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# Cover Page

**Order ID :** Q2333

**Project ID :** RFK Bridge RMB-Randall Island

**Client :** LiRo Engineers, Inc.

| Lab Sample Number | Client Sample Number |
|---|---|
| Q2333-01 | MW-06 |
| Q2333-02 | MW-08 |
| Q2333-03 | MW-10 |
| Q2333-04 | MW-11 |
| Q2333-05 | MW-13 |
| Q2333-06 | MW-12 |

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

Date: 6/21/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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# DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

| | |
|---|---|
| Value | If the result is a value greater than or equal to the detection limit, report the value |
| **U** | Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required. |
| **ND** | Indicates the analyte was analyzed for, but not detected |
| **J** | Indicates an estimated value**.** This flag is used:<br>(1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.)<br>(2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This is flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others. |
| **B** | Indicates the analyte was found in the blank as well as the sample report as "12 B". |
| **E** | Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis. |
| **D** | This flag identifies all compounds identified in an analysis at a secondary dilution factor. |
| **P** | This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P". |
| **N** | This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used. |
| **A** | This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product. |
| **Q** | Indicates the LCS did not meet the control limits requirements |

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**APPENDIX A**

**QA REVIEW GENERAL DOCUMENTATION**

**Project #:** **Q2333**

| | Completed |
|---|---|
| **For thorough review, the report must have the following:** | |
| **GENERAL:** | |
| **Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)** | ✓ |
| **Check chain-of-custody for proper relinquish/return of samples** | ✓ |
| **Is the chain of custody signed and complete** | ✓ |
| **Check internal chain-of-custody for proper relinquish/return of samples /sample extracts** | ✓ |
| **Collect information for each project id from server. Were all requirements followed** | ✓ |
| **COVER PAGE:** | |
| **Do numbers of samples correspond to the number of samples in the Chain of Custody on login page** | ✓ |
| **Do lab numbers and client Ids on cover page agree with the Chain of Custody** | ✓ |
| **CHAIN OF CUSTODY:** | |
| **Do requested analyses on Chain of Custody agree with form I results** | ✓ |
| **Do requested analyses on Chain of Custody agree with the log-in page** | ✓ |
| **Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody** | ✓ |
| **Were the samples received within hold time** | ✓ |
| **Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle** | ✓ |
| **ANALYTICAL:** | |
| **Was method requirement followed?** | ✓ |
| **Was client requirement followed?** | ✓ |
| **Does the case narrative summarize all QC failure?** | ✓ |
| **All runlogs and manual integration are reviewed for requirements** | ✓ |
| **All manual calculations and /or hand notations verified** | ✓ |

**QA Review Signature:** **PRADIP PRAJAPATI** **Date:** **06/21/2025**

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# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | Q2333 | **OrderDate:** | 6/13/2025 3:21:44 PM |
| **Client:** | LiRo Engineers, Inc. | **Project:** | RFK Bridge RMB-Randall Island |
| **Contact:** | Martin Wesolowski | **Location:** | D51,VOA Ref. #3 Water |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **Q2333-01** | **MW-06** | **Water** | | | **06/12/25** | | | **06/13/25** |
| | | | VOCMS Group1 | 8260-Low | | | 06/19/25 | |
| **Q2333-02** | **MW-08** | **Water** | | | **06/12/25** | | | **06/13/25** |
| | | | VOCMS Group1 | 8260-Low | | | 06/19/25 | |
| **Q2333-02DL** | **MW-08DL** | **Water** | | | **06/12/25** | | | **06/13/25** |
| | | | VOCMS Group1 | 8260-Low | | | 06/19/25 | |
| **Q2333-03** | **MW-10** | **Water** | | | **06/12/25** | | | **06/13/25** |
| | | | VOCMS Group1 | 8260-Low | | | 06/19/25 | |
| **Q2333-04** | **MW-11** | **Water** | | | **06/12/25** | | | **06/13/25** |
| | | | VOCMS Group1 | 8260-Low | | | 06/19/25 | |
| **Q2333-05** | **MW-13** | **Water** | | | **06/12/25** | | | **06/13/25** |
| | | | VOCMS Group1 | 8260-Low | | | 06/19/25 | |
| **Q2333-06** | **MW-12** | **Water** | | | **06/12/25** | | | **06/13/25** |
| | | | VOCMS Group1 | 8260-Low | | | 06/19/25 | |
| **Q2333-06DL** | **MW-12DL** | **Water** | | | **06/12/25** | | | **06/13/25** |
| | | | VOCMS Group1 | 8260-Low | | | 06/19/25 | |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** Q2333

**Client:** LiRo Engineers, Inc.

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| **Client ID:** | **MW-06** | | | | | | | |
| Q2333-01 | MW-06 | Water | Benzene | 3.10 | | 0.15 | 1.00 | ug/L |
| Q2333-01 | MW-06 | Water | Ethyl Benzene | 1.40 | | 0.13 | 1.00 | ug/L |
| Q2333-01 | MW-06 | Water | Total Xylenes | 1.00 | J | 0.36 | 3.00 | ug/L |
| Q2333-01 | MW-06 | Water | m/p-Xylenes | 1.00 | J | 0.24 | 2.00 | ug/L |
| Q2333-01 | MW-06 | Water | Isopropylbenzene | 14.7 | | 0.12 | 1.00 | ug/L |
| Q2333-01 | MW-06 | Water | n-propylbenzene | 36.4 | | 0.13 | 1.00 | ug/L |
| Q2333-01 | MW-06 | Water | sec-Butylbenzene | 2.50 | | 0.13 | 1.00 | ug/L |
| Q2333-01 | MW-06 | Water | n-Butylbenzene | 1.70 | | 0.15 | 1.00 | ug/L |
| Q2333-01 | MW-06 | Water | Naphthalene | 23.0 | | 0.20 | 1.00 | ug/L |
| | | | **Total Voc :** | 83.8 | | | | |
| | | | **Total Concentration:** | 83.8 | | | | |
| **Client ID:** | **MW-08** | | | | | | | |
| Q2333-02 | MW-08 | Water | Benzene | 88.5 | | 0.15 | 1.00 | ug/L |
| Q2333-02 | MW-08 | Water | Toluene | 22.0 | | 0.14 | 1.00 | ug/L |
| Q2333-02 | MW-08 | Water | Ethyl Benzene | 520 | E | 0.13 | 1.00 | ug/L |
| Q2333-02 | MW-08 | Water | Total Xylenes | 1770 | E | 0.36 | 3.00 | ug/L |
| Q2333-02 | MW-08 | Water | m/p-Xylenes | 1200 | E | 0.24 | 2.00 | ug/L |
| Q2333-02 | MW-08 | Water | o-Xylene | 570 | E | 0.12 | 1.00 | ug/L |
| Q2333-02 | MW-08 | Water | Isopropylbenzene | 38.1 | | 0.12 | 1.00 | ug/L |
| Q2333-02 | MW-08 | Water | n-propylbenzene | 79.6 | | 0.13 | 1.00 | ug/L |
| Q2333-02 | MW-08 | Water | 1,3,5-Trimethylbenzene | 46.5 | | 0.15 | 1.00 | ug/L |
| Q2333-02 | MW-08 | Water | 1,2,4-Trimethylbenzene | 890 | E | 0.14 | 1.00 | ug/L |
| Q2333-02 | MW-08 | Water | sec-Butylbenzene | 3.60 | | 0.13 | 1.00 | ug/L |
| Q2333-02 | MW-08 | Water | p-Isopropyltoluene | 2.80 | | 0.13 | 1.00 | ug/L |
| Q2333-02 | MW-08 | Water | n-Butylbenzene | 3.40 | | 0.15 | 1.00 | ug/L |
| Q2333-02 | MW-08 | Water | Naphthalene | 350 | E | 0.20 | 1.00 | ug/L |
| | | | **Total Voc :** | 3810 | | | | |
| | | | **Total Concentration:** | 3810 | | | | |
| **Client ID:** | **MW-08DL** | | | | | | | |
| Q2333-02DL | MW-08DL | Water | Benzene | 120 | D | 3.00 | 20.0 | ug/L |
| Q2333-02DL | MW-08DL | Water | Toluene | 27.0 | D | 2.80 | 20.0 | ug/L |
| Q2333-02DL | MW-08DL | Water | Ethyl Benzene | 630 | D | 2.60 | 20.0 | ug/L |
| Q2333-02DL | MW-08DL | Water | Total Xylenes | 2170 | D | 7.20 | 60.0 | ug/L |
| Q2333-02DL | MW-08DL | Water | m/p-Xylenes | 1500 | D | 4.80 | 40.0 | ug/L |
| Q2333-02DL | MW-08DL | Water | o-Xylene | 670 | D | 2.40 | 20.0 | ug/L |
| Q2333-02DL | MW-08DL | Water | Isopropylbenzene | 44.3 | D | 2.40 | 20.0 | ug/L |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** Q2333

**Client:** LiRo Engineers, Inc.

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| Q2333-02DL | MW-08DL | Water | n-propylbenzene | 92.2 | D | 2.60 | 20.0 | ug/L |
| Q2333-02DL | MW-08DL | Water | 1,3,5-Trimethylbenzene | 50.0 | D | 3.00 | 20.0 | ug/L |
| Q2333-02DL | MW-08DL | Water | 1,2,4-Trimethylbenzene | 1100 | D | 2.80 | 20.0 | ug/L |
| Q2333-02DL | MW-08DL | Water | Naphthalene | 400 | D | 4.00 | 20.0 | ug/L |
| | | | **Total Voc :** | 4630 | | | | |
| | | | **Total Concentration:** | 4630 | | | | |
| **Client ID:** | **MW-10** | | | | | | | |
| Q2333-03 | MW-10 | Water | Ethyl Benzene | 0.31 | J | 0.13 | 1.00 | ug/L |
| Q2333-03 | MW-10 | Water | Total Xylenes | 0.85 | J | 0.36 | 3.00 | ug/L |
| Q2333-03 | MW-10 | Water | m/p-Xylenes | 0.85 | J | 0.24 | 2.00 | ug/L |
| Q2333-03 | MW-10 | Water | Isopropylbenzene | 2.90 | | 0.12 | 1.00 | ug/L |
| Q2333-03 | MW-10 | Water | n-propylbenzene | 0.86 | J | 0.13 | 1.00 | ug/L |
| Q2333-03 | MW-10 | Water | tert-Butylbenzene | 0.30 | J | 0.14 | 1.00 | ug/L |
| Q2333-03 | MW-10 | Water | 1,2,4-Trimethylbenzene | 1.80 | | 0.14 | 1.00 | ug/L |
| Q2333-03 | MW-10 | Water | sec-Butylbenzene | 0.93 | J | 0.13 | 1.00 | ug/L |
| | | | **Total Voc :** | 7.95 | | | | |
| | | | **Total Concentration:** | 7.95 | | | | |
| **Client ID:** | **MW-11** | | | | | | | |
| Q2333-04 | MW-11 | Water | Ethyl Benzene | 0.30 | J | 0.13 | 1.00 | ug/L |
| Q2333-04 | MW-11 | Water | Total Xylenes | 1.05 | J | 0.36 | 3.00 | ug/L |
| Q2333-04 | MW-11 | Water | m/p-Xylenes | 0.79 | J | 0.24 | 2.00 | ug/L |
| Q2333-04 | MW-11 | Water | o-Xylene | 0.26 | J | 0.12 | 1.00 | ug/L |
| Q2333-04 | MW-11 | Water | 1,2,4-Trimethylbenzene | 1.70 | | 0.14 | 1.00 | ug/L |
| Q2333-04 | MW-11 | Water | Naphthalene | 0.61 | J | 0.20 | 1.00 | ug/L |
| | | | **Total Voc :** | 3.66 | | | | |
| | | | **Total Concentration:** | 3.66 | | | | |
| **Client ID:** | **MW-13** | | | | | | | |
| Q2333-05 | MW-13 | Water | Benzene | 0.80 | J | 0.15 | 1.00 | ug/L |
| Q2333-05 | MW-13 | Water | Ethyl Benzene | 1.70 | | 0.13 | 1.00 | ug/L |
| Q2333-05 | MW-13 | Water | Total Xylenes | 2.70 | J | 0.36 | 3.00 | ug/L |
| Q2333-05 | MW-13 | Water | m/p-Xylenes | 1.50 | J | 0.24 | 2.00 | ug/L |
| Q2333-05 | MW-13 | Water | o-Xylene | 1.20 | | 0.12 | 1.00 | ug/L |
| Q2333-05 | MW-13 | Water | 1,2,4-Trimethylbenzene | 0.71 | J | 0.14 | 1.00 | ug/L |
| Q2333-05 | MW-13 | Water | Naphthalene | 0.34 | J | 0.20 | 1.00 | ug/L |
| | | | **Total Voc :** | 6.25 | | | | |
| | | | **Total Concentration:** | 6.25 | | | | |
| **Client ID:** | **MW-12** | | | | | | | |
| Q2333-06 | MW-12 | Water | Benzene | 200 | E | 0.15 | 1.00 | ug/L |

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# Hit Summary Sheet
**SW-846**

**SDG No.:** Q2333

**Client:** LiRo Engineers, Inc.

| Sample ID | Client ID | Matrix | Parameter | Concentration | C | MDL | RDL | Units |
|---|---|---|---|---|---|---|---|---|
| Q2333-06 | MW-12 | Water | Toluene | 58.0 | | 0.14 | 1.00 | ug/L |
| Q2333-06 | MW-12 | Water | Ethyl Benzene | 730 | E | 0.13 | 1.00 | ug/L |
| Q2333-06 | MW-12 | Water | Total Xylenes | 540 | | 0.36 | 3.00 | ug/L |
| Q2333-06 | MW-12 | Water | m/p-Xylenes | 370 | E | 0.24 | 2.00 | ug/L |
| Q2333-06 | MW-12 | Water | o-Xylene | 170 | E | 0.12 | 1.00 | ug/L |
| Q2333-06 | MW-12 | Water | Isopropylbenzene | 23.6 | | 0.12 | 1.00 | ug/L |
| Q2333-06 | MW-12 | Water | n-propylbenzene | 49.1 | | 0.13 | 1.00 | ug/L |
| Q2333-06 | MW-12 | Water | 1,3,5-Trimethylbenzene | 4.50 | | 0.15 | 1.00 | ug/L |
| Q2333-06 | MW-12 | Water | 1,2,4-Trimethylbenzene | 480 | E | 0.14 | 1.00 | ug/L |
| Q2333-06 | MW-12 | Water | sec-Butylbenzene | 2.50 | | 0.13 | 1.00 | ug/L |
| Q2333-06 | MW-12 | Water | p-Isopropyltoluene | 2.50 | | 0.13 | 1.00 | ug/L |
| Q2333-06 | MW-12 | Water | n-Butylbenzene | 3.10 | | 0.15 | 1.00 | ug/L |
| Q2333-06 | MW-12 | Water | Naphthalene | 140 | | 0.20 | 1.00 | ug/L |
| | | | **Total Voc :** | 2230 | | | | |
| | | | **Total Concentration:** | 2230 | | | | |
| **Client ID:** | **MW-12DL** | | | | | | | |
| Q2333-06DL | MW-12DL | Water | Benzene | 210 | D | 1.50 | 10.0 | ug/L |
| Q2333-06DL | MW-12DL | Water | Toluene | 61.7 | D | 1.40 | 10.0 | ug/L |
| Q2333-06DL | MW-12DL | Water | Ethyl Benzene | 780 | D | 1.30 | 10.0 | ug/L |
| Q2333-06DL | MW-12DL | Water | Total Xylenes | 570 | D | 3.60 | 30.0 | ug/L |
| Q2333-06DL | MW-12DL | Water | m/p-Xylenes | 390 | D | 2.40 | 20.0 | ug/L |
| Q2333-06DL | MW-12DL | Water | o-Xylene | 180 | D | 1.20 | 10.0 | ug/L |
| Q2333-06DL | MW-12DL | Water | Isopropylbenzene | 23.2 | D | 1.20 | 10.0 | ug/L |
| Q2333-06DL | MW-12DL | Water | n-propylbenzene | 47.7 | D | 1.30 | 10.0 | ug/L |
| Q2333-06DL | MW-12DL | Water | 1,3,5-Trimethylbenzene | 5.10 | JD | 1.50 | 10.0 | ug/L |
| Q2333-06DL | MW-12DL | Water | 1,2,4-Trimethylbenzene | 500 | D | 1.40 | 10.0 | ug/L |
| Q2333-06DL | MW-12DL | Water | sec-Butylbenzene | 3.10 | JD | 1.30 | 10.0 | ug/L |
| Q2333-06DL | MW-12DL | Water | p-Isopropyltoluene | 2.80 | JD | 1.30 | 10.0 | ug/L |
| Q2333-06DL | MW-12DL | Water | n-Butylbenzene | 4.00 | JD | 1.50 | 10.0 | ug/L |
| Q2333-06DL | MW-12DL | Water | Naphthalene | 130 | D | 2.00 | 10.0 | ug/L |
| | | | **Total Voc :** | 2340 | | | | |
| | | | **Total Concentration:** | 2340 | | | | |


# QC SUMMARY

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# Surrogate Summary

**SDG No.:** Q2333

**Client:** LiRo Engineers, Inc.

**Analytical Method:** SW8260-Low

| Lab Sample ID | Client ID | Parameter | Spike | Result | RecoveryQual | Limits Low | Limits High |
|---|---|---|---|---|---|---|---|
| Q2329-11MS | TT172S1-20250613MS | 1,2-Dichloroethane-d4 | 50 | 50.0 | 100 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 55.6 | 111 | 75 | 124 |
| | | Toluene-d8 | 50 | 51.3 | 103 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 52.6 | 105 | 77 | 121 |
| Q2329-12MSD | TT172S1-20250613MSD | 1,2-Dichloroethane-d4 | 50 | 44.7 | 89 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 49.1 | 98 | 75 | 124 |
| | | Toluene-d8 | 50 | 45.9 | 92 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 46.6 | 93 | 77 | 121 |
| Q2333-01 | MW-06 | 1,2-Dichloroethane-d4 | 50 | 55.0 | 110 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 53.9 | 108 | 75 | 124 |
| | | Toluene-d8 | 50 | 50.6 | 101 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 47.9 | 96 | 77 | 121 |
| Q2333-02 | MW-08 | 1,2-Dichloroethane-d4 | 50 | 52.3 | 105 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 51.4 | 103 | 75 | 124 |
| | | Toluene-d8 | 50 | 52.9 | 106 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 47.2 | 94 | 77 | 121 |
| Q2333-02DL | MW-08DL | 1,2-Dichloroethane-d4 | 50 | 54.1 | 108 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 51.9 | 104 | 75 | 124 |
| | | Toluene-d8 | 50 | 52.4 | 105 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 49.8 | 100 | 77 | 121 |
| Q2333-03 | MW-10 | 1,2-Dichloroethane-d4 | 50 | 55.0 | 110 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 51.8 | 104 | 75 | 124 |
| | | Toluene-d8 | 50 | 52.8 | 106 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 49.5 | 99 | 77 | 121 |
| Q2333-04 | MW-11 | 1,2-Dichloroethane-d4 | 50 | 52.7 | 105 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 51.5 | 103 | 75 | 124 |
| | | Toluene-d8 | 50 | 52.5 | 105 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 50.0 | 100 | 77 | 121 |
| Q2333-05 | MW-13 | 1,2-Dichloroethane-d4 | 50 | 51.0 | 102 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 51.4 | 103 | 75 | 124 |
| | | Toluene-d8 | 50 | 51.8 | 104 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 49.3 | 99 | 77 | 121 |
| Q2333-06 | MW-12 | 1,2-Dichloroethane-d4 | 50 | 52.5 | 105 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 51.2 | 102 | 75 | 124 |
| | | Toluene-d8 | 50 | 51.9 | 104 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 48.7 | 97 | 77 | 121 |
| Q2333-06DL | MW-12DL | 1,2-Dichloroethane-d4 | 50 | 52.9 | 106 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 51.0 | 102 | 75 | 124 |
| | | Toluene-d8 | 50 | 52.0 | 104 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 49.8 | 100 | 77 | 121 |
| VN0619WBL01 | VN0619WBL01 | 1,2-Dichloroethane-d4 | 50 | 57.1 | 114 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 53.1 | 106 | 75 | 124 |
| | | Toluene-d8 | 50 | 53.8 | 108 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 48.9 | 98 | 77 | 121 |
| VN0619WBS01 | VN0619WBS01 | 1,2-Dichloroethane-d4 | 50 | 48.3 | 97 | 74 | 125 |
| | | Dibromofluoromethane | 50 | 53.4 | 107 | 75 | 124 |
| | | Toluene-d8 | 50 | 49.9 | 100 | 86 | 113 |
| | | 4-Bromofluorobenzene | 50 | 50.3 | 101 | 77 | 121 |

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## Matrix Spike/Matrix Spike Duplicate Summary

### SW-846

**SDG No.:** Q2333

**Client:** LiRo Engineers, Inc.

**Analytical Method:** SW8260-Low

| Parameter | Spike | Sample Result | Result | Units | Rec | Rec Qual | RPD | RPD Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Lab Sample ID :** | **Q2329-11MS** | **Client Sample ID :** | **TT172S1-20250613MS** | | | | | **Datafile :** | VN087118.D | | |
| Methyl tert-butyl Ether | 50 | 0 | 56.2 | ug/L | 112 | | | | 82 | 133 | |
| Benzene | 50 | 0 | 57.4 | ug/L | 115 | | | | 81 | 128 | |
| Toluene | 50 | 0 | 58.6 | ug/L | 117 | * | | | 85 | 115 | |
| Ethyl Benzene | 50 | 0 | 55.6 | ug/L | 111 | | | | 81 | 128 | |
| m/p-Xylenes | 100 | 0 | 120 | ug/L | 120 | | | | 69 | 129 | |
| o-Xylene | 50 | 0 | 58.7 | ug/L | 117 | | | | 75 | 127 | |
| Isopropylbenzene | 50 | 0 | 54.2 | ug/L | 108 | | | | 76 | 121 | |
| N-propylbenzene | 50 | 0 | 52.4 | ug/L | 105 | | | | 79 | 116 | |
| 1,3,5-Trimethylbenzene | 50 | 0 | 54.3 | ug/L | 109 | | | | 40 | 169 | |
| tert-Butylbenzene | 50 | 0 | 50.9 | ug/L | 102 | | | | 80 | 116 | |
| 1,2,4-Trimethylbenzene | 50 | 0.36 | 54.7 | ug/L | 109 | | | | 81 | 116 | |
| Sec-butylbenzene | 50 | 0 | 49.6 | ug/L | 99 | | | | 70 | 122 | |
| p-Isopropyltoluene | 50 | 0 | 50.6 | ug/L | 101 | | | | 64 | 124 | |
| n-Butylbenzene | 50 | 0 | 45.3 | ug/L | 91 | | | | 53 | 140 | |
| Naphthalene | 50 | 0 | 52.9 | ug/L | 106 | | | | 79 | 124 | |

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## Matrix Spike/Matrix Spike Duplicate Summary

### SW-846

**SDG No.:** Q2333

**Client:** LiRo Engineers, Inc.

**Analytical Method:** SW8260-Low

| Parameter | Spike | Sample Result | Result | Units | Rec | Rec Qual | RPD | RPD Qual | Limits Low | Limits High | Limits RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Lab Sample ID :** | **Q2329-12MSD** | **Client Sample ID :** | **TT172S1-20250613MSD** | | | | | **Datafile :** | VN087119.D | | |
| Methyl tert-butyl Ether | 50 | 0 | 52.3 | ug/L | 105 | | 7 | | 82 | 133 | 20 |
| Benzene | 50 | 0 | 53.1 | ug/L | 106 | | 8 | | 81 | 128 | 20 |
| Toluene | 50 | 0 | 53.7 | ug/L | 107 | | 9 | | 85 | 115 | 20 |
| Ethyl Benzene | 50 | 0 | 52.9 | ug/L | 106 | | 5 | | 81 | 128 | 20 |
| m/p-Xylenes | 100 | 0 | 110 | ug/L | 110 | | 9 | | 69 | 129 | 20 |
| o-Xylene | 50 | 0 | 55.9 | ug/L | 112 | | 5 | | 75 | 127 | 20 |
| Isopropylbenzene | 50 | 0 | 51.7 | ug/L | 103 | | 5 | | 76 | 121 | 20 |
| N-propylbenzene | 50 | 0 | 49.7 | ug/L | 99 | | 5 | | 79 | 116 | 20 |
| 1,3,5-Trimethylbenzene | 50 | 0 | 51.1 | ug/L | 102 | | 6 | | 40 | 169 | 20 |
| tert-Butylbenzene | 50 | 0 | 48.4 | ug/L | 97 | | 5 | | 80 | 116 | 20 |
| 1,2,4-Trimethylbenzene | 50 | 0.36 | 52.0 | ug/L | 103 | | 6 | | 81 | 116 | 20 |
| Sec-butylbenzene | 50 | 0 | 47.4 | ug/L | 95 | | 5 | | 70 | 122 | 20 |
| p-Isopropyltoluene | 50 | 0 | 47.8 | ug/L | 96 | | 6 | | 64 | 124 | 20 |
| n-Butylbenzene | 50 | 0 | 42.8 | ug/L | 86 | | 6 | | 53 | 140 | 20 |
| Naphthalene | 50 | 0 | 50.2 | ug/L | 100 | | 5 | | 79 | 124 | 20 |

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## Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

**SW-846**

**SDG No.:** Q2333

**Client:** LiRo Engineers, Inc.

**Analytical Method:** SW8260-Low **Datafile :** VN087104.D

| Lab Sample ID | Parameter | Spike | Result | Unit | Rec | RPD | Qual | Limits Low | Limits High | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| VN0619WBS01 | Methyl tert-butyl Ether | 20 | 18.1 | ug/L | 91 | | | 78 | 114 | |
| | Benzene | 20 | 19.2 | ug/L | 96 | | | 82 | 109 | |
| | Toluene | 20 | 19.5 | ug/L | 98 | | | 82 | 110 | |
| | Ethyl Benzene | 20 | 18.6 | ug/L | 93 | | | 83 | 109 | |
| | m/p-Xylenes | 40 | 38.5 | ug/L | 96 | | | 82 | 110 | |
| | o-Xylene | 20 | 18.7 | ug/L | 94 | | | 83 | 109 | |
| | Isopropylbenzene | 20 | 18.1 | ug/L | 91 | | | 83 | 112 | |
| | N-propylbenzene | 20 | 17.7 | ug/L | 89 | | | 83 | 112 | |
| | 1,3,5-Trimethylbenzene | 20 | 18.2 | ug/L | 91 | | | 85 | 112 | |
| | tert-Butylbenzene | 20 | 16.6 | ug/L | 83 | | | 83 | 112 | |
| | 1,2,4-Trimethylbenzene | 20 | 18.1 | ug/L | 91 | | | 85 | 111 | |
| | Sec-butylbenzene | 20 | 16.4 | ug/L | 82 | | | 81 | 114 | |
| | p-Isopropyltoluene | 20 | 16.5 | ug/L | 83 | | | 78 | 116 | |
| | n-Butylbenzene | 20 | 15.1 | ug/L | 76 | | | 75 | 115 | |
| | Naphthalene | 20 | 16.4 | ug/L | 82 | | | 78 | 119 | |

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# VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VN0619WBL01

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG NO.: Q2333

Lab File ID: VN087102.D Lab Sample ID: VN0619WBL01

Date Analyzed: 06/19/2025 Time Analyzed: 10:26

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: MSVOA_N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| VN0619WBS01 | VN0619WBS01 | VN087104.D | 06/19/2025 |
| MW-06 | Q2333-01 | VN087106.D | 06/19/2025 |
| MW-08 | Q2333-02 | VN087107.D | 06/19/2025 |
| MW-11 | Q2333-04 | VN087109.D | 06/19/2025 |
| MW-13 | Q2333-05 | VN087110.D | 06/19/2025 |
| MW-12 | Q2333-06 | VN087111.D | 06/19/2025 |
| MW-08DL | Q2333-02DL | VN087114.D | 06/19/2025 |
| MW-10 | Q2333-03 | VN087115.D | 06/19/2025 |
| MW-12DL | Q2333-06DL | VN087116.D | 06/19/2025 |
| TT172S1-20250613MS | Q2329-11MS | VN087118.D | 06/19/2025 |
| TT172S1-20250613MSD | Q2329-12MSD | VN087119.D | 06/19/2025 |

COMMENTS:

Raw Data: **VN086861.D**

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# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG NO.: Q2333

Lab File ID: VN086861.D BFB Injection Date: 06/06/2025

Instrument ID: MSVOA_N BFB Injection Time: 07:59

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: Y/N N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.3 |
| 75 | 30.0 - 60.0% of mass 95 | 48.1 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.4 |
| 173 | Less than 2.0% of mass 174 | 0.7 ( 1 ) 1 |
| 174 | 50.0 - 100.0% of mass 95 | 66.6 |
| 175 | 5.0 - 9.0% of mass 174 | 4.7 ( 7.1 ) 1 |
| 176 | 95.0 - 101.0% of mass 174 | 65.3 ( 98.1 ) 1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.4 ( 6.8 ) 2 |

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| VSTDICC001 | VSTDICC001 | VN086862.D | 06/06/2025 | 12:44 |
| VSTDICC005 | VSTDICC005 | VN086863.D | 06/06/2025 | 13:17 |
| VSTDICC020 | VSTDICC020 | VN086864.D | 06/06/2025 | 13:40 |
| VSTDICCC050 | VSTDICCC050 | VN086865.D | 06/06/2025 | 14:03 |
| VSTDICC100 | VSTDICC100 | VN086866.D | 06/06/2025 | 14:26 |
| VSTDICC150 | VSTDICC150 | VN086867.D | 06/06/2025 | 14:49 |

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# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG NO.: Q2333

Lab File ID: VN087099.D BFB Injection Date: 06/19/2025

Instrument ID: MSVOA_N BFB Injection Time: 08:58

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: Y/N N

| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 15.1 |
| 75 | 30.0 - 60.0% of mass 95 | 44.3 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.2 |
| 173 | Less than 2.0% of mass 174 | 0.7 ( 1 ) 1 |
| 174 | 50.0 - 100.0% of mass 95 | 70.2 |
| 175 | 5.0 - 9.0% of mass 174 | 5 ( 7.1 ) 1 |
| 176 | 95.0 - 101.0% of mass 174 | 68.6 ( 97.7 ) 1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.5 ( 6.5 ) 2 |

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| VSTDCCC050 | VSTDCCC050 | VN087100.D | 06/19/2025 | 09:31 |
| VN0619WBL01 | VN0619WBL01 | VN087102.D | 06/19/2025 | 10:26 |
| VN0619WBS01 | VN0619WBS01 | VN087104.D | 06/19/2025 | 12:22 |
| MW-06 | Q2333-01 | VN087106.D | 06/19/2025 | 13:17 |
| MW-08 | Q2333-02 | VN087107.D | 06/19/2025 | 13:38 |
| MW-11 | Q2333-04 | VN087109.D | 06/19/2025 | 14:21 |
| MW-13 | Q2333-05 | VN087110.D | 06/19/2025 | 14:42 |
| MW-12 | Q2333-06 | VN087111.D | 06/19/2025 | 15:03 |
| MW-08DL | Q2333-02DL | VN087114.D | 06/19/2025 | 16:07 |
| MW-10 | Q2333-03 | VN087115.D | 06/19/2025 | 16:28 |
| MW-12DL | Q2333-06DL | VN087116.D | 06/19/2025 | 16:49 |
| TT172S1-20250613MS | Q2329-11MS | VN087118.D | 06/19/2025 | 17:31 |
| TT172S1-20250613MSD | Q2329-12MSD | VN087119.D | 06/19/2025 | 17:52 |

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# VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG NO.: Q2333

Lab File ID: VN087100.D Date Analyzed: 06/19/2025

Instrument ID: MSVOA_N Time Analyzed: 09:31

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

| | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 157053 | 8.23 | 278046 | 9.11 | 245271 | 11.87 |
| UPPER LIMIT | 314106 | 8.729 | 556092 | 9.606 | 490542 | 12.365 |
| LOWER LIMIT | 78526.5 | 7.729 | 139023 | 8.606 | 122636 | 11.365 |
| EPA SAMPLE NO. | | | | | | |
| TT172S1-20250613MS | 180737 | 8.23 | 323339 | 9.11 | 287602 | 11.87 |
| TT172S1-20250613MSD | 177485 | 8.23 | 324249 | 9.11 | 281966 | 11.87 |
| MW-06 | 163392 | 8.23 | 328324 | 9.11 | 281009 | 11.87 |
| MW-08 | 260611 | 8.23 | 524185 | 9.11 | 470225 | 11.87 |
| MW-08DL | 183164 | 8.23 | 368444 | 9.11 | 333195 | 11.87 |
| MW-10 | 174663 | 8.23 | 354191 | 9.11 | 320832 | 11.87 |
| MW-11 | 203941 | 8.23 | 406474 | 9.11 | 369075 | 11.87 |
| MW-13 | 200534 | 8.23 | 398084 | 9.11 | 356355 | 11.87 |
| MW-12 | 189269 | 8.23 | 379701 | 9.11 | 338791 | 11.87 |
| MW-12DL | 199848 | 8.23 | 402925 | 9.11 | 360708 | 11.87 |
| VN0619WBL01 | 180966 | 8.23 | 368878 | 9.11 | 337249 | 11.87 |
| VN0619WBS01 | 168651 | 8.23 | 300634 | 9.11 | 265368 | 11.87 |

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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# VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG NO.: Q2333

Lab File ID: VN087100.D Date Analyzed: 06/19/2025

Instrument ID: MSVOA_N Time Analyzed: 09:31

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

| | IS4 AREA # | RT # | | | | |
|---|---|---|---|---|---|---|
| 12 HOUR STD | 126484 | 13.788 | | | | |
| UPPER LIMIT | 252968 | 14.288 | | | | |
| LOWER LIMIT | 63242 | 13.288 | | | | |
| EPA SAMPLE NO. | | | | | | |
| TT172S1-20250613MS | 145576 | 13.79 | | | | |
| TT172S1-20250613MSD | 142178 | 13.79 | | | | |
| MW-06 | 131506 | 13.79 | | | | |
| MW-08 | 201938 | 13.79 | | | | |
| MW-08DL | 162105 | 13.79 | | | | |
| MW-10 | 152345 | 13.79 | | | | |
| MW-11 | 174687 | 13.79 | | | | |
| MW-13 | 169301 | 13.79 | | | | |
| MW-12 | 153356 | 13.79 | | | | |
| MW-12DL | 175112 | 13.79 | | | | |
| VN0619WBL01 | 156562 | 13.79 | | | | |
| VN0619WBS01 | 132931 | 13.79 | | | | |

IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.


# SAMPLE DATA

Raw Data: **VN087106.D**

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-06 | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-01 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087106.D | 1 | | 06/19/25 13:17 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 3.10 | | 0.15 | 1.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.40 | | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.00 | J | 0.24 | 2.00 | ug/L |
| 1330-20-7 | Total Xylenes | 1.00 | J | 0.36 | 3.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 14.7 | | 0.12 | 1.00 | ug/L |
| 103-65-1 | n-propylbenzene | 36.4 | | 0.13 | 1.00 | ug/L |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-06-6 | tert-Butylbenzene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 135-98-8 | sec-Butylbenzene | 2.50 | | 0.13 | 1.00 | ug/L |
| 99-87-6 | p-Isopropyltoluene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 104-51-8 | n-Butylbenzene | 1.70 | | 0.15 | 1.00 | ug/L |
| 91-20-3 | Naphthalene | 23.0 | | 0.20 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 55.0 | | 74 - 125 | 110% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 53.9 | | 75 - 124 | 108% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 50.6 | | 86 - 113 | 101% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 47.9 | | 77 - 121 | 96% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 163000 | 8.23 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 328000 | 9.106 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 281000 | 11.865 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 132000 | 13.788 | | | |

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-06 | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-01 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087106.D | 1 | | 06/19/25 13:17 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Sample Results: **VN087106.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087106.D
Acq On : 19 Jun 2025 13:17
Operator : JC\MD
Sample : Q2333-01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 20 01:23:37 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-06

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.230 | 168 | 163392 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 328324 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 281009 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 131506 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.582 | 65 | 120353 | 55.015 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 110.040% | | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 104788 | 53.856 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 107.720% | | | |
| 50) Toluene-d8 | 10.565 | 98 | 390073 | 50.642 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 101.280% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 137135 | 47.920 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 95.840% | | | |
| Target Compounds | | | | | | Qvalue |
| 16) Acetone | 4.453 | 43 | 3613 | 3.114 | ug/l | 90 |
| 39) Methylcyclohexane | 9.606 | 83 | 8864 | 2.232 | ug/l | 97 |
| 40) Benzene | 8.612 | 78 | 29365 | 3.097 | ug/l | 97 |
| 67) Ethyl Benzene | 11.959 | 91 | 15063 | 1.411 | ug/l | 91 |
| 68) m/p-Xylenes | 12.076 | 106 | 4232 | 1.036 | ug/l | 91 |
| 73) Isopropylbenzene | 12.694 | 105 | 140969 | 14.714 | ug/l | 99 |
| 78) n-propylbenzene | 13.035 | 91 | 424264 | 36.441 | ug/l | 98 |
| 85) sec-Butylbenzene | 13.612 | 105 | 26748 | 2.544 | ug/l # | 58 |
| 89) n-Butylbenzene | 14.053 | 91 | 14139m | 1.679 | ug/l | |
| 95) Naphthalene | 15.635 | 128 | 226720 | 22.968 | ug/l | 100 |

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

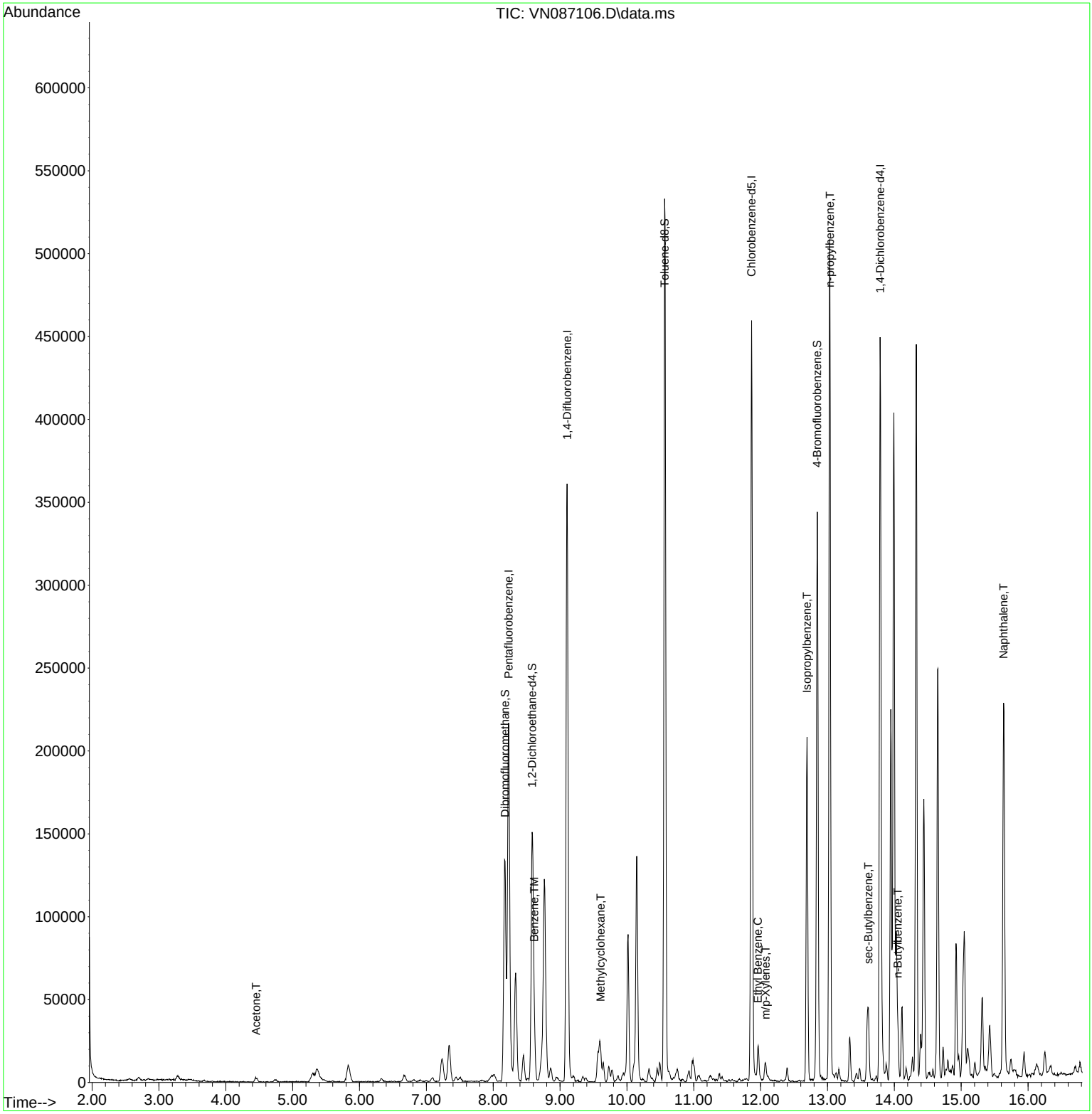
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087106.D
Acq On : 19 Jun 2025 13:17
Operator : JC\MD
Sample : Q2333-01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 8 Sample Multiplier: 1

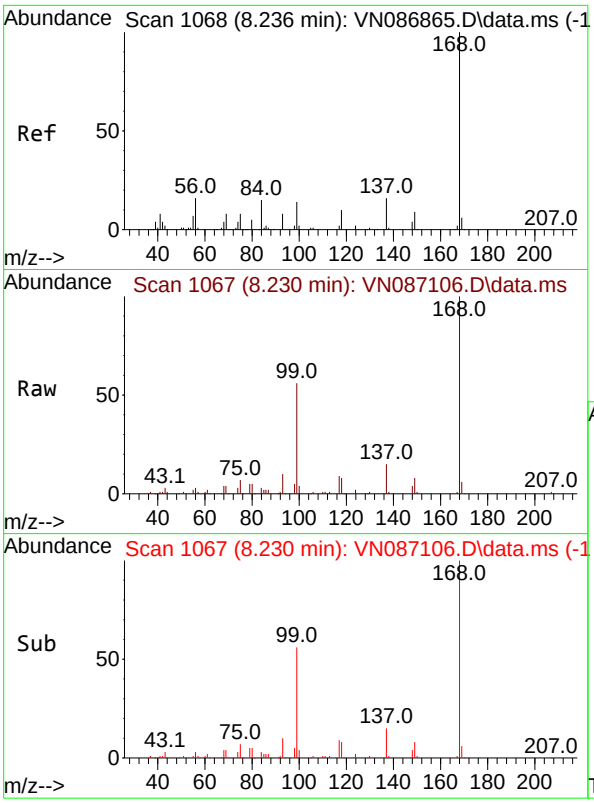
Quant Time: Jun 20 01:23:37 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-06

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025






#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.230 min Scan# 1
Delta R.T. -0.006 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion:168 Resp: 16339

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 168 | 100 | | |
| 99 | 56.3 | 49.1 | 73.7 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-06

**Manual Integrations**
**APPROVED**

Reviewed By :John Carlone 06/20/2025
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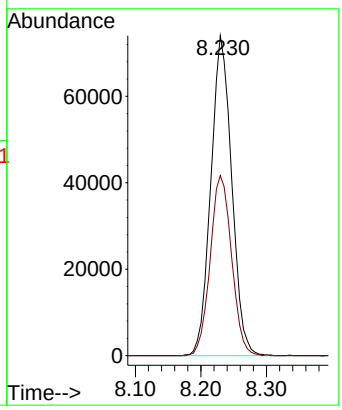
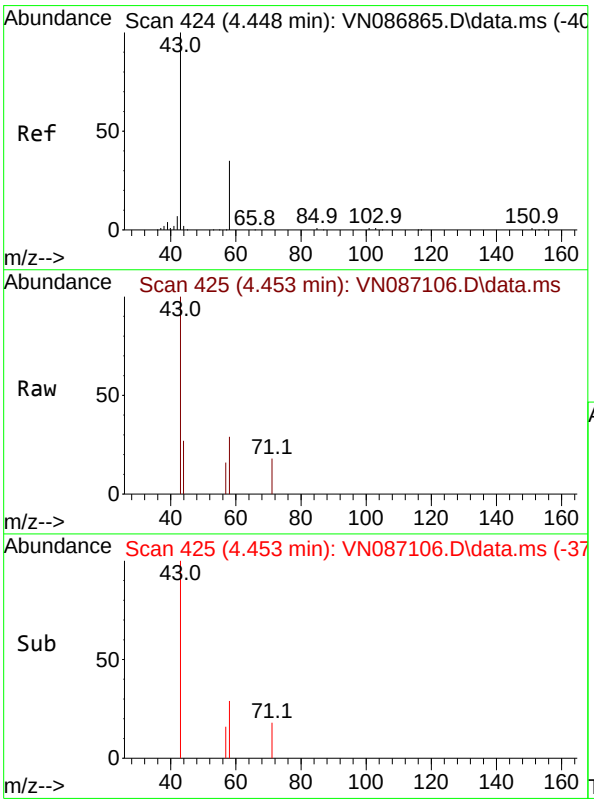
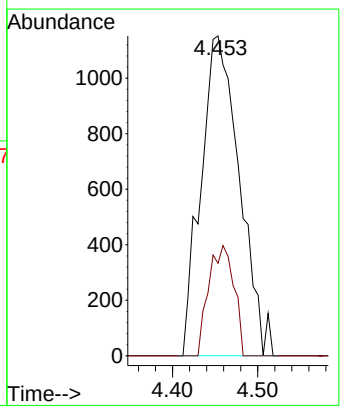


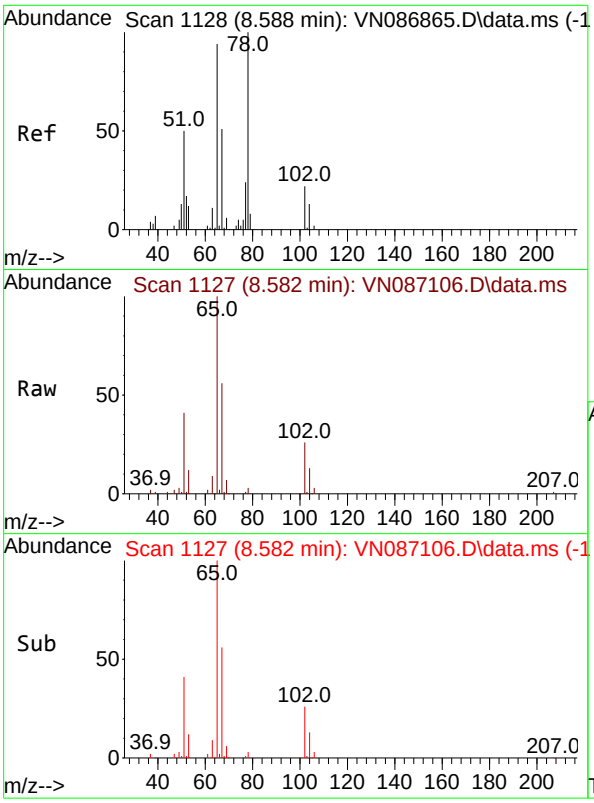




#16
Acetone
Concen: 3.114 ug/l
RT: 4.453 min Scan# 425
Delta R.T. 0.006 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion: 43 Resp: 3613

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 28.9 | 28.0 | 42.0 |






#33
1,2-Dichloroethane-d4
Concen: 55.015 ug/l
RT: 8.582 min Scan# 1
Delta R.T. -0.006 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion: 65 Resp: 12035

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 65 | 100 | | |
| 67 | 55.1 | 0.0 | 105.6 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-06

**Manual Integrations**
**APPROVED**

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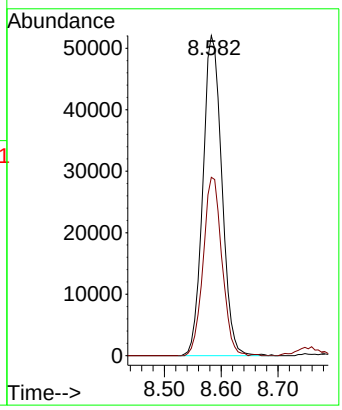
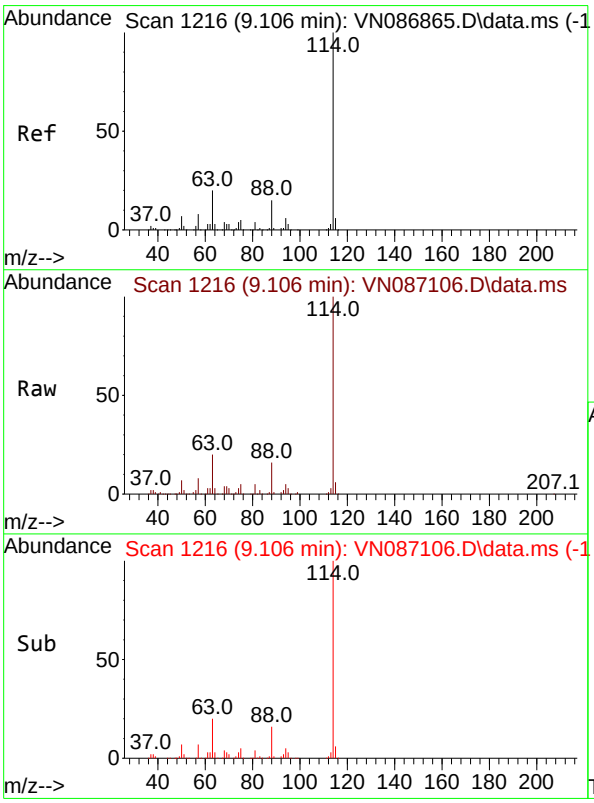
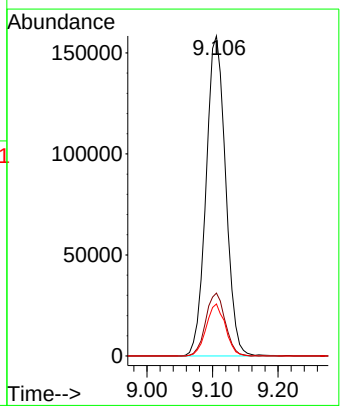


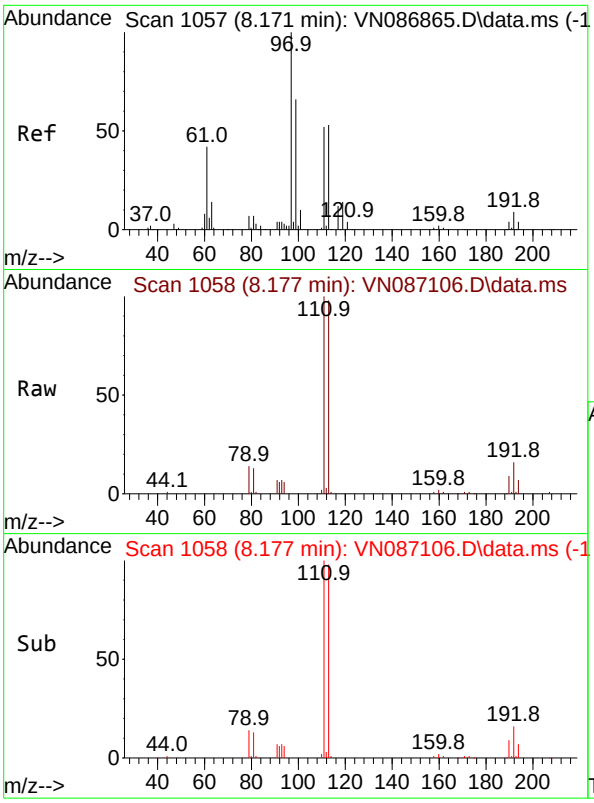




#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.106 min Scan# 1216
Delta R.T. -0.000 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion:114 Resp: 328324

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 19.6 | 0.0 | 39.6 |
| 88 | 16.3 | 0.0 | 30.2 |

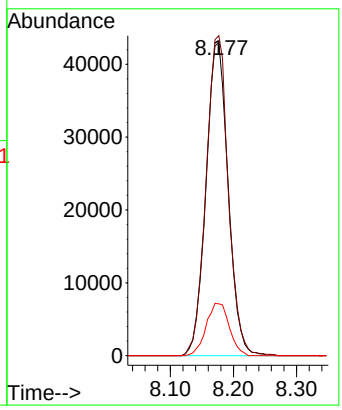





#35
Dibromofluoromethane
Concen: 53.856 ug/l
RT: 8.177 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion:113 Resp: 10478

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 113 | 100 | | |
| 111 | 102.5 | 84.2 | 126.2 |
| 192 | 17.4 | 14.2 | 21.4 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-06

**Manual Integrations**
**APPROVED**

Reviewed By :John Carlone 06/20/2025
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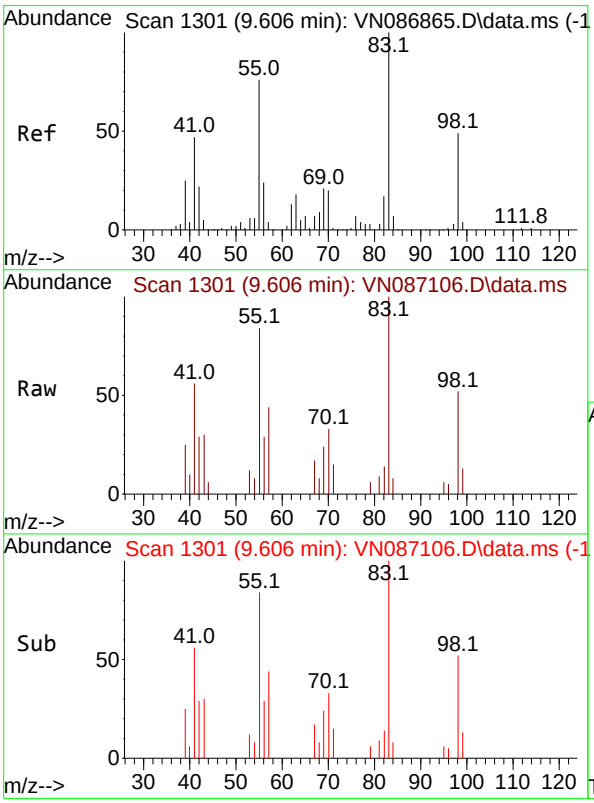
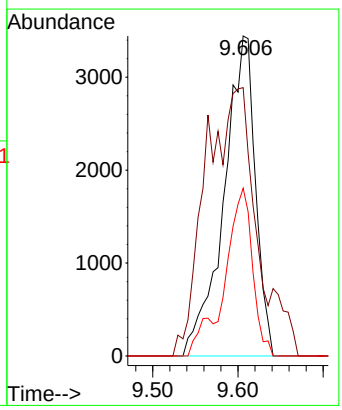
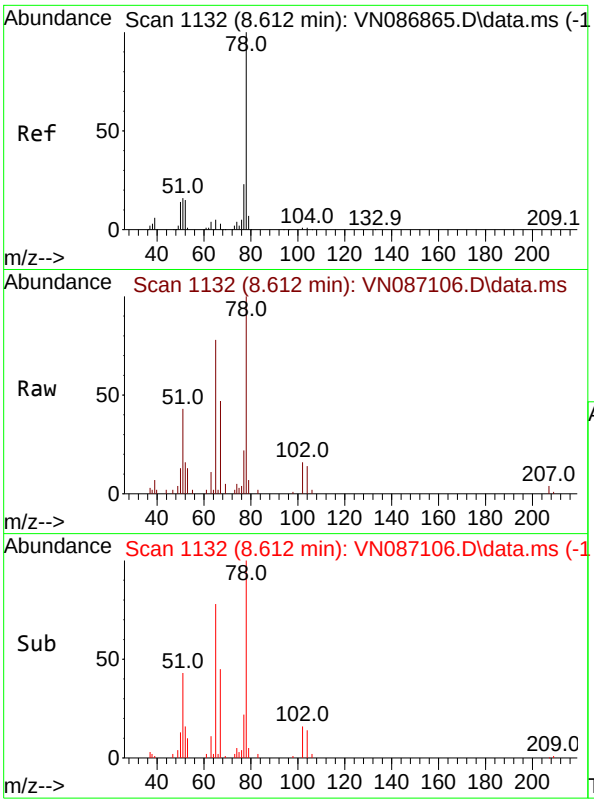



#39
Methylcyclohexane
Concen: 2.232 ug/l
RT: 9.606 min Scan# 1301
Delta R.T. -0.000 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion: 83 Resp: 8864

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 55 | 77.3 | 61.0 | 91.6 |
| 98 | 52.4 | 38.9 | 58.3 |






#40
Benzene
Concen: 3.097 ug/l
RT: 8.612 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion: 78 Resp: 2936

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 21.8 | 18.7 | 28.1 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-06

**Manual Integrations**
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Reviewed By :John Carlone 06/20/2025
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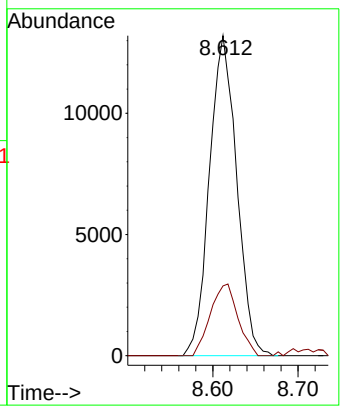
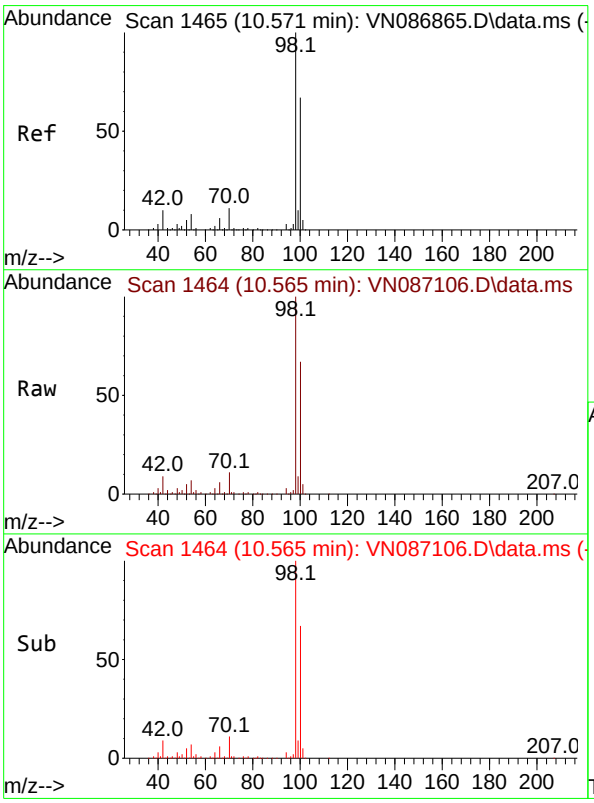
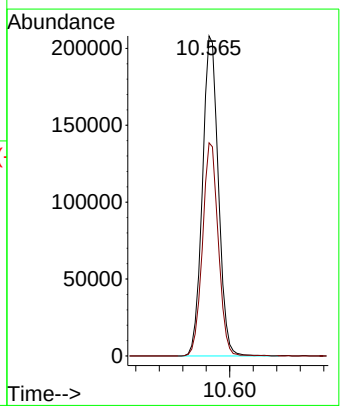


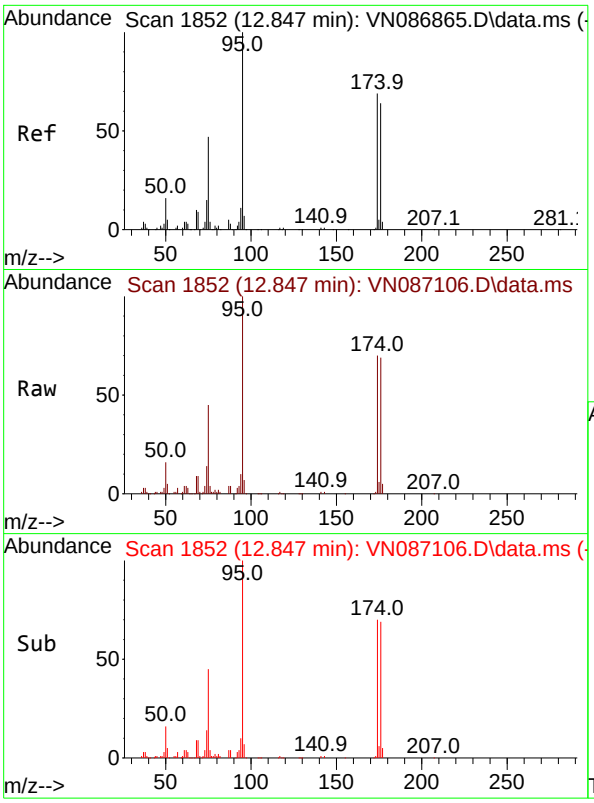




#50
Toluene-d8
Concen: 50.642 ug/l
RT: 10.565 min Scan# 1464
Delta R.T. -0.006 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion: 98 Resp: 390073

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 98 | 100 | | |
| 100 | 66.0 | 53.4 | 80.0 |

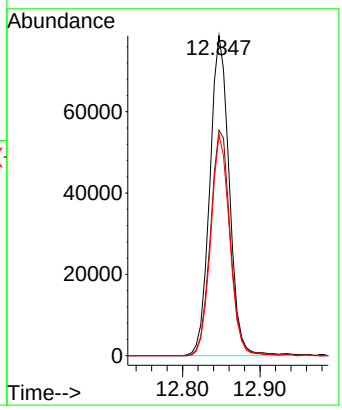





#62
4-Bromofluorobenzene
Concen: 47.920 ug/l
RT: 12.847 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion: 95 Resp: 13713

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 71.8 | 0.0 | 141.8 |
| 176 | 67.9 | 0.0 | 132.6 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-06

**Manual Integrations**
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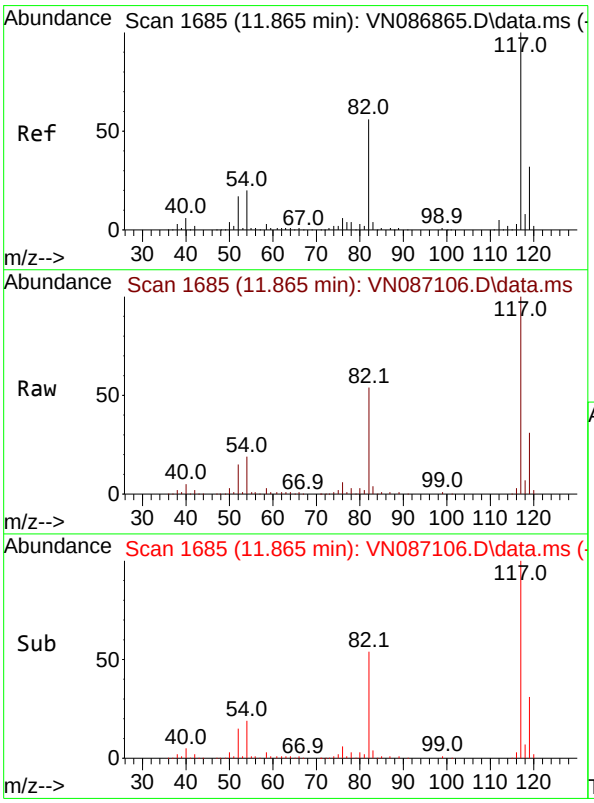
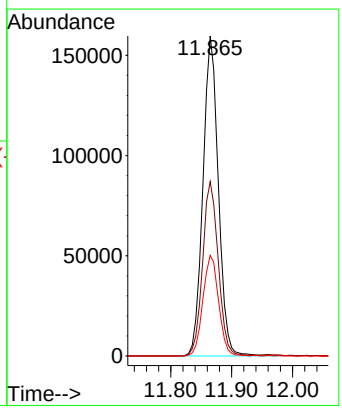
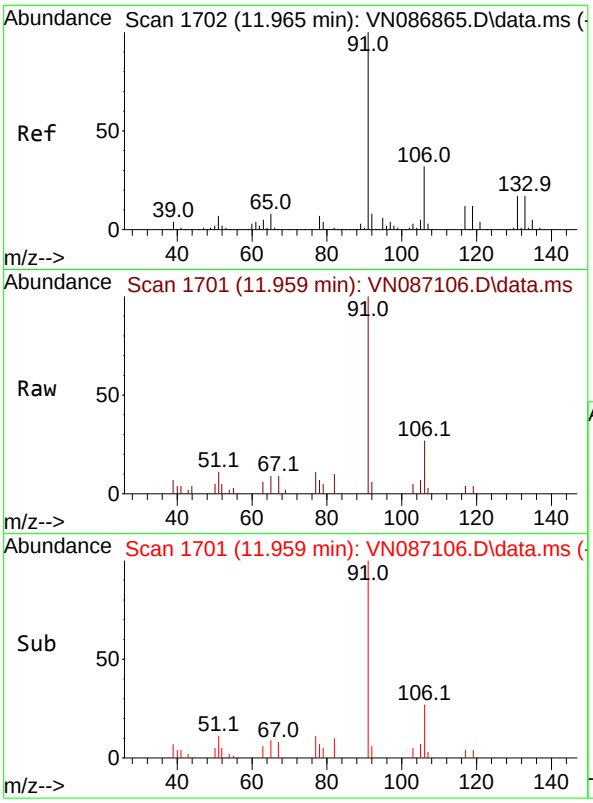



#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1685
Delta R.T. -0.000 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion:117 Resp: 281009

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.5 | 44.6 | 67.0 |
| 119 | 31.5 | 25.5 | 38.3 |






#67
Ethyl Benzene
Concen: 1.411 ug/l
RT: 11.959 min Scan# 1
Delta R.T. -0.006 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion: 91 Resp: 1506

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 26.8 | 25.4 | 38.2 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-06

**Manual Integrations**
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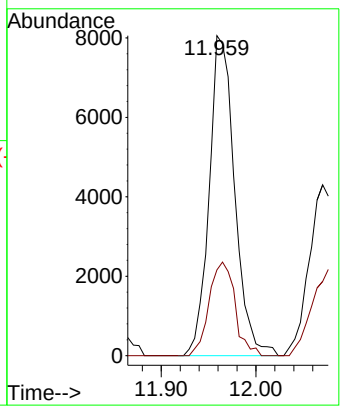
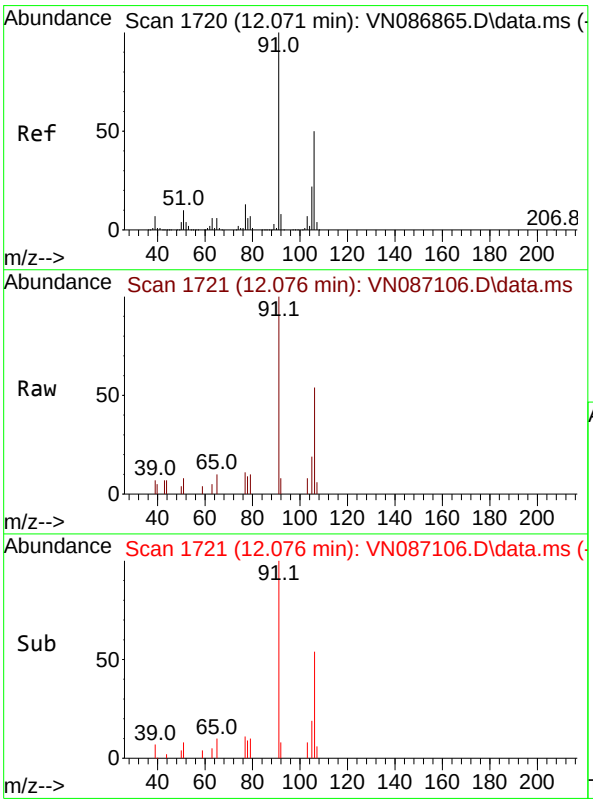
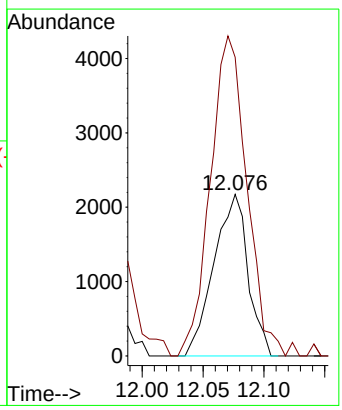


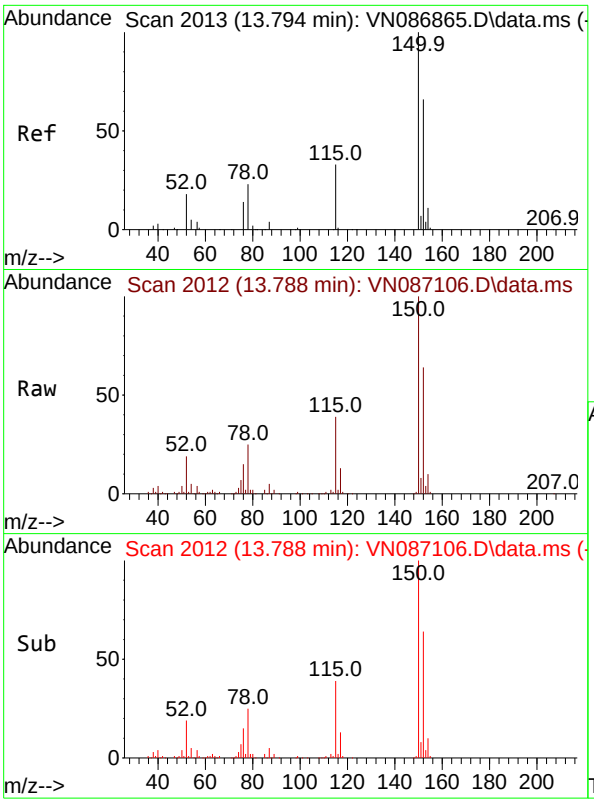




#68
m/p-Xylenes
Concen: 1.036 ug/l
RT: 12.076 min Scan# 1721
Delta R.T. 0.006 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion:106 Resp: 4232

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 212.9 | 159.4 | 239.0 |






#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2
Delta R.T. -0.006 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion:152 Resp: 13150

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 115 | 60.8 | 30.1 | 90.5 |
| 150 | 159.1 | 0.0 | 345.0 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-06

**Manual Integrations**
**APPROVED**

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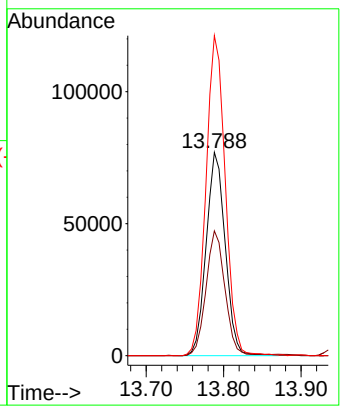
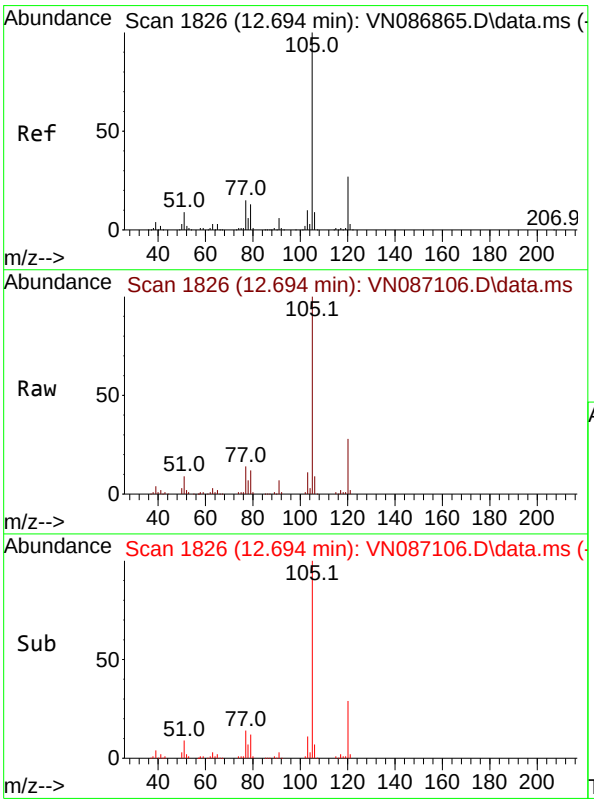
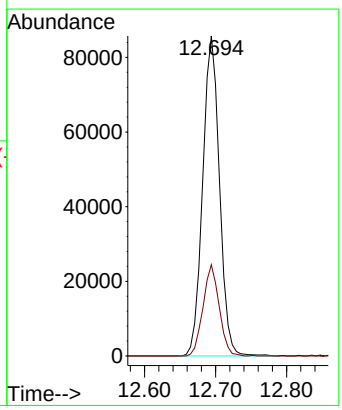


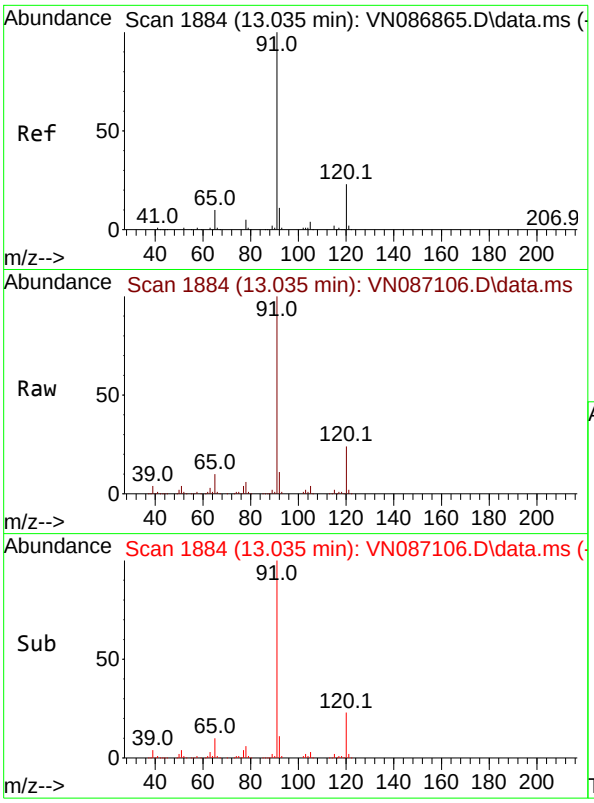




#73
Isopropylbenzene
Concen: 14.714 ug/l
RT: 12.694 min Scan# 1826
Delta R.T. -0.000 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion:105 Resp: 140969

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 27.3 | 13.5 | 40.4 |






#78
n-propylbenzene
Concen: 36.441 ug/l
RT: 13.035 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion: 91 Resp: 42426

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 23.7 | 11.4 | 34.2 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-06

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**APPROVED**

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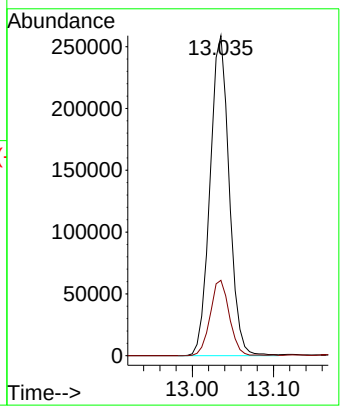
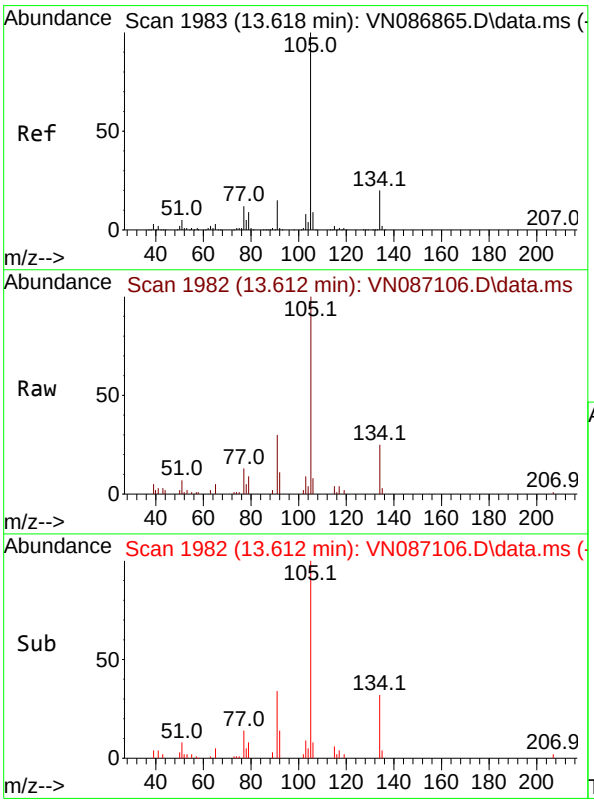
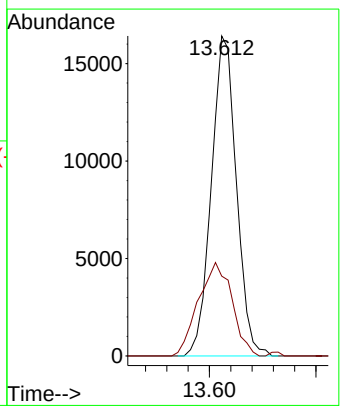


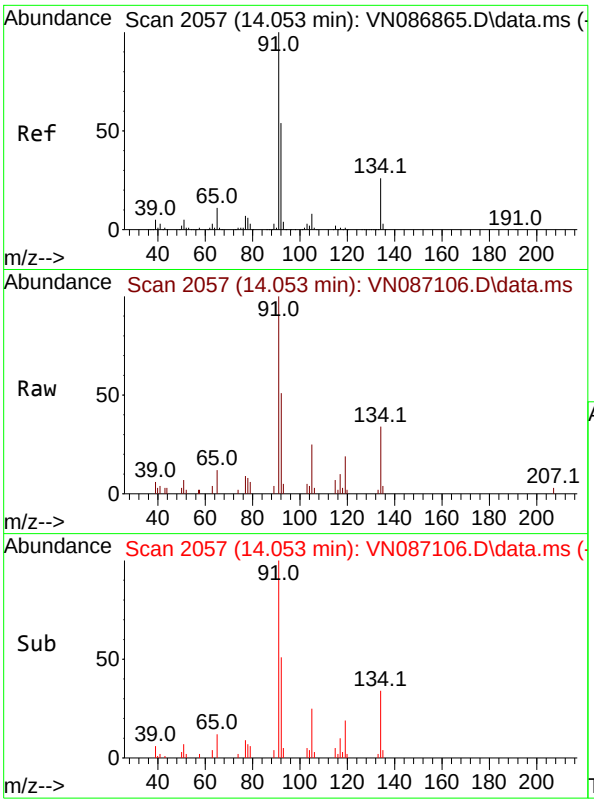




#85
sec-Butylbenzene
Concen: 2.544 ug/l
RT: 13.612 min Scan# 1982
Delta R.T. -0.006 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion:105 Resp: 26748

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 134 | 39.3 | 10.0 | 30.0# |






#89
n-Butylbenzene
Concen: 1.679 ug/l m
RT: 14.053 min Scan# 2(
Delta R.T. -0.000 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion: 91 Resp: 1413(

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 64.3 | 27.5 | 82.4 |
| 134 | 0.0 | 13.0 | 39.0# |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-06

**Manual Integrations**
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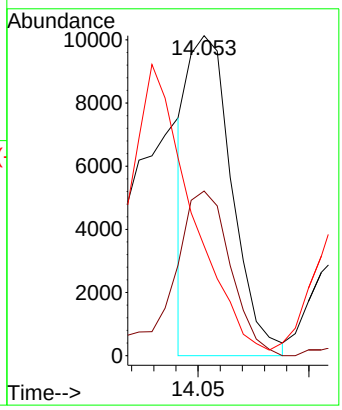
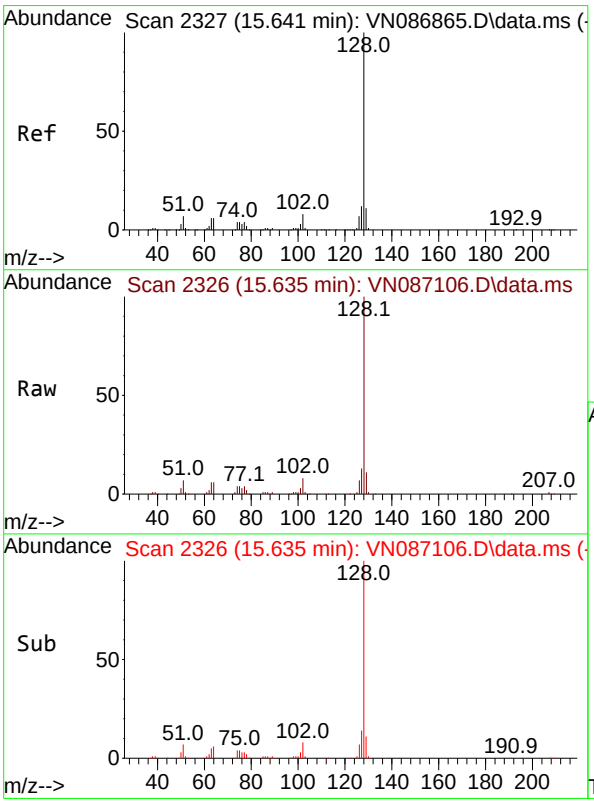
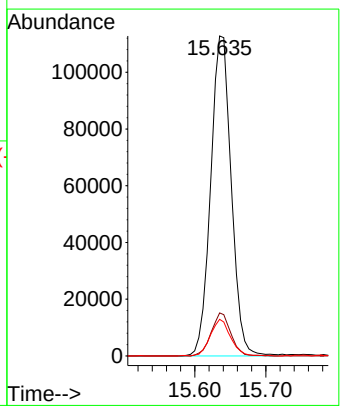



#95
Naphthalene
Concen: 22.968 ug/l
RT: 15.635 min Scan# 2326
Delta R.T. -0.006 min
Lab File: VN087106.D
Acq: 19 Jun 2025 13:17

Tgt Ion:128 Resp: 226720

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 127 | 12.8 | 10.2 | 15.2 |
| 129 | 11.2 | 8.8 | 13.2 |



Raw Data: **VN087107.D**

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-08 | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-02 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087107.D | 1 | | 06/19/25 13:38 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 88.5 | | 0.15 | 1.00 | ug/L |
| 108-88-3 | Toluene | 22.0 | | 0.14 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 520 | E | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1200 | E | 0.24 | 2.00 | ug/L |
| 1330-20-7 | Total Xylenes | 1770 | E | 0.36 | 3.00 | ug/L |
| 95-47-6 | o-Xylene | 570 | E | 0.12 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 38.1 | | 0.12 | 1.00 | ug/L |
| 103-65-1 | n-propylbenzene | 79.6 | | 0.13 | 1.00 | ug/L |
| 108-67-8 | 1,3,5-Trimethylbenzene | 46.5 | | 0.15 | 1.00 | ug/L |
| 98-06-6 | tert-Butylbenzene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 95-63-6 | 1,2,4-Trimethylbenzene | 890 | E | 0.14 | 1.00 | ug/L |
| 135-98-8 | sec-Butylbenzene | 3.60 | | 0.13 | 1.00 | ug/L |
| 99-87-6 | p-Isopropyltoluene | 2.80 | | 0.13 | 1.00 | ug/L |
| 104-51-8 | n-Butylbenzene | 3.40 | | 0.15 | 1.00 | ug/L |
| 91-20-3 | Naphthalene | 350 | E | 0.20 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 52.3 | | 74 - 125 | 105% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 51.4 | | 75 - 124 | 103% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 52.9 | | 86 - 113 | 106% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 47.2 | | 77 - 121 | 94% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 261000 | 8.23 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 524000 | 9.106 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 470000 | 11.865 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 202000 | 13.788 | | | |

