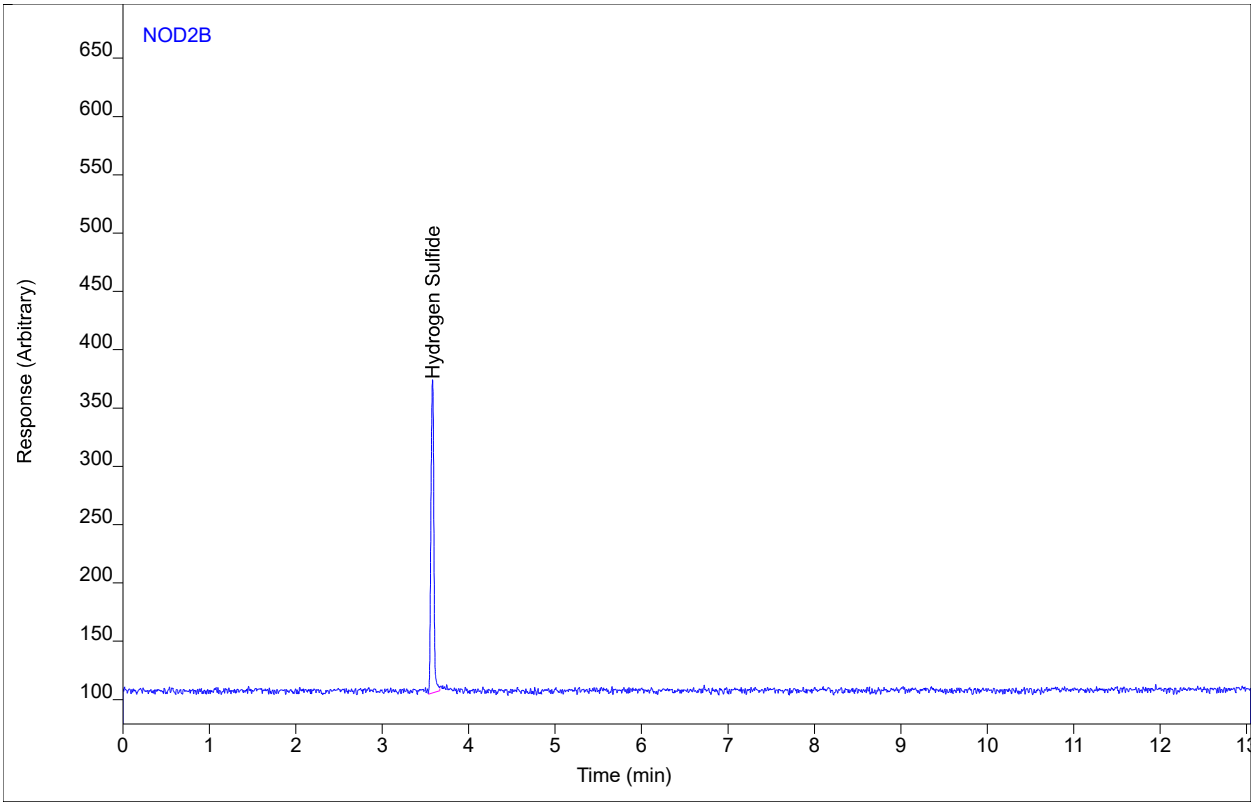

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Hydrogen Sulfide | BV | 3.58 | 624.860 | 270.948 | 1.12873 | 1 | 1.12873 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p355 #HS3 |
| Sequence Name | DPGC5-041023 ver.6 |
| Inj Data File | 001B0104.D |
| File Location | 3 - Houston Lab/Data/GC5/2023_Q2 |
| Injection Date | 4/11/2023 11:36 AM |
| File Modified | 4/19/2023 2:23 PM |
| Instrument | DP-GC05 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 1 |
| Injection Volume | 1000 |
| Injection | 4 of 4 |
| Acquisition Method | DPGC5-ACQ-072622.M |
| Analysis Method | DPGC5-R_040423.M |
| Method Modified | 4/19/2023 2:08 PM |
| Printed | 4/19/2023 2:35 PM |



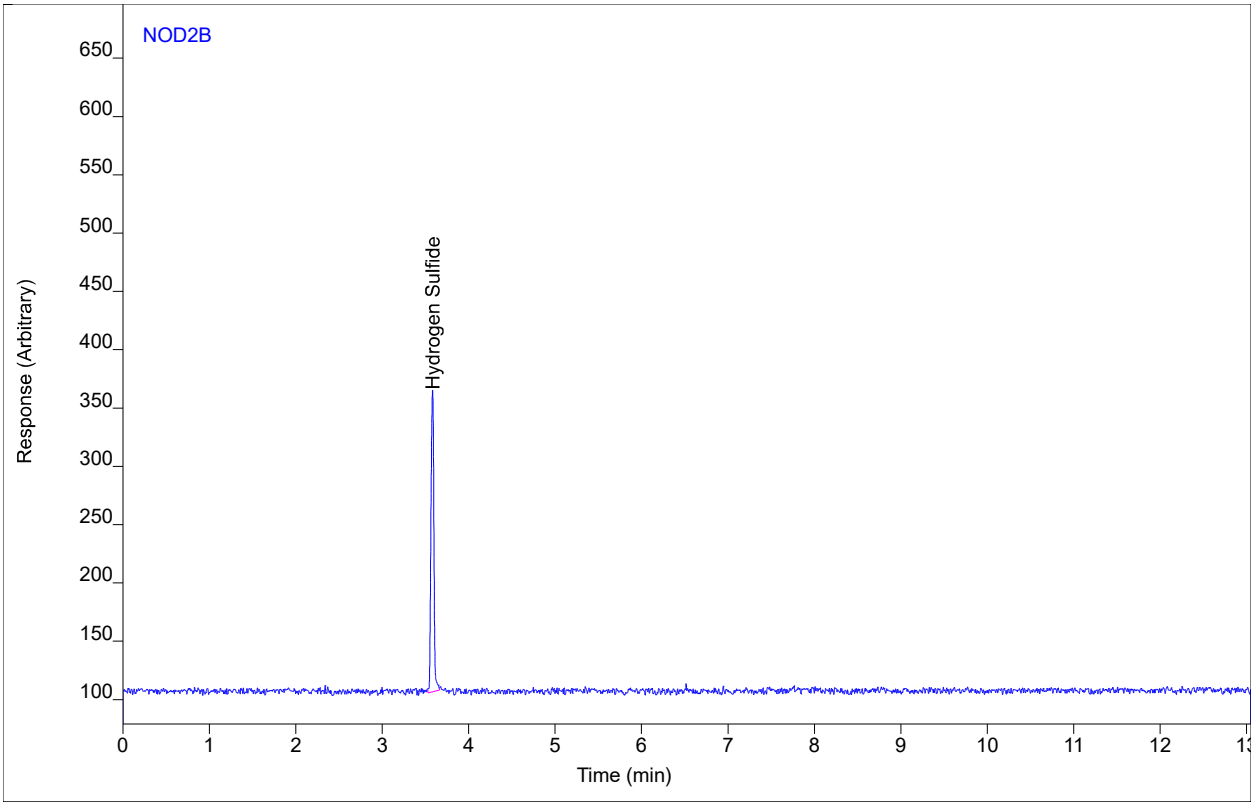

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Hydrogen Sulfide | BV | 3.58 | 628.867 | 269.095 | 1.13596 | 1 | 1.13596 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p355 #HS3 LCS |
| Sequence Name | DPGC5-041023 ver.6 |
| Inj Data File | 002B0201.D |
| File Location | 3 - Houston Lab/Data/GC5/2023_Q2 |
| Injection Date | 4/11/2023 11:56 AM |
| File Modified | 4/19/2023 2:23 PM |
| Instrument | DP-GC05 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 2 |
| Injection Volume | 1000 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC5-ACQ-072622.M |
| Analysis Method | DPGC5-R_040423.M |
| Method Modified | 4/19/2023 2:08 PM |
| Printed | 4/19/2023 2:35 PM |



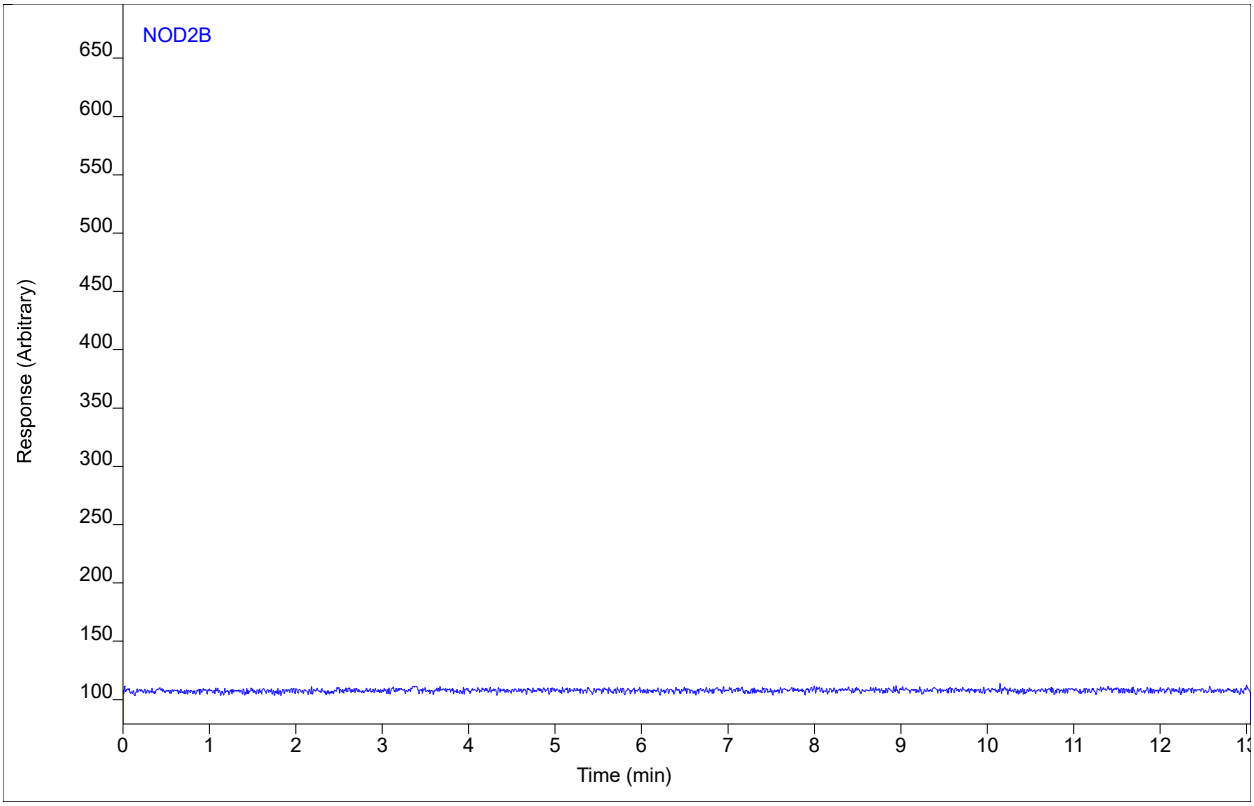

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Hydrogen Sulfide | VV | 3.58 | 604.664 | 259.005 | 1.09224 | 1 | 1.09224 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | N2 #MB |
| Sequence Name | DPGC5-041023 ver.6 |
| Inj Data File | 003B0301.D |
| File Location | 3 - Houston Lab/Data/GC5/2023_Q2 |
| Injection Date | 4/11/2023 12:16 PM |
| File Modified | 4/19/2023 2:23 PM |
| Instrument | DP-GC05 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 3 |
| Injection Volume | 1000 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC5-ACQ-072622.M |
| Analysis Method | DPGC5-R_040423.M |
| Method Modified | 4/19/2023 2:08 PM |
| Printed | 4/19/2023 2:35 PM |



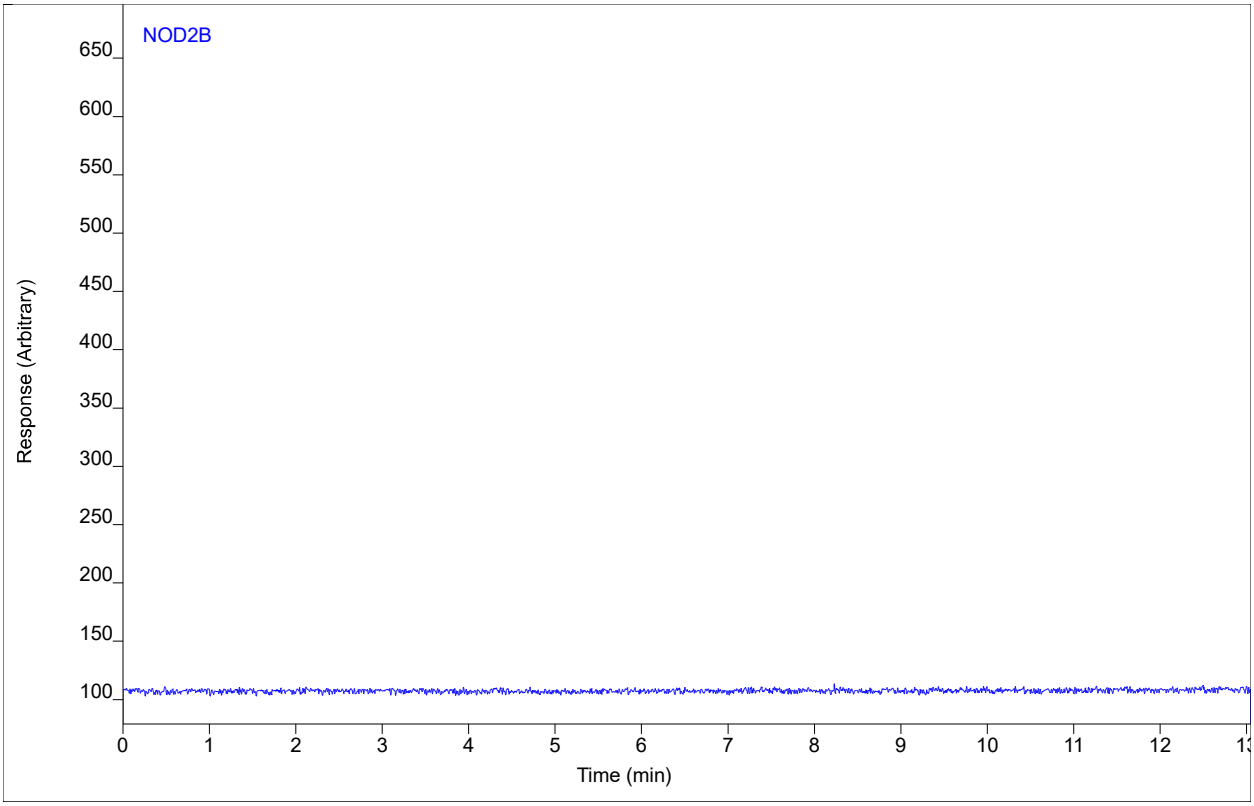

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Hydrogen Sulfide | | (3.59) | | | | 1 | | |
| Methyl Mercaptan | | (4.46) | | | | 1 | | |
| Ethyl Mercaptan | | (5.52) | | | | 1 | | |
| Isopropyl Mercaptan | | (6.37) | | | | 1 | | |
| t-Butyl Mercaptan | | (7.01) | | | | 1 | | |
| n-Propyl Mercaptan | | (7.22) | | | | 1 | | |
| sec-Butyl Mercaptan | | (8.17) | | | | 1 | | |
| Isobutyl Mercaptan | | (8.35) | | | | 1 | | |
| n-Butyl Mercaptan | | (8.84) | | | | 1 | | |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-1 C70523.Bag |
| Sequence Name | DPGC5-041023 ver.6 |
| Inj Data File | 012B0401.D |
| File Location | 3 - Houston Lab/Data/GC5/2023_Q2 |
| Injection Date | 4/11/2023 12:36 PM |
| File Modified | 4/19/2023 2:23 PM |
| Instrument | DP-GC05 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 12 |
| Injection Volume | 1000 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC5-ACQ-072622.M |
| Analysis Method | DPGC5-R_040423.M |
| Method Modified | 4/19/2023 2:08 PM |
| Printed | 4/19/2023 2:35 PM |



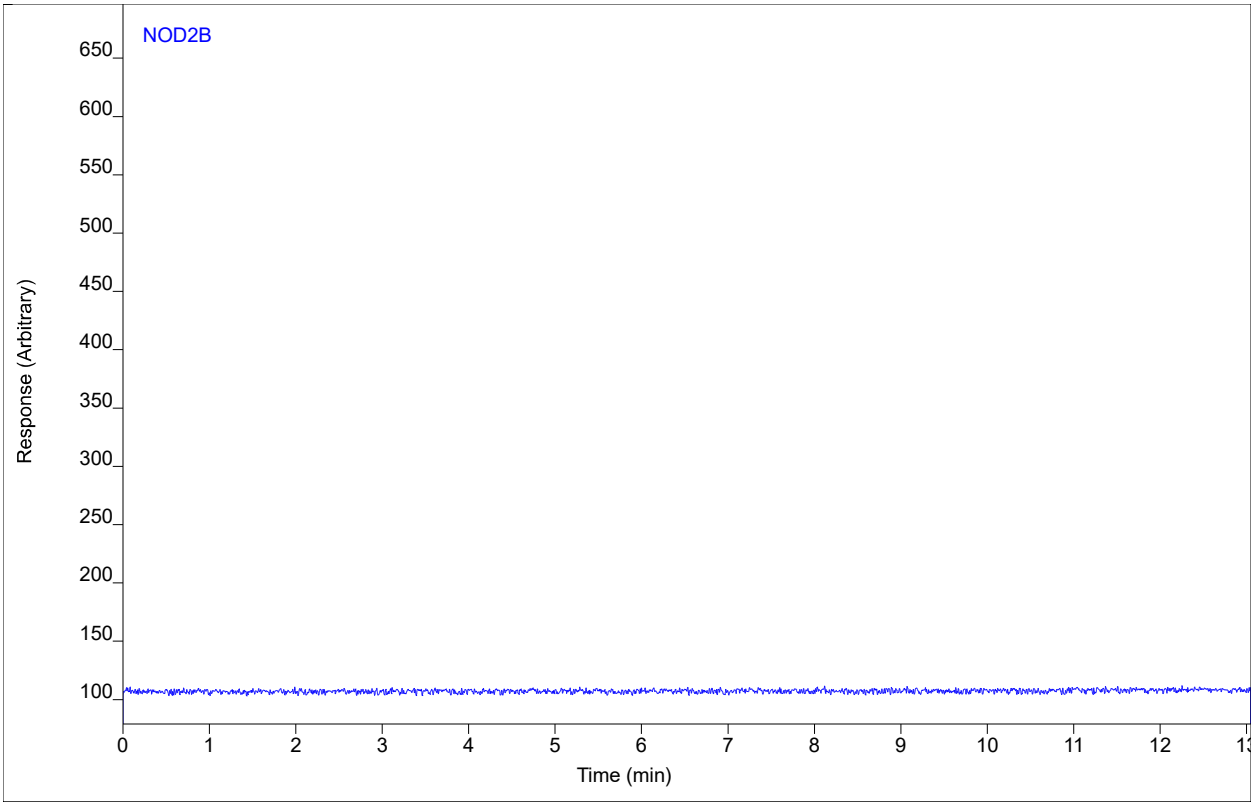

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Hydrogen Sulfide | | (3.59) | | | | 1.99 | | |
| Methyl Mercaptan | | (4.46) | | | | 1.99 | | |
| Ethyl Mercaptan | | (5.52) | | | | 1.99 | | |
| Isopropyl Mercaptan | | (6.37) | | | | 1.99 | | |
| t-Butyl Mercaptan | | (7.01) | | | | 1.99 | | |
| n-Propyl Mercaptan | | (7.22) | | | | 1.99 | | |
| sec-Butyl Mercaptan | | (8.17) | | | | 1.99 | | |
| Isobutyl Mercaptan | | (8.35) | | | | 1.99 | | |
| n-Butyl Mercaptan | | (8.84) | | | | 1.99 | | |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-1 C70523 Dup.Bag |
| Sequence Name | DPGC5-041023 ver.6 |
| Inj Data File | 012B0501.D |
| File Location | 3 - Houston Lab/Data/GC5/2023_Q2 |
| Injection Date | 4/11/2023 12:56 PM |
| File Modified | 4/19/2023 2:23 PM |
| Instrument | DP-GC05 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 12 |
| Injection Volume | 1000 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC5-ACQ-072622.M |
| Analysis Method | DPGC5-R_040423.M |
| Method Modified | 4/19/2023 2:08 PM |
| Printed | 4/19/2023 2:35 PM |



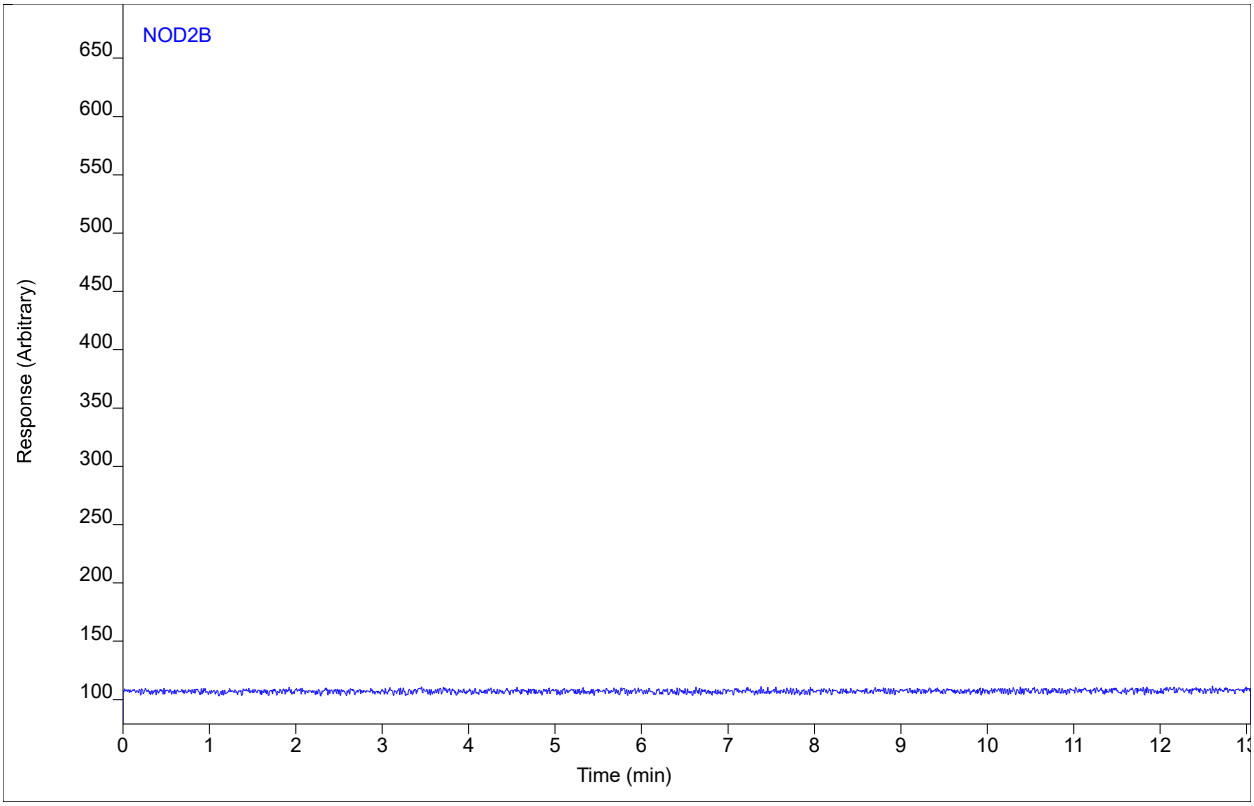

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Hydrogen Sulfide | | (3.59) | | | | 1.99 | | |
| Methyl Mercaptan | | (4.46) | | | | 1.99 | | |
| Ethyl Mercaptan | | (5.52) | | | | 1.99 | | |
| Isopropyl Mercaptan | | (6.37) | | | | 1.99 | | |
| t-Butyl Mercaptan | | (7.01) | | | | 1.99 | | |
| n-Propyl Mercaptan | | (7.22) | | | | 1.99 | | |
| sec-Butyl Mercaptan | | (8.17) | | | | 1.99 | | |
| Isobutyl Mercaptan | | (8.35) | | | | 1.99 | | |
| n-Butyl Mercaptan | | (8.84) | | | | 1.99 | | |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-2 C70527.Bag |
| Sequence Name | DPGC5-041023 ver.6 |
| Inj Data File | 013B0701.D |
| File Location | 3 - Houston Lab/Data/GC5/2023_Q2 |
| Injection Date | 4/11/2023 1:36 PM |
| File Modified | 4/19/2023 2:23 PM |
| Instrument | DP-GC05 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 13 |
| Injection Volume | 1000 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC5-ACQ-072622.M |
| Analysis Method | DPGC5-R_040423.M |
| Method Modified | 4/19/2023 2:08 PM |
| Printed | 4/19/2023 2:35 PM |



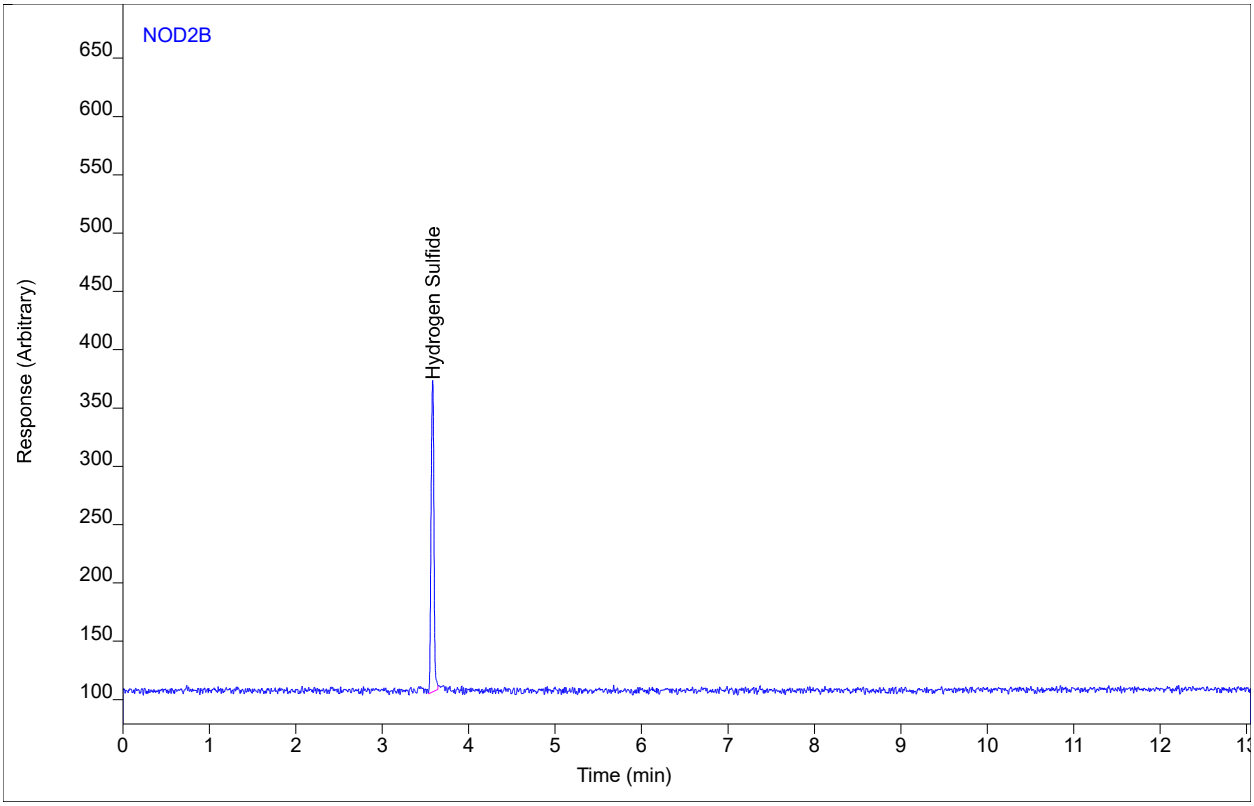

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Hydrogen Sulfide | | (3.59) | | | | 1.88 | | |
| Methyl Mercaptan | | (4.46) | | | | 1.88 | | |
| Ethyl Mercaptan | | (5.52) | | | | 1.88 | | |
| Isopropyl Mercaptan | | (6.37) | | | | 1.88 | | |
| t-Butyl Mercaptan | | (7.01) | | | | 1.88 | | |
| n-Propyl Mercaptan | | (7.22) | | | | 1.88 | | |
| sec-Butyl Mercaptan | | (8.17) | | | | 1.88 | | |
| Isobutyl Mercaptan | | (8.35) | | | | 1.88 | | |
| n-Butyl Mercaptan | | (8.84) | | | | 1.88 | | |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | 0423-940.SB-2 C70527 SP.Bag |
| Sequence Name | DPGC5-041023 ver.6 |
| Inj Data File | 008B0901.D |
| File Location | 3 - Houston Lab/Data/GC5/2023_Q2 |
| Injection Date | 4/11/2023 2:24 PM |
| File Modified | 4/19/2023 2:23 PM |
| Instrument | DP-GC05 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 8 |
| Injection Volume | 1000 |
| Injection | 1 of 1 |
| Acquisition Method | DPGC5-ACQ-072622.M |
| Analysis Method | DPGC5-R_040423.M |
| Method Modified | 4/19/2023 2:08 PM |
| Printed | 4/19/2023 2:35 PM |



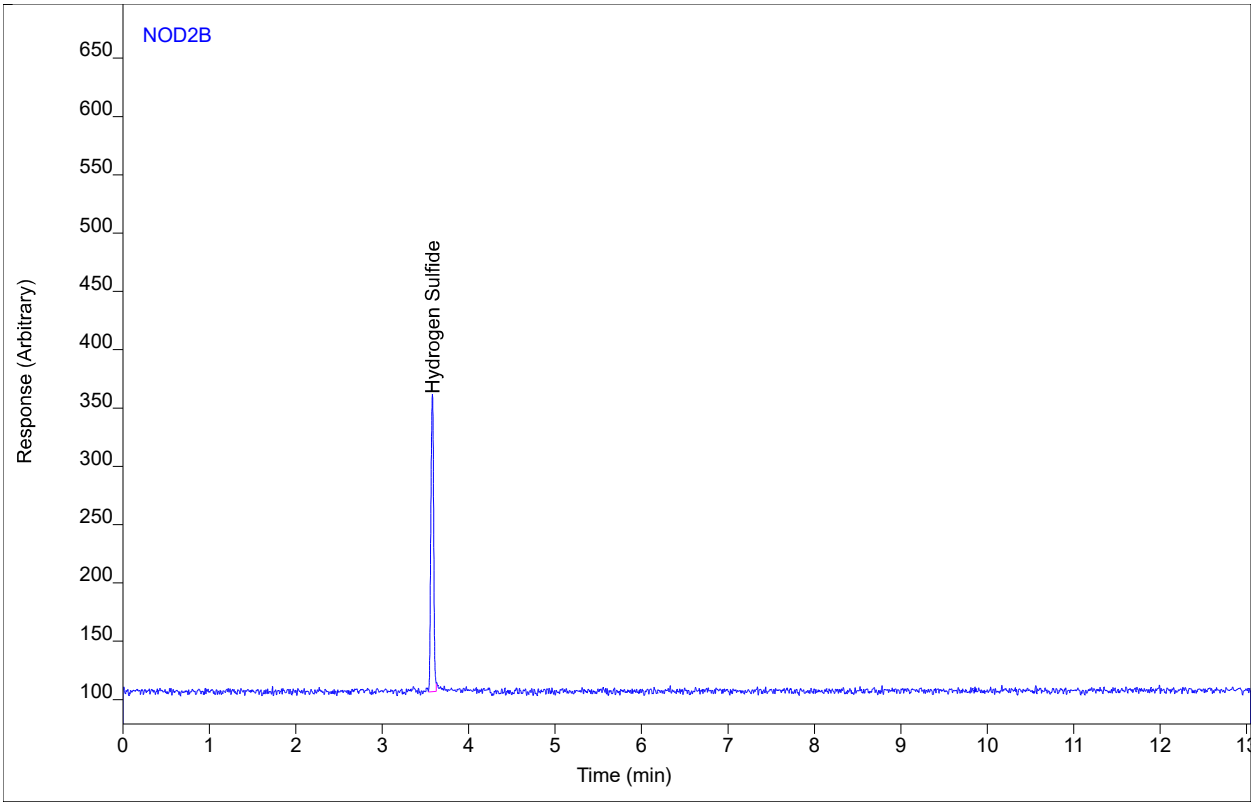

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Hydrogen Sulfide | BV | 3.58 | 614.260 | 267.858 | 1.10958 | 1 | 1.10958 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p355 #HS3 |
| Sequence Name | DPGC5-041023 ver.6 |
| Inj Data File | 001B1002.D |
| File Location | 3 - Houston Lab/Data/GC5/2023_Q2 |
| Injection Date | 4/11/2023 3:03 PM |
| File Modified | 4/19/2023 2:23 PM |
| Instrument | DP-GC05 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 1 |
| Injection Volume | 1000 |
| Injection | 2 of 4 |
| Acquisition Method | DPGC5-ACQ-072622.M |
| Analysis Method | DPGC5-R_040423.M |
| Method Modified | 4/19/2023 2:08 PM |
| Printed | 4/19/2023 2:35 PM |



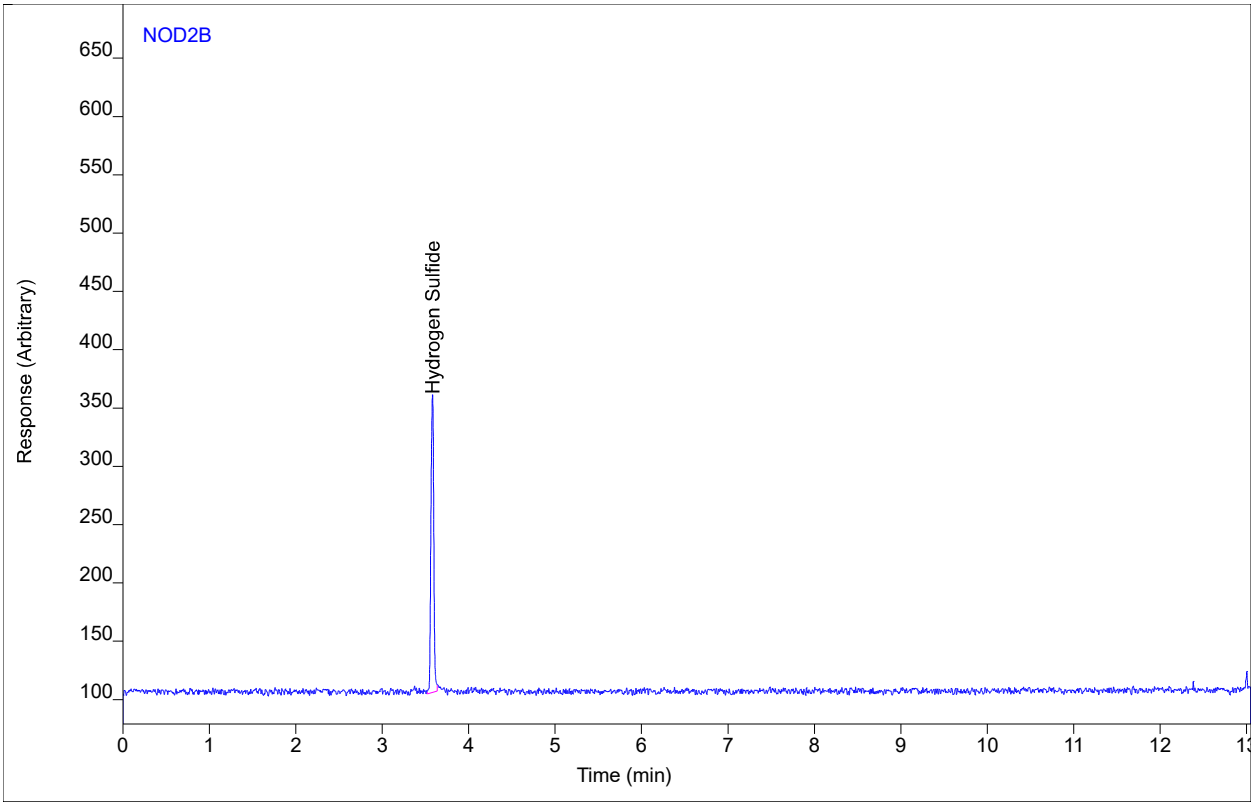

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Hydrogen Sulfide | BV | 3.58 | 573.059 | 255.481 | 1.03515 | 1 | 1.03515 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p355 #HS3 |
| Sequence Name | DPGC5-041023 ver.6 |
| Inj Data File | 001B1003.D |
| File Location | 3 - Houston Lab/Data/GC5/2023_Q2 |
| Injection Date | 4/11/2023 3:24 PM |
| File Modified | 4/19/2023 2:23 PM |
| Instrument | DP-GC05 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 1 |
| Injection Volume | 1000 |
| Injection | 3 of 4 |
| Acquisition Method | DPGC5-ACQ-072622.M |
| Analysis Method | DPGC5-R_040423.M |
| Method Modified | 4/19/2023 2:08 PM |
| Printed | 4/19/2023 2:35 PM |