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-08 | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-02 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087107.D | 1 | | 06/19/25 13:38 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087107.D
Acq On : 19 Jun 2025 13:38
Operator : JC\MD
Sample : Q2333-02
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 20 01:24:10 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.230 | 168 | 260611 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 524185 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 470225 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 201938 | 50.000 | ug/l | # 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.583 | 65 | 182621 | 52.338 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 104.680% | | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 159633 | 51.388 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 102.780% | | | |
| 50) Toluene-d8 | 10.565 | 98 | 650422 | 52.890 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 105.780% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 215504 | 47.167 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 94.340% | | | |
| Target Compounds | | | | | | Qvalue |
| 11) Tert butyl alcohol | 5.548 | 59 | 18017 | 19.030 | ug/l | 96 |
| 25) 2-Butanone | 7.494 | 43 | 7336 | 2.439 | ug/l # | 88 |
| 31) Cyclohexane | 8.265 | 56 | 180028 | 31.811 | ug/l | 91 |
| 39) Methylcyclohexane | 9.606 | 83 | 130866 | 20.636 | ug/l | 95 |
| 40) Benzene | 8.612 | 78 | 1339654 | 88.504 | ug/l | 100 |
| 52) Toluene | 10.630 | 92 | 203519 | 22.001 | ug/l | 99 |
| 67) Ethyl Benzene | 11.965 | 91 | 9306781 | 520.985 | ug/l | 98 |
| 68) m/p-Xylenes | 12.076 | 106 | 8208444 | 1200.368 | ug/l | 94 |
| 69) o-Xylene | 12.394 | 106 | 3736770 | 570.561 | ug/l | 96 |
| 73) Isopropylbenzene | 12.694 | 105 | 560609 | 38.107 | ug/l | 99 |
| 78) n-propylbenzene | 13.035 | 91 | 1423219 | 79.606 | ug/l | 98 |
| 80) 1,3,5-Trimethylbenzene | 13.171 | 105 | 564715 | 46.494 | ug/l | 87 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 10846826 | 890.576 | ug/l | 98 |
| 85) sec-Butylbenzene | 13.618 | 105 | 58641m | 3.632 | ug/l | |
| 86) p-Isopropyltoluene | 13.729 | 119 | 37682m | 2.823 | ug/l | |
| 89) n-Butylbenzene | 14.053 | 91 | 44551m | 3.446 | ug/l | |
| 95) Naphthalene | 15.635 | 128 | 5267267 | 347.493 | ug/l | 100 |

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

Sample Results: **VN087107.D**

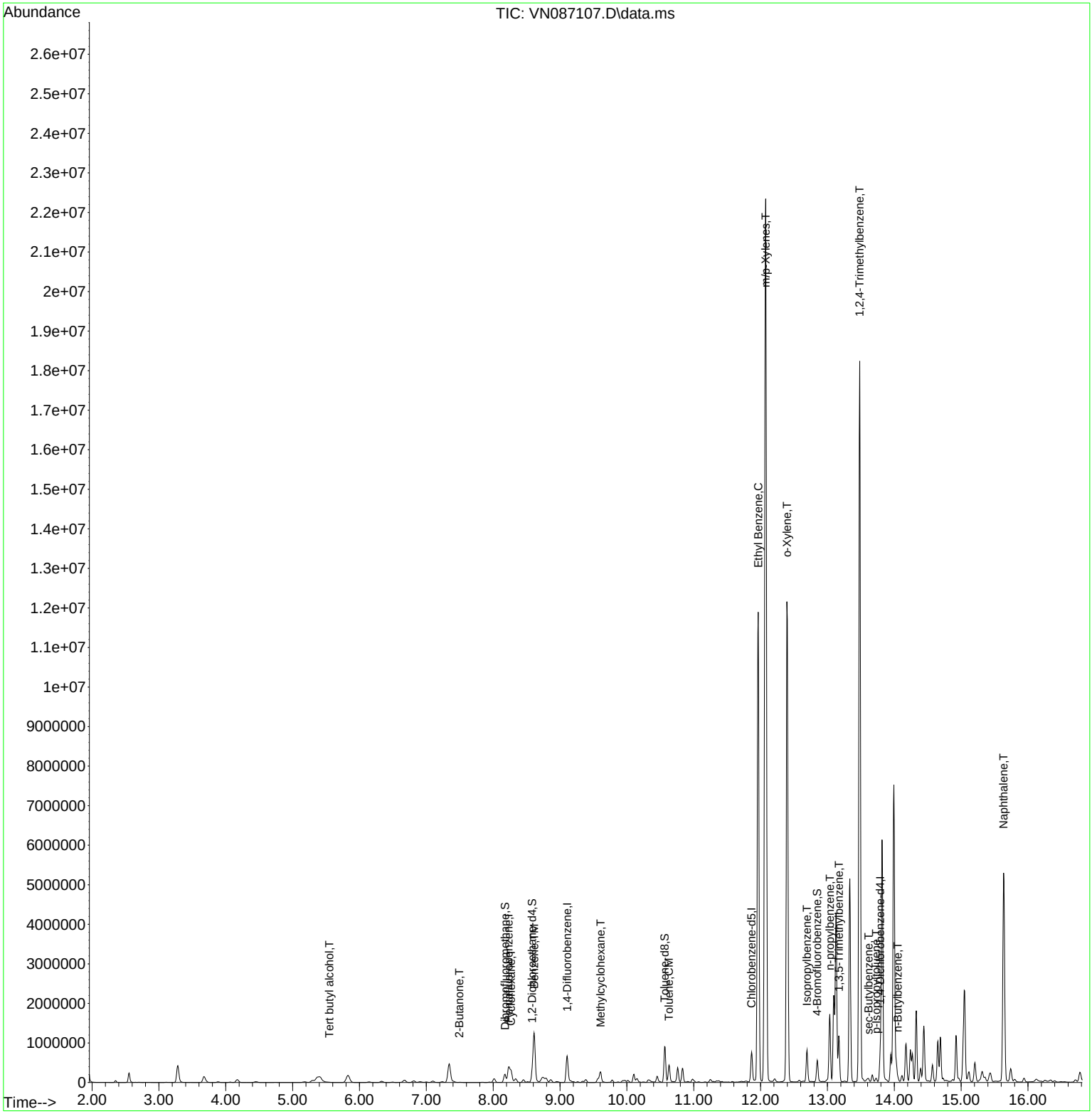
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087107.D
Acq On : 19 Jun 2025 13:38
Operator : JC\MD
Sample : Q2333-02
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 9 Sample Multiplier: 1

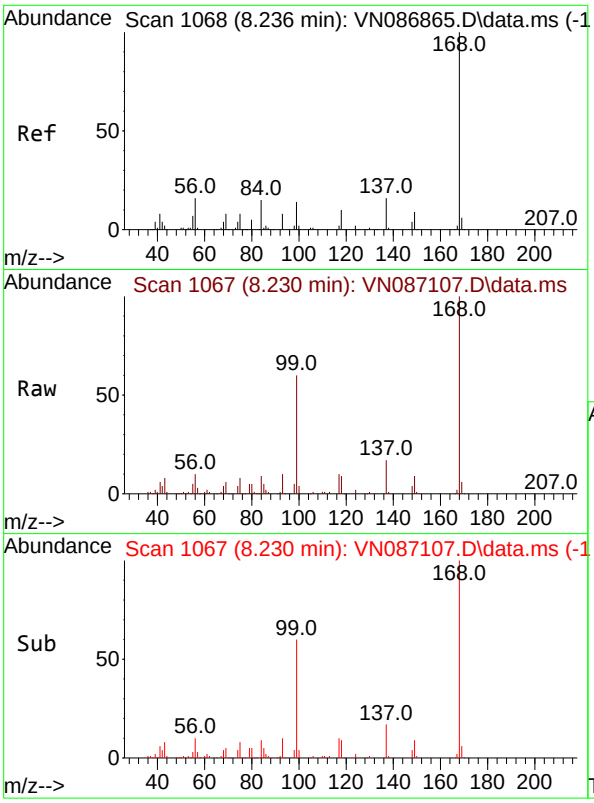
Quant Time: Jun 20 01:24:10 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

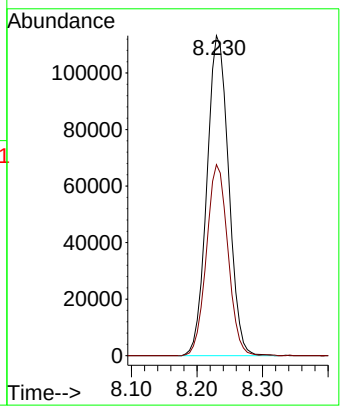





#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.230 min Scan# 1
Delta R.T. -0.006 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion:168 Resp: 26061

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 168 | 100 | | |
| 99 | 59.7 | 49.1 | 73.7 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations**
**APPROVED**

Reviewed By :John Carlone 06/20/2025
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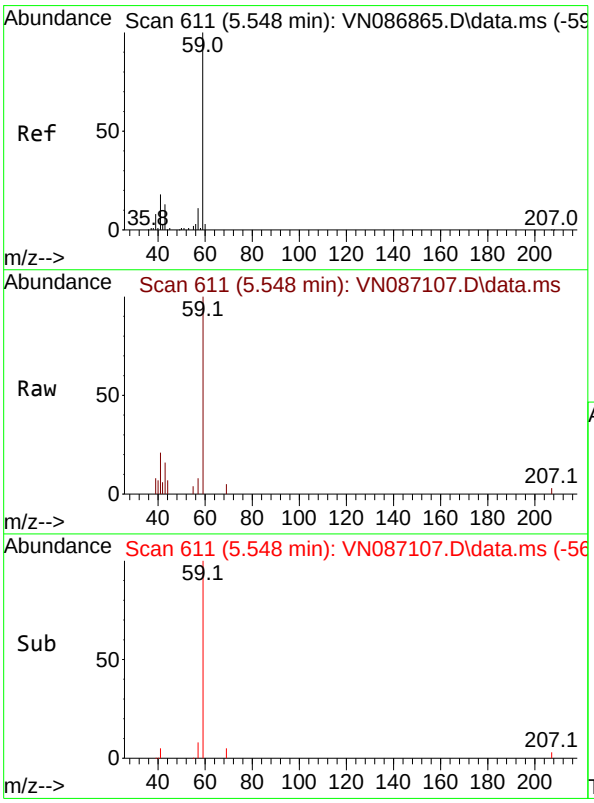
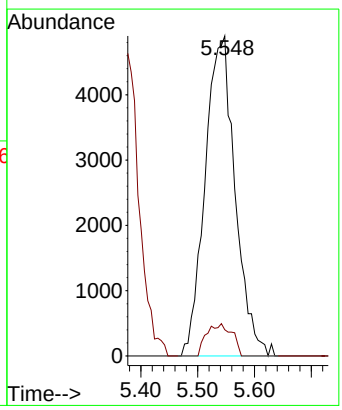
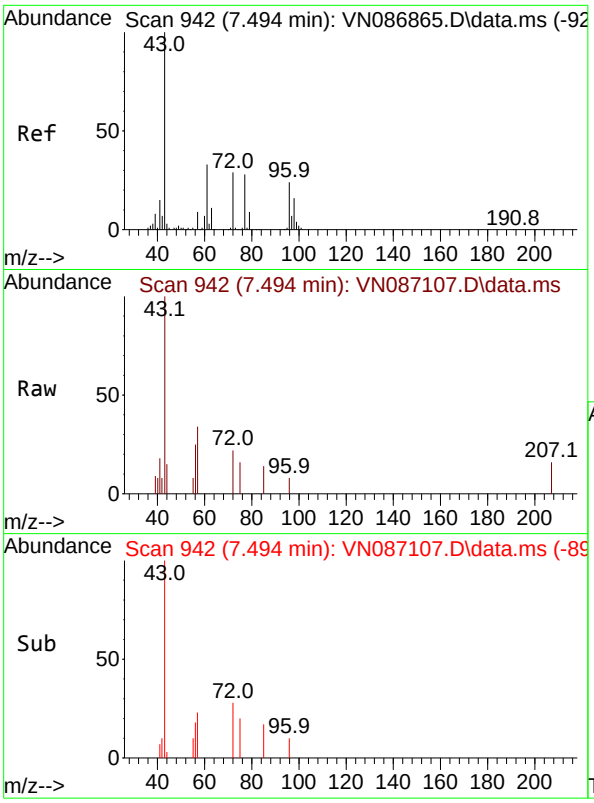



#11
Tert butyl alcohol
Concen: 19.030 ug/l
RT: 5.548 min Scan# 611
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion: 59 Resp: 18017

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 59 | 100 | | |
| 57 | 8.5 | 8.1 | 12.1 |






#25
2-Butanone
Concen: 2.439 ug/l
RT: 7.494 min Scan# 94
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

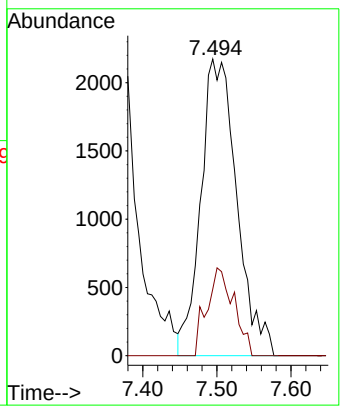
Tgt Ion: 43 Resp: 733

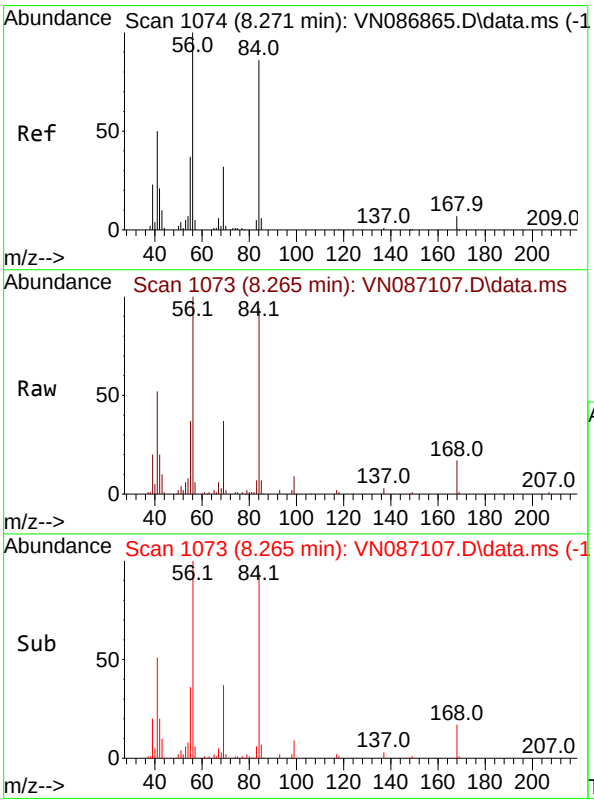
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 22.5 | 23.0 | 34.6 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations**
**APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

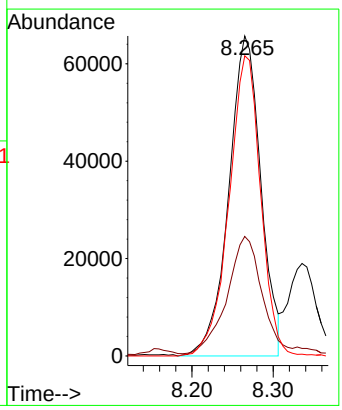


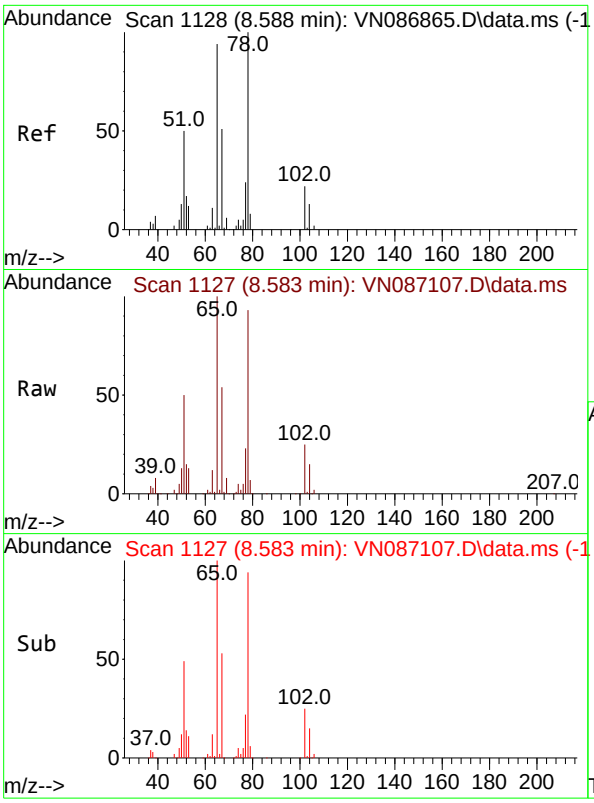




#31
Cyclohexane
Concen: 31.811 ug/l
RT: 8.265 min Scan# 1073
Delta R.T. -0.006 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion: 56 Resp: 180028

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 69 | 36.6 | 25.4 | 38.0 |
| 84 | 93.8 | 68.8 | 103.2 |






#33
1,2-Dichloroethane-d4
Concen: 52.338 ug/l
RT: 8.583 min Scan# 1
Delta R.T. -0.006 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

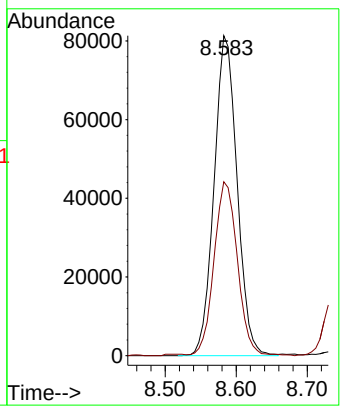
Tgt Ion: 65 Resp: 18262

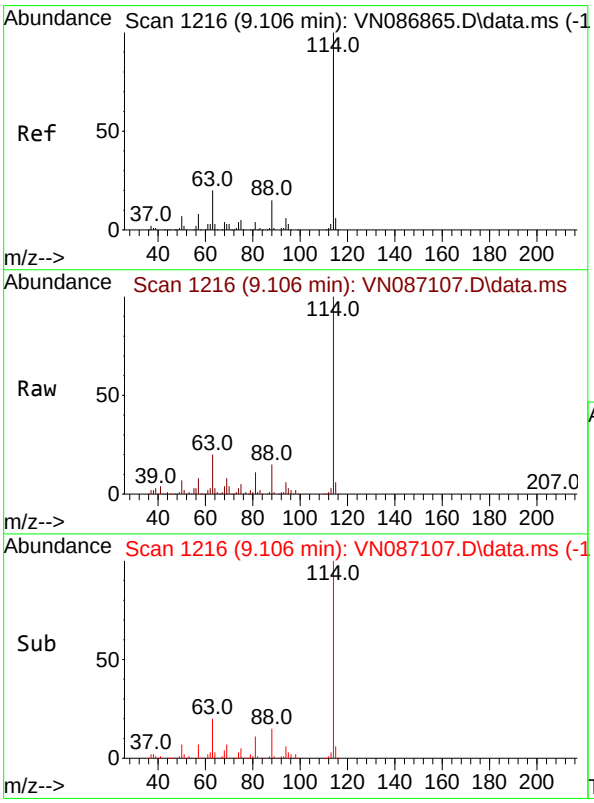
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 65 | 100 | | |
| 67 | 55.4 | 0.0 | 105.6 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations**
**APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

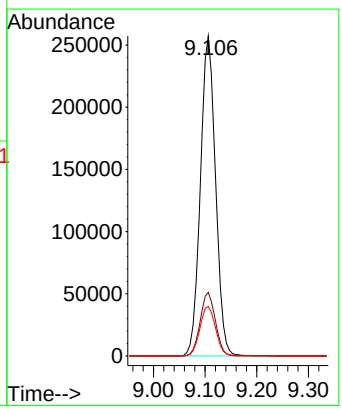


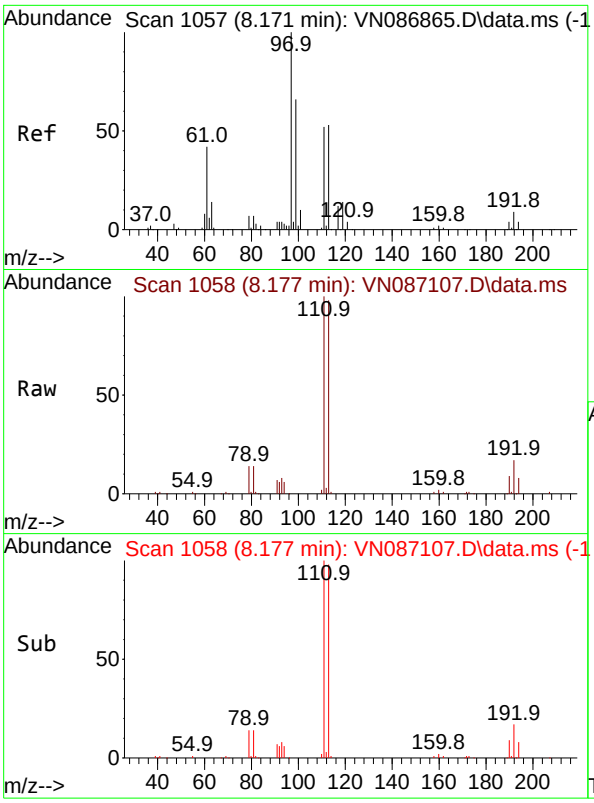




#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.106 min Scan# 1216
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion:114 Resp: 524185

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 19.8 | 0.0 | 39.6 |
| 88 | 15.5 | 0.0 | 30.2 |

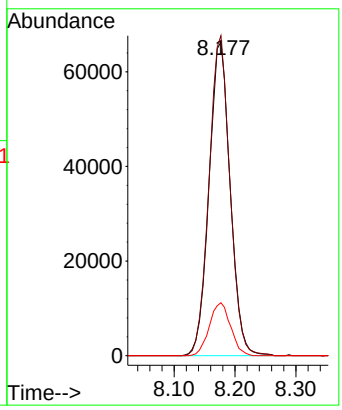





#35
Dibromofluoromethane
Concen: 51.388 ug/l
RT: 8.177 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion:113 Resp: 15963

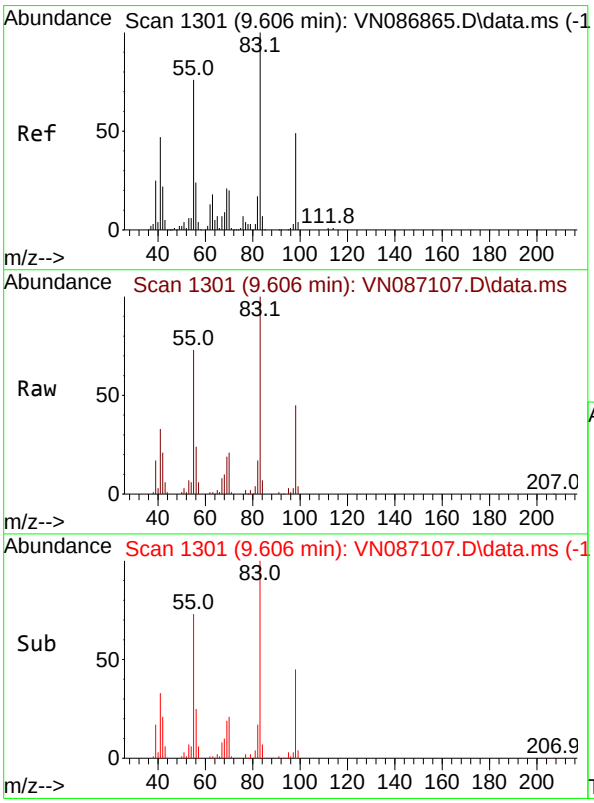
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 113 | 100 | | |
| 111 | 101.1 | 84.2 | 126.2 |
| 192 | 17.0 | 14.2 | 21.4 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations**
**APPROVED**

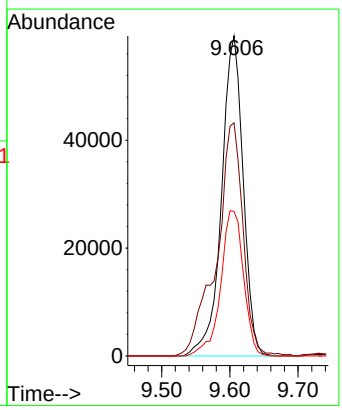
Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

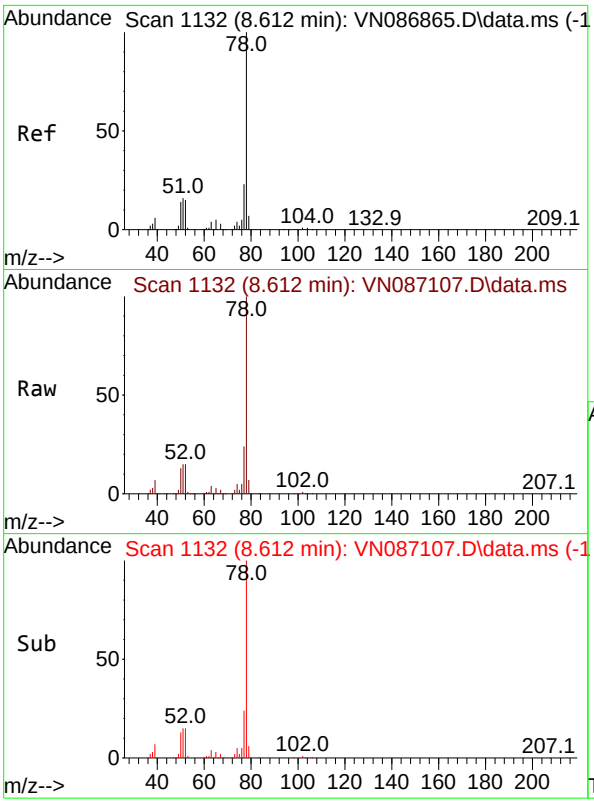



#39
Methylcyclohexane
Concen: 20.636 ug/l
RT: 9.606 min Scan# 1301
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion: 83 Resp: 130866

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 55 | 72.4 | 61.0 | 91.6 |
| 98 | 45.2 | 38.9 | 58.3 |






#40
Benzene
Concen: 88.504 ug/l
RT: 8.612 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion: 78 Resp: 133965

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 23.6 | 18.7 | 28.1 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations**
**APPROVED**

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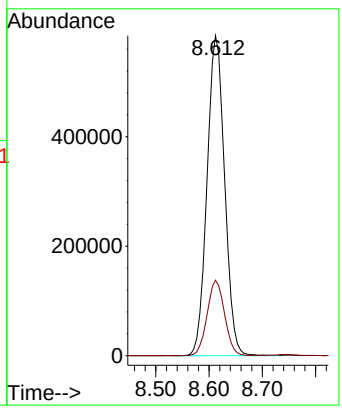
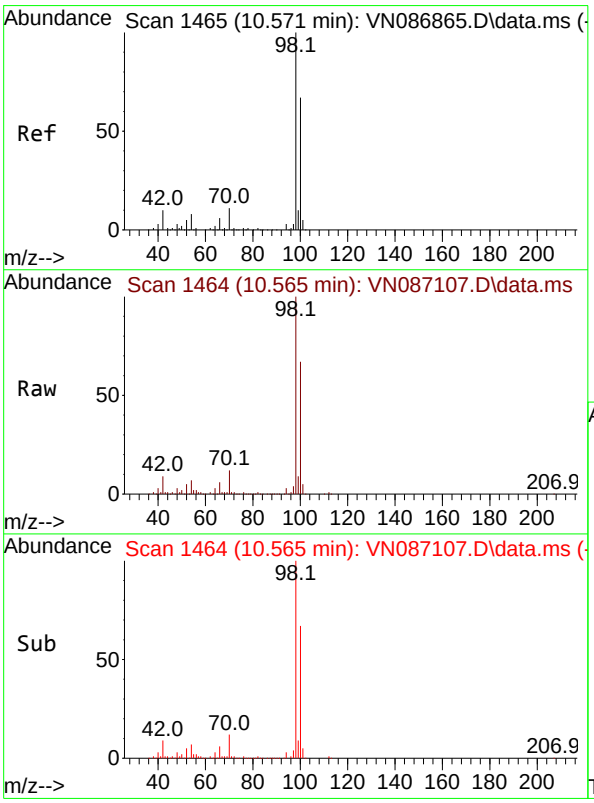
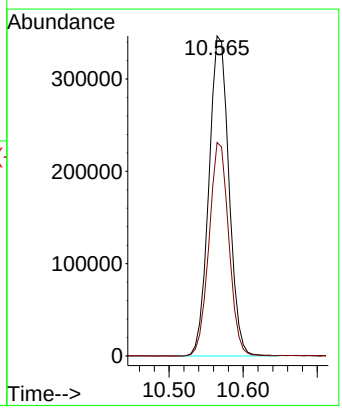


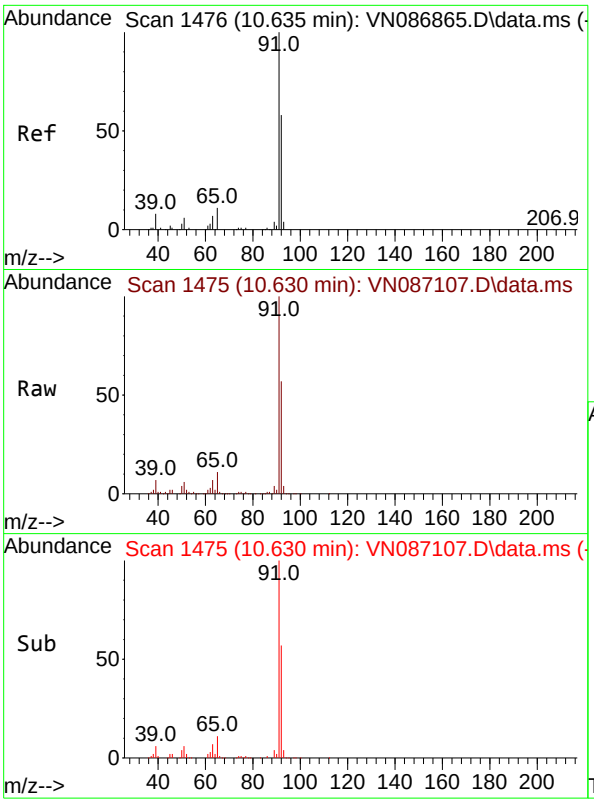




#50
Toluene-d8
Concen: 52.890 ug/l
RT: 10.565 min Scan# 1464
Delta R.T. -0.006 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion: 98 Resp: 650422

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 98 | 100 | | |
| 100 | 65.9 | 53.4 | 80.0 |

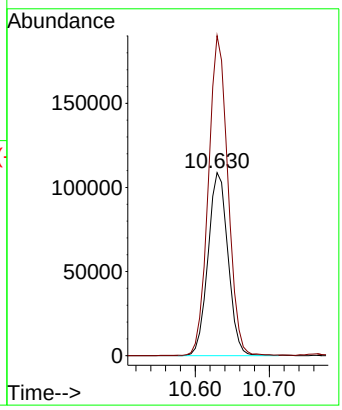





#52
Toluene
Concen: 22.001 ug/l
RT: 10.630 min Scan# 14
Delta R.T. -0.006 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion: 92 Resp: 20351

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 92 | 100 | | |
| 91 | 171.5 | 136.5 | 204.7 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations**
**APPROVED**

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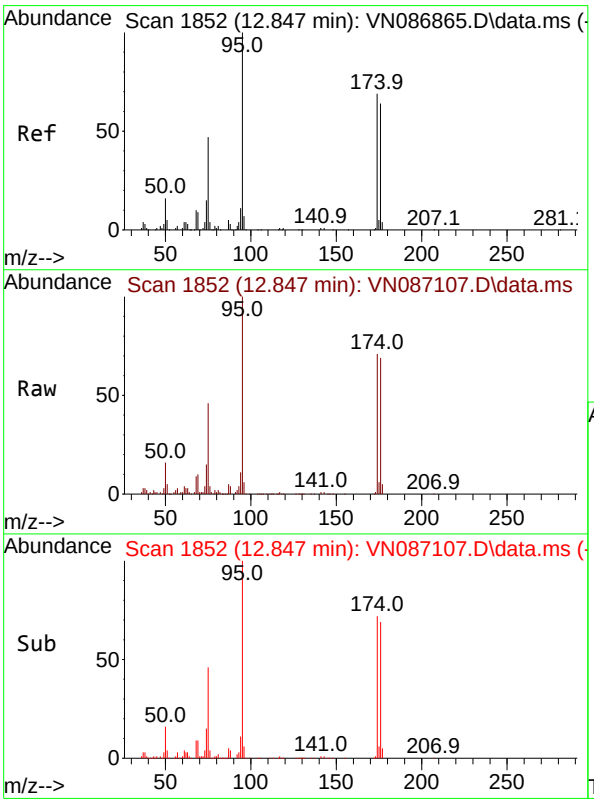
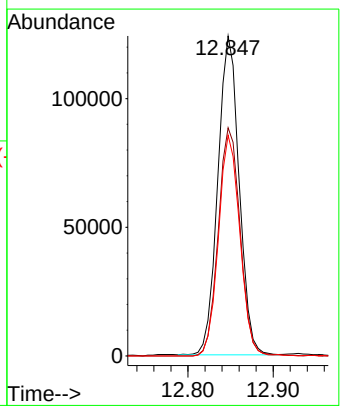
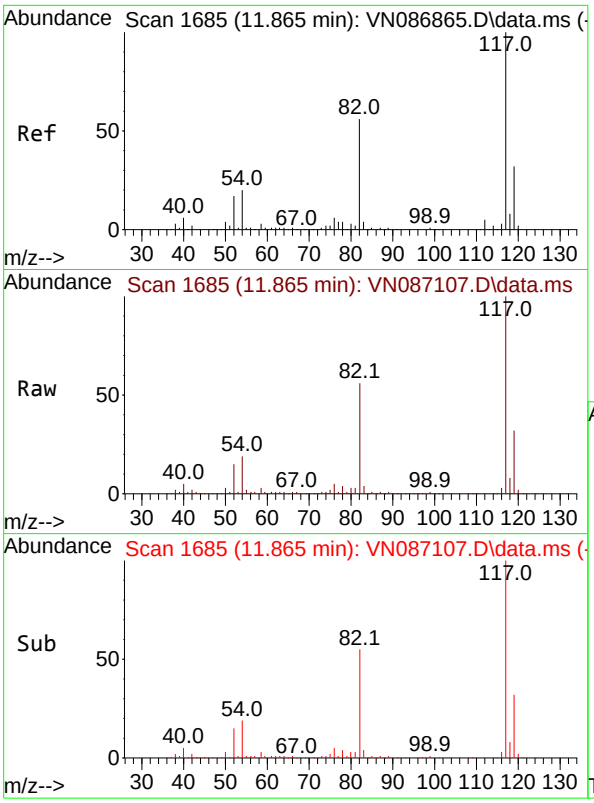



#62
4-Bromofluorobenzene
Concen: 47.167 ug/l
RT: 12.847 min Scan# 1852
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion: 95 Resp: 215504

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 73.4 | 0.0 | 141.8 |
| 176 | 69.4 | 0.0 | 132.6 |

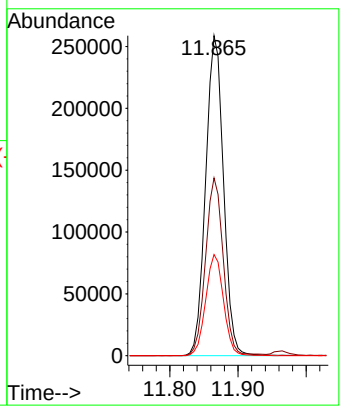





#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion:117 Resp: 47022

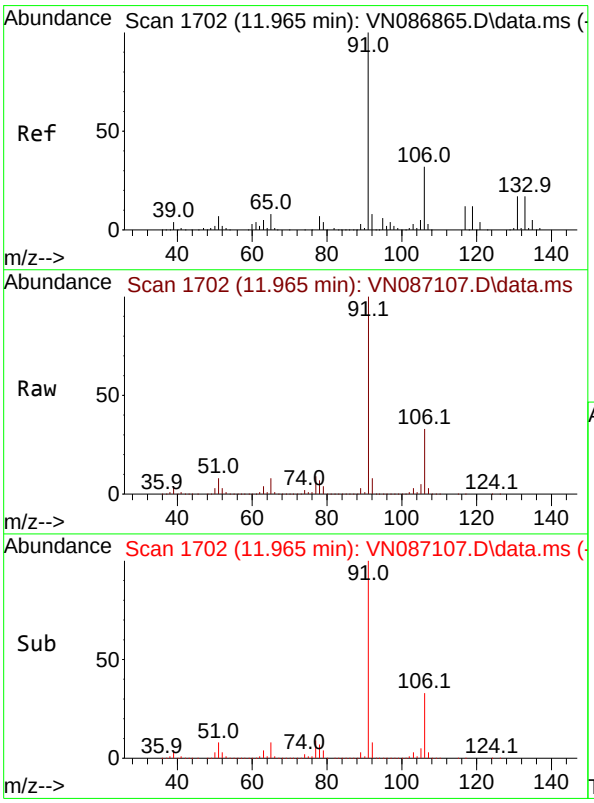
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 55.5 | 44.6 | 67.0 |
| 119 | 31.6 | 25.5 | 38.3 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations**
**APPROVED**

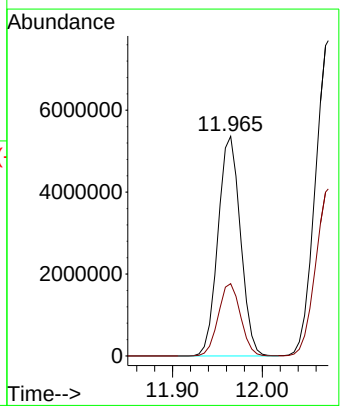
Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

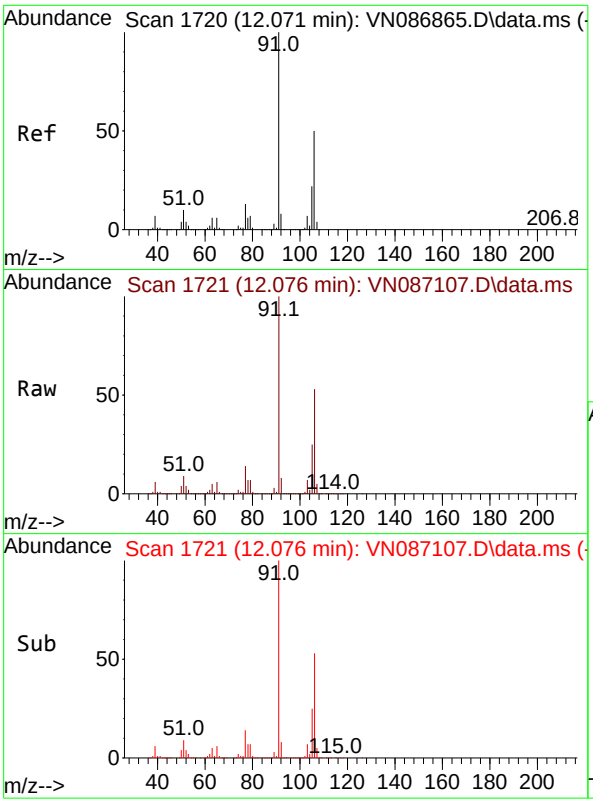



#67
Ethyl Benzene
Concen: 520.985 ug/l
RT: 11.965 min Scan# 1702
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion: 91 Resp: 9306781

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 32.9 | 25.4 | 38.2 |






#68
m/p-Xylenes
Concen: 1200.368 ug/l
RT: 12.076 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

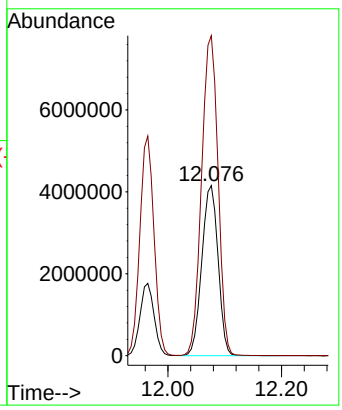
Tgt Ion:106 Resp: 820844

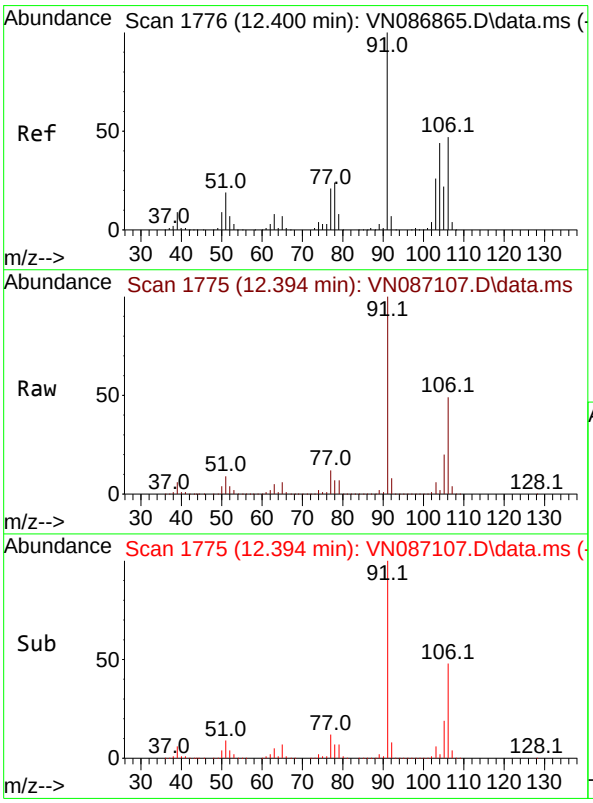
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 190.7 | 159.4 | 239.0 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations**
**APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

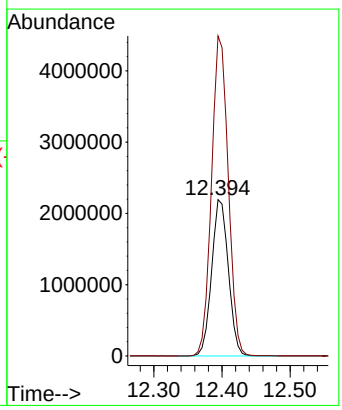


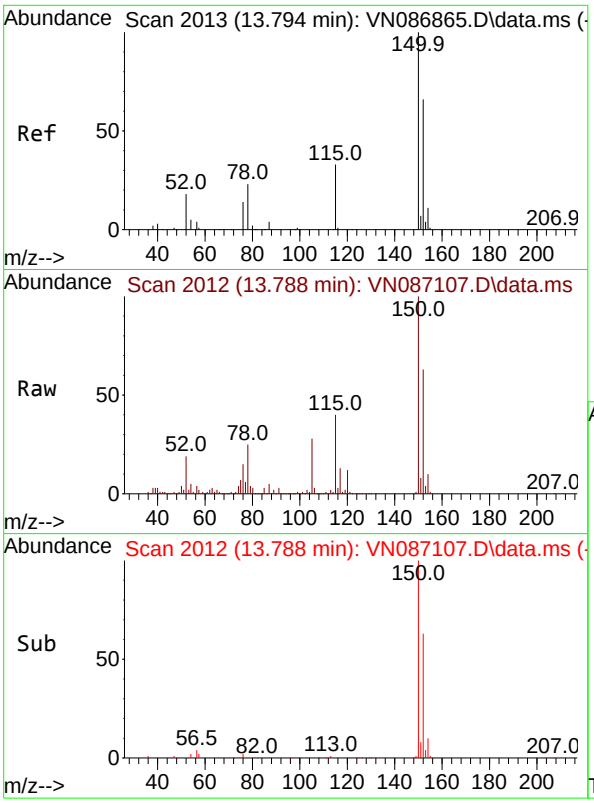




#69
o-Xylene
Concen: 570.561 ug/l
RT: 12.394 min Scan# 1775
Delta R.T. -0.006 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion:106 Resp: 3736770

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 205.3 | 106.1 | 318.1 |

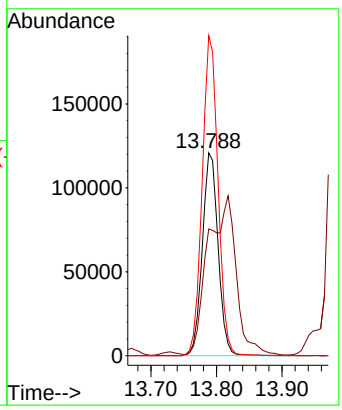





#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2
Delta R.T. -0.006 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion:152 Resp: 20193

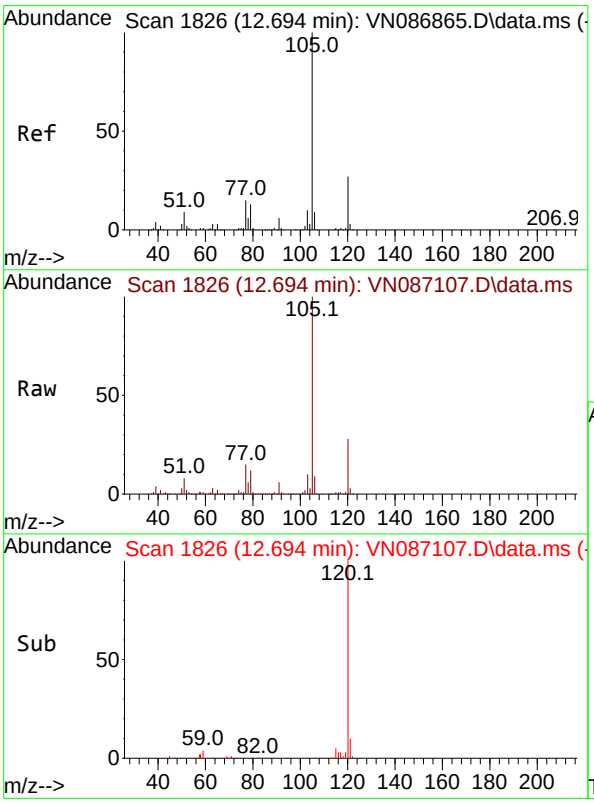
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 115 | 0.0 | 30.1 | 90.5 |
| 150 | 158.4 | 0.0 | 345.0 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations**
**APPROVED**

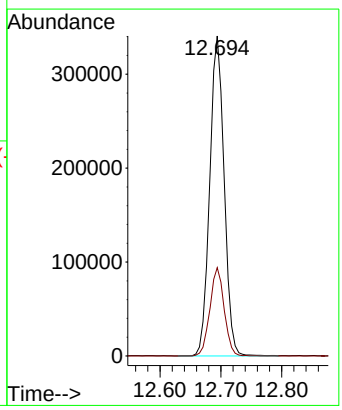
Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

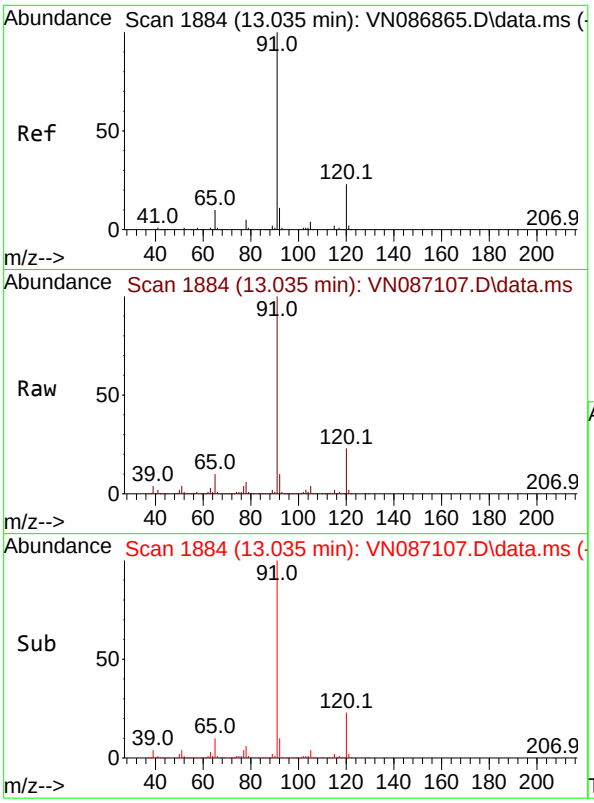



#73
Isopropylbenzene
Concen: 38.107 ug/l
RT: 12.694 min Scan# 1826
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion:105 Resp: 560609

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 27.2 | 13.5 | 40.4 |

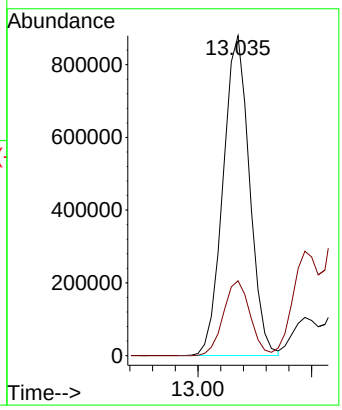





#78
n-propylbenzene
Concen: 79.606 ug/l
RT: 13.035 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion: 91 Resp: 142321

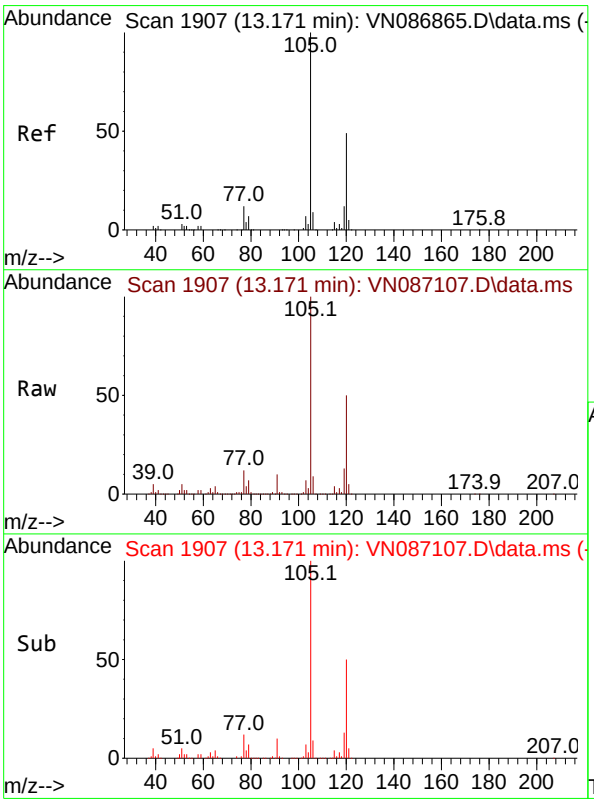
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 23.6 | 11.4 | 34.2 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations**
**APPROVED**

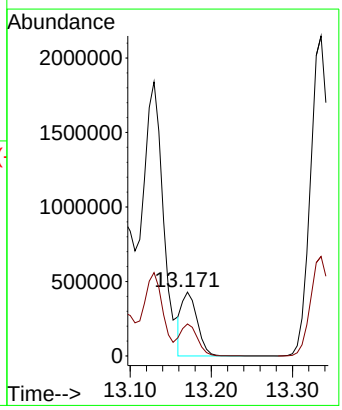
Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

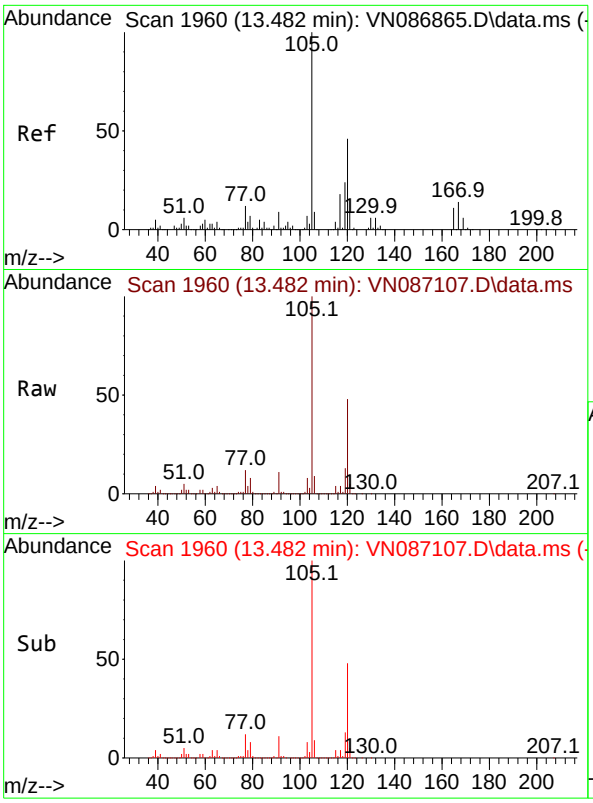



#80
1,3,5-Trimethylbenzene
Concen: 46.494 ug/l
RT: 13.171 min Scan# 1907
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion:105 Resp: 564715

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 58.6 | 24.9 | 74.6 |

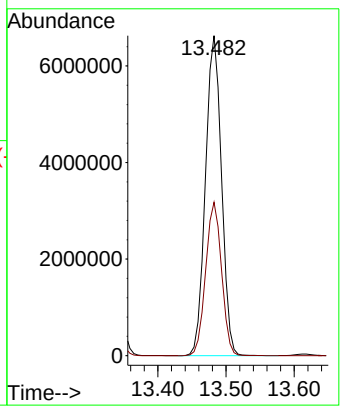





#84
1,2,4-Trimethylbenzene
Concen: 890.576 ug/l
RT: 13.482 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion:105 Resp:1084682

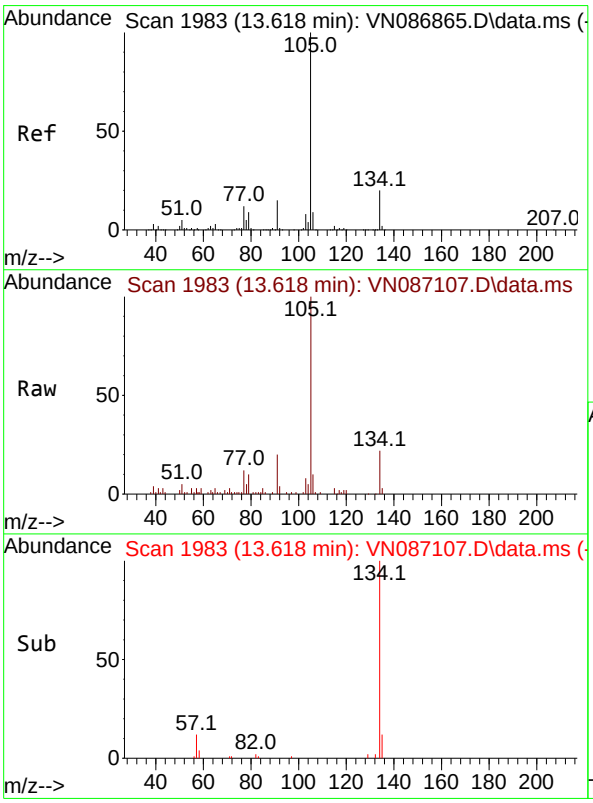
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.5 | 23.2 | 69.6 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations**
**APPROVED**

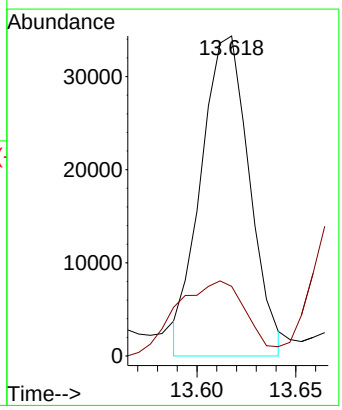
Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

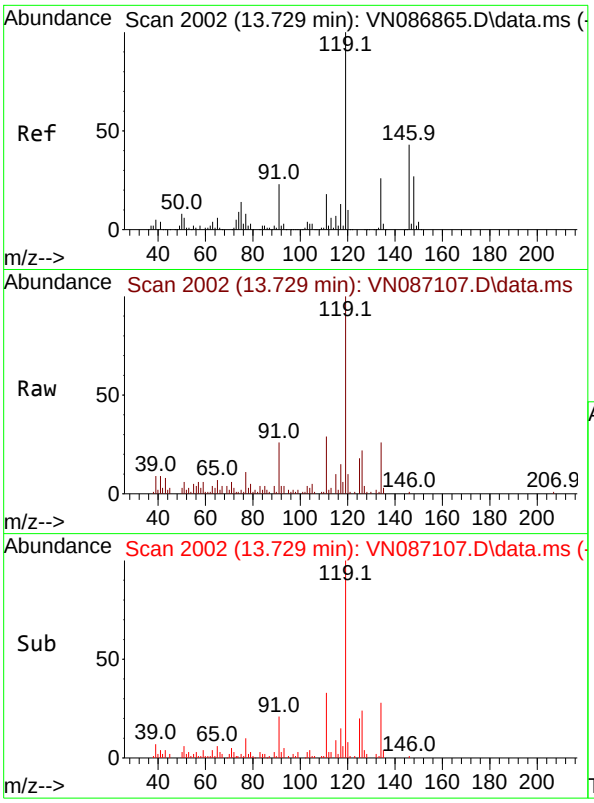



#85
sec-Butylbenzene
Concen: 3.632 ug/l m
RT: 13.618 min Scan# 1983
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion:105 Resp: 58641

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 134 | 0.0 | 10.0 | 30.0# |






#86
p-Isopropyltoluene
Concen: 2.823 ug/l m
RT: 13.729 min Scan# 2
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

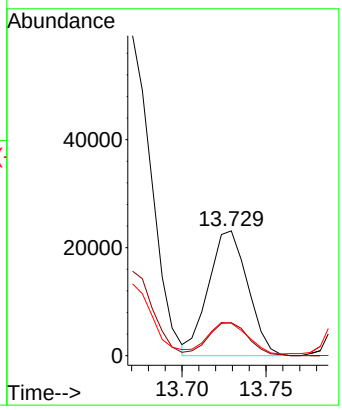
Tgt Ion:119 Resp: 3768

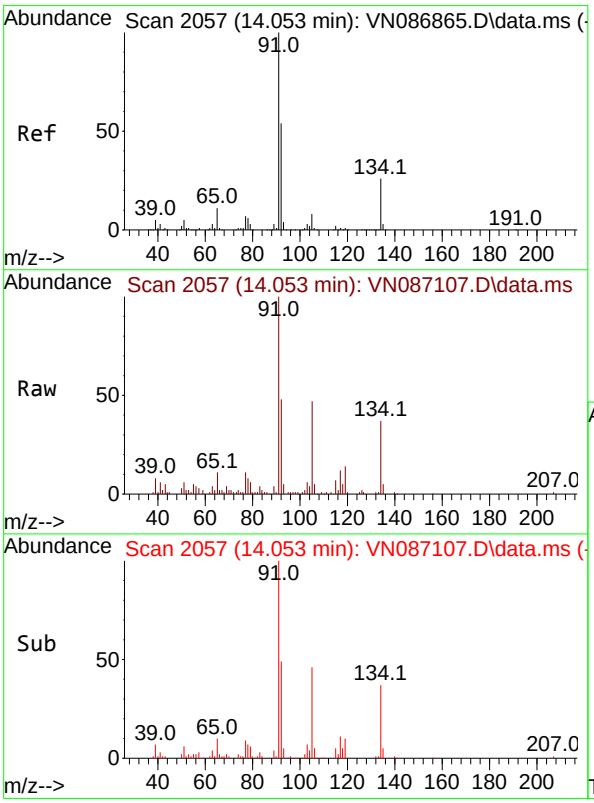
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 134 | 69.4 | 13.5 | 40.4# |
| 91 | 0.0 | 11.5 | 34.4# |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations**
**APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

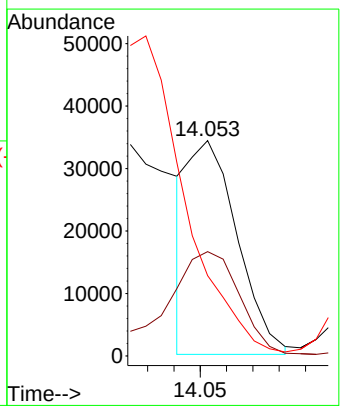


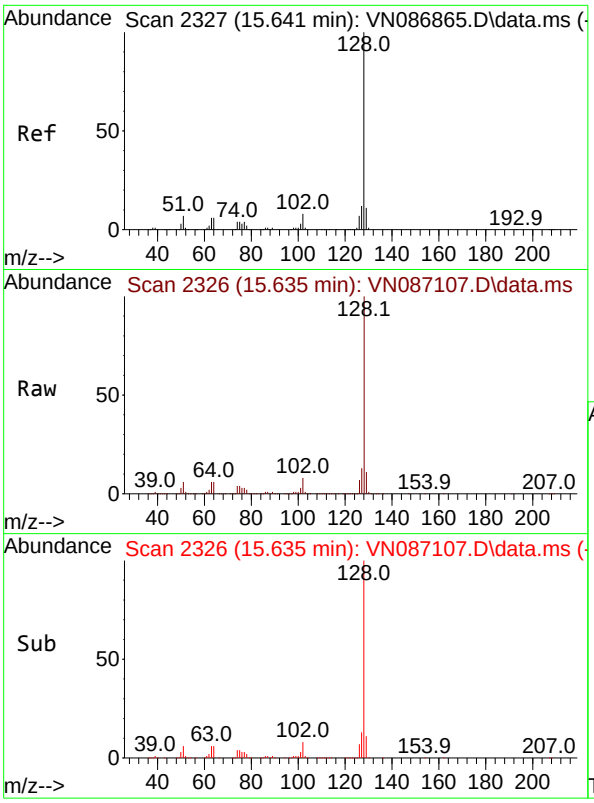




#89
n-Butylbenzene
Concen: 3.446 ug/l m
RT: 14.053 min Scan# 2057
Delta R.T. -0.000 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion: 91 Resp: 44551

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 160.2 | 27.5 | 82.4# |
| 134 | 0.0 | 13.0 | 39.0# |

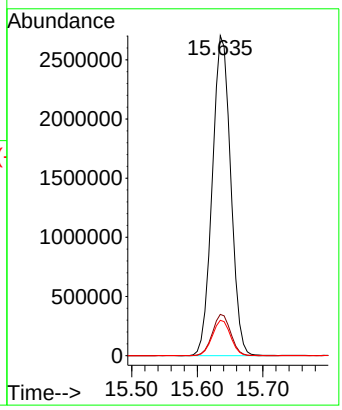





#95
Naphthalene
Concen: 347.493 ug/l
RT: 15.635 min Scan# 2
Delta R.T. -0.006 min
Lab File: VN087107.D
Acq: 19 Jun 2025 13:38

Tgt Ion:128 Resp: 526726

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 127 | 12.8 | 10.2 | 15.2 |
| 129 | 11.0 | 8.8 | 13.2 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08

**Manual Integrations**
**APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

Raw Data: **VN087114.D**

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-08DL | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-02DL | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087114.D | 20 | | 06/19/25 16:07 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 1634-04-4 | Methyl tert-butyl Ether | 20.0 | UD | 3.20 | 20.0 | ug/L |
| 71-43-2 | Benzene | 120 | D | 3.00 | 20.0 | ug/L |
| 108-88-3 | Toluene | 27.0 | D | 2.80 | 20.0 | ug/L |
| 100-41-4 | Ethyl Benzene | 630 | D | 2.60 | 20.0 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1500 | D | 4.80 | 40.0 | ug/L |
| 1330-20-7 | Total Xylenes | 2170 | D | 7.20 | 60.0 | ug/L |
| 95-47-6 | o-Xylene | 670 | D | 2.40 | 20.0 | ug/L |
| 98-82-8 | Isopropylbenzene | 44.3 | D | 2.40 | 20.0 | ug/L |
| 103-65-1 | n-propylbenzene | 92.2 | D | 2.60 | 20.0 | ug/L |
| 108-67-8 | 1,3,5-Trimethylbenzene | 50.0 | D | 3.00 | 20.0 | ug/L |
| 98-06-6 | tert-Butylbenzene | 20.0 | UD | 2.80 | 20.0 | ug/L |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1100 | D | 2.80 | 20.0 | ug/L |
| 135-98-8 | sec-Butylbenzene | 20.0 | UD | 2.60 | 20.0 | ug/L |
| 99-87-6 | p-Isopropyltoluene | 20.0 | UD | 2.60 | 20.0 | ug/L |
| 104-51-8 | n-Butylbenzene | 20.0 | UD | 3.00 | 20.0 | ug/L |
| 91-20-3 | Naphthalene | 400 | D | 4.00 | 20.0 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 54.1 | | 74 - 125 | 108% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 51.8 | | 75 - 124 | 104% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 52.4 | | 86 - 113 | 105% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 49.8 | | 77 - 121 | 100% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 183000 | 8.229 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 368000 | 9.106 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 333000 | 11.865 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 162000 | 13.788 | | | |

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-08DL | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-02DL | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087114.D | 20 | | 06/19/25 16:07 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087114.D
Acq On : 19 Jun 2025 16:07
Operator : JC\MD
Sample : Q2333-02DL 20X
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 16 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08DL

Quant Time: Jun 20 01:27:23 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

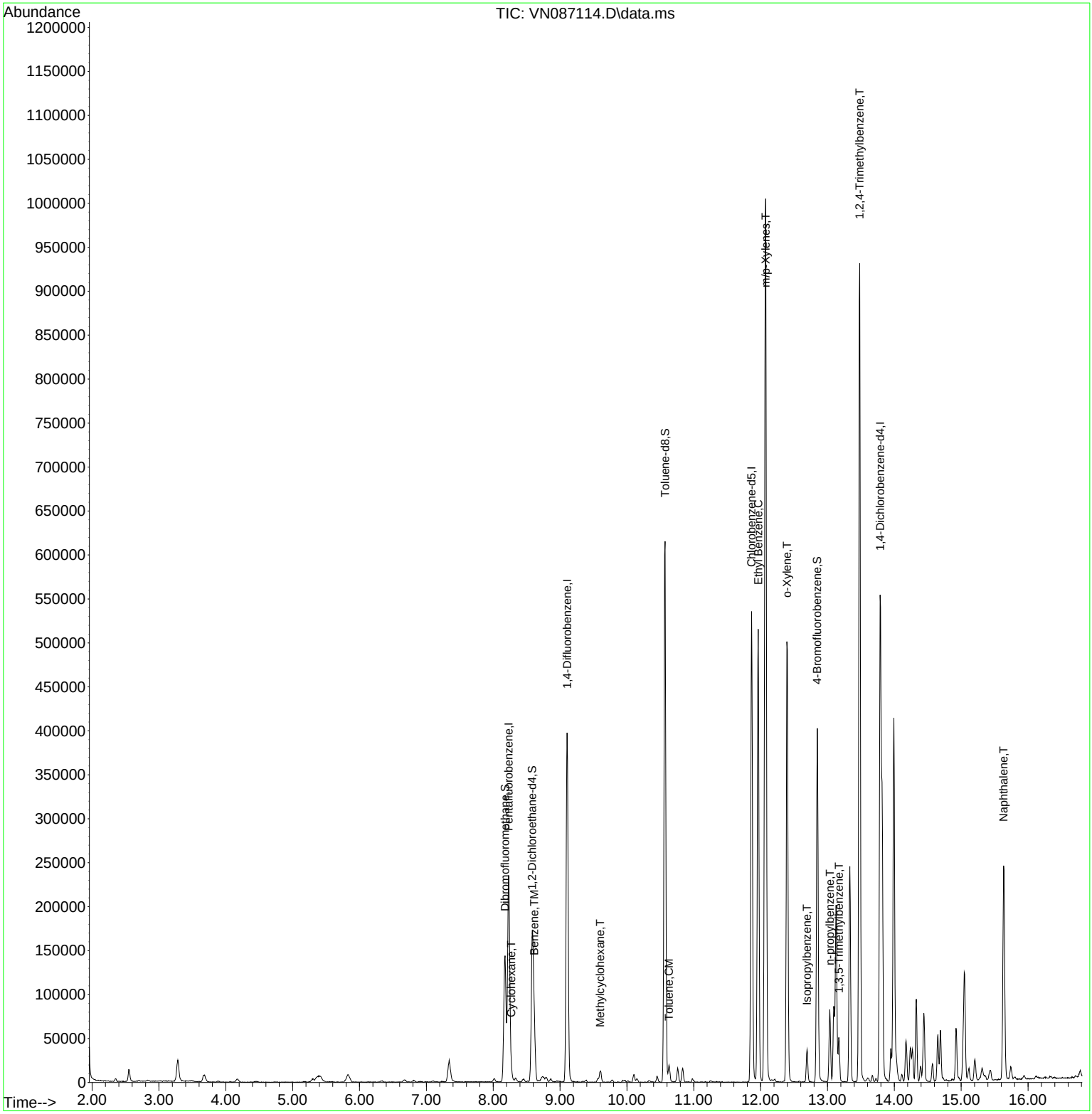
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.229 | 168 | 183164 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 368444 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 333195 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 162105 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.582 | 65 | 132607 | 54.073 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 108.140% | | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 113205 | 51.846 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 103.700% | | | |
| 50) Toluene-d8 | 10.570 | 98 | 452751 | 52.378 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 104.760% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 159857 | 49.777 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 99.560% | | | |
| Target Compounds | | | | | | Qvalue |
| 31) Cyclohexane | 8.271 | 56 | 11907 | 2.994 | ug/l # | 84 |
| 39) Methylcyclohexane | 9.600 | 83 | 5968 | 1.339 | ug/l | 89 |
| 40) Benzene | 8.612 | 78 | 65863 | 6.190 | ug/l | 99 |
| 52) Toluene | 10.629 | 92 | 8768 | 1.349 | ug/l | 97 |
| 67) Ethyl Benzene | 11.965 | 91 | 400804 | 31.664 | ug/l | 99 |
| 68) m/p-Xylenes | 12.076 | 106 | 360555 | 74.410 | ug/l | 98 |
| 69) o-Xylene | 12.394 | 106 | 155804 | 33.573 | ug/l | 96 |
| 73) Isopropylbenzene | 12.694 | 105 | 26160 | 2.215 | ug/l | 100 |
| 78) n-propylbenzene | 13.035 | 91 | 66168 | 4.610 | ug/l | 100 |
| 80) 1,3,5-Trimethylbenzene | 13.170 | 105 | 24397 | 2.502 | ug/l | 84 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 559574 | 57.233 | ug/l | 99 |
| 95) Naphthalene | 15.635 | 128 | 244209 | 20.070 | ug/l | 99 |

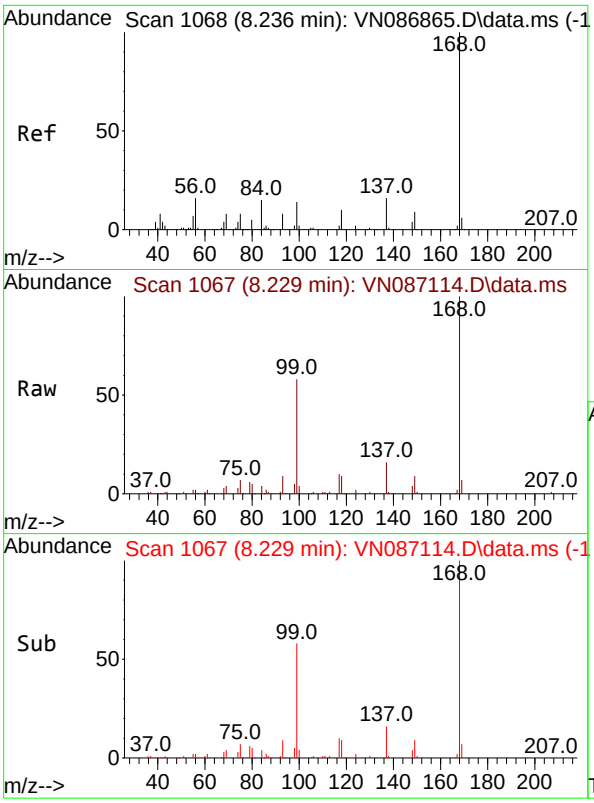
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087114.D
Acq On : 19 Jun 2025 16:07
Operator : JC\MD
Sample : Q2333-02DL 20X
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 16 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08DL

Quant Time: Jun 20 01:27:23 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration



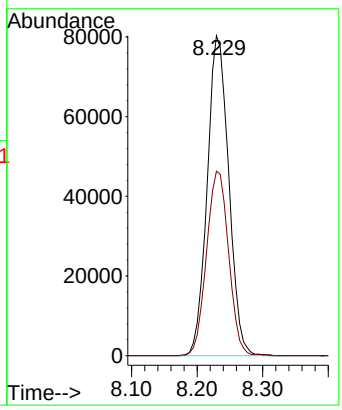


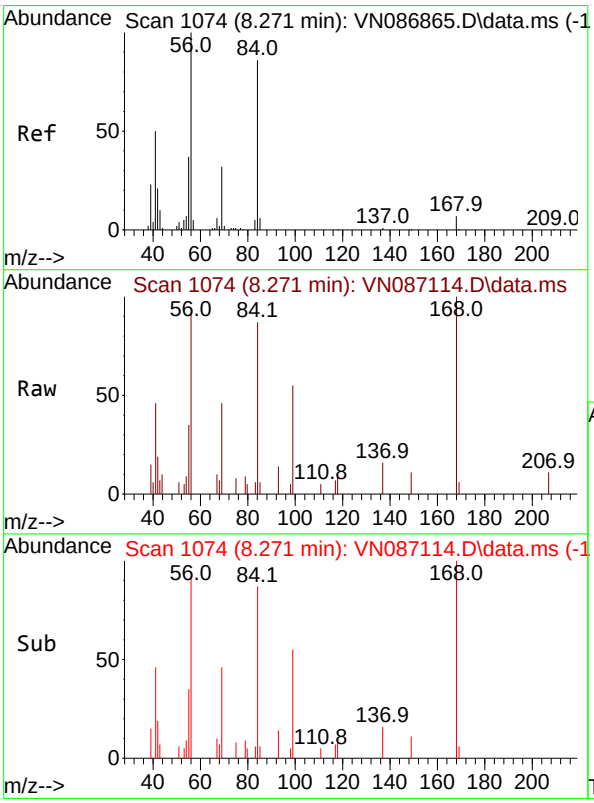

#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.229 min Scan# 1
Delta R.T. -0.007 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08DL

Tgt Ion:168 Resp: 183164

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 168 | 100 | | |
| 99 | 57.7 | 49.1 | 73.7 |

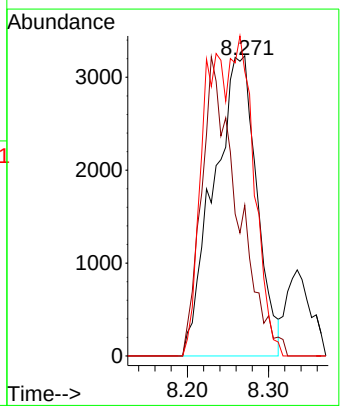


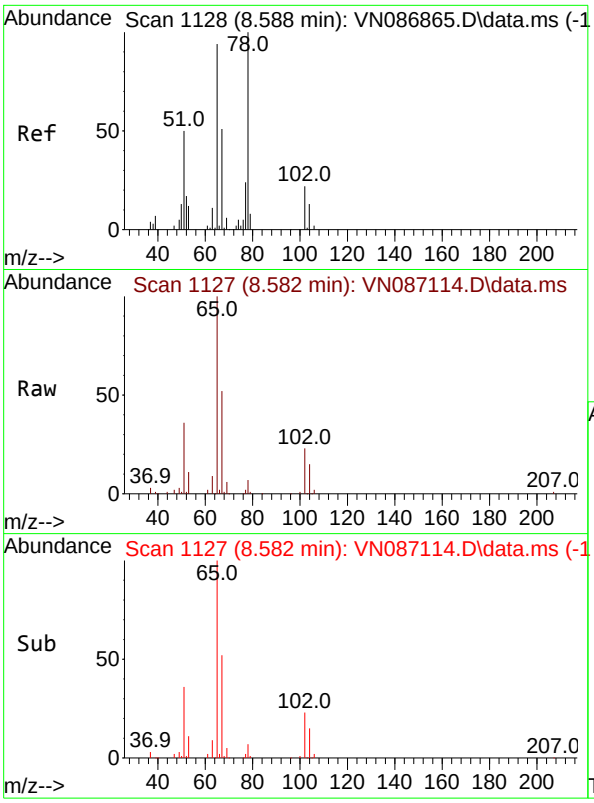




#31
Cyclohexane
Concen: 2.994 ug/l
RT: 8.271 min Scan# 1074
Delta R.T. -0.000 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

Tgt Ion: 56 Resp: 11907

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 69 | 50.2 | 25.4 | 38.0# |
| 84 | 94.8 | 68.8 | 103.2 |



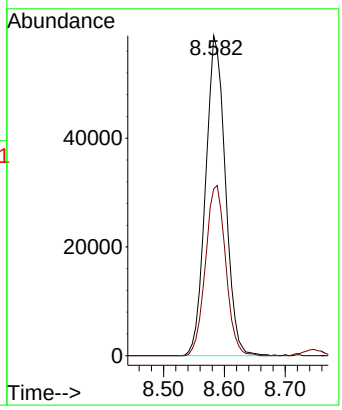


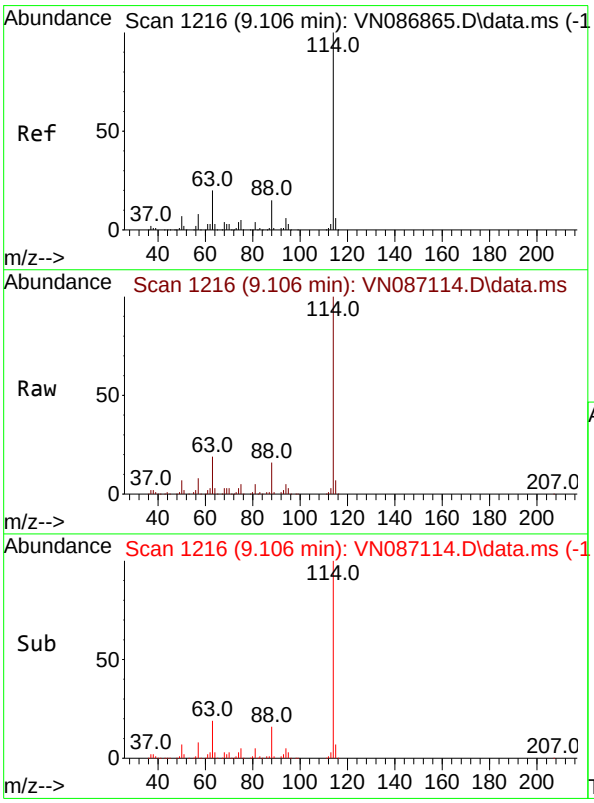

#33
1,2-Dichloroethane-d4
Concen: 54.073 ug/l
RT: 8.582 min Scan# 11
Delta R.T. -0.006 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08DL

Tgt Ion: 65 Resp: 132607

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 65 | 100 | | |
| 67 | 54.5 | 0.0 | 105.6 |

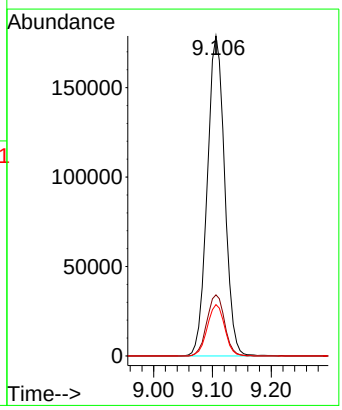


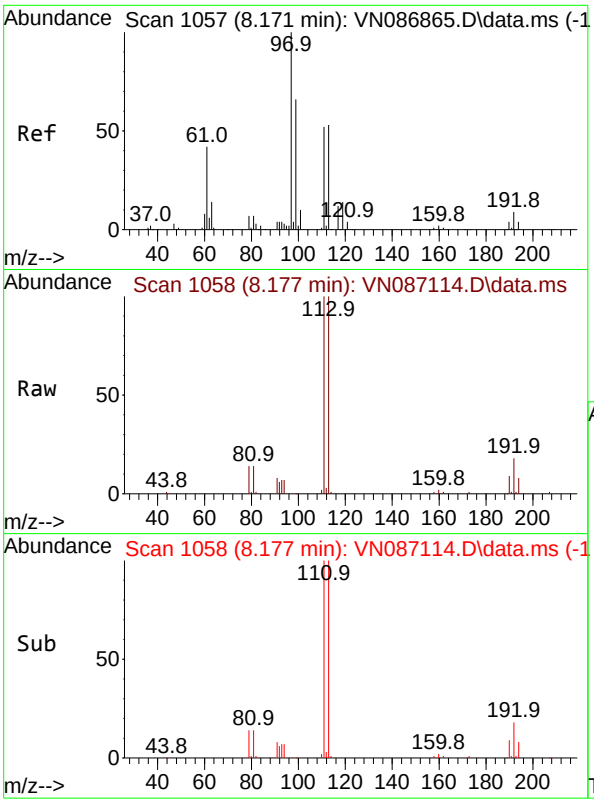




#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.106 min Scan# 1216
Delta R.T. -0.000 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

Tgt Ion:114 Resp: 368444

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 19.1 | 0.0 | 39.6 |
| 88 | 16.0 | 0.0 | 30.2 |



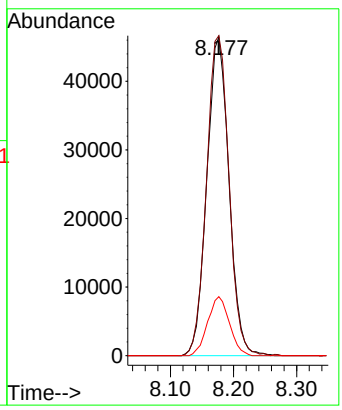


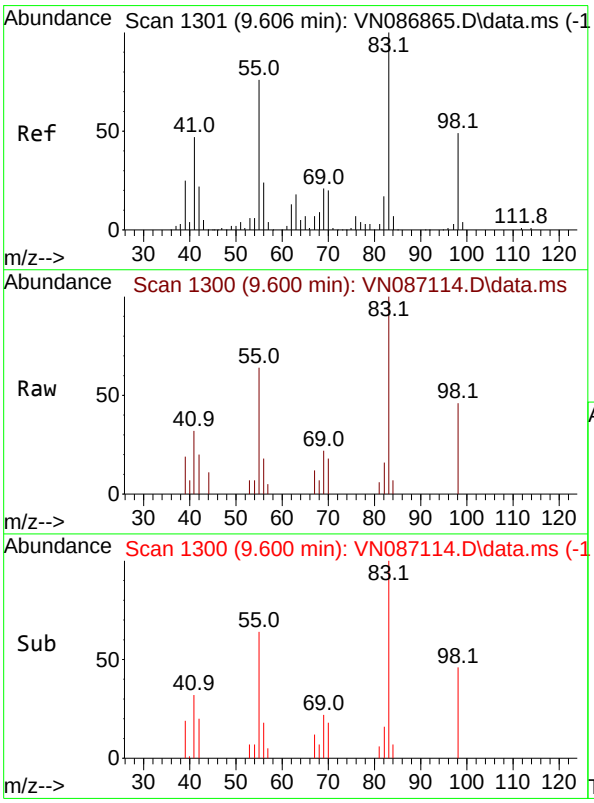

#35
Dibromofluoromethane
Concen: 51.846 ug/l
RT: 8.177 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08DL