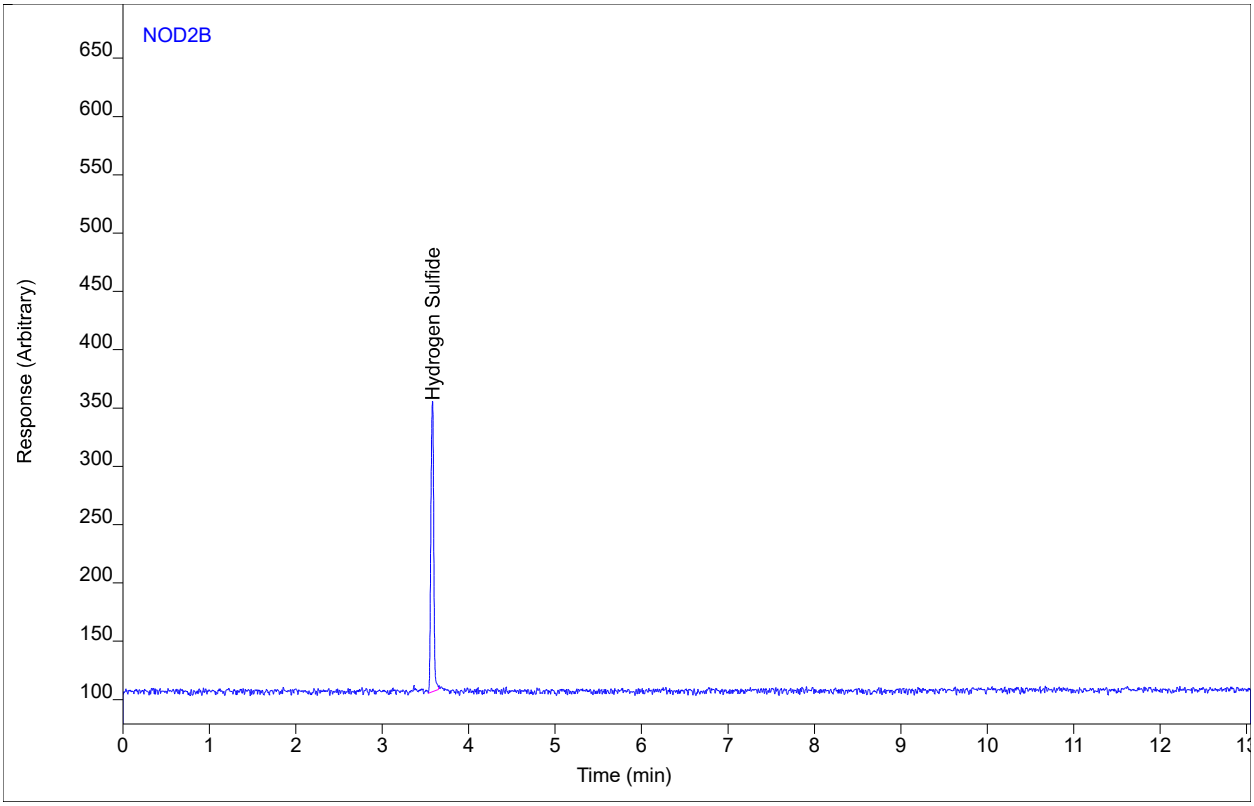

| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Hydrogen Sulfide | VV | 3.58 | 583.706 | 255.788 | 1.05439 | 1 | 1.05439 | ppm |

# Chromatogram Report

# Enthalpy Analytical

| | |
|---|---|
| Sample Name | Prep1p355 #HS3 |
| Sequence Name | DPGC5-041023 ver.6 |
| Inj Data File | 001B1004.D |
| File Location | 3 - Houston Lab/Data/GC5/2023_Q2 |
| Injection Date | 4/11/2023 3:44 PM |
| File Modified | 4/19/2023 2:23 PM |
| Instrument | DP-GC05 |
| Operator | Kristopher Beverly |

| | |
|---|---|
| Sample Type | Sample |
| Vial Number | Vial 1 |
| Injection Volume | 1000 |
| Injection | 4 of 4 |
| Acquisition Method | DPGC5-ACQ-072622.M |
| Analysis Method | DPGC5-R_040423.M |
| Method Modified | 4/19/2023 2:08 PM |
| Printed | 4/19/2023 2:35 PM |




| Compound | Type | RT | Area | Height | Amount | DF | SampAmt | Unit |
|---|---|---|---|---|---|---|---|---|
| Hydrogen Sulfide | BV | 3.58 | 571.522 | 249.711 | 1.03238 | 1 | 1.03238 | ppm |

# Enthalpy Durham Report

# Enthalpy Analytical, LLC – Deer Park

931 Seaco Ct
Deer Park, TX 77536

## Baylor Football OP

Waco, TX
Client Project # L-10-1678

## Analytical Report (0323-166)

## *NIOSH Method 6016*

Ammonia


**Enthalpy Analytical, LLC**

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
800-1 Capitola Drive Durham, NC 27713-4385

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF). This report shall not be reproduced except in full without approval of the laboratory. This will provide assurance that parts of a report are not taken out of context.

Kristen H Bounds

Report Issued: 04/21/2023

ENTHALPY ANALYTICAL

# Summary of Results

# Enthalpy Analytical

Company: Enthalpy - Deer Park

Job No.: 0323-166 - NIOSH Method 6016-Type

Client No.: L-10-1678 Site: Baylor Football OP-Waco, TX

## Summary - Ammonia

| Sample ID | Catch Weight (ug) |
|---|---|
| SB-1 | 21.6 |
| SB-2 | 1.71 |

# Results

## Enthalpy Analytical

Company: Enthalpy - Deer Park

Job No.: 0323-166 - NIOSH Method 6016-Type

Client No.: L-10-1678 Site: Baylor Football OP-Waco, TX

### Ammonia

| Client's Sample Name | Filename #1 | Filename #2 | MDL | Curve Min | Curve Max | Ret Time (min) | Ret Time (min) | %dif RT | Conc #1 (ug/mL) | Conc #2 (ug/mL) | %dif conc | Avg Conc (ug/mL) | DF | Liquid Vol (mL) | Catch Weight (ug) | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-1 | 026 | 027 | 0.0151 | 0.151 | 19.9 | 7.44 | 7.41 | 0.2 | 2.19 | 2.13 | 1.3 | 2.16 | 1 | 10.0 | 21.6 | |
| SB-2 | 030 | 031 | 0.0151 | 0.151 | 19.9 | 7.27 | 7.31 | 0.3 | 0.164 | 0.179 | 4.3 | 0.171 | 1 | 10.0 | 1.71 | |

# Enthalpy Analytical

Company: Enthalpy - Deer Park
Job No.: 0323-166 - NIOSH Method 6016-Type
Client No.: L-10-1678 Site: Baylor Football OP-Waco, TX

## QC Samples

| QC Type | QC Sample Name | | Ammonia |
|---|---|---|---|
| Spiked Blank Tube | 0323-166.LCS.NH3 | catch (ug) | 12.7 |
| | spiked: | spike (ug) | 15.0 |
| | HPLCPrep6457.Stock * 15uL | recovery | 84.8% |
| Blank Media | 0323-166.MB.NH3 | ug/mL | 0.0286 |

# Narrative Summary

# Enthalpy Analytical Narrative Summary

| | |
|---|---|
| Company<br>Job No.<br>Client ID. | Enthalpy - Deer Park<br>0323-166 NIOSH Method 6016<br>L-10-1678 Site: Baylor Football OP-Waco, TX |

| | |
|---|---|
| Custody | Alyssa Miller received the samples on 4/11/23 at 2.5 ºC after being relinquished by Enthalpy - Deer Park. The samples were received in good condition.<br><br>Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC. |

| | |
|---|---|
| Analysis | The samples were analyzed for ammonia using the general analytical procedures in NIOSH Method 6016, using the Ion Chromatograph “Mel-1.”<br><br>Each sample train consisted of one silica gel (Cat# 226-10-06) sample tube. The sample tubes were desorbed whole using 10 mL of water and shaken. The tubes were desorbed on 4/12/23. |

| | |
|---|---|
| Calibration | The calibration curves are located in the back of this report. For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound. |

| | |
|---|---|
| Chrom. Conditions | A copy of acquisition method (Mel-1 NH3 ENV 8mmMSA) may be made available upon request. |

| | |
|---|---|
| QC Notes | The analyses of the laboratory reagent blank and laboratory media blank contained ammonia at a concentrations above the MDL value, but below the LOQ value.<br><br>A Laboratory Control Sample (LCS) was prepared and analyzed with the samples and yielded a recovery value of 84.8%.<br><br>A second source standard was analyzed as a laboratory control sample and yielded a recovery value of 96.6% |

| | |
|---|---|
| Reporting Notes | The results presented in this report are representative of the samples as provided to the laboratory. |

# General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, LLC data reports, unless specifically noted otherwise.

- Any analysis which refers to the method as ***"Type"*** represents a planned deviation from the reference method. For instance a Hydrogen Sulfide assay from a Tedlar bag would be labeled as "EPA Method 16-Type" because Tedlar bags are not mentioned as one of the collection options in EPA Method 16.
- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.
- The letter ***J*** in the Qualifier or Flag column in the results indicates that the value is between the MDL and the LOQ. The laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter ***E*** in the Qualifier or Flag column indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- Sample results are presented 'as measured' for single injection methodologies, or an average value if multiple injections are made. If all injections are below the MDL, the sample is considered non-detect and the ND value is presented. If one, but not all, are below the MDL, the MDL value is used for any injections that are below the MDL. For example, if the MDL is 0.500 and LOQ is 1.00, and the instrument measures 0.355, 0.620, and 0.442 - the result reported is the average of 0.500, 0.620, and 0.500 - - - i.e. 0.540 with a J flag.
- When a spike recovery (Bag Spike, Collocated Spike Train, or liquid matrix spike) is being calculated, the native (unspiked) sample result is used in the calculations, as long as the value is above the MDL. If a sample is ND, then 0 is used as the native amount (not the MDL value).
- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. The MS analysis indicates what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).

# General Reporting Notes
**(continued)**

- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as a MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.

- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).

- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.

- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two spikes are retained as LCSs. The LCSs are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection, and/or sample transport.

- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits. In the case of small numbers, generally 3 significant figures are presented, but still only 2 should be used with confidence. Many neat materials are only certified to 3 digits, and as the mathematically correct final result is always 1 digit less than all its pre-cursors - 2 significant figures are what are most defensible.

- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations on sample chromatograms, if provided in the report. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name on the chromatogram.

# Sample Custody

0423-940

# Chain of Custody Record

ENTHALPY ANALYTICAL

Page 1 of 1

**Special Handling:**
- ☑ Standard Turn Around Time (10 business days)
- ☐ Rush Turn Around Time -- Date Needed: _____
- All TATs Subject to Approval by Enthalpy Analytical, Inc.
- All Bag/Can Samples Disposed of 1 Month from Receipt.
- All Other Samples Disposed of 4 Months from Receipt.

Client Name: Hydrex
Project Manager: Trae Scarborough
Report To: Trae Scarborough

Project Number: L-10-12678
Site Name: Baylor Football Op. Center
Location: Waco Tx

PO#: ~~~~
Telephone#: 936-568-9451
Email: tscarborough@hydrex-inc.

For spiked or duplicate samples: please provide sample volumes for recovery calculations.
For Particulates: please provide tare weights and/or condensed water volumes.

Special Instructions:

A=Air 1=H2SO4 2=NaOH W=Water O=Other
X=XAD C=Charcoal SG=Silica Gel
G=Grab C=Composite Q=Quality Control O=Other

| | Sample ID | Date | Time | Sample Volume | Type | Matrix | # of VOA Vials | # of Glass | # of Plastic | # of Bags | # of Canisters | # of Tubes | # Other | TO-14A - std list | TO-14A - CH4 | ASTM D1946 - CO | **ASTM D5504 | NIOSH 6016 - NH3 | | | | Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~~SB-1-T1~~ | ~~4/5/23~~ | ~~10:12-10:42~~ | ~~NA~~ | ~~G~~ | ~~A~~ | | | | | | 1 | | | | | | | | | | **ASTM D5504 - H2S, Mercaptans |
| 002 | SB-2-T2 | 4/5/23 | 12:43-2:13 | N/A | G | A | | | | | | 1 | | | | | | X | | | | Tube # 9653012190 |
| 001 | SB-1-T1 | 4/5/23 | 10:12-10:42 | NA | G | A | | | | | | 1 | | | | | | X | | | | Tube # 9653011193 |
| | 2.5°C Rayflex 2 good condition AMM3 04-11-23 | | | | | | | | | | | | | | | | | | | | | APR 10 '23 AM 9:50 |
| | | | | | | | | | | | | | | | | | | | | | | Ref quote: 20230303-01JLE |
| | | | | | | | | | | | | | | | | | | | | | | 20.6°C FLUKE 6W |

| Relinquished By: | Date: | Received By: | Date: | Time: | Sample Condition Upon Receipt: |
|---|---|---|---|---|---|
| Gordon O. Mezzo | 4/6/23 | Ela G | ~~4/6/23~~ 4/10/23 | 09:50 | ☑ Iced ☐ Ambient ☑ °C 20.6 FLUKE6W |
| | 4/10/23 | Alyssa M Mello | 04-11-23 | 1220 | ☒ Iced ☐ Ambient ☒ °C 2.5 |
| | | | | | ☐ Iced ☐ Ambient ☐ °C _____ |

931 Seaco Court • Deer Park, TX 77536 • (281) 984-7021 • www.enthalpy.com

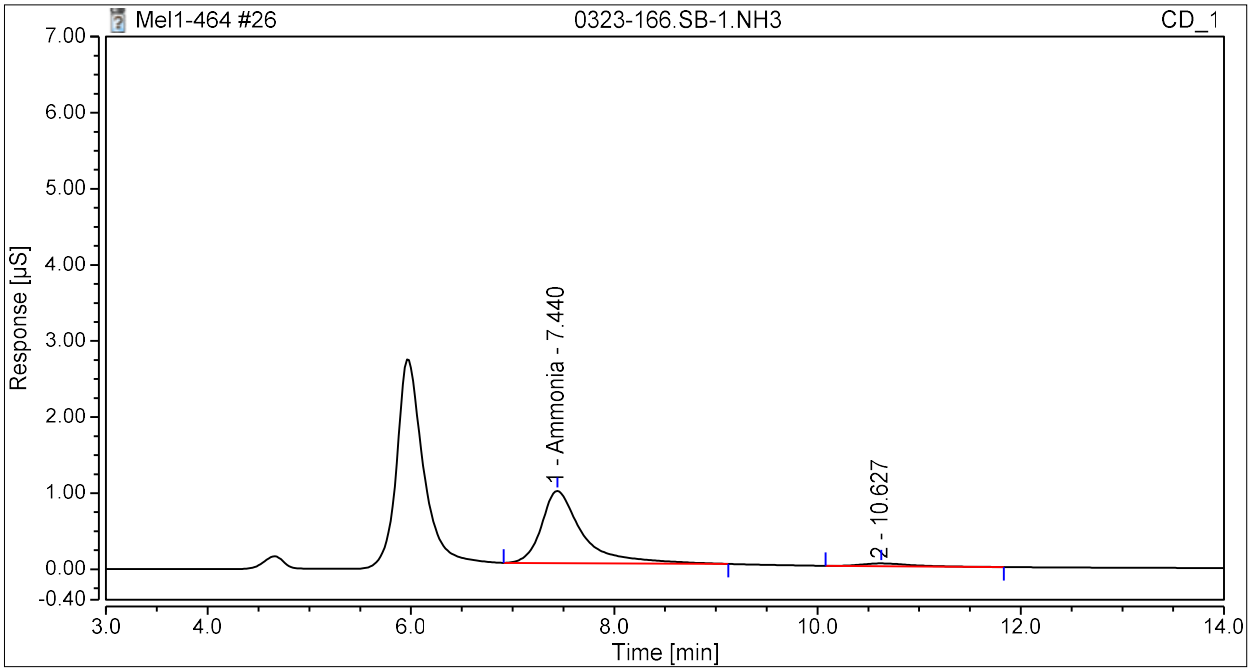
OEF 406 4/10/23

FORM
Chain of Custody
EAH-DR1001-001, Revision 2019-01, Effective 03/18/19

# Raw Data

## Peak Analysis Report

| | | | |
|---|---|---|---|
| *Sample Name:* | **0323-166.SB-1.NH3** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Unknown** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 22:07** | *Run Time:* | **19.50** |