Tgt Ion:113 Resp: 113205

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 113 | 100 | | |
| 111 | 101.8 | 84.2 | 126.2 |
| 192 | 18.2 | 14.2 | 21.4 |

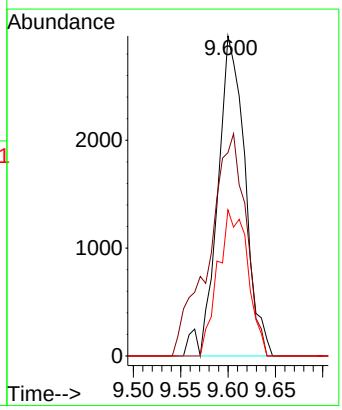


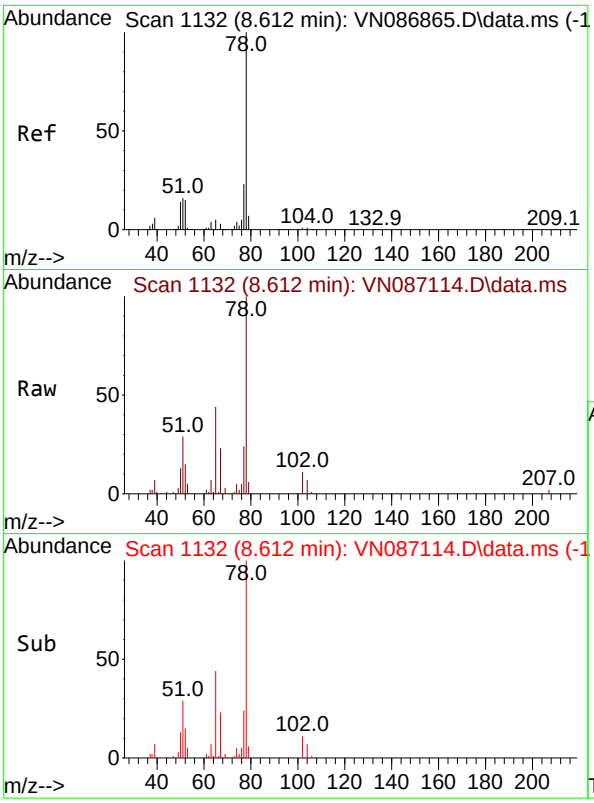




#39
Methylcyclohexane
Concen: 1.339 ug/l
RT: 9.600 min Scan# 1300
Delta R.T. -0.006 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

Tgt Ion: 83 Resp: 5968

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 55 | 63.6 | 61.0 | 91.6 |
| 98 | 45.7 | 38.9 | 58.3 |



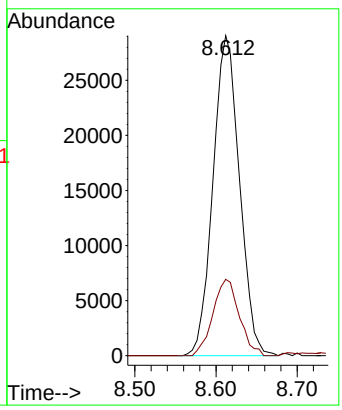


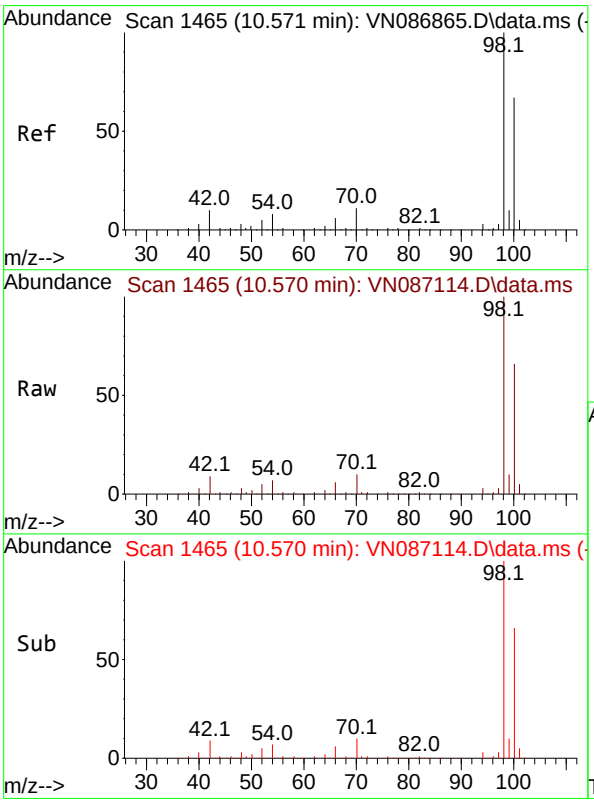

#40
Benzene
Concen: 6.190 ug/l
RT: 8.612 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08DL

Tgt Ion: 78 Resp: 65863

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 23.8 | 18.7 | 28.1 |

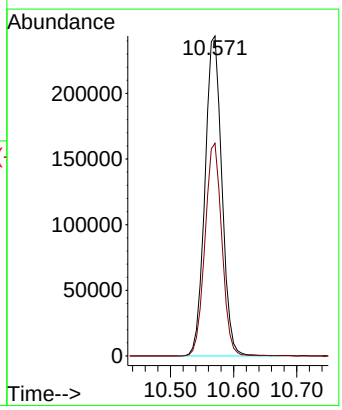


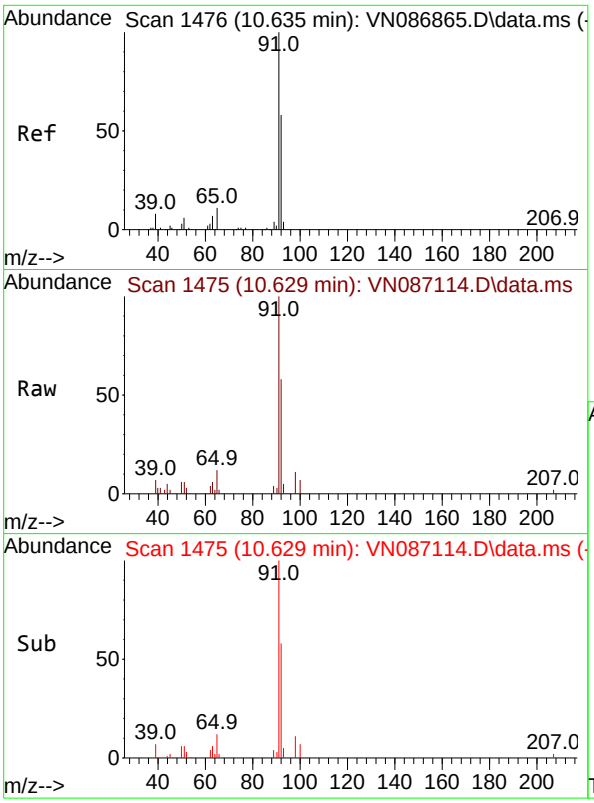




#50
Toluene-d8
Concen: 52.378 ug/l
RT: 10.570 min Scan# 1465
Delta R.T. -0.000 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

Tgt Ion: 98 Resp: 452751

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 98 | 100 | | |
| 100 | 66.4 | 53.4 | 80.0 |



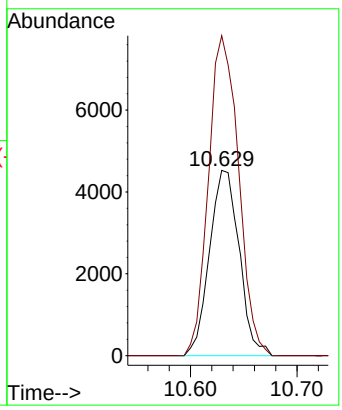


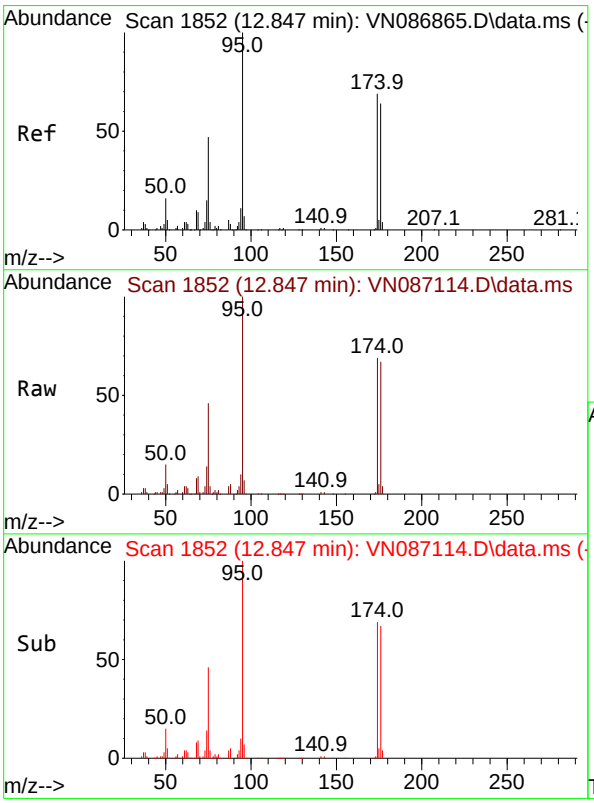

#52
Toluene
Concen: 1.349 ug/l
RT: 10.629 min Scan# 14
Delta R.T. -0.006 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08DL

Tgt Ion: 92 Resp: 8768

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 92 | 100 | | |
| 91 | 174.9 | 136.5 | 204.7 |

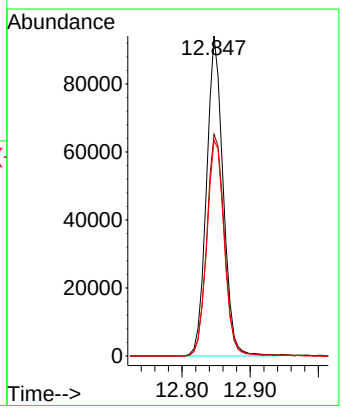


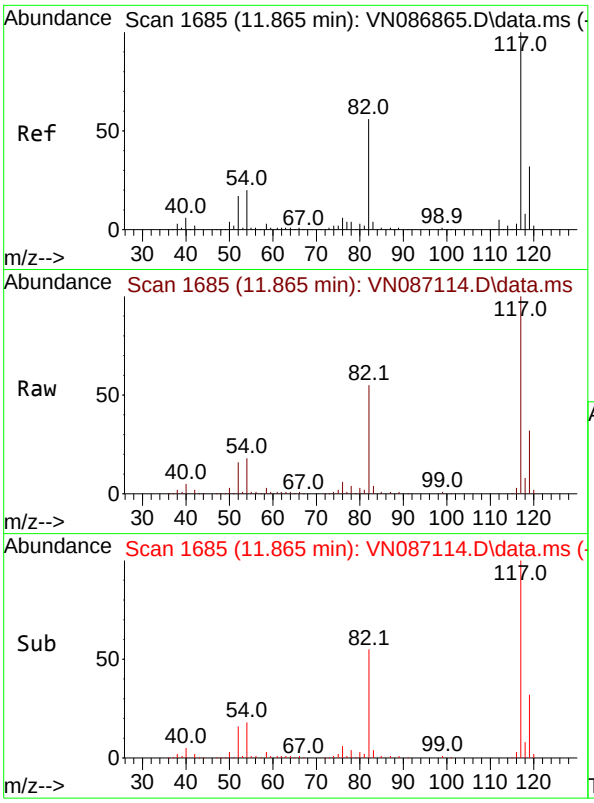




#62
4-Bromofluorobenzene
Concen: 49.777 ug/l
RT: 12.847 min Scan# 1852
Delta R.T. -0.000 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

Tgt Ion: 95 Resp: 159857

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 73.0 | 0.0 | 141.8 |
| 176 | 70.4 | 0.0 | 132.6 |



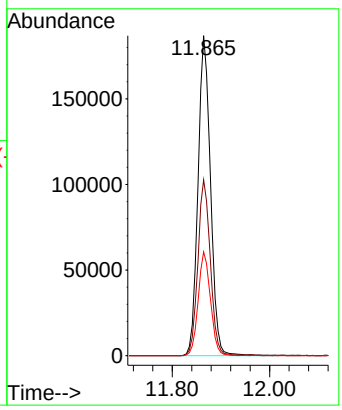


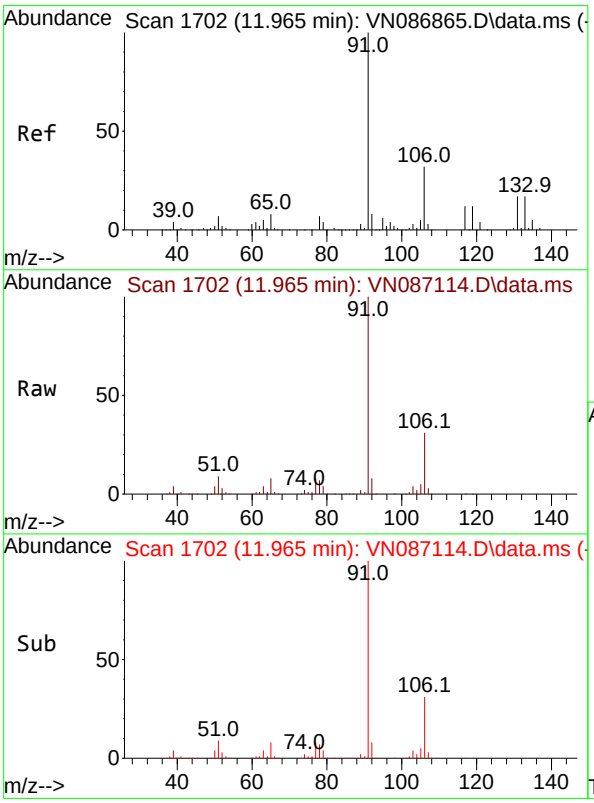

#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08DL

Tgt Ion:117 Resp: 333195

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 55.0 | 44.6 | 67.0 |
| 119 | 32.5 | 25.5 | 38.3 |

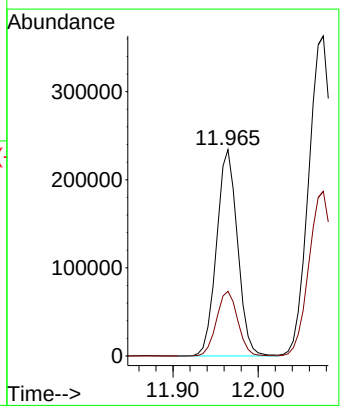


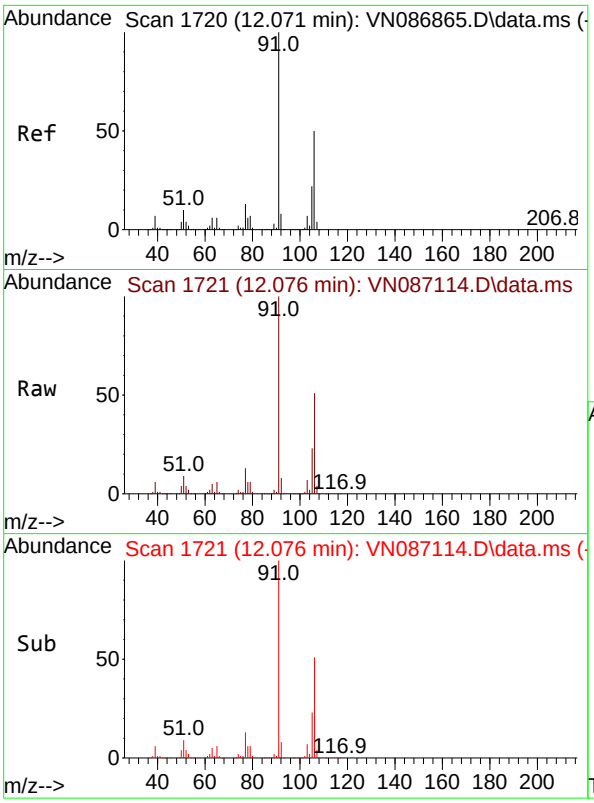




#67
Ethyl Benzene
Concen: 31.664 ug/l
RT: 11.965 min Scan# 1702
Delta R.T. -0.000 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

Tgt Ion: 91 Resp: 400804

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 31.3 | 25.4 | 38.2 |



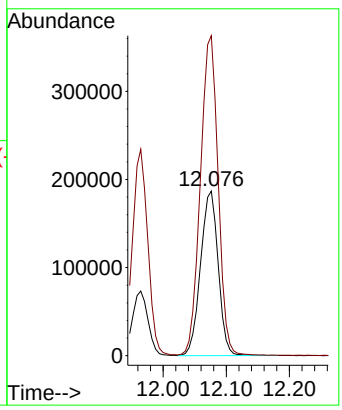


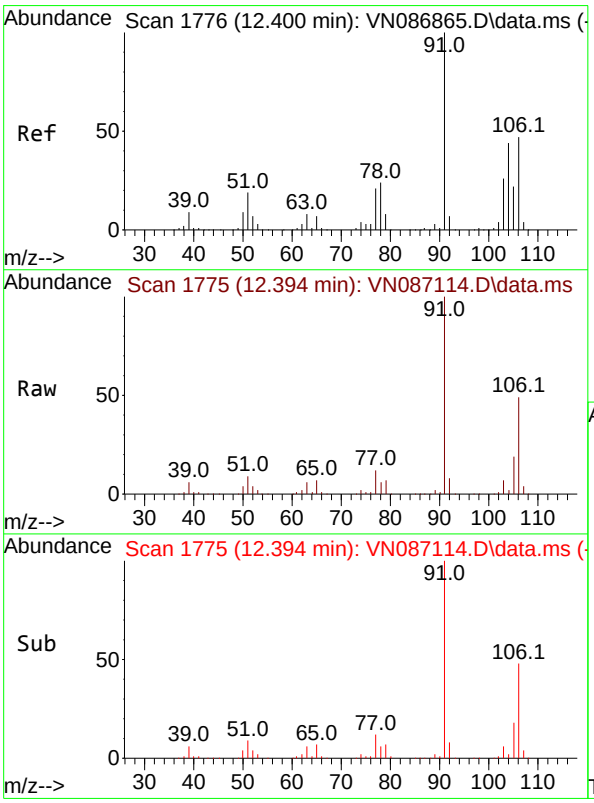

#68
m/p-Xylenes
Concen: 74.410 ug/l
RT: 12.076 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08DL

Tgt Ion:106 Resp: 360555

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 195.8 | 159.4 | 239.0 |

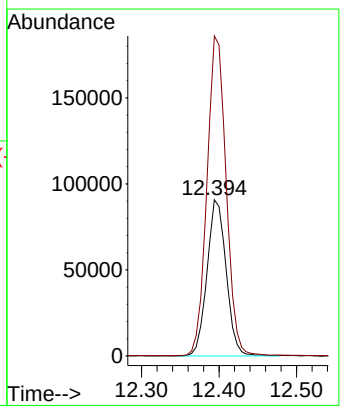


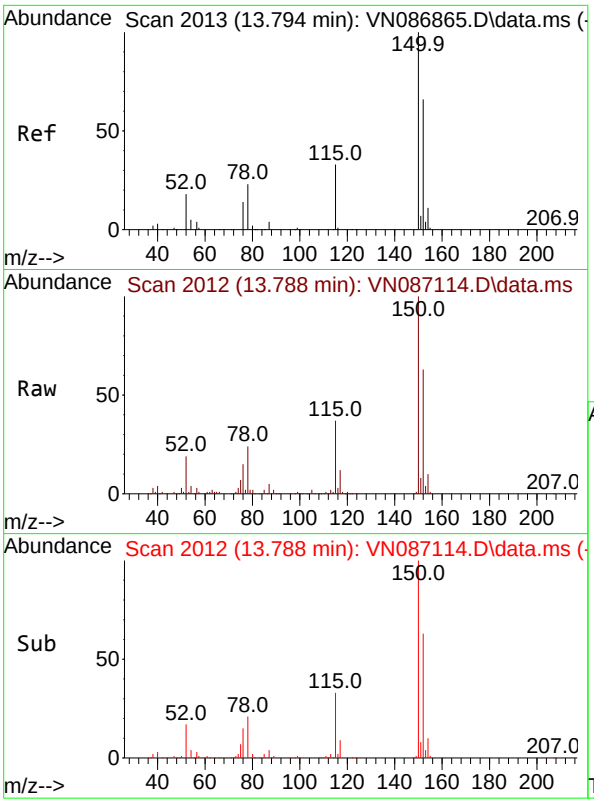




#69
o-Xylene
Concen: 33.573 ug/l
RT: 12.394 min Scan# 1775
Delta R.T. -0.006 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

Tgt Ion:106 Resp: 155804

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 205.7 | 106.1 | 318.1 |



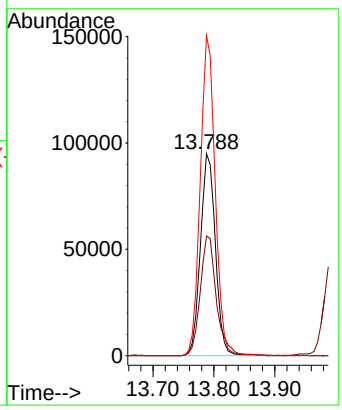


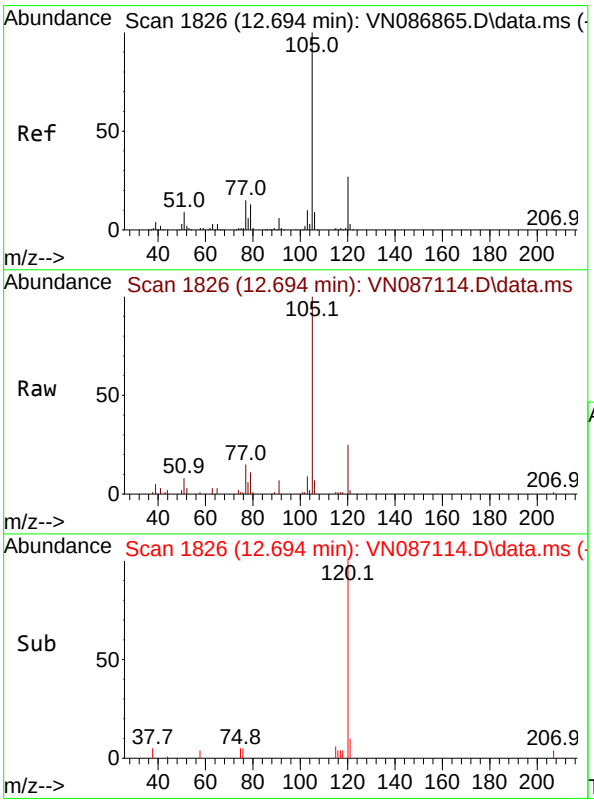

#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2
Delta R.T. -0.006 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08DL

Tgt Ion:152 Resp: 162105

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 115 | 64.6 | 30.1 | 90.5 |
| 150 | 157.3 | 0.0 | 345.0 |

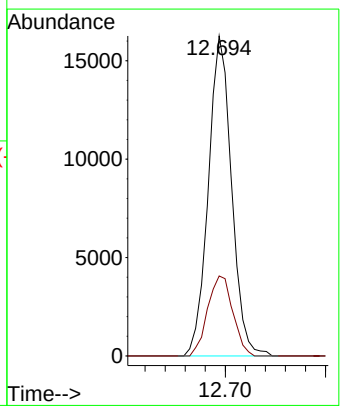


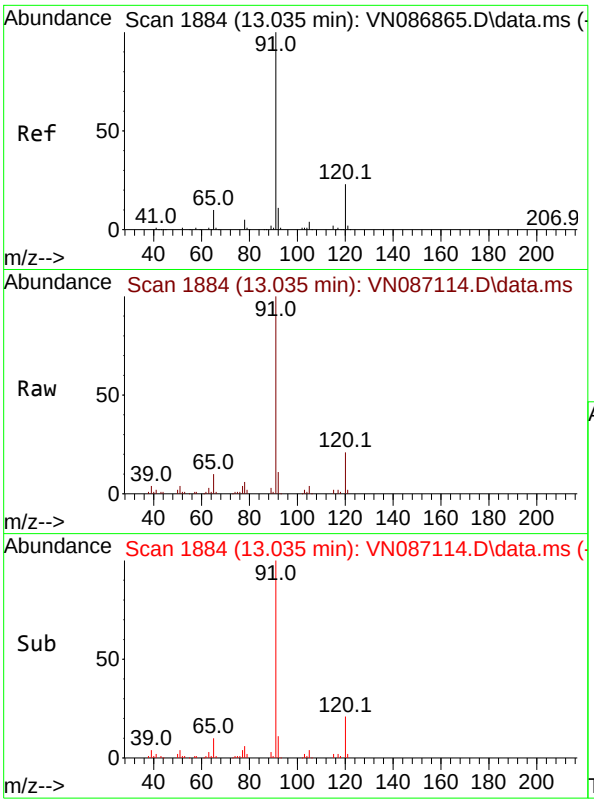




#73
Isopropylbenzene
Concen: 2.215 ug/l
RT: 12.694 min Scan# 1826
Delta R.T. -0.000 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

Tgt Ion:105 Resp: 26160

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 27.0 | 13.5 | 40.4 |



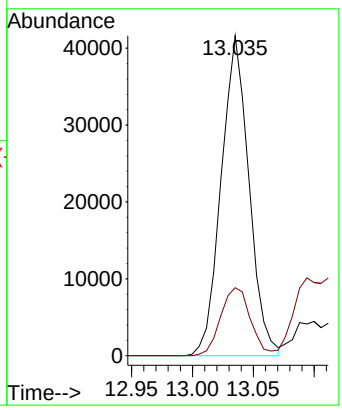


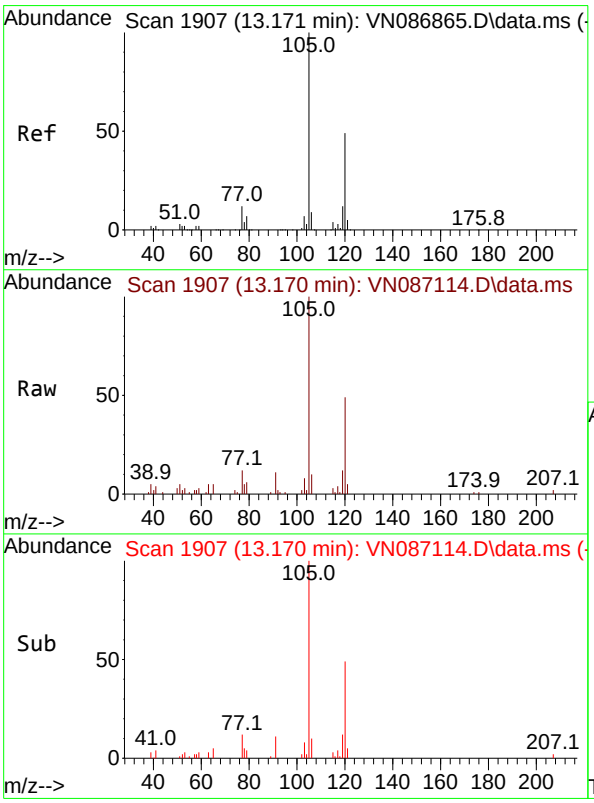

#78
n-propylbenzene
Concen: 4.610 ug/l
RT: 13.035 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08DL

Tgt Ion: 91 Resp: 66168

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 22.7 | 11.4 | 34.2 |

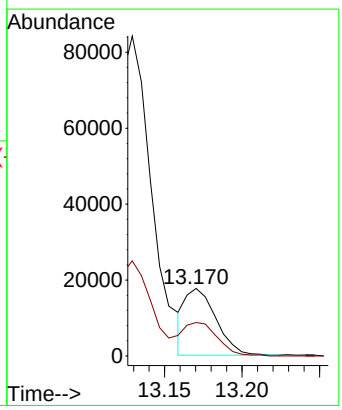


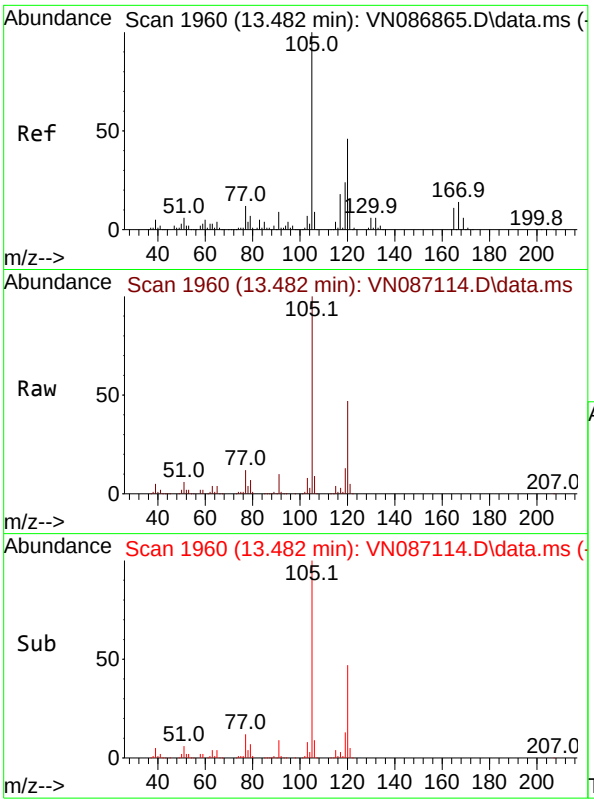




#80
1,3,5-Trimethylbenzene
Concen: 2.502 ug/l
RT: 13.170 min Scan# 1907
Delta R.T. -0.000 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

Tgt Ion:105 Resp: 24397

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 60.6 | 24.9 | 74.6 |



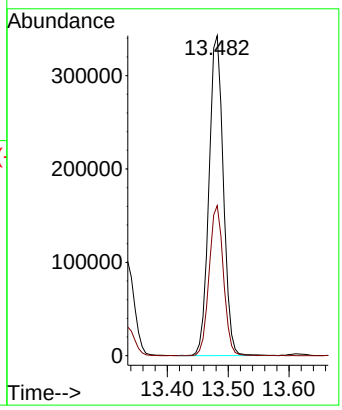


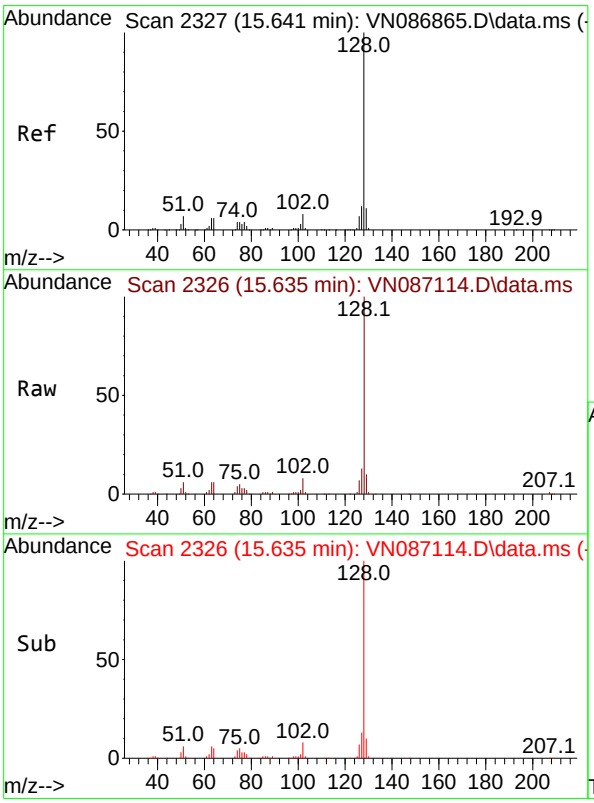

#84
1,2,4-Trimethylbenzene
Concen: 57.233 ug/l
RT: 13.482 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-08DL

Tgt Ion:105 Resp: 559574

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 46.9 | 23.2 | 69.6 |

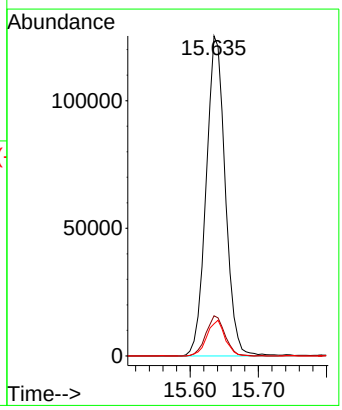



#95
Naphthalene
Concen: 20.070 ug/l
RT: 15.635 min Scan# 2326
Delta R.T. -0.006 min
Lab File: VN087114.D
Acq: 19 Jun 2025 16:07

Tgt Ion:128 Resp: 244209

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 127 | 12.5 | 10.2 | 15.2 |
| 129 | 10.6 | 8.8 | 13.2 |



Raw Data: **VN087115.D**

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-10 | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-03 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087115.D | 1 | | 06/19/25 16:28 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.31 | J | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 0.85 | J | 0.24 | 2.00 | ug/L |
| 1330-20-7 | Total Xylenes | 0.85 | J | 0.36 | 3.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 2.90 | | 0.12 | 1.00 | ug/L |
| 103-65-1 | n-propylbenzene | 0.86 | J | 0.13 | 1.00 | ug/L |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-06-6 | tert-Butylbenzene | 0.30 | J | 0.14 | 1.00 | ug/L |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.80 | | 0.14 | 1.00 | ug/L |
| 135-98-8 | sec-Butylbenzene | 0.93 | J | 0.13 | 1.00 | ug/L |
| 99-87-6 | p-Isopropyltoluene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 104-51-8 | n-Butylbenzene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 91-20-3 | Naphthalene | 1.00 | U | 0.20 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 55.0 | | 74 - 125 | 110% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 51.8 | | 75 - 124 | 104% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 52.8 | | 86 - 113 | 106% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 49.5 | | 77 - 121 | 99% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 175000 | 8.23 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 354000 | 9.106 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 321000 | 11.865 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 152000 | 13.788 | | | |

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-10 | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-03 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087115.D | 1 | | 06/19/25 16:28 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087115.D
Acq On : 19 Jun 2025 16:28
Operator : JC\MD
Sample : Q2333-03
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 17 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-10

Quant Time: Jun 20 01:27:52 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

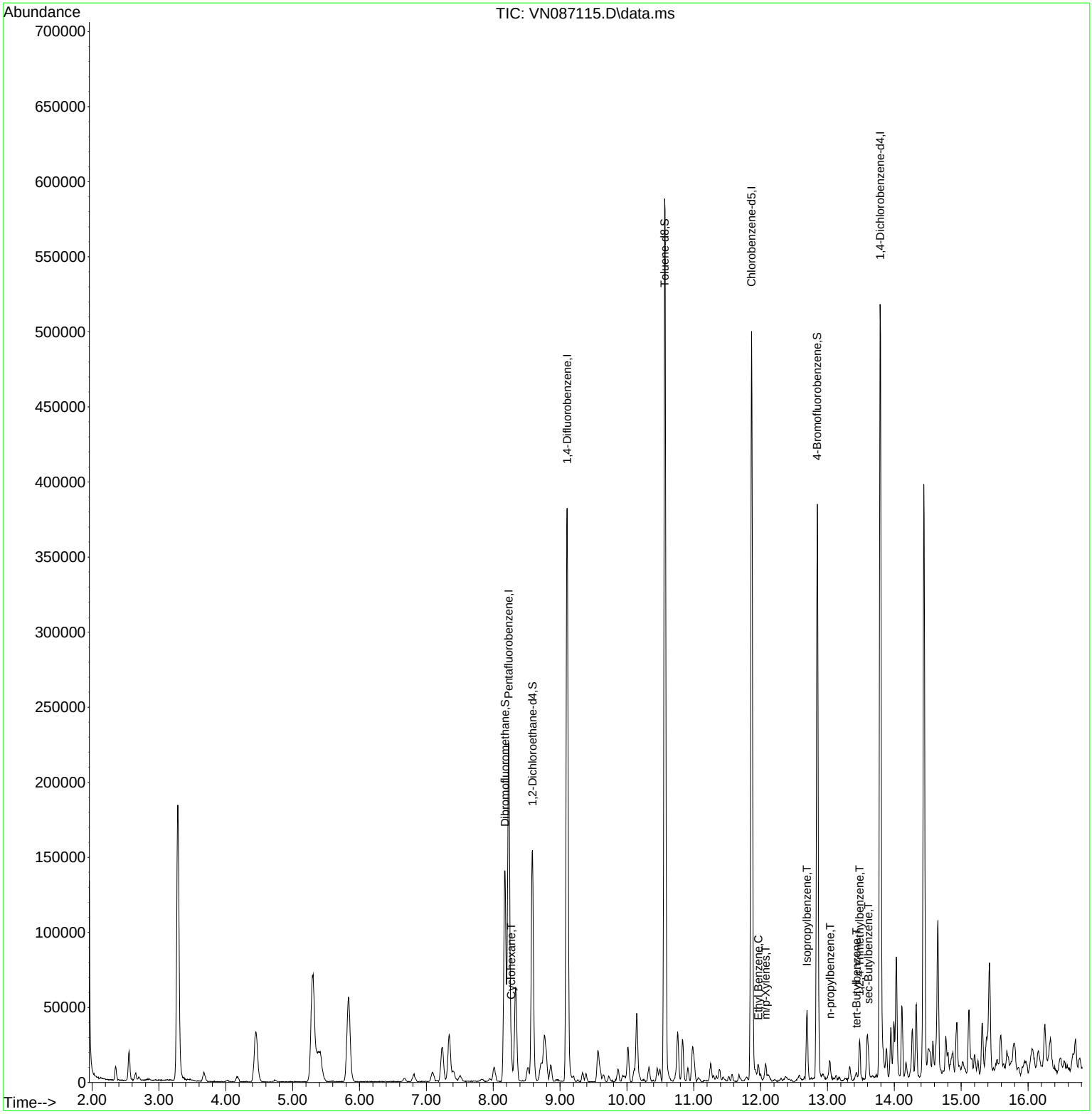
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.230 | 168 | 174663 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 354191 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 320832 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 152345 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.588 | 65 | 128547 | 54.969 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 109.940% | | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 108722 | 51.797 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 103.600% | | | |
| 50) Toluene-d8 | 10.565 | 98 | 438995 | 52.831 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 105.660% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 152947 | 49.542 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 99.080% | | | |
| Target Compounds | | | | | | Qvalue |
| 31) Cyclohexane | 8.271 | 56 | 12761 | 3.364 | ug/l | 92 |
| 67) Ethyl Benzene | 11.965 | 91 | 3775 | 0.310 | ug/l | 90 |
| 68) m/p-Xylenes | 12.076 | 106 | 3962 | 0.849 | ug/l | 91 |
| 73) Isopropylbenzene | 12.694 | 105 | 31867 | 2.871 | ug/l | 99 |
| 78) n-propylbenzene | 13.041 | 91 | 11544 | 0.856 | ug/l | 98 |
| 83) tert-Butylbenzene | 13.435 | 119 | 2521 | 0.301 | ug/l | 95 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 16280 | 1.772 | ug/l | 98 |
| 85) sec-Butylbenzene | 13.612 | 105 | 11304 | 0.928 | ug/l # | 56 |

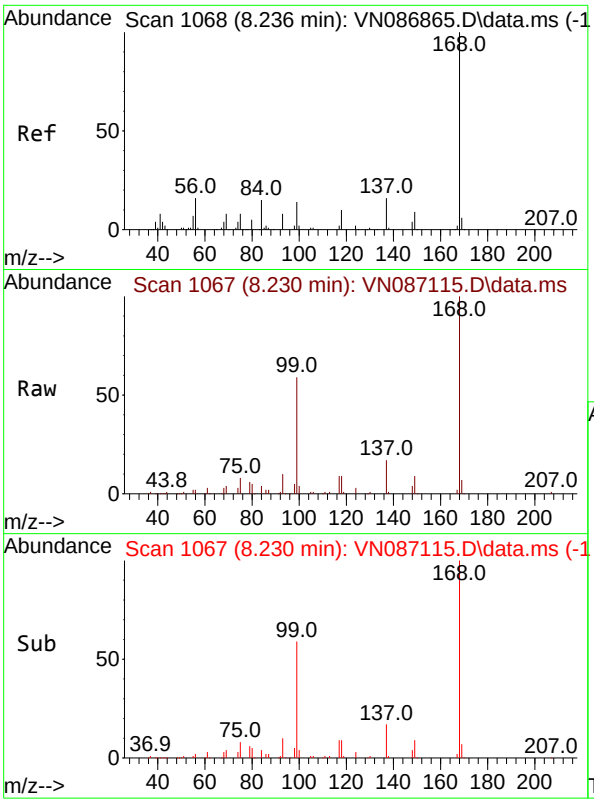
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087115.D
Acq On : 19 Jun 2025 16:28
Operator : JC\MD
Sample : Q2333-03
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 17 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-10

Quant Time: Jun 20 01:27:52 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration



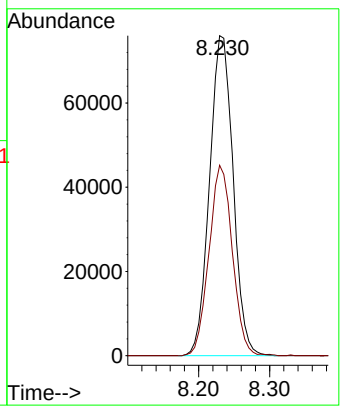


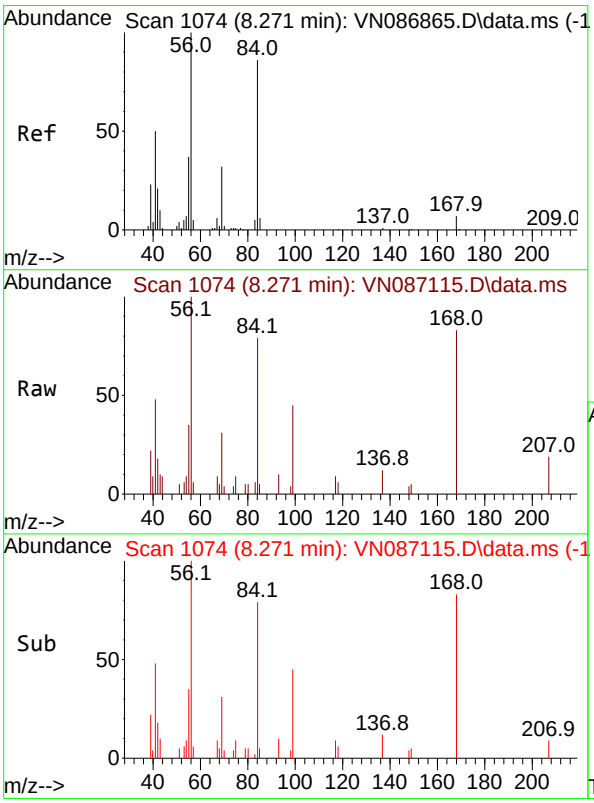

#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.230 min Scan# 1
Delta R.T. -0.006 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-10

Tgt Ion:168 Resp: 174663

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 168 | 100 | | |
| 99 | 59.5 | 49.1 | 73.7 |

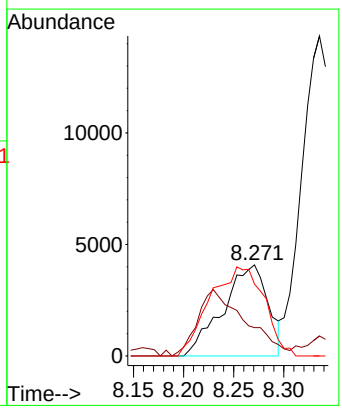


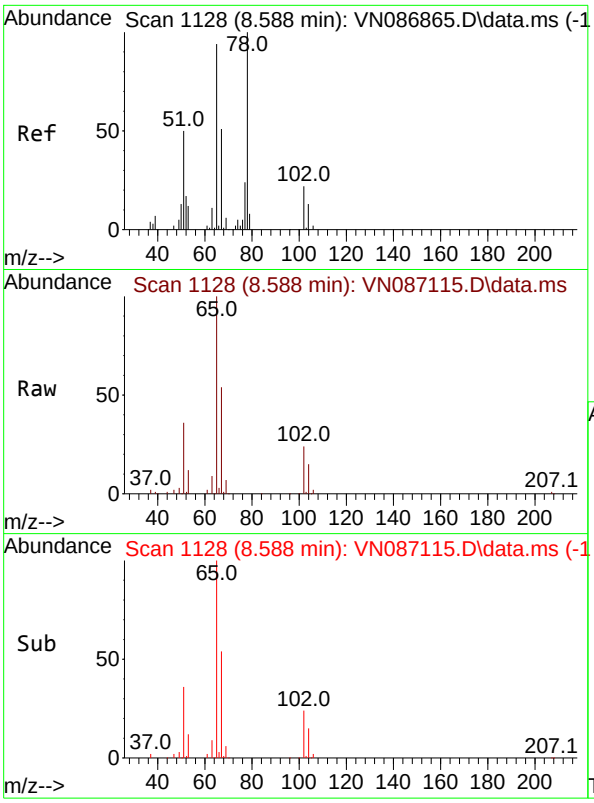




#31
Cyclohexane
Concen: 3.364 ug/l
RT: 8.271 min Scan# 1074
Delta R.T. -0.000 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

Tgt Ion: 56 Resp: 12761

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 69 | 26.8 | 25.4 | 38.0 |
| 84 | 78.9 | 68.8 | 103.2 |



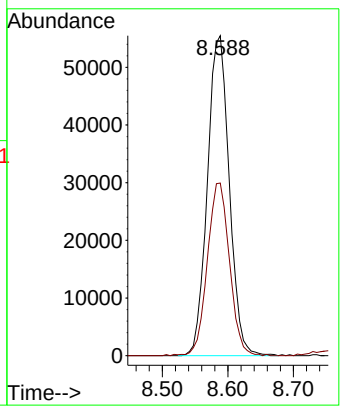


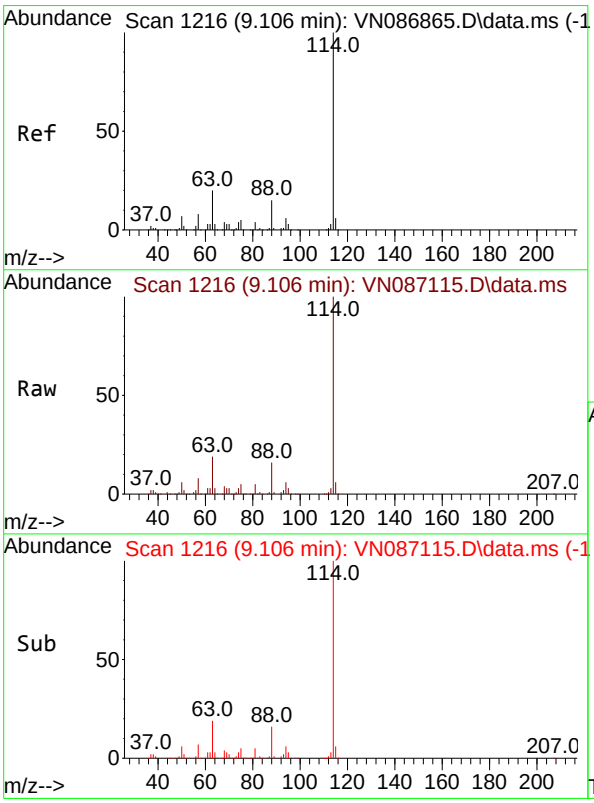

#33
1,2-Dichloroethane-d4
Concen: 54.969 ug/l
RT: 8.588 min Scan# 11
Delta R.T. -0.000 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-10

Tgt Ion: 65 Resp: 128547

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 65 | 100 | | |
| 67 | 54.7 | 0.0 | 105.6 |

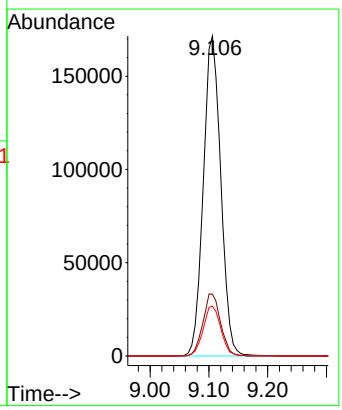


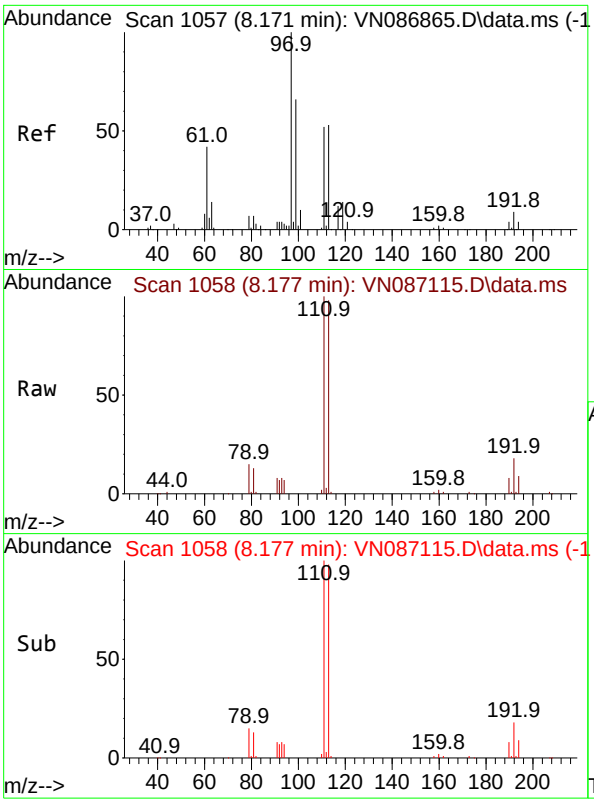




#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.106 min Scan# 1216
Delta R.T. -0.000 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

Tgt Ion:114 Resp: 354191

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 19.3 | 0.0 | 39.6 |
| 88 | 15.6 | 0.0 | 30.2 |



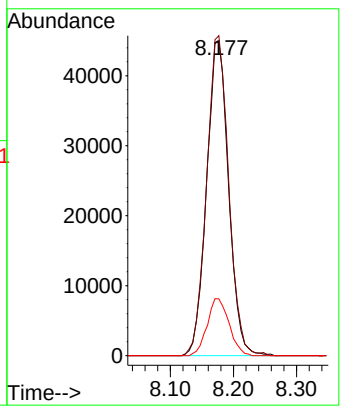


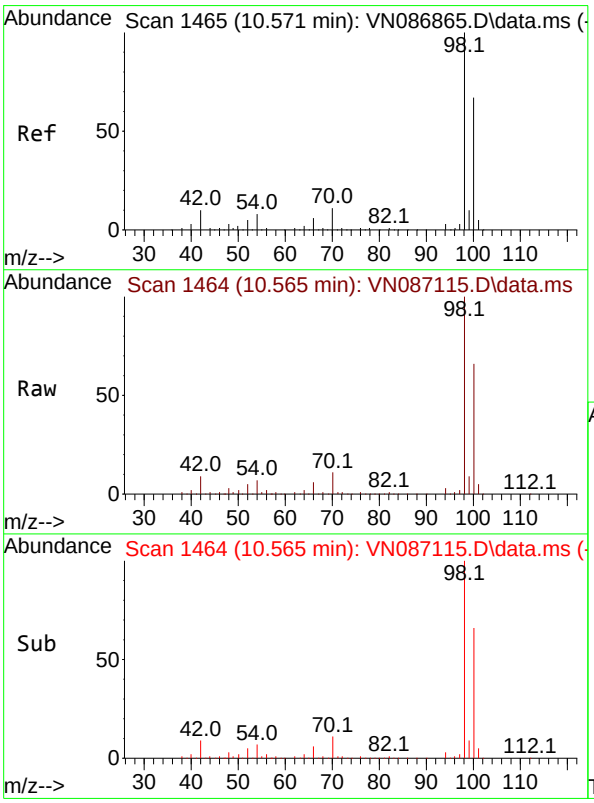

#35
Dibromofluoromethane
Concen: 51.797 ug/l
RT: 8.177 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-10

Tgt Ion:113 Resp: 108722

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 113 | 100 | | |
| 111 | 102.3 | 84.2 | 126.2 |
| 192 | 18.0 | 14.2 | 21.4 |

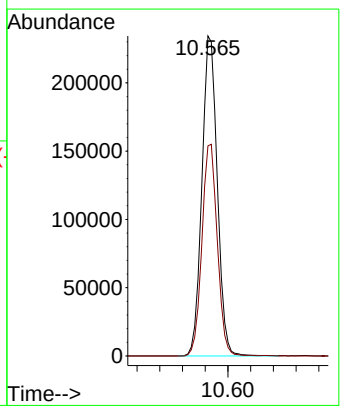


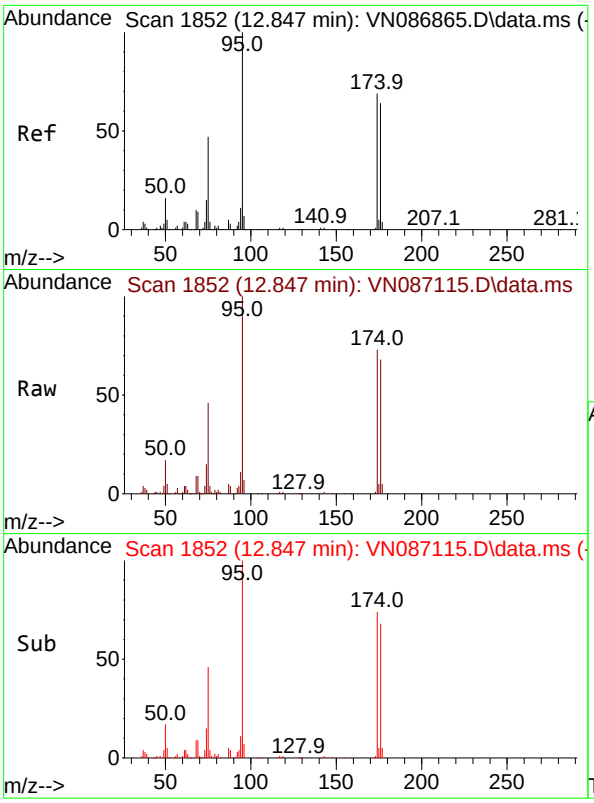




#50
Toluene-d8
Concen: 52.831 ug/l
RT: 10.565 min Scan# 1464
Delta R.T. -0.006 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

Tgt Ion: 98 Resp: 438995

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 98 | 100 | | |
| 100 | 66.1 | 53.4 | 80.0 |



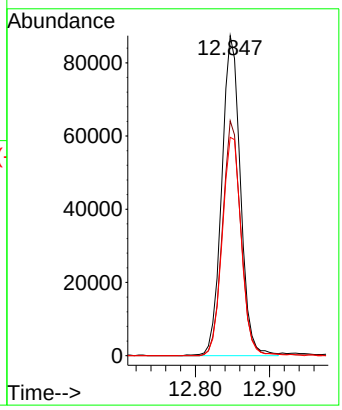


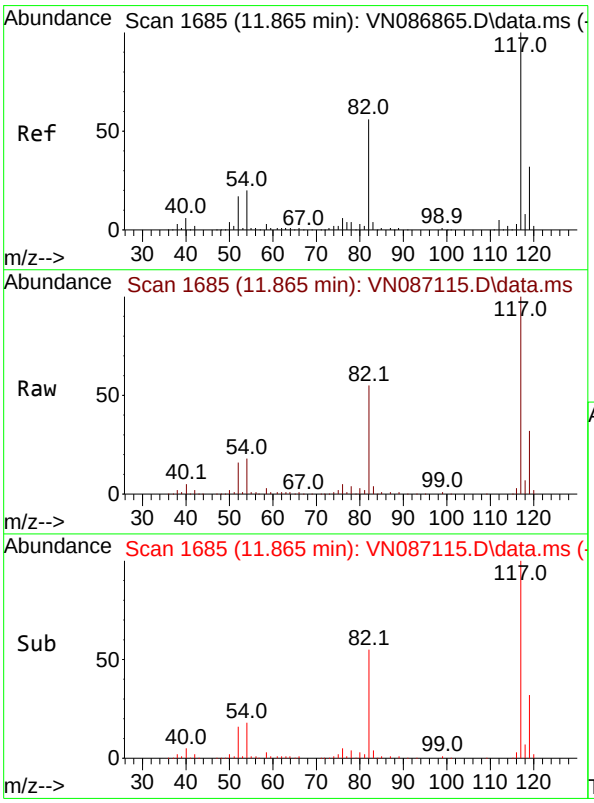

#62
4-Bromofluorobenzene
Concen: 49.542 ug/l
RT: 12.847 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-10

Tgt Ion: 95 Resp: 152947

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 72.7 | 0.0 | 141.8 |
| 176 | 69.6 | 0.0 | 132.6 |

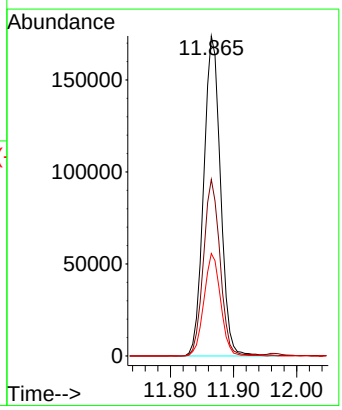


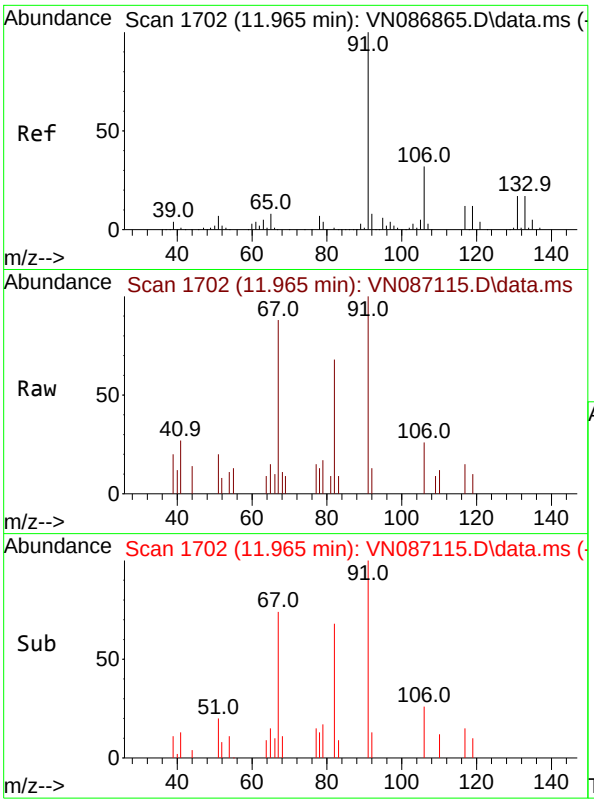




#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1685
Delta R.T. -0.000 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

Tgt Ion:117 Resp: 320832

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 55.2 | 44.6 | 67.0 |
| 119 | 32.0 | 25.5 | 38.3 |



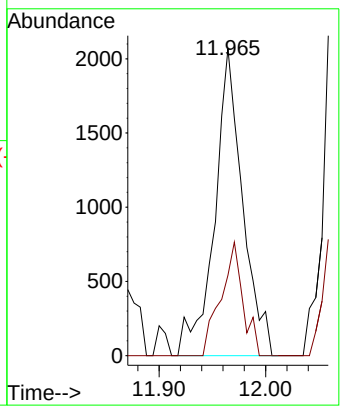


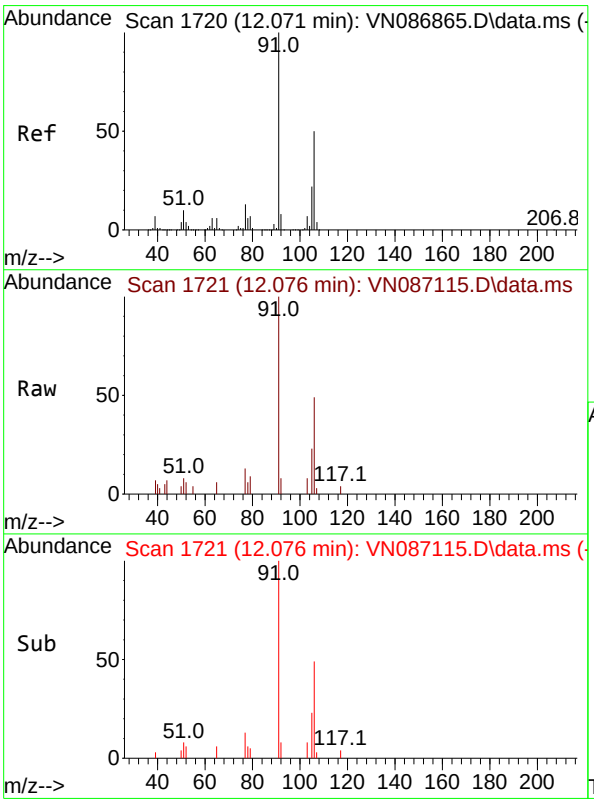

#67
Ethyl Benzene
Concen: 0.310 ug/l
RT: 11.965 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-10

Tgt Ion: 91 Resp: 3775

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 26.2 | 25.4 | 38.2 |

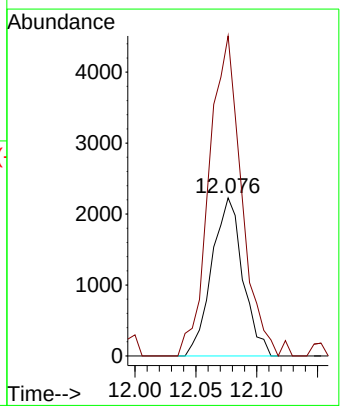


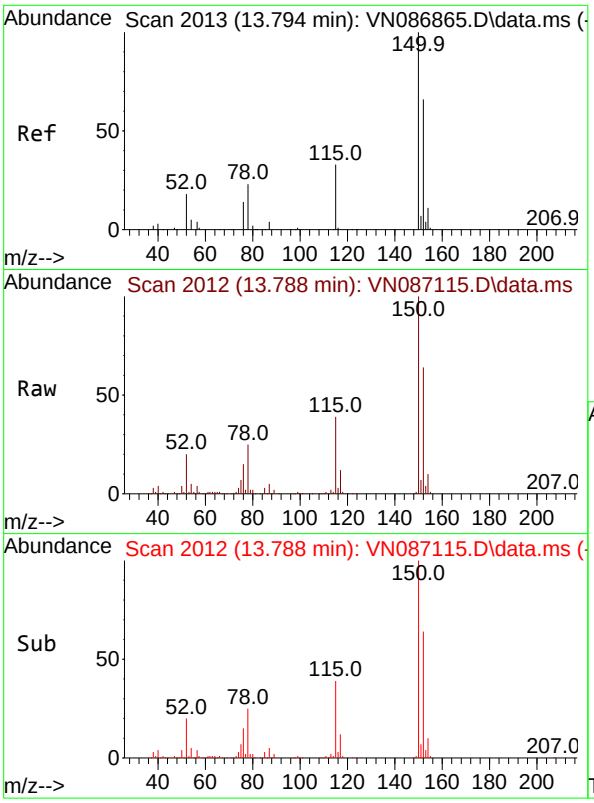




#68
m/p-Xylenes
Concen: 0.849 ug/l
RT: 12.076 min Scan# 1721
Delta R.T. 0.006 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

Tgt Ion:106 Resp: 3962

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 212.3 | 159.4 | 239.0 |



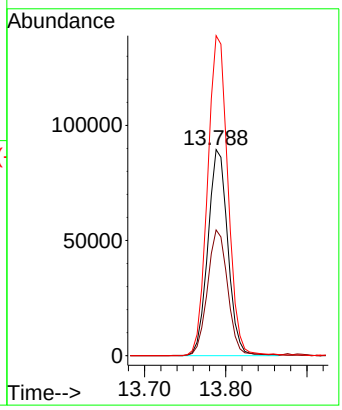


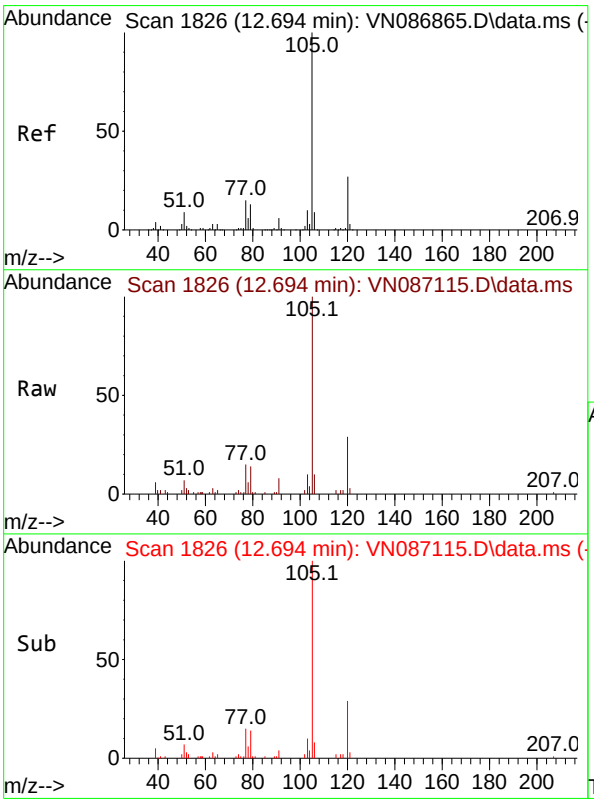

#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2
Delta R.T. -0.006 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-10

Tgt Ion:152 Resp: 152345

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 115 | 62.3 | 30.1 | 90.5 |
| 150 | 158.6 | 0.0 | 345.0 |

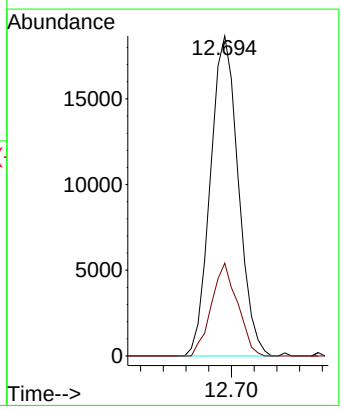


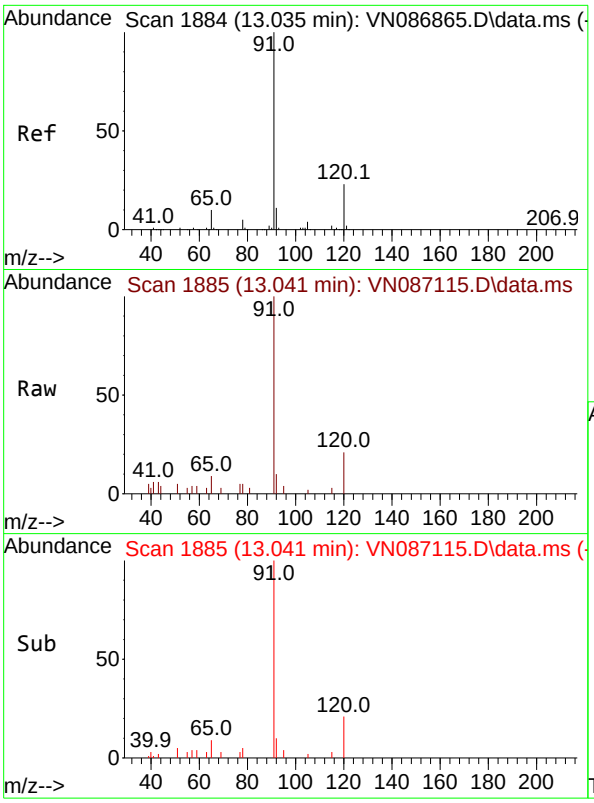




#73
Isopropylbenzene
Concen: 2.871 ug/l
RT: 12.694 min Scan# 1826
Delta R.T. -0.000 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

Tgt Ion:105 Resp: 31867

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 27.2 | 13.5 | 40.4 |



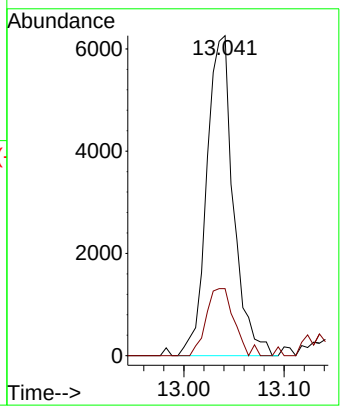


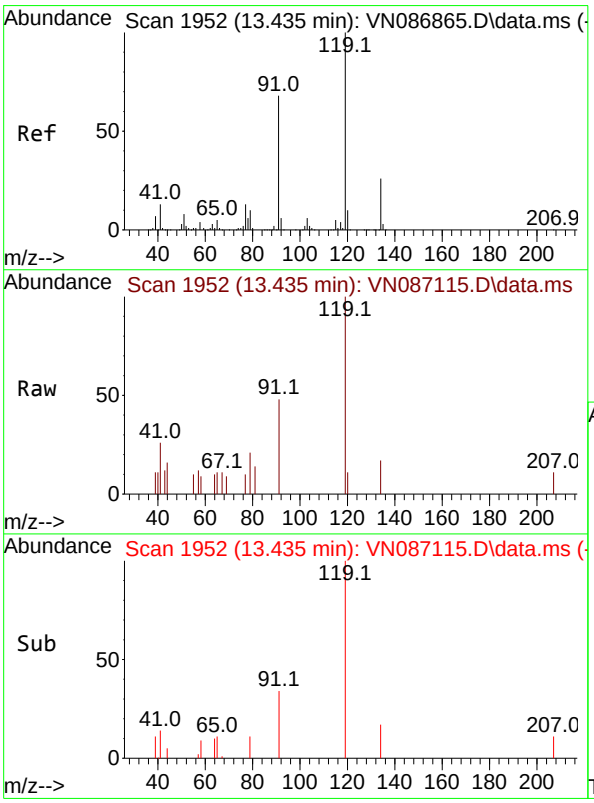

#78
n-propylbenzene
Concen: 0.856 ug/l
RT: 13.041 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-10

Tgt Ion: 91 Resp: 11544

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 21.9 | 11.4 | 34.2 |

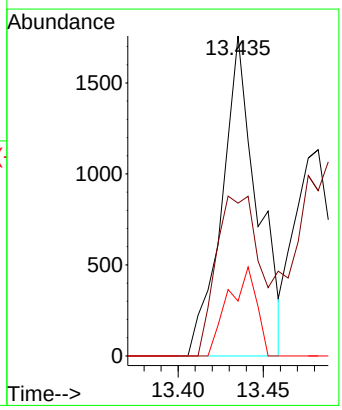


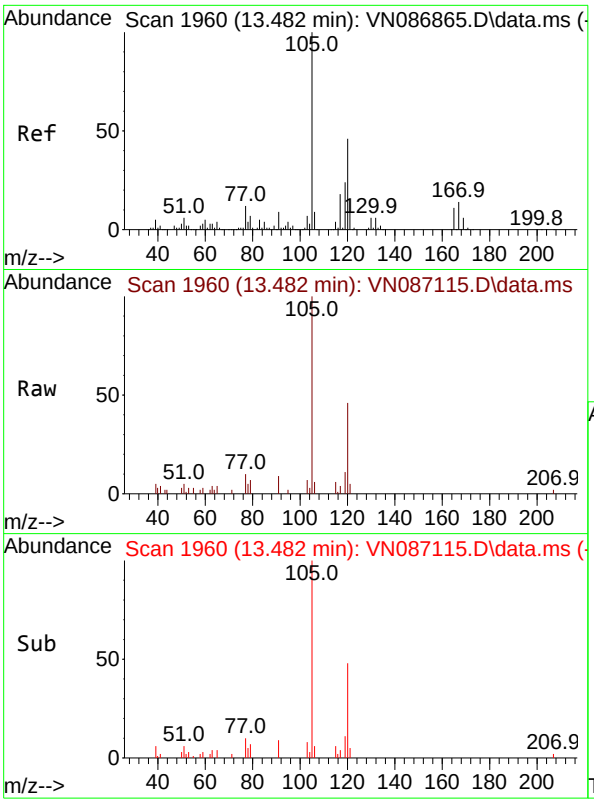




#83
tert-Butylbenzene
Concen: 0.301 ug/l
RT: 13.435 min Scan# 1952
Delta R.T. -0.000 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

Tgt Ion:119 Resp: 2521

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 91 | 61.3 | 32.1 | 96.5 |
| 134 | 22.3 | 13.4 | 40.1 |



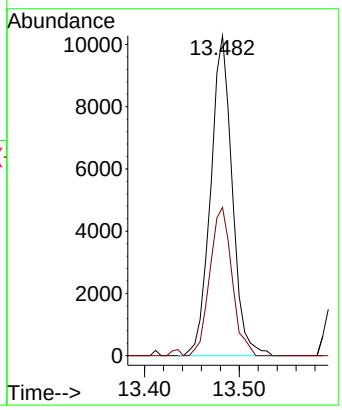


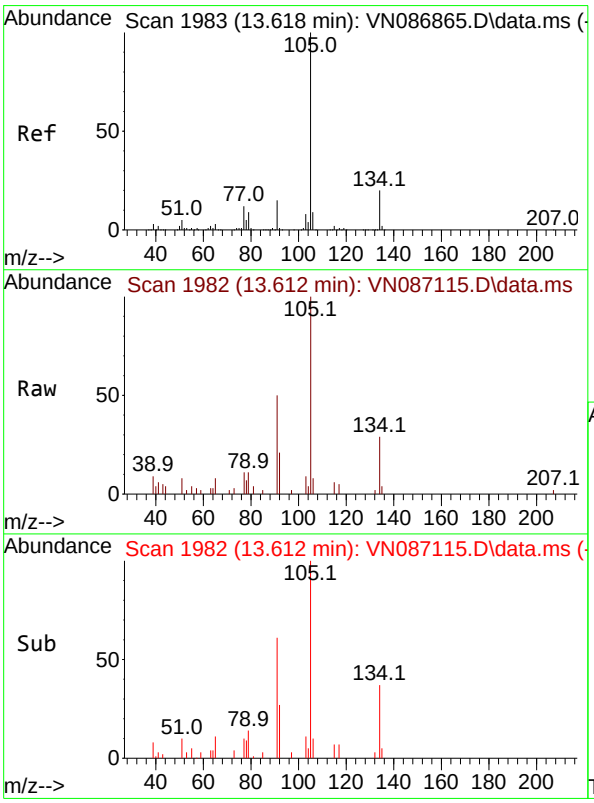

#84
1,2,4-Trimethylbenzene
Concen: 1.772 ug/l
RT: 13.482 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-10

Tgt Ion:105 Resp: 16280

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.5 | 23.2 | 69.6 |

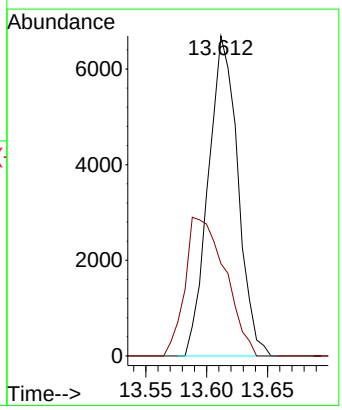



#85
sec-Butylbenzene
Concen: 0.928 ug/l
RT: 13.612 min Scan# 1982
Delta R.T. -0.006 min
Lab File: VN087115.D
Acq: 19 Jun 2025 16:28

Tgt Ion:105 Resp: 11304

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 134 | 0.0 | 10.0 | 30.0# |



Raw Data: **VN087109.D**

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-11 | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-04 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087109.D | 1 | | 06/19/25 14:21 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 0.30 | J | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 0.79 | J | 0.24 | 2.00 | ug/L |
| 1330-20-7 | Total Xylenes | 1.05 | J | 0.36 | 3.00 | ug/L |
| 95-47-6 | o-Xylene | 0.26 | J | 0.12 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 103-65-1 | n-propylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-06-6 | tert-Butylbenzene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.70 | | 0.14 | 1.00 | ug/L |
| 135-98-8 | sec-Butylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 99-87-6 | p-Isopropyltoluene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 104-51-8 | n-Butylbenzene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 91-20-3 | Naphthalene | 0.61 | J | 0.20 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 52.7 | | 74 - 125 | 105% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 51.5 | | 75 - 124 | 103% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 52.5 | | 86 - 113 | 105% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 50.0 | | 77 - 121 | 100% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 204000 | 8.229 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 406000 | 9.106 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 369000 | 11.865 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 175000 | 13.788 | | | |

Raw Data: **VN087109.D**

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-11 | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-04 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087109.D | 1 | | 06/19/25 14:21 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087109.D
Acq On : 19 Jun 2025 14:21
Operator : JC\MD
Sample : Q2333-04
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 11 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-11

Quant Time: Jun 20 01:25:19 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

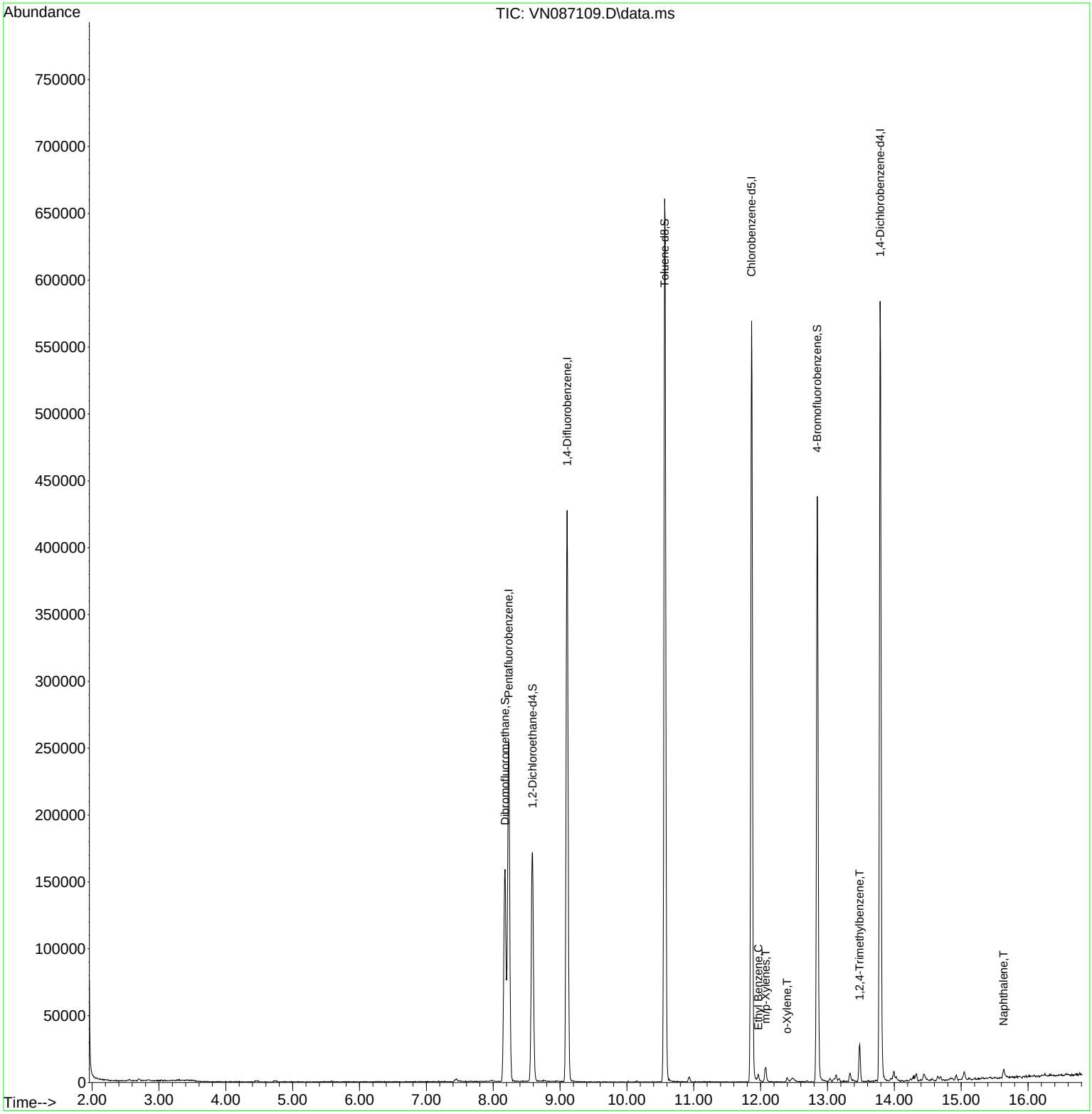
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.229 | 168 | 203941 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 406474 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 369075 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 174687 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.588 | 65 | 143926 | 52.710 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 105.420% | | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 123998 | 51.476 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 102.960% | | | |
| 50) Toluene-d8 | 10.565 | 98 | 500608 | 52.496 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 105.000% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 177106 | 49.989 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 99.980% | | | |
| Target Compounds | | | | | | Qvalue |
| 67) Ethyl Benzene | 11.965 | 91 | 4136 | 0.295 | ug/l | 100 |
| 68) m/p-Xylenes | 12.076 | 106 | 4223 | 0.787 | ug/l | 94 |
| 69) o-Xylene | 12.394 | 106 | 1346 | 0.262 | ug/l | 99 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 17583 | 1.669 | ug/l | 97 |
| 95) Naphthalene | 15.635 | 128 | 7998 | 0.610 | ug/l | 96 |

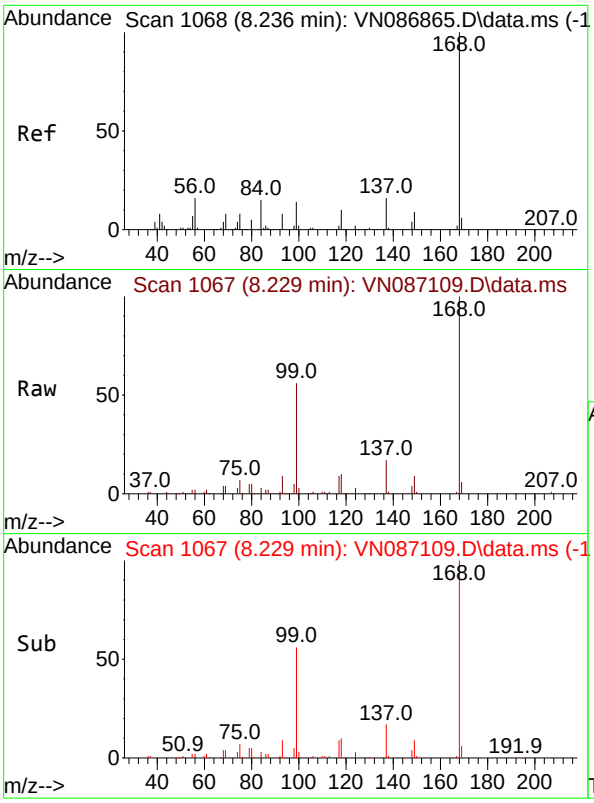
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087109.D
Acq On : 19 Jun 2025 14:21
Operator : JC\MD
Sample : Q2333-04
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 11 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-11

Quant Time: Jun 20 01:25:19 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration



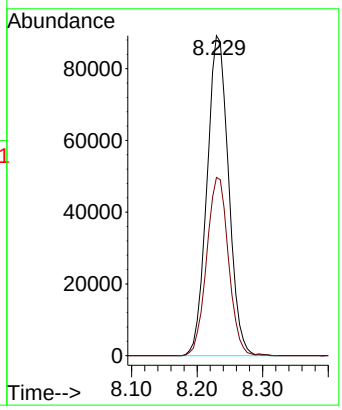


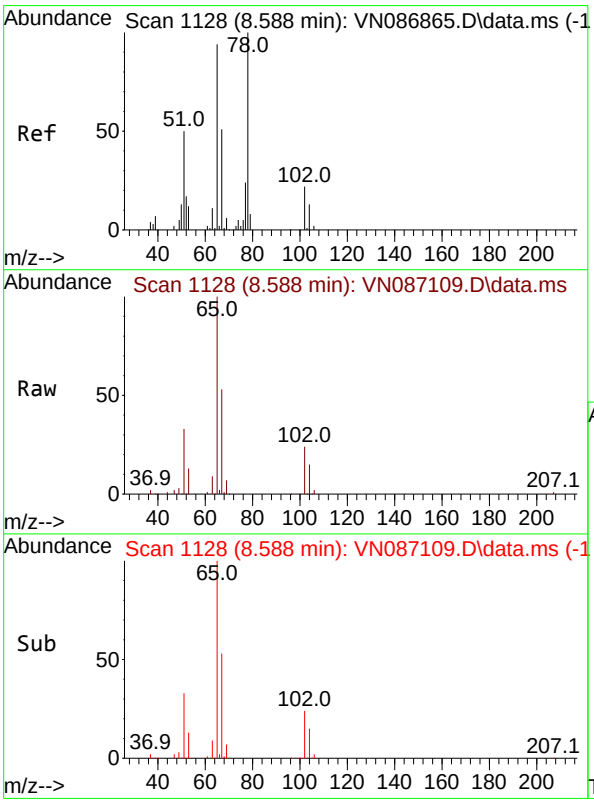

#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.229 min Scan# 1
Delta R.T. -0.007 min
Lab File: VN087109.D
Acq: 19 Jun 2025 14:21

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-11

Tgt Ion:168 Resp: 203941

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 168 | 100 | | |
| 99 | 55.7 | 49.1 | 73.7 |

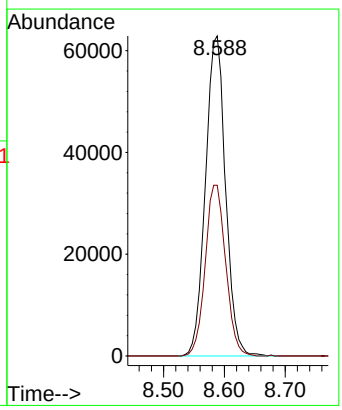


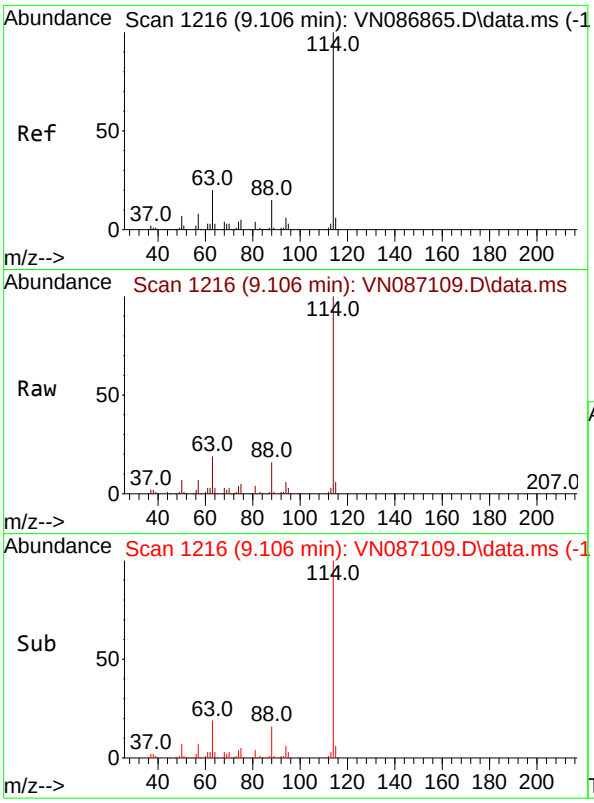




#33
1,2-Dichloroethane-d4
Concen: 52.710 ug/l
RT: 8.588 min Scan# 1128
Delta R.T. -0.000 min
Lab File: VN087109.D
Acq: 19 Jun 2025 14:21

Tgt Ion: 65 Resp: 143926

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 65 | 100 | | |
| 67 | 54.3 | 0.0 | 105.6 |



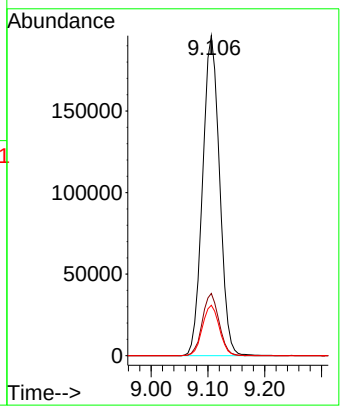


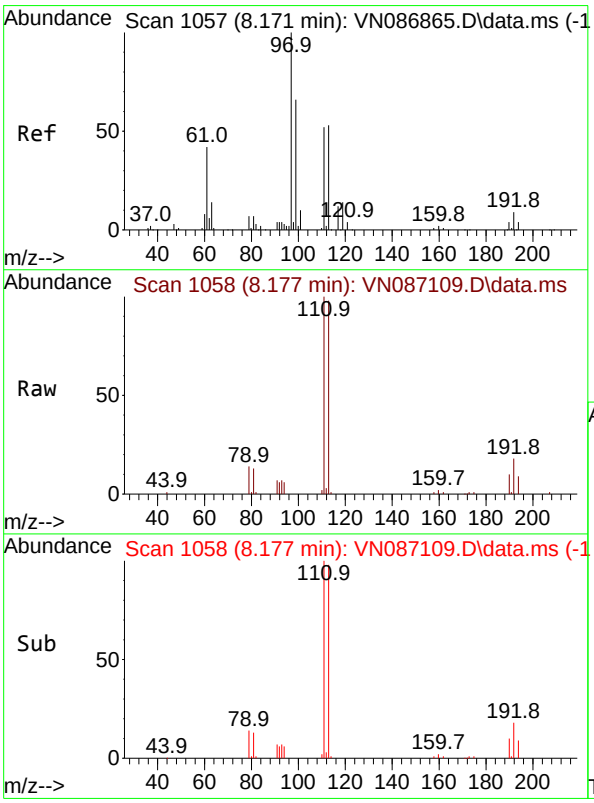

#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.106 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087109.D
Acq: 19 Jun 2025 14:21

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-11

Tgt Ion:114 Resp: 406474

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 19.4 | 0.0 | 39.6 |
| 88 | 15.7 | 0.0 | 30.2 |

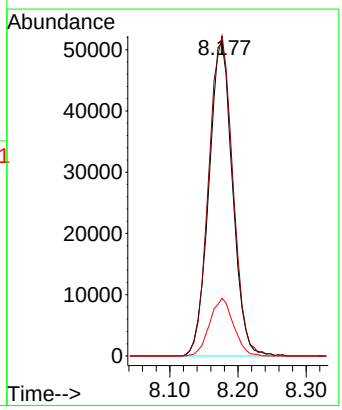


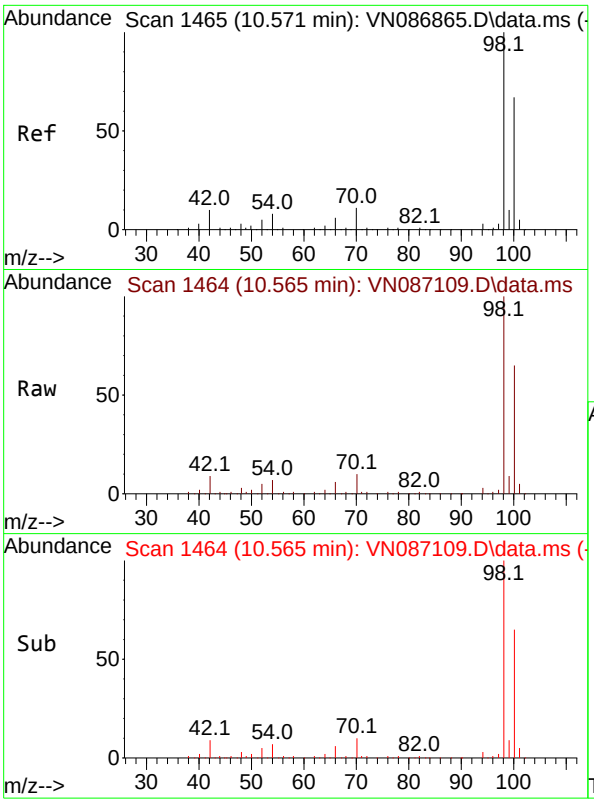




#35
Dibromofluoromethane
Concen: 51.476 ug/l
RT: 8.177 min Scan# 1058
Delta R.T. 0.006 min
Lab File: VN087109.D
Acq: 19 Jun 2025 14:21

Tgt Ion:113 Resp: 123998

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 113 | 100 | | |
| 111 | 104.1 | 84.2 | 126.2 |
| 192 | 18.5 | 14.2 | 21.4 |



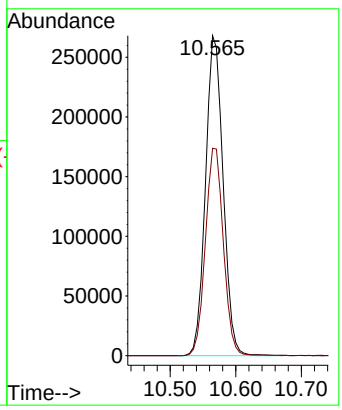


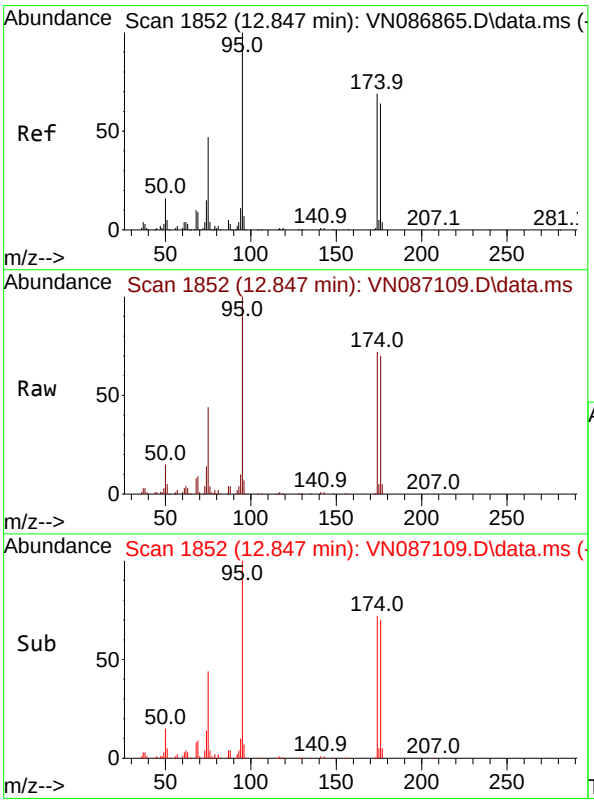

#50
Toluene-d8
Concen: 52.496 ug/l
RT: 10.565 min Scan# 14
Delta R.T. -0.006 min
Lab File: VN087109.D
Acq: 19 Jun 2025 14:21

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-11

Tgt Ion: 98 Resp: 500608

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 98 | 100 | | |
| 100 | 66.3 | 53.4 | 80.0 |

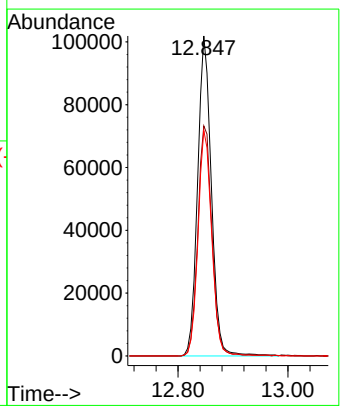


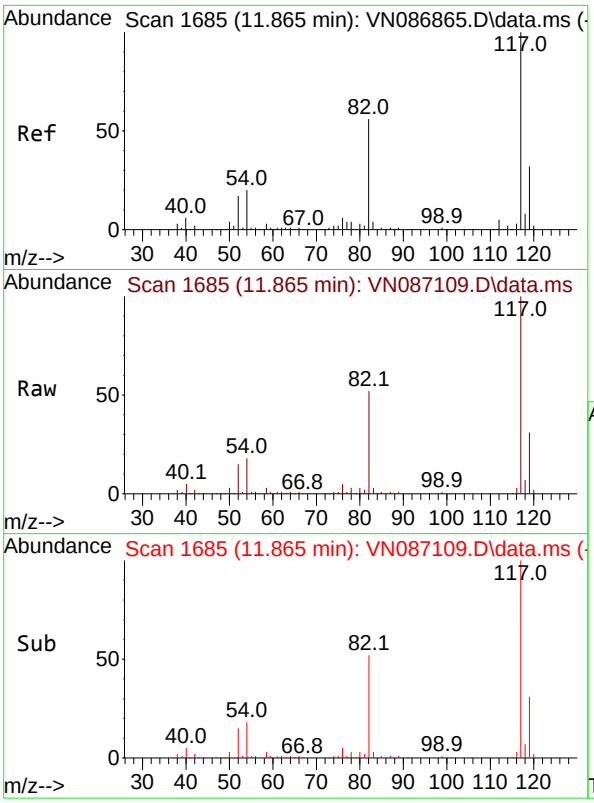




#62
4-Bromofluorobenzene
Concen: 49.989 ug/l
RT: 12.847 min Scan# 1852
Delta R.T. -0.000 min
Lab File: VN087109.D
Acq: 19 Jun 2025 14:21

Tgt Ion: 95 Resp: 177106

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 73.7 | 0.0 | 141.8 |
| 176 | 70.2 | 0.0 | 132.6 |



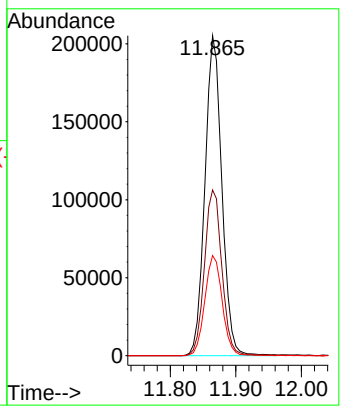


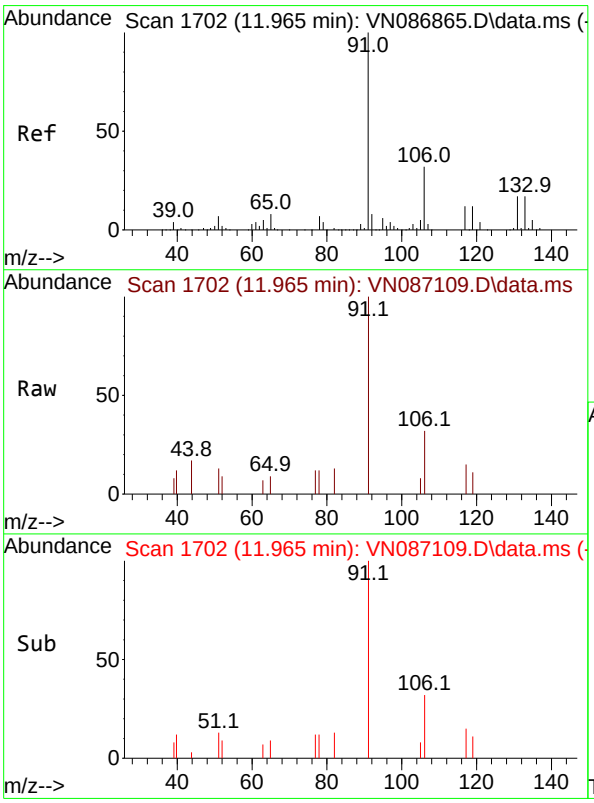

#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087109.D
Acq: 19 Jun 2025 14:21

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-11

Tgt Ion:117 Resp: 369075

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 51.8 | 44.6 | 67.0 |
| 119 | 31.3 | 25.5 | 38.3 |

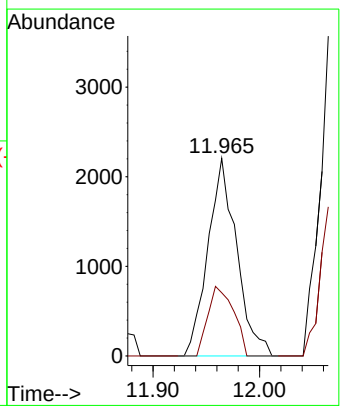


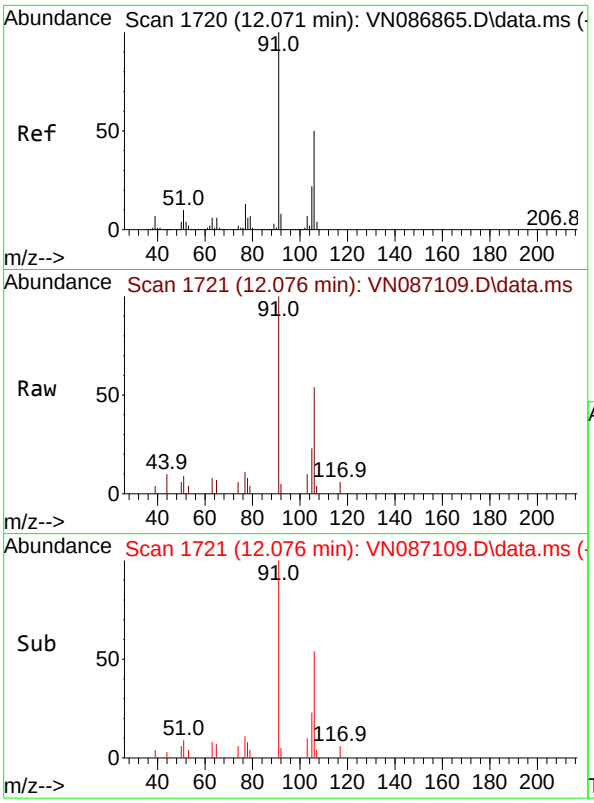




#67
Ethyl Benzene
Concen: 0.295 ug/l
RT: 11.965 min Scan# 1702
Delta R.T. -0.000 min
Lab File: VN087109.D
Acq: 19 Jun 2025 14:21

Tgt Ion: 91 Resp: 4136

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 32.0 | 25.4 | 38.2 |



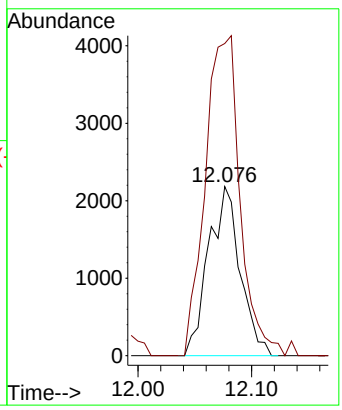


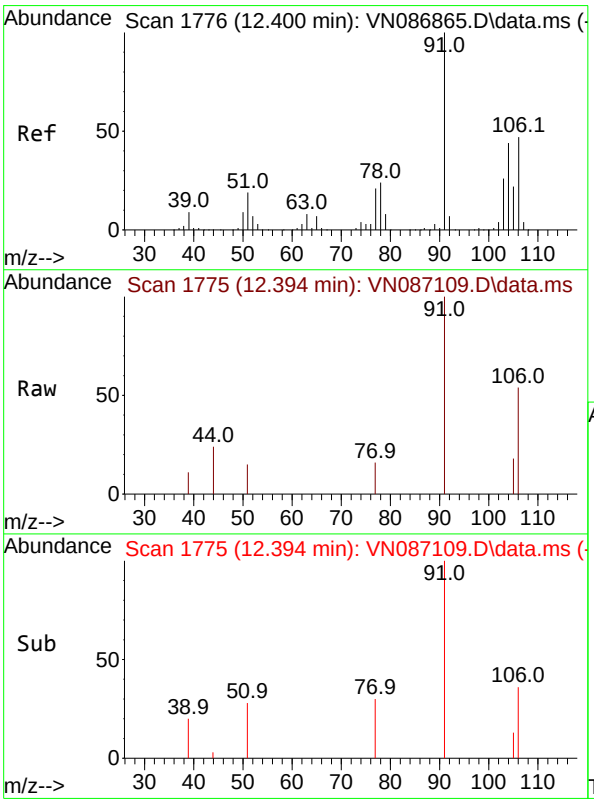

#68
m/p-Xylenes
Concen: 0.787 ug/l
RT: 12.076 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN087109.D
Acq: 19 Jun 2025 14:21

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-11

Tgt Ion:106 Resp: 4223

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 208.2 | 159.4 | 239.0 |

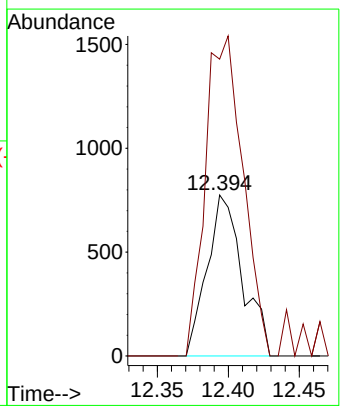


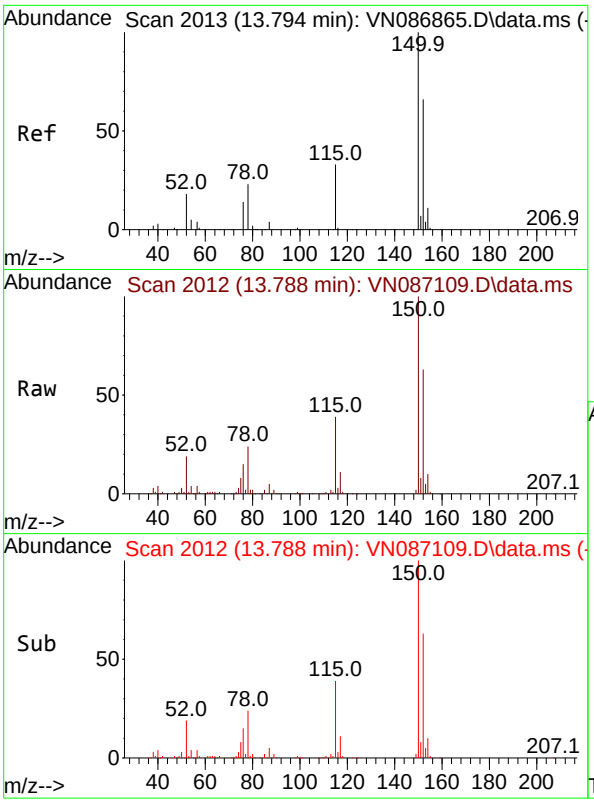




#69
o-Xylene
Concen: 0.262 ug/l
RT: 12.394 min Scan# 1775
Delta R.T. -0.006 min
Lab File: VN087109.D
Acq: 19 Jun 2025 14:21

Tgt Ion:106 Resp: 1346

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 211.1 | 106.1 | 318.1 |



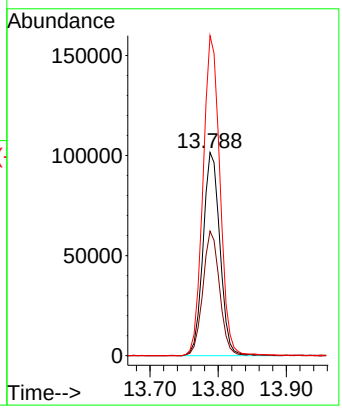


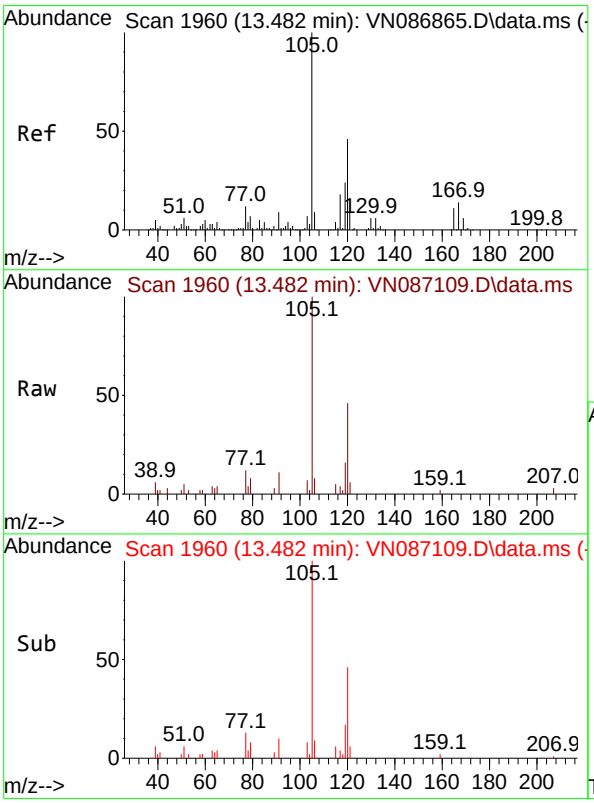

#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2
Delta R.T. -0.006 min
Lab File: VN087109.D
Acq: 19 Jun 2025 14:21

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-11

Tgt Ion:152 Resp: 174687

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 115 | 60.7 | 30.1 | 90.5 |
| 150 | 159.0 | 0.0 | 345.0 |

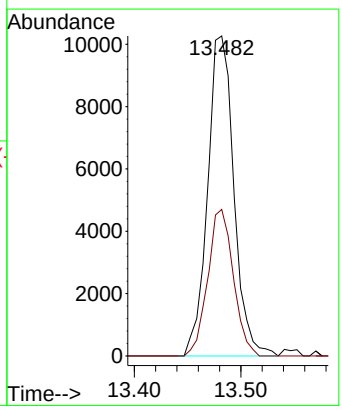


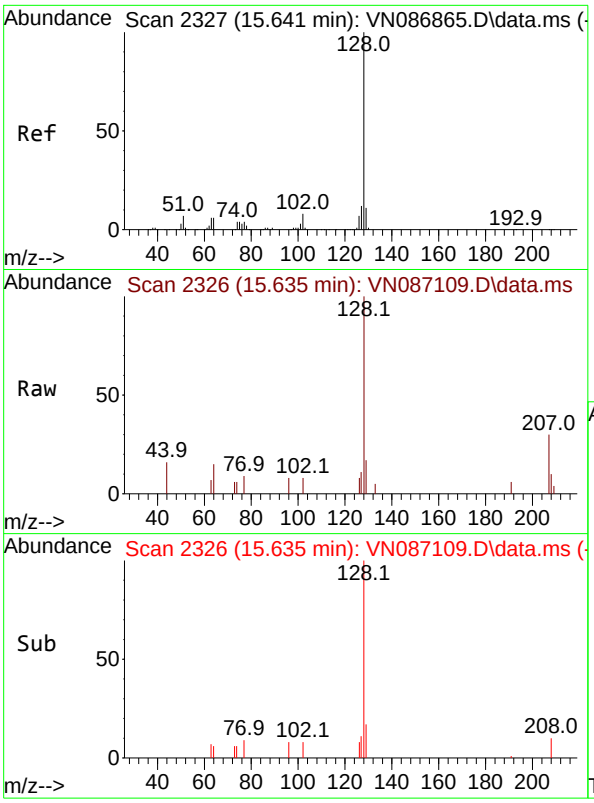




#84
1,2,4-Trimethylbenzene
Concen: 1.669 ug/l
RT: 13.482 min Scan# 1960
Delta R.T. -0.000 min
Lab File: VN087109.D
Acq: 19 Jun 2025 14:21

Tgt Ion:105 Resp: 17583

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 44.6 | 23.2 | 69.6 |



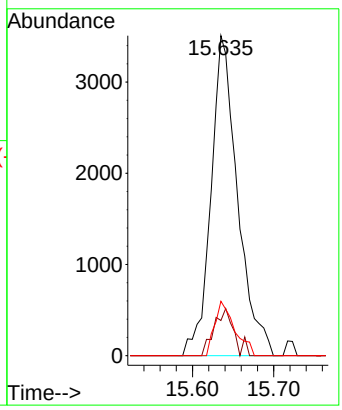



#95
Naphthalene
Concen: 0.610 ug/l
RT: 15.635 min Scan# 2
Delta R.T. -0.006 min
Lab File: VN087109.D
Acq: 19 Jun 2025 14:21

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-11

Tgt Ion:128 Resp: 7998

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 127 | 11.0 | 10.2 | 15.2 |
| 129 | 12.8 | 8.8 | 13.2 |



Raw Data: **VN087110.D**

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-13 | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-05 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087110.D | 1 | | 06/19/25 14:42 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 0.80 | J | 0.15 | 1.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.70 | | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 1.50 | J | 0.24 | 2.00 | ug/L |
| 1330-20-7 | Total Xylenes | 2.70 | J | 0.36 | 3.00 | ug/L |
| 95-47-6 | o-Xylene | 1.20 | | 0.12 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 103-65-1 | n-propylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-06-6 | tert-Butylbenzene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.71 | J | 0.14 | 1.00 | ug/L |
| 135-98-8 | sec-Butylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 99-87-6 | p-Isopropyltoluene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 104-51-8 | n-Butylbenzene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 91-20-3 | Naphthalene | 0.34 | J | 0.20 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 51.0 | | 74 - 125 | 102% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 51.4 | | 75 - 124 | 103% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 51.8 | | 86 - 113 | 104% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 49.3 | | 77 - 121 | 99% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 201000 | 8.23 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 398000 | 9.106 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 356000 | 11.865 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 169000 | 13.788 | | | |

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-13 | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-05 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087110.D | 1 | | 06/19/25 14:42 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087110.D
Acq On : 19 Jun 2025 14:42
Operator : JC\MD
Sample : Q2333-05
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 12 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-13

Quant Time: Jun 20 01:25:41 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

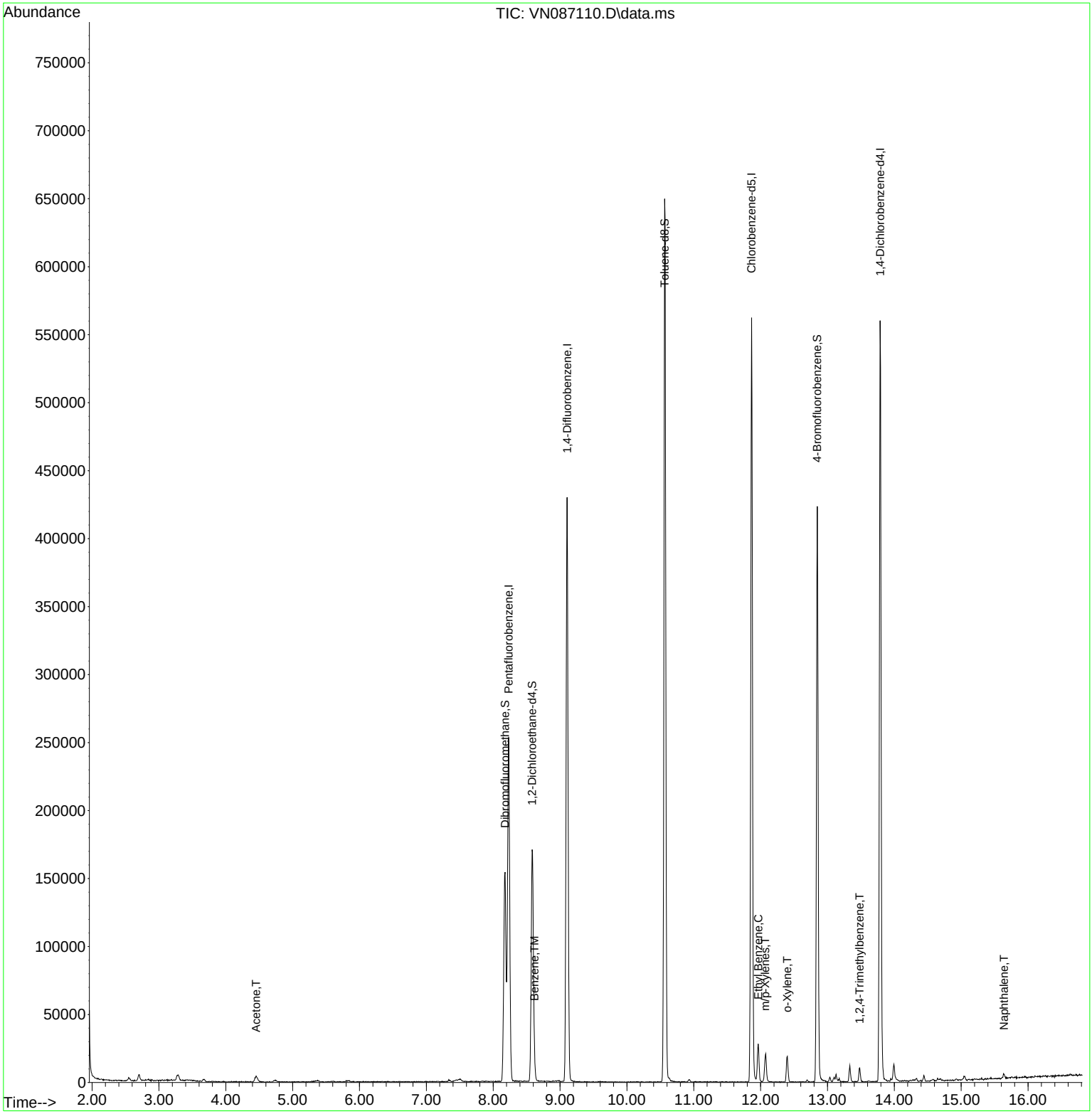
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.230 | 168 | 200534 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 398084 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 356355 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 169301 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.583 | 65 | 136952 | 51.008 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 102.020% | | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 121246 | 51.394 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 102.780% | | | |
| 50) Toluene-d8 | 10.565 | 98 | 483778 | 51.801 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 103.600% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 171089 | 49.308 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 98.620% | | | |
| Target Compounds | | | | | | Qvalue |
| 16) Acetone | 4.453 | 43 | 8627 | 6.059 | ug/l # | 81 |
| 40) Benzene | 8.618 | 78 | 9222 | 0.802 | ug/l | 97 |
| 67) Ethyl Benzene | 11.965 | 91 | 22730 | 1.679 | ug/l | 97 |
| 68) m/p-Xylenes | 12.071 | 106 | 7635 | 1.473 | ug/l | 97 |
| 69) o-Xylene | 12.400 | 106 | 6022 | 1.213 | ug/l | 94 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 7202 | 0.705 | ug/l | 96 |
| 95) Naphthalene | 15.641 | 128 | 4261 | 0.335 | ug/l # | 82 |

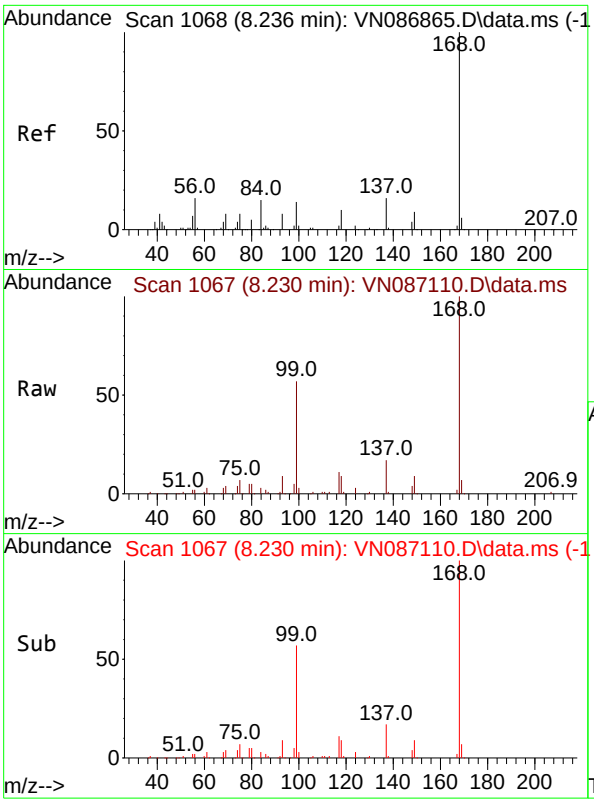
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087110.D
Acq On : 19 Jun 2025 14:42
Operator : JC\MD
Sample : Q2333-05
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 12 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-13

Quant Time: Jun 20 01:25:41 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration



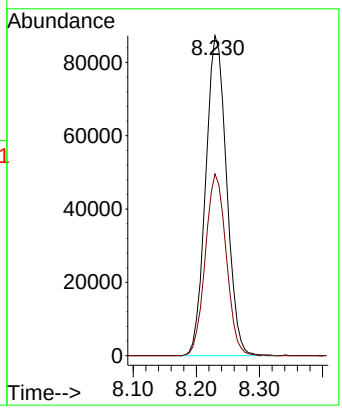


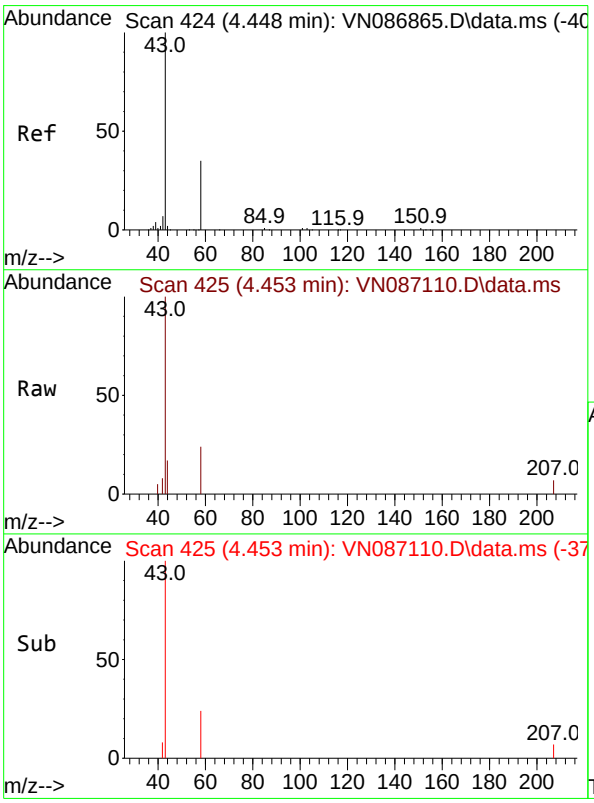

#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.230 min Scan# 1
Delta R.T. -0.006 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-13

Tgt Ion:168 Resp: 200534

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 168 | 100 | | |
| 99 | 56.8 | 49.1 | 73.7 |

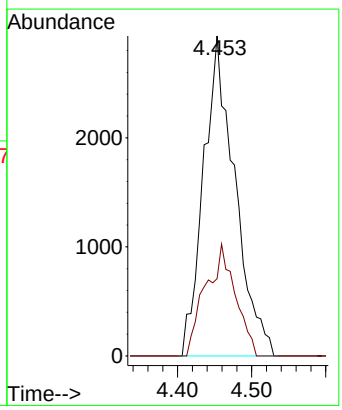


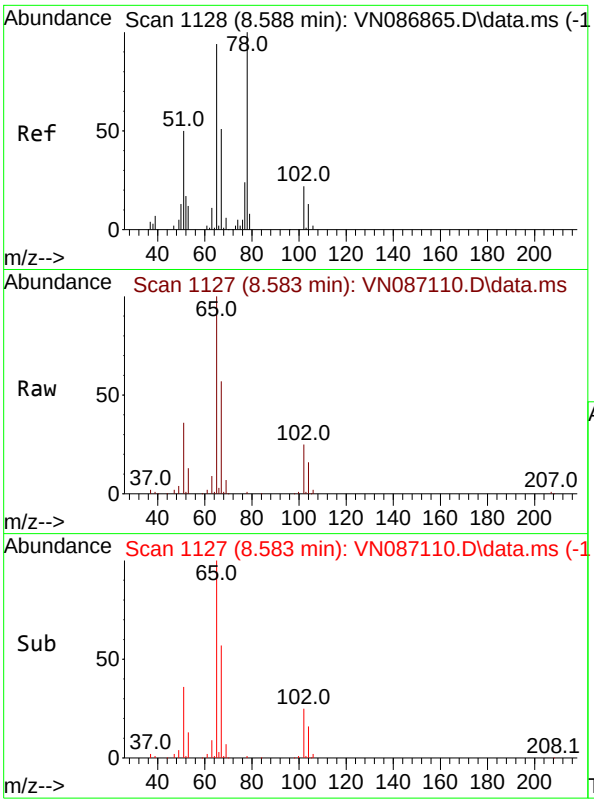




#16
Acetone
Concen: 6.059 ug/l
RT: 4.453 min Scan# 425
Delta R.T. 0.006 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

Tgt Ion: 43 Resp: 8627

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 24.1 | 28.0 | 42.0# |



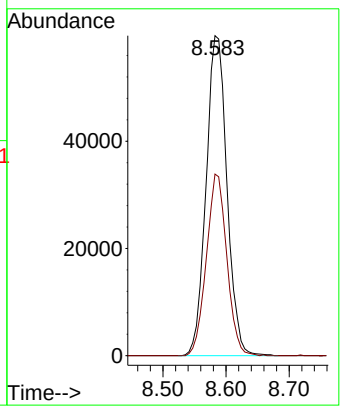


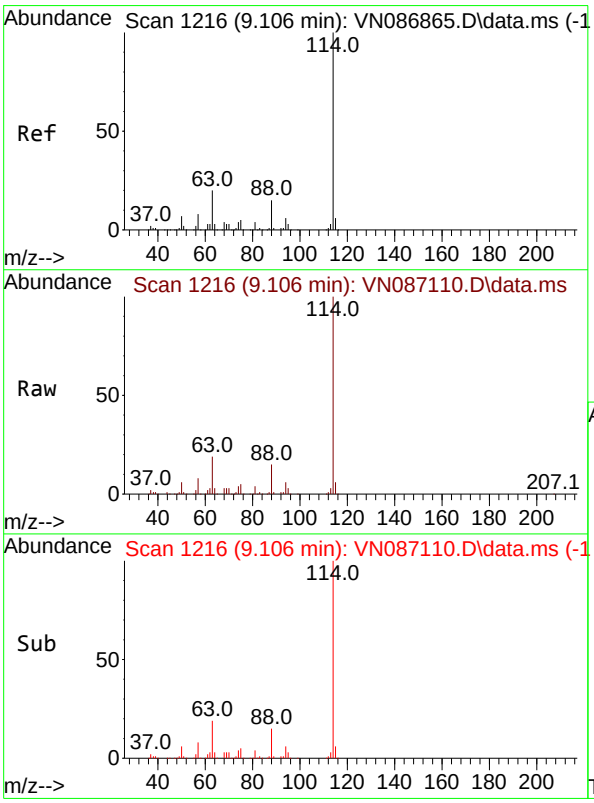

#33
1,2-Dichloroethane-d4
Concen: 51.008 ug/l
RT: 8.583 min Scan# 11
Delta R.T. -0.006 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-13

Tgt Ion: 65 Resp: 136952

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 65 | 100 | | |
| 67 | 55.6 | 0.0 | 105.6 |

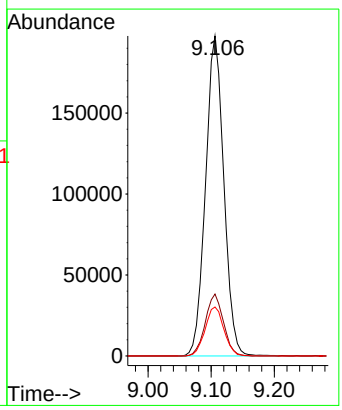


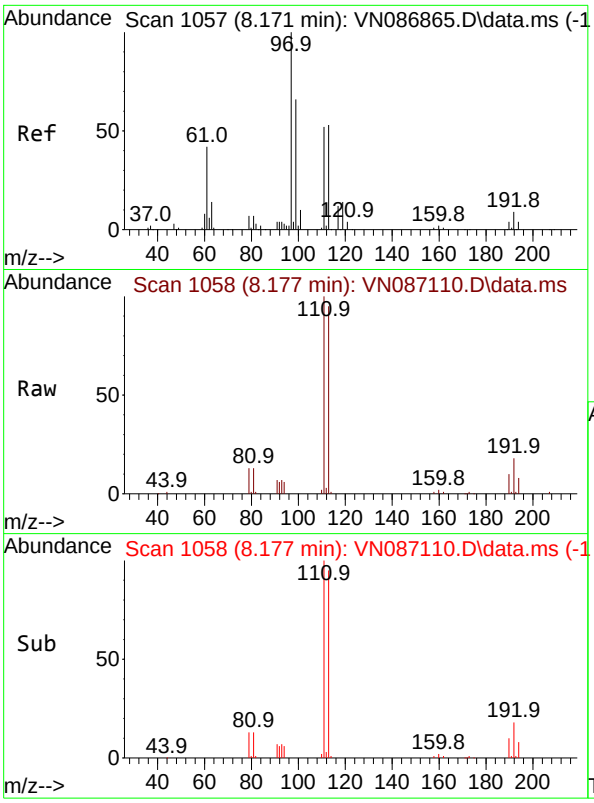




#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.106 min Scan# 1216
Delta R.T. -0.000 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

Tgt Ion:114 Resp: 398084

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 19.4 | 0.0 | 39.6 |
| 88 | 15.3 | 0.0 | 30.2 |



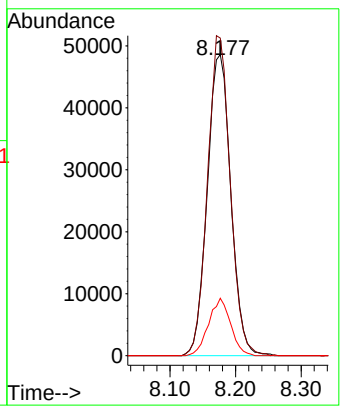


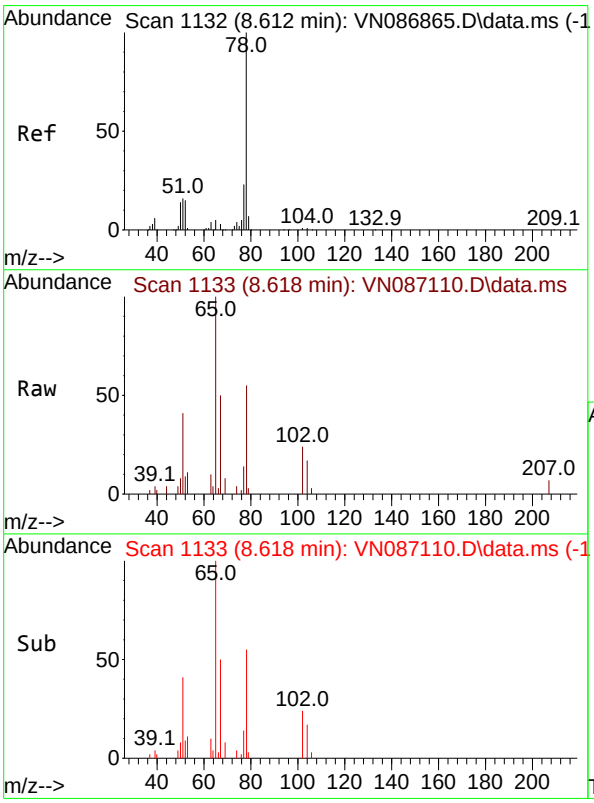

#35
Dibromofluoromethane
Concen: 51.394 ug/l
RT: 8.177 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-13

Tgt Ion:113 Resp: 121246

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 113 | 100 | | |
| 111 | 102.5 | 84.2 | 126.2 |
| 192 | 17.8 | 14.2 | 21.4 |

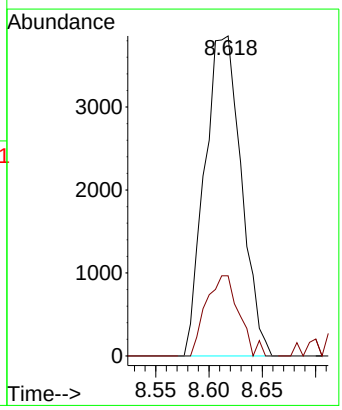


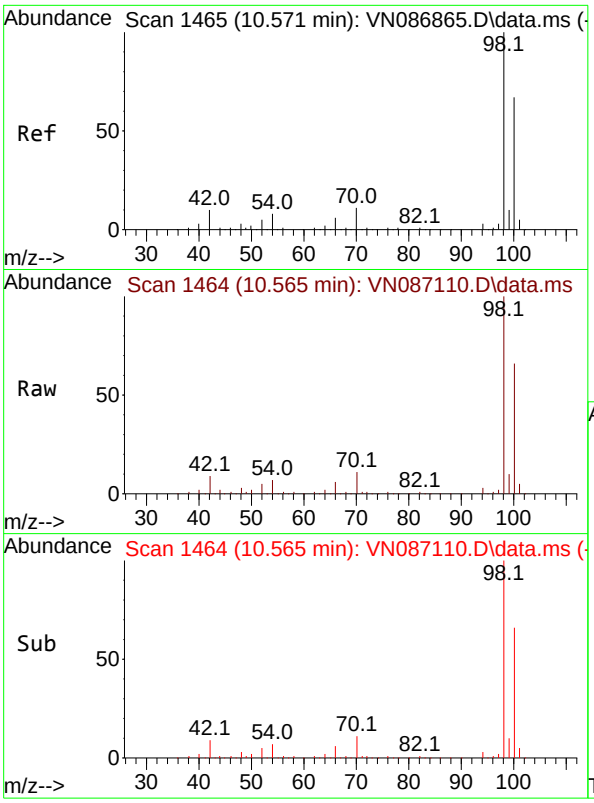




#40
Benzene
Concen: 0.802 ug/l
RT: 8.618 min Scan# 1133
Delta R.T. 0.006 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

Tgt Ion: 78 Resp: 9222

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 25.0 | 18.7 | 28.1 |



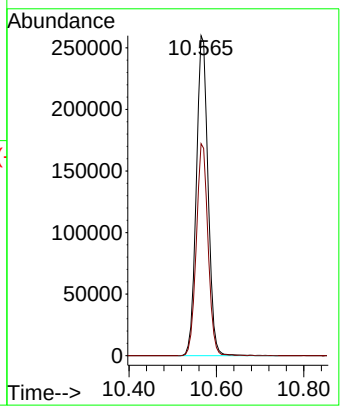


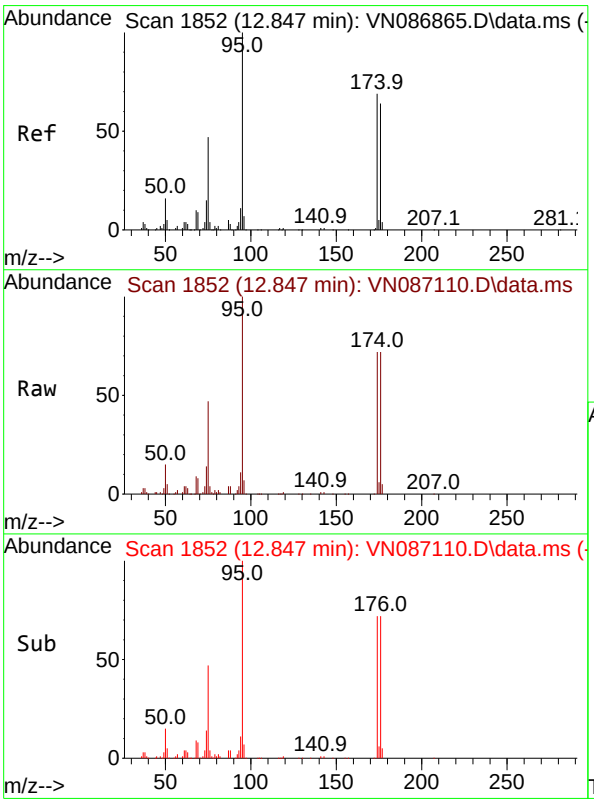

#50
Toluene-d8
Concen: 51.801 ug/l
RT: 10.565 min Scan# 14
Delta R.T. -0.006 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-13

Tgt Ion: 98 Resp: 483778

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 98 | 100 | | |
| 100 | 66.3 | 53.4 | 80.0 |

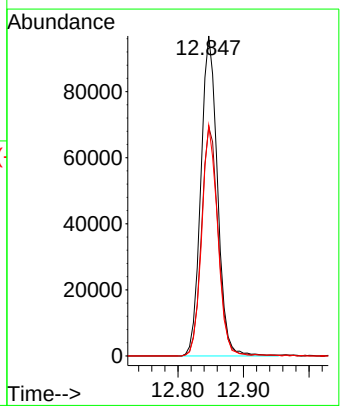


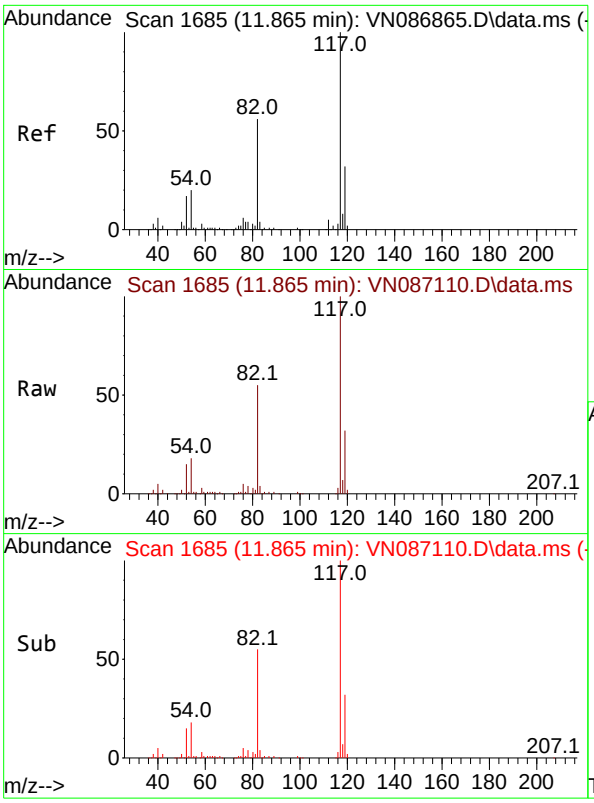




#62
4-Bromofluorobenzene
Concen: 49.308 ug/l
RT: 12.847 min Scan# 1852
Delta R.T. -0.000 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

Tgt Ion: 95 Resp: 171089

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 72.0 | 0.0 | 141.8 |
| 176 | 68.9 | 0.0 | 132.6 |



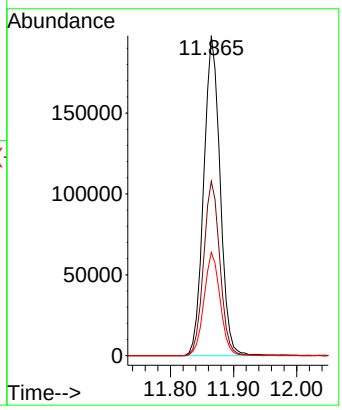


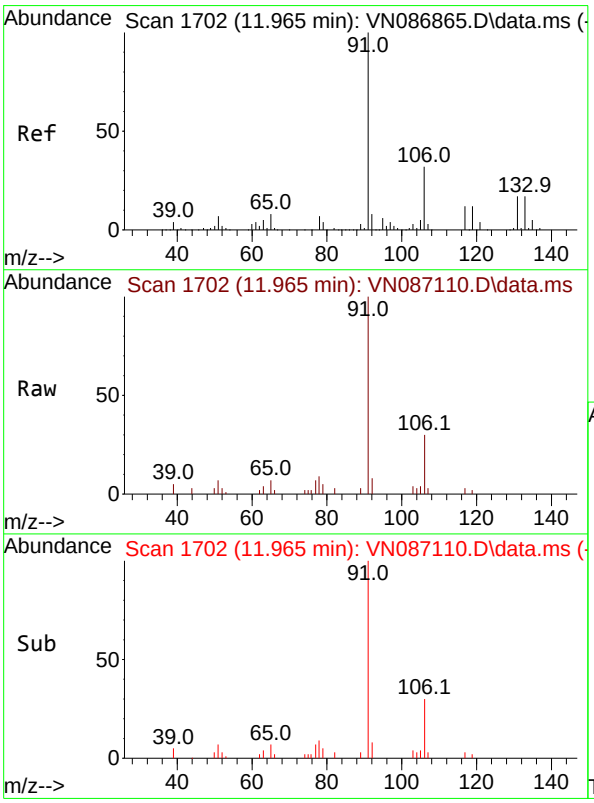

#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-13

Tgt Ion:117 Resp: 356355

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.5 | 44.6 | 67.0 |
| 119 | 32.2 | 25.5 | 38.3 |

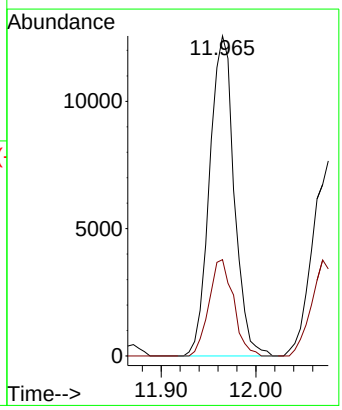


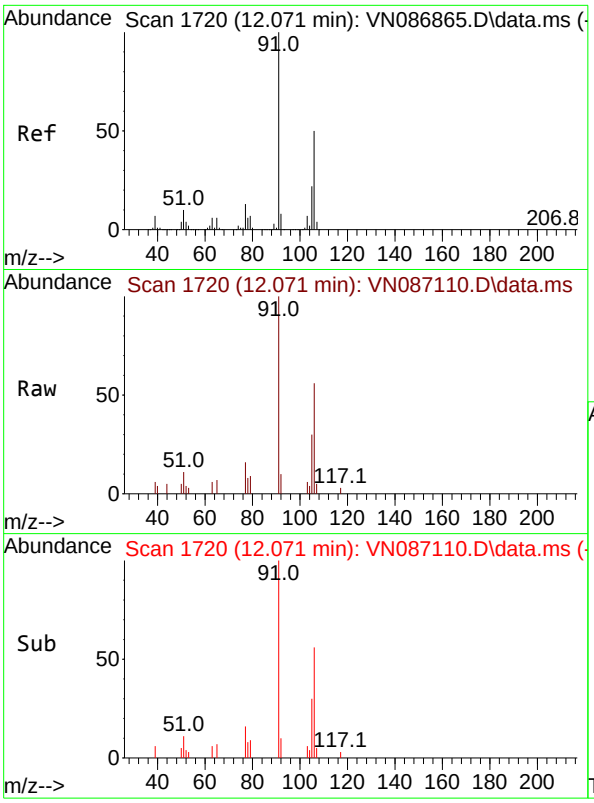




#67
Ethyl Benzene
Concen: 1.679 ug/l
RT: 11.965 min Scan# 1702
Delta R.T. -0.000 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

Tgt Ion: 91 Resp: 22730

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 30.1 | 25.4 | 38.2 |



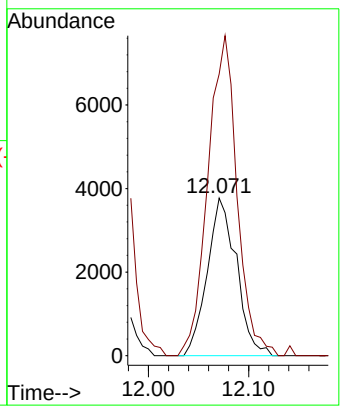


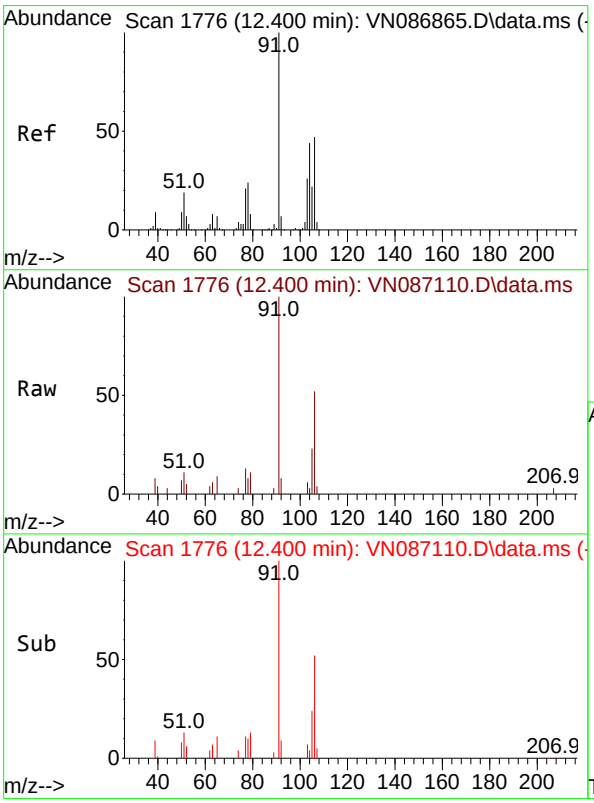

#68
m/p-Xylenes
Concen: 1.473 ug/l
RT: 12.071 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-13

Tgt Ion:106 Resp: 7635

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 203.2 | 159.4 | 239.0 |

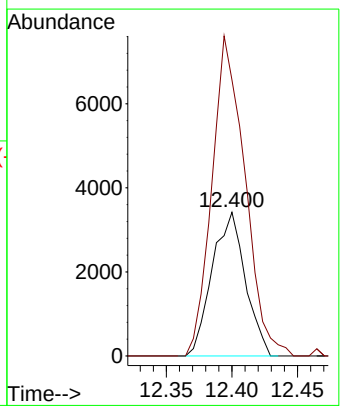


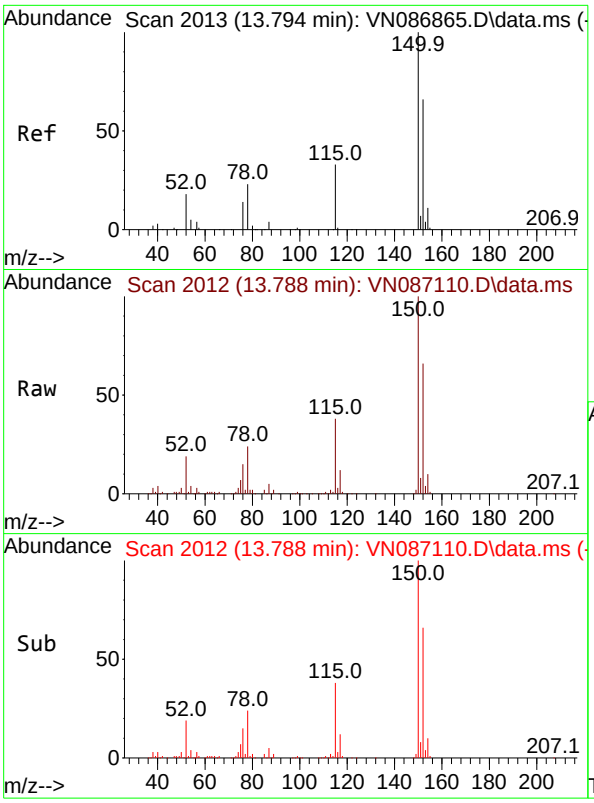




#69
o-Xylene
Concen: 1.213 ug/l
RT: 12.400 min Scan# 1776
Delta R.T. -0.000 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

Tgt Ion:106 Resp: 6022

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 221.2 | 106.1 | 318.1 |



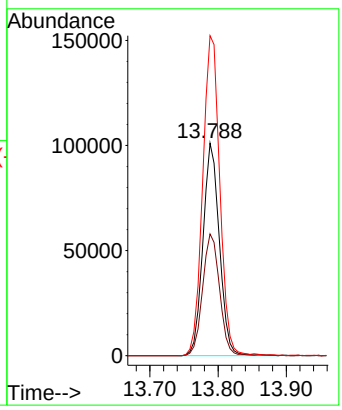


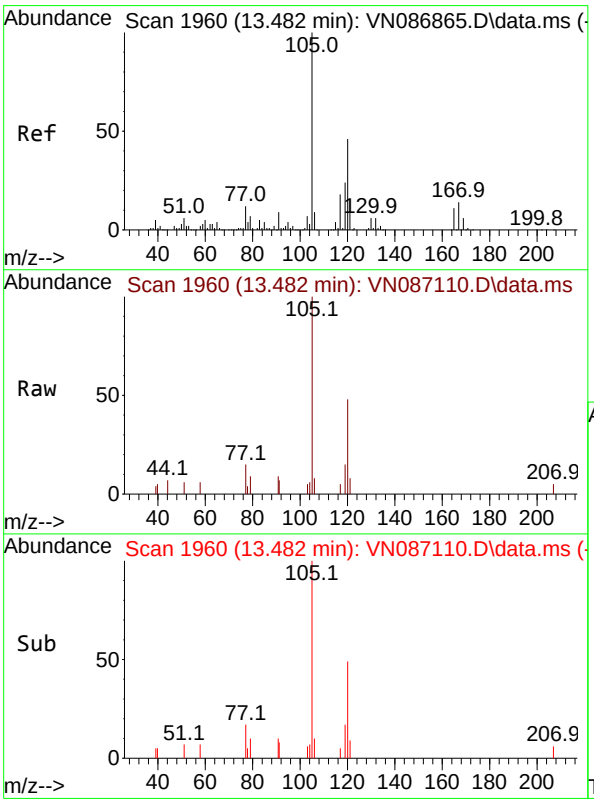

#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2
Delta R.T. -0.006 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-13

Tgt Ion:152 Resp: 169301

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 115 | 59.1 | 30.1 | 90.5 |
| 150 | 156.6 | 0.0 | 345.0 |

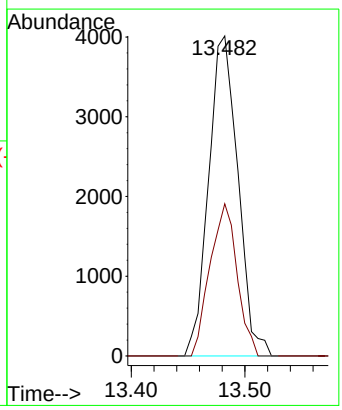


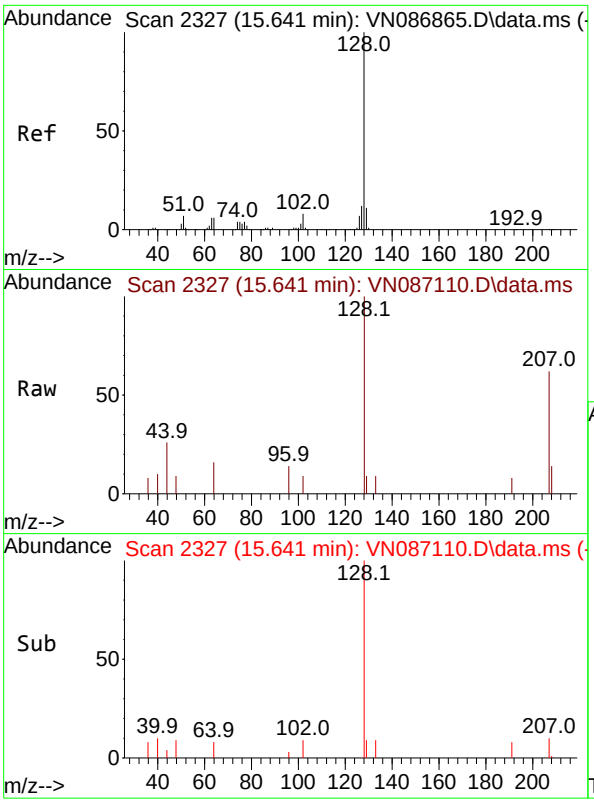




#84
1,2,4-Trimethylbenzene
Concen: 0.705 ug/l
RT: 13.482 min Scan# 1960
Delta R.T. -0.000 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

Tgt Ion:105 Resp: 7202

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 44.0 | 23.2 | 69.6 |



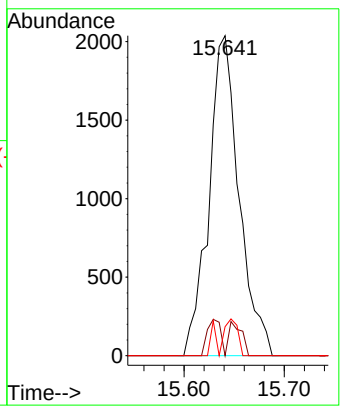



#95
Naphthalene
Concen: 0.335 ug/l
RT: 15.641 min Scan# 2
Delta R.T. -0.000 min
Lab File: VN087110.D
Acq: 19 Jun 2025 14:42

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-13

Tgt Ion:128 Resp: 4261

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 127 | 4.5 | 10.2 | 15.2# |
| 129 | 5.1 | 8.8 | 13.2# |



Raw Data: **VN087111.D**

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-12 | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-06 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087111.D | 1 | | 06/19/25 15:03 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 200 | E | 0.15 | 1.00 | ug/L |
| 108-88-3 | Toluene | 58.0 | | 0.14 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 730 | E | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 370 | E | 0.24 | 2.00 | ug/L |
| 1330-20-7 | Total Xylenes | 540 | | 0.36 | 3.00 | ug/L |
| 95-47-6 | o-Xylene | 170 | E | 0.12 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 23.6 | | 0.12 | 1.00 | ug/L |
| 103-65-1 | n-propylbenzene | 49.1 | | 0.13 | 1.00 | ug/L |
| 108-67-8 | 1,3,5-Trimethylbenzene | 4.50 | | 0.15 | 1.00 | ug/L |
| 98-06-6 | tert-Butylbenzene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 95-63-6 | 1,2,4-Trimethylbenzene | 480 | E | 0.14 | 1.00 | ug/L |
| 135-98-8 | sec-Butylbenzene | 2.50 | | 0.13 | 1.00 | ug/L |
| 99-87-6 | p-Isopropyltoluene | 2.50 | | 0.13 | 1.00 | ug/L |
| 104-51-8 | n-Butylbenzene | 3.10 | | 0.15 | 1.00 | ug/L |
| 91-20-3 | Naphthalene | 140 | | 0.20 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 52.5 | | 74 - 125 | 105% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 51.2 | | 75 - 124 | 102% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 51.9 | | 86 - 113 | 104% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 48.7 | | 77 - 121 | 97% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 189000 | 8.23 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 380000 | 9.106 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 339000 | 11.865 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 153000 | 13.788 | | | |

Raw Data: **VN087111.D**

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-12 | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-06 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087111.D | 1 | | 06/19/25 15:03 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087111.D
Acq On : 19 Jun 2025 15:03
Operator : JC\MD
Sample : Q2333-06
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 20 01:26:04 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| **Internal Standards** | | | | | | |
| 1) Pentafluorobenzene | 8.230 | 168 | 189269 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 379701 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 338791 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 153356 | 50.000 | ug/l | # 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.583 | 65 | 133053 | 52.505 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 105.020% | | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 115113 | 51.157 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 102.320% | | | |
| 50) Toluene-d8 | 10.565 | 98 | 462487 | 51.919 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 103.840% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 161074 | 48.669 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 97.340% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 6) Chloroethane | 3.159 | 64 | 4460 | 2.747 | ug/l | 98 |
| 16) Acetone | 4.453 | 43 | 61661 | 45.884 | ug/l | 100 |
| 25) 2-Butanone | 7.500 | 43 | 28998 | 13.275 | ug/l | 92 |
| 31) Cyclohexane | 8.271 | 56 | 150224 | 36.550 | ug/l | 91 |
| 39) Methylcyclohexane | 9.606 | 83 | 86788 | 18.893 | ug/l | 97 |
| 40) Benzene | 8.612 | 78 | 2159953 | 196.995 | ug/l | 99 |
| 52) Toluene | 10.630 | 92 | 388686 | 58.007 | ug/l | 100 |
| 67) Ethyl Benzene | 11.965 | 91 | 9435127 | 733.073 | ug/l | 97 |
| 68) m/p-Xylenes | 12.076 | 106 | 1831713 | 371.779 | ug/l | 97 |
| 69) o-Xylene | 12.394 | 106 | 824044 | 174.635 | ug/l | 97 |
| 73) Isopropylbenzene | 12.694 | 105 | 263132 | 23.553 | ug/l | 99 |
| 78) n-propylbenzene | 13.035 | 91 | 666280 | 49.074 | ug/l | 99 |
| 80) 1,3,5-Trimethylbenzene | 13.171 | 105 | 41419m | 4.490 | ug/l | |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 4427688 | 478.699 | ug/l | 99 |
| 85) sec-Butylbenzene | 13.618 | 105 | 30455m | 2.484 | ug/l | |
| 86) p-Isopropyltoluene | 13.723 | 119 | 25694 | 2.535 | ug/l # | 78 |
| 89) n-Butylbenzene | 14.053 | 91 | 30245m | 3.081 | ug/l | |
| 95) Naphthalene | 15.635 | 128 | 1599639 | 138.963 | ug/l | 100 |

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

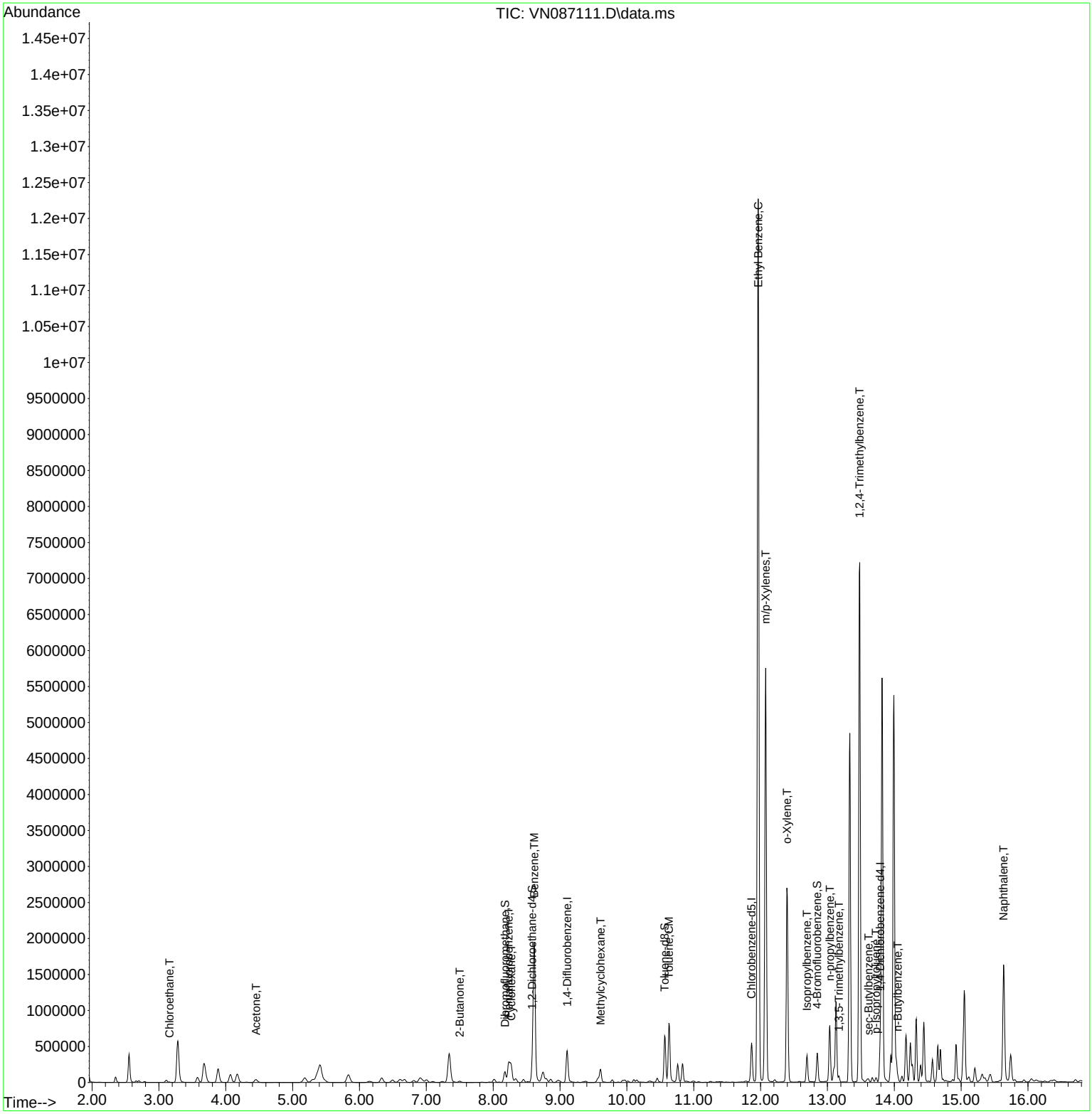
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087111.D
Acq On : 19 Jun 2025 15:03
Operator : JC\MD
Sample : Q2333-06
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

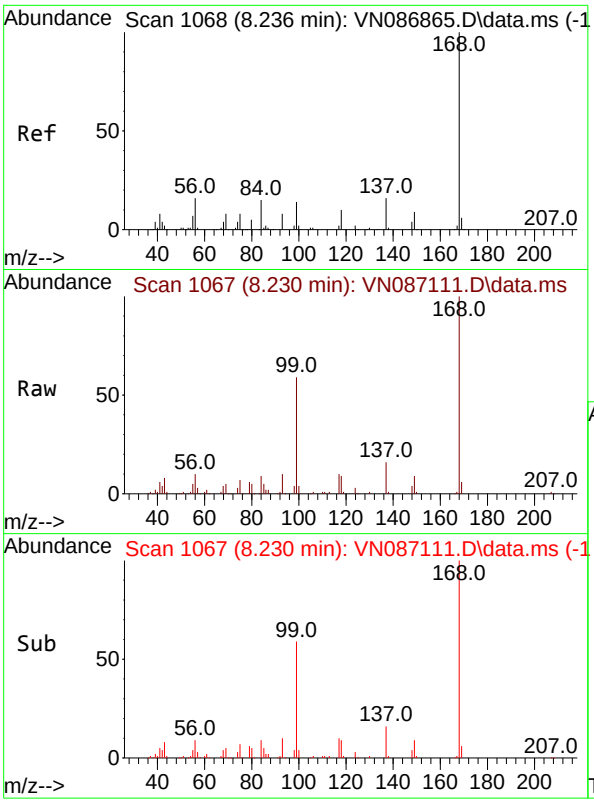
Quant Time: Jun 20 01:26:04 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

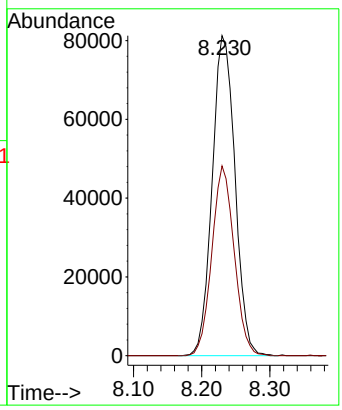





#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.230 min Scan# 1
Delta R.T. -0.006 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion:168 Resp: 18926

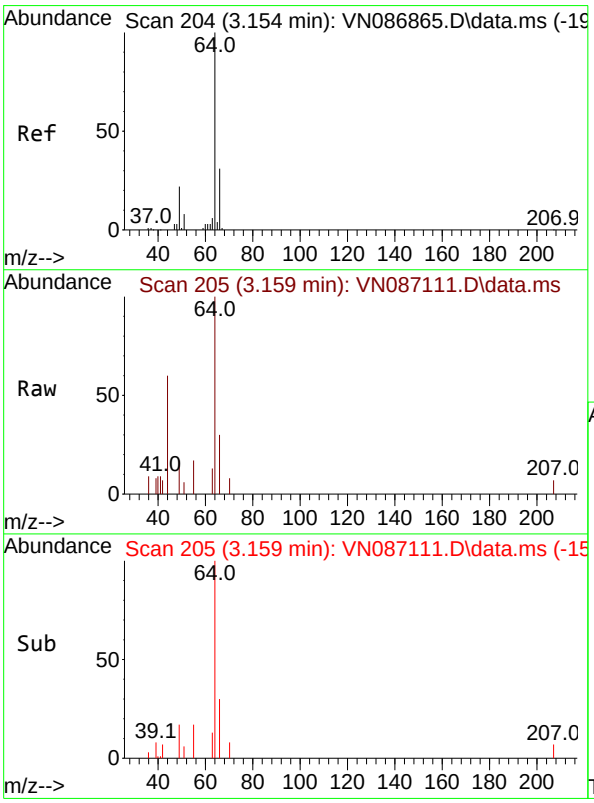
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 168 | 100 | | |
| 99 | 59.3 | 49.1 | 73.7 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

**Manual Integrations**
**APPROVED**

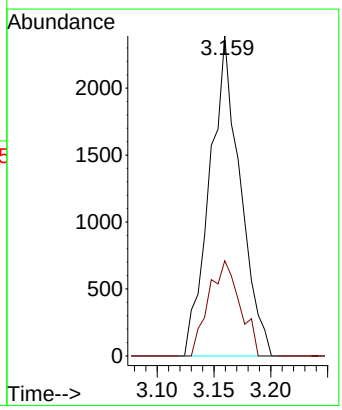
Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

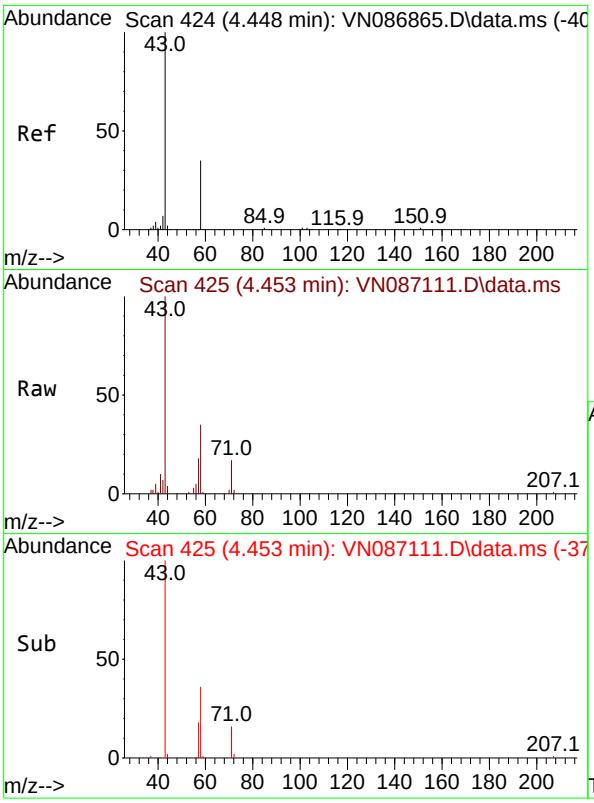



#6
Chloroethane
Concen: 2.747 ug/l
RT: 3.159 min Scan# 205
Delta R.T. 0.006 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion: 64 Resp: 4460