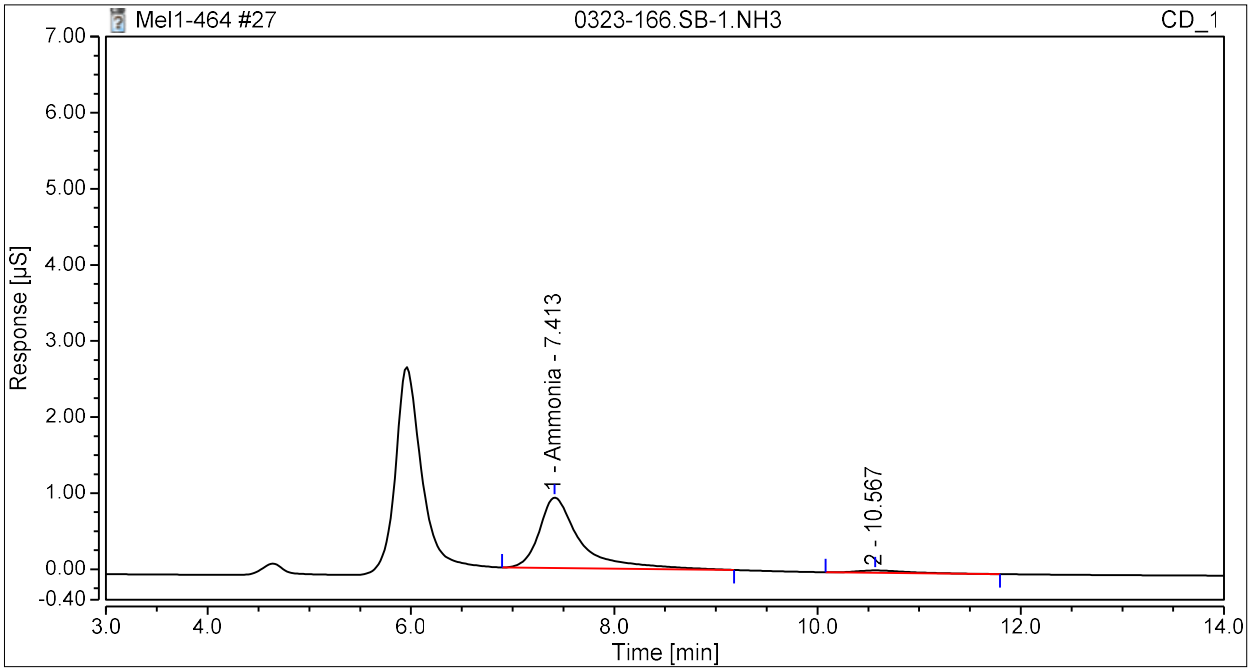



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.44 | Ammonia | 0.442 | 0.949 | 2.193 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **0323-166.SB-1.NH3** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Unknown** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 22:29** | *Run Time:* | **19.50** |

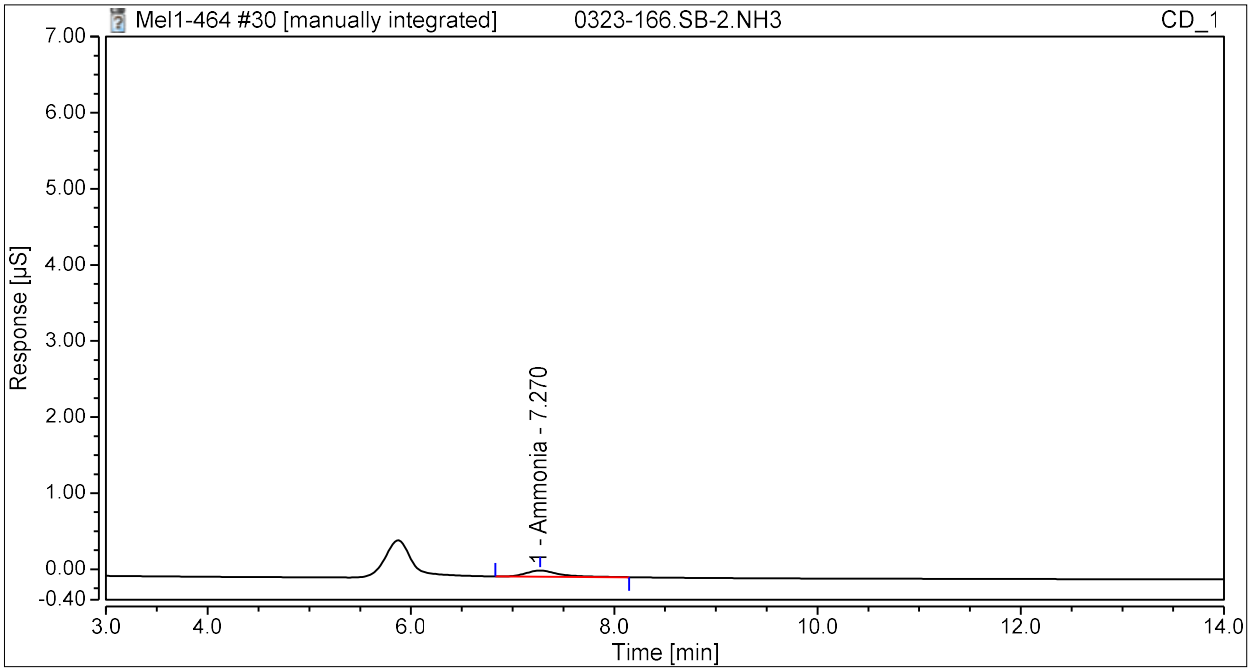



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.41 | Ammonia | 0.431 | 0.926 | 2.135 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **0323-166.SB-2.NH3** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Unknown** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 23:33** | *Run Time:* | **19.50** |

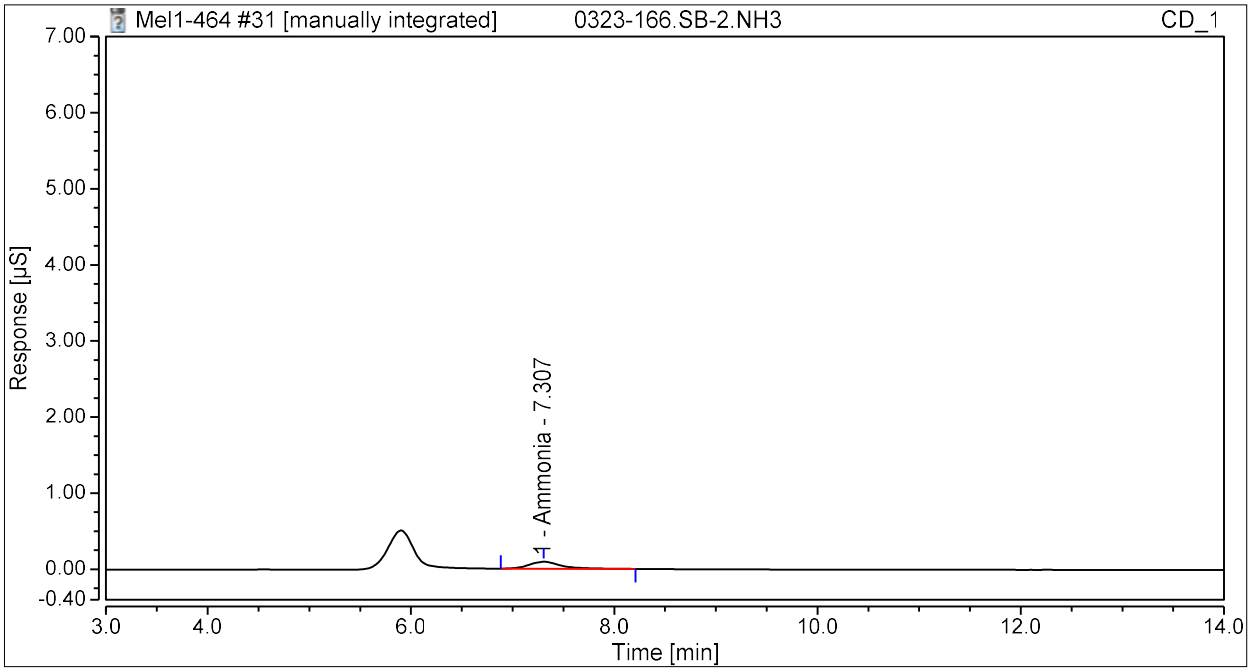



Analyst Comment: NI STW 4.18.23

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| TRUE | FALSE | 1 | 7.27 | Ammonia | 0.031 | 0.082 | 0.164 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **0323-166.SB-2.NH3** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Unknown** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 23:54** | *Run Time:* | **19.50** |

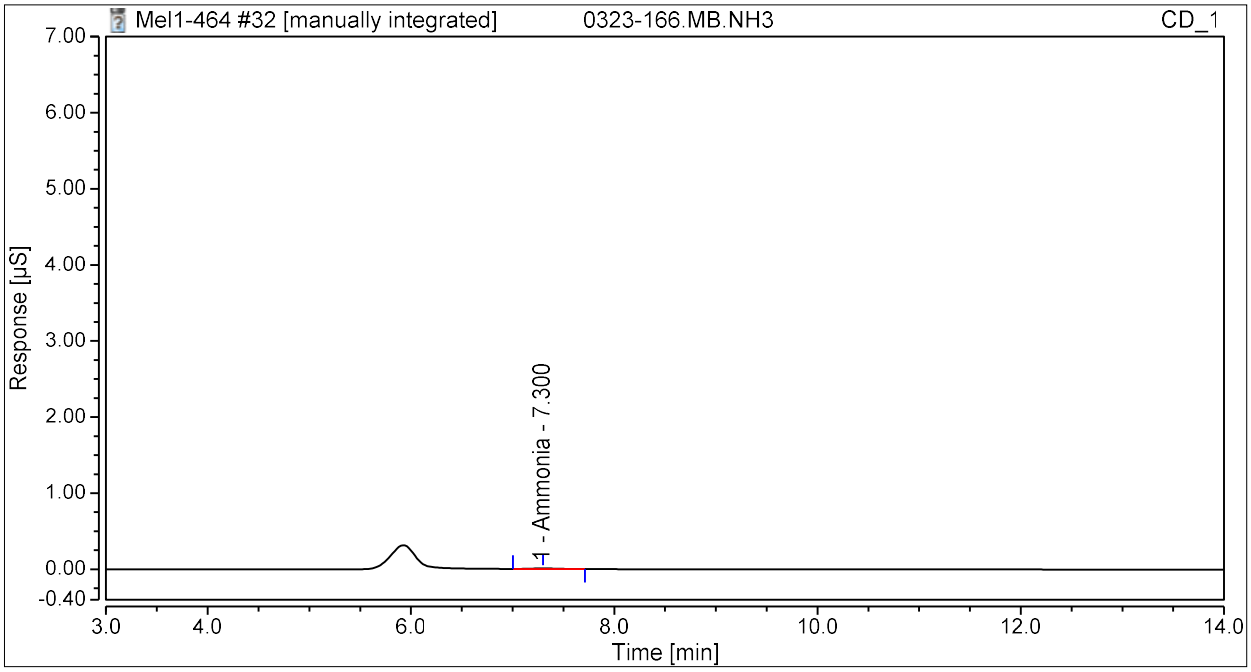



Analyst Comment: NI STW 4.18.23

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| TRUE | FALSE | 1 | 7.31 | Ammonia | 0.034 | 0.092 | 0.179 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **0323-166.MB.NH3** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Unknown** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **15-Apr-2023 / 00:16** | *Run Time:* | **19.50** |

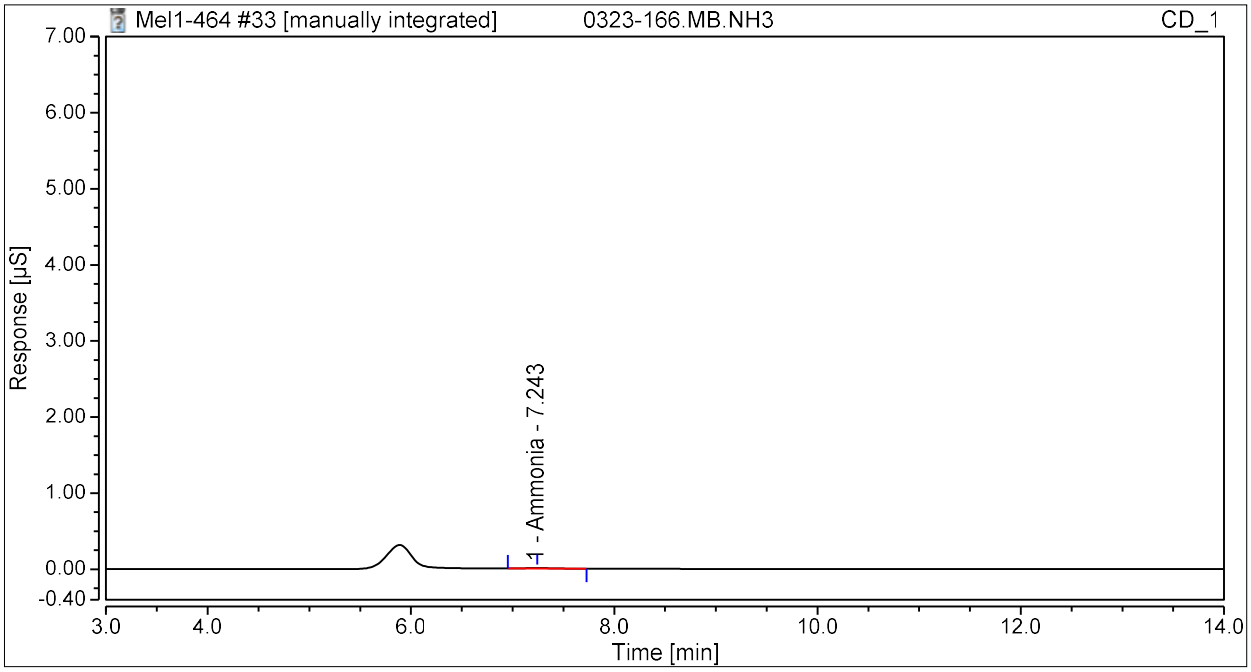



Analyst Comment: NI STW 4.18.23

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| TRUE | FALSE | 1 | 7.30 | Ammonia | 0.002 | 0.007 | 0.028 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **0323-166.MB.NH3** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Unknown** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **15-Apr-2023 / 00:37** | *Run Time:* | **19.50** |

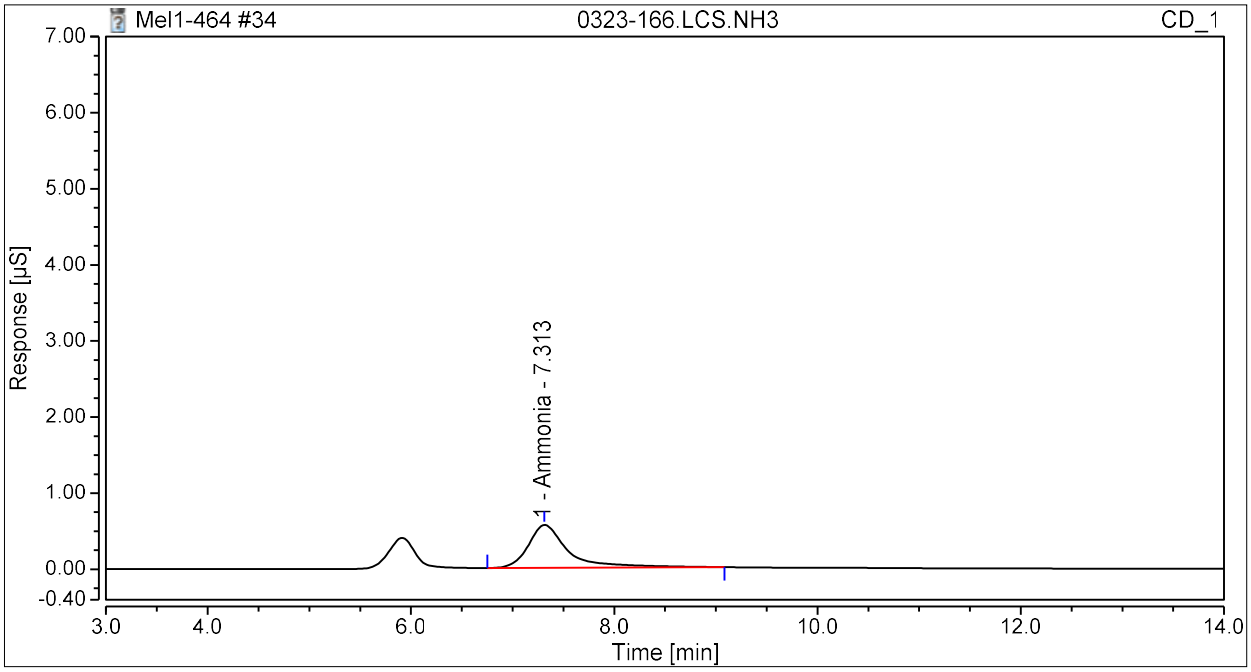



Analyst Comment: NI STW 4.18.23

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| TRUE | FALSE | 1 | 7.24 | Ammonia | 0.002 | 0.008 | 0.029 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **0323-166.LCS.NH3** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Unknown** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **15-Apr-2023 / 00:59** | *Run Time:* | **19.50** |