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 64 | 100 | | |
| 66 | 29.7 | 24.6 | 36.8 |

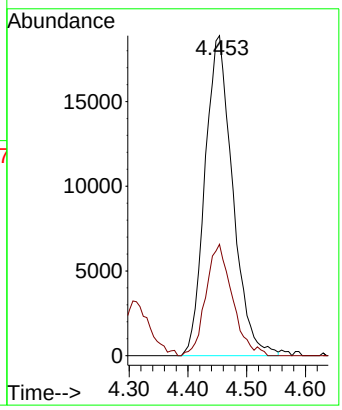





#16
Acetone
Concen: 45.884 ug/l
RT: 4.453 min Scan# 4
Delta R.T. 0.006 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion: 43 Resp: 6166

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 34.8 | 28.0 | 42.0 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

**Manual Integrations**
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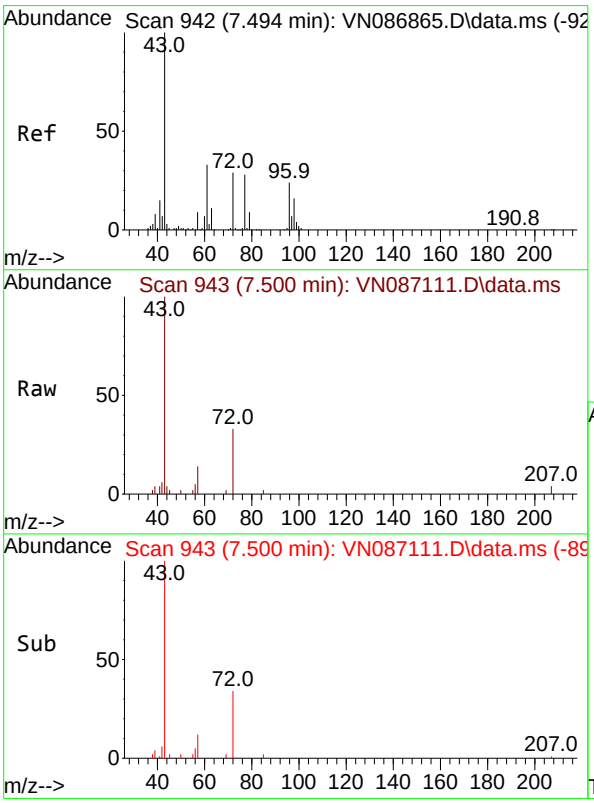
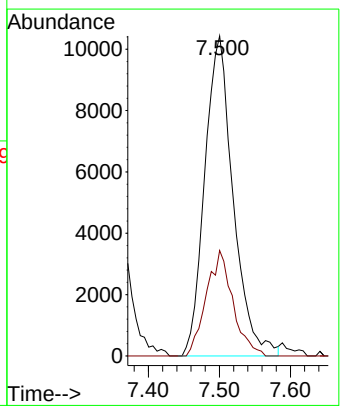
Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

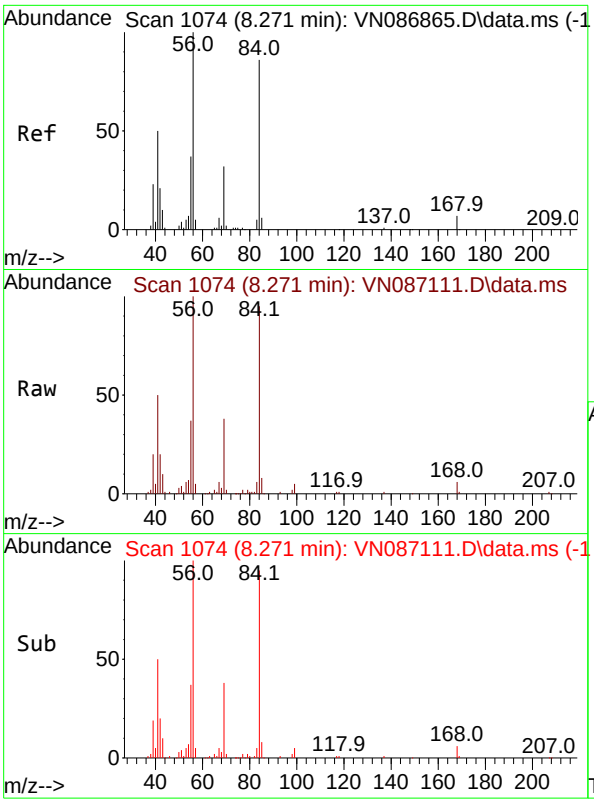



#25
2-Butanone
Concen: 13.275 ug/l
RT: 7.500 min Scan# 943
Delta R.T. 0.006 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion: 43 Resp: 28998

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 33.0 | 23.0 | 34.6 |

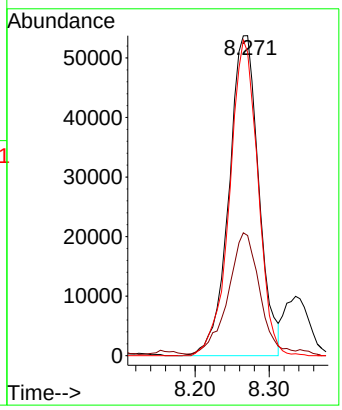





#31
Cyclohexane
Concen: 36.550 ug/l
RT: 8.271 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion: 56 Resp: 15022

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 69 | 36.7 | 25.4 | 38.0 |
| 84 | 94.8 | 68.8 | 103.2 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

**Manual Integrations**
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Reviewed By :John Carlone 06/20/2025
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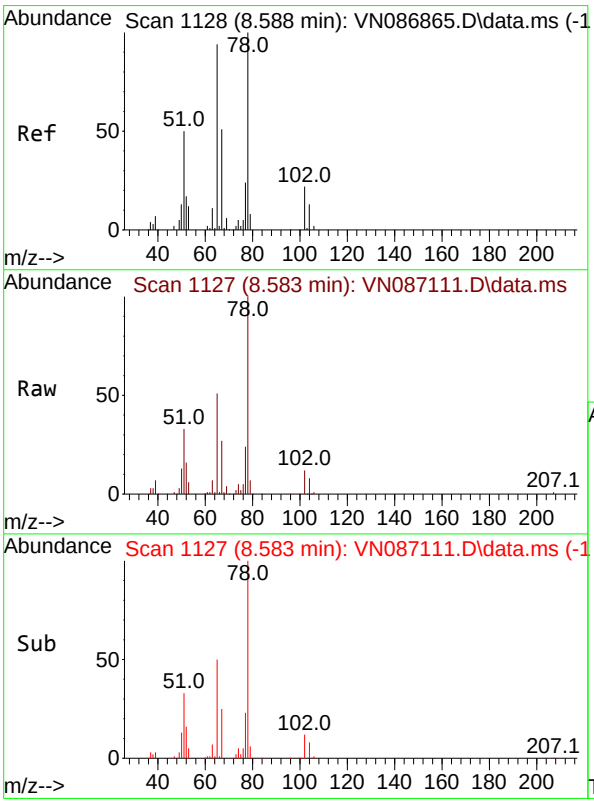
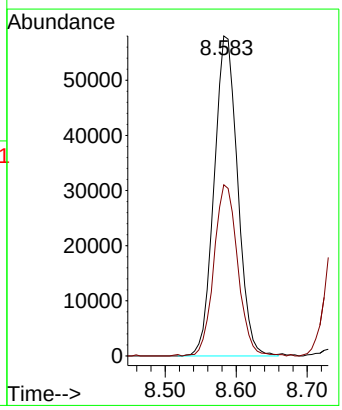
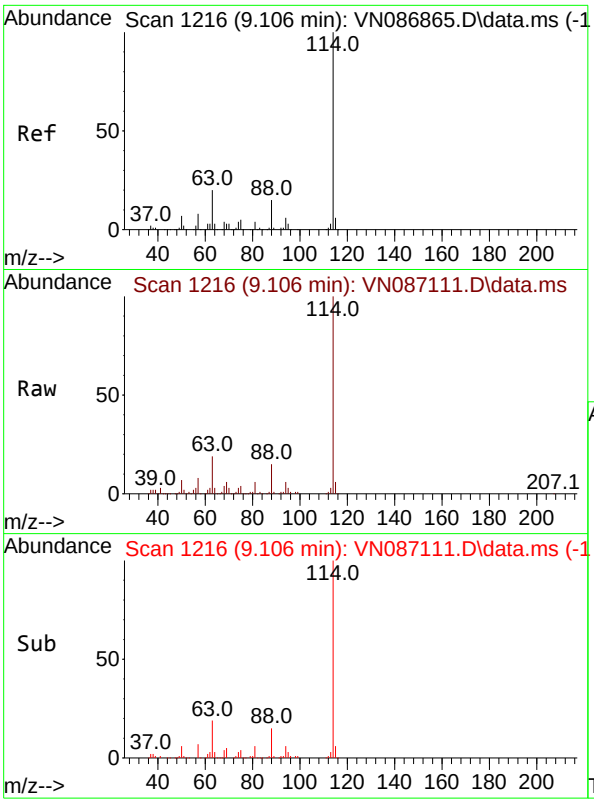



#33
1,2-Dichloroethane-d4
Concen: 52.505 ug/l
RT: 8.583 min Scan# 1127
Delta R.T. -0.006 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion: 65 Resp: 133053

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 65 | 100 | | |
| 67 | 54.3 | 0.0 | 105.6 |






#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.106 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion:114 Resp: 37970

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 18.9 | 0.0 | 39.6 |
| 88 | 15.2 | 0.0 | 30.2 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

**Manual Integrations**
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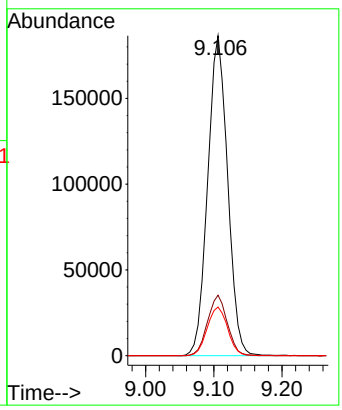
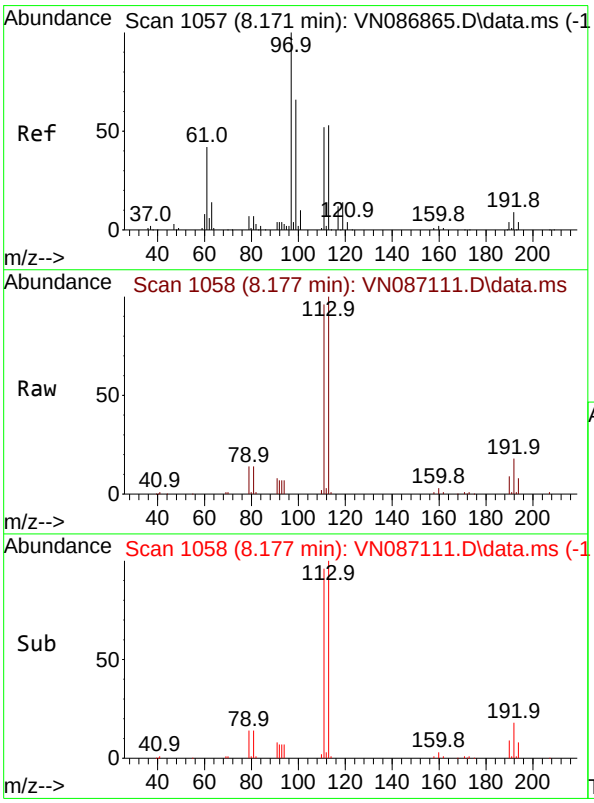
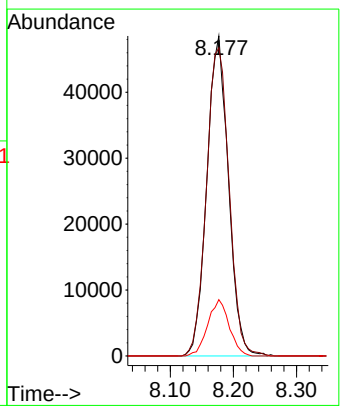


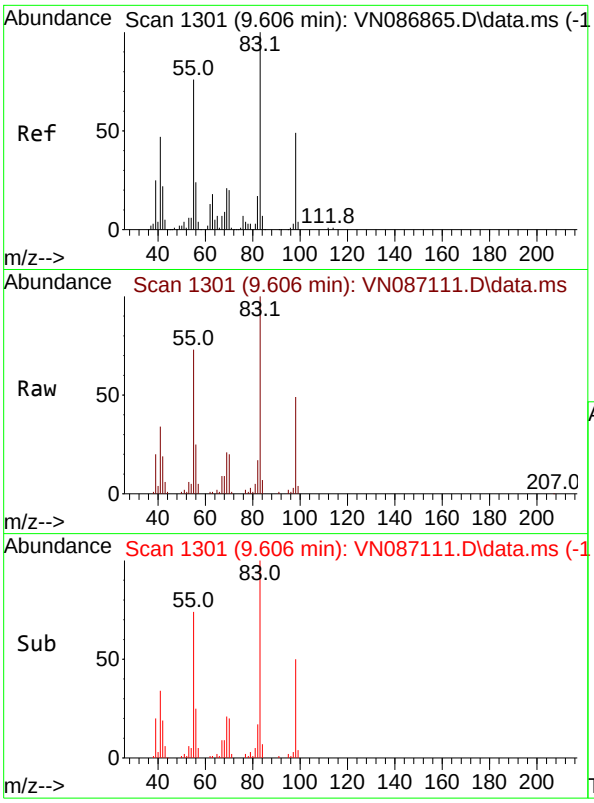




#35
Dibromofluoromethane
Concen: 51.157 ug/l
RT: 8.177 min Scan# 1058
Delta R.T. 0.006 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion:113 Resp: 115113

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 113 | 100 | | |
| 111 | 101.6 | 84.2 | 126.2 |
| 192 | 17.5 | 14.2 | 21.4 |






#39
Methylcyclohexane
Concen: 18.893 ug/l
RT: 9.606 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion: 83 Resp: 8678

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 55 | 73.2 | 61.0 | 91.6 |
| 98 | 49.4 | 38.9 | 58.3 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

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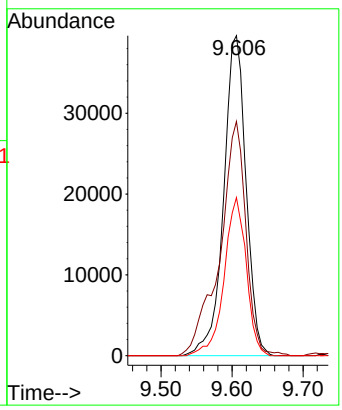
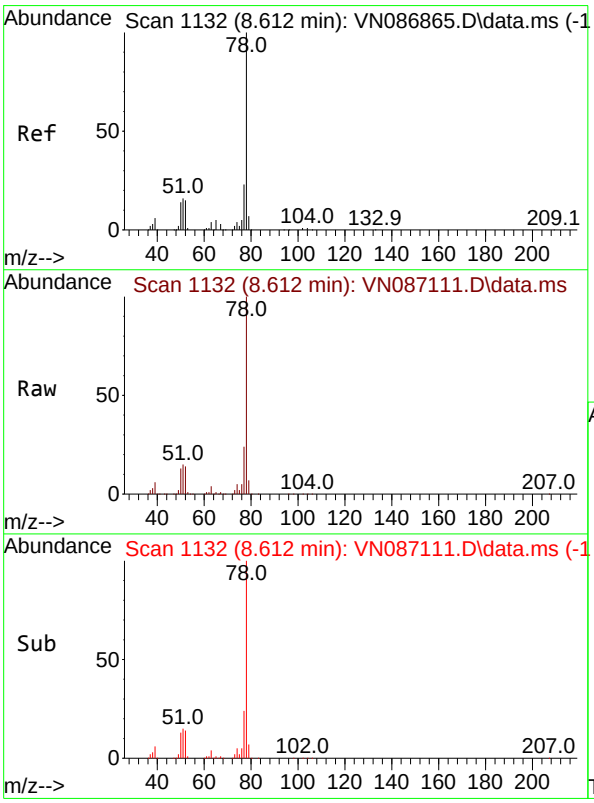
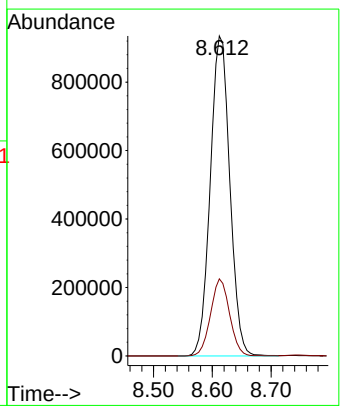


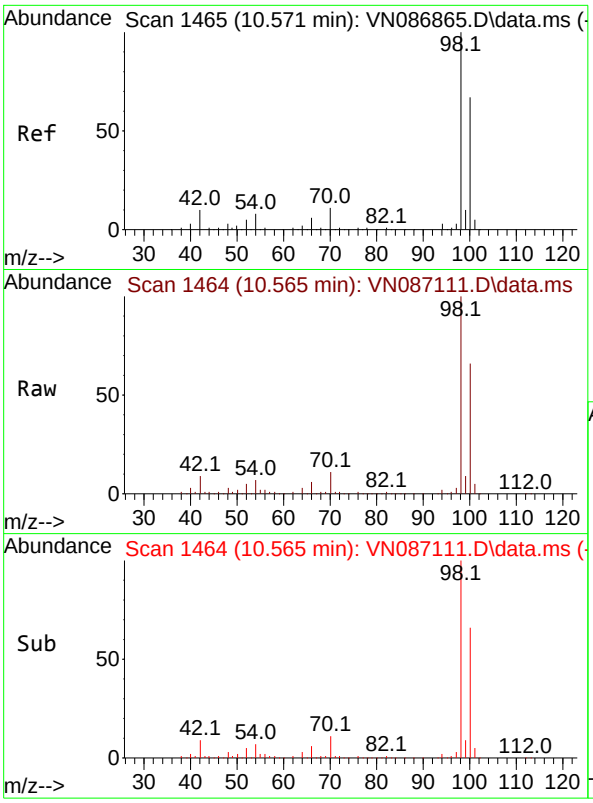




#40
Benzene
Concen: 196.995 ug/l
RT: 8.612 min Scan# 1132
Delta R.T. -0.000 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion: 78 Resp: 2159953

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 24.1 | 18.7 | 28.1 |






#50
Toluene-d8
Concen: 51.919 ug/l
RT: 10.565 min Scan# 14
Delta R.T. -0.006 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion: 98 Resp: 46248

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 98 | 100 | | |
| 100 | 66.2 | 53.4 | 80.0 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

**Manual Integrations**
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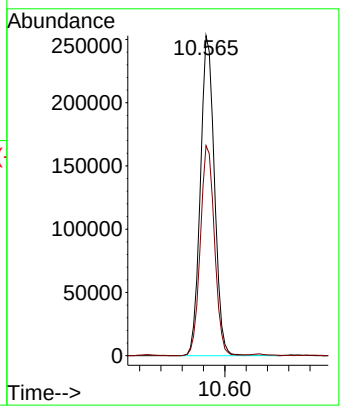
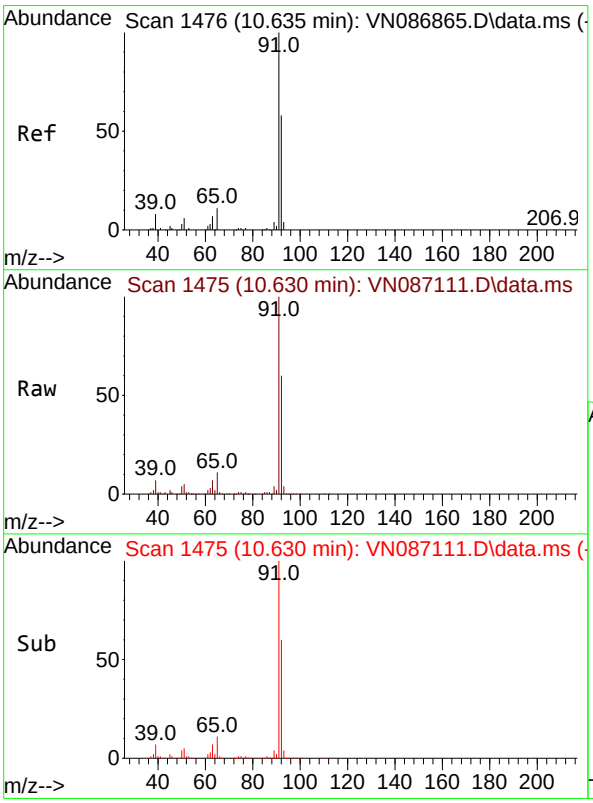
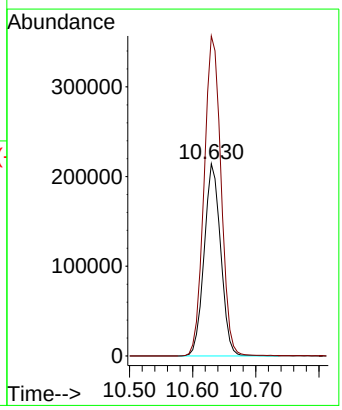


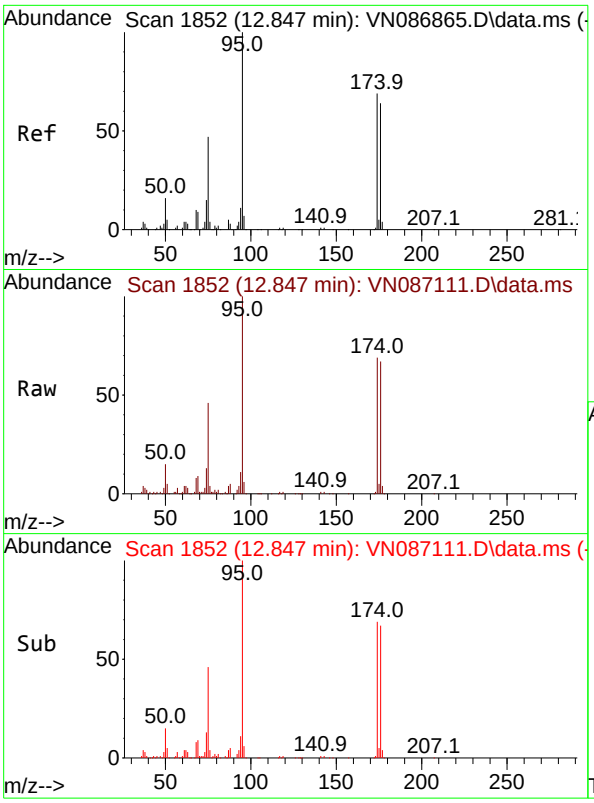




#52
Toluene
Concen: 58.007 ug/l
RT: 10.630 min Scan# 1475
Delta R.T. -0.006 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion: 92 Resp: 388686

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 92 | 100 | | |
| 91 | 171.0 | 136.5 | 204.7 |






#62
4-Bromofluorobenzene
Concen: 48.669 ug/l
RT: 12.847 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion: 95 Resp: 16107

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 71.9 | 0.0 | 141.8 |
| 176 | 68.7 | 0.0 | 132.6 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

**Manual Integrations**
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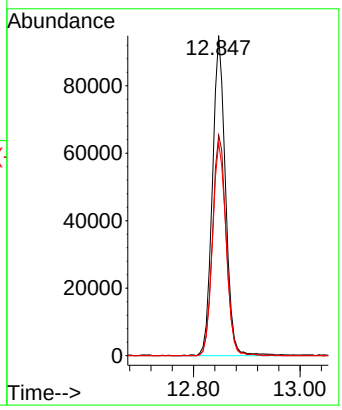
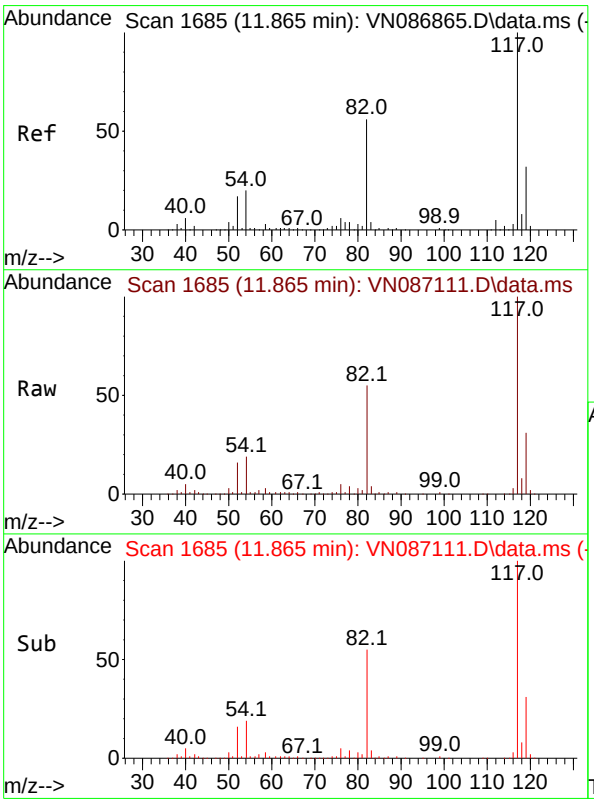
Supervised By :Mahesh Dadoda 06/21/2025

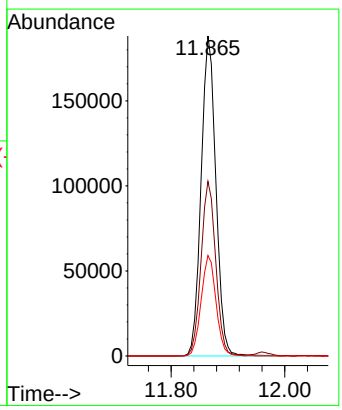


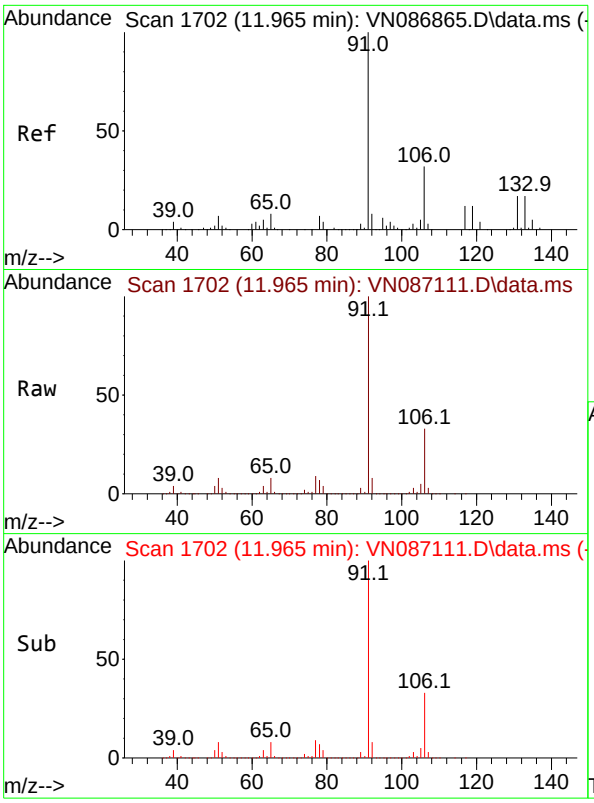




#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1685
Delta R.T. -0.000 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion:117 Resp: 338791

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 54.6 | 44.6 | 67.0 |
| 119 | 31.4 | 25.5 | 38.3 |






#67
Ethyl Benzene
Concen: 733.073 ug/l
RT: 11.965 min Scan# 1
Delta R.T. 0.000 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion: 91 Resp: 943512

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 33.4 | 25.4 | 38.2 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

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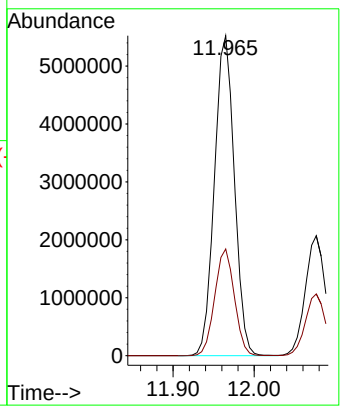
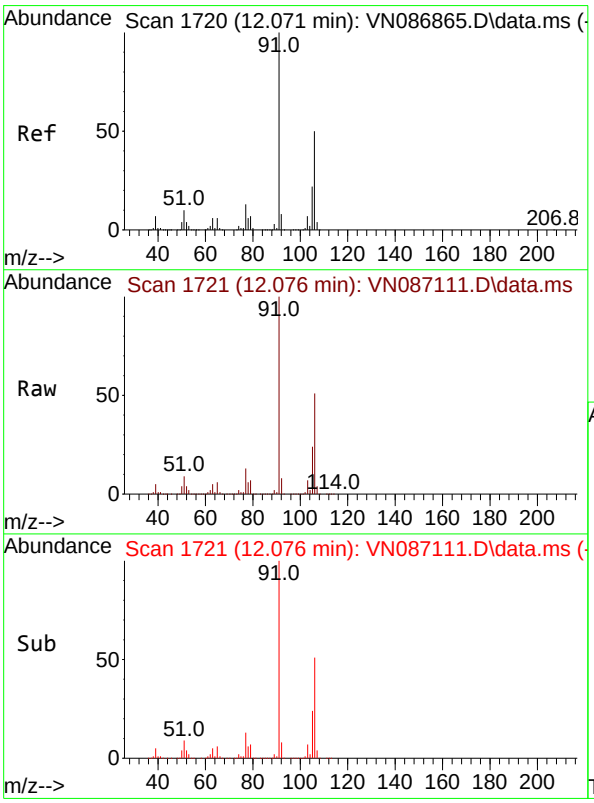
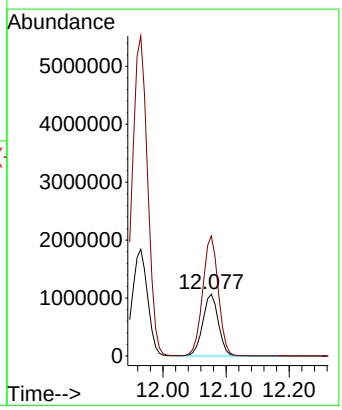


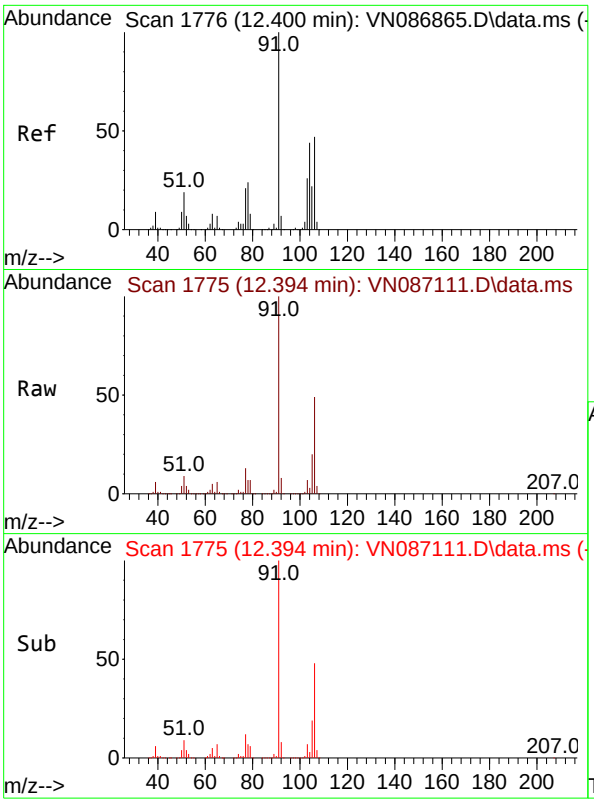




#68
m/p-Xylenes
Concen: 371.779 ug/l
RT: 12.076 min Scan# 1721
Delta R.T. 0.006 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion:106 Resp: 1831713

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 194.4 | 159.4 | 239.0 |






#69
o-Xylene
Concen: 174.635 ug/l
RT: 12.394 min Scan# 1
Delta R.T. -0.006 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion:106 Resp: 82404

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 206.9 | 106.1 | 318.1 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

**Manual Integrations**
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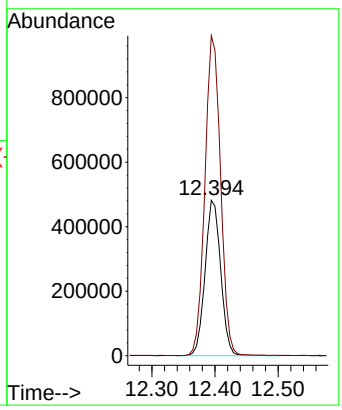
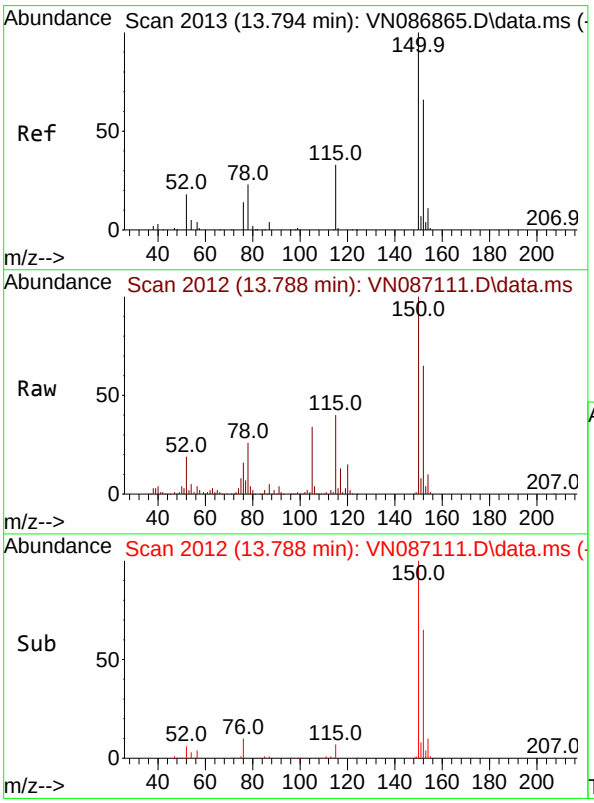
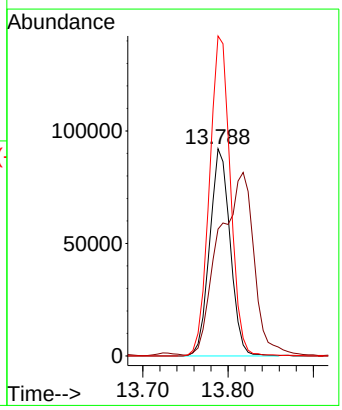


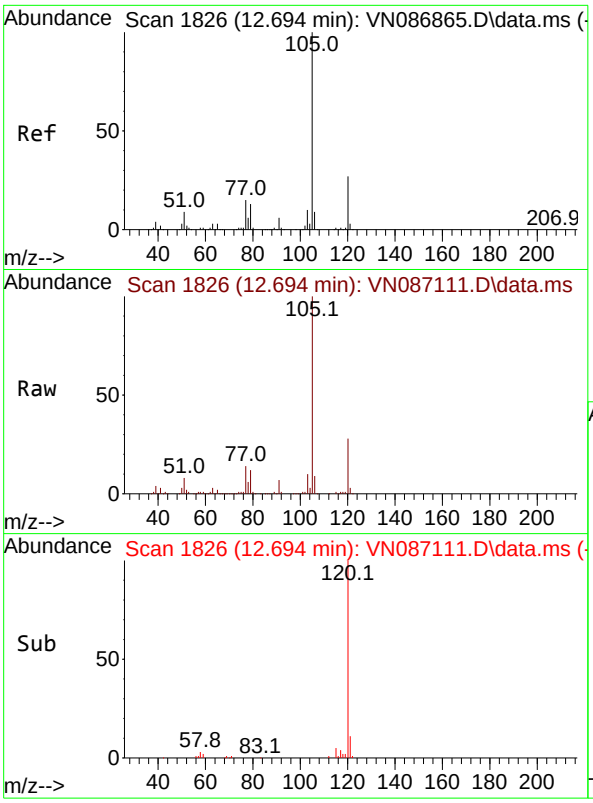




#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2012
Delta R.T. -0.006 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion:152 Resp: 153356

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 115 | 0.0 | 30.1 | 90.5# |
| 150 | 158.2 | 0.0 | 345.0 |

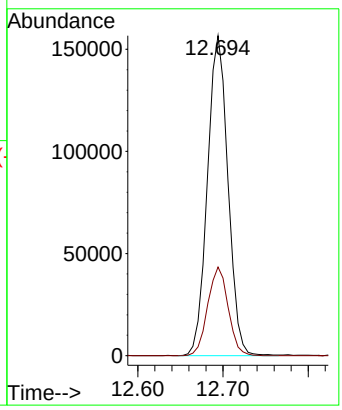





#73
Isopropylbenzene
Concen: 23.553 ug/l
RT: 12.694 min Scan# 1
Delta R.T. 0.000 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion:105 Resp: 26313

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 27.5 | 13.5 | 40.4 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

**Manual Integrations**
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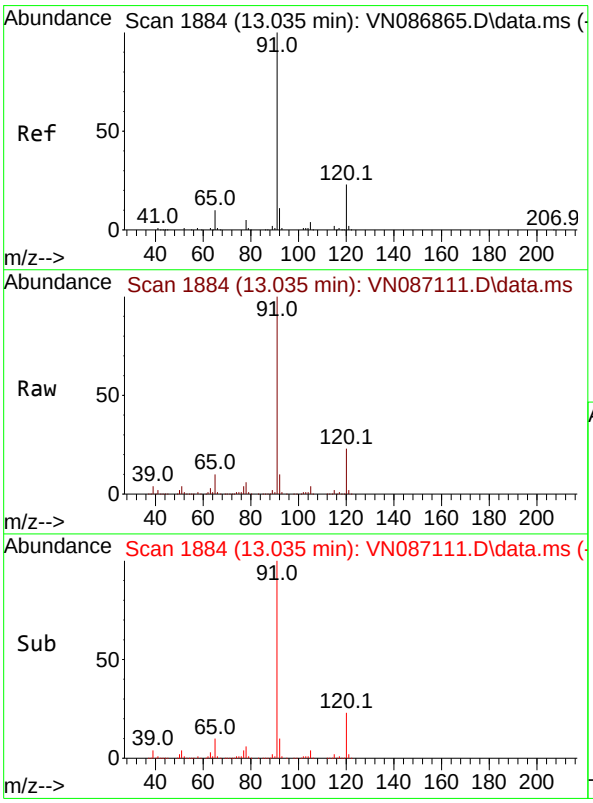
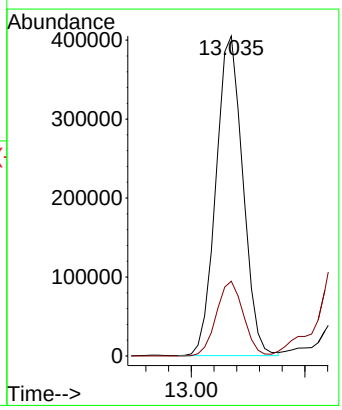
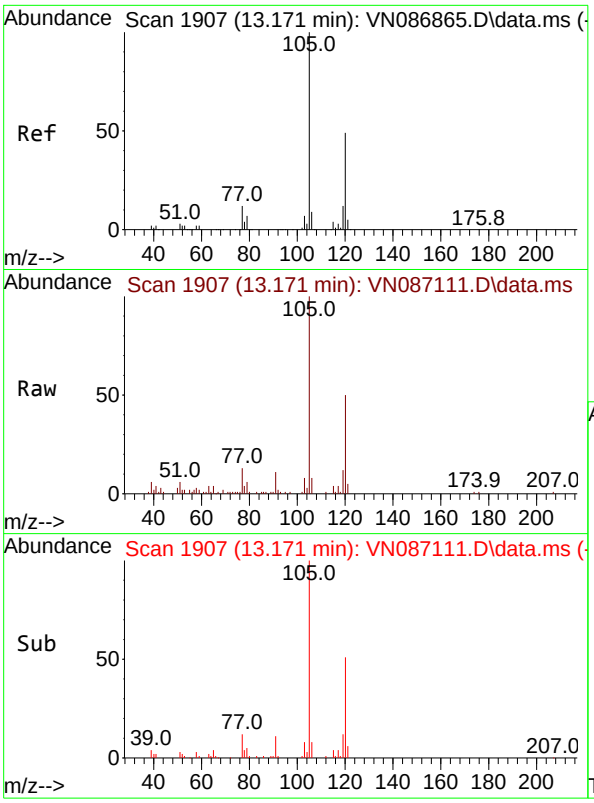



#78
n-propylbenzene
Concen: 49.074 ug/l
RT: 13.035 min Scan# 1884
Delta R.T. 0.000 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion: 91 Resp: 666280

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 23.5 | 11.4 | 34.2 |

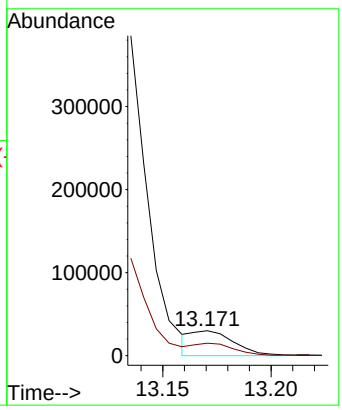





#80
1,3,5-Trimethylbenzene
Concen: 4.490 ug/l m
RT: 13.171 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion:105 Resp: 4141

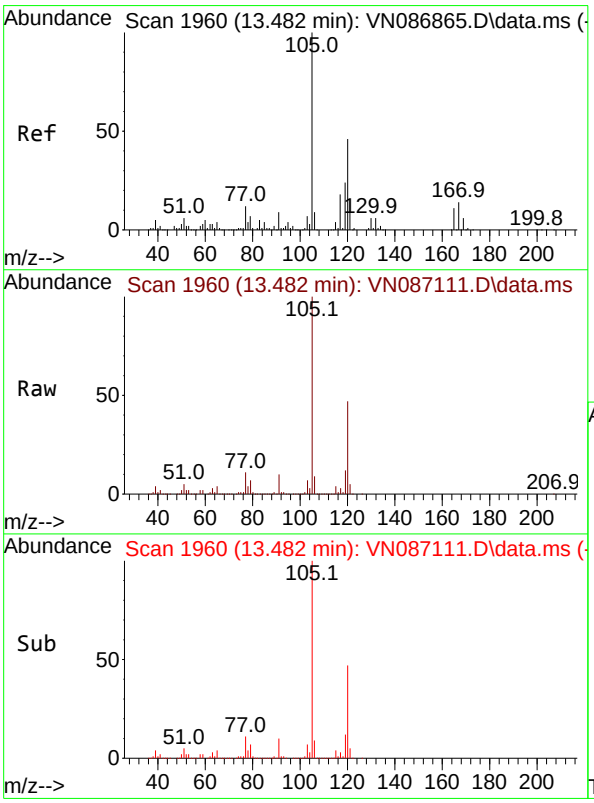
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 622.8 | 24.9 | 74.6 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

**Manual Integrations**
**APPROVED**

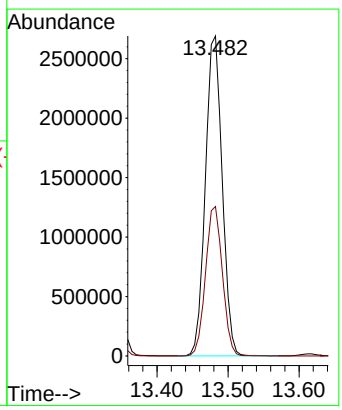
Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

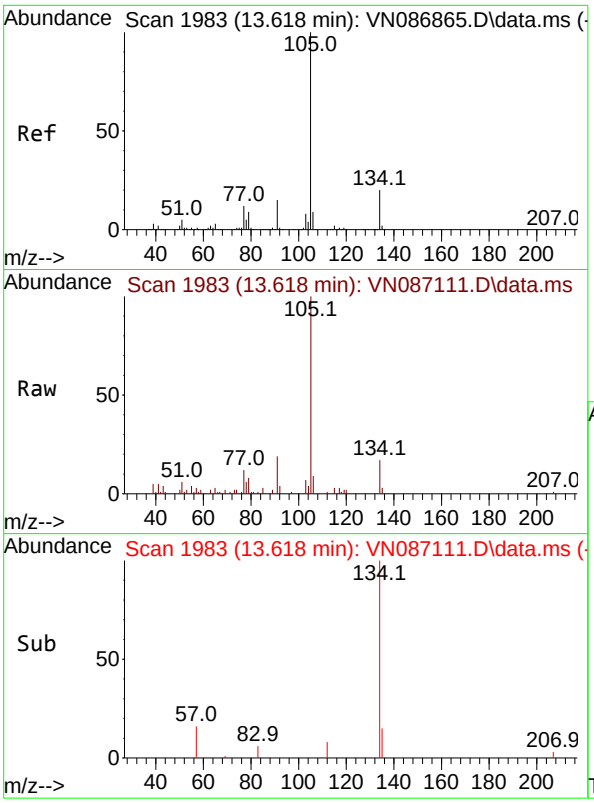



#84
1,2,4-Trimethylbenzene
Concen: 478.699 ug/l
RT: 13.482 min Scan# 1960
Delta R.T. 0.000 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion:105 Resp: 4427688

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 46.9 | 23.2 | 69.6 |






#85
sec-Butylbenzene
Concen: 2.484 ug/l m
RT: 13.618 min Scan# 1
Delta R.T. 0.000 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

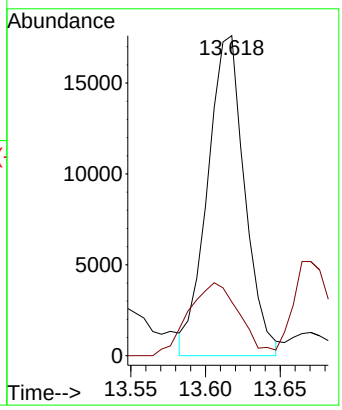
Tgt Ion:105 Resp: 3045

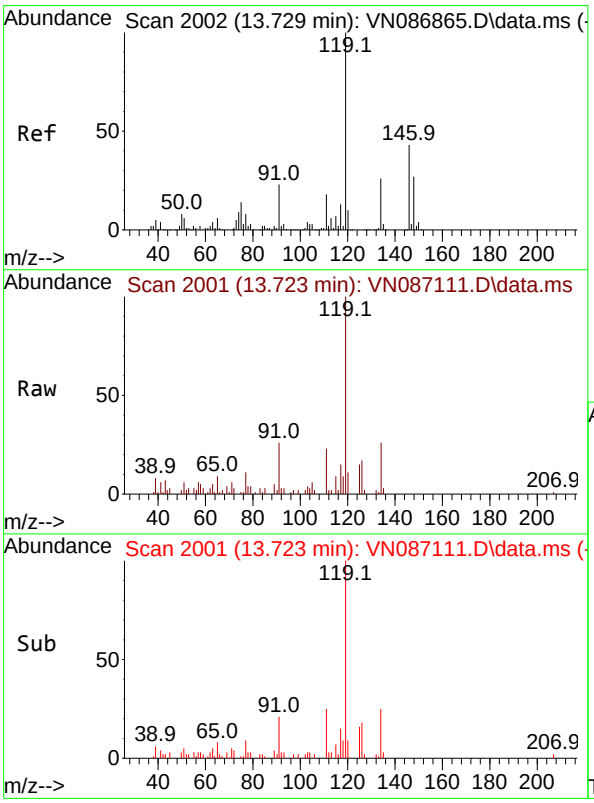
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 134 | 0.0 | 10.0 | 30.0# |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

**Manual Integrations**
**APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

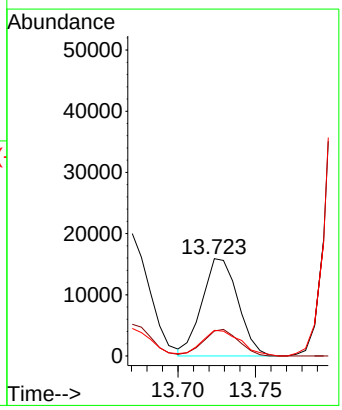


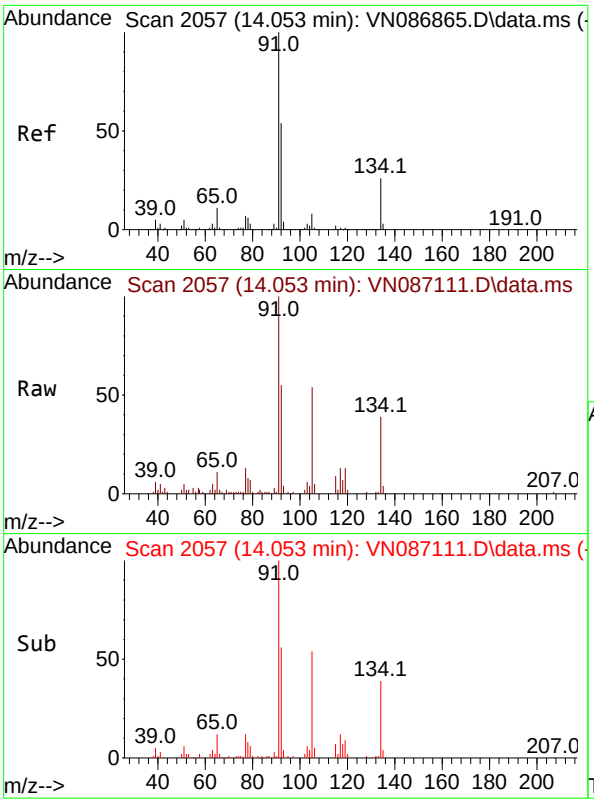




#86
p-Isopropyltoluene
Concen: 2.535 ug/l
RT: 13.723 min Scan# 2001
Delta R.T. -0.006 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion:119 Resp: 25694

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 134 | 26.6 | 13.5 | 40.4 |
| 91 | 0.0 | 11.5 | 34.4# |

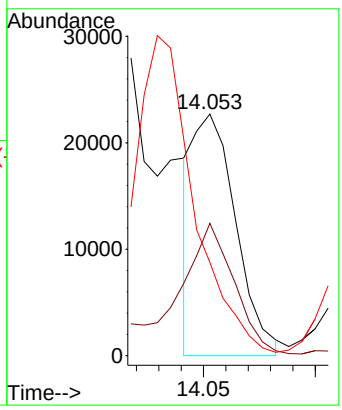





#89
n-Butylbenzene
Concen: 3.081 ug/l m
RT: 14.053 min Scan# 2
Delta R.T. 0.000 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion: 91 Resp: 3024

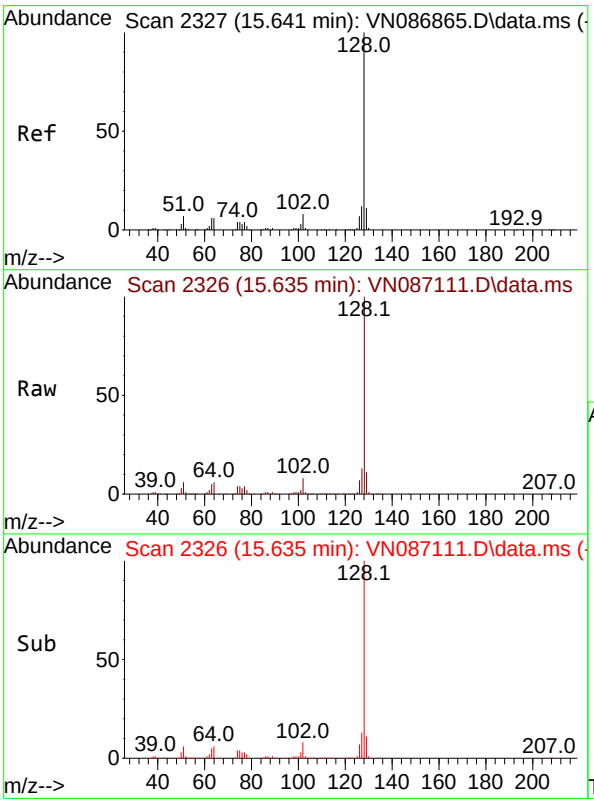
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 166.4 | 27.5 | 82.4# |
| 134 | 0.0 | 13.0 | 39.0# |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12

**Manual Integrations**
**APPROVED**

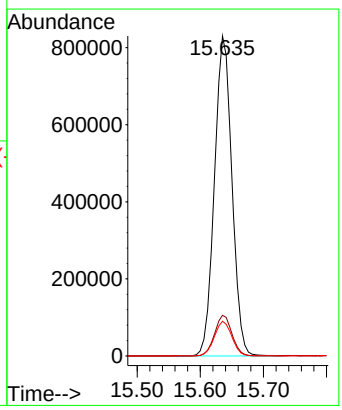
Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025




#95
Naphthalene
Concen: 138.963 ug/l
RT: 15.635 min Scan# 2326
Delta R.T. -0.006 min
Lab File: VN087111.D
Acq: 19 Jun 2025 15:03

Tgt Ion:128 Resp: 1599639

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 127 | 12.7 | 10.2 | 15.2 |
| 129 | 10.8 | 8.8 | 13.2 |



Raw Data: **VN087116.D**

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-12DL | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-06DL | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087116.D | 10 | | 06/19/25 16:49 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 1634-04-4 | Methyl tert-butyl Ether | 10.0 | UD | 1.60 | 10.0 | ug/L |
| 71-43-2 | Benzene | 210 | D | 1.50 | 10.0 | ug/L |
| 108-88-3 | Toluene | 61.7 | D | 1.40 | 10.0 | ug/L |
| 100-41-4 | Ethyl Benzene | 780 | D | 1.30 | 10.0 | ug/L |
| 179601-23-1 | m/p-Xylenes | 390 | D | 2.40 | 20.0 | ug/L |
| 1330-20-7 | Total Xylenes | 570 | D | 3.60 | 30.0 | ug/L |
| 95-47-6 | o-Xylene | 180 | D | 1.20 | 10.0 | ug/L |
| 98-82-8 | Isopropylbenzene | 23.2 | D | 1.20 | 10.0 | ug/L |
| 103-65-1 | n-propylbenzene | 47.7 | D | 1.30 | 10.0 | ug/L |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.10 | JD | 1.50 | 10.0 | ug/L |
| 98-06-6 | tert-Butylbenzene | 10.0 | UD | 1.40 | 10.0 | ug/L |
| 95-63-6 | 1,2,4-Trimethylbenzene | 500 | D | 1.40 | 10.0 | ug/L |
| 135-98-8 | sec-Butylbenzene | 3.10 | JD | 1.30 | 10.0 | ug/L |
| 99-87-6 | p-Isopropyltoluene | 2.80 | JD | 1.30 | 10.0 | ug/L |
| 104-51-8 | n-Butylbenzene | 4.00 | JD | 1.50 | 10.0 | ug/L |
| 91-20-3 | Naphthalene | 130 | D | 2.00 | 10.0 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 52.9 | | 74 - 125 | 106% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 51.0 | | 75 - 124 | 102% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 52.0 | | 86 - 113 | 104% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 49.8 | | 77 - 121 | 100% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 200000 | 8.23 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 403000 | 9.106 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 361000 | 11.865 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 175000 | 13.788 | | | |

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/12/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | MW-12DL | SDG No.: | Q2333 |
| Lab Sample ID: | Q2333-06DL | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087116.D | 10 | | 06/19/25 16:49 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087116.D
Acq On : 19 Jun 2025 16:49
Operator : JC\MD
Sample : Q2333-06DL 10X
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jun 20 01:28:34 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.230 | 168 | 199848 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 402925 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 360708 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 175112 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.583 | 65 | 141552 | 52.902 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 105.800% | | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 121829 | 51.021 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 102.040% | | | |
| 50) Toluene-d8 | 10.565 | 98 | 491679 | 52.014 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 104.020% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 174856 | 49.788 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 99.580% | | | |
| Target Compounds | | | | | | Qvalue |
| 16) Acetone | 4.453 | 43 | 6735 | 4.746 | ug/l | 97 |
| 25) 2-Butanone | 7.506 | 43 | 2696 | 1.169 | ug/l # | 89 |
| 31) Cyclohexane | 8.259 | 56 | 19911 | 4.588 | ug/l # | 93 |
| 39) Methylcyclohexane | 9.600 | 83 | 10176 | 2.087 | ug/l | 99 |
| 40) Benzene | 8.612 | 78 | 238651 | 20.511 | ug/l | 99 |
| 52) Toluene | 10.630 | 92 | 43840 | 6.166 | ug/l | 100 |
| 67) Ethyl Benzene | 11.965 | 91 | 1074041 | 78.378 | ug/l | 100 |
| 68) m/p-Xylenes | 12.076 | 106 | 204915 | 39.064 | ug/l | 98 |
| 69) o-Xylene | 12.394 | 106 | 90518 | 18.017 | ug/l | 99 |
| 73) Isopropylbenzene | 12.694 | 105 | 29651 | 2.324 | ug/l | 99 |
| 78) n-propylbenzene | 13.035 | 91 | 73882 | 4.766 | ug/l | 99 |
| 80) 1,3,5-Trimethylbenzene | 13.171 | 105 | 5332m | 0.506 | ug/l | |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 528348 | 50.025 | ug/l | 99 |
| 85) sec-Butylbenzene | 13.618 | 105 | 4308m | 0.308 | ug/l | |
| 86) p-Isopropyltoluene | 13.723 | 119 | 3227 | 0.279 | ug/l # | 73 |
| 89) n-Butylbenzene | 14.053 | 91 | 4533m | 0.404 | ug/l | |
| 95) Naphthalene | 15.635 | 128 | 177120 | 13.475 | ug/l | 100 |

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

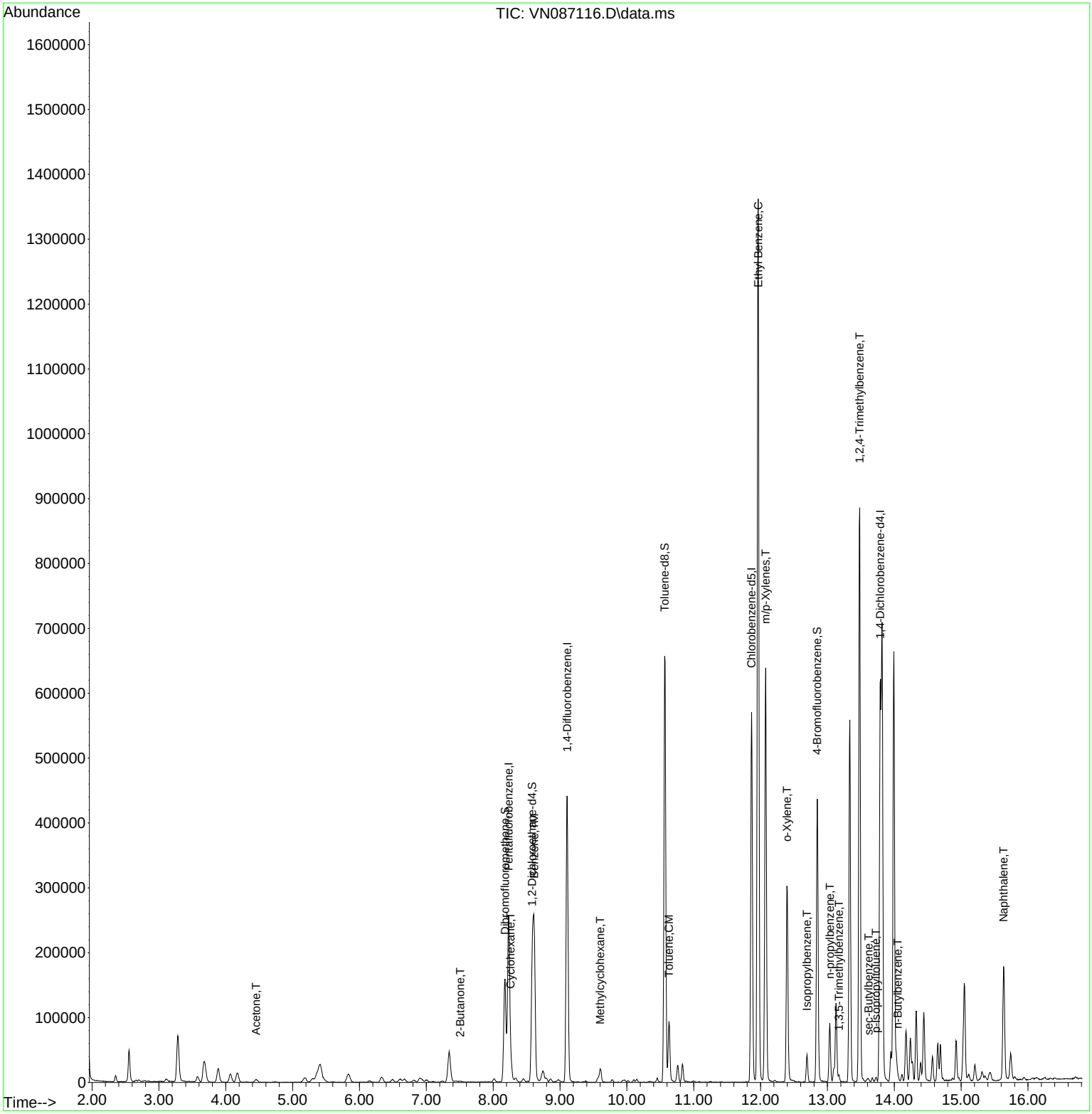
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087116.D
Acq On : 19 Jun 2025 16:49
Operator : JC\MD
Sample : Q2333-06DL 10X
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 18 Sample Multiplier: 1

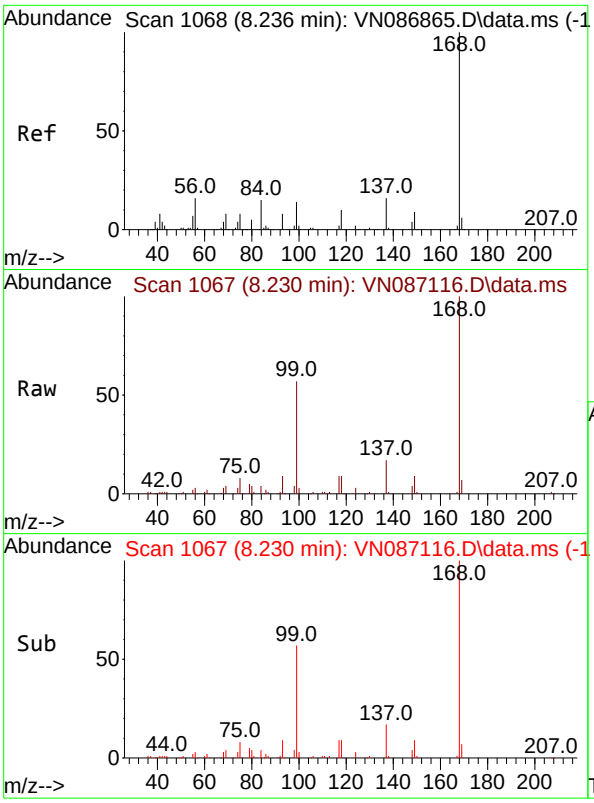
Quant Time: Jun 20 01:28:34 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

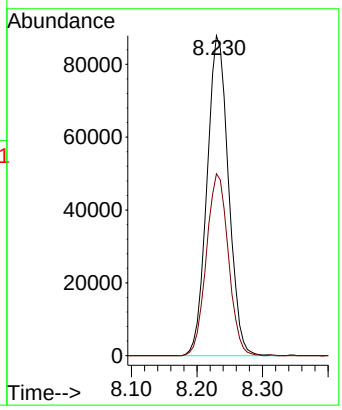





#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.230 min Scan# 1
Delta R.T. -0.006 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion:168 Resp: 19984

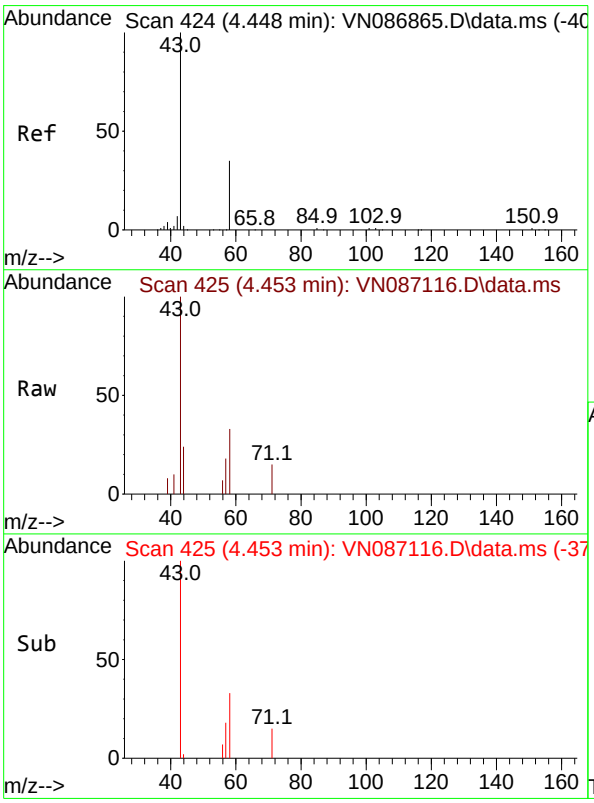
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 168 | 100 | | |
| 99 | 56.9 | 49.1 | 73.7 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations**
**APPROVED**

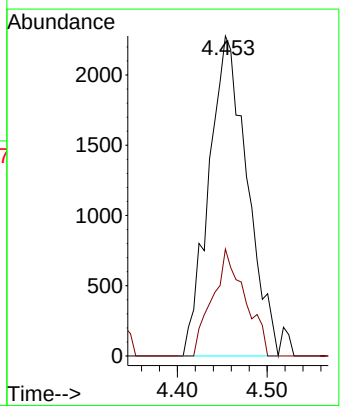
Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

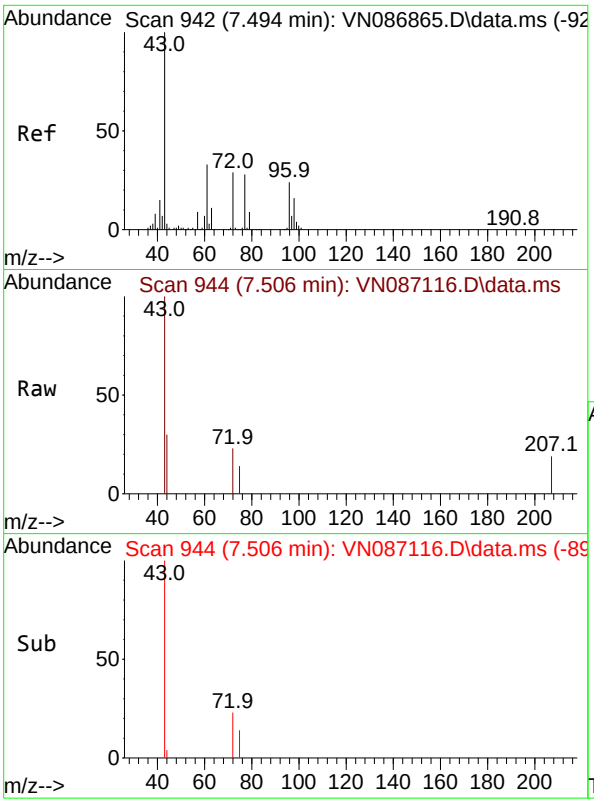



#16
Acetone
Concen: 4.746 ug/l
RT: 4.453 min Scan# 425
Delta R.T. 0.006 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion: 43 Resp: 6735

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.4 | 28.0 | 42.0 |






#25
2-Butanone
Concen: 1.169 ug/l
RT: 7.506 min Scan# 94
Delta R.T. 0.012 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion: 43 Resp: 269

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 22.8 | 23.0 | 34.6# |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations**
**APPROVED**

Reviewed By :John Carlone 06/20/2025
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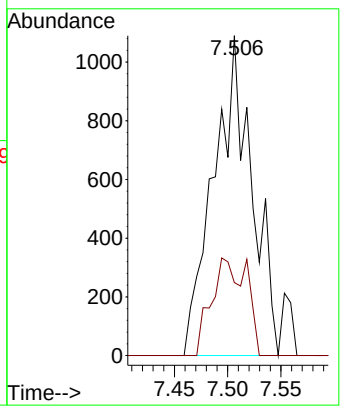
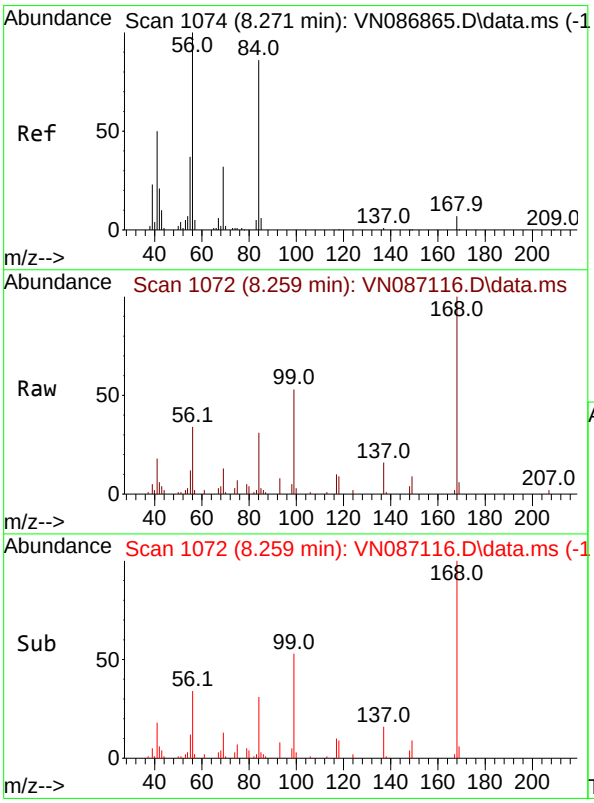
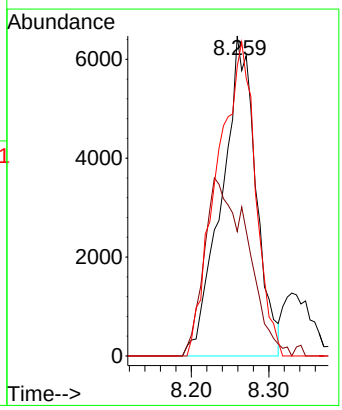


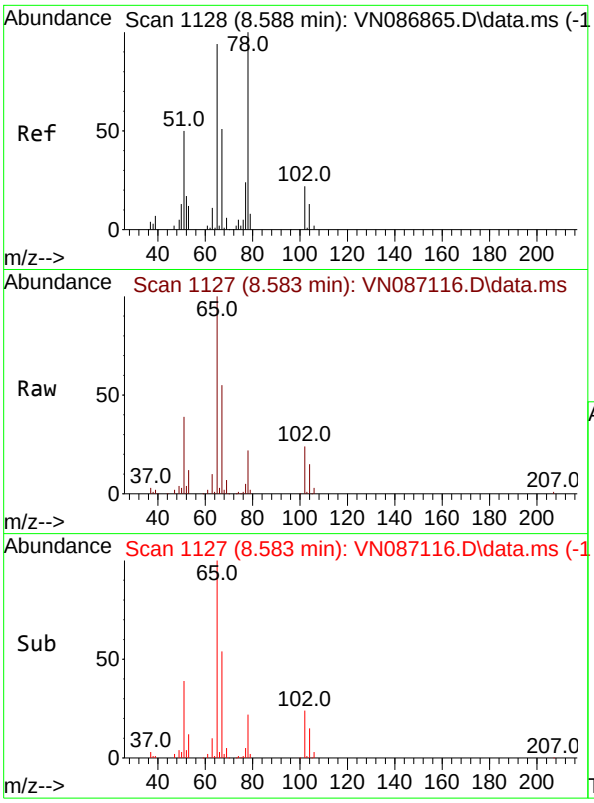




#31
Cyclohexane
Concen: 4.588 ug/l
RT: 8.259 min Scan# 1072
Delta R.T. -0.012 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion: 56 Resp: 19911

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 69 | 38.9 | 25.4 | 38.0# |
| 84 | 90.4 | 68.8 | 103.2 |






#33
1,2-Dichloroethane-d4
Concen: 52.902 ug/l
RT: 8.583 min Scan# 1
Delta R.T. -0.006 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

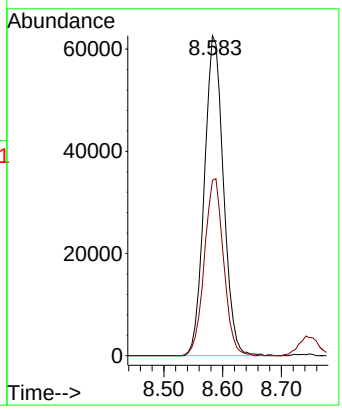
Tgt Ion: 65 Resp: 14155

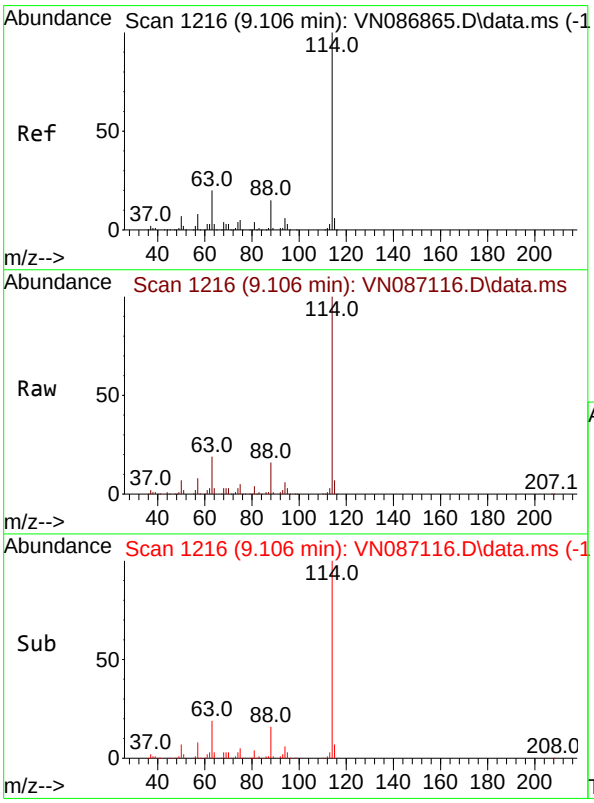
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 65 | 100 | | |
| 67 | 55.7 | 0.0 | 105.6 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations**
**APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

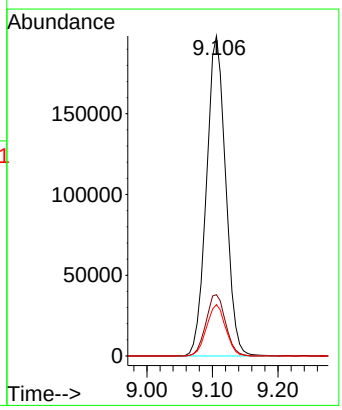


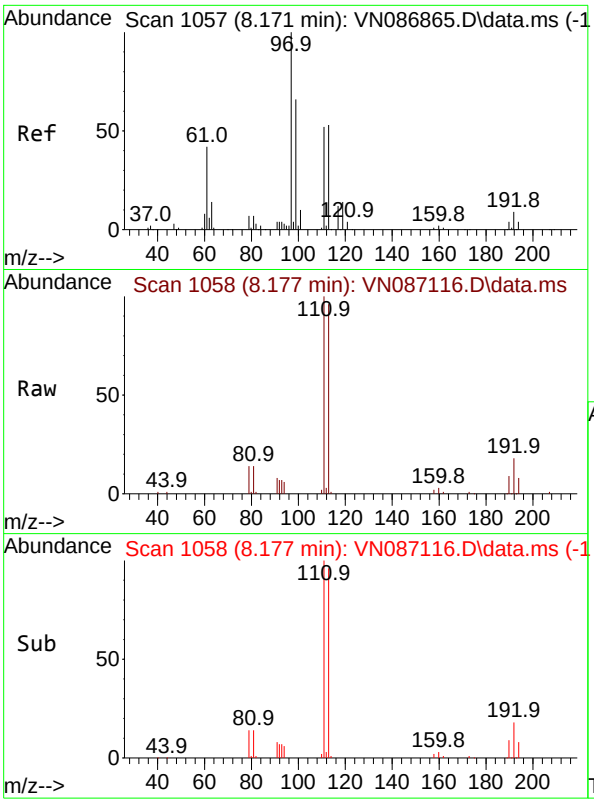




#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.106 min Scan# 1216
Delta R.T. -0.000 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion:114 Resp: 402925

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 19.1 | 0.0 | 39.6 |
| 88 | 16.0 | 0.0 | 30.2 |

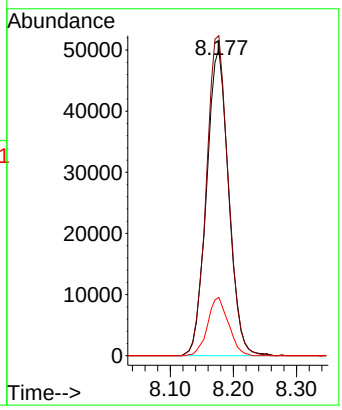





#35
Dibromofluoromethane
Concen: 51.021 ug/l
RT: 8.177 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion:113 Resp: 12182

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 113 | 100 | | |
| 111 | 103.9 | 84.2 | 126.2 |
| 192 | 17.9 | 14.2 | 21.4 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations**
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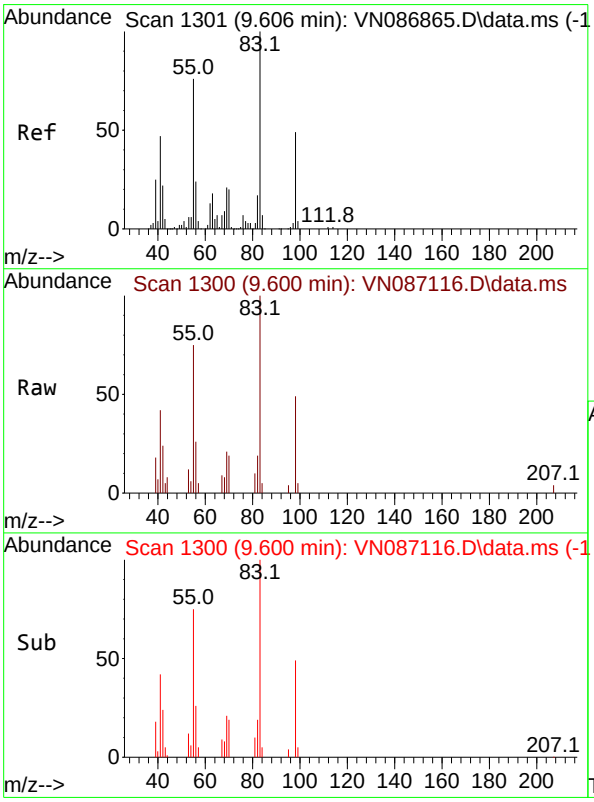
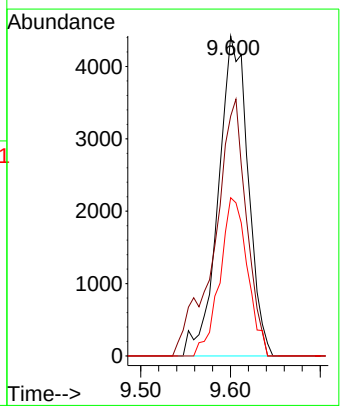
Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

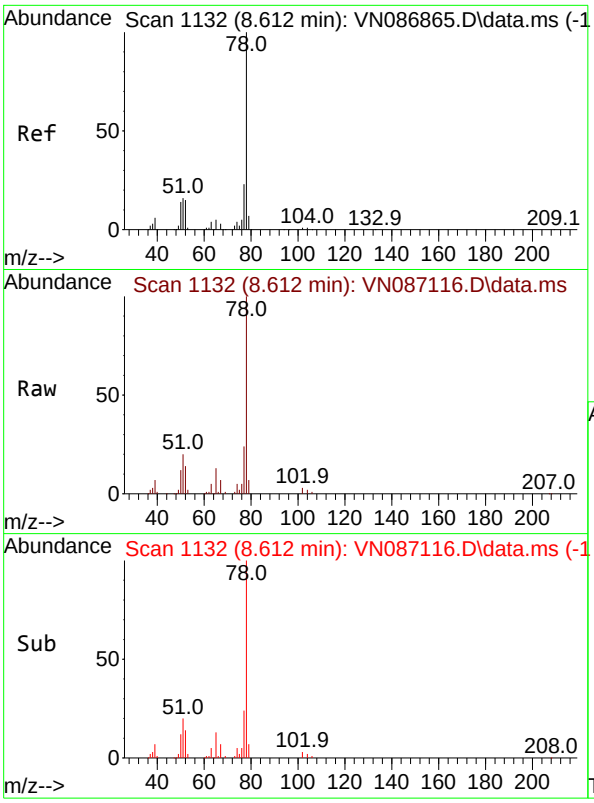



#39
Methylcyclohexane
Concen: 2.087 ug/l
RT: 9.600 min Scan# 1300
Delta R.T. -0.006 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion: 83 Resp: 10176

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 55 | 74.9 | 61.0 | 91.6 |
| 98 | 49.5 | 38.9 | 58.3 |






#40
Benzene
Concen: 20.511 ug/l
RT: 8.612 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion: 78 Resp: 23865

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 23.7 | 18.7 | 28.1 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations**
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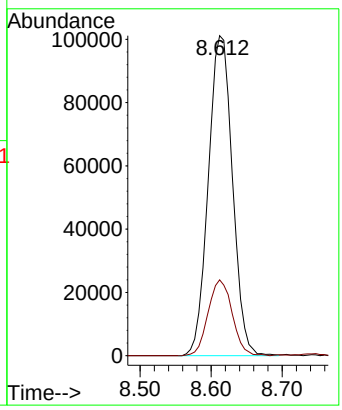
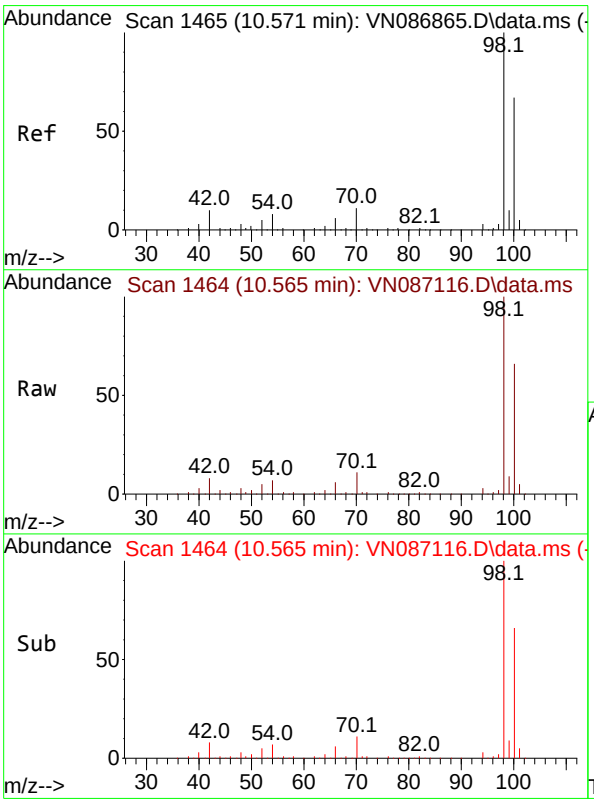
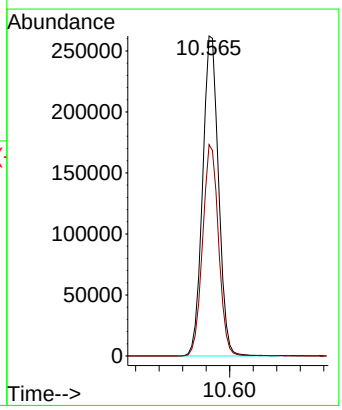


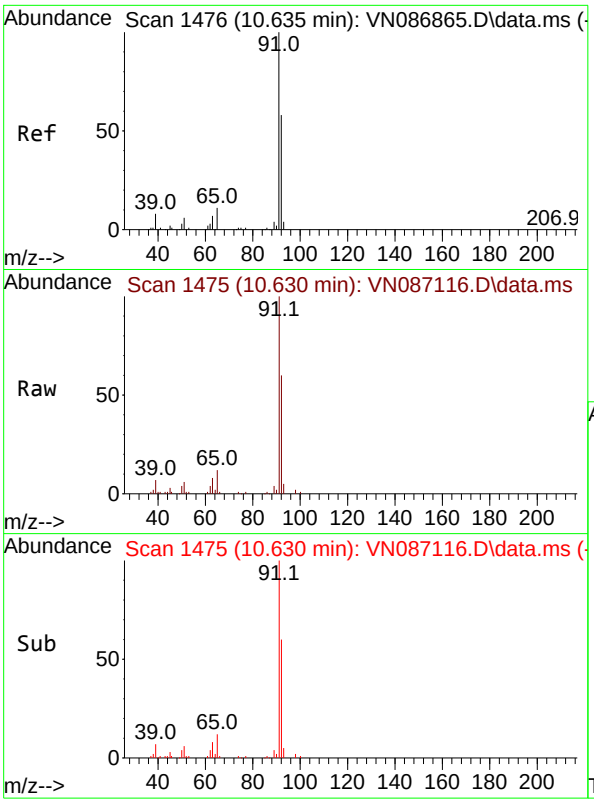




#50
Toluene-d8
Concen: 52.014 ug/l
RT: 10.565 min Scan# 1464
Delta R.T. -0.006 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion: 98 Resp: 491679

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 98 | 100 | | |
| 100 | 65.9 | 53.4 | 80.0 |






#52
Toluene
Concen: 6.166 ug/l
RT: 10.630 min Scan# 14
Delta R.T. -0.006 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion: 92 Resp: 4384

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 92 | 100 | | |
| 91 | 170.1 | 136.5 | 204.7 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations**
**APPROVED**

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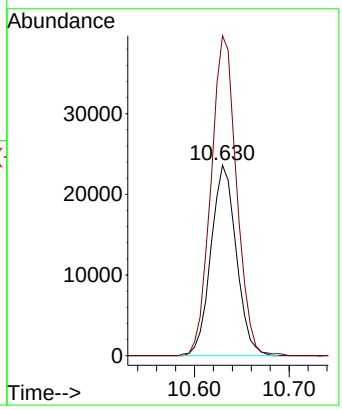
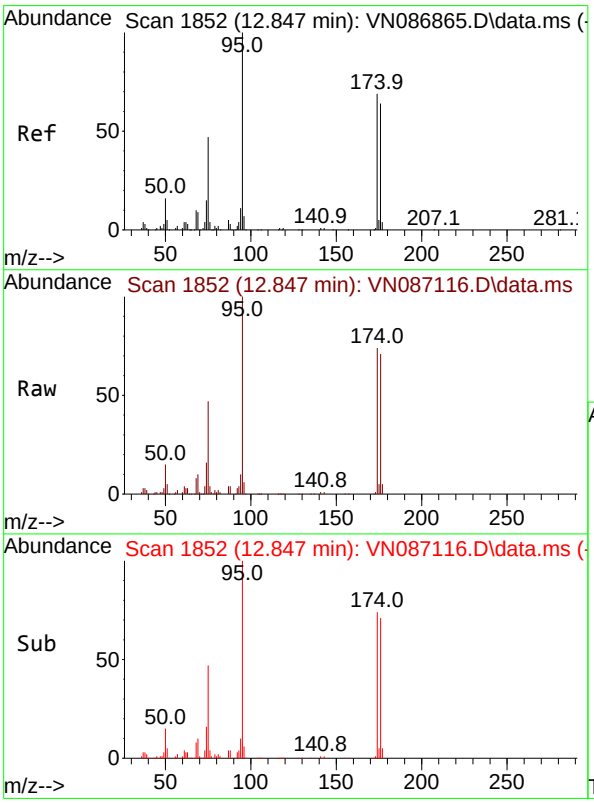
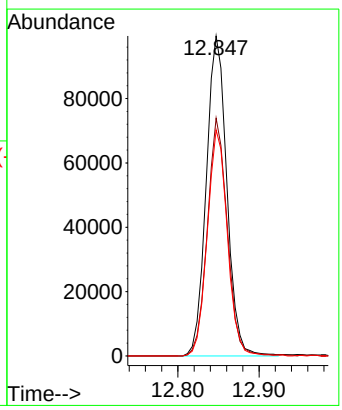


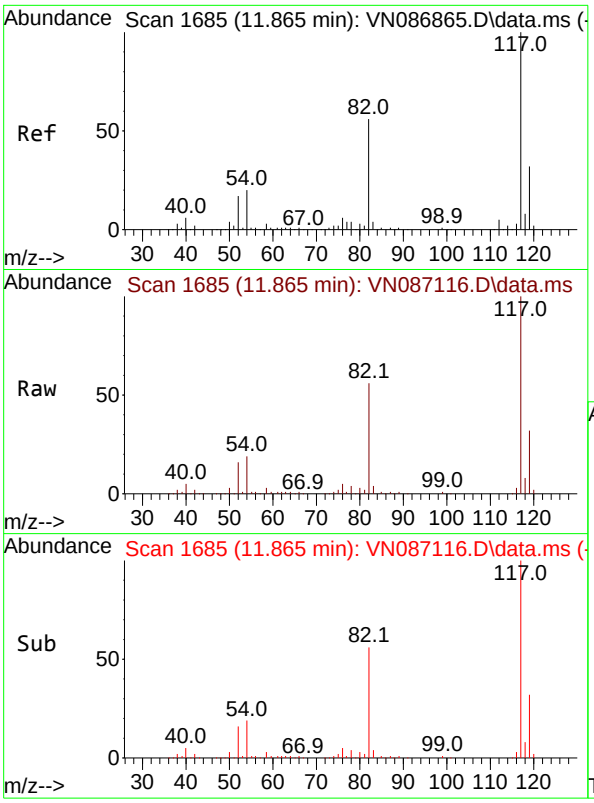




#62
4-Bromofluorobenzene
Concen: 49.788 ug/l
RT: 12.847 min Scan# 1852
Delta R.T. -0.000 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion: 95 Resp: 174856

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 72.3 | 0.0 | 141.8 |
| 176 | 68.9 | 0.0 | 132.6 |

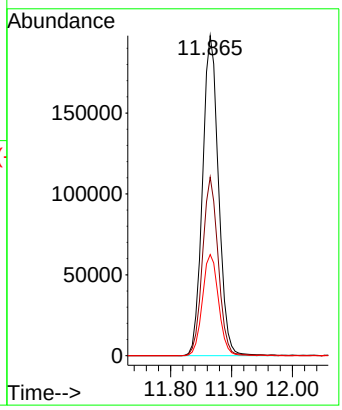





#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion:117 Resp: 360708

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 55.8 | 44.6 | 67.0 |
| 119 | 31.6 | 25.5 | 38.3 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations**
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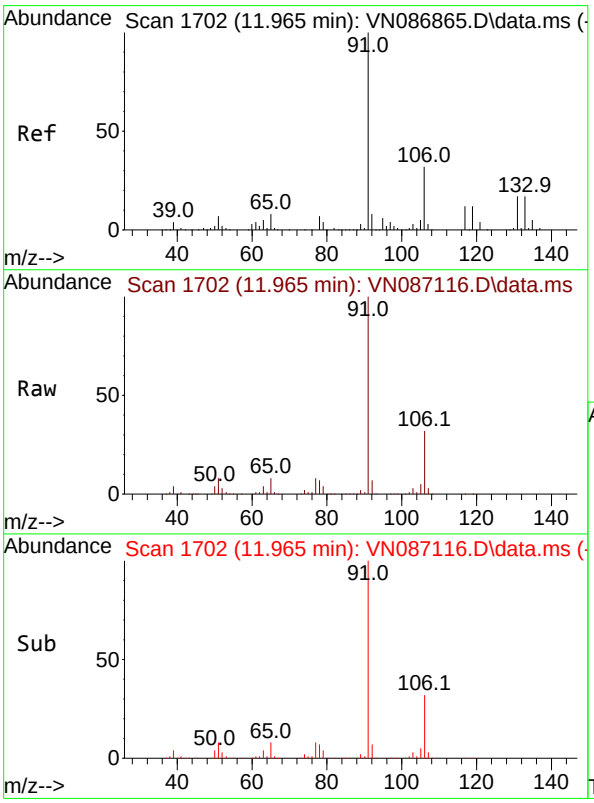
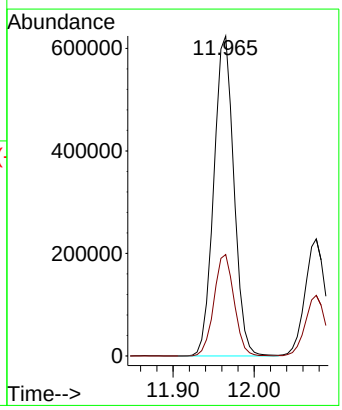
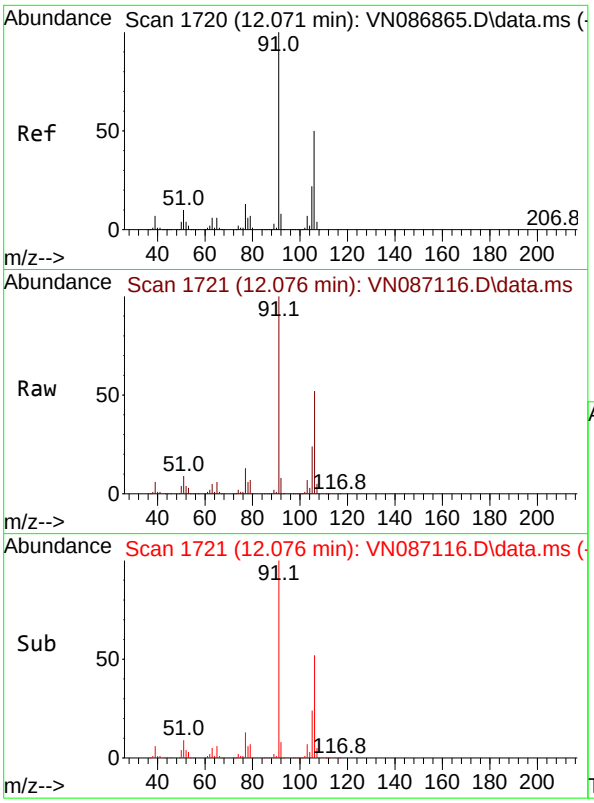



#67
Ethyl Benzene
Concen: 78.378 ug/l
RT: 11.965 min Scan# 1702
Delta R.T. -0.000 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion: 91 Resp: 1074041

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 31.7 | 25.4 | 38.2 |






#68
m/p-Xylenes
Concen: 39.064 ug/l
RT: 12.076 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion:106 Resp: 20491

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 195.6 | 159.4 | 239.0 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations**
**APPROVED**

Reviewed By :John Carlone 06/20/2025
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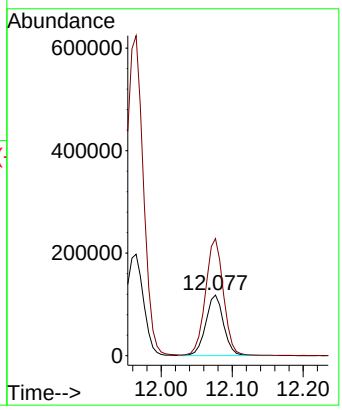
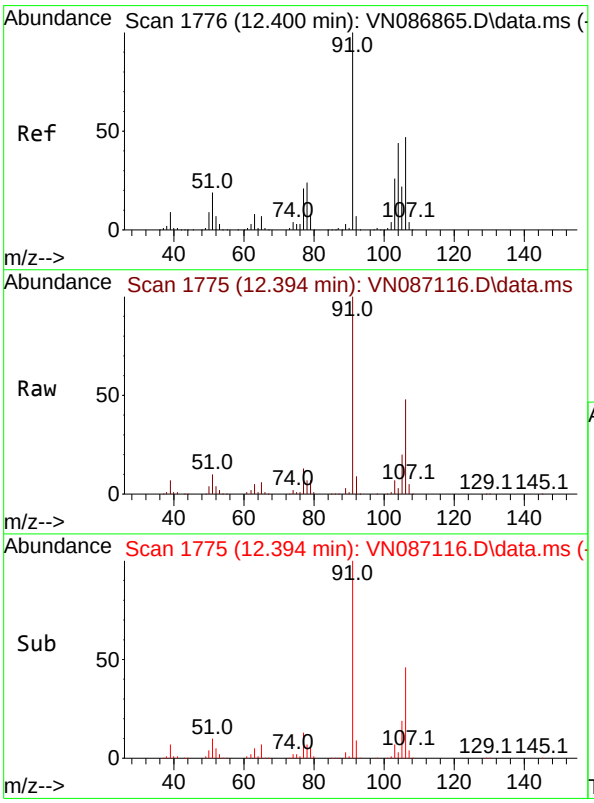
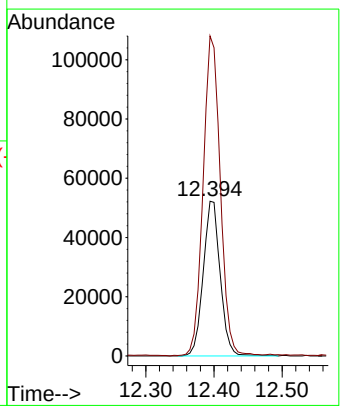


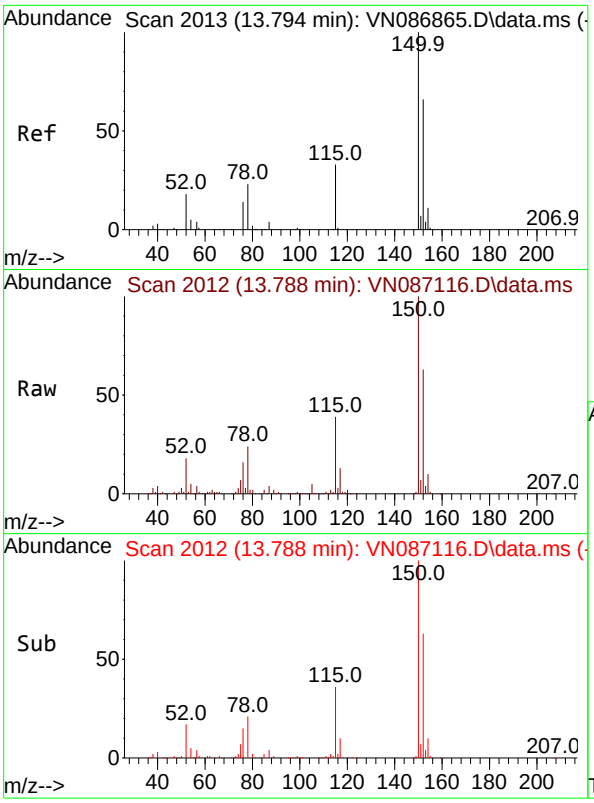




#69
o-Xylene
Concen: 18.017 ug/l
RT: 12.394 min Scan# 1775
Delta R.T. -0.006 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion:106 Resp: 90518

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 210.0 | 106.1 | 318.1 |






#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2
Delta R.T. -0.006 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion:152 Resp: 17511

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 115 | 70.2 | 30.1 | 90.5 |
| 150 | 157.0 | 0.0 | 345.0 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations**
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Reviewed By :John Carlone 06/20/2025
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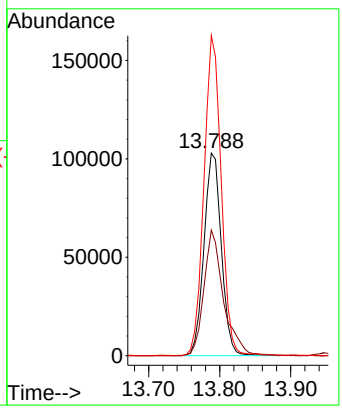
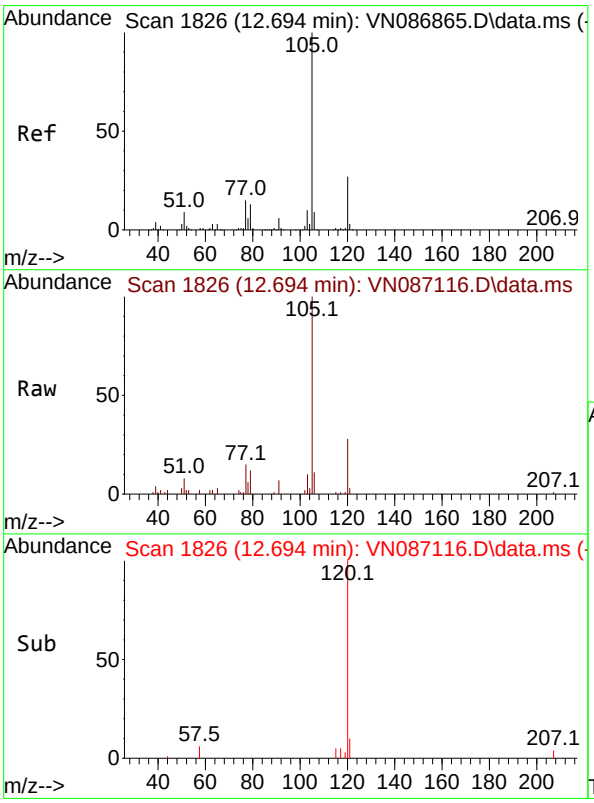
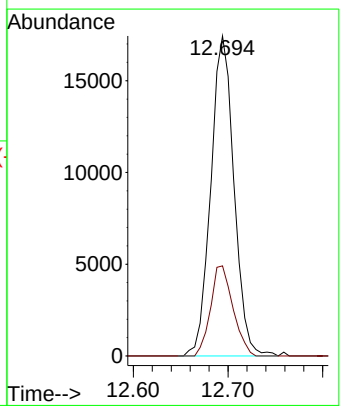


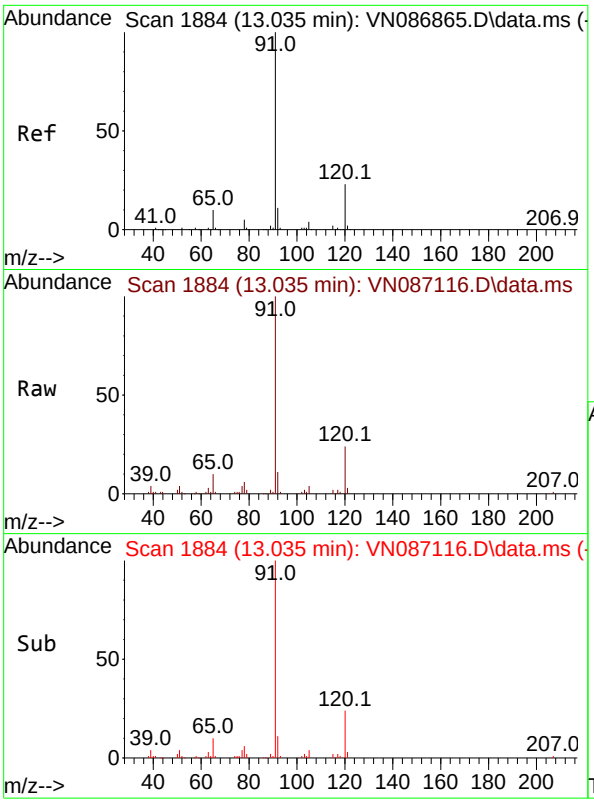




#73
Isopropylbenzene
Concen: 2.324 ug/l
RT: 12.694 min Scan# 1826
Delta R.T. -0.000 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion:105 Resp: 29651

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 27.2 | 13.5 | 40.4 |






#78
n-propylbenzene
Concen: 4.766 ug/l
RT: 13.035 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion: 91 Resp: 7388

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 23.3 | 11.4 | 34.2 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations**
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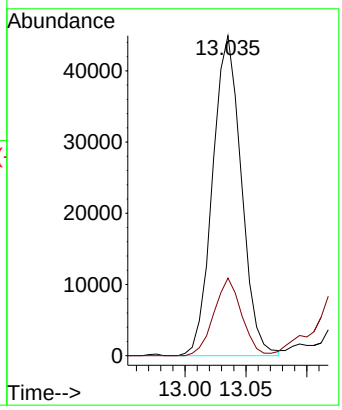
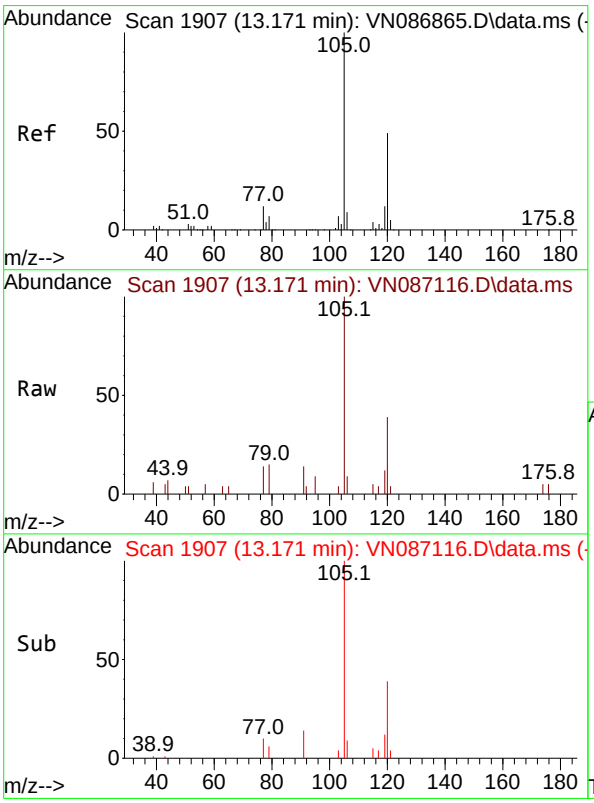
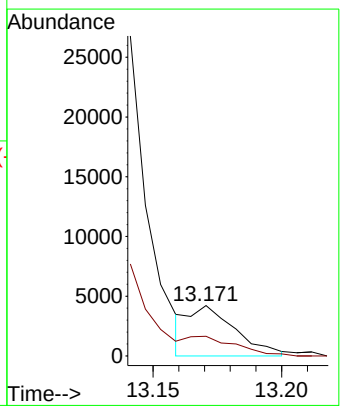


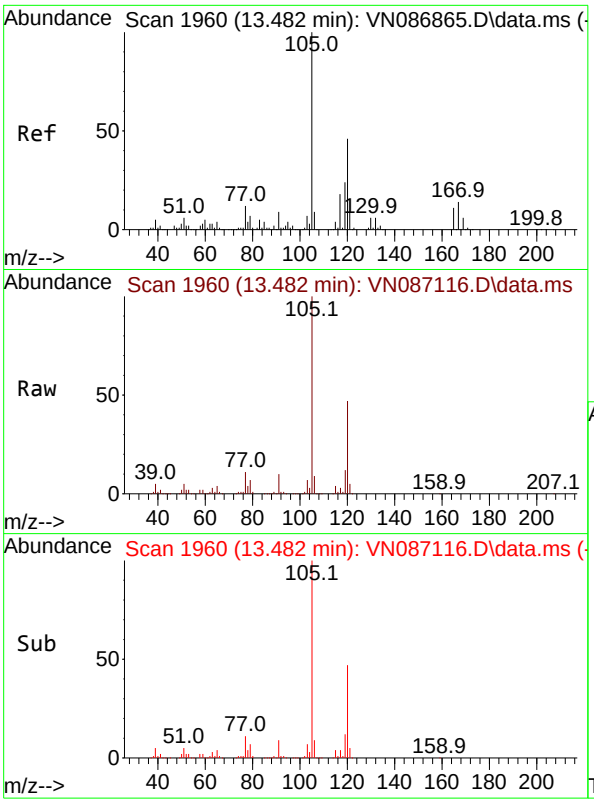




#80
1,3,5-Trimethylbenzene
Concen: 0.506 ug/l m
RT: 13.171 min Scan# 1907
Delta R.T. -0.000 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion:105 Resp: 5332

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 602.9 | 24.9 | 74.6# |






#84
1,2,4-Trimethylbenzene
Concen: 50.025 ug/l
RT: 13.482 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion:105 Resp: 52834

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.2 | 23.2 | 69.6 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations**
**APPROVED**

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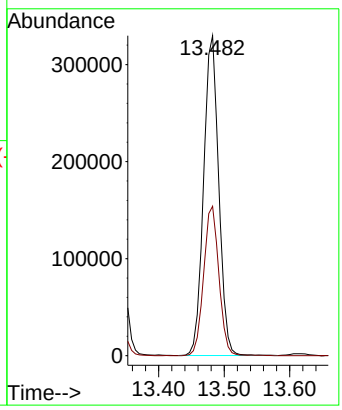
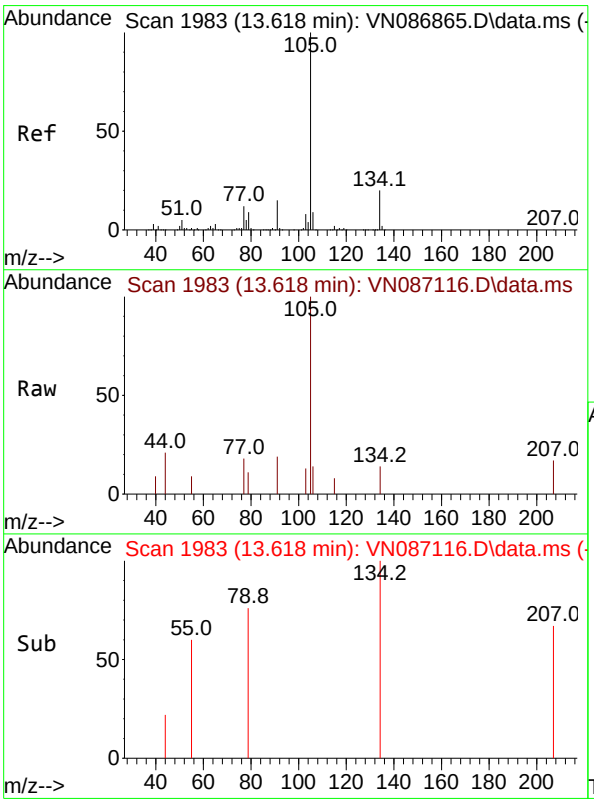
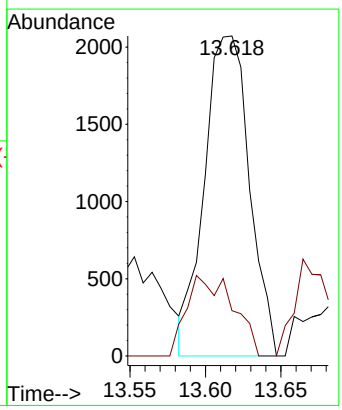


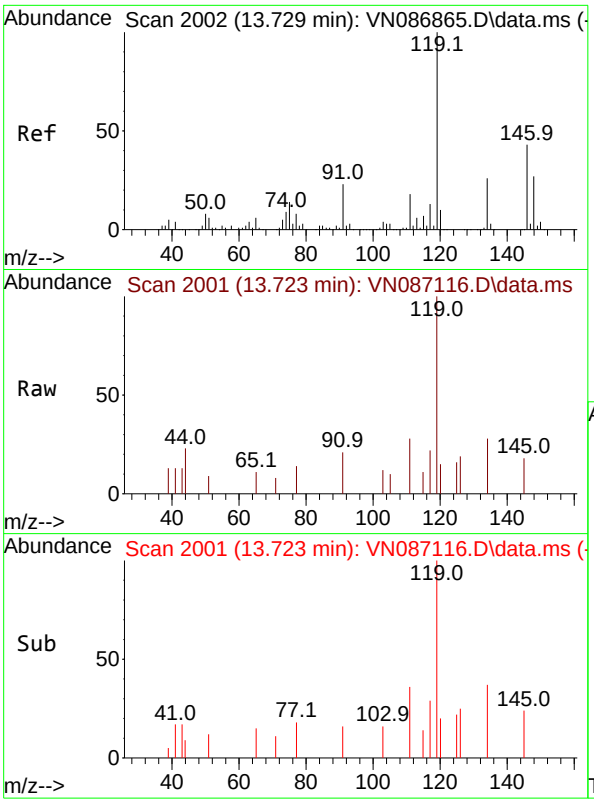




#85
sec-Butylbenzene
Concen: 0.308 ug/l m
RT: 13.618 min Scan# 1983
Delta R.T. -0.000 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion:105 Resp: 4308

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 134 | 0.0 | 10.0 | 30.0# |






#86
p-Isopropyltoluene
Concen: 0.279 ug/l
RT: 13.723 min Scan# 2
Delta R.T. -0.006 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion:119 Resp: 322

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 134 | 22.0 | 13.5 | 40.4 |
| 91 | 0.0 | 11.5 | 34.4# |

**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations**
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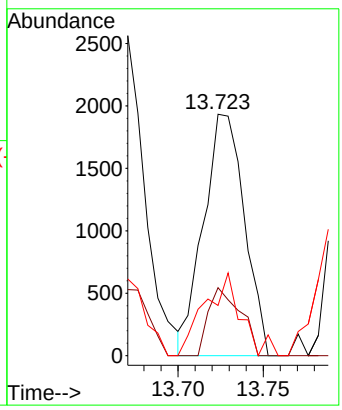
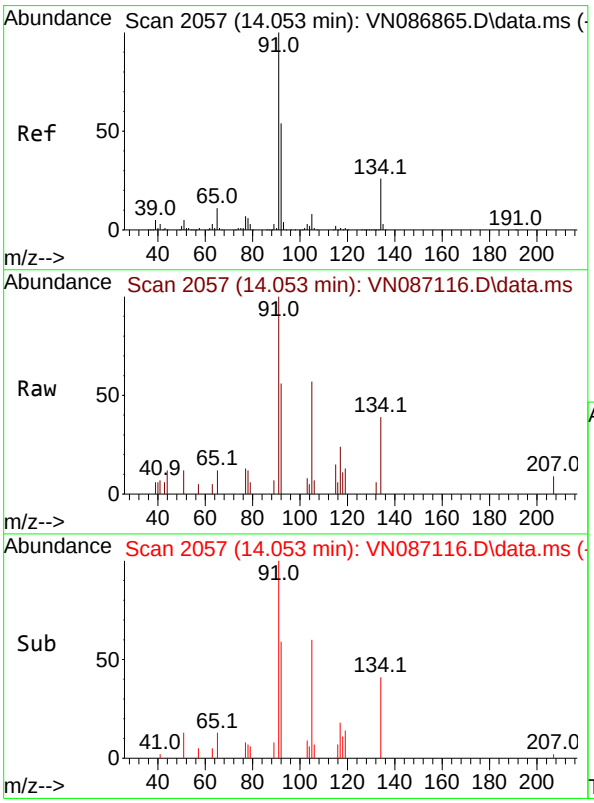
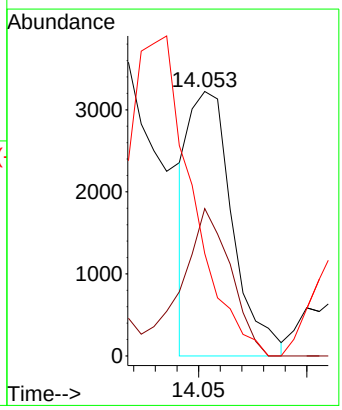


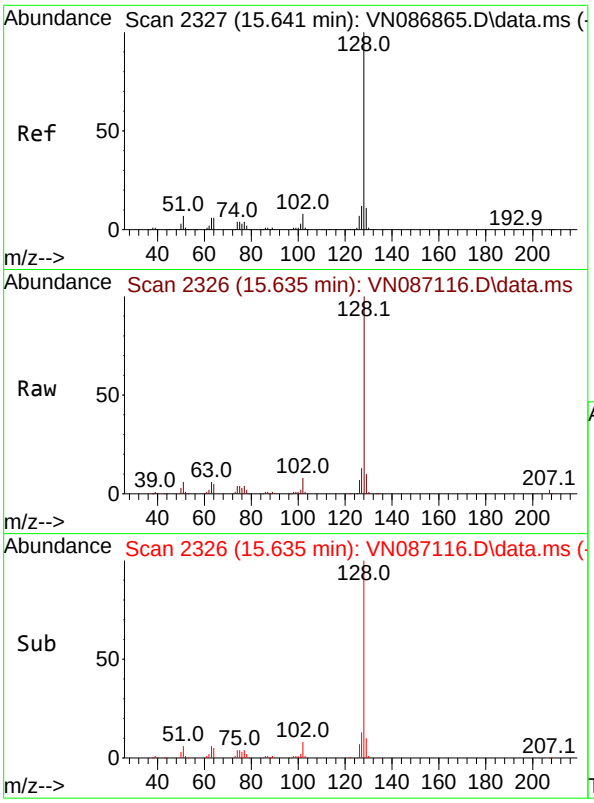




#89
n-Butylbenzene
Concen: 0.404 ug/l m
RT: 14.053 min Scan# 2057
Delta R.T. -0.000 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion: 91 Resp: 4533

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 62.5 | 27.5 | 82.4 |
| 134 | 178.4 | 13.0 | 39.0# |

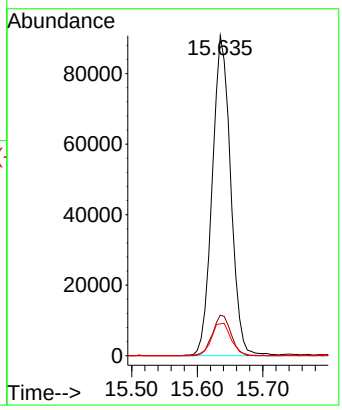





#95
Naphthalene
Concen: 13.475 ug/l
RT: 15.635 min Scan# 2
Delta R.T. -0.006 min
Lab File: VN087116.D
Acq: 19 Jun 2025 16:49

Tgt Ion:128 Resp: 17712

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 127 | 12.7 | 10.2 | 15.2 |
| 129 | 10.8 | 8.8 | 13.2 |




**Instrument :**
MSVOA_N
**ClientSampleId :**
MW-12DL

**Manual Integrations**
**APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

# CALIBRATION SUMMARY

Raw Data

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG No.: Q2333

Instrument ID: MSVOA_N Calibration Date(s): 06/06/2025 06/06/2025

Heated Purge: (Y/N) N Calibration Time(s): 12:44 14:49

GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID: RRF001 = VN086862.D RRF005 = VN086863.D RRF020 = VN086864.D
RRF050 = VN086865.D RRF100 = VN086866.D RRF150 = VN086867.D

| COMPOUND | RRF001 | RRF005 | RRF020 | RRF050 | RRF100 | RRF150 | $\overline{RRF}$ | % RSD |
|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl Ether | 2.120 | 2.038 | 2.051 | 1.933 | 2.021 | 1.926 | 2.015 | 3.7 |
| Benzene | 1.588 | 1.501 | 1.444 | 1.345 | 1.414 | 1.371 | 1.444 | 6.2 |
| Toluene | 0.918 | 0.914 | 0.885 | 0.835 | 0.883 | 0.859 | 0.882 | 3.6 |
| Ethyl Benzene | 1.989 | 1.975 | 1.907 | 1.796 | 1.913 | 1.816 | 1.900 | 4.2 |
| m/p-Xylenes | 0.730 | 0.751 | 0.741 | 0.701 | 0.736 | 0.703 | 0.727 | 2.8 |
| o-Xylene | 0.714 | 0.699 | 0.702 | 0.674 | 0.711 | 0.678 | 0.696 | 2.4 |
| Isopropylbenzene | 3.864 | 3.749 | 3.649 | 3.426 | 3.621 | 3.546 | 3.643 | 4.2 |
| n-propylbenzene | 4.530 | 4.627 | 4.449 | 4.211 | 4.424 | 4.317 | 4.427 | 3.3 |
| 1,3,5-Trimethylbenzene | 3.004 | 3.091 | 3.035 | 2.898 | 3.064 | 2.953 | 3.007 | 2.4 |
| tert-Butylbenzene | 2.942 | 2.810 | 2.736 | 2.617 | 2.745 | 2.668 | 2.753 | 4.1 |
| 1,2,4-Trimethylbenzene | 2.952 | 3.122 | 3.063 | 2.914 | 3.075 | 2.968 | 3.016 | 2.7 |
| sec-Butylbenzene | 4.114 | 4.126 | 4.037 | 3.829 | 4.018 | 3.861 | 3.998 | 3.1 |
| p-Isopropyltoluene | 3.305 | 3.425 | 3.321 | 3.184 | 3.366 | 3.227 | 3.305 | 2.7 |
| n-Butylbenzene | 3.473 | 3.292 | 3.140 | 3.059 | 3.188 | 3.054 | 3.201 | 5 |
| Naphthalene | 3.820 | 3.727 | 3.761 | 3.600 | 3.839 | 3.772 | 3.753 | 2.3 |
| 1,2-Dichloroethane-d4 | | 0.732 | 0.707 | 0.500 | 0.656 | 0.751 | 0.669 | 15.1 |
| Dibromofluoromethane | | 0.303 | 0.310 | 0.219 | 0.298 | 0.351 | 0.296 | 16.2 |
| Toluene-d8 | | 1.245 | 1.203 | 0.861 | 1.178 | 1.377 | 1.173 | 16.2 |
| 4-Bromofluorobenzene | | 0.441 | 0.446 | 0.325 | 0.446 | 0.521 | 0.436 | 16.2 |

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

# Response Factor Report MSVOA_N_NEW

Method Path : Z:\voasrv\HPCHEM1\MSVOA_N\methods\
Method File : 82N060625W.M
Title : SW846 8260
Last Update : Sat Jun 07 02:12:50 2025
Response Via : Initial Calibration

Calibration Files
1 =VN086862.D 5 =VN086863.D 20 =VN086864.D 50 =VN086865.D 100 =VN086866.D 150 =VN086867.D

| | | Compound | 1 | 5 | 20 | 50 | 100 | 150 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Pentafluorobenzene | ----------ISTD---------- | | | | | | | |
| 2) | T | Dichlorodifluo... | 0.467 | 0.444 | 0.539 | 0.501 | 0.535 | 0.506 | 0.499 | 7.51 |
| 3) | P | Chloromethane | 0.762 | 0.654 | 0.645 | 0.597 | 0.617 | 0.587 | 0.644 | 9.85 |
| 4) | C | Vinyl Chloride | 0.670 | 0.670 | 0.684 | 0.640 | 0.673 | 0.648 | 0.664 | 2.49# |
| 5) | T | Bromomethane | | 0.375 | 0.380 | 0.357 | 0.379 | 0.368 | 0.372 | 2.57 |
| 6) | T | Chloroethane | 0.460 | 0.444 | 0.442 | 0.408 | 0.418 | 0.402 | 0.429 | 5.37 |
| 7) | T | Trichlorofluor... | 0.882 | 0.903 | 0.904 | 0.834 | 0.858 | 0.825 | 0.868 | 3.93 |
| 8) | T | Diethyl Ether | 0.372 | 0.397 | 0.383 | 0.363 | 0.384 | 0.369 | 0.378 | 3.28 |
| 9) | T | 1,1,2-Trichlor... | 0.554 | 0.567 | 0.563 | 0.519 | 0.546 | 0.520 | 0.545 | 3.83 |
| 10) | T | Methyl Iodide | | 0.720 | 0.729 | 0.683 | 0.722 | 0.679 | 0.707 | 3.35 |
| 11) | T | Tert butyl alc... | | 0.192 | 0.194 | 0.176 | 0.180 | 0.166 | 0.182 | 6.37 |
| 12) | CM | 1,1-Dichloroet... | 0.573 | 0.593 | 0.563 | 0.533 | 0.550 | 0.527 | 0.557 | 4.44# |
| 13) | T | Acrolein | | 0.073 | 0.051 | 0.045 | 0.052 | 0.066 | 0.057 | 20.26 |
| 14) | T | Allyl chloride | 0.985 | 0.911 | 0.925 | 0.865 | 0.905 | 0.947 | 0.923 | 4.40 |
| 15) | T | Acrylonitrile | 0.434 | 0.434 | 0.445 | 0.407 | 0.423 | 0.404 | 0.425 | 3.82 |
| 16) | T | Acetone | 0.426 | 0.366 | 0.366 | 0.322 | 0.334 | 0.316 | 0.355 | 11.53 |
| 17) | T | Carbon Disulfide | 1.718 | 1.621 | 1.542 | 1.426 | 1.496 | 1.433 | 1.539 | 7.38 |
| 18) | T | Methyl Acetate | 1.035 | 1.049 | 1.078 | 0.986 | 1.049 | 1.011 | 1.035 | 3.10 |
| 19) | T | Methyl tert-bu... | 2.120 | 2.038 | 2.051 | 1.933 | 2.021 | 1.926 | 2.015 | 3.69 |
| 20) | T | Methylene Chlo... | 0.822 | 0.688 | 0.643 | 0.605 | 0.629 | 0.601 | 0.665 | 12.52 |
| 21) | T | trans-1,2-Dich... | 0.700 | 0.674 | 0.621 | 0.567 | 0.591 | 0.561 | 0.619 | 9.25 |
| 22) | T | Diisopropyl ether | 2.018 | 2.020 | 2.036 | 1.856 | 1.915 | 1.828 | 1.945 | 4.70 |
| 23) | T | Vinyl Acetate | 1.743 | 1.692 | 1.715 | 1.591 | 1.604 | 1.517 | 1.644 | 5.29 |
| 24) | P | 1,1-Dichloroet... | 1.192 | 1.152 | 1.156 | 1.063 | 1.110 | 1.043 | 1.120 | 5.17 |
| 25) | T | 2-Butanone | 0.604 | 0.598 | 0.604 | 0.551 | 0.573 | 0.533 | 0.577 | 5.18 |
| 26) | T | 2,2-Dichloropr... | 0.967 | 0.796 | 0.778 | 0.905 | 0.912 | 0.868 | 0.871 | 8.32 |
| 27) | T | cis-1,2-Dichlo... | 0.786 | 0.766 | 0.762 | 0.699 | 0.729 | 0.701 | 0.740 | 4.93 |
| 28) | T | Bromochloromet... | 0.579 | 0.564 | 0.616 | 0.466 | 0.517 | 0.560 | 0.550 | 9.48 |
| 29) | T | Tetrahydrofuran | 0.390 | 0.390 | 0.399 | 0.358 | 0.372 | 0.346 | 0.376 | 5.46 |
| 30) | C | Chloroform | 1.235 | 1.151 | 1.145 | 1.061 | 1.085 | 1.030 | 1.118 | 6.66# |
| 31) | T | Cyclohexane | | 1.303 | 1.116 | 1.004 | 1.030 | 0.976 | 1.086 | 12.21 |
| 32) | T | 1,1,1-Trichlor... | 1.029 | 0.995 | 0.969 | 0.895 | 0.925 | 0.893 | 0.951 | 5.88 |
| 33) | S | 1,2-Dichloroet... | | 0.732 | 0.707 | 0.500 | 0.656 | 0.751 | 0.669 | 15.08 |
| 34) | I | 1,4-Difluorobenzene | ----------ISTD---------- | | | | | | | |
| 35) | S | Dibromofluorom... | | 0.303 | 0.310 | 0.219 | 0.298 | 0.351 | 0.296 | 16.15 |
| 36) | T | 1,1-Dichloropr... | 0.467 | 0.458 | 0.438 | 0.418 | 0.442 | 0.426 | 0.442 | 4.23 |
| 37) | T | Ethyl Acetate | 0.544 | 0.615 | 0.577 | 0.536 | 0.565 | 0.535 | 0.562 | 5.48 |
| 38) | T | Carbon Tetrach... | 0.453 | 0.449 | 0.434 | 0.409 | 0.435 | 0.421 | 0.433 | 3.88 |
| 39) | T | Methylcyclohexane | 0.633 | 0.645 | 0.588 | 0.570 | 0.603 | 0.589 | 0.605 | 4.75 |
| 40) | TM | Benzene | 1.588 | 1.501 | 1.444 | 1.345 | 1.414 | 1.371 | 1.444 | 6.20 |
| 41) | T | Methacrylonitrile | 0.356 | 0.319 | 0.318 | 0.303 | 0.299 | 0.299 | 0.316 | 6.84 |
| 42) | TM | 1,2-Dichloroet... | 0.473 | 0.456 | 0.444 | 0.411 | 0.430 | 0.413 | 0.438 | 5.60 |
| 43) | T | Isopropyl Acetate | 0.975 | 0.950 | 0.906 | 0.852 | 0.884 | 0.845 | 0.902 | 5.79 |
| 44) | TM | Trichloroethene | 0.359 | 0.360 | 0.341 | 0.327 | 0.340 | 0.327 | 0.342 | 4.17 |
| 45) | C | 1,2-Dichloropr... | 0.366 | 0.369 | 0.354 | 0.332 | 0.352 | 0.335 | 0.351 | 4.40# |
| 46) | T | Dibromomethane | 0.233 | 0.242 | 0.241 | 0.221 | 0.237 | 0.226 | 0.233 | 3.54 |
| 47) | T | Bromodichlorom... | 0.510 | 0.484 | 0.480 | 0.457 | 0.483 | 0.465 | 0.480 | 3.80 |
| 48) | T | Methyl methacr... | 0.444 | 0.415 | 0.421 | 0.394 | 0.421 | 0.397 | 0.415 | 4.40 |
| 49) | T | 1,4-Dioxane | 0.006 | 0.007 | 0.008 | 0.008 | 0.008 | 0.007 | 0.008 | 9.40 |
| 50) | S | Toluene-d8 | | 1.245 | 1.203 | 0.861 | 1.178 | 1.377 | 1.173 | 16.23 |
| 51) | T | 4-Methyl-2-Pen... | 0.505 | 0.549 | 0.576 | 0.538 | 0.562 | 0.528 | 0.543 | 4.64 |
| 52) | CM | Toluene | 0.918 | 0.914 | 0.885 | 0.835 | 0.883 | 0.859 | 0.882 | 3.61# |
| 53) | T | t-1,3-Dichloro... | 0.571 | 0.526 | 0.524 | 0.522 | 0.548 | 0.530 | 0.537 | 3.59 |
| 54) | T | cis-1,3-Dichlo... | 0.609 | 0.577 | 0.564 | 0.551 | 0.584 | 0.561 | 0.574 | 3.61 |
| 55) | T | 1,1,2-Trichlor... | 0.359 | 0.355 | 0.342 | 0.322 | 0.335 | 0.323 | 0.340 | 4.66 |
| 56) | T | Ethyl methacry... | 0.433 | 0.516 | 0.567 | 0.556 | 0.595 | 0.578 | 0.541 | 10.92 |

Method Path : Z:\voasrv\HPCHEM1\MSVOA_N\methods\
Method File : 82N060625W.M

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 57) | T | 1,3-Dichloropr... | 0.643 | 0.600 | 0.587 | 0.561 | 0.583 | 0.559 | 0.589 | 5.27 |
| 58) | T | 2-Chloroethyl ... | 0.278 | 0.305 | 0.334 | 0.274 | 0.340 | 0.405 | 0.323 | 15.07 |
| 59) | T | 2-Hexanone | 0.312 | 0.282 | 0.363 | 0.368 | 0.397 | 0.376 | 0.350 | 12.36 |
| 60) | T | Dibromochlorom... | 0.361 | 0.351 | 0.358 | 0.340 | 0.363 | 0.349 | 0.354 | 2.49 |
| 61) | T | 1,2-Dibromoethane | 0.353 | 0.358 | 0.354 | 0.329 | 0.354 | 0.341 | 0.348 | 3.18 |
| 62) | S | 4-Bromofluorob... | | 0.441 | 0.446 | 0.325 | 0.446 | 0.521 | 0.436 | 16.16 |
| 63) | I | Chlorobenzene-d5 | ----------ISTD---------- | | | | | | | |
| 64) | T | Tetrachloroethene | 0.355 | 0.331 | 0.312 | 0.294 | 0.313 | 0.293 | 0.316 | 7.51 |
| 65) | PM | Chlorobenzene | 1.233 | 1.135 | 1.107 | 1.023 | 1.089 | 1.030 | 1.103 | 7.01 |
| 66) | T | 1,1,1,2-Tetrac... | 0.362 | 0.374 | 0.358 | 0.338 | 0.356 | 0.338 | 0.354 | 3.99 |
| 67) | C | Ethyl Benzene | 1.989 | 1.975 | 1.907 | 1.796 | 1.913 | 1.816 | 1.899 | 4.19# |
| 68) | T | m/p-Xylenes | 0.730 | 0.751 | 0.741 | 0.701 | 0.736 | 0.703 | 0.727 | 2.82 |
| 69) | T | o-Xylene | 0.714 | 0.699 | 0.702 | 0.674 | 0.711 | 0.678 | 0.696 | 2.42 |
| 70) | T | Styrene | 1.177 | 1.193 | 1.226 | 1.162 | 1.229 | 1.164 | 1.192 | 2.51 |
| 71) | P | Bromoform | 0.217 | 0.266 | 0.276 | 0.265 | 0.286 | 0.267 | 0.263 | 9.09 |
| 72) | I | 1,4-Dichlorobenzen... | ----------ISTD---------- | | | | | | | |
| 73) | T | Isopropylbenzene | 3.864 | 3.749 | 3.649 | 3.426 | 3.621 | 3.546 | 3.643 | 4.21 |
| 74) | T | N-amyl acetate | 1.376 | 1.110 | 1.187 | 1.266 | 1.372 | 1.327 | 1.273 | 8.42 |
| 75) | P | 1,1,2,2-Tetrac... | 1.292 | 1.299 | 1.273 | 1.178 | 1.205 | 1.157 | 1.234 | 4.99 |
| 76) | T | 1,2,3-Trichlor... | 1.297 | 1.189 | 1.129 | 1.173 | 1.201 | 1.142 | 1.189 | 5.03 |
| 77) | T | Bromobenzene | 0.870 | 0.855 | 0.840 | 0.790 | 0.838 | 0.819 | 0.835 | 3.36 |
| 78) | T | n-propylbenzene | 4.530 | 4.627 | 4.449 | 4.211 | 4.424 | 4.317 | 4.427 | 3.35 |
| 79) | T | 2-Chlorotoluene | 2.852 | 2.723 | 2.674 | 2.507 | 2.618 | 2.554 | 2.655 | 4.69 |
| 80) | T | 1,3,5-Trimethy... | 3.004 | 3.091 | 3.035 | 2.898 | 3.064 | 2.953 | 3.007 | 2.39 |
| 81) | T | trans-1,4-Dich... | | 0.510 | 0.522 | 0.476 | 0.546 | 0.528 | 0.516 | 5.06 |
| 82) | T | 4-Chlorotoluene | 2.899 | 2.757 | 2.671 | 2.531 | 2.664 | 2.595 | 2.686 | 4.81 |
| 83) | T | tert-Butylbenzene | 2.942 | 2.810 | 2.736 | 2.617 | 2.745 | 2.668 | 2.753 | 4.14 |
| 84) | T | 1,2,4-Trimethy... | 2.952 | 3.122 | 3.063 | 2.914 | 3.075 | 2.968 | 3.016 | 2.73 |
| 85) | T | sec-Butylbenzene | 4.114 | 4.126 | 4.037 | 3.829 | 4.018 | 3.861 | 3.998 | 3.15 |
| 86) | T | p-Isopropyltol... | 3.305 | 3.425 | 3.321 | 3.184 | 3.366 | 3.227 | 3.305 | 2.68 |
| 87) | T | 1,3-Dichlorobe... | 1.763 | 1.709 | 1.657 | 1.554 | 1.612 | 1.566 | 1.644 | 5.01 |
| 88) | T | 1,4-Dichlorobe... | 1.820 | 1.786 | 1.657 | 1.572 | 1.642 | 1.576 | 1.676 | 6.27 |
| 89) | T | n-Butylbenzene | 3.473 | 3.292 | 3.140 | 3.059 | 3.188 | 3.054 | 3.201 | 4.99 |
| 90) | T | Hexachloroethane | 0.580 | 0.537 | 0.569 | 0.537 | 0.577 | 0.562 | 0.560 | 3.43 |
| 91) | T | 1,2-Dichlorobe... | 1.675 | 1.651 | 1.596 | 1.500 | 1.557 | 1.496 | 1.579 | 4.77 |
| 92) | T | 1,2-Dibromo-3-... | 0.339 | 0.317 | 0.290 | 0.272 | 0.283 | 0.270 | 0.295 | 9.29 |
| 93) | T | 1,2,4-Trichlor... | 1.042 | 1.037 | 0.991 | 0.969 | 1.016 | 0.994 | 1.008 | 2.82 |
| 94) | T | Hexachlorobuta... | 0.364 | 0.391 | 0.385 | 0.363 | 0.382 | 0.369 | 0.376 | 3.11 |
| 95) | T | Naphthalene | 3.820 | 3.727 | 3.761 | 3.600 | 3.839 | 3.772 | 3.753 | 2.27 |
| 96) | T | 1,2,3-Trichlor... | 1.073 | 1.009 | 0.993 | 0.950 | 1.000 | 0.987 | 1.002 | 4.05 |

(#) = Out of Range

Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086862.D
Acq On : 06 Jun 2025 12:44
Operator : JC\MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC001

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 01:54:26 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Pentafluorobenzene | 8.235 | 168 | 212682 | 50.000 | ug/l | | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 393457 | 50.000 | ug/l | | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 348010 | 50.000 | ug/l | | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.794 | 152 | 167399 | 50.000 | ug/l | | 0.00 |
| System Monitoring Compounds | | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 0.000 | 65 | 0d | 0.000 | ug/l | | |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = | 0.000%# | | | |
| 35) Dibromofluoromethane | 0.000 | 113 | 0d | 0.000 | ug/l | | |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = | 0.000%# | | | |
| 50) Toluene-d8 | 0.000 | 98 | 0d | 0.000 | ug/l | | |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = | 0.000%# | | | |
| 62) 4-Bromofluorobenzene | 0.000 | 95 | 0d | 0.000 | ug/l | | |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = | 0.000%# | | | |
| Target Compounds | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.153 | 85 | 1985 | 0.936 | ug/l | | 72 |
| 3) Chloromethane | 2.400 | 50 | 3241 | 1.184 | ug/l | | 98 |
| 4) Vinyl Chloride | 2.559 | 62 | 2848 | 1.008 | ug/l | # | 88 |
| 6) Chloroethane | 3.159 | 64 | 1957 | 1.073 | ug/l | # | 79 |
| 7) Trichlorofluoromethane | 3.530 | 101 | 3752 | 1.017 | ug/l | | 97 |
| 8) Diethyl Ether | 3.994 | 74 | 1583 | 0.984 | ug/l | | 76 |
| 9) 1,1,2-Trichlorotrifluo... | 4.377 | 101 | 2358m | 1.017 | ug/l | | |
| 12) 1,1-Dichloroethene | 4.365 | 96 | 2436 | 1.029 | ug/l | | 85 |
| 14) Allyl chloride | 5.041 | 41 | 4189 | 1.067 | ug/l | # | 75 |
| 15) Acrylonitrile | 5.735 | 53 | 9222 | 5.106 | ug/l | | 96 |
| 16) Acetone | 4.459 | 43 | 9069 | 6.006 | ug/l | | 95 |
| 17) Carbon Disulfide | 4.730 | 76 | 7306 | 1.116 | ug/l | | 97 |
| 18) Methyl Acetate | 5.053 | 43 | 4402 | 1.000 | ug/l | # | 66 |
| 19) Methyl tert-butyl Ether | 5.824 | 73 | 9019 | 1.052 | ug/l | | 92 |
| 20) Methylene Chloride | 5.294 | 84 | 3496 | 1.237 | ug/l | | 93 |
| 21) trans-1,2-Dichloroethene | 5.800 | 96 | 2979 | 1.131 | ug/l | | 87 |
| 22) Diisopropyl ether | 6.682 | 45 | 8584 | 1.037 | ug/l | # | 96 |
| 23) Vinyl Acetate | 6.618 | 43 | 37075 | 5.303 | ug/l | | 95 |
| 24) 1,1-Dichloroethane | 6.588 | 63 | 5071 | 1.065 | ug/l | # | 81 |
| 25) 2-Butanone | 7.500 | 43 | 12841 | 5.231 | ug/l | | 93 |
| 26) 2,2-Dichloropropane | 7.500 | 77 | 4112 | 1.110 | ug/l | | 94 |
| 27) cis-1,2-Dichloroethene | 7.494 | 96 | 3345 | 1.062 | ug/l | | 95 |
| 28) Bromochloromethane | 7.824 | 49 | 2464 | 1.052 | ug/l | # | 88 |
| 29) Tetrahydrofuran | 7.853 | 42 | 8301 | 5.191 | ug/l | | 100 |
| 30) Chloroform | 7.971 | 83 | 5255 | 1.105 | ug/l | | 97 |
| 32) 1,1,1-Trichloroethane | 8.171 | 97 | 4378 | 1.082 | ug/l | # | 50 |
| 36) 1,1-Dichloropropene | 8.376 | 75 | 3678 | 1.059 | ug/l | | 96 |
| 37) Ethyl Acetate | 7.577 | 43 | 4282 | 0.968 | ug/l | # | 78 |
| 38) Carbon Tetrachloride | 8.376 | 117 | 3563 | 1.045 | ug/l | # | 93 |
| 39) Methylcyclohexane | 9.606 | 83 | 4981 | 1.046 | ug/l | # | 90 |
| 40) Benzene | 8.612 | 78 | 12498 | 1.100 | ug/l | | 100 |
| 41) Methacrylonitrile | 7.782 | 41 | 2799 | 1.127 | ug/l | | 89 |
| 42) 1,2-Dichloroethane | 8.682 | 62 | 3725 | 1.081 | ug/l | | 82 |
| 43) Isopropyl Acetate | 8.694 | 43 | 7673 | 1.081 | ug/l | # | 96 |
| 44) Trichloroethene | 9.365 | 130 | 2822 | 1.047 | ug/l | | 71 |
| 45) 1,2-Dichloropropane | 9.629 | 63 | 2883 | 1.043 | ug/l | | 95 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086862.D
Acq On : 06 Jun 2025 12:44
Operator : JC\MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 07 01:54:26 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC001

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 46) | Dibromomethane | 9.712 | 93 | 1835 | 0.999 | ug/l | | 94 |
| 47) | Bromodichloromethane | 9.888 | 83 | 4017 | 1.063 | ug/l | # | 96 |
| 48) | Methyl methacrylate | 9.688 | 41 | 3492 | 1.069 | ug/l | | 88 |
| 49) | 1,4-Dioxane | 9.706 | 88 | 1004 | 16.891 | ug/l | # | 74 |
| 51) | 4-Methyl-2-Pentanone | 10.453 | 43 | 19886 | 4.653 | ug/l | | 99 |
| 52) | Toluene | 10.635 | 92 | 7227 | 1.041 | ug/l | | 95 |
| 53) | t-1,3-Dichloropropene | 10.841 | 75 | 4494 | 1.064 | ug/l | | 97 |
| 54) | cis-1,3-Dichloropropene | 10.312 | 75 | 4792 | 1.060 | ug/l | | 97 |
| 55) | 1,1,2-Trichloroethane | 11.023 | 97 | 2828 | 1.058 | ug/l | | 89 |
| 56) | Ethyl methacrylate | 10.882 | 69 | 3406 | 0.800 | ug/l | # | 85 |
| 57) | 1,3-Dichloropropane | 11.170 | 76 | 5062 | 1.092 | ug/l | | 98 |
| 58) | 2-Chloroethyl Vinyl ether | 10.165 | 63 | 10924 | 4.304 | ug/l | | 97 |
| 59) | 2-Hexanone | 11.235 | 43 | 12295m | 4.466 | ug/l | | |
| 60) | Dibromochloromethane | 11.359 | 129 | 2843 | 1.021 | ug/l | | 96 |
| 61) | 1,2-Dibromoethane | 11.470 | 107 | 2777 | 1.014 | ug/l | | 96 |
| 64) | Tetrachloroethene | 11.106 | 164 | 2473 | 1.123 | ug/l | | 94 |
| 65) | Chlorobenzene | 11.894 | 112 | 8581 | 1.118 | ug/l | # | 87 |
| 66) | 1,1,1,2-Tetrachloroethane | 11.959 | 131 | 2523 | 1.023 | ug/l | # | 63 |
| 67) | Ethyl Benzene | 11.970 | 91 | 13845 | 1.047 | ug/l | | 94 |
| 68) | m/p-Xylenes | 12.070 | 106 | 10163 | 2.008 | ug/l | | 95 |
| 69) | o-Xylene | 12.400 | 106 | 4970 | 1.025 | ug/l | | 93 |
| 70) | Styrene | 12.417 | 104 | 8189 | 0.987 | ug/l | | 98 |
| 71) | Bromoform | 12.582 | 173 | 1508 | 0.825 | ug/l | # | 78 |
| 73) | Isopropylbenzene | 12.694 | 105 | 12938 | 1.061 | ug/l | | 98 |
| 74) | N-amyl acetate | 12.647 | 43 | 4608m | 1.138 | ug/l | | |
| 75) | 1,1,2,2-Tetrachloroethane | 12.935 | 83 | 4326 | 1.047 | ug/l | # | 93 |
| 76) | 1,2,3-Trichloropropane | 13.000 | 75 | 4343m | 1.088 | ug/l | | |
| 77) | Bromobenzene | 12.982 | 156 | 2913 | 1.042 | ug/l | | 96 |
| 78) | n-propylbenzene | 13.035 | 91 | 15168 | 1.023 | ug/l | | 98 |
| 79) | 2-Chlorotoluene | 13.123 | 91 | 9550 | 1.074 | ug/l | | 97 |
| 80) | 1,3,5-Trimethylbenzene | 13.170 | 105 | 10058 | 0.999 | ug/l | | 96 |
| 82) | 4-Chlorotoluene | 13.223 | 91 | 9706 | 1.079 | ug/l | | 96 |
| 83) | tert-Butylbenzene | 13.435 | 119 | 9849 | 1.069 | ug/l | | 98 |
| 84) | 1,2,4-Trimethylbenzene | 13.482 | 105 | 9882 | 0.979 | ug/l | | 99 |
| 85) | sec-Butylbenzene | 13.617 | 105 | 13775 | 1.029 | ug/l | | 100 |
| 86) | p-Isopropyltoluene | 13.729 | 119 | 11065 | 1.000 | ug/l | | 97 |
| 87) | 1,3-Dichlorobenzene | 13.735 | 146 | 5903 | 1.073 | ug/l | | 94 |
| 88) | 1,4-Dichlorobenzene | 13.811 | 146 | 6094m | 1.086 | ug/l | | |
| 89) | n-Butylbenzene | 14.058 | 91 | 11627 | 1.085 | ug/l | | 94 |
| 90) | Hexachloroethane | 14.329 | 117 | 1942 | 1.036 | ug/l | | 93 |
| 91) | 1,2-Dichlorobenzene | 14.106 | 146 | 5607 | 1.061 | ug/l | | 99 |
| 92) | 1,2-Dibromo-3-Chloropr... | 14.717 | 75 | 1136 | 1.150 | ug/l | | 78 |
| 93) | 1,2,4-Trichlorobenzene | 15.388 | 180 | 3489 | 1.034 | ug/l | | 98 |
| 94) | Hexachlorobutadiene | 15.500 | 225 | 1219 | 0.969 | ug/l | | 88 |
| 95) | Naphthalene | 15.635 | 128 | 12789 | 1.018 | ug/l | | 98 |
| 96) | 1,2,3-Trichlorobenzene | 15.835 | 180 | 3594 | 1.072 | ug/l | | 96 |

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

ICAL Form

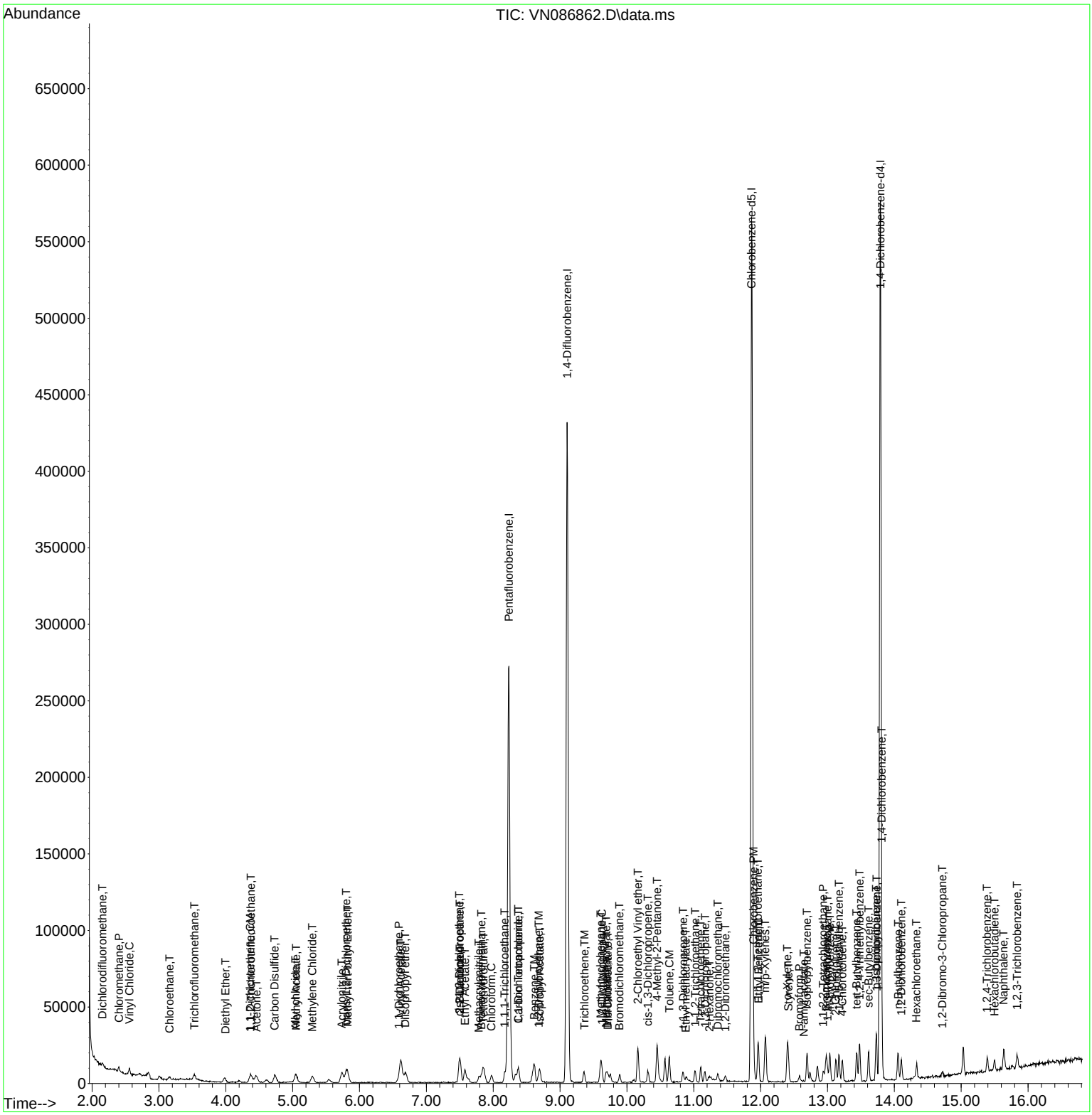
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086862.D
Acq On : 06 Jun 2025 12:44
Operator : JC\MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 07 01:54:26 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC001

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086863.D
Acq On : 06 Jun 2025 13:17
Operator : JC\MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC005

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 01:55:22 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.230 | 168 | 229701 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 423980 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 371851 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.794 | 152 | 181065 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.588 | 65 | 16818 | 5.468 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = | 10.940%# | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 12867 | 5.121 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = | 10.240%# | | |
| 50) Toluene-d8 | 10.571 | 98 | 52794 | 5.308 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = | 10.620%# | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 18697 | 5.059 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = | 10.120%# | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.154 | 85 | 10196 | 4.452 | ug/l | 93 |
| 3) Chloromethane | 2.395 | 50 | 15025 | 5.080 | ug/l | 98 |
| 4) Vinyl Chloride | 2.554 | 62 | 15384 | 5.043 | ug/l | 97 |
| 5) Bromomethane | 2.989 | 94 | 8606 | 5.041 | ug/l | 97 |
| 6) Chloroethane | 3.154 | 64 | 10190 | 5.171 | ug/l | 96 |
| 7) Trichlorofluoromethane | 3.518 | 101 | 20740 | 5.203 | ug/l | 99 |
| 8) Diethyl Ether | 3.971 | 74 | 9121 | 5.252 | ug/l | 95 |
| 9) 1,1,2-Trichlorotrifluo... | 4.401 | 101 | 13034 | 5.205 | ug/l | 97 |
| 10) Methyl Iodide | 4.606 | 142 | 16530 | 5.092 | ug/l | 98 |
| 11) Tert butyl alcohol | 5.542 | 59 | 22000 | 26.363 | ug/l | 99 |
| 12) 1,1-Dichloroethene | 4.359 | 96 | 13610 | 5.323 | ug/l | 94 |
| 13) Acrolein | 4.195 | 56 | 8401 | 31.804 | ug/l | 99 |
| 14) Allyl chloride | 5.042 | 41 | 20925 | 4.935 | ug/l | 99 |
| 15) Acrylonitrile | 5.736 | 53 | 49826 | 25.545 | ug/l | 99 |
| 16) Acetone | 4.448 | 43 | 41981 | 25.741 | ug/l | 99 |
| 17) Carbon Disulfide | 4.736 | 76 | 37246 | 5.267 | ug/l | 97 |
| 18) Methyl Acetate | 5.048 | 43 | 24096 | 5.070 | ug/l | 97 |
| 19) Methyl tert-butyl Ether | 5.812 | 73 | 46823 | 5.058 | ug/l | 95 |
| 20) Methylene Chloride | 5.300 | 84 | 15809 | 5.178 | ug/l | 96 |
| 21) trans-1,2-Dichloroethene | 5.806 | 96 | 15480 | 5.442 | ug/l # | 81 |
| 22) Diisopropyl ether | 6.689 | 45 | 46396 | 5.191 | ug/l | 99 |
| 23) Vinyl Acetate | 6.618 | 43 | 194334 | 25.735 | ug/l | 100 |
| 24) 1,1-Dichloroethane | 6.583 | 63 | 26473 | 5.147 | ug/l | 99 |
| 25) 2-Butanone | 7.494 | 43 | 68629 | 25.888 | ug/l | 99 |
| 26) 2,2-Dichloropropane | 7.500 | 77 | 18288 | 4.571 | ug/l | 100 |
| 27) cis-1,2-Dichloroethene | 7.500 | 96 | 17594 | 5.172 | ug/l | 98 |
| 28) Bromochloromethane | 7.830 | 49 | 12958 | 5.124 | ug/l # | 97 |
| 29) Tetrahydrofuran | 7.853 | 42 | 44749 | 25.912 | ug/l | 98 |
| 30) Chloroform | 7.977 | 83 | 26450 | 5.149 | ug/l | 95 |
| 31) Cyclohexane | 8.271 | 56 | 29938 | 6.002 | ug/l | 95 |
| 32) 1,1,1-Trichloroethane | 8.177 | 97 | 22857 | 5.232 | ug/l # | 50 |
| 36) 1,1-Dichloropropene | 8.377 | 75 | 19410 | 5.184 | ug/l | 98 |
| 37) Ethyl Acetate | 7.571 | 43 | 26073 | 5.470 | ug/l | 97 |
| 38) Carbon Tetrachloride | 8.371 | 117 | 19056 | 5.184 | ug/l | 99 |
| 39) Methylcyclohexane | 9.606 | 83 | 27353 | 5.333 | ug/l | 95 |
| 40) Benzene | 8.612 | 78 | 63646 | 5.199 | ug/l | 98 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086863.D
Acq On : 06 Jun 2025 13:17
Operator : JC\MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC005

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 01:55:22 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 41) Methacrylonitrile | 7.783 | 41 | 13518 | 5.050 | ug/l | | 99 |
| 42) 1,2-Dichloroethane | 8.683 | 62 | 19329 | 5.205 | ug/l | | 98 |
| 43) Isopropyl Acetate | 8.700 | 43 | 40268 | 5.264 | ug/l | | 98 |
| 44) Trichloroethene | 9.359 | 130 | 15245 | 5.251 | ug/l | | 96 |
| 45) 1,2-Dichloropropane | 9.624 | 63 | 15632 | 5.248 | ug/l | | 99 |
| 46) Dibromomethane | 9.718 | 93 | 10241 | 5.176 | ug/l | | 99 |
| 47) Bromodichloromethane | 9.888 | 83 | 20512 | 5.039 | ug/l | | 97 |
| 48) Methyl methacrylate | 9.688 | 41 | 17591 | 4.996 | ug/l | | 94 |
| 49) 1,4-Dioxane | 9.700 | 88 | 6141 | 95.874 | ug/l | # | 93 |
| 51) 4-Methyl-2-Pentanone | 10.447 | 43 | 116434 | 25.283 | ug/l | | 97 |
| 52) Toluene | 10.630 | 92 | 38744 | 5.178 | ug/l | | 99 |
| 53) t-1,3-Dichloropropene | 10.841 | 75 | 22285 | 4.896 | ug/l | | 98 |
| 54) cis-1,3-Dichloropropene | 10.318 | 75 | 24477 | 5.026 | ug/l | | 93 |
| 55) 1,1,2-Trichloroethane | 11.018 | 97 | 15068 | 5.234 | ug/l | | 97 |
| 56) Ethyl methacrylate | 10.888 | 69 | 21893 | 4.774 | ug/l | | 95 |
| 57) 1,3-Dichloropropane | 11.165 | 76 | 25452 | 5.096 | ug/l | | 98 |
| 58) 2-Chloroethyl Vinyl ether | 10.165 | 63 | 64722 | 23.664 | ug/l | | 98 |
| 59) 2-Hexanone | 11.212 | 43 | 59884 | 20.188 | ug/l | | 99 |
| 60) Dibromochloromethane | 11.359 | 129 | 14884 | 4.962 | ug/l | | 98 |
| 61) 1,2-Dibromoethane | 11.471 | 107 | 15172 | 5.141 | ug/l | | 99 |
| 64) Tetrachloroethene | 11.106 | 164 | 12322 | 5.236 | ug/l | | 92 |
| 65) Chlorobenzene | 11.894 | 112 | 42195 | 5.145 | ug/l | | 98 |
| 66) 1,1,1,2-Tetrachloroethane | 11.965 | 131 | 13897 | 5.271 | ug/l | | 97 |
| 67) Ethyl Benzene | 11.965 | 91 | 73443 | 5.199 | ug/l | | 97 |
| 68) m/p-Xylenes | 12.071 | 106 | 55859 | 10.330 | ug/l | | 100 |
| 69) o-Xylene | 12.400 | 106 | 26004 | 5.021 | ug/l | | 96 |
| 70) Styrene | 12.412 | 104 | 44380 | 5.008 | ug/l | | 98 |
| 71) Bromoform | 12.582 | 173 | 9890 | 5.063 | ug/l | # | 96 |
| 73) Isopropylbenzene | 12.694 | 105 | 67878 | 5.146 | ug/l | | 100 |
| 74) N-amyl acetate | 12.559 | 43 | 20096m | 4.590 | ug/l | | |
| 75) 1,1,2,2-Tetrachloroethane | 12.935 | 83 | 23516 | 5.262 | ug/l | | 98 |
| 76) 1,2,3-Trichloropropane | 12.994 | 75 | 21527m | 4.986 | ug/l | | |
| 77) Bromobenzene | 12.976 | 156 | 15485 | 5.119 | ug/l | | 92 |
| 78) n-propylbenzene | 13.035 | 91 | 83781 | 5.226 | ug/l | | 99 |
| 79) 2-Chlorotoluene | 13.124 | 91 | 49297 | 5.128 | ug/l | | 100 |
| 80) 1,3,5-Trimethylbenzene | 13.171 | 105 | 55961 | 5.139 | ug/l | | 100 |
| 81) trans-1,4-Dichloro-2-b... | 12.741 | 75 | 9234 | 4.939 | ug/l | | 94 |
| 82) 4-Chlorotoluene | 13.223 | 91 | 49924 | 5.132 | ug/l | | 100 |
| 83) tert-Butylbenzene | 13.435 | 119 | 50874 | 5.103 | ug/l | | 98 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 56525 | 5.176 | ug/l | | 100 |
| 85) sec-Butylbenzene | 13.618 | 105 | 74711 | 5.161 | ug/l | | 99 |
| 86) p-Isopropyltoluene | 13.729 | 119 | 62016 | 5.182 | ug/l | | 99 |
| 87) 1,3-Dichlorobenzene | 13.735 | 146 | 30949 | 5.200 | ug/l | | 98 |
| 88) 1,4-Dichlorobenzene | 13.812 | 146 | 32342 | 5.330 | ug/l | | 96 |
| 89) n-Butylbenzene | 14.053 | 91 | 59601 | 5.142 | ug/l | | 99 |
| 90) Hexachloroethane | 14.335 | 117 | 9725 | 4.794 | ug/l | | 95 |
| 91) 1,2-Dichlorobenzene | 14.106 | 146 | 29897 | 5.228 | ug/l | | 99 |
| 92) 1,2-Dibromo-3-Chloropr... | 14.717 | 75 | 5731 | 5.363 | ug/l | | 93 |
| 93) 1,2,4-Trichlorobenzene | 15.394 | 180 | 18778 | 5.143 | ug/l | | 99 |
| 94) Hexachlorobutadiene | 15.500 | 225 | 7072 | 5.199 | ug/l | | 99 |
| 95) Naphthalene | 15.641 | 128 | 67481 | 4.965 | ug/l | | 99 |
| 96) 1,2,3-Trichlorobenzene | 15.841 | 180 | 18262 | 5.034 | ug/l | | 97 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086863.D
Acq On : 06 Jun 2025 13:17
Operator : JC\MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC005

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 01:55:22 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

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

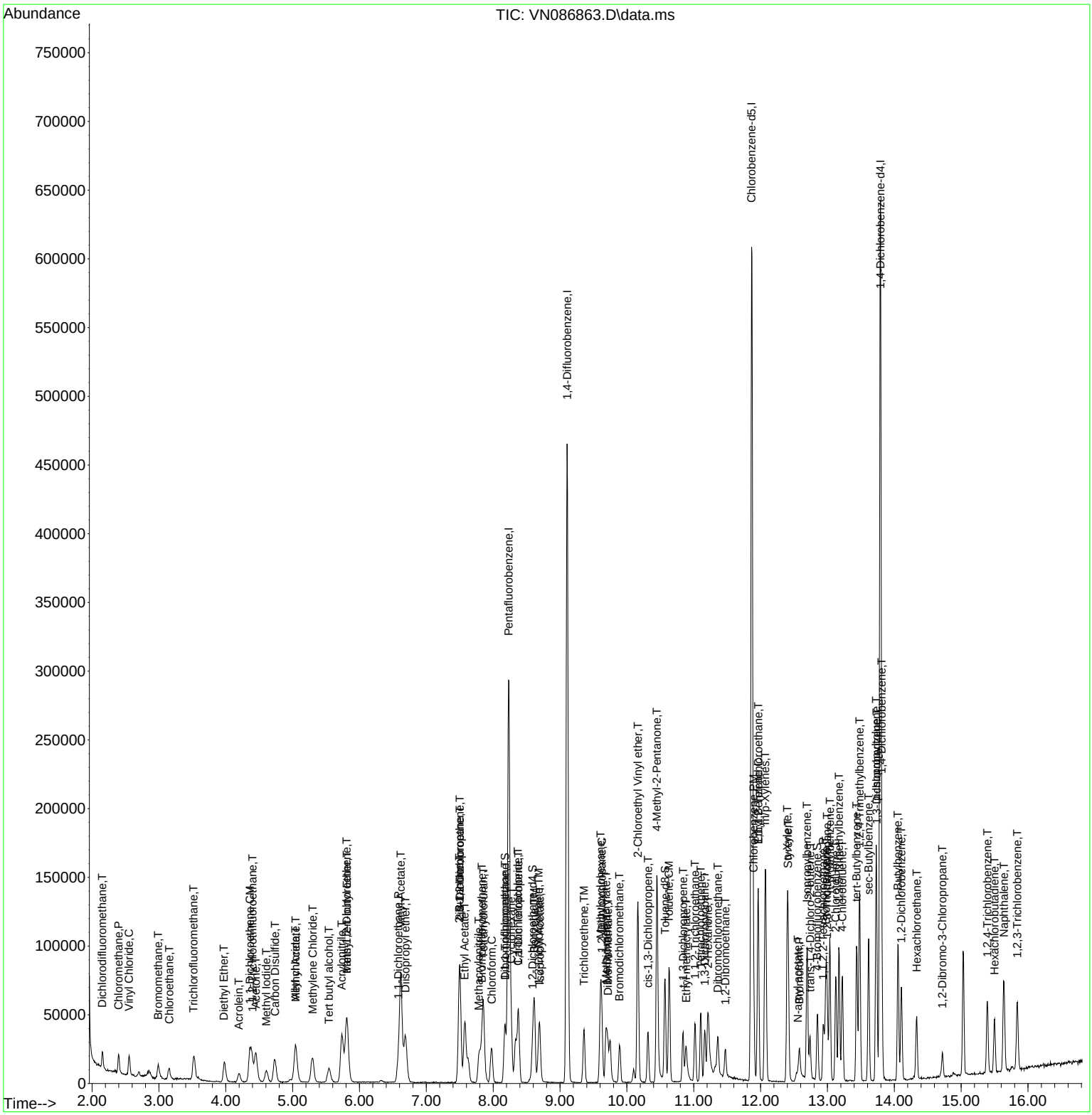
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086863.D
Acq On : 06 Jun 2025 13:17
Operator : JC\MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 07 01:55:22 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC005