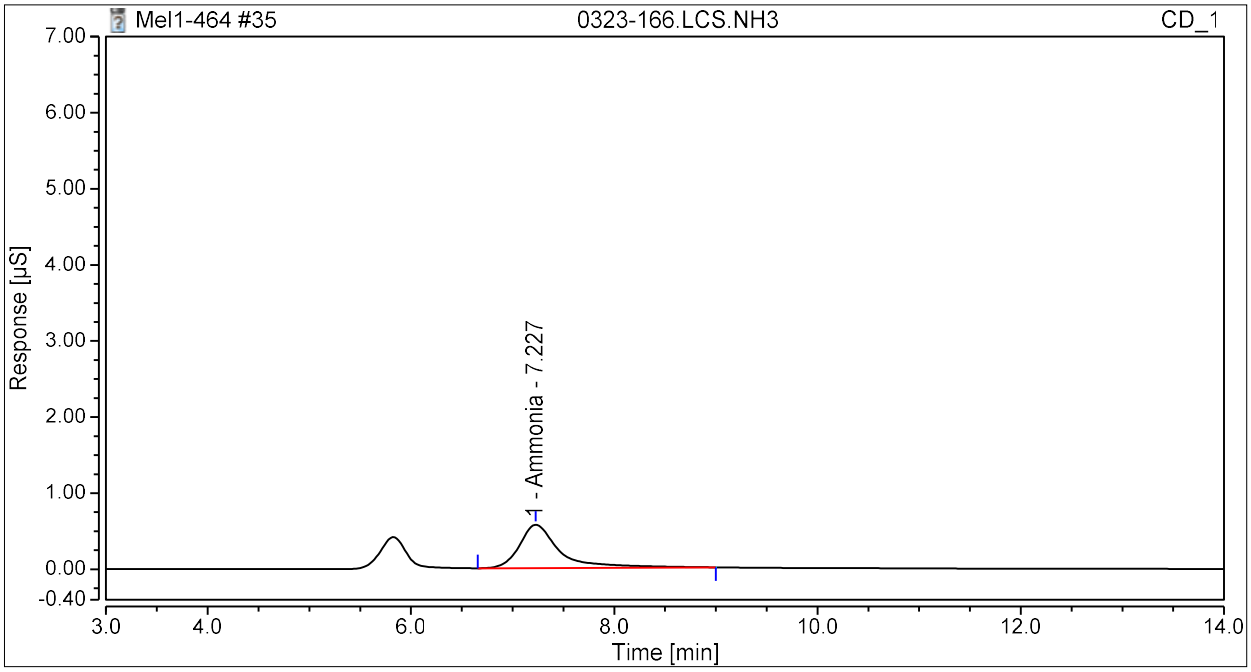



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.31 | Ammonia | 0.257 | 0.563 | 1.263 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **0323-166.LCS.NH3** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Unknown** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **15-Apr-2023 / 01:20** | *Run Time:* | **19.50** |

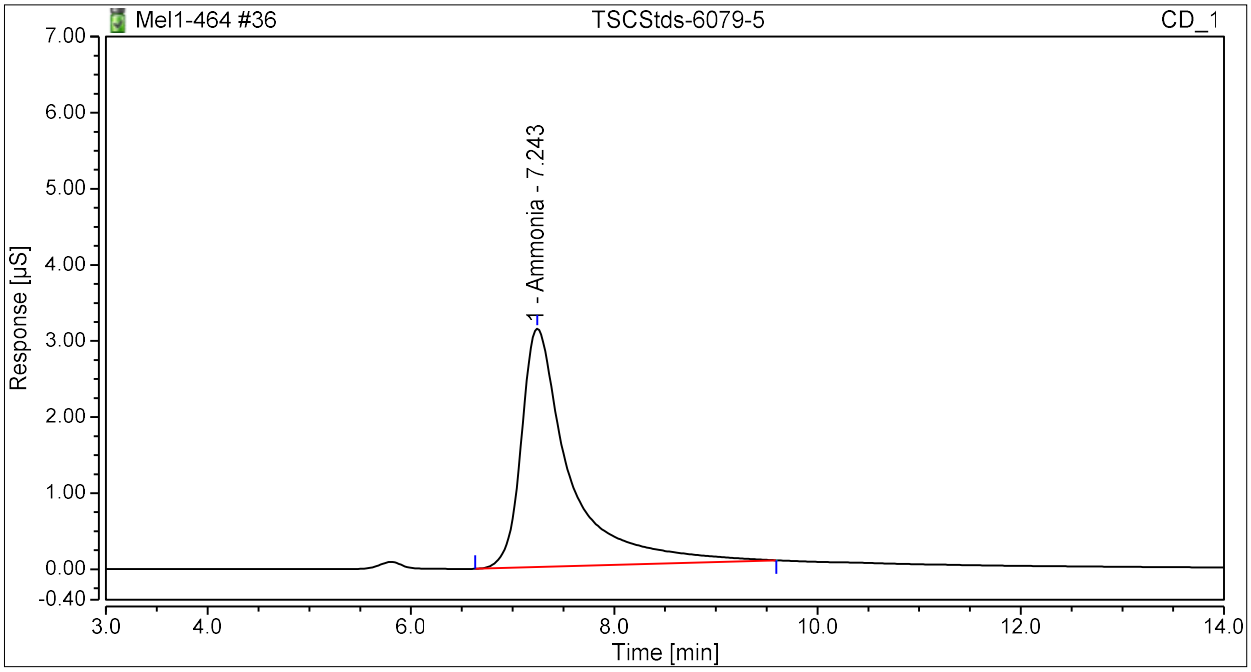



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area µS*min | Height µS | Amount µg/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.23 | Ammonia | 0.261 | 0.570 | 1.281 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-5** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Check Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **15-Apr-2023 / 01:41** | *Run Time:* | **19.50** |

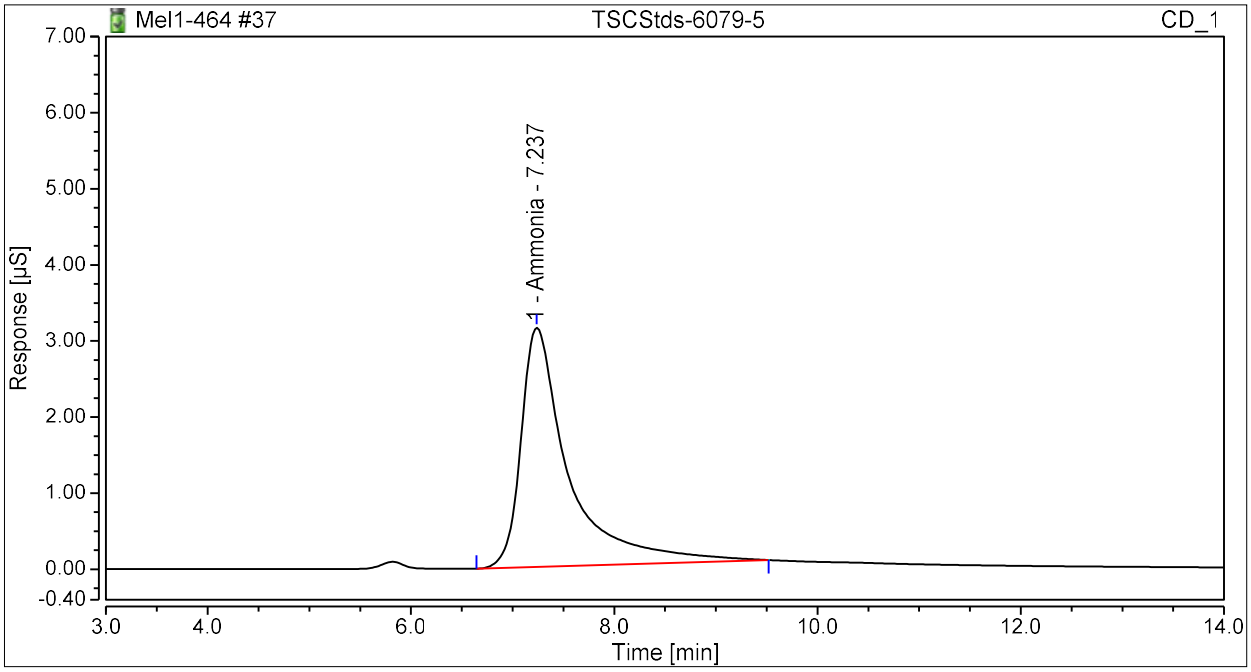



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area µS*min | Height µS | Amount µg/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.24 | Ammonia | 1.744 | 3.134 | 9.548 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-5** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Check Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **15-Apr-2023 / 02:03** | *Run Time:* | **19.50** |




Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area µS*min | Height µS | Amount µg/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.24 | Ammonia | 1.718 | 3.143 | 9.383 |

**Mel1 Calibration Table**

| No. | Injection Name | Inject Time | Pos. | Level | Ref.Amount | Cal. Point Status | Volume | Dil.Factor |
|---|---|---|---|---|---|---|---|---|
| | | | | | µg/mL<br>CD_1<br>Ammonia | CD_1<br>Ammonia | | |
| 8 | TSCStds-6079-3 | 14/Apr/2023 15:42 | RA3 | 03 | 3.0039 | Ok | 25.00 | 1.0000 |
| 9 | TSCStds-6079-3 | 14/Apr/2023 16:04 | RA3 | 03 | 3.0039 | Ok | 25.00 | 1.0000 |
| 10 | TSCStds-6079-1 | 14/Apr/2023 16:25 | RA1 | 01 | 0.1508 | Ok | 25.00 | 1.0000 |
| 11 | TSCStds-6079-1 | 14/Apr/2023 16:46 | RA1 | 01 | 0.1508 | Ok | 25.00 | 1.0000 |
| 12 | TSCStds-6079-2 | 14/Apr/2023 17:08 | RA2 | 02 | 1.0086 | Ok | 25.00 | 1.0000 |
| 13 | TSCStds-6079-2 | 14/Apr/2023 17:29 | RA2 | 02 | 1.0086 | Ok | 25.00 | 1.0000 |
| 14 | TSCStds-6079-4 | 14/Apr/2023 17:51 | RA4 | 04 | 6.0006 | Ok | 25.00 | 1.0000 |
| 15 | TSCStds-6079-4 | 14/Apr/2023 18:12 | RA4 | 04 | 6.0006 | Ok | 25.00 | 1.0000 |
| 16 | TSCStds-6079-5 | 14/Apr/2023 18:33 | RA5 | 05 | 9.0010 | Ok | 25.00 | 1.0000 |
| 17 | TSCStds-6079-5 | 14/Apr/2023 18:55 | RA5 | 05 | 9.0010 | Ok | 25.00 | 1.0000 |
| 18 | TSCStds-6079-6 | 14/Apr/2023 19:16 | RA6 | 06 | 15.0011 | Ok | 25.00 | 1.0000 |
| 19 | TSCStds-6079-6 | 14/Apr/2023 19:38 | RA6 | 06 | 15.0011 | Ok | 25.00 | 1.0000 |
| 20 | TSCStds-6079-7 | 14/Apr/2023 19:59 | RA7 | 07 | 19.8737 | Ok | 25.00 | 1.0000 |
| 21 | TSCStds-6079-7 | 14/Apr/2023 20:20 | RA7 | 07 | 19.8737 | Ok | 25.00 | 1.0000 |

Detection Parameters

| Ret. Time min | Param. Name | Param. Value | Inj. Type | Channel |
|---|---|---|---|---|
| Always | Baseline Noise Auto Range | On | Any | All Channels |
| Always | Cobra Smoothing Width | Auto | Any | All Channels |
| Always | Consider Void Peak | Off | Any | All Channels |
| 0.000 | Detect Negative Peaks | On Don't Label | Any | All Channels |
| 0.000 | Fronting Sensitivity Factor | 0.002 [%] | Any | All Channels |
| 0.000 | Tailing Sensitivity Factor | 1.000 [%] | Any | All Channels |
| 0.000 | Minimum Signal To Noise Ratio | 3 | Any | All Channels |
| 0.000 | Baseline Type | Drop Perpendicular | Any | All Channels |
| 0.000 | Minimum Area | 0.0100 [Signal*min] | Any | All Channels |
| 0.000 | Inhibit Integration | On | Any | All Channels |
| 6.000 | Inhibit Integration | Off | Any | All Channels |
| 12.000 | Inhibit Integration | On | Any | All Channels |

**Mel1**

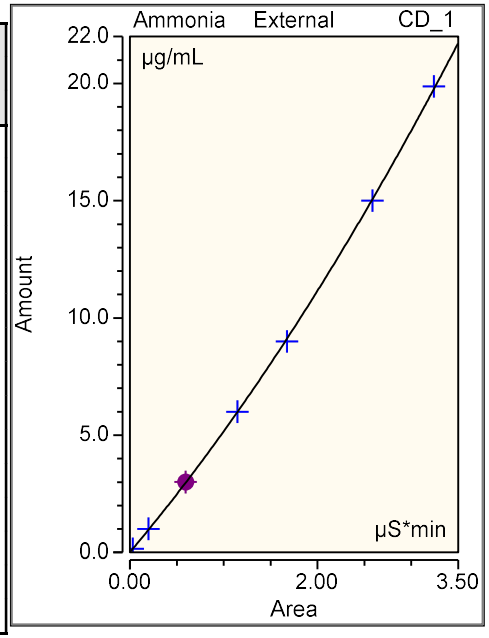
# Calibration Batch Report

| | | | |
|---|---|---|---|
| *Sequence:* | **Mel1-464** | *Injection Volume:* | **25.00** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 15:42** | *Run Time:* | **19.5** |

**Calibration Summary**

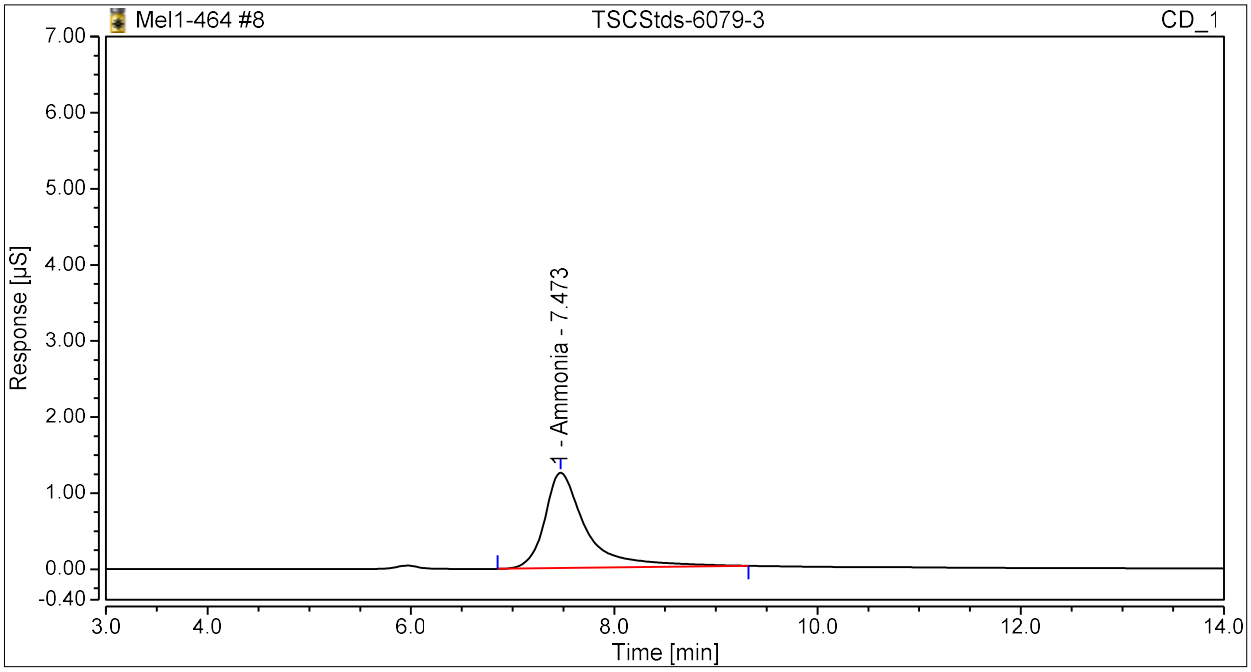
| Peak Name | Eval.Type | Cal.Type | Points | Offset (C0) | Slope (C1) | Curve (C2) | Coeff.Det. % |
|---|---|---|---|---|---|---|---|
| Ammonia | Area | Quad, WithOffset, 1/A, Avg | 7.000 | 0.018 | 4.731 | 0.419 | 99.990 |
| | | **AVERAGE:** | | 0.0179 | 4.7314 | 0.4194 | 99.9901 |

| Injection Name | Ret.Time min CD_1 | Area µS*min CD_1 | Height µS CD_1 | Amount µg/mL CD_1 |
|---|---|---|---|---|
| | Ammonia | Ammonia | Ammonia | Ammonia |
| TSCStds-6079-3 | 7.473 | 0.5948 | 1.256 | 2.980 |
| TSCStds-6079-3 | 7.457 | 0.5938 | 1.257 | 2.976 |
| TSCStds-6079-1 | 7.430 | 0.0294 | 0.081 | 0.157 |
| TSCStds-6079-1 | 7.467 | 0.0294 | 0.081 | 0.158 |
| TSCStds-6079-2 | 7.463 | 0.1962 | 0.460 | 0.962 |
| TSCStds-6079-2 | 7.473 | 0.1967 | 0.463 | 0.965 |
| TSCStds-6079-4 | 7.410 | 1.1438 | 2.220 | 5.978 |
| TSCStds-6079-4 | 7.417 | 1.1486 | 2.221 | 6.006 |
| TSCStds-6079-5 | 7.443 | 1.6704 | 3.101 | 9.092 |
| TSCStds-6079-5 | 7.450 | 1.6768 | 3.096 | 9.131 |
| TSCStds-6079-6 | 7.437 | 2.5914 | 4.617 | 15.095 |
| TSCStds-6079-6 | 7.440 | 2.5832 | 4.620 | 15.039 |
| TSCStds-6079-7 | 7.417 | 3.2372 | 5.765 | 19.730 |
| TSCStds-6079-7 | 7.457 | 3.2468 | 5.748 | 19.801 |