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086864.D
Acq On : 06 Jun 2025 13:40
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC020

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 01:56:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.235 | 168 | 224006 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 418154 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 363172 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 181178 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.588 | 65 | 63390 | 21.136 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = | 42.280%# | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 51797 | 20.902 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = | 41.800%# | | |
| 50) Toluene-d8 | 10.571 | 98 | 201268 | 20.516 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = | 41.040%# | | |
| 62) 4-Bromofluorobenzene | 12.853 | 95 | 74622 | 20.474 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = | 40.940%# | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.159 | 85 | 48254 | 21.605 | ug/l | 92 |
| 3) Chloromethane | 2.401 | 50 | 57778 | 20.033 | ug/l | 93 |
| 4) Vinyl Chloride | 2.559 | 62 | 61254 | 20.589 | ug/l | 99 |
| 5) Bromomethane | 3.006 | 94 | 34022 | 20.435 | ug/l | 95 |
| 6) Chloroethane | 3.159 | 64 | 39625 | 20.619 | ug/l | 99 |
| 7) Trichlorofluoromethane | 3.524 | 101 | 80978 | 20.832 | ug/l | 94 |
| 8) Diethyl Ether | 3.983 | 74 | 34288 | 20.245 | ug/l | 98 |
| 9) 1,1,2-Trichlorotrifluo... | 4.395 | 101 | 50458 | 20.661 | ug/l | 98 |
| 10) Methyl Iodide | 4.612 | 142 | 65360 | 20.646 | ug/l | 98 |
| 11) Tert butyl alcohol | 5.547 | 59 | 87102 | 107.031 | ug/l | 99 |
| 12) 1,1-Dichloroethene | 4.359 | 96 | 50485 | 20.249 | ug/l | 96 |
| 13) Acrolein | 4.200 | 56 | 22866 | 88.767 | ug/l | 97 |
| 14) Allyl chloride | 5.047 | 41 | 82924 | 20.055 | ug/l | 98 |
| 15) Acrylonitrile | 5.742 | 53 | 199498 | 104.881 | ug/l | 99 |
| 16) Acetone | 4.447 | 43 | 163979 | 103.099 | ug/l | 98 |
| 17) Carbon Disulfide | 4.736 | 76 | 138195 | 20.038 | ug/l | 97 |
| 18) Methyl Acetate | 5.047 | 43 | 96547 | 20.830 | ug/l | 99 |
| 19) Methyl tert-butyl Ether | 5.818 | 73 | 183780 | 20.358 | ug/l | 98 |
| 20) Methylene Chloride | 5.294 | 84 | 57611 | 19.348 | ug/l | 98 |
| 21) trans-1,2-Dichloroethene | 5.806 | 96 | 55643 | 20.059 | ug/l | 94 |
| 22) Diisopropyl ether | 6.689 | 45 | 182472 | 20.935 | ug/l | 98 |
| 23) Vinyl Acetate | 6.624 | 43 | 768556 | 104.365 | ug/l | 99 |
| 24) 1,1-Dichloroethane | 6.583 | 63 | 103578 | 20.650 | ug/l | 99 |
| 25) 2-Butanone | 7.494 | 43 | 270477 | 104.621 | ug/l | 100 |
| 26) 2,2-Dichloropropane | 7.506 | 77 | 69692 | 17.862 | ug/l | 99 |
| 27) cis-1,2-Dichloroethene | 7.500 | 96 | 68292 | 20.585 | ug/l | 98 |
| 28) Bromochloromethane | 7.824 | 49 | 55196 | 22.381 | ug/l | 99 |
| 29) Tetrahydrofuran | 7.853 | 42 | 178571 | 106.031 | ug/l | 99 |
| 30) Chloroform | 7.977 | 83 | 102615 | 20.485 | ug/l | 93 |
| 31) Cyclohexane | 8.271 | 56 | 100026 | 20.563 | ug/l | 98 |
| 32) 1,1,1-Trichloroethane | 8.177 | 97 | 86810 | 20.376 | ug/l | 98 |
| 36) 1,1-Dichloropropene | 8.383 | 75 | 73252 | 19.838 | ug/l | 100 |
| 37) Ethyl Acetate | 7.571 | 43 | 96467 | 20.522 | ug/l | 98 |
| 38) Carbon Tetrachloride | 8.377 | 117 | 72628 | 20.034 | ug/l | 97 |
| 39) Methylcyclohexane | 9.606 | 83 | 98425 | 19.455 | ug/l | 99 |
| 40) Benzene | 8.612 | 78 | 241444 | 19.996 | ug/l | 99 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086864.D
Acq On : 06 Jun 2025 13:40
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 07 01:56:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC020

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 41) Methacrylonitrile | 7.788 | 41 | 53244 | 20.169 | ug/l | | 98 |
| 42) 1,2-Dichloroethane | 8.677 | 62 | 74238 | 20.270 | ug/l | | 100 |
| 43) Isopropyl Acetate | 8.694 | 43 | 151601 | 20.094 | ug/l | | 99 |
| 44) Trichloroethene | 9.359 | 130 | 57110 | 19.946 | ug/l | | 96 |
| 45) 1,2-Dichloropropane | 9.630 | 63 | 59293 | 20.184 | ug/l | | 97 |
| 46) Dibromomethane | 9.712 | 93 | 40290 | 20.648 | ug/l | | 98 |
| 47) Bromodichloromethane | 9.894 | 83 | 80353 | 20.015 | ug/l | | 98 |
| 48) Methyl methacrylate | 9.682 | 41 | 70457 | 20.290 | ug/l | | 97 |
| 49) 1,4-Dioxane | 9.706 | 88 | 28231 | 446.886 | ug/l | # | 98 |
| 51) 4-Methyl-2-Pentanone | 10.447 | 43 | 481741 | 106.066 | ug/l | | 99 |
| 52) Toluene | 10.635 | 92 | 148000 | 20.056 | ug/l | | 98 |
| 53) t-1,3-Dichloropropene | 10.841 | 75 | 87683 | 19.532 | ug/l | | 99 |
| 54) cis-1,3-Dichloropropene | 10.318 | 75 | 94315 | 19.636 | ug/l | | 99 |
| 55) 1,1,2-Trichloroethane | 11.018 | 97 | 57195 | 20.143 | ug/l | | 99 |
| 56) Ethyl methacrylate | 10.882 | 69 | 94829 | 20.968 | ug/l | | 98 |
| 57) 1,3-Dichloropropane | 11.165 | 76 | 98205 | 19.938 | ug/l | | 98 |
| 58) 2-Chloroethyl Vinyl ether | 10.165 | 63 | 278986 | 103.426 | ug/l | | 99 |
| 59) 2-Hexanone | 11.206 | 43 | 303686 | 103.803 | ug/l | | 95 |
| 60) Dibromochloromethane | 11.359 | 129 | 59961 | 20.268 | ug/l | | 99 |
| 61) 1,2-Dibromoethane | 11.471 | 107 | 59139 | 20.320 | ug/l | | 97 |
| 64) Tetrachloroethene | 11.106 | 164 | 45374 | 19.742 | ug/l | | 96 |
| 65) Chlorobenzene | 11.894 | 112 | 160803 | 20.076 | ug/l | | 97 |
| 66) 1,1,1,2-Tetrachloroethane | 11.959 | 131 | 52069 | 20.223 | ug/l | | 99 |
| 67) Ethyl Benzene | 11.965 | 91 | 277087 | 20.083 | ug/l | | 98 |
| 68) m/p-Xylenes | 12.071 | 106 | 215378 | 40.780 | ug/l | | 100 |
| 69) o-Xylene | 12.400 | 106 | 102050 | 20.175 | ug/l | | 98 |
| 70) Styrene | 12.412 | 104 | 178061 | 20.572 | ug/l | | 99 |
| 71) Bromoform | 12.576 | 173 | 40070 | 21.004 | ug/l | # | 99 |
| 73) Isopropylbenzene | 12.694 | 105 | 264442 | 20.035 | ug/l | | 100 |
| 74) N-amyl acetate | 12.523 | 43 | 86003 | 19.633 | ug/l | | 98 |
| 75) 1,1,2,2-Tetrachloroethane | 12.941 | 83 | 92264 | 20.634 | ug/l | | 99 |
| 76) 1,2,3-Trichloropropane | 12.994 | 75 | 81846m | 18.945 | ug/l | | |
| 77) Bromobenzene | 12.982 | 156 | 60877 | 20.111 | ug/l | | 98 |
| 78) n-propylbenzene | 13.035 | 91 | 322436 | 20.102 | ug/l | | 100 |
| 79) 2-Chlorotoluene | 13.123 | 91 | 193774 | 20.144 | ug/l | | 100 |
| 80) 1,3,5-Trimethylbenzene | 13.170 | 105 | 219937 | 20.183 | ug/l | | 100 |
| 81) trans-1,4-Dichloro-2-b... | 12.735 | 75 | 37808 | 20.209 | ug/l | | 92 |
| 82) 4-Chlorotoluene | 13.223 | 91 | 193544 | 19.885 | ug/l | | 99 |
| 83) tert-Butylbenzene | 13.435 | 119 | 198303 | 19.880 | ug/l | | 99 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 221990 | 20.315 | ug/l | | 100 |
| 85) sec-Butylbenzene | 13.617 | 105 | 292563 | 20.196 | ug/l | | 100 |
| 86) p-Isopropyltoluene | 13.729 | 119 | 240682 | 20.099 | ug/l | | 100 |
| 87) 1,3-Dichlorobenzene | 13.735 | 146 | 120099 | 20.166 | ug/l | | 99 |
| 88) 1,4-Dichlorobenzene | 13.812 | 146 | 120102 | 19.780 | ug/l | | 97 |
| 89) n-Butylbenzene | 14.053 | 91 | 227536 | 19.617 | ug/l | | 100 |
| 90) Hexachloroethane | 14.335 | 117 | 41202 | 20.299 | ug/l | | 100 |
| 91) 1,2-Dichlorobenzene | 14.106 | 146 | 115645 | 20.212 | ug/l | | 99 |
| 92) 1,2-Dibromo-3-Chloropr... | 14.717 | 75 | 21025 | 19.661 | ug/l | | 98 |
| 93) 1,2,4-Trichlorobenzene | 15.388 | 180 | 71826 | 19.659 | ug/l | | 98 |
| 94) Hexachlorobutadiene | 15.500 | 225 | 27887 | 20.486 | ug/l | | 97 |
| 95) Naphthalene | 15.641 | 128 | 272584 | 20.043 | ug/l | | 100 |
| 96) 1,2,3-Trichlorobenzene | 15.841 | 180 | 71929 | 19.815 | ug/l | | 99 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086864.D
Acq On : 06 Jun 2025 13:40
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC020

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 01:56:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

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

ICAL Form

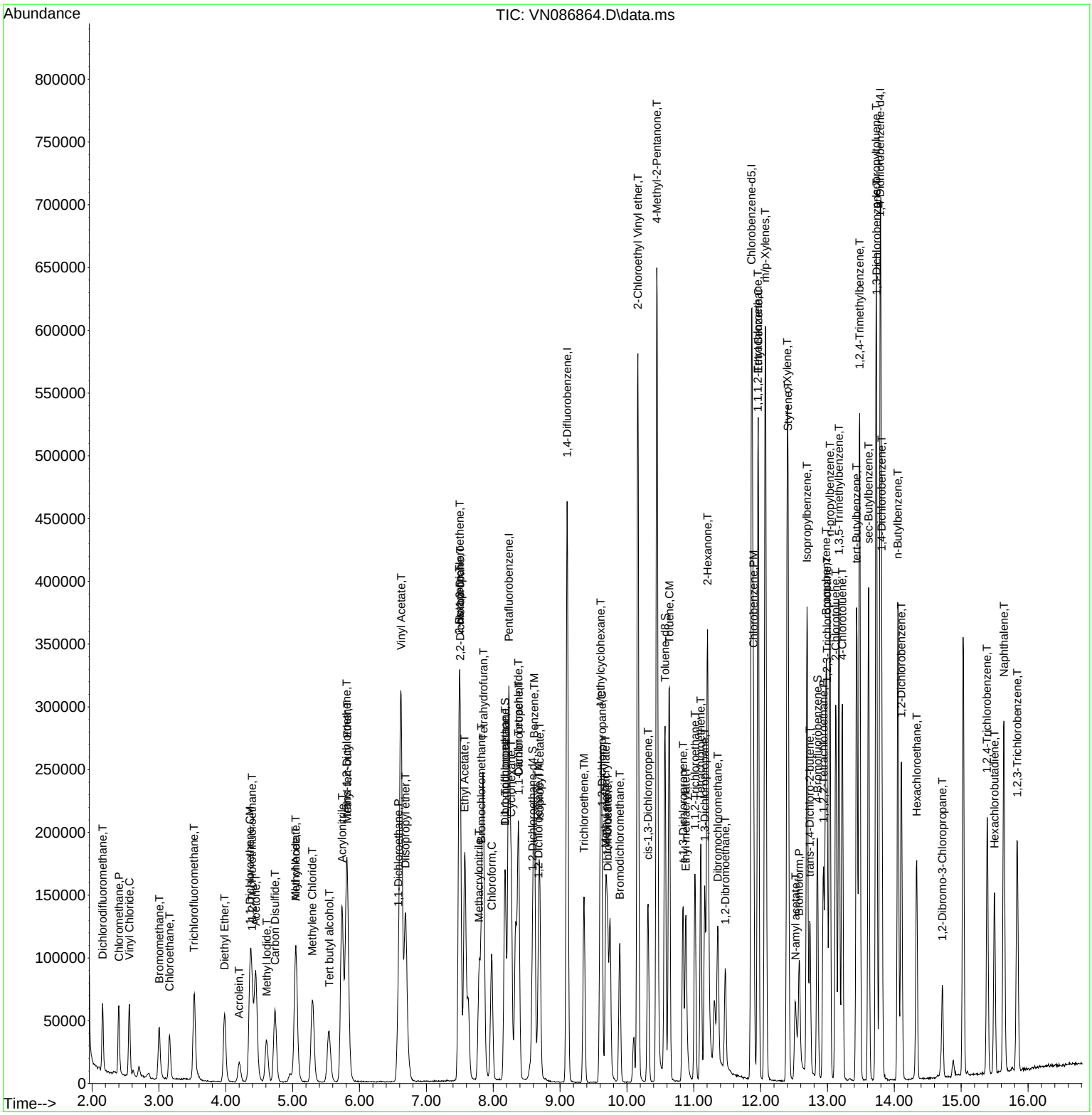
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086864.D
Acq On : 06 Jun 2025 13:40
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 07 01:56:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC020

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086865.D
Acq On : 06 Jun 2025 14:03
Operator : JC\MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICCC050

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 01:57:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.236 | 168 | 207354 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 378587 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 332766 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.794 | 152 | 167532 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.588 | 65 | 103736 | 37.366 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 74.740% | | | |
| 35) Dibromofluoromethane | 8.171 | 113 | 83058 | 37.020 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 74.040%# | | | |
| 50) Toluene-d8 | 10.571 | 98 | 326105 | 36.716 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 73.440%# | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 122965 | 37.264 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 74.520%# | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.154 | 85 | 103958 | 50.283 | ug/l | 100 |
| 3) Chloromethane | 2.395 | 50 | 123866 | 46.397 | ug/l | 100 |
| 4) Vinyl Chloride | 2.554 | 62 | 132783 | 48.215 | ug/l | 100 |
| 5) Bromomethane | 2.995 | 94 | 73974 | 47.999 | ug/l | 100 |
| 6) Chloroethane | 3.154 | 64 | 84505 | 47.504 | ug/l | 100 |
| 7) Trichlorofluoromethane | 3.524 | 101 | 172860 | 48.041 | ug/l | 100 |
| 8) Diethyl Ether | 3.983 | 74 | 75193 | 47.963 | ug/l | 100 |
| 9) 1,1,2-Trichlorotrifluo... | 4.395 | 101 | 107695 | 47.640 | ug/l | 100 |
| 10) Methyl Iodide | 4.606 | 142 | 141678 | 48.346 | ug/l | 100 |
| 11) Tert butyl alcohol | 5.548 | 59 | 182315 | 242.020 | ug/l | 100 |
| 12) 1,1-Dichloroethene | 4.359 | 96 | 110549 | 47.900 | ug/l | 100 |
| 13) Acrolein | 4.201 | 56 | 47026 | 197.217 | ug/l | 100 |
| 14) Allyl chloride | 5.042 | 41 | 179313 | 46.848 | ug/l | 100 |
| 15) Acrylonitrile | 5.742 | 53 | 421941 | 239.638 | ug/l | 100 |
| 16) Acetone | 4.448 | 43 | 333857 | 226.765 | ug/l | 100 |
| 17) Carbon Disulfide | 4.730 | 76 | 295753 | 46.328 | ug/l | 100 |
| 18) Methyl Acetate | 5.042 | 43 | 204538 | 47.673 | ug/l | 100 |
| 19) Methyl tert-butyl Ether | 5.812 | 73 | 400775 | 47.960 | ug/l | 100 |
| 20) Methylene Chloride | 5.295 | 84 | 125498 | 45.531 | ug/l | 100 |
| 21) trans-1,2-Dichloroethene | 5.806 | 96 | 117660 | 45.822 | ug/l | 100 |
| 22) Diisopropyl ether | 6.689 | 45 | 384939 | 47.711 | ug/l | 100 |
| 23) Vinyl Acetate | 6.618 | 43 | 1649023 | 241.910 | ug/l | 100 |
| 24) 1,1-Dichloroethane | 6.583 | 63 | 220477 | 47.485 | ug/l | 100 |
| 25) 2-Butanone | 7.494 | 43 | 571221 | 238.693 | ug/l | 100 |
| 26) 2,2-Dichloropropane | 7.500 | 77 | 187567 | 51.933 | ug/l | 100 |
| 27) cis-1,2-Dichloroethene | 7.500 | 96 | 144911 | 47.189 | ug/l | 100 |
| 28) Bromochloromethane | 7.824 | 49 | 96707 | 42.362 | ug/l | 100 |
| 29) Tetrahydrofuran | 7.853 | 42 | 371357 | 238.210 | ug/l | 100 |
| 30) Chloroform | 7.977 | 83 | 220093 | 47.467 | ug/l | 100 |
| 31) Cyclohexane | 8.271 | 56 | 208105 | 46.217 | ug/l | 100 |
| 32) 1,1,1-Trichloroethane | 8.177 | 97 | 185502 | 47.037 | ug/l | 100 |
| 36) 1,1-Dichloropropene | 8.377 | 75 | 158341 | 47.362 | ug/l | 100 |
| 37) Ethyl Acetate | 7.577 | 43 | 203091 | 47.720 | ug/l | 100 |
| 38) Carbon Tetrachloride | 8.371 | 117 | 154677 | 47.126 | ug/l | 100 |
| 39) Methylcyclohexane | 9.606 | 83 | 215849 | 47.126 | ug/l | 100 |
| 40) Benzene | 8.612 | 78 | 509334 | 46.590 | ug/l | 100 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086865.D
Acq On : 06 Jun 2025 14:03
Operator : JC\MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICCC050

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 01:57:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 41) Methacrylonitrile | 7.789 | 41 | 114727 | 48.000 | ug/l | | 100 |
| 42) 1,2-Dichloroethane | 8.677 | 62 | 155713 | 46.960 | ug/l | | 100 |
| 43) Isopropyl Acetate | 8.694 | 43 | 322741 | 47.248 | ug/l | | 100 |
| 44) Trichloroethene | 9.359 | 130 | 123847 | 47.776 | ug/l | | 100 |
| 45) 1,2-Dichloropropane | 9.630 | 63 | 125673 | 47.251 | ug/l | | 100 |
| 46) Dibromomethane | 9.718 | 93 | 83811 | 47.442 | ug/l | | 100 |
| 47) Bromodichloromethane | 9.894 | 83 | 173200 | 47.651 | ug/l | | 100 |
| 48) Methyl methacrylate | 9.683 | 41 | 149019 | 47.399 | ug/l | | 100 |
| 49) 1,4-Dioxane | 9.700 | 88 | 59060 | 1032.607 | ug/l | # | 100 |
| 51) 4-Methyl-2-Pentanone | 10.447 | 43 | 1017688 | 247.484 | ug/l | | 100 |
| 52) Toluene | 10.635 | 92 | 316219 | 47.331 | ug/l | | 100 |
| 53) t-1,3-Dichloropropene | 10.841 | 75 | 197475 | 48.587 | ug/l | | 100 |
| 54) cis-1,3-Dichloropropene | 10.318 | 75 | 208523 | 47.950 | ug/l | | 100 |
| 55) 1,1,2-Trichloroethane | 11.018 | 97 | 121969 | 47.445 | ug/l | | 100 |
| 56) Ethyl methacrylate | 10.882 | 69 | 210467 | 51.401 | ug/l | | 100 |
| 57) 1,3-Dichloropropane | 11.165 | 76 | 212243 | 47.593 | ug/l | | 100 |
| 58) 2-Chloroethyl Vinyl ether | 10.165 | 63 | 519139 | 212.570 | ug/l | | 100 |
| 59) 2-Hexanone | 11.200 | 43 | 696567 | 262.977 | ug/l | | 100 |
| 60) Dibromochloromethane | 11.359 | 129 | 128715 | 48.056 | ug/l | | 100 |
| 61) 1,2-Dibromoethane | 11.471 | 107 | 124522 | 47.258 | ug/l | | 100 |
| 64) Tetrachloroethene | 11.106 | 164 | 97679 | 46.382 | ug/l | | 100 |
| 65) Chlorobenzene | 11.894 | 112 | 340439 | 46.386 | ug/l | | 100 |
| 66) 1,1,1,2-Tetrachloroethane | 11.965 | 131 | 112333 | 47.615 | ug/l | | 100 |
| 67) Ethyl Benzene | 11.965 | 91 | 597593 | 47.271 | ug/l | | 100 |
| 68) m/p-Xylenes | 12.071 | 106 | 466620 | 96.424 | ug/l | | 100 |
| 69) o-Xylene | 12.400 | 106 | 224299 | 48.395 | ug/l | | 100 |
| 70) Styrene | 12.412 | 104 | 386596 | 48.745 | ug/l | | 100 |
| 71) Bromoform | 12.582 | 173 | 88127 | 50.415 | ug/l | # | 100 |
| 73) Isopropylbenzene | 12.694 | 105 | 573905 | 47.023 | ug/l | | 100 |
| 74) N-amyl acetate | 12.512 | 43 | 212064 | 52.353 | ug/l | | 100 |
| 75) 1,1,2,2-Tetrachloroethane | 12.941 | 83 | 197360 | 47.732 | ug/l | | 100 |
| 76) 1,2,3-Trichloropropane | 12.994 | 75 | 196473m | 49.183 | ug/l | | |
| 77) Bromobenzene | 12.982 | 156 | 132381 | 47.296 | ug/l | | 100 |
| 78) n-propylbenzene | 13.035 | 91 | 705524 | 47.567 | ug/l | | 100 |
| 79) 2-Chlorotoluene | 13.124 | 91 | 419986 | 47.216 | ug/l | | 100 |
| 80) 1,3,5-Trimethylbenzene | 13.171 | 105 | 485499 | 48.181 | ug/l | | 100 |
| 81) trans-1,4-Dichloro-2-b... | 12.735 | 75 | 79732 | 46.089 | ug/l | | 100 |
| 82) 4-Chlorotoluene | 13.224 | 91 | 424066 | 47.117 | ug/l | | 100 |
| 83) tert-Butylbenzene | 13.435 | 119 | 438417 | 47.531 | ug/l | | 100 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 488189 | 48.314 | ug/l | | 100 |
| 85) sec-Butylbenzene | 13.618 | 105 | 641523 | 47.893 | ug/l | | 100 |
| 86) p-Isopropyltoluene | 13.729 | 119 | 533366 | 48.169 | ug/l | | 100 |
| 87) 1,3-Dichlorobenzene | 13.735 | 146 | 260310 | 47.269 | ug/l | | 100 |
| 88) 1,4-Dichlorobenzene | 13.812 | 146 | 263358 | 46.907 | ug/l | | 100 |
| 89) n-Butylbenzene | 14.053 | 91 | 512519 | 47.787 | ug/l | | 100 |
| 90) Hexachloroethane | 14.335 | 117 | 89896 | 47.896 | ug/l | | 100 |
| 91) 1,2-Dichlorobenzene | 14.106 | 146 | 251235 | 47.486 | ug/l | | 100 |
| 92) 1,2-Dibromo-3-Chloropr... | 14.718 | 75 | 45535 | 46.049 | ug/l | | 100 |
| 93) 1,2,4-Trichlorobenzene | 15.388 | 180 | 162374 | 48.061 | ug/l | | 100 |
| 94) Hexachlorobutadiene | 15.500 | 225 | 60866 | 48.356 | ug/l | | 100 |
| 95) Naphthalene | 15.641 | 128 | 603088 | 47.958 | ug/l | | 100 |
| 96) 1,2,3-Trichlorobenzene | 15.835 | 180 | 159113 | 47.402 | ug/l | | 100 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086865.D
Acq On : 06 Jun 2025 14:03
Operator : JC\MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICCC050

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 01:57:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

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

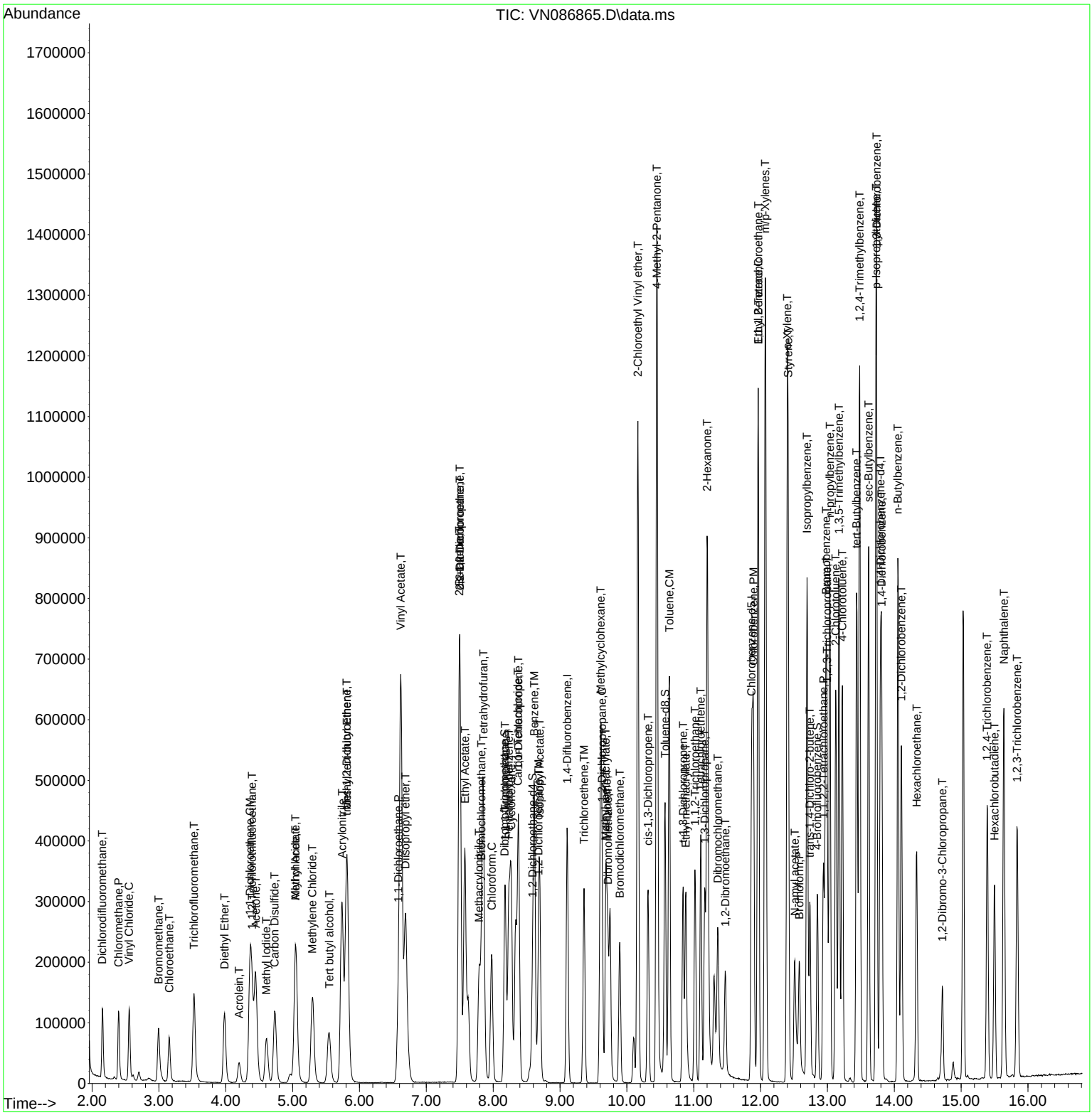
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086865.D
Acq On : 06 Jun 2025 14:03
Operator : JC\MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 07 01:57:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICCC050

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086866.D
Acq On : 06 Jun 2025 14:26
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC100

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 01:58:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.235 | 168 | 181996 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 327782 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.870 | 117 | 290313 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.794 | 152 | 147098 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.588 | 65 | 238957 | 98.065 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 196.120%# | | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 195212 | 100.495 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 200.980%# | | | |
| 50) Toluene-d8 | 10.570 | 98 | 772210 | 100.419 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 200.840%# | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 292385 | 102.339 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 204.680%# | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.153 | 85 | 194799 | 107.350 | ug/l | 100 |
| 3) Chloromethane | 2.395 | 50 | 224558 | 95.833 | ug/l | 98 |
| 4) Vinyl Chloride | 2.553 | 62 | 245135 | 101.414 | ug/l | 98 |
| 5) Bromomethane | 2.977 | 94 | 137967 | 101.996 | ug/l | 99 |
| 6) Chloroethane | 3.147 | 64 | 152150 | 97.447 | ug/l | 97 |
| 7) Trichlorofluoromethane | 3.524 | 101 | 312394 | 98.917 | ug/l | 99 |
| 8) Diethyl Ether | 3.983 | 74 | 139844 | 101.631 | ug/l | 98 |
| 9) 1,1,2-Trichlorotrifluo... | 4.389 | 101 | 198739 | 100.163 | ug/l | 99 |
| 10) Methyl Iodide | 4.612 | 142 | 262771 | 102.162 | ug/l | 99 |
| 11) Tert butyl alcohol | 5.547 | 59 | 327987 | 496.062 | ug/l | 99 |
| 12) 1,1-Dichloroethene | 4.359 | 96 | 200212 | 98.838 | ug/l | 99 |
| 13) Acrolein | 4.200 | 56 | 94171 | 449.961 | ug/l | 98 |
| 14) Allyl chloride | 5.047 | 41 | 329412 | 98.055 | ug/l | 99 |
| 15) Acrylonitrile | 5.735 | 53 | 770470 | 498.552 | ug/l | 99 |
| 16) Acetone | 4.447 | 43 | 608178 | 470.648 | ug/l | 98 |
| 17) Carbon Disulfide | 4.736 | 76 | 544511 | 97.179 | ug/l | 100 |
| 18) Methyl Acetate | 5.047 | 43 | 381808 | 101.390 | ug/l | 100 |
| 19) Methyl tert-butyl Ether | 5.818 | 73 | 735694 | 100.306 | ug/l | 100 |
| 20) Methylene Chloride | 5.294 | 84 | 228800 | 94.575 | ug/l | 97 |
| 21) trans-1,2-Dichloroethene | 5.806 | 96 | 215177 | 95.476 | ug/l | 99 |
| 22) Diisopropyl ether | 6.688 | 45 | 696881 | 98.409 | ug/l | 98 |
| 23) Vinyl Acetate | 6.618 | 43 | 2919350 | 487.936 | ug/l | 100 |
| 24) 1,1-Dichloroethane | 6.588 | 63 | 404207 | 99.186 | ug/l | 99 |
| 25) 2-Butanone | 7.494 | 43 | 1043385 | 496.743 | ug/l | 100 |
| 26) 2,2-Dichloropropane | 7.500 | 77 | 331995 | 104.729 | ug/l | 99 |
| 27) cis-1,2-Dichloroethene | 7.500 | 96 | 265248 | 98.410 | ug/l | 99 |
| 28) Bromochloromethane | 7.824 | 49 | 188050 | 93.851 | ug/l | 99 |
| 29) Tetrahydrofuran | 7.847 | 42 | 677636 | 495.240 | ug/l | 99 |
| 30) Chloroform | 7.977 | 83 | 394927 | 97.040 | ug/l | 99 |
| 31) Cyclohexane | 8.265 | 56 | 374933 | 94.869 | ug/l | 99 |
| 32) 1,1,1-Trichloroethane | 8.177 | 97 | 336819 | 97.306 | ug/l | 99 |
| 36) 1,1-Dichloropropene | 8.382 | 75 | 289907 | 100.156 | ug/l | 99 |
| 37) Ethyl Acetate | 7.571 | 43 | 370652 | 100.591 | ug/l | 99 |
| 38) Carbon Tetrachloride | 8.371 | 117 | 285325 | 100.404 | ug/l | 98 |
| 39) Methylcyclohexane | 9.606 | 83 | 395603 | 99.758 | ug/l | 99 |
| 40) Benzene | 8.612 | 78 | 927083 | 97.946 | ug/l | 100 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086866.D
Acq On : 06 Jun 2025 14:26
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 07 01:58:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC100

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 41) Methacrylonitrile | 7.794 | 41 | 195946 | 94.688 | ug/l | | 95 |
| 42) 1,2-Dichloroethane | 8.676 | 62 | 282015 | 98.232 | ug/l | | 100 |
| 43) Isopropyl Acetate | 8.694 | 43 | 579464 | 97.981 | ug/l | | 99 |
| 44) Trichloroethene | 9.359 | 130 | 222822 | 99.280 | ug/l | | 97 |
| 45) 1,2-Dichloropropane | 9.629 | 63 | 230454 | 100.077 | ug/l | | 98 |
| 46) Dibromomethane | 9.712 | 93 | 155530 | 101.685 | ug/l | | 99 |
| 47) Bromodichloromethane | 9.894 | 83 | 316375 | 100.533 | ug/l | | 100 |
| 48) Methyl methacrylate | 9.682 | 41 | 275710 | 101.288 | ug/l | | 99 |
| 49) 1,4-Dioxane | 9.706 | 88 | 104771 | 2115.744 | ug/l | # | 99 |
| 51) 4-Methyl-2-Pentanone | 10.447 | 43 | 1843274 | 517.729 | ug/l | | 99 |
| 52) Toluene | 10.635 | 92 | 578978 | 100.092 | ug/l | | 100 |
| 53) t-1,3-Dichloropropene | 10.841 | 75 | 359200 | 102.077 | ug/l | | 99 |
| 54) cis-1,3-Dichloropropene | 10.318 | 75 | 383030 | 101.730 | ug/l | | 99 |
| 55) 1,1,2-Trichloroethane | 11.017 | 97 | 219922 | 98.808 | ug/l | | 98 |
| 56) Ethyl methacrylate | 10.882 | 69 | 389802 | 109.955 | ug/l | | 99 |
| 57) 1,3-Dichloropropane | 11.165 | 76 | 382510 | 99.069 | ug/l | | 99 |
| 58) 2-Chloroethyl Vinyl ether | 10.165 | 63 | 1113523 | 526.621 | ug/l | | 100 |
| 59) 2-Hexanone | 11.200 | 43 | 1301539 | 567.535 | ug/l | | 99 |
| 60) Dibromochloromethane | 11.359 | 129 | 237965 | 102.616 | ug/l | | 100 |
| 61) 1,2-Dibromoethane | 11.470 | 107 | 232214 | 101.787 | ug/l | | 98 |
| 64) Tetrachloroethene | 11.106 | 164 | 181568 | 98.824 | ug/l | | 94 |
| 65) Chlorobenzene | 11.894 | 112 | 632563 | 98.793 | ug/l | | 98 |
| 66) 1,1,1,2-Tetrachloroethane | 11.959 | 131 | 206895 | 100.521 | ug/l | | 100 |
| 67) Ethyl Benzene | 11.964 | 91 | 1110803 | 100.717 | ug/l | | 99 |
| 68) m/p-Xylenes | 12.070 | 106 | 854557 | 202.411 | ug/l | | 99 |
| 69) o-Xylene | 12.400 | 106 | 412719 | 102.070 | ug/l | | 100 |
| 70) Styrene | 12.412 | 104 | 713548 | 103.127 | ug/l | | 100 |
| 71) Bromoform | 12.576 | 173 | 165781 | 108.707 | ug/l | # | 99 |
| 73) Isopropylbenzene | 12.694 | 105 | 1065297 | 99.410 | ug/l | | 100 |
| 74) N-amyl acetate | 12.506 | 43 | 403587 | 113.475 | ug/l | | 98 |
| 75) 1,1,2,2-Tetrachloroethane | 12.941 | 83 | 354386 | 97.616 | ug/l | | 99 |
| 76) 1,2,3-Trichloropropane | 12.994 | 75 | 353334m | 100.738 | ug/l | | |
| 77) Bromobenzene | 12.982 | 156 | 246413 | 100.266 | ug/l | | 99 |
| 78) n-propylbenzene | 13.035 | 91 | 1301631 | 99.948 | ug/l | | 100 |
| 79) 2-Chlorotoluene | 13.123 | 91 | 770308 | 98.630 | ug/l | | 99 |
| 80) 1,3,5-Trimethylbenzene | 13.170 | 105 | 901317 | 101.873 | ug/l | | 100 |
| 81) trans-1,4-Dichloro-2-b... | 12.735 | 75 | 160736 | 105.820 | ug/l | | 92 |
| 82) 4-Chlorotoluene | 13.223 | 91 | 783657 | 99.166 | ug/l | | 100 |
| 83) tert-Butylbenzene | 13.435 | 119 | 807528 | 99.710 | ug/l | | 100 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 904794 | 101.983 | ug/l | | 100 |
| 85) sec-Butylbenzene | 13.617 | 105 | 1182155 | 100.513 | ug/l | | 99 |
| 86) p-Isopropyltoluene | 13.729 | 119 | 990273 | 101.857 | ug/l | | 100 |
| 87) 1,3-Dichlorobenzene | 13.735 | 146 | 474162 | 98.063 | ug/l | | 100 |
| 88) 1,4-Dichlorobenzene | 13.811 | 146 | 483003 | 97.978 | ug/l | | 99 |
| 89) n-Butylbenzene | 14.053 | 91 | 937913 | 99.598 | ug/l | | 100 |
| 90) Hexachloroethane | 14.335 | 117 | 169772 | 103.019 | ug/l | | 99 |
| 91) 1,2-Dichlorobenzene | 14.106 | 146 | 458049 | 98.602 | ug/l | | 100 |
| 92) 1,2-Dibromo-3-Chloropr... | 14.717 | 75 | 83243 | 95.877 | ug/l | | 96 |
| 93) 1,2,4-Trichlorobenzene | 15.394 | 180 | 298870 | 100.751 | ug/l | | 99 |
| 94) Hexachlorobutadiene | 15.500 | 225 | 112496 | 101.789 | ug/l | | 98 |
| 95) Naphthalene | 15.641 | 128 | 1129434 | 102.290 | ug/l | | 100 |
| 96) 1,2,3-Trichlorobenzene | 15.841 | 180 | 294127 | 99.796 | ug/l | | 99 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086866.D
Acq On : 06 Jun 2025 14:26
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC100

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 01:58:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

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

ICAL Form

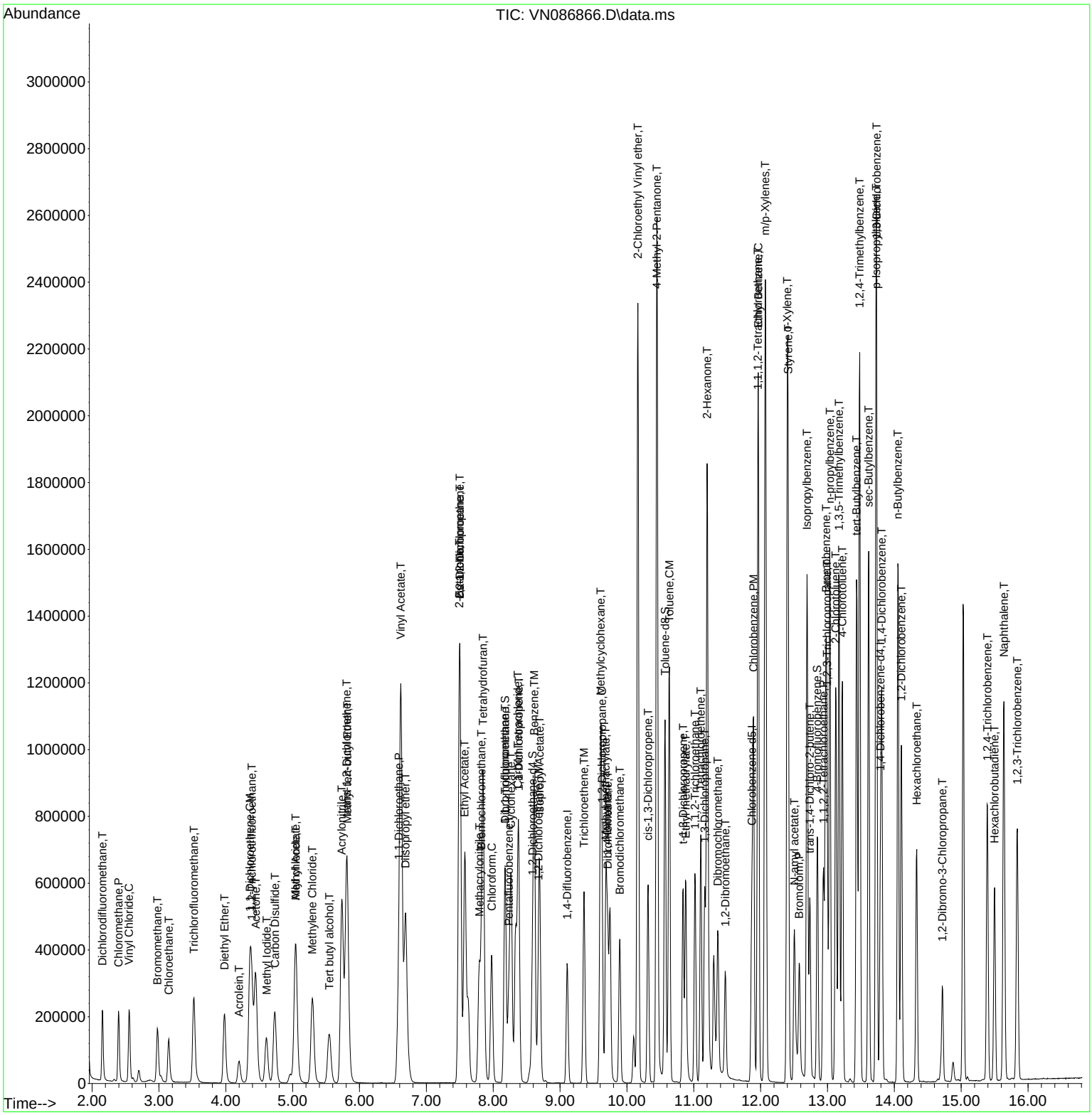
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086866.D
Acq On : 06 Jun 2025 14:26
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 07 01:58:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC100

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086867.D
Acq On : 06 Jun 2025 14:49
Operator : JC\MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC150

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 01:59:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.229 | 168 | 172832 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 307937 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.864 | 117 | 278552 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.794 | 152 | 136630 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.588 | 65 | 389297 | 168.233 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 336.460%# | | | |
| 35) Dibromofluoromethane | 8.176 | 113 | 324474 | 177.803 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 355.600%# | | | |
| 50) Toluene-d8 | 10.570 | 98 | 1272348 | 176.120 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 352.240%# | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 481421 | 179.364 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 358.720%# | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.153 | 85 | 262143 | 152.122 | ug/l | 100 |
| 3) Chloromethane | 2.394 | 50 | 304558 | 136.865 | ug/l | 100 |
| 4) Vinyl Chloride | 2.553 | 62 | 335834 | 146.303 | ug/l | 100 |
| 5) Bromomethane | 2.965 | 94 | 190786 | 148.522 | ug/l | 98 |
| 6) Chloroethane | 3.136 | 64 | 208568 | 140.664 | ug/l | 96 |
| 7) Trichlorofluoromethane | 3.518 | 101 | 427871 | 142.666 | ug/l | 100 |
| 8) Diethyl Ether | 3.983 | 74 | 191555 | 146.593 | ug/l | 99 |
| 9) 1,1,2-Trichlorotrifluo... | 4.388 | 101 | 269810 | 143.192 | ug/l | 100 |
| 10) Methyl Iodide | 4.606 | 142 | 352020 | 144.118 | ug/l | 99 |
| 11) Tert butyl alcohol | 5.553 | 59 | 430866 | 686.213 | ug/l | 100 |
| 12) 1,1-Dichloroethene | 4.353 | 96 | 273388 | 142.118 | ug/l | 98 |
| 13) Acrolein | 4.194 | 56 | 171625 | 863.526 | ug/l | 99 |
| 14) Allyl chloride | 5.035 | 41 | 490852 | 153.858 | ug/l | 92 |
| 15) Acrylonitrile | 5.735 | 53 | 1048372 | 714.344 | ug/l | 99 |
| 16) Acetone | 4.447 | 43 | 819041 | 667.435 | ug/l | 100 |
| 17) Carbon Disulfide | 4.730 | 76 | 742788 | 139.594 | ug/l | 100 |
| 18) Methyl Acetate | 5.041 | 43 | 523996 | 146.527 | ug/l | 100 |
| 19) Methyl tert-butyl Ether | 5.818 | 73 | 998781 | 143.396 | ug/l | 99 |
| 20) Methylene Chloride | 5.300 | 84 | 311597 | 135.628 | ug/l | 99 |
| 21) trans-1,2-Dichloroethene | 5.806 | 96 | 290960 | 135.947 | ug/l | 97 |
| 22) Diisopropyl ether | 6.688 | 45 | 947638 | 140.915 | ug/l | 98 |
| 23) Vinyl Acetate | 6.618 | 43 | 3932872 | 692.189 | ug/l | 99 |
| 24) 1,1-Dichloroethane | 6.582 | 63 | 540881 | 139.761 | ug/l | 99 |
| 25) 2-Butanone | 7.494 | 43 | 1381940 | 692.809 | ug/l | 99 |
| 26) 2,2-Dichloropropane | 7.500 | 77 | 450112 | 149.519 | ug/l | 99 |
| 27) cis-1,2-Dichloroethene | 7.500 | 96 | 363398 | 141.974 | ug/l | 99 |
| 28) Bromochloromethane | 7.824 | 49 | 290594 | 152.718 | ug/l | 98 |
| 29) Tetrahydrofuran | 7.847 | 42 | 898159 | 691.211 | ug/l | 98 |
| 30) Chloroform | 7.976 | 83 | 534038 | 138.179 | ug/l | 97 |
| 31) Cyclohexane | 8.265 | 56 | 505795 | 134.766 | ug/l | 96 |
| 32) 1,1,1-Trichloroethane | 8.176 | 97 | 462854 | 140.807 | ug/l | 99 |
| 36) 1,1-Dichloropropene | 8.376 | 75 | 393166 | 144.584 | ug/l | 100 |
| 37) Ethyl Acetate | 7.571 | 43 | 494000 | 142.706 | ug/l | 99 |
| 38) Carbon Tetrachloride | 8.371 | 117 | 388595 | 145.557 | ug/l | 98 |
| 39) Methylcyclohexane | 9.606 | 83 | 544437 | 146.136 | ug/l | 97 |
| 40) Benzene | 8.612 | 78 | 1266139 | 142.388 | ug/l | 100 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086867.D
Acq On : 06 Jun 2025 14:49
Operator : JC\MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 07 01:59:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC150

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 41) Methacrylonitrile | 7.788 | 41 | 276400 | 142.174 ug/l | 98 |
| 42) 1,2-Dichloroethane | 8.676 | 62 | 381516 | 141.455 ug/l | 100 |
| 43) Isopropyl Acetate | 8.694 | 43 | 780791 | 140.531 ug/l | 99 |
| 44) Trichloroethene | 9.359 | 130 | 302548 | 143.490 ug/l | 96 |
| 45) 1,2-Dichloropropane | 9.623 | 63 | 309047 | 142.856 ug/l | 100 |
| 46) Dibromomethane | 9.712 | 93 | 208461 | 145.074 ug/l | 100 |
| 47) Bromodichloromethane | 9.894 | 83 | 430011 | 145.449 ug/l | 100 |
| 48) Methyl methacrylate | 9.688 | 41 | 366967 | 143.502 ug/l | 99 |
| 49) 1,4-Dioxane | 9.712 | 88 | 138035 | 2967.116 ug/l # | 100 |
| 51) 4-Methyl-2-Pentanone | 10.447 | 43 | 2438311 | 728.995 ug/l | 98 |
| 52) Toluene | 10.635 | 92 | 793270 | 145.976 ug/l | 100 |
| 53) t-1,3-Dichloropropene | 10.841 | 75 | 489809 | 148.163 ug/l | 97 |
| 54) cis-1,3-Dichloropropene | 10.318 | 75 | 518092 | 146.469 ug/l | 99 |
| 55) 1,1,2-Trichloroethane | 11.017 | 97 | 298151 | 142.588 ug/l | 99 |
| 56) Ethyl methacrylate | 10.876 | 69 | 533912 | 160.311 ug/l | 98 |
| 57) 1,3-Dichloropropane | 11.165 | 76 | 516391 | 142.363 ug/l | 98 |
| 58) 2-Chloroethyl Vinyl ether | 10.165 | 63 | 1869543 | 941.147 ug/l | 99 |
| 59) 2-Hexanone | 11.200 | 43 | 1735777 | 805.662 ug/l | 99 |
| 60) Dibromochloromethane | 11.365 | 129 | 322064 | 147.832 ug/l | 98 |
| 61) 1,2-Dibromoethane | 11.470 | 107 | 314606 | 146.790 ug/l | 99 |
| 64) Tetrachloroethene | 11.106 | 164 | 245122 | 139.048 ug/l | 97 |
| 65) Chlorobenzene | 11.894 | 112 | 860345 | 140.041 ug/l | 98 |
| 66) 1,1,1,2-Tetrachloroethane | 11.959 | 131 | 282739 | 143.171 ug/l | 99 |
| 67) Ethyl Benzene | 11.964 | 91 | 1517883 | 143.438 ug/l | 98 |
| 68) m/p-Xylenes | 12.070 | 106 | 1175378 | 290.155 ug/l | 99 |
| 69) o-Xylene | 12.400 | 106 | 566301 | 145.966 ug/l | 100 |
| 70) Styrene | 12.411 | 104 | 972318 | 146.459 ug/l | 100 |
| 71) Bromoform | 12.582 | 173 | 223200 | 152.538 ug/l # | 99 |
| 73) Isopropylbenzene | 12.694 | 105 | 1453651 | 146.042 ug/l | 100 |
| 74) N-amyl acetate | 12.500 | 43 | 543747 | 164.596 ug/l | 96 |
| 75) 1,1,2,2-Tetrachloroethane | 12.941 | 83 | 474426 | 140.693 ug/l | 100 |
| 76) 1,2,3-Trichloropropane | 12.994 | 75 | 468041m | 143.665 ug/l | |
| 77) Bromobenzene | 12.982 | 156 | 335734 | 147.077 ug/l | 98 |
| 78) n-propylbenzene | 13.035 | 91 | 1769694 | 146.301 ug/l | 99 |
| 79) 2-Chlorotoluene | 13.123 | 91 | 1046916 | 144.317 ug/l | 99 |
| 80) 1,3,5-Trimethylbenzene | 13.170 | 105 | 1210325 | 147.279 ug/l | 100 |
| 81) trans-1,4-Dichloro-2-b... | 12.735 | 75 | 216253 | 153.277 ug/l | 95 |
| 82) 4-Chlorotoluene | 13.223 | 91 | 1063581 | 144.900 ug/l | 100 |
| 83) tert-Butylbenzene | 13.435 | 119 | 1093406 | 145.352 ug/l | 100 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 1216529 | 147.626 ug/l | 100 |
| 85) sec-Butylbenzene | 13.617 | 105 | 1582762 | 144.885 ug/l | 99 |
| 86) p-Isopropyltoluene | 13.729 | 119 | 1322780 | 146.482 ug/l | 99 |
| 87) 1,3-Dichlorobenzene | 13.735 | 146 | 641966 | 142.939 ug/l | 100 |
| 88) 1,4-Dichlorobenzene | 13.811 | 146 | 646188 | 141.124 ug/l | 99 |
| 89) n-Butylbenzene | 14.053 | 91 | 1251819 | 143.117 ug/l | 100 |
| 90) Hexachloroethane | 14.335 | 117 | 230195 | 150.387 ug/l | 98 |
| 91) 1,2-Dichlorobenzene | 14.105 | 146 | 613177 | 142.108 ug/l | 100 |
| 92) 1,2-Dibromo-3-Chloropr... | 14.717 | 75 | 110677 | 137.242 ug/l | 96 |
| 93) 1,2,4-Trichlorobenzene | 15.394 | 180 | 407621 | 147.940 ug/l | 99 |
| 94) Hexachlorobutadiene | 15.500 | 225 | 151172 | 147.264 ug/l | 98 |
| 95) Naphthalene | 15.641 | 128 | 1545981 | 150.743 ug/l | 100 |
| 96) 1,2,3-Trichlorobenzene | 15.841 | 180 | 404450 | 147.743 ug/l | 99 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086867.D
Acq On : 06 Jun 2025 14:49
Operator : JC\MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC150

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 01:59:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

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

ICAL Form

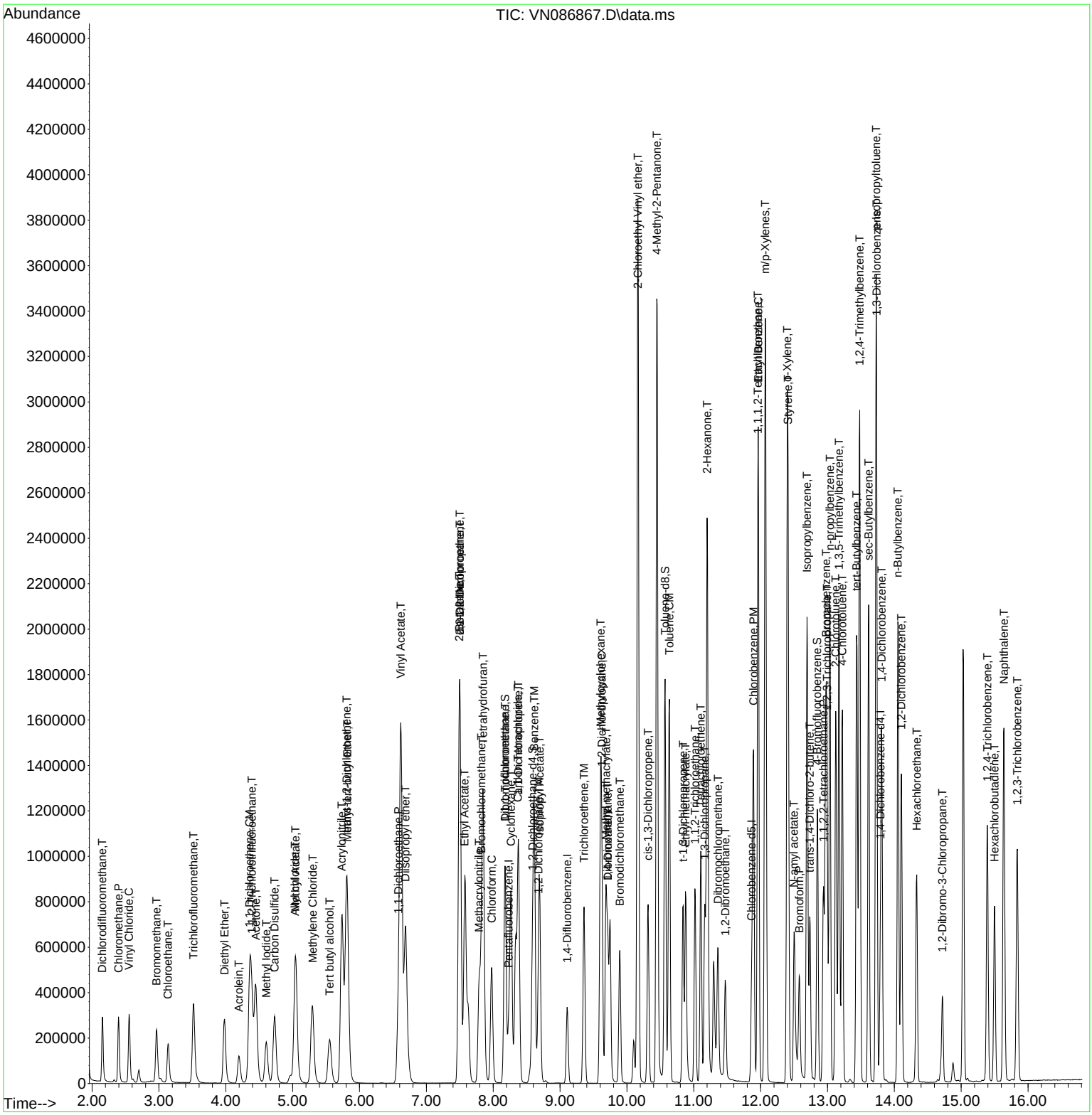
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086867.D
Acq On : 06 Jun 2025 14:49
Operator : JC\MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 07 01:59:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 01:51:02 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDICC150

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086869.D
Acq On : 06 Jun 2025 15:54
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 9 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
ICVVN060625

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 02:16:19 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.230 | 168 | 218122 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 394140 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 348935 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.794 | 152 | 172710 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.588 | 65 | 152255 | 52.135 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 104.260% | | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 127102 | 54.416 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 108.840% | | | |
| 50) Toluene-d8 | 10.571 | 98 | 491265 | 53.129 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 106.260% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 185792 | 54.081 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 108.160% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.154 | 85 | 120237 | 55.286 | ug/l | 99 |
| 3) Chloromethane | 2.401 | 50 | 139027 | 49.505 | ug/l | 99 |
| 4) Vinyl Chloride | 2.554 | 62 | 151951 | 52.451 | ug/l | 99 |
| 5) Bromomethane | 2.989 | 94 | 89638 | 55.292 | ug/l | 95 |
| 6) Chloroethane | 3.154 | 64 | 95654 | 51.117 | ug/l | 96 |
| 7) Trichlorofluoromethane | 3.524 | 101 | 196138 | 51.819 | ug/l | 97 |
| 8) Diethyl Ether | 3.983 | 74 | 87405 | 53.001 | ug/l | 100 |
| 9) 1,1,2-Trichlorotrifluo... | 4.395 | 101 | 127498 | 53.615 | ug/l | 99 |
| 10) Methyl Iodide | 4.612 | 142 | 164080 | 53.227 | ug/l | 97 |
| 11) Tert butyl alcohol | 5.542 | 59 | 207768 | 262.193 | ug/l | 99 |
| 12) 1,1-Dichloroethene | 4.359 | 96 | 125461 | 51.678 | ug/l | 99 |
| 13) Acrolein | 4.195 | 56 | 60336 | 240.545 | ug/l | 98 |
| 14) Allyl chloride | 5.042 | 41 | 203344 | 50.504 | ug/l | 98 |
| 15) Acrylonitrile | 5.736 | 53 | 479502 | 258.885 | ug/l | 100 |
| 16) Acetone | 4.448 | 43 | 382146 | 246.750 | ug/l | 98 |
| 17) Carbon Disulfide | 4.736 | 76 | 339466 | 50.550 | ug/l | 100 |
| 18) Methyl Acetate | 5.042 | 43 | 234290 | 51.912 | ug/l | 100 |
| 19) Methyl tert-butyl Ether | 5.818 | 73 | 454641 | 51.720 | ug/l | 100 |
| 20) Methylene Chloride | 5.295 | 84 | 143862 | 49.617 | ug/l | 97 |
| 21) trans-1,2-Dichloroethene | 5.806 | 96 | 133535 | 49.437 | ug/l | 99 |
| 22) Diisopropyl ether | 6.689 | 45 | 440080 | 51.853 | ug/l | 99 |
| 23) Vinyl Acetate | 6.618 | 43 | 1828919 | 255.055 | ug/l | 99 |
| 24) 1,1-Dichloroethane | 6.589 | 63 | 251473 | 51.487 | ug/l | 98 |
| 25) 2-Butanone | 7.494 | 43 | 644194 | 255.897 | ug/l | 99 |
| 26) 2,2-Dichloropropane | 7.500 | 77 | 216678 | 57.031 | ug/l | 99 |
| 27) cis-1,2-Dichloroethene | 7.500 | 96 | 164985 | 51.073 | ug/l | 99 |
| 28) Bromochloromethane | 7.824 | 49 | 108810 | 45.310 | ug/l | 99 |
| 29) Tetrahydrofuran | 7.847 | 42 | 420891 | 256.656 | ug/l | 100 |
| 30) Chloroform | 7.977 | 83 | 248429 | 50.933 | ug/l | 97 |
| 31) Cyclohexane | 8.265 | 56 | 237836 | 50.212 | ug/l | 97 |
| 32) 1,1,1-Trichloroethane | 8.177 | 97 | 209927 | 50.603 | ug/l | 97 |
| 36) 1,1-Dichloropropene | 8.377 | 75 | 181414 | 52.123 | ug/l | 99 |
| 37) Ethyl Acetate | 7.571 | 43 | 222090 | 50.125 | ug/l | 99 |
| 38) Carbon Tetrachloride | 8.371 | 117 | 179281 | 52.466 | ug/l | 98 |
| 39) Methylcyclohexane | 9.606 | 83 | 251231 | 52.686 | ug/l | 98 |
| 40) Benzene | 8.612 | 78 | 579667 | 50.931 | ug/l | 99 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086869.D
Acq On : 06 Jun 2025 15:54
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 9 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
ICVVN060625

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 02:16:19 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 41) Methacrylonitrile | 7.789 | 41 | 130903 | 52.607 | ug/l | | 100 |
| 42) 1,2-Dichloroethane | 8.677 | 62 | 177746 | 51.489 | ug/l | | 100 |
| 43) Isopropyl Acetate | 8.694 | 43 | 359378 | 50.536 | ug/l | | 100 |
| 44) Trichloroethene | 9.359 | 130 | 139763 | 51.788 | ug/l | | 100 |
| 45) 1,2-Dichloropropane | 9.624 | 63 | 142463 | 51.450 | ug/l | | 99 |
| 46) Dibromomethane | 9.712 | 93 | 97199 | 52.849 | ug/l | | 98 |
| 47) Bromodichloromethane | 9.894 | 83 | 196104 | 51.824 | ug/l | | 100 |
| 48) Methyl methacrylate | 9.688 | 41 | 168001 | 51.328 | ug/l | | 98 |
| 49) 1,4-Dioxane | 9.706 | 88 | 66102 | 1110.123 | ug/l | # | 99 |
| 51) 4-Methyl-2-Pentanone | 10.447 | 43 | 1146622 | 267.835 | ug/l | | 99 |
| 52) Toluene | 10.635 | 92 | 361963 | 52.040 | ug/l | | 99 |
| 53) t-1,3-Dichloropropene | 10.835 | 75 | 224839 | 53.137 | ug/l | | 99 |
| 54) cis-1,3-Dichloropropene | 10.318 | 75 | 237774 | 52.519 | ug/l | | 99 |
| 55) 1,1,2-Trichloroethane | 11.018 | 97 | 137998 | 51.562 | ug/l | | 99 |
| 56) Ethyl methacrylate | 10.882 | 69 | 241649 | 56.688 | ug/l | | 98 |
| 57) 1,3-Dichloropropane | 11.165 | 76 | 238572 | 51.386 | ug/l | | 99 |
| 58) 2-Chloroethyl Vinyl ether | 10.165 | 63 | 625479 | 246.006 | ug/l | | 100 |
| 59) 2-Hexanone | 11.200 | 43 | 781717 | 283.478 | ug/l | | 100 |
| 60) Dibromochloromethane | 11.359 | 129 | 146749 | 52.627 | ug/l | | 99 |
| 61) 1,2-Dibromoethane | 11.471 | 107 | 142338 | 51.887 | ug/l | | 99 |
| 64) Tetrachloroethene | 11.106 | 164 | 111409 | 50.450 | ug/l | | 98 |
| 65) Chlorobenzene | 11.894 | 112 | 391661 | 50.892 | ug/l | | 98 |
| 66) 1,1,1,2-Tetrachloroethane | 11.959 | 131 | 129045 | 52.164 | ug/l | | 99 |
| 67) Ethyl Benzene | 11.965 | 91 | 683879 | 51.590 | ug/l | | 98 |
| 68) m/p-Xylenes | 12.071 | 106 | 527293 | 103.912 | ug/l | | 98 |
| 69) o-Xylene | 12.400 | 106 | 254600 | 52.387 | ug/l | | 100 |
| 70) Styrene | 12.412 | 104 | 438751 | 52.758 | ug/l | | 99 |
| 71) Bromoform | 12.582 | 173 | 100357 | 54.751 | ug/l | # | 99 |
| 73) Isopropylbenzene | 12.694 | 105 | 652045 | 51.823 | ug/l | | 100 |
| 74) N-amyl acetate | 12.506 | 43 | 238355 | 54.212 | ug/l | | 97 |
| 75) 1,1,2,2-Tetrachloroethane | 12.941 | 83 | 220643 | 51.763 | ug/l | | 100 |
| 76) 1,2,3-Trichloropropane | 12.994 | 75 | 220957m | 53.821 | ug/l | | |
| 77) Bromobenzene | 12.982 | 156 | 150950 | 52.313 | ug/l | | 100 |
| 78) n-propylbenzene | 13.035 | 91 | 801180 | 52.397 | ug/l | | 100 |
| 79) 2-Chlorotoluene | 13.123 | 91 | 473629 | 51.650 | ug/l | | 99 |
| 80) 1,3,5-Trimethylbenzene | 13.171 | 105 | 548347 | 52.787 | ug/l | | 99 |
| 81) trans-1,4-Dichloro-2-b... | 12.735 | 75 | 99341 | 55.702 | ug/l | | 97 |
| 82) 4-Chlorotoluene | 13.223 | 91 | 481403 | 51.884 | ug/l | | 99 |
| 83) tert-Butylbenzene | 13.441 | 119 | 499519 | 52.532 | ug/l | | 99 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 552333 | 53.024 | ug/l | | 100 |
| 85) sec-Butylbenzene | 13.618 | 105 | 723986 | 52.428 | ug/l | | 100 |
| 86) p-Isopropyltoluene | 13.729 | 119 | 606979 | 53.174 | ug/l | | 99 |
| 87) 1,3-Dichlorobenzene | 13.735 | 146 | 290810 | 51.224 | ug/l | | 100 |
| 88) 1,4-Dichlorobenzene | 13.812 | 146 | 298412 | 51.557 | ug/l | | 100 |
| 89) n-Butylbenzene | 14.059 | 91 | 579636 | 52.424 | ug/l | | 100 |
| 90) Hexachloroethane | 14.335 | 117 | 102254 | 52.847 | ug/l | | 100 |
| 91) 1,2-Dichlorobenzene | 14.106 | 146 | 280025 | 51.340 | ug/l | | 100 |
| 92) 1,2-Dibromo-3-Chloropr... | 14.723 | 75 | 50115 | 49.161 | ug/l | | 98 |
| 93) 1,2,4-Trichlorobenzene | 15.394 | 180 | 181064 | 51.986 | ug/l | | 99 |
| 94) Hexachlorobutadiene | 15.500 | 225 | 68570 | 52.843 | ug/l | | 99 |
| 95) Naphthalene | 15.641 | 128 | 674187 | 52.005 | ug/l | | 100 |
| 96) 1,2,3-Trichlorobenzene | 15.841 | 180 | 174888 | 50.539 | ug/l | | 99 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086869.D
Acq On : 06 Jun 2025 15:54
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 9 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
ICVVN060625

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025

Quant Time: Jun 07 02:16:19 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

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

ICAL Form

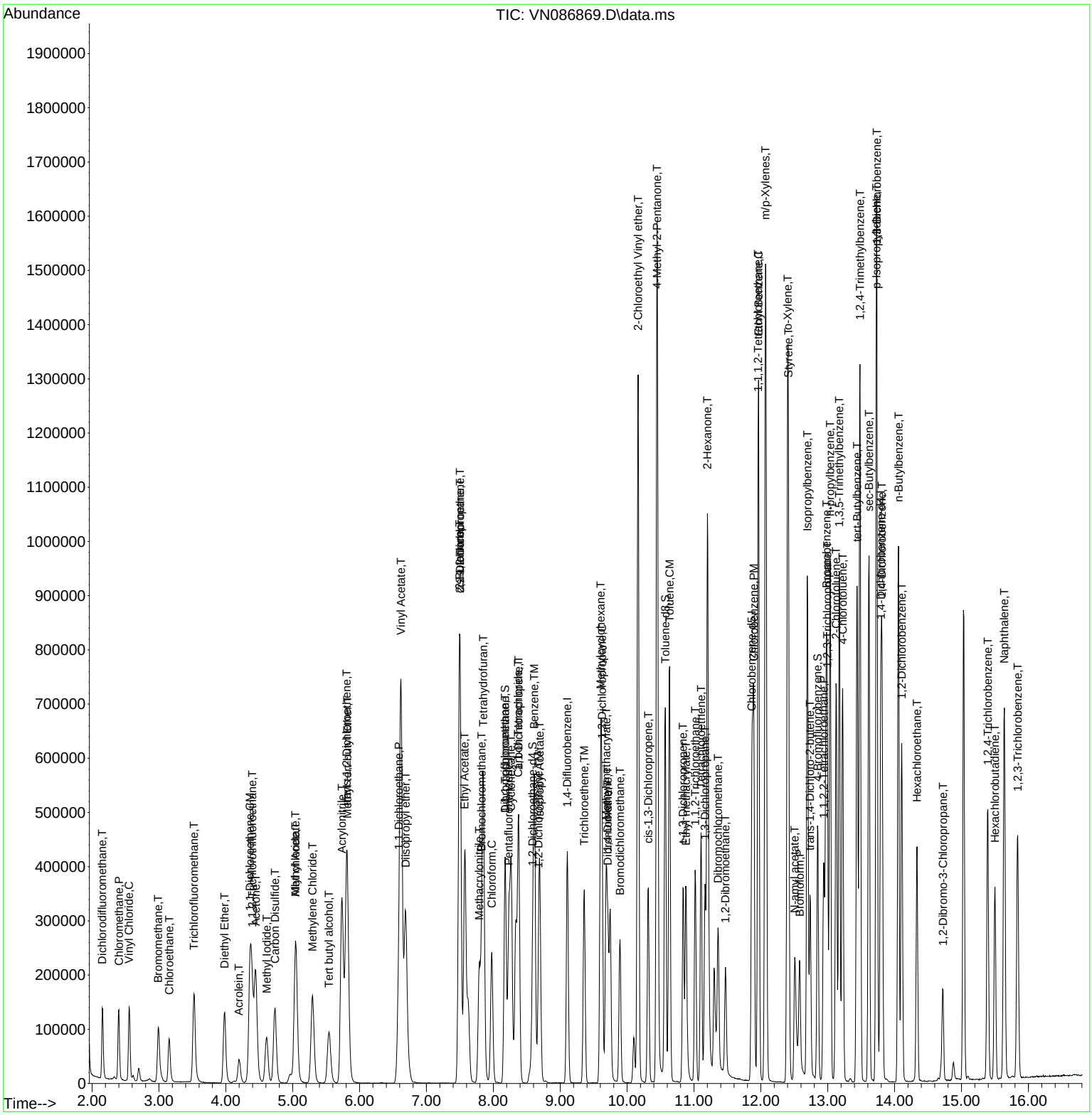
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086869.D
Acq On : 06 Jun 2025 15:54
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 07 02:16:19 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
ICVVN060625

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/09/2025
Supervised By :Mahesh Dadoda 06/09/2025



# Evaluate Continuing Calibration Report

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086869.D
Acq On : 06 Jun 2025 15:54
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 9 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
ICVVN060625

Quant Time: Jun 07 02:16:19 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 105 | 0.00 |
| 2 | T | Dichlorodifluoromethane | 0.499 | 0.551 | -10.4 | 116 | 0.00 |
| 3 | P | Chloromethane | 0.644 | 0.637 | 1.1 | 112 | 0.00 |
| 4 | C | Vinyl Chloride | 0.664 | 0.697 | -5.0# | 114 | 0.00 |
| 5 | T | Bromomethane | 0.372 | 0.411 | -10.5 | 121 | 0.00 |
| 6 | T | Chloroethane | 0.429 | 0.439 | -2.3 | 113 | 0.00 |
| 7 | T | Trichlorofluoromethane | 0.868 | 0.899 | -3.6 | 113 | 0.00 |
| 8 | T | Diethyl Ether | 0.378 | 0.401 | -6.1 | 116 | 0.00 |
| 9 | T | 1,1,2-Trichlorotrifluoroeth | 0.545 | 0.585 | -7.3 | 118 | 0.00 |
| 10 | T | Methyl Iodide | 0.707 | 0.752 | -6.4 | 116 | 0.00 |
| 11 | T | Tert butyl alcohol | 0.182 | 0.191 | -4.9 | 114 | 0.00 |
| 12 | CM | 1,1-Dichloroethene | 0.557 | 0.575 | -3.2# | 113 | 0.00 |
| 13 | T | Acrolein | 0.057 | 0.055 | 3.5 | 128 | 0.00 |
| 14 | T | Allyl chloride | 0.923 | 0.932 | -1.0 | 113 | 0.00 |
| 15 | T | Acrylonitrile | 0.425 | 0.440 | -3.5 | 114 | 0.00 |
| 16 | T | Acetone | 0.355 | 0.350 | 1.4 | 114 | 0.00 |
| 17 | T | Carbon Disulfide | 1.539 | 1.556 | -1.1 | 115 | 0.00 |
| 18 | T | Methyl Acetate | 1.035 | 1.074 | -3.8 | 115 | 0.00 |
| 19 | T | Methyl tert-butyl Ether | 2.015 | 2.084 | -3.4 | 113 | 0.00 |
| 20 | T | Methylene Chloride | 0.665 | 0.660 | 0.8 | 115 | 0.00 |
| 21 | T | trans-1,2-Dichloroethene | 0.619 | 0.612 | 1.1 | 113 | 0.00 |
| 22 | T | Diisopropyl ether | 1.945 | 2.018 | -3.8 | 114 | 0.00 |
| 23 | T | Vinyl Acetate | 1.644 | 1.677 | -2.0 | 111 | 0.00 |
| 24 | P | 1,1-Dichloroethane | 1.120 | 1.153 | -2.9 | 114 | 0.00 |
| 25 | T | 2-Butanone | 0.577 | 0.591 | -2.4 | 113 | 0.00 |
| 26 | T | 2,2-Dichloropropane | 0.871 | 0.993 | -14.0 | 116 | 0.00 |
| 27 | T | cis-1,2-Dichloroethene | 0.740 | 0.756 | -2.2 | 114 | 0.00 |
| 28 | T | Bromochloromethane | 0.550 | 0.499 | 9.3 | 113 | 0.00 |
| 29 | T | Tetrahydrofuran | 0.376 | 0.386 | -2.7 | 113 | 0.00 |
| 30 | C | Chloroform | 1.118 | 1.139 | -1.9# | 113 | 0.00 |
| 31 | T | Cyclohexane | 1.086 | 1.090 | -0.4 | 114 | 0.00 |
| 32 | T | 1,1,1-Trichloroethane | 0.951 | 0.962 | -1.2 | 113 | 0.00 |
| 33 | S | 1,2-Dichloroethane-d4 | 0.669 | 0.698 | -4.3 | 147 | 0.00 |
| 34 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 104 | 0.00 |
| 35 | S | Dibromofluoromethane | 0.296 | 0.322 | -8.8 | 153# | 0.00 |
| 36 | T | 1,1-Dichloropropene | 0.442 | 0.460 | -4.1 | 115 | 0.00 |
| 37 | T | Ethyl Acetate | 0.562 | 0.563 | -0.2 | 109 | 0.00 |
| 38 | T | Carbon Tetrachloride | 0.433 | 0.455 | -5.1 | 116 | 0.00 |
| 39 | T | Methylcyclohexane | 0.605 | 0.637 | -5.3 | 116 | 0.00 |
| 40 | TM | Benzene | 1.444 | 1.471 | -1.9 | 114 | 0.00 |
| 41 | T | Methacrylonitrile | 0.316 | 0.332 | -5.1 | 114 | 0.00 |
| 42 | TM | 1,2-Dichloroethane | 0.438 | 0.451 | -3.0 | 114 | 0.00 |
| 43 | T | Isopropyl Acetate | 0.902 | 0.912 | -1.1 | 111 | 0.00 |
| 44 | TM | Trichloroethene | 0.342 | 0.355 | -3.8 | 113 | 0.00 |
| 45 | C | 1,2-Dichloropropane | 0.351 | 0.361 | -2.8# | 113 | 0.00 |
| 46 | T | Dibromomethane | 0.233 | 0.247 | -6.0 | 116 | 0.00 |
| 47 | T | Bromodichloromethane | 0.480 | 0.498 | -3.8 | 113 | 0.00 |
| 48 | T | Methyl methacrylate | 0.415 | 0.426 | -2.7 | 113 | 0.00 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086869.D
Acq On : 06 Jun 2025 15:54
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 9 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
ICVVN060625

Quant Time: Jun 07 02:16:19 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 49 | T | 1,4-Dioxane | 0.008 | 0.008 | 0.0 | 112 | 0.00 |
| 50 | S | Toluene-d8 | 1.173 | 1.246 | -6.2 | 151# | 0.00 |
| 51 | T | 4-Methyl-2-Pentanone | 0.543 | 0.582 | -7.2 | 113 | 0.00 |
| 52 | CM | Toluene | 0.882 | 0.918 | -4.1# | 114 | 0.00 |
| 53 | T | t-1,3-Dichloropropene | 0.537 | 0.570 | -6.1 | 114 | 0.00 |
| 54 | T | cis-1,3-Dichloropropene | 0.574 | 0.603 | -5.1 | 114 | 0.00 |
| 55 | T | 1,1,2-Trichloroethane | 0.340 | 0.350 | -2.9 | 113 | 0.00 |
| 56 | T | Ethyl methacrylate | 0.541 | 0.613 | -13.3 | 115 | 0.00 |
| 57 | T | 1,3-Dichloropropane | 0.589 | 0.605 | -2.7 | 112 | 0.00 |
| 58 | T | 2-Chloroethyl Vinyl ether | 0.323 | 0.317 | 1.9 | 120 | 0.00 |
| 59 | T | 2-Hexanone | 0.350 | 0.397 | -13.4 | 112 | 0.00 |
| 60 | T | Dibromochloromethane | 0.354 | 0.372 | -5.1 | 114 | 0.00 |
| 61 | T | 1,2-Dibromoethane | 0.348 | 0.361 | -3.7 | 114 | 0.00 |
| 62 | S | 4-Bromofluorobenzene | 0.436 | 0.471 | -8.0 | 151# | 0.00 |
| 63 | I | Chlorobenzene-d5 | 1.000 | 1.000 | 0.0 | 105 | 0.00 |
| 64 | T | Tetrachloroethene | 0.316 | 0.319 | -0.9 | 114 | 0.00 |
| 65 | PM | Chlorobenzene | 1.103 | 1.122 | -1.7 | 115 | 0.00 |
| 66 | T | 1,1,1,2-Tetrachloroethane | 0.354 | 0.370 | -4.5 | 115 | 0.00 |
| 67 | C | Ethyl Benzene | 1.899 | 1.960 | -3.2# | 114 | 0.00 |
| 68 | T | m/p-Xylenes | 0.727 | 0.756 | -4.0 | 113 | 0.00 |
| 69 | T | o-Xylene | 0.696 | 0.730 | -4.9 | 114 | 0.00 |
| 70 | T | Styrene | 1.192 | 1.257 | -5.5 | 113 | 0.00 |
| 71 | P | Bromoform | 0.263 | 0.288 | -9.5 | 114 | 0.00 |
| 72 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 103 | 0.00 |
| 73 | T | Isopropylbenzene | 3.643 | 3.775 | -3.6 | 114 | 0.00 |
| 74 | T | N-amyl acetate | 1.273 | 1.380 | -8.4 | 112 | 0.00 |
| 75 | P | 1,1,2,2-Tetrachloroethane | 1.234 | 1.278 | -3.6 | 112 | 0.00 |
| 76 | T | 1,2,3-Trichloropropane | 1.189 | 1.279 | -7.6 | 112 | 0.00 |
| 77 | T | Bromobenzene | 0.835 | 0.874 | -4.7 | 114 | 0.00 |
| 78 | T | n-propylbenzene | 4.427 | 4.639 | -4.8 | 114 | 0.00 |
| 79 | T | 2-Chlorotoluene | 2.655 | 2.742 | -3.3 | 113 | 0.00 |
| 80 | T | 1,3,5-Trimethylbenzene | 3.007 | 3.175 | -5.6 | 113 | 0.00 |
| 81 | T | trans-1,4-Dichloro-2-butene | 0.516 | 0.575 | -11.4 | 125 | 0.00 |
| 82 | T | 4-Chlorotoluene | 2.686 | 2.787 | -3.8 | 114 | 0.00 |
| 83 | T | tert-Butylbenzene | 2.753 | 2.892 | -5.0 | 114 | 0.00 |
| 84 | T | 1,2,4-Trimethylbenzene | 3.016 | 3.198 | -6.0 | 113 | 0.00 |
| 85 | T | sec-Butylbenzene | 3.998 | 4.192 | -4.9 | 113 | 0.00 |
| 86 | T | p-Isopropyltoluene | 3.305 | 3.514 | -6.3 | 114 | 0.00 |
| 87 | T | 1,3-Dichlorobenzene | 1.644 | 1.684 | -2.4 | 112 | 0.00 |
| 88 | T | 1,4-Dichlorobenzene | 1.676 | 1.728 | -3.1 | 113 | 0.00 |
| 89 | T | n-Butylbenzene | 3.201 | 3.356 | -4.8 | 113 | 0.00 |
| 90 | T | Hexachloroethane | 0.560 | 0.592 | -5.7 | 114 | 0.00 |
| 91 | T | 1,2-Dichlorobenzene | 1.579 | 1.621 | -2.7 | 111 | 0.00 |
| 92 | T | 1,2-Dibromo-3-Chloropropane | 0.295 | 0.290 | 1.7 | 110 | 0.00 |
| 93 | T | 1,2,4-Trichlorobenzene | 1.008 | 1.048 | -4.0 | 112 | 0.00 |
| 94 | T | Hexachlorobutadiene | 0.376 | 0.397 | -5.6 | 113 | 0.00 |
| 95 | T | Naphthalene | 3.753 | 3.904 | -4.0 | 112 | 0.00 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086869.D
Acq On : 06 Jun 2025 15:54
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 9 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
ICVVN060625

Quant Time: Jun 07 02:16:19 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 96 T | 1,2,3-Trichlorobenzene | 1.002 | 1.013 | -1.1 | 110 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 6

# Evaluate Continuing Calibration Report

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086869.D
Acq On : 06 Jun 2025 15:54
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 9 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
ICVVN060625