**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-3** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 15:42** | *Run Time:* | **19.50** |

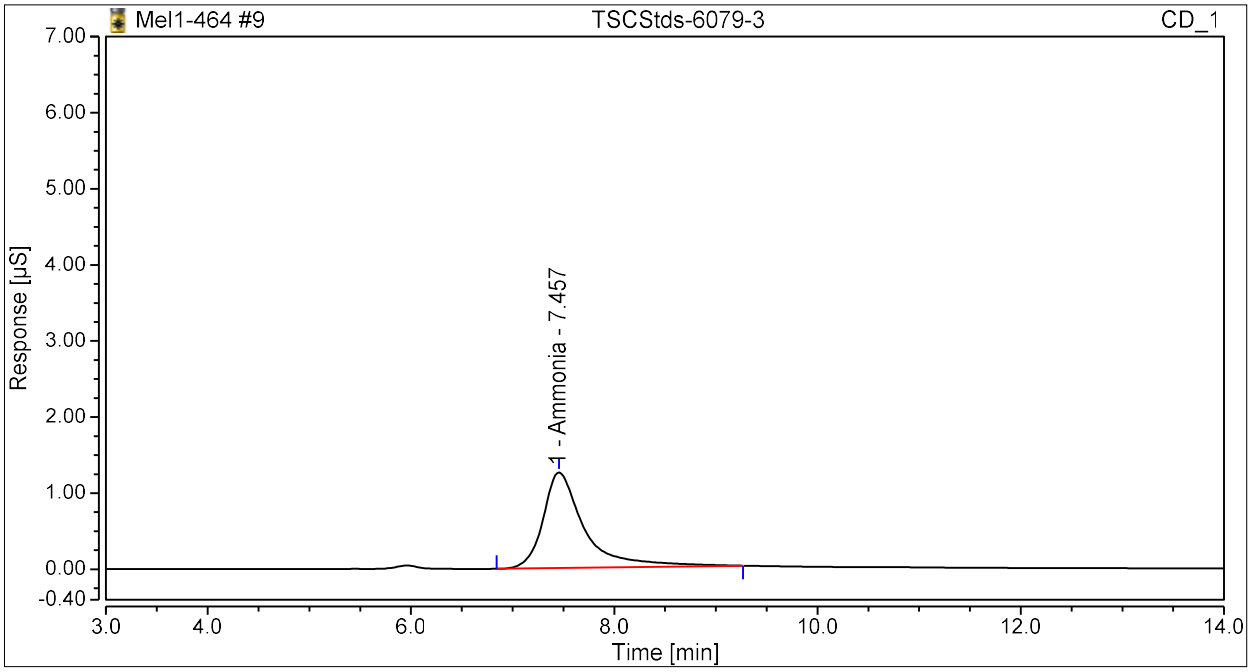



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.47 | Ammonia | 0.595 | 1.256 | 2.980 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-3** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 16:04** | *Run Time:* | **19.50** |

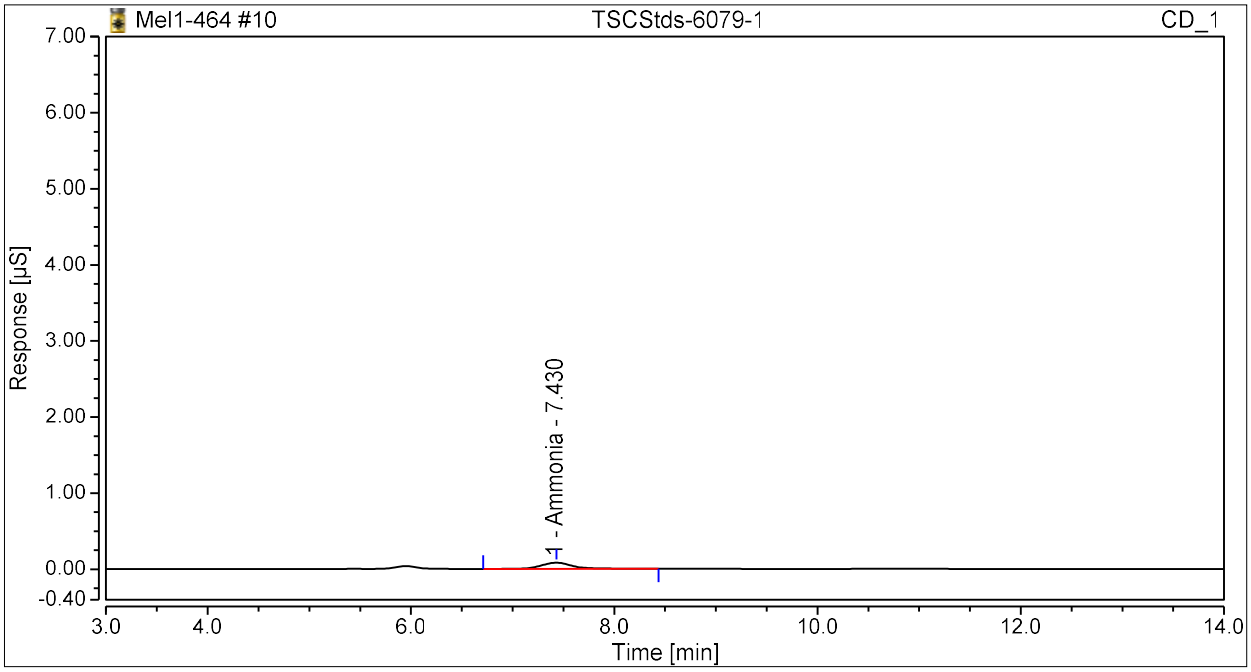



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.46 | Ammonia | 0.594 | 1.257 | 2.976 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-1** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 16:25** | *Run Time:* | **19.50** |

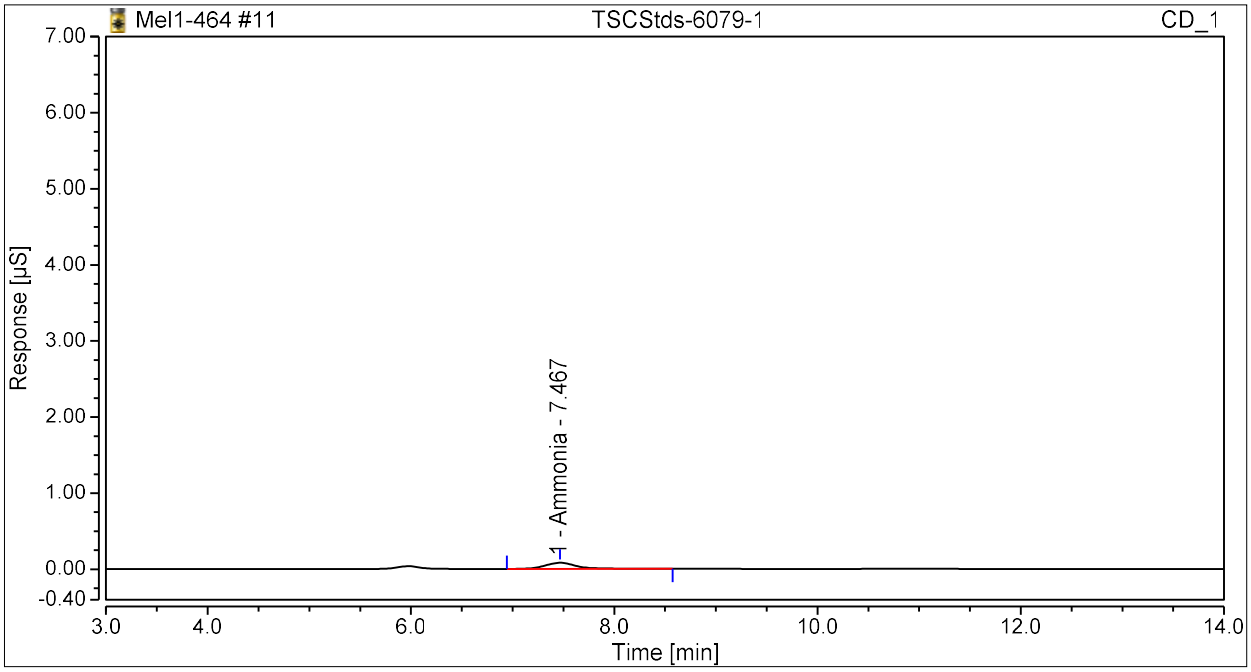



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area µS*min | Height µS | Amount µg/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.43 | Ammonia | 0.029 | 0.081 | 0.157 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-1** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 16:46** | *Run Time:* | **19.50** |

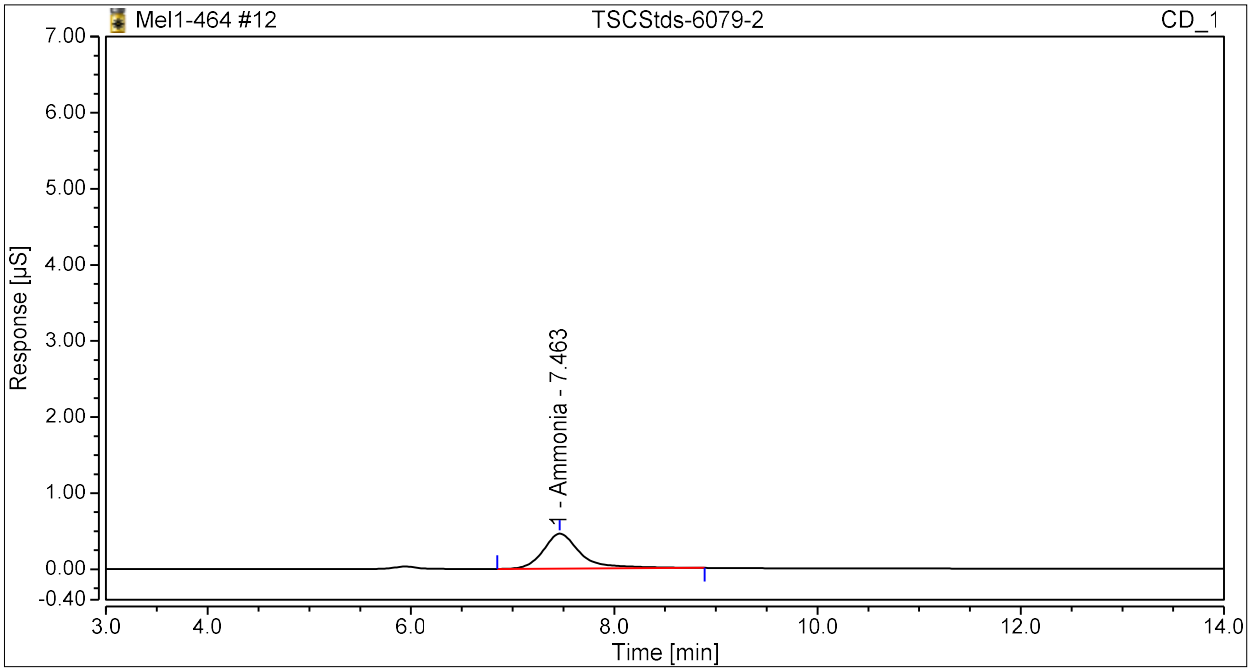



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area µS*min | Height µS | Amount µg/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.47 | Ammonia | 0.029 | 0.081 | 0.158 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-2** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 17:08** | *Run Time:* | **19.50** |

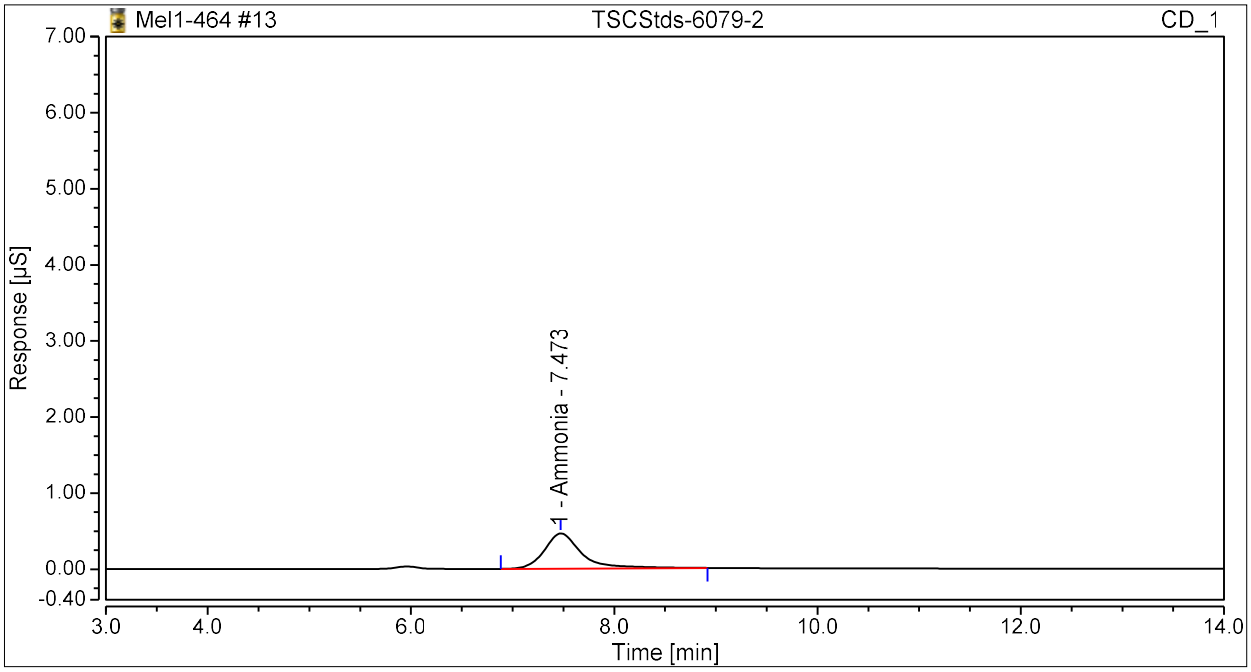



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.46 | Ammonia | 0.196 | 0.460 | 0.962 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-2** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 17:29** | *Run Time:* | **19.50** |

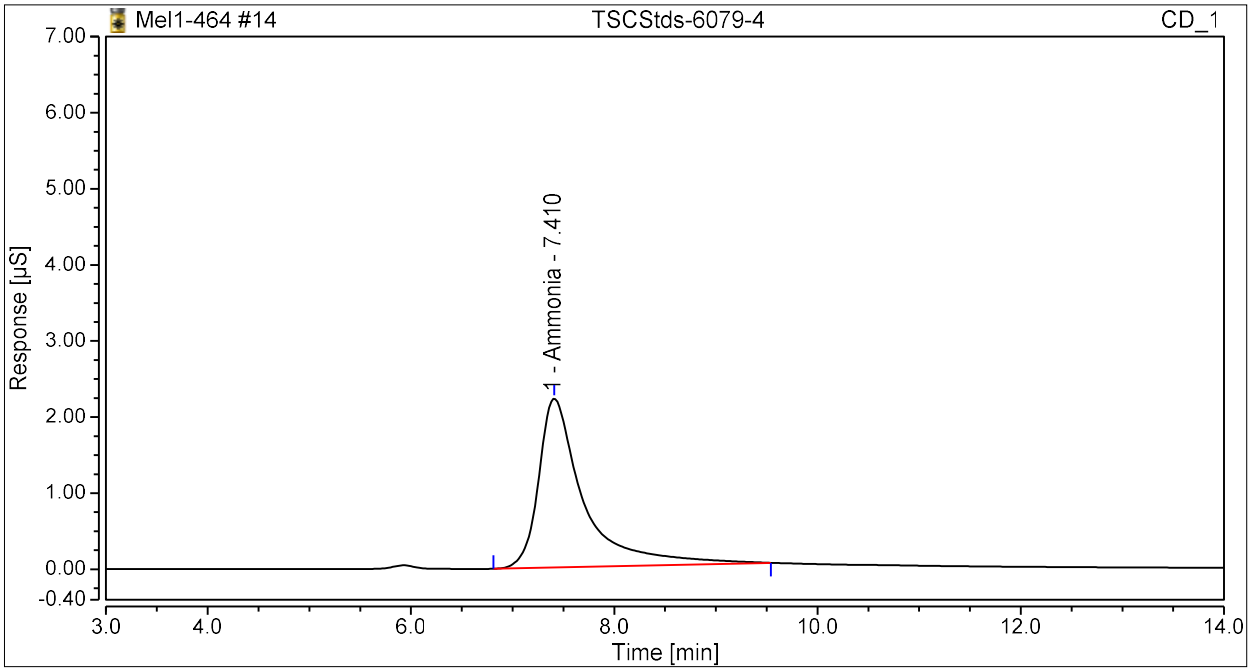



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.47 | Ammonia | 0.197 | 0.463 | 0.965 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-4** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 17:51** | *Run Time:* | **19.50** |

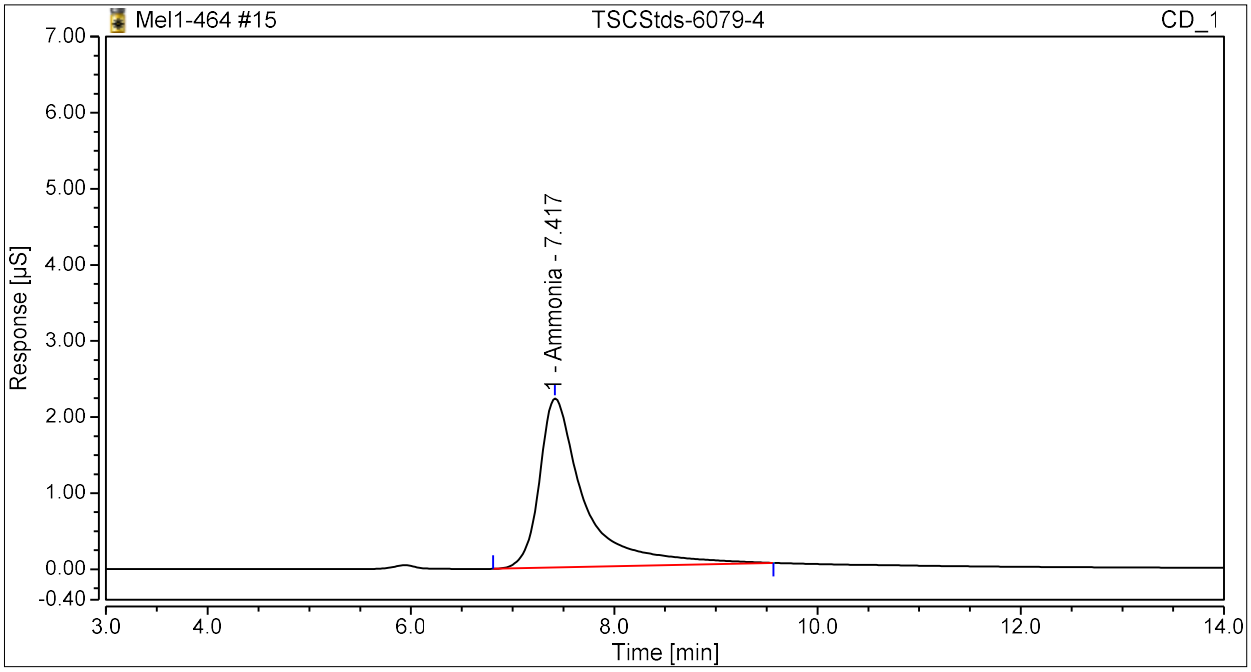



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.41 | Ammonia | 1.144 | 2.220 | 5.978 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-4** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 18:12** | *Run Time:* | **19.50** |

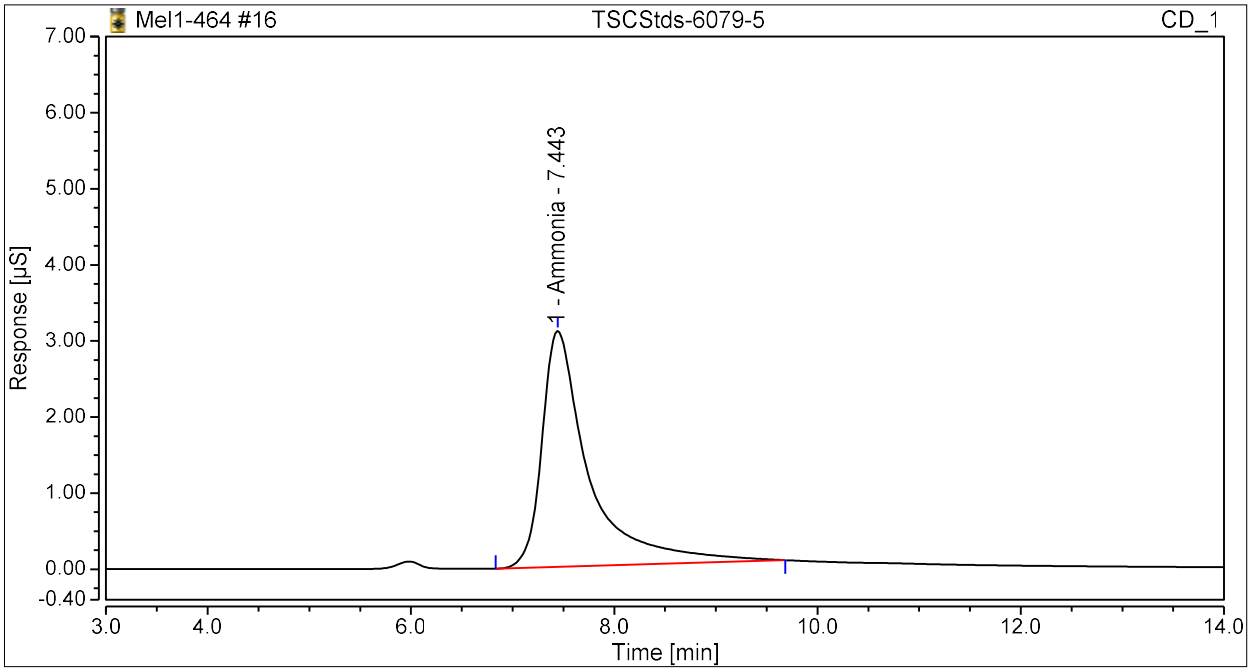



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.42 | Ammonia | 1.149 | 2.221 | 6.006 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-5** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 18:33** | *Run Time:* | **19.50** |

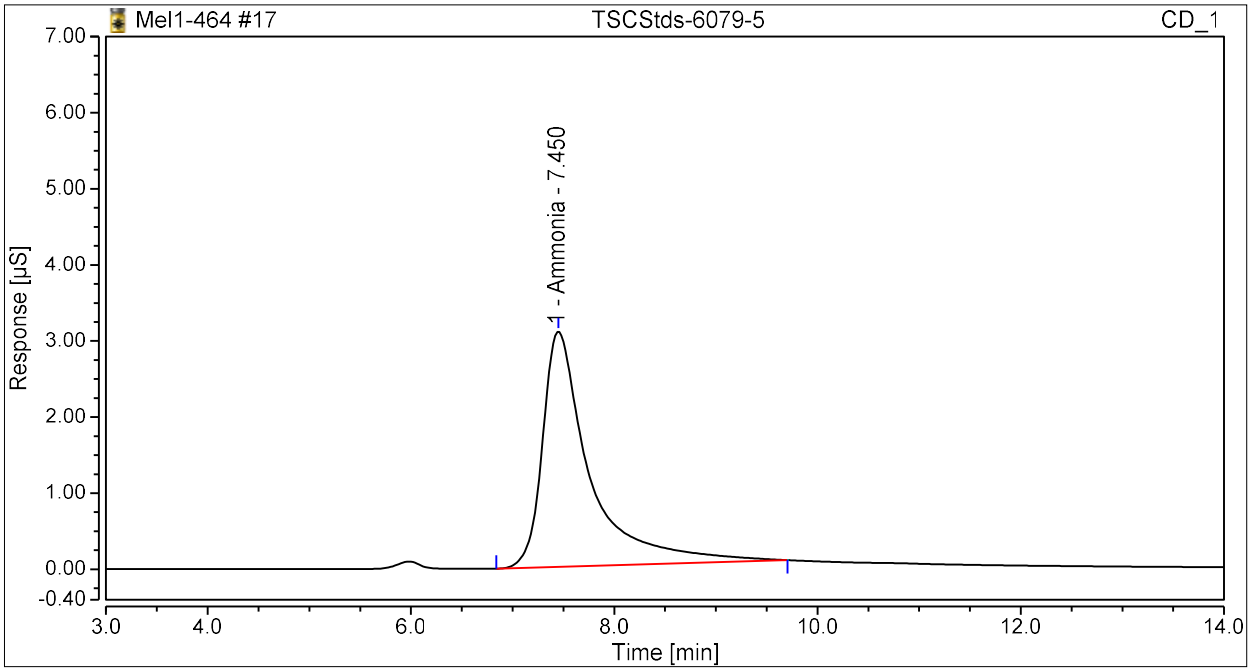



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area µS*min | Height µS | Amount µg/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.44 | Ammonia | 1.670 | 3.101 | 9.092 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-5** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 18:55** | *Run Time:* | **19.50** |

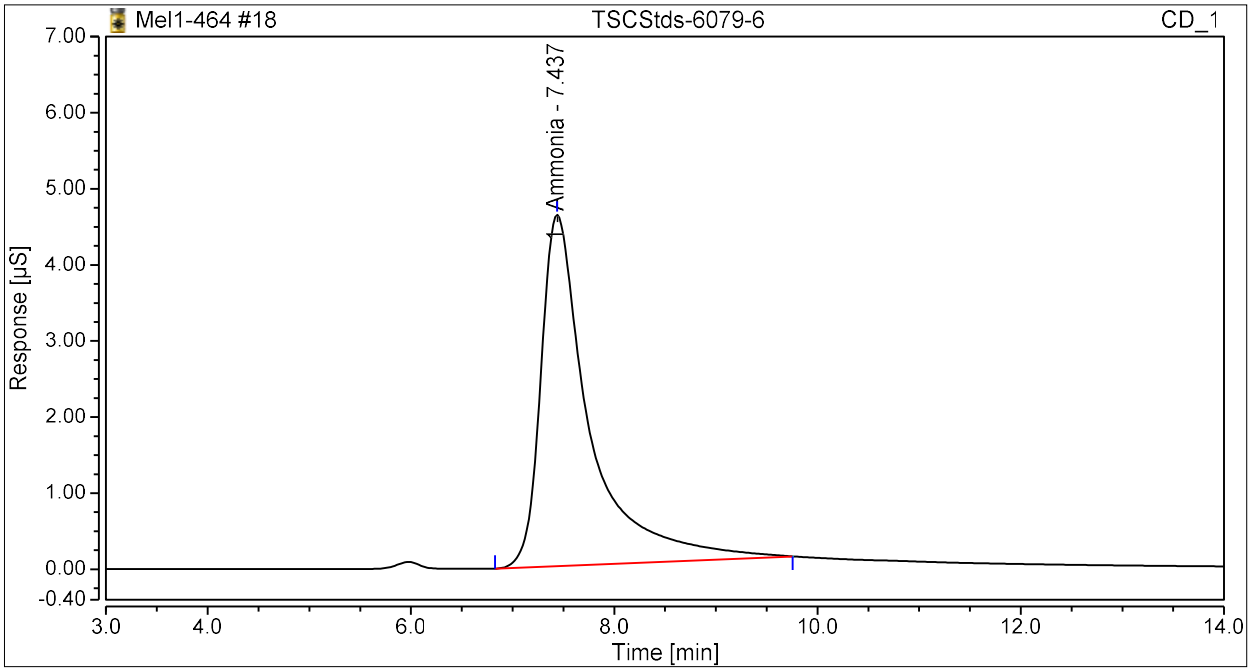



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area µS*min | Height µS | Amount µg/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.45 | Ammonia | 1.677 | 3.096 | 9.131 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-6** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 19:16** | *Run Time:* | **19.50** |

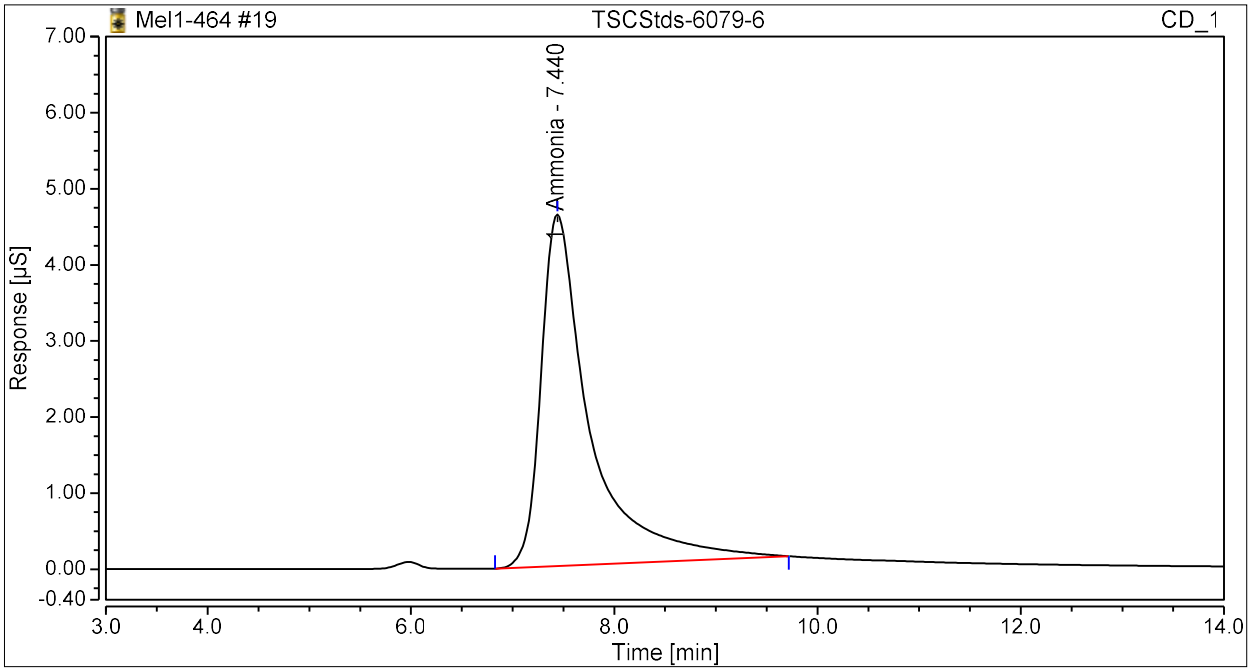



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.44 | Ammonia | 2.591 | 4.617 | 15.095 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-6** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 19:38** | *Run Time:* | **19.50** |

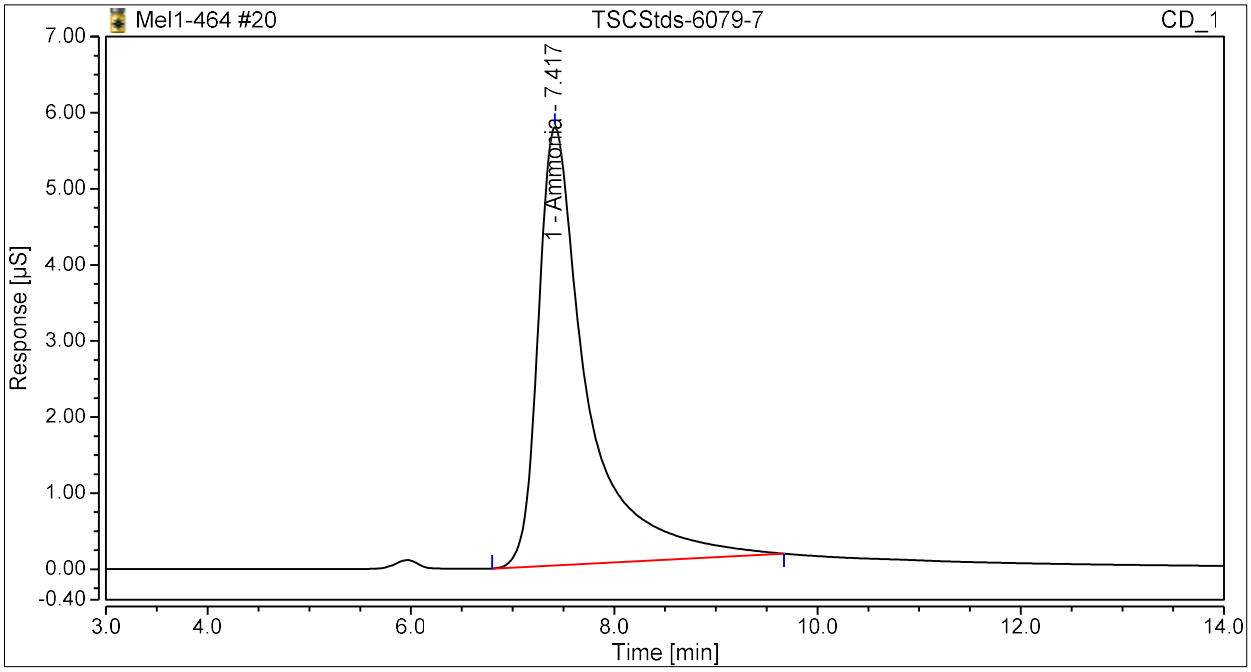



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.44 | Ammonia | 2.583 | 4.620 | 15.039 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-7** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 19:59** | *Run Time:* | **19.50** |

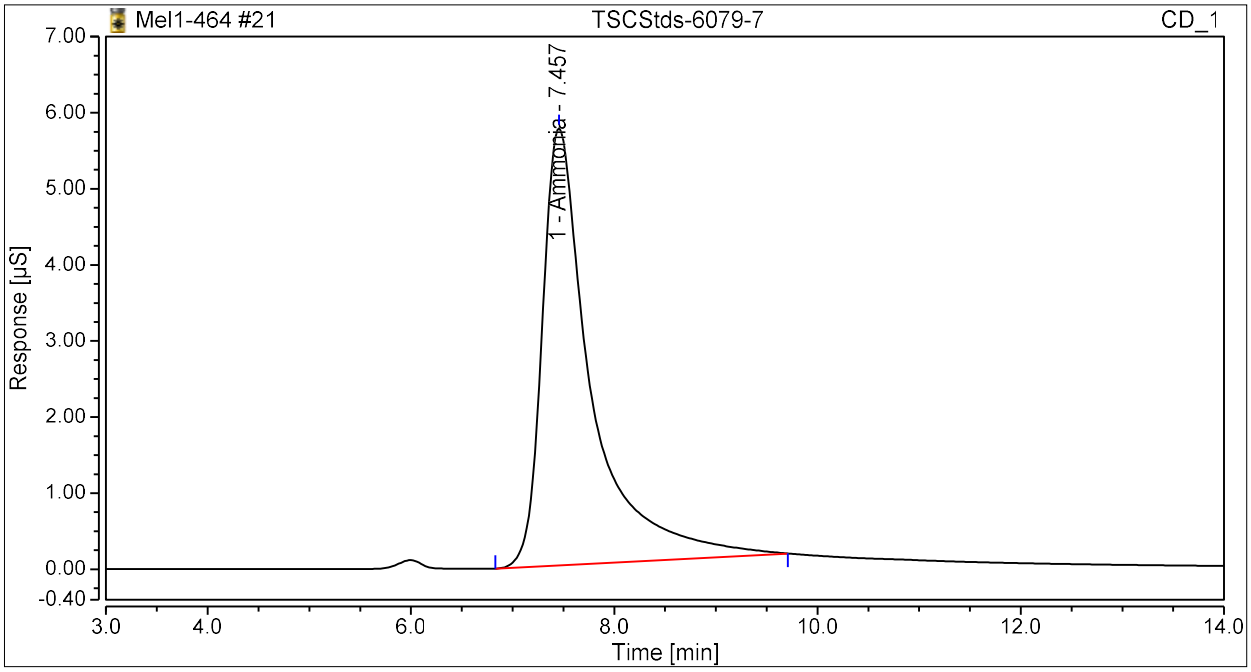



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.42 | Ammonia | 3.237 | 5.765 | 19.730 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-7** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Calibration Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 20:20** | *Run Time:* | **19.50** |

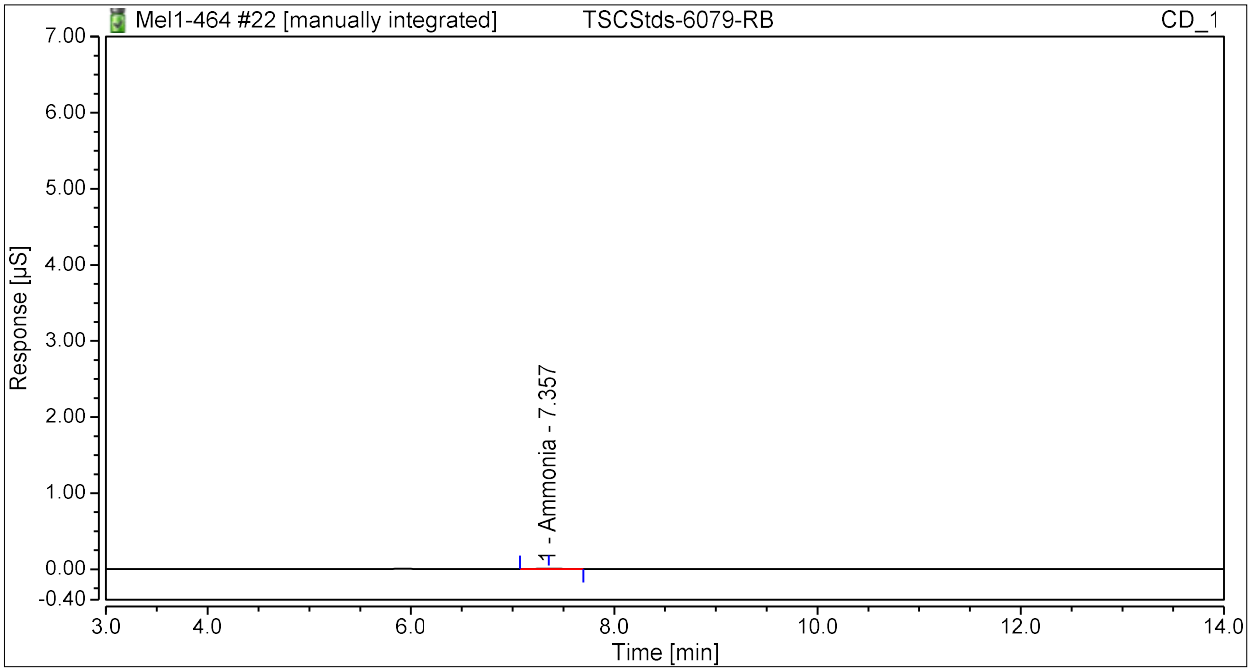



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.46 | Ammonia | 3.247 | 5.748 | 19.801 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-RB** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Check Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 20:42** | *Run Time:* | **19.50** |

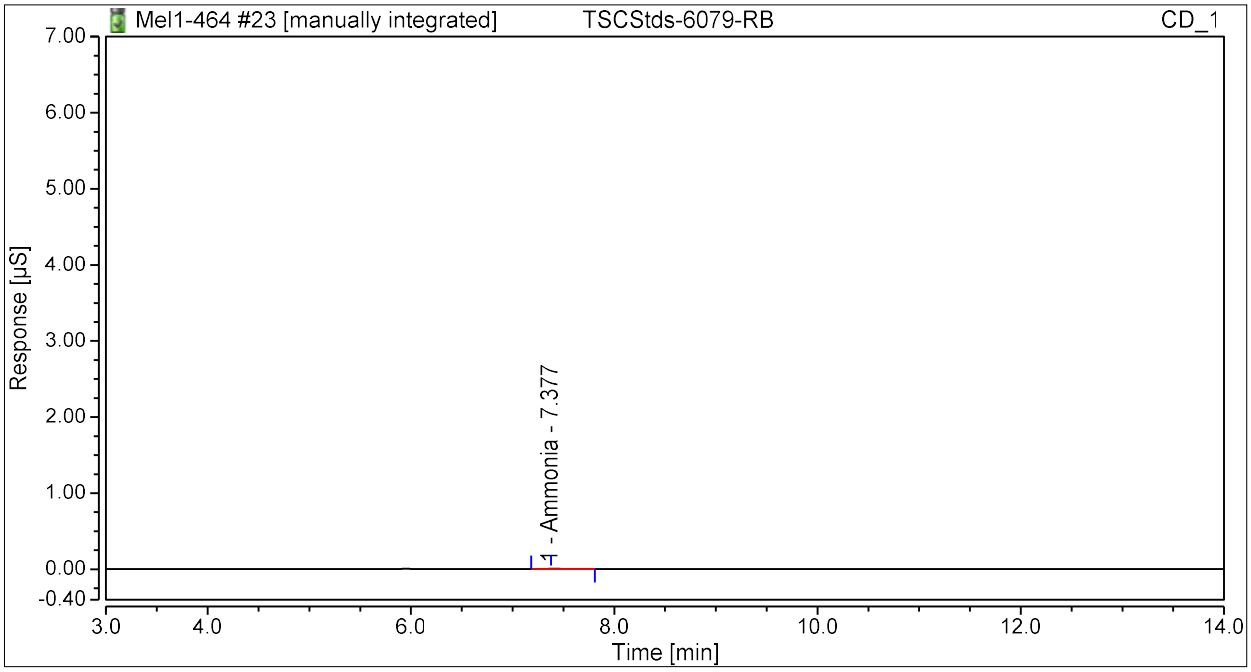



Analyst Comment: NI STW 4.18.23

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area µS*min | Height µS | Amount µg/mL |
|---|---|---|---|---|---|---|---|
| TRUE | FALSE | 1 | 7.36 | Ammonia | 0.001 | 0.002 | 0.021 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-RB** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Check Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 21:03** | *Run Time:* | **19.50** |

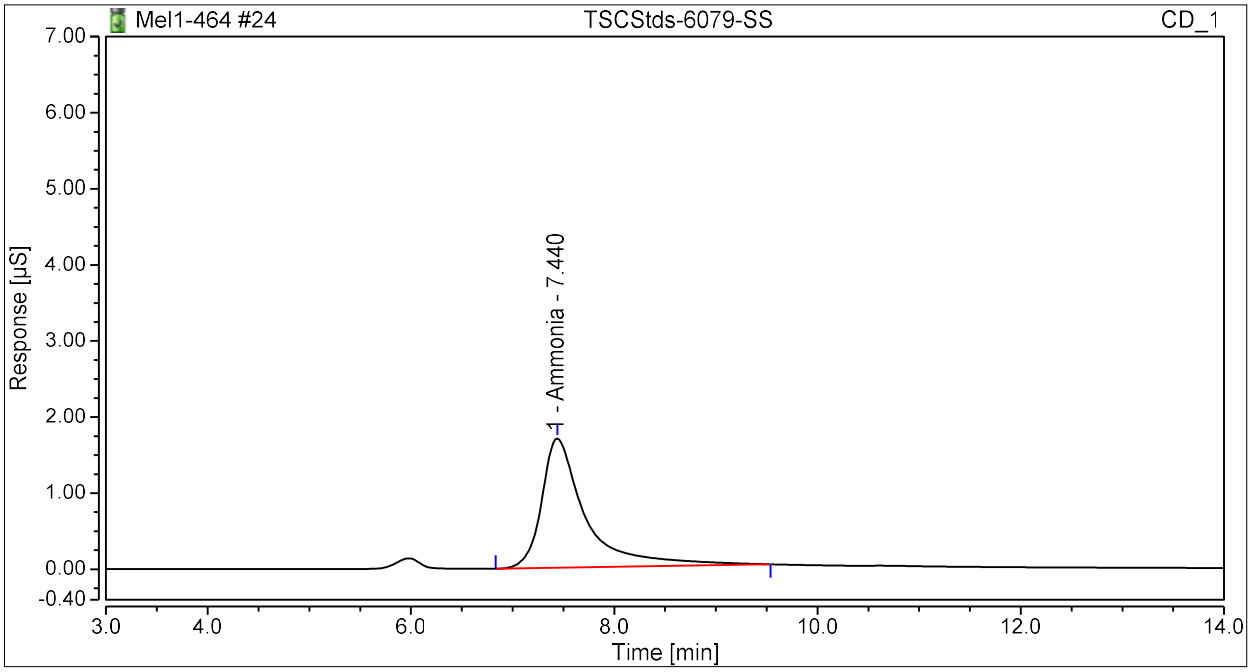



Analyst Comment: NI STW 4.18.23

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| TRUE | FALSE | 1 | 7.38 | Ammonia | 0.000 | 0.001 | 0.019 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-SS** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Check Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 21:25** | *Run Time:* | **19.50** |

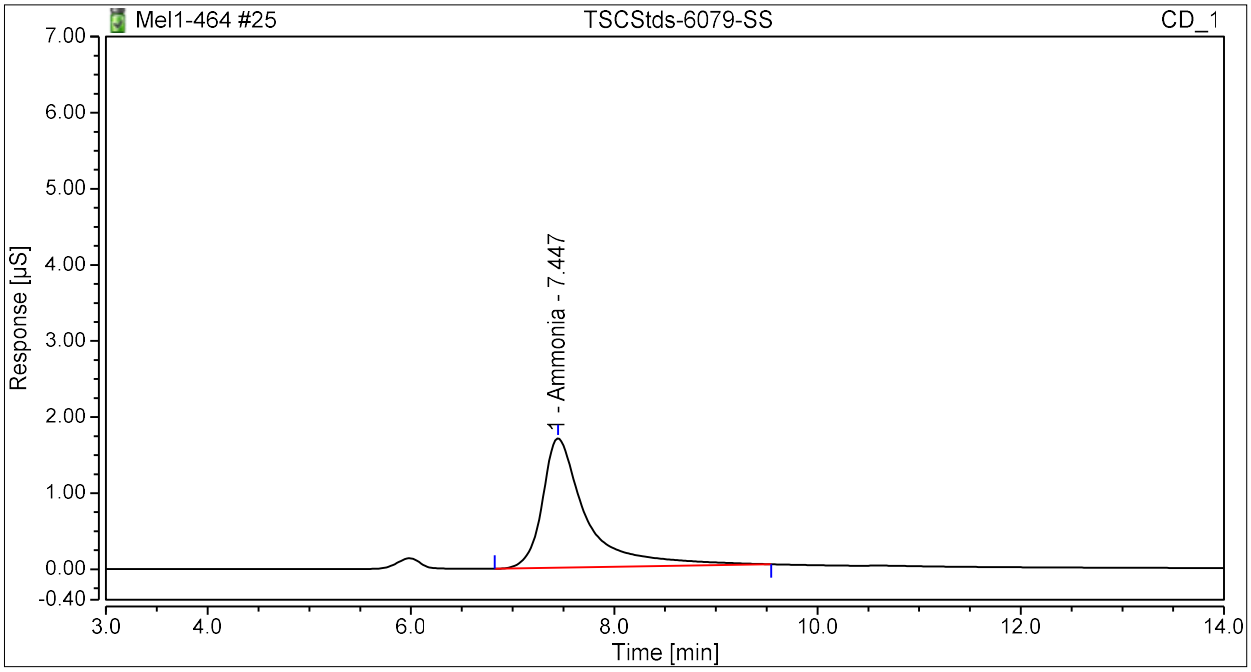



Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area µS*min | Height µS | Amount µg/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.44 | Ammonia | 0.854 | 1.699 | 4.364 |

**Peak Analysis Report**

| | | | |
|---|---|---|---|
| *Sample Name:* | **TSCStds-6079-SS** | *Injection Volume:* | **25.00** |
| *Injection Type:* | **Check Standard** | *Dilution Factor:* | **1.0** |
| *Instrument Method:* | **Mel-1 NH3 ENV 8mmMSA** | *Operator:* | **SWilson** |
| *Inj. Date / Time:* | **14-Apr-2023 / 21:46** | *Run Time:* | **19.50** |




Analyst Comment:

| Manipulated? | Manually Assigned? | No. | Time min | Peak Name | Area uS*min | Height uS | Amount ug/mL |
|---|---|---|---|---|---|---|---|
| FALSE | FALSE | 1 | 7.45 | Ammonia | 0.855 | 1.701 | 4.372 |

# This Is The Last Page Of This Report.

Sections 20.7 and 20.8

(Revised and Sealed: Marked Version)

destruction device will be provided in the riser pipes. Although this is very unlikely given that methane levels are very low at this landfill due to the age and nature of the waste.

## 20.5 LANDFILL GAS MONITORING EQUIPMENT (330.957(t)(2)(D))

As previously described the methane gas monitoring system includes:

Two controllers and six sensors will be installed on the second floor of the building. Two controller units with eight sensors will be installed on the first floor of the building. Drawing 20.1 in Appendix B provides a plan for the location of the methane monitoring equipment. The O & M manual for the monitoring equipment is included in Appendix C. Calibration will be performed at least twice annually or every six months. The controllers and sensors will be set to produce and audible and visible alarm at methane levels of 20% LEL The monitoring equipment will have backup batter power in the event of power failure or interruption.

## 20.6 IMPLEMENTATION SCHEDULE FOR MONITORING EQUIPMENT (330.957(T)(2)(E))

The gas monitoring equipment will be installed and tested prior to completion of the building construction. The monitoring equipment shall be in continuous operation at least one week prior to building occupation to verify that measurable methane concentrations are not present within the building.

## 20.7 SAMPLING AND ANALYSIS PLAN (330.957(t)(2)(F))

Gas samples werewill be taken initially prior to occupancy from the four riser pipes connected to the gas ventilation systemclosed landfill. The samples will be were collected and analyzed in accordance with this section and the following section the sampling and analysis plan included in Appendix G.

The risers shall be capped and the sampling port valve closed for 24 hours prior to sampling. Four Two samples werewill collected from the gas collection system at the four riserslandfill using four separate "Summa" canisters. The selected analytical laboratory will provide canisters and chain of custody forms for the sampling activities. It should be noted that only four of the five canisters will be analyzed (the fifth is a spare in the event any issues were encountered with the other three).

The following method shall be used to collect the samples from the active collection systemlandfill. Teflon tubing was first connected to a sampling port at the riser pipe. The closed canister will then be connected to the line which containing a pressure gauge and a flow controller. The flow controller will be set to a flow rate of approximately 500 ml/min. The line will then be purged and a field analyzer was used to sample the gas and make sure that air intrusion into the line was not detected. The evacuated canister will then be opened and allowed to fill until its pressure reaches just above 0 mm Hg. A detailed description of sampling and analysis procedures is included in Appendix G.

## 20.8 ANALYSIS OF LANDFILL GAS (330.957(t)(2)(G))

The four gas samples collected from the riser pipes will bewere analyzed for the following constituents and compounds. The samples of gas were will be shipped to an accredited laboratory offsite that can perform the approved EPA test methods:

- Methane and other light hydrocarbons, carbon dioxide and water vapor
- Hydrogen Sulfide, mercaptans, ammonia
- VOCs

Laboratory QA/QC procedures will be provided by the laboratory chosen to perform the analysis and will be included with the test results. -These procedures are included with the results included in Appendix G.


Date: 05/04/2023

Sections 20.7 and 20.8

(Unmarked Version)

destruction device will be provided in the riser pipes. Although this is very unlikely given that methane levels are very low at this landfill due to the age and nature of the waste.

## 20.5 LANDFILL GAS MONITORING EQUIPMENT (330.957(t)(2)(D))

As previously described the methane gas monitoring system includes:

Two controllers and six sensors will be installed on the second floor of the building. Two controller units with eight sensors will be installed on the first floor of the building. Drawing 20.1 in Appendix B provides a plan for the location of the methane monitoring equipment. The O & M manual for the monitoring equipment is included in Appendix C. Calibration will be performed at least twice annually or every six months. The controllers and sensors will be set to produce and audible and visible alarm at methane levels of 20% LEL The monitoring equipment will have backup batter power in the event of power failure or interruption.

## 20.6 IMPLEMENTATION SCHEDULE FOR MONITORING EQUIPMENT (330.957(T)(2)(E))

The gas monitoring equipment will be installed and tested prior to completion of the building construction. The monitoring equipment shall be in continuous operation at least one week prior to building occupation to verify that measurable methane concentrations are not present within the building.

## 20.7 SAMPLING AND ANALYSIS PLAN (330.957(t)(2)(F))

Gas samples were taken initially prior to occupancy from the closed landfill. The samples were collected and analyzed in accordance with the sampling and analysis plan included in Appendix G.

Two samples werecollected from the landfill using “Summa” canisters. The selected analytical laboratory will provide canisters and chain of custody forms for the sampling activities.

## 20.8 A DETAILED DESCRIPTION OF SAMPLING AND ANALYSIS PROCEDURES IS INCLUDED IN APPENDIX G.ANALYSIS OF LANDFILL GAS (330.957(t)(2)(G))

The gas samples were analyzed for the following constituents and compounds. The samples of gas were shipped to an accredited laboratory offsite that can perform the approved EPA test methods:

- Methane and other light hydrocarbons, carbon dioxide and water vapor
- Hydrogen Sulfide, mercaptans, ammonia
- VOCs

Laboratory QA/QC procedures will be provided by the laboratory chosen to perform the analysis and will be included with the test results. These procedures are included with the results included in Appendix G.