Quant Time: Jun 07 02:16:19 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 50.000 | 50.000 | 0.0 | 105 | 0.00 |
| 2 | T | Dichlorodifluoromethane | 50.000 | 55.286 | -10.6 | 116 | 0.00 |
| 3 | P | Chloromethane | 50.000 | 49.505 | 1.0 | 112 | 0.00 |
| 4 | C | Vinyl Chloride | 50.000 | 52.451 | -4.9# | 114 | 0.00 |
| 5 | T | Bromomethane | 50.000 | 55.292 | -10.6 | 121 | 0.00 |
| 6 | T | Chloroethane | 50.000 | 51.117 | -2.2 | 113 | 0.00 |
| 7 | T | Trichlorofluoromethane | 50.000 | 51.819 | -3.6 | 113 | 0.00 |
| 8 | T | Diethyl Ether | 50.000 | 53.001 | -6.0 | 116 | 0.00 |
| 9 | T | 1,1,2-Trichlorotrifluoroeth | 50.000 | 53.615 | -7.2 | 118 | 0.00 |
| 10 | T | Methyl Iodide | 50.000 | 53.227 | -6.5 | 116 | 0.00 |
| 11 | T | Tert butyl alcohol | 250.000 | 262.193 | -4.9 | 114 | 0.00 |
| 12 | CM | 1,1-Dichloroethene | 50.000 | 51.678 | -3.4# | 113 | 0.00 |
| 13 | T | Acrolein | 250.000 | 240.545 | 3.8 | 128 | 0.00 |
| 14 | T | Allyl chloride | 50.000 | 50.504 | -1.0 | 113 | 0.00 |
| 15 | T | Acrylonitrile | 250.000 | 258.885 | -3.6 | 114 | 0.00 |
| 16 | T | Acetone | 250.000 | 246.750 | 1.3 | 114 | 0.00 |
| 17 | T | Carbon Disulfide | 50.000 | 50.550 | -1.1 | 115 | 0.00 |
| 18 | T | Methyl Acetate | 50.000 | 51.912 | -3.8 | 115 | 0.00 |
| 19 | T | Methyl tert-butyl Ether | 50.000 | 51.720 | -3.4 | 113 | 0.00 |
| 20 | T | Methylene Chloride | 50.000 | 49.617 | 0.8 | 115 | 0.00 |
| 21 | T | trans-1,2-Dichloroethene | 50.000 | 49.437 | 1.1 | 113 | 0.00 |
| 22 | T | Diisopropyl ether | 50.000 | 51.853 | -3.7 | 114 | 0.00 |
| 23 | T | Vinyl Acetate | 250.000 | 255.055 | -2.0 | 111 | 0.00 |
| 24 | P | 1,1-Dichloroethane | 50.000 | 51.487 | -3.0 | 114 | 0.00 |
| 25 | T | 2-Butanone | 250.000 | 255.897 | -2.4 | 113 | 0.00 |
| 26 | T | 2,2-Dichloropropane | 50.000 | 57.031 | -14.1 | 116 | 0.00 |
| 27 | T | cis-1,2-Dichloroethene | 50.000 | 51.073 | -2.1 | 114 | 0.00 |
| 28 | T | Bromochloromethane | 50.000 | 45.310 | 9.4 | 113 | 0.00 |
| 29 | T | Tetrahydrofuran | 250.000 | 256.656 | -2.7 | 113 | 0.00 |
| 30 | C | Chloroform | 50.000 | 50.933 | -1.9# | 113 | 0.00 |
| 31 | T | Cyclohexane | 50.000 | 50.212 | -0.4 | 114 | 0.00 |
| 32 | T | 1,1,1-Trichloroethane | 50.000 | 50.603 | -1.2 | 113 | 0.00 |
| 33 | S | 1,2-Dichloroethane-d4 | 50.000 | 52.135 | -4.3 | 147 | 0.00 |
| 34 | I | 1,4-Difluorobenzene | 50.000 | 50.000 | 0.0 | 104 | 0.00 |
| 35 | S | Dibromofluoromethane | 50.000 | 54.416 | -8.8 | 153 | 0.00 |
| 36 | T | 1,1-Dichloropropene | 50.000 | 52.123 | -4.2 | 115 | 0.00 |
| 37 | T | Ethyl Acetate | 50.000 | 50.125 | -0.3 | 109 | 0.00 |
| 38 | T | Carbon Tetrachloride | 50.000 | 52.466 | -4.9 | 116 | 0.00 |
| 39 | T | Methylcyclohexane | 50.000 | 52.686 | -5.4 | 116 | 0.00 |
| 40 | TM | Benzene | 50.000 | 50.931 | -1.9 | 114 | 0.00 |
| 41 | T | Methacrylonitrile | 50.000 | 52.607 | -5.2 | 114 | 0.00 |
| 42 | TM | 1,2-Dichloroethane | 50.000 | 51.489 | -3.0 | 114 | 0.00 |
| 43 | T | Isopropyl Acetate | 50.000 | 50.536 | -1.1 | 111 | 0.00 |
| 44 | TM | Trichloroethene | 50.000 | 51.788 | -3.6 | 113 | 0.00 |
| 45 | C | 1,2-Dichloropropane | 50.000 | 51.450 | -2.9# | 113 | 0.00 |
| 46 | T | Dibromomethane | 50.000 | 52.849 | -5.7 | 116 | 0.00 |
| 47 | T | Bromodichloromethane | 50.000 | 51.824 | -3.6 | 113 | 0.00 |
| 48 | T | Methyl methacrylate | 50.000 | 51.328 | -2.7 | 113 | 0.00 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086869.D
Acq On : 06 Jun 2025 15:54
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 9 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
ICVVN060625

Quant Time: Jun 07 02:16:19 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 49 | T | 1,4-Dioxane | 1000.000 | 1110.123 | -11.0 | 112 | 0.00 |
| 50 | S | Toluene-d8 | 50.000 | 53.129 | -6.3 | 151 | 0.00 |
| 51 | T | 4-Methyl-2-Pentanone | 250.000 | 267.835 | -7.1 | 113 | 0.00 |
| 52 | CM | Toluene | 50.000 | 52.040 | -4.1# | 114 | 0.00 |
| 53 | T | t-1,3-Dichloropropene | 50.000 | 53.137 | -6.3 | 114 | 0.00 |
| 54 | T | cis-1,3-Dichloropropene | 50.000 | 52.519 | -5.0 | 114 | 0.00 |
| 55 | T | 1,1,2-Trichloroethane | 50.000 | 51.562 | -3.1 | 113 | 0.00 |
| 56 | T | Ethyl methacrylate | 50.000 | 56.688 | -13.4 | 115 | 0.00 |
| 57 | T | 1,3-Dichloropropane | 50.000 | 51.386 | -2.8 | 112 | 0.00 |
| 58 | T | 2-Chloroethyl Vinyl ether | 250.000 | 246.006 | 1.6 | 120 | 0.00 |
| 59 | T | 2-Hexanone | 250.000 | 283.478 | -13.4 | 112 | 0.00 |
| 60 | T | Dibromochloromethane | 50.000 | 52.627 | -5.3 | 114 | 0.00 |
| 61 | T | 1,2-Dibromoethane | 50.000 | 51.887 | -3.8 | 114 | 0.00 |
| 62 | S | 4-Bromofluorobenzene | 50.000 | 54.081 | -8.2 | 151 | 0.00 |
| 63 | I | Chlorobenzene-d5 | 50.000 | 50.000 | 0.0 | 105 | 0.00 |
| 64 | T | Tetrachloroethene | 50.000 | 50.450 | -0.9 | 114 | 0.00 |
| 65 | PM | Chlorobenzene | 50.000 | 50.892 | -1.8 | 115 | 0.00 |
| 66 | T | 1,1,1,2-Tetrachloroethane | 50.000 | 52.164 | -4.3 | 115 | 0.00 |
| 67 | C | Ethyl Benzene | 50.000 | 51.590 | -3.2# | 114 | 0.00 |
| 68 | T | m/p-Xylenes | 100.000 | 103.912 | -3.9 | 113 | 0.00 |
| 69 | T | o-Xylene | 50.000 | 52.387 | -4.8 | 114 | 0.00 |
| 70 | T | Styrene | 50.000 | 52.758 | -5.5 | 113 | 0.00 |
| 71 | P | Bromoform | 50.000 | 54.751 | -9.5 | 114 | 0.00 |
| 72 | I | 1,4-Dichlorobenzene-d4 | 50.000 | 50.000 | 0.0 | 103 | 0.00 |
| 73 | T | Isopropylbenzene | 50.000 | 51.823 | -3.6 | 114 | 0.00 |
| 74 | T | N-amyl acetate | 50.000 | 54.212 | -8.4 | 112 | 0.00 |
| 75 | P | 1,1,2,2-Tetrachloroethane | 50.000 | 51.763 | -3.5 | 112 | 0.00 |
| 76 | T | 1,2,3-Trichloropropane | 50.000 | 53.821 | -7.6 | 112 | 0.00 |
| 77 | T | Bromobenzene | 50.000 | 52.313 | -4.6 | 114 | 0.00 |
| 78 | T | n-propylbenzene | 50.000 | 52.397 | -4.8 | 114 | 0.00 |
| 79 | T | 2-Chlorotoluene | 50.000 | 51.650 | -3.3 | 113 | 0.00 |
| 80 | T | 1,3,5-Trimethylbenzene | 50.000 | 52.787 | -5.6 | 113 | 0.00 |
| 81 | T | trans-1,4-Dichloro-2-butene | 50.000 | 55.702 | -11.4 | 125 | 0.00 |
| 82 | T | 4-Chlorotoluene | 50.000 | 51.884 | -3.8 | 114 | 0.00 |
| 83 | T | tert-Butylbenzene | 50.000 | 52.532 | -5.1 | 114 | 0.00 |
| 84 | T | 1,2,4-Trimethylbenzene | 50.000 | 53.024 | -6.0 | 113 | 0.00 |
| 85 | T | sec-Butylbenzene | 50.000 | 52.428 | -4.9 | 113 | 0.00 |
| 86 | T | p-Isopropyltoluene | 50.000 | 53.174 | -6.3 | 114 | 0.00 |
| 87 | T | 1,3-Dichlorobenzene | 50.000 | 51.224 | -2.4 | 112 | 0.00 |
| 88 | T | 1,4-Dichlorobenzene | 50.000 | 51.557 | -3.1 | 113 | 0.00 |
| 89 | T | n-Butylbenzene | 50.000 | 52.424 | -4.8 | 113 | 0.00 |
| 90 | T | Hexachloroethane | 50.000 | 52.847 | -5.7 | 114 | 0.00 |
| 91 | T | 1,2-Dichlorobenzene | 50.000 | 51.340 | -2.7 | 111 | 0.00 |
| 92 | T | 1,2-Dibromo-3-Chloropropane | 50.000 | 49.161 | 1.7 | 110 | 0.00 |
| 93 | T | 1,2,4-Trichlorobenzene | 50.000 | 51.986 | -4.0 | 112 | 0.00 |
| 94 | T | Hexachlorobutadiene | 50.000 | 52.843 | -5.7 | 113 | 0.00 |
| 95 | T | Naphthalene | 50.000 | 52.005 | -4.0 | 112 | 0.00 |

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086869.D
Acq On : 06 Jun 2025 15:54
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 9 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
ICVVN060625

Quant Time: Jun 07 02:16:19 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 96 T | 1,2,3-Trichlorobenzene | 50.000 | 50.539 | -1.1 | 110 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 6

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: LIRO01

Lab Code: CHEM Case No.: Q2333 SAS No.: Q2333 SDG No.: Q2333

Instrument ID: MSVOA_N Calibration Date/Time: 06/19/2025 09:31

Lab File ID: VN087100.D Init. Calib. Date(s): 06/06/2025 06/06/2025

Heated Purge: (Y/N) N Init. Calib. Time(s): 12:44 14:49

GC Column: RXI-624 ID: 0.25 (mm)

| COMPOUND | RRF | RRF050 | MIN RRF | %D | MAX%D |
|---|---|---|---|---|---|
| Methyl tert-butyl Ether | 2.015 | 2.213 | | 9.83 | 20 |
| Benzene | 1.444 | 1.656 | | 14.68 | 20 |
| Toluene | 0.882 | 1.023 | | 15.99 | 20 |
| Ethyl Benzene | 1.900 | 2.140 | | 12.63 | 20 |
| m/p-Xylenes | 0.727 | 0.852 | | 17.19 | 20 |
| o-Xylene | 0.696 | 0.807 | | 15.95 | 20 |
| Isopropylbenzene | 3.643 | 3.878 | | 6.45 | 20 |
| n-propylbenzene | 4.427 | 4.633 | | 4.65 | 20 |
| 1,3,5-Trimethylbenzene | 3.007 | 3.222 | | 7.15 | 20 |
| tert-Butylbenzene | 2.753 | 2.715 | | -1.38 | 20 |
| 1,2,4-Trimethylbenzene | 3.016 | 3.240 | | 7.43 | 20 |
| sec-Butylbenzene | 3.998 | 3.893 | | -2.63 | 20 |
| p-Isopropyltoluene | 3.305 | 3.279 | | -0.79 | 20 |
| n-Butylbenzene | 3.201 | 2.886 | | -9.84 | 20 |
| Naphthalene | 3.753 | 3.758 | | 0.13 | 20 |
| 1,2-Dichloroethane-d4 | 0.669 | 0.604 | | -9.72 | 20 |
| Dibromofluoromethane | 0.296 | 0.296 | | 0 | 20 |
| Toluene-d8 | 1.173 | 1.094 | | -6.74 | 20 |
| 4-Bromofluorobenzene | 0.436 | 0.411 | | -5.73 | 20 |

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087100.D
Acq On : 19 Jun 2025 09:31
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 20 01:19:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDCCC050

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.229 | 168 | 157053 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 278046 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 245271 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 126484 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.582 | 65 | 94849 | 45.107 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 90.220% | | | |
| 35) Dibromofluoromethane | 8.171 | 113 | 82354 | 49.979 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 99.960% | | | |
| 50) Toluene-d8 | 10.565 | 98 | 304189 | 46.633 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 93.260% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 114266 | 47.149 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 94.300% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.153 | 85 | 91821 | 58.637 | ug/l | 99 |
| 3) Chloromethane | 2.395 | 50 | 99602 | 49.257 | ug/l | 98 |
| 4) Vinyl Chloride | 2.553 | 62 | 128030 | 61.379 | ug/l | 98 |
| 5) Bromomethane | 2.995 | 94 | 63194 | 54.137 | ug/l | 96 |
| 6) Chloroethane | 3.153 | 64 | 79682 | 59.139 | ug/l | 96 |
| 7) Trichlorofluoromethane | 3.530 | 101 | 159307 | 58.455 | ug/l | 98 |
| 8) Diethyl Ether | 3.983 | 74 | 66903 | 56.344 | ug/l | 95 |
| 9) 1,1,2-Trichlorotrifluo... | 4.400 | 101 | 99010 | 57.825 | ug/l | 98 |
| 10) Methyl Iodide | 4.606 | 142 | 79070 | 35.624 | ug/l # | 91 |
| 11) Tert butyl alcohol | 5.536 | 59 | 132196 | 231.693 | ug/l | 99 |
| 12) 1,1-Dichloroethene | 4.371 | 96 | 102722 | 58.764 | ug/l | 94 |
| 13) Acrolein | 4.200 | 56 | 75576 | 418.463 | ug/l | 99 |
| 14) Allyl chloride | 5.047 | 41 | 149234 | 51.477 | ug/l | 95 |
| 15) Acrylonitrile | 5.736 | 53 | 351875 | 263.851 | ug/l | 100 |
| 16) Acetone | 4.441 | 43 | 285191 | 255.751 | ug/l | 100 |
| 17) Carbon Disulfide | 4.736 | 76 | 296271 | 61.273 | ug/l | 98 |
| 18) Methyl Acetate | 5.047 | 43 | 148831 | 45.799 | ug/l | 97 |
| 19) Methyl tert-butyl Ether | 5.818 | 73 | 347549 | 54.911 | ug/l | 98 |
| 20) Methylene Chloride | 5.300 | 84 | 115852 | 55.493 | ug/l | 97 |
| 21) trans-1,2-Dichloroethene | 5.806 | 96 | 110371 | 56.750 | ug/l | 96 |
| 22) Diisopropyl ether | 6.683 | 45 | 321446 | 52.602 | ug/l | 95 |
| 23) Vinyl Acetate | 6.618 | 43 | 1411385 | 273.362 | ug/l | 98 |
| 24) 1,1-Dichloroethane | 6.583 | 63 | 198785 | 56.526 | ug/l | 99 |
| 25) 2-Butanone | 7.488 | 43 | 441572 | 243.615 | ug/l | 97 |
| 26) 2,2-Dichloropropane | 7.500 | 77 | 171090 | 62.543 | ug/l | 100 |
| 27) cis-1,2-Dichloroethene | 7.500 | 96 | 131103 | 56.366 | ug/l | 99 |
| 28) Bromochloromethane | 7.824 | 49 | 81165 | 46.941 | ug/l | 94 |
| 29) Tetrahydrofuran | 7.847 | 42 | 289933 | 245.546 | ug/l | 95 |
| 30) Chloroform | 7.971 | 83 | 195599 | 55.695 | ug/l | 100 |
| 31) Cyclohexane | 8.265 | 56 | 176136 | 51.646 | ug/l | 96 |
| 32) 1,1,1-Trichloroethane | 8.177 | 97 | 169121 | 56.618 | ug/l | 99 |
| 36) 1,1-Dichloropropene | 8.377 | 75 | 145323 | 59.187 | ug/l | 99 |
| 37) Ethyl Acetate | 7.565 | 43 | 165466 | 52.938 | ug/l | 98 |
| 38) Carbon Tetrachloride | 8.371 | 117 | 142286 | 59.026 | ug/l | 99 |
| 39) Methylcyclohexane | 9.606 | 83 | 166872 | 49.607 | ug/l | 97 |
| 40) Benzene | 8.612 | 78 | 460485 | 57.353 | ug/l | 100 |

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087100.D
Acq On : 19 Jun 2025 09:31
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 20 01:19:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDCCC050

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 41) Methacrylonitrile | 7.782 | 41 | 89696 | 51.098 ug/l | 93 |
| 42) 1,2-Dichloroethane | 8.677 | 62 | 137283 | 56.372 ug/l | 99 |
| 43) Isopropyl Acetate | 8.694 | 43 | 255218 | 50.874 ug/l | 96 |
| 44) Trichloroethene | 9.353 | 130 | 112240 | 58.955 ug/l | 99 |
| 45) 1,2-Dichloropropane | 9.624 | 63 | 111438 | 57.050 ug/l | 99 |
| 46) Dibromomethane | 9.712 | 93 | 76751 | 59.155 ug/l | 99 |
| 47) Bromodichloromethane | 9.888 | 83 | 152931 | 57.289 ug/l | 98 |
| 48) Methyl methacrylate | 9.682 | 41 | 117229 | 50.770 ug/l | 95 |
| 49) 1,4-Dioxane | 9.700 | 88 | 43879 | 1044.593 ug/l # | 99 |
| 51) 4-Methyl-2-Pentanone | 10.447 | 43 | 805255 | 266.633 ug/l | 98 |
| 52) Toluene | 10.629 | 92 | 284384 | 57.958 ug/l | 99 |
| 53) t-1,3-Dichloropropene | 10.835 | 75 | 174988 | 58.623 ug/l | 96 |
| 54) cis-1,3-Dichloropropene | 10.312 | 75 | 185041 | 57.936 ug/l | 98 |
| 55) 1,1,2-Trichloroethane | 11.018 | 97 | 107940 | 57.171 ug/l | 99 |
| 56) Ethyl methacrylate | 10.876 | 69 | 176425 | 58.668 ug/l | 94 |
| 57) 1,3-Dichloropropane | 11.165 | 76 | 186250 | 56.867 ug/l | 99 |
| 58) 2-Chloroethyl Vinyl ether | 10.159 | 63 | 511071 | 284.937 ug/l | 99 |
| 59) 2-Hexanone | 11.200 | 43 | 532387 | 273.673 ug/l | 94 |
| 60) Dibromochloromethane | 11.359 | 129 | 117206 | 59.583 ug/l | 99 |
| 61) 1,2-Dibromoethane | 11.470 | 107 | 110430 | 57.064 ug/l | 99 |
| 64) Tetrachloroethene | 11.106 | 164 | 87272 | 56.223 ug/l | 96 |
| 65) Chlorobenzene | 11.888 | 112 | 310675 | 57.431 ug/l | 98 |
| 66) 1,1,1,2-Tetrachloroethane | 11.959 | 131 | 101699 | 58.485 ug/l | 99 |
| 67) Ethyl Benzene | 11.965 | 91 | 524965 | 56.340 ug/l | 99 |
| 68) m/p-Xylenes | 12.070 | 106 | 417726 | 117.113 ug/l | 98 |
| 69) o-Xylene | 12.394 | 106 | 198006 | 57.962 ug/l | 96 |
| 70) Styrene | 12.412 | 104 | 342586 | 58.606 ug/l | 99 |
| 71) Bromoform | 12.576 | 173 | 78941 | 61.270 ug/l # | 99 |
| 73) Isopropylbenzene | 12.694 | 105 | 490532 | 53.235 ug/l | 100 |
| 74) N-amyl acetate | 12.512 | 43 | 146899 | 45.622 ug/l # | 93 |
| 75) 1,1,2,2-Tetrachloroethane | 12.935 | 83 | 169825 | 54.402 ug/l | 100 |
| 76) 1,2,3-Trichloropropane | 12.994 | 75 | 141322m | 47.004 ug/l | |
| 77) Bromobenzene | 12.976 | 156 | 119991 | 56.782 ug/l | 96 |
| 78) n-propylbenzene | 13.035 | 91 | 586015 | 52.332 ug/l | 98 |
| 79) 2-Chlorotoluene | 13.123 | 91 | 352946 | 52.556 ug/l | 98 |
| 80) 1,3,5-Trimethylbenzene | 13.170 | 105 | 407528 | 53.568 ug/l | 99 |
| 81) trans-1,4-Dichloro-2-b... | 12.735 | 75 | 65431 | 50.097 ug/l | 98 |
| 82) 4-Chlorotoluene | 13.217 | 91 | 364837 | 53.692 ug/l | 99 |
| 83) tert-Butylbenzene | 13.435 | 119 | 343353 | 49.305 ug/l | 100 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 409813 | 53.720 ug/l | 100 |
| 85) sec-Butylbenzene | 13.611 | 105 | 492411 | 48.691 ug/l | 99 |
| 86) p-Isopropyltoluene | 13.729 | 119 | 414725 | 49.610 ug/l | 99 |
| 87) 1,3-Dichlorobenzene | 13.729 | 146 | 232408 | 55.899 ug/l | 98 |
| 88) 1,4-Dichlorobenzene | 13.811 | 146 | 231597 | 54.637 ug/l | 100 |
| 89) n-Butylbenzene | 14.053 | 91 | 365013 | 45.078 ug/l | 99 |
| 90) Hexachloroethane | 14.329 | 117 | 74155 | 52.332 ug/l | 98 |
| 91) 1,2-Dichlorobenzene | 14.106 | 146 | 220753 | 55.265 ug/l | 99 |
| 92) 1,2-Dibromo-3-Chloropr... | 14.717 | 75 | 37254 | 49.901 ug/l | 97 |
| 93) 1,2,4-Trichlorobenzene | 15.388 | 180 | 120236 | 47.138 ug/l | 100 |
| 94) Hexachlorobutadiene | 15.500 | 225 | 33782 | 35.548 ug/l | 99 |
| 95) Naphthalene | 15.635 | 128 | 475311 | 50.063 ug/l | 100 |
| 96) 1,2,3-Trichlorobenzene | 15.835 | 180 | 114676 | 45.251 ug/l | 99 |

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087100.D
Acq On : 19 Jun 2025 09:31
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 20 01:19:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDCCC050

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

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

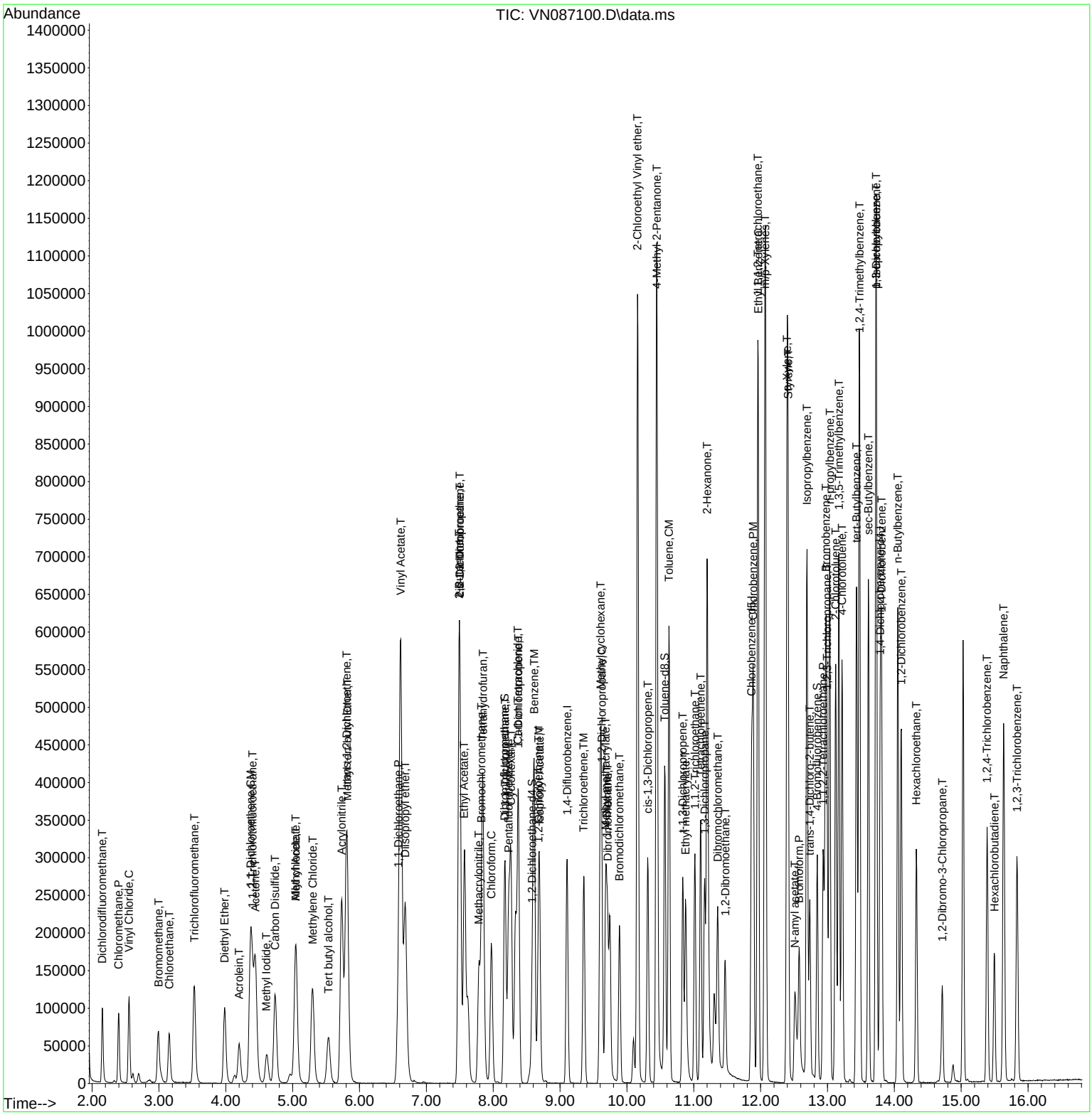
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087100.D
Acq On : 19 Jun 2025 09:31
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 20 01:19:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VSTDCCC050

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025



Sample Results: **VN087100.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087100.D
Acq On : 19 Jun 2025 09:31
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**LabSampleId :**
VSTDCCC050

Quant Time: Jun 20 01:19:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 76 | 0.00 |
| 2 | T | Dichlorodifluoromethane | 0.499 | 0.585 | -17.2 | 88 | 0.00 |
| 3 | P | Chloromethane | 0.644 | 0.634 | 1.6 | 80 | 0.00 |
| 4 | C | Vinyl Chloride | 0.664 | 0.815 | -22.7# | 96 | 0.00 |
| 5 | T | Bromomethane | 0.372 | 0.402 | -8.1 | 85 | 0.00 |
| 6 | T | Chloroethane | 0.429 | 0.507 | -18.2 | 94 | 0.00 |
| 7 | T | Trichlorofluoromethane | 0.868 | 1.014 | -16.8 | 92 | 0.00 |
| 8 | T | Diethyl Ether | 0.378 | 0.426 | -12.7 | 89 | 0.00 |
| 9 | T | 1,1,2-Trichlorotrifluoroeth | 0.545 | 0.630 | -15.6 | 92 | 0.00 |
| 10 | T | Methyl Iodide | 0.707 | 0.503 | 28.9# | 56 | 0.00 |
| 11 | T | Tert butyl alcohol | 0.182 | 0.168 | 7.7 | 73 | -0.01 |
| 12 | CM | 1,1-Dichloroethene | 0.557 | 0.654 | -17.4# | 93 | 0.01 |
| 13 | T | Acrolein | 0.057 | 0.096 | -68.4# | 161# | 0.00 |
| 14 | T | Allyl chloride | 0.923 | 0.950 | -2.9 | 83 | 0.00 |
| 15 | T | Acrylonitrile | 0.425 | 0.448 | -5.4 | 83 | 0.00 |
| 16 | T | Acetone | 0.355 | 0.363 | -2.3 | 85 | 0.00 |
| 17 | T | Carbon Disulfide | 1.539 | 1.886 | -22.5 | 100 | 0.00 |
| 18 | T | Methyl Acetate | 1.035 | 0.948 | 8.4 | 73 | 0.00 |
| 19 | T | Methyl tert-butyl Ether | 2.015 | 2.213 | -9.8 | 87 | 0.00 |
| 20 | T | Methylene Chloride | 0.665 | 0.738 | -11.0 | 92 | 0.00 |
| 21 | T | trans-1,2-Dichloroethene | 0.619 | 0.703 | -13.6 | 94 | 0.00 |
| 22 | T | Diisopropyl ether | 1.945 | 2.047 | -5.2 | 84 | 0.00 |
| 23 | T | Vinyl Acetate | 1.644 | 1.797 | -9.3 | 86 | 0.00 |
| 24 | P | 1,1-Dichloroethane | 1.120 | 1.266 | -13.0 | 90 | 0.00 |
| 25 | T | 2-Butanone | 0.577 | 0.562 | 2.6 | 77 | 0.00 |
| 26 | T | 2,2-Dichloropropane | 0.871 | 1.089 | -25.0# | 91 | 0.00 |
| 27 | T | cis-1,2-Dichloroethene | 0.740 | 0.835 | -12.8 | 90 | 0.00 |
| 28 | T | Bromochloromethane | 0.550 | 0.517 | 6.0 | 84 | 0.00 |
| 29 | T | Tetrahydrofuran | 0.376 | 0.369 | 1.9 | 78 | 0.00 |
| 30 | C | Chloroform | 1.118 | 1.245 | -11.4# | 89 | 0.00 |
| 31 | T | Cyclohexane | 1.086 | 1.122 | -3.3 | 85 | 0.00 |
| 32 | T | 1,1,1-Trichloroethane | 0.951 | 1.077 | -13.2 | 91 | 0.00 |
| 33 | S | 1,2-Dichloroethane-d4 | 0.669 | 0.604 | 9.7 | 91 | 0.00 |
| 34 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 73 | 0.00 |
| 35 | S | Dibromofluoromethane | 0.296 | 0.296 | 0.0 | 99 | 0.00 |
| 36 | T | 1,1-Dichloropropene | 0.442 | 0.523 | -18.3 | 92 | 0.00 |
| 37 | T | Ethyl Acetate | 0.562 | 0.595 | -5.9 | 81 | -0.01 |
| 38 | T | Carbon Tetrachloride | 0.433 | 0.512 | -18.2 | 92 | 0.00 |
| 39 | T | Methylcyclohexane | 0.605 | 0.600 | 0.8 | 77 | 0.00 |
| 40 | TM | Benzene | 1.444 | 1.656 | -14.7 | 90 | 0.00 |
| 41 | T | Methacrylonitrile | 0.316 | 0.323 | -2.2 | 78 | 0.00 |
| 42 | TM | 1,2-Dichloroethane | 0.438 | 0.494 | -12.8 | 88 | 0.00 |
| 43 | T | Isopropyl Acetate | 0.902 | 0.918 | -1.8 | 79 | 0.00 |
| 44 | TM | Trichloroethene | 0.342 | 0.404 | -18.1 | 91 | 0.00 |
| 45 | C | 1,2-Dichloropropane | 0.351 | 0.401 | -14.2# | 89 | 0.00 |
| 46 | T | Dibromomethane | 0.233 | 0.276 | -18.5 | 92 | 0.00 |
| 47 | T | Bromodichloromethane | 0.480 | 0.550 | -14.6 | 88 | 0.00 |
| 48 | T | Methyl methacrylate | 0.415 | 0.422 | -1.7 | 79 | 0.00 |

Sample Results: **VN087100.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087100.D
Acq On : 19 Jun 2025 09:31
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**LabSampleId :**
VSTDCCC050

Quant Time: Jun 20 01:19:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 49 | T | 1,4-Dioxane | 0.008 | 0.008 | 0.0 | 74 | 0.00 |
| 50 | S | Toluene-d8 | 1.173 | 1.094 | 6.7 | 93 | 0.00 |
| 51 | T | 4-Methyl-2-Pentanone | 0.543 | 0.579 | -6.6 | 79 | 0.00 |
| 52 | CM | Toluene | 0.882 | 1.023 | -16.0# | 90 | 0.00 |
| 53 | T | t-1,3-Dichloropropene | 0.537 | 0.629 | -17.1 | 89 | 0.00 |
| 54 | T | cis-1,3-Dichloropropene | 0.574 | 0.666 | -16.0 | 89 | 0.00 |
| 55 | T | 1,1,2-Trichloroethane | 0.340 | 0.388 | -14.1 | 88 | 0.00 |
| 56 | T | Ethyl methacrylate | 0.541 | 0.635 | -17.4 | 84 | 0.00 |
| 57 | T | 1,3-Dichloropropane | 0.589 | 0.670 | -13.8 | 88 | 0.00 |
| 58 | T | 2-Chloroethyl Vinyl ether | 0.323 | 0.368 | -13.9 | 98 | 0.00 |
| 59 | T | 2-Hexanone | 0.350 | 0.383 | -9.4 | 76 | 0.00 |
| 60 | T | Dibromochloromethane | 0.354 | 0.422 | -19.2 | 91 | 0.00 |
| 61 | T | 1,2-Dibromoethane | 0.348 | 0.397 | -14.1 | 89 | 0.00 |
| 62 | S | 4-Bromofluorobenzene | 0.436 | 0.411 | 5.7 | 93 | 0.00 |
| 63 | I | Chlorobenzene-d5 | 1.000 | 1.000 | 0.0 | 74 | 0.00 |
| 64 | T | Tetrachloroethene | 0.316 | 0.356 | -12.7 | 89 | 0.00 |
| 65 | PM | Chlorobenzene | 1.103 | 1.267 | -14.9 | 91 | 0.00 |
| 66 | T | 1,1,1,2-Tetrachloroethane | 0.354 | 0.415 | -17.2 | 91 | 0.00 |
| 67 | C | Ethyl Benzene | 1.899 | 2.140 | -12.7# | 88 | 0.00 |
| 68 | T | m/p-Xylenes | 0.727 | 0.852 | -17.2 | 90 | 0.00 |
| 69 | T | o-Xylene | 0.696 | 0.807 | -15.9 | 88 | 0.00 |
| 70 | T | Styrene | 1.192 | 1.397 | -17.2 | 89 | 0.00 |
| 71 | P | Bromoform | 0.263 | 0.322 | -22.4 | 90 | 0.00 |
| 72 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 75 | 0.00 |
| 73 | T | Isopropylbenzene | 3.643 | 3.878 | -6.5 | 85 | 0.00 |
| 74 | T | N-amyl acetate | 1.273 | 1.161 | 8.8 | 69 | 0.00 |
| 75 | P | 1,1,2,2-Tetrachloroethane | 1.234 | 1.343 | -8.8 | 86 | 0.00 |
| 76 | T | 1,2,3-Trichloropropane | 1.189 | 1.117 | 6.1 | 72 | 0.00 |
| 77 | T | Bromobenzene | 0.835 | 0.949 | -13.7 | 91 | 0.00 |
| 78 | T | n-propylbenzene | 4.427 | 4.633 | -4.7 | 83 | 0.00 |
| 79 | T | 2-Chlorotoluene | 2.655 | 2.790 | -5.1 | 84 | 0.00 |
| 80 | T | 1,3,5-Trimethylbenzene | 3.007 | 3.222 | -7.1 | 84 | 0.00 |
| 81 | T | trans-1,4-Dichloro-2-butene | 0.516 | 0.517 | -0.2 | 82 | 0.00 |
| 82 | T | 4-Chlorotoluene | 2.686 | 2.884 | -7.4 | 86 | 0.00 |
| 83 | T | tert-Butylbenzene | 2.753 | 2.715 | 1.4 | 78 | 0.00 |
| 84 | T | 1,2,4-Trimethylbenzene | 3.016 | 3.240 | -7.4 | 84 | 0.00 |
| 85 | T | sec-Butylbenzene | 3.998 | 3.893 | 2.6 | 77 | 0.00 |
| 86 | T | p-Isopropyltoluene | 3.305 | 3.279 | 0.8 | 78 | 0.00 |
| 87 | T | 1,3-Dichlorobenzene | 1.644 | 1.837 | -11.7 | 89 | 0.00 |
| 88 | T | 1,4-Dichlorobenzene | 1.676 | 1.831 | -9.2 | 88 | 0.00 |
| 89 | T | n-Butylbenzene | 3.201 | 2.886 | 9.8 | 71 | 0.00 |
| 90 | T | Hexachloroethane | 0.560 | 0.586 | -4.6 | 82 | 0.00 |
| 91 | T | 1,2-Dichlorobenzene | 1.579 | 1.745 | -10.5 | 88 | 0.00 |
| 92 | T | 1,2-Dibromo-3-Chloropropane | 0.295 | 0.295 | 0.0 | 82 | 0.00 |
| 93 | T | 1,2,4-Trichlorobenzene | 1.008 | 0.951 | 5.7 | 74 | 0.00 |
| 94 | T | Hexachlorobutadiene | 0.376 | 0.267 | 29.0# | 56 | 0.00 |
| 95 | T | Naphthalene | 3.753 | 3.758 | -0.1 | 79 | 0.00 |

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087100.D
Acq On : 19 Jun 2025 09:31
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**LabSampleId :**
VSTDCCC050

Quant Time: Jun 20 01:19:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 96 T | 1,2,3-Trichlorobenzene | 1.002 | 0.907 | 9.5 | 72 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 6

Sample Results: **VN087100.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087100.D
Acq On : 19 Jun 2025 09:31
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**LabSampleId :**
VSTDCCC050

Quant Time: Jun 20 01:19:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 50.000 | 50.000 | 0.0 | 76 | 0.00 |
| 2 | T | Dichlorodifluoromethane | 50.000 | 58.637 | -17.3 | 88 | 0.00 |
| 3 | P | Chloromethane | 50.000 | 49.257 | 1.5 | 80 | 0.00 |
| 4 | C | Vinyl Chloride | 50.000 | 61.379 | -22.8# | 96 | 0.00 |
| 5 | T | Bromomethane | 50.000 | 54.137 | -8.3 | 85 | 0.00 |
| 6 | T | Chloroethane | 50.000 | 59.139 | -18.3 | 94 | 0.00 |
| 7 | T | Trichlorofluoromethane | 50.000 | 58.455 | -16.9 | 92 | 0.00 |
| 8 | T | Diethyl Ether | 50.000 | 56.344 | -12.7 | 89 | 0.00 |
| 9 | T | 1,1,2-Trichlorotrifluoroeth | 50.000 | 57.825 | -15.7 | 92 | 0.00 |
| 10 | T | Methyl Iodide | 50.000 | 35.624 | 28.8# | 56 | 0.00 |
| 11 | T | Tert butyl alcohol | 250.000 | 231.693 | 7.3 | 73 | -0.01 |
| 12 | CM | 1,1-Dichloroethene | 50.000 | 58.764 | -17.5# | 93 | 0.01 |
| 13 | T | Acrolein | 250.000 | 418.463 | -67.4# | 161 | 0.00 |
| 14 | T | Allyl chloride | 50.000 | 51.477 | -3.0 | 83 | 0.00 |
| 15 | T | Acrylonitrile | 250.000 | 263.851 | -5.5 | 83 | 0.00 |
| 16 | T | Acetone | 250.000 | 255.751 | -2.3 | 85 | 0.00 |
| 17 | T | Carbon Disulfide | 50.000 | 61.273 | -22.5 | 100 | 0.00 |
| 18 | T | Methyl Acetate | 50.000 | 45.799 | 8.4 | 73 | 0.00 |
| 19 | T | Methyl tert-butyl Ether | 50.000 | 54.911 | -9.8 | 87 | 0.00 |
| 20 | T | Methylene Chloride | 50.000 | 55.493 | -11.0 | 92 | 0.00 |
| 21 | T | trans-1,2-Dichloroethene | 50.000 | 56.750 | -13.5 | 94 | 0.00 |
| 22 | T | Diisopropyl ether | 50.000 | 52.602 | -5.2 | 84 | 0.00 |
| 23 | T | Vinyl Acetate | 250.000 | 273.362 | -9.3 | 86 | 0.00 |
| 24 | P | 1,1-Dichloroethane | 50.000 | 56.526 | -13.1 | 90 | 0.00 |
| 25 | T | 2-Butanone | 250.000 | 243.615 | 2.6 | 77 | 0.00 |
| 26 | T | 2,2-Dichloropropane | 50.000 | 62.543 | -25.1# | 91 | 0.00 |
| 27 | T | cis-1,2-Dichloroethene | 50.000 | 56.366 | -12.7 | 90 | 0.00 |
| 28 | T | Bromochloromethane | 50.000 | 46.941 | 6.1 | 84 | 0.00 |
| 29 | T | Tetrahydrofuran | 250.000 | 245.546 | 1.8 | 78 | 0.00 |
| 30 | C | Chloroform | 50.000 | 55.695 | -11.4# | 89 | 0.00 |
| 31 | T | Cyclohexane | 50.000 | 51.646 | -3.3 | 85 | 0.00 |
| 32 | T | 1,1,1-Trichloroethane | 50.000 | 56.618 | -13.2 | 91 | 0.00 |
| 33 | S | 1,2-Dichloroethane-d4 | 50.000 | 45.107 | 9.8 | 91 | 0.00 |
| 34 | I | 1,4-Difluorobenzene | 50.000 | 50.000 | 0.0 | 73 | 0.00 |
| 35 | S | Dibromofluoromethane | 50.000 | 49.979 | 0.0 | 99 | 0.00 |
| 36 | T | 1,1-Dichloropropene | 50.000 | 59.187 | -18.4 | 92 | 0.00 |
| 37 | T | Ethyl Acetate | 50.000 | 52.938 | -5.9 | 81 | -0.01 |
| 38 | T | Carbon Tetrachloride | 50.000 | 59.026 | -18.1 | 92 | 0.00 |
| 39 | T | Methylcyclohexane | 50.000 | 49.607 | 0.8 | 77 | 0.00 |
| 40 | TM | Benzene | 50.000 | 57.353 | -14.7 | 90 | 0.00 |
| 41 | T | Methacrylonitrile | 50.000 | 51.098 | -2.2 | 78 | 0.00 |
| 42 | TM | 1,2-Dichloroethane | 50.000 | 56.372 | -12.7 | 88 | 0.00 |
| 43 | T | Isopropyl Acetate | 50.000 | 50.874 | -1.7 | 79 | 0.00 |
| 44 | TM | Trichloroethene | 50.000 | 58.955 | -17.9 | 91 | 0.00 |
| 45 | C | 1,2-Dichloropropane | 50.000 | 57.050 | -14.1# | 89 | 0.00 |
| 46 | T | Dibromomethane | 50.000 | 59.155 | -18.3 | 92 | 0.00 |
| 47 | T | Bromodichloromethane | 50.000 | 57.289 | -14.6 | 88 | 0.00 |
| 48 | T | Methyl methacrylate | 50.000 | 50.770 | -1.5 | 79 | 0.00 |

Sample Results: **VN087100.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087100.D
Acq On : 19 Jun 2025 09:31
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**LabSampleId :**
VSTDCCC050

Quant Time: Jun 20 01:19:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 49 | T | 1,4-Dioxane | 1000.000 | 1044.593 | -4.5 | 74 | 0.00 |
| 50 | S | Toluene-d8 | 50.000 | 46.633 | 6.7 | 93 | 0.00 |
| 51 | T | 4-Methyl-2-Pentanone | 250.000 | 266.633 | -6.7 | 79 | 0.00 |
| 52 | CM | Toluene | 50.000 | 57.958 | -15.9# | 90 | 0.00 |
| 53 | T | t-1,3-Dichloropropene | 50.000 | 58.623 | -17.2 | 89 | 0.00 |
| 54 | T | cis-1,3-Dichloropropene | 50.000 | 57.936 | -15.9 | 89 | 0.00 |
| 55 | T | 1,1,2-Trichloroethane | 50.000 | 57.171 | -14.3 | 88 | 0.00 |
| 56 | T | Ethyl methacrylate | 50.000 | 58.668 | -17.3 | 84 | 0.00 |
| 57 | T | 1,3-Dichloropropane | 50.000 | 56.867 | -13.7 | 88 | 0.00 |
| 58 | T | 2-Chloroethyl Vinyl ether | 250.000 | 284.937 | -14.0 | 98 | 0.00 |
| 59 | T | 2-Hexanone | 250.000 | 273.673 | -9.5 | 76 | 0.00 |
| 60 | T | Dibromochloromethane | 50.000 | 59.583 | -19.2 | 91 | 0.00 |
| 61 | T | 1,2-Dibromoethane | 50.000 | 57.064 | -14.1 | 89 | 0.00 |
| 62 | S | 4-Bromofluorobenzene | 50.000 | 47.149 | 5.7 | 93 | 0.00 |
| 63 | I | Chlorobenzene-d5 | 50.000 | 50.000 | 0.0 | 74 | 0.00 |
| 64 | T | Tetrachloroethene | 50.000 | 56.223 | -12.4 | 89 | 0.00 |
| 65 | PM | Chlorobenzene | 50.000 | 57.431 | -14.9 | 91 | 0.00 |
| 66 | T | 1,1,1,2-Tetrachloroethane | 50.000 | 58.485 | -17.0 | 91 | 0.00 |
| 67 | C | Ethyl Benzene | 50.000 | 56.340 | -12.7# | 88 | 0.00 |
| 68 | T | m/p-Xylenes | 100.000 | 117.113 | -17.1 | 90 | 0.00 |
| 69 | T | o-Xylene | 50.000 | 57.962 | -15.9 | 88 | 0.00 |
| 70 | T | Styrene | 50.000 | 58.606 | -17.2 | 89 | 0.00 |
| 71 | P | Bromoform | 50.000 | 61.270 | -22.5 | 90 | 0.00 |
| 72 | I | 1,4-Dichlorobenzene-d4 | 50.000 | 50.000 | 0.0 | 75 | 0.00 |
| 73 | T | Isopropylbenzene | 50.000 | 53.235 | -6.5 | 85 | 0.00 |
| 74 | T | N-amyl acetate | 50.000 | 45.622 | 8.8 | 69 | 0.00 |
| 75 | P | 1,1,2,2-Tetrachloroethane | 50.000 | 54.402 | -8.8 | 86 | 0.00 |
| 76 | T | 1,2,3-Trichloropropane | 50.000 | 47.004 | 6.0 | 72 | 0.00 |
| 77 | T | Bromobenzene | 50.000 | 56.782 | -13.6 | 91 | 0.00 |
| 78 | T | n-propylbenzene | 50.000 | 52.332 | -4.7 | 83 | 0.00 |
| 79 | T | 2-Chlorotoluene | 50.000 | 52.556 | -5.1 | 84 | 0.00 |
| 80 | T | 1,3,5-Trimethylbenzene | 50.000 | 53.568 | -7.1 | 84 | 0.00 |
| 81 | T | trans-1,4-Dichloro-2-butene | 50.000 | 50.097 | -0.2 | 82 | 0.00 |
| 82 | T | 4-Chlorotoluene | 50.000 | 53.692 | -7.4 | 86 | 0.00 |
| 83 | T | tert-Butylbenzene | 50.000 | 49.305 | 1.4 | 78 | 0.00 |
| 84 | T | 1,2,4-Trimethylbenzene | 50.000 | 53.720 | -7.4 | 84 | 0.00 |
| 85 | T | sec-Butylbenzene | 50.000 | 48.691 | 2.6 | 77 | 0.00 |
| 86 | T | p-Isopropyltoluene | 50.000 | 49.610 | 0.8 | 78 | 0.00 |
| 87 | T | 1,3-Dichlorobenzene | 50.000 | 55.899 | -11.8 | 89 | 0.00 |
| 88 | T | 1,4-Dichlorobenzene | 50.000 | 54.637 | -9.3 | 88 | 0.00 |
| 89 | T | n-Butylbenzene | 50.000 | 45.078 | 9.8 | 71 | 0.00 |
| 90 | T | Hexachloroethane | 50.000 | 52.332 | -4.7 | 82 | 0.00 |
| 91 | T | 1,2-Dichlorobenzene | 50.000 | 55.265 | -10.5 | 88 | 0.00 |
| 92 | T | 1,2-Dibromo-3-Chloropropane | 50.000 | 49.901 | 0.2 | 82 | 0.00 |
| 93 | T | 1,2,4-Trichlorobenzene | 50.000 | 47.138 | 5.7 | 74 | 0.00 |
| 94 | T | Hexachlorobutadiene | 50.000 | 35.548 | 28.9# | 56 | 0.00 |
| 95 | T | Naphthalene | 50.000 | 50.063 | -0.1 | 79 | 0.00 |

Sample Results: **VN087100.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087100.D
Acq On : 19 Jun 2025 09:31
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**LabSampleId :**
VSTDCCC050

Quant Time: Jun 20 01:19:29 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 96 T | 1,2,3-Trichlorobenzene | 50.000 | 45.251 | 9.5 | 72 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 6

# QC SAMPLE DATA

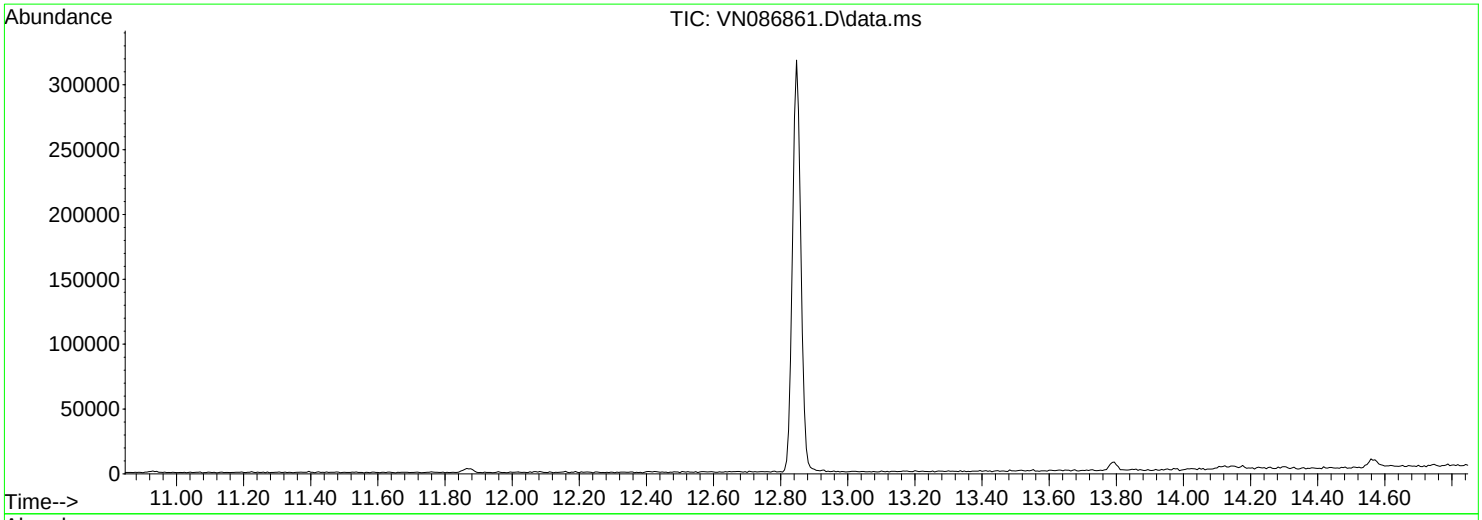
Sample Results: **VN086861.D**

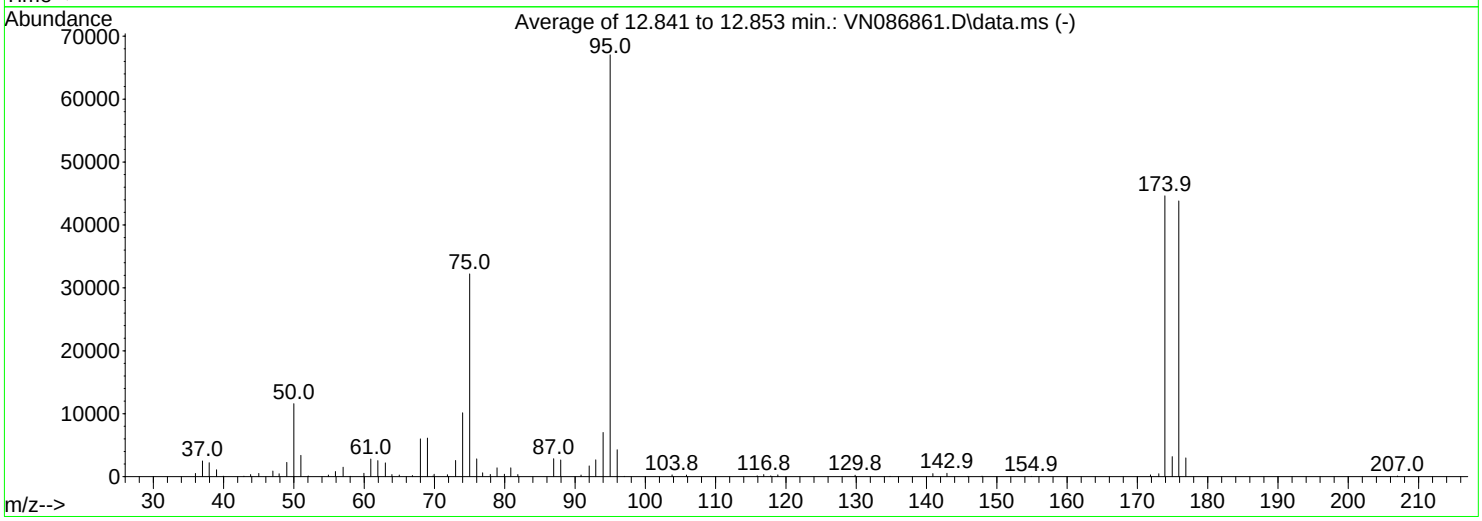
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN060625\
Data File : VN086861.D
Acq On : 06 Jun 2025 07:59
Operator : JC\MD
Sample : BFB
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 1 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Title : SW846 8260
Last Update : Sat Jun 07 02:12:50 2025




AutoFind: Scans 1851, 1852, 1853; Background Corrected with Scan 1843

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 17.3 | 11610 | PASS |
| 75 | 95 | 30 | 60 | 48.1 | 32235 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 67037 | PASS |
| 96 | 95 | 5 | 9 | 6.4 | 4284 | PASS |
| 173 | 174 | 0.00 | 2 | 1.0 | 453 | PASS |
| 174 | 95 | 50 | 100 | 66.6 | 44632 | PASS |
| 175 | 174 | 5 | 9 | 7.1 | 3184 | PASS |
| 176 | 174 | 95 | 101 | 98.1 | 43805 | PASS |
| 177 | 176 | 5 | 9 | 6.8 | 2979 | PASS |

Average of 12.841 to 12.853 min.: VN086861.D\data.ms
BFB
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.00 | 508 | 50.00 | 11610 | 63.95 | 331 | 76.00 | 281 |
| 37.00 | 2495 | 51.00 | 3387 | 65.00 | 260 | 76.85 | 60 |
| 37.95 | 2209 | 52.05 | 112 | 66.85 | 177 | 77.95 | 34 |
| 39.00 | 1096 | 54.90 | 253 | 68.00 | 6008 | 78.90 | 141 |
| 39.95 | 84 | 55.90 | 806 | 69.00 | 6141 | 79.95 | 395 |
| 42.90 | 88 | 57.00 | 1501 | 69.80 | 100 | 80.85 | 1397 |
| 43.85 | 329 | 58.00 | 50 | 69.95 | 383 | 81.85 | 328 |
| 45.00 | 512 | 59.95 | 526 | 71.85 | 297 | 86.95 | 2851 |
| 47.00 | 882 | 60.95 | 2806 | 73.00 | 2562 | 87.95 | 2646 |
| 47.90 | 460 | 61.95 | 2535 | 74.00 | 10138 | 90.85 | 264 |
| 49.00 | 2276 | 63.00 | 2195 | 75.00 | 32235 | 92.00 | 1704 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
BFB

Average of 12.841 to 12.853 min.: VN086861.D\data.ms
BFB
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 92.95 | 2660 | 129.85 | 228 | 175.90 | 43805 | | |
| 94.00 | 7029 | 134.80 | 66 | 176.90 | 2979 | | |
| 95.00 | 67037 | 140.90 | 488 | 207.00 | 111 | | |
| 96.00 | 4284 | 142.90 | 542 | | | | |
| 97.00 | 57 | 145.90 | 54 | | | | |
| 103.80 | 279 | 147.90 | 82 | | | | |
| 105.85 | 267 | 154.90 | 64 | | | | |
| 115.90 | 128 | 171.85 | 288 | | | | |
| 116.85 | 345 | 173.05 | 453 | | | | |
| 117.85 | 116 | 173.90 | 44632 | | | | |
| 118.85 | 274 | 174.95 | 3184 | | | | |

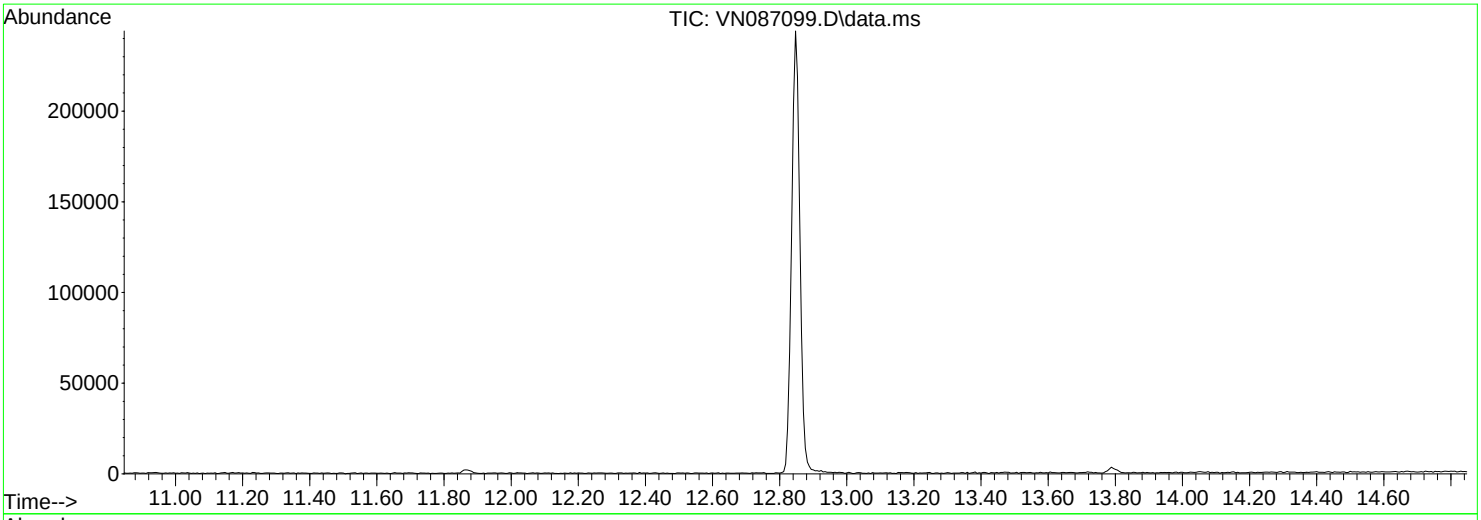
Sample Results: **VN087099.D**

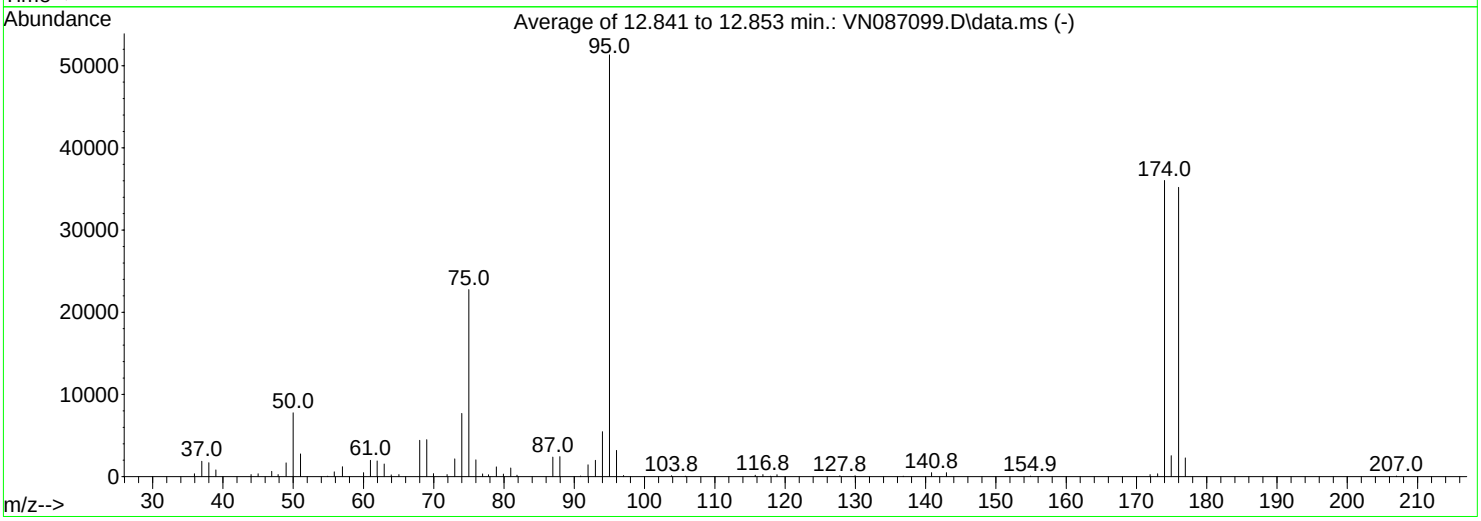
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087099.D
Acq On : 19 Jun 2025 08:58
Operator : JC\MD
Sample : BFB
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 1 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Title : SW846 8260
Last Update : Sat Jun 07 02:12:50 2025




AutoFind: Scans 1851, 1852, 1853; Background Corrected with Scan 1843

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.1 | 7775 | PASS |
| 75 | 95 | 30 | 60 | 44.3 | 22760 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 51323 | PASS |
| 96 | 95 | 5 | 9 | 6.2 | 3191 | PASS |
| 173 | 174 | 0.00 | 2 | 1.0 | 343 | PASS |
| 174 | 95 | 50 | 100 | 70.2 | 36029 | PASS |
| 175 | 174 | 5 | 9 | 7.1 | 2561 | PASS |
| 176 | 174 | 95 | 101 | 97.7 | 35200 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 2289 | PASS |

Average of 12.841 to 12.853 min.: VN087099.D\data.ms
BFB
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 35.95 | 349 | 54.90 | 69 | 69.95 | 380 | 81.85 | 18 |
| 37.00 | 1862 | 55.85 | 580 | 71.90 | 252 | 86.95 | 238 |
| 38.00 | 1689 | 57.00 | 1210 | 73.00 | 2167 | 87.95 | 243 |
| 39.00 | 812 | 60.00 | 479 | 74.00 | 7682 | 90.90 | 8 |
| 44.00 | 253 | 61.00 | 1993 | 75.00 | 22760 | 91.95 | 1434 |
| 45.00 | 344 | 61.95 | 1906 | 76.00 | 2052 | 93.00 | 1982 |
| 46.95 | 634 | 62.95 | 1533 | 76.95 | 336 | 94.00 | 5471 |
| 47.85 | 248 | 63.95 | 210 | 77.80 | 234 | 95.00 | 51323 |
| 49.00 | 1670 | 65.05 | 263 | 78.90 | 1196 | 96.00 | 3191 |
| 50.00 | 7775 | 68.00 | 4412 | 79.90 | 310 | 97.00 | 142 |
| 51.05 | 2762 | 69.00 | 4501 | 80.95 | 1054 | 103.85 | 119 |

**Instrument :**
MSVOA_N
**ClientSampleId :**
BFB

Average of 12.841 to 12.853 min.: VN087099.D\data.ms
BFB
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 105.80 | 57 | 171.95 | 252 | | | | |
| 115.75 | 182 | 173.00 | 343 | | | | |
| 116.85 | 260 | 174.00 | 36029 | | | | |
| 117.90 | 56 | 174.95 | 2561 | | | | |
| 118.85 | 240 | 176.00 | 35200 | | | | |
| 127.80 | 126 | 176.95 | 2289 | | | | |
| 129.95 | 111 | 207.00 | 81 | | | | |
| 136.80 | 52 | | | | | | |
| 140.85 | 492 | | | | | | |
| 142.95 | 481 | | | | | | |
| 154.90 | 75 | | | | | | |

Raw Data: **VN087102.D**

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | |
| Client Sample ID: | VN0619WBL01 | SDG No.: | Q2333 |
| Lab Sample ID: | VN0619WBL01 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087102.D | 1 | | 06/19/25 10:26 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 1634-04-4 | Methyl tert-butyl Ether | 1.00 | U | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 108-88-3 | Toluene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 2.00 | U | 0.24 | 2.00 | ug/L |
| 1330-20-7 | Total Xylenes | 3.00 | U | 0.36 | 3.00 | ug/L |
| 95-47-6 | o-Xylene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 1.00 | U | 0.12 | 1.00 | ug/L |
| 103-65-1 | n-propylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 98-06-6 | tert-Butylbenzene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.00 | U | 0.14 | 1.00 | ug/L |
| 135-98-8 | sec-Butylbenzene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 99-87-6 | p-Isopropyltoluene | 1.00 | U | 0.13 | 1.00 | ug/L |
| 104-51-8 | n-Butylbenzene | 1.00 | U | 0.15 | 1.00 | ug/L |
| 91-20-3 | Naphthalene | 1.00 | U | 0.20 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 57.1 | | 74 - 125 | 114% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 53.1 | | 75 - 124 | 106% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 53.8 | | 86 - 113 | 108% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 48.9 | | 77 - 121 | 98% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 181000 | 8.23 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 369000 | 9.106 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 337000 | 11.865 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 157000 | 13.788 | | | |

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | |
| Client Sample ID: | VN0619WBL01 | SDG No.: | Q2333 |
| Lab Sample ID: | VN0619WBL01 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087102.D | 1 | | 06/19/25 10:26 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087102.D
Acq On : 19 Jun 2025 10:26
Operator : JC\MD
Sample : VN0619WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VN0619WBL01

Quant Time: Jun 20 01:20:55 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.230 | 168 | 180966 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 368878 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 337249 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 156562 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.583 | 65 | 138328 | 57.091 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 114.180% | | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 116016 | 53.071 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 106.140% | | | |
| 50) Toluene-d8 | 10.565 | 98 | 465529 | 53.793 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 107.580% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 157268 | 48.914 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 97.820% | | | |

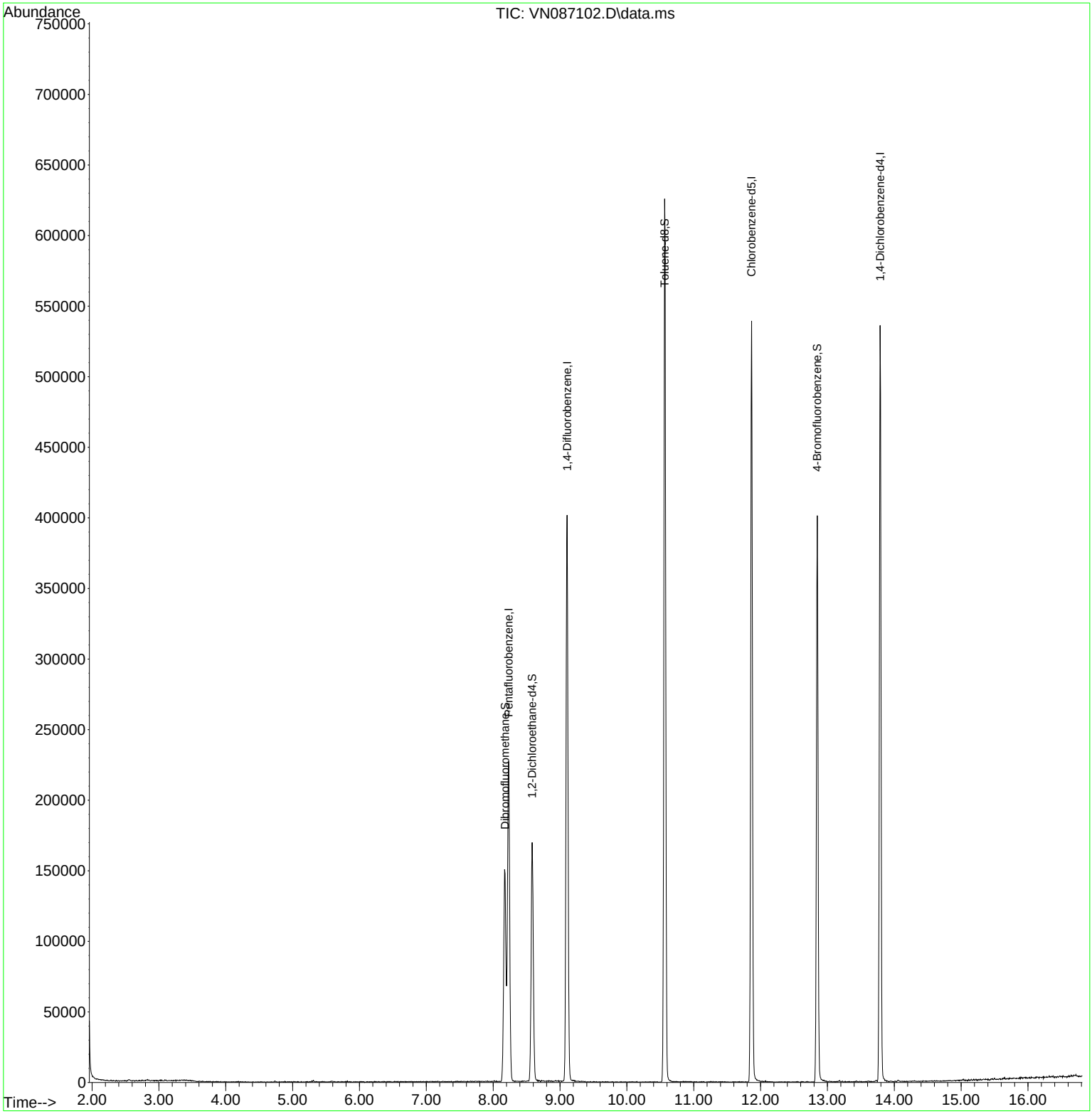
Target Compounds Qvalue

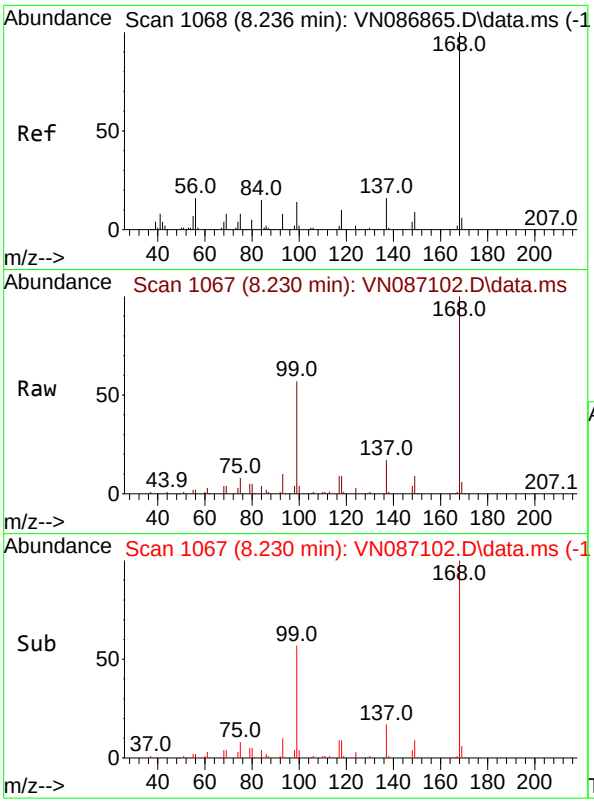
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087102.D
Acq On : 19 Jun 2025 10:26
Operator : JC\MD
Sample : VN0619WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
VN0619WBL01

Quant Time: Jun 20 01:20:55 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration



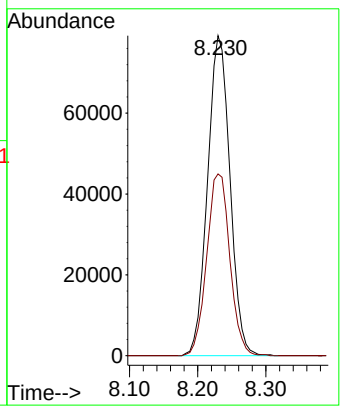


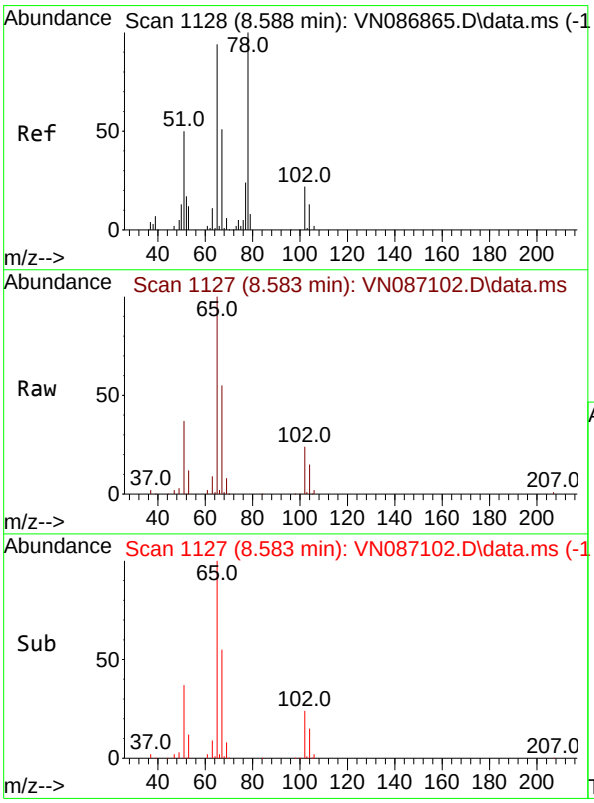

#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.230 min Scan# 1
Delta R.T. -0.006 min
Lab File: VN087102.D
Acq: 19 Jun 2025 10:26

**Instrument :**
MSVOA_N
**ClientSampleId :**
VN0619WBL01

Tgt Ion:168 Resp: 180966

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 168 | 100 | | |
| 99 | 56.8 | 49.1 | 73.7 |

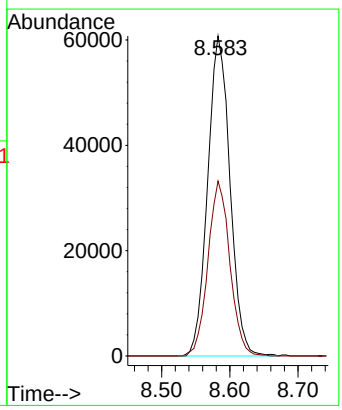


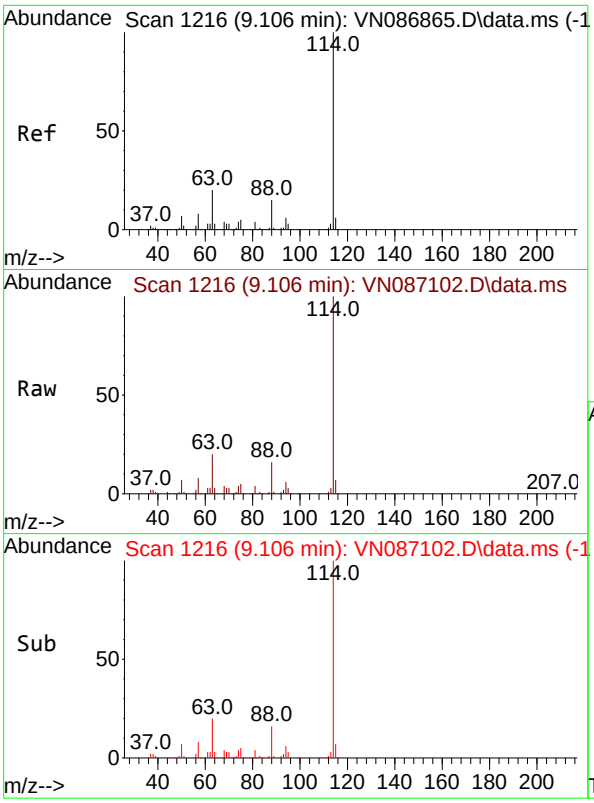




#33
1,2-Dichloroethane-d4
Concen: 57.091 ug/l
RT: 8.583 min Scan# 1127
Delta R.T. -0.006 min
Lab File: VN087102.D
Acq: 19 Jun 2025 10:26

Tgt Ion: 65 Resp: 138328

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 65 | 100 | | |
| 67 | 53.7 | 0.0 | 105.6 |



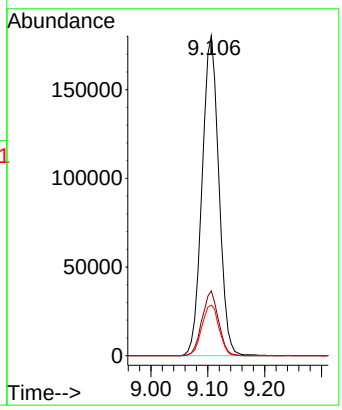


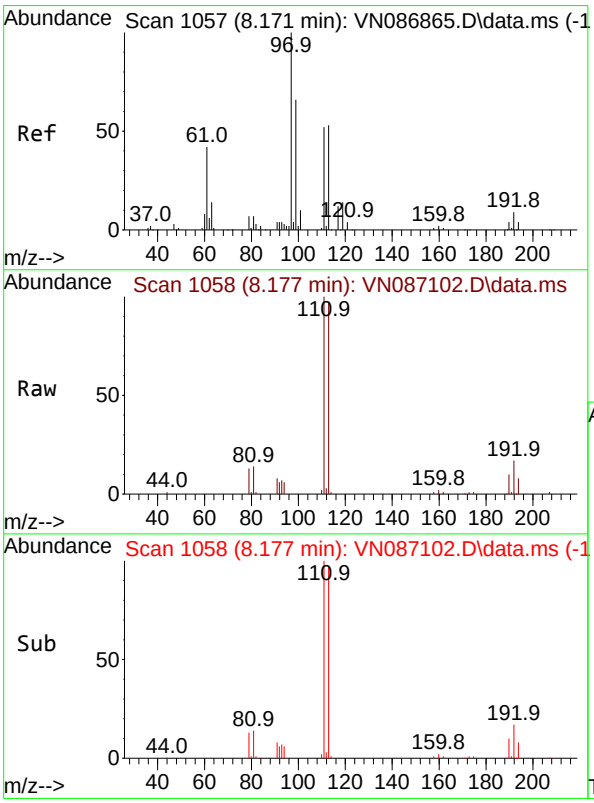

#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.106 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087102.D
Acq: 19 Jun 2025 10:26

**Instrument :**
MSVOA_N
**ClientSampleId :**
VN0619WBL01

Tgt Ion:114 Resp: 368878

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 114 | 100 | | |
| 63 | 20.2 | 0.0 | 39.6 |
| 88 | 15.8 | 0.0 | 30.2 |

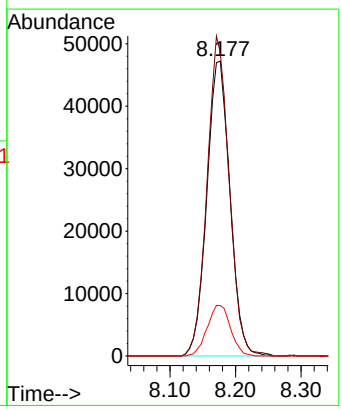


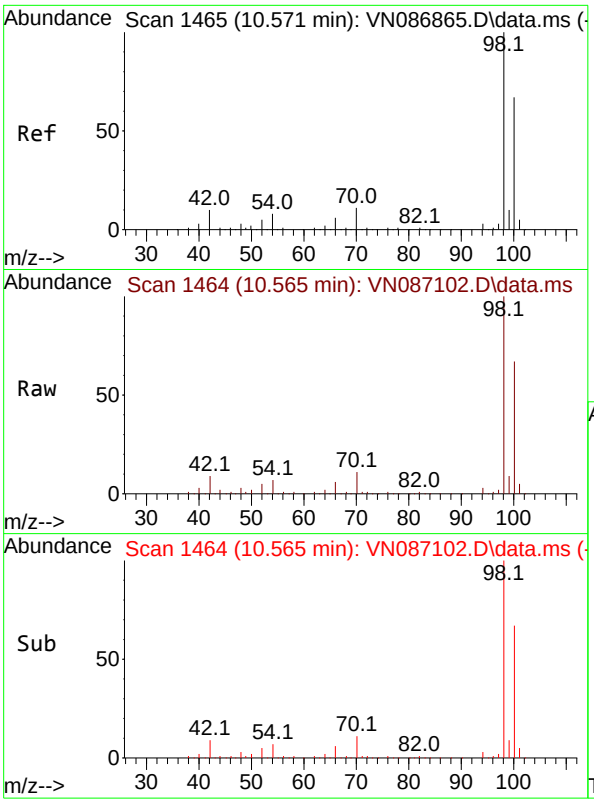




#35
Dibromofluoromethane
Concen: 53.071 ug/l
RT: 8.177 min Scan# 1058
Delta R.T. 0.006 min
Lab File: VN087102.D
Acq: 19 Jun 2025 10:26

Tgt Ion:113 Resp: 116016

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 113 | 100 | | |
| 111 | 103.6 | 84.2 | 126.2 |
| 192 | 17.3 | 14.2 | 21.4 |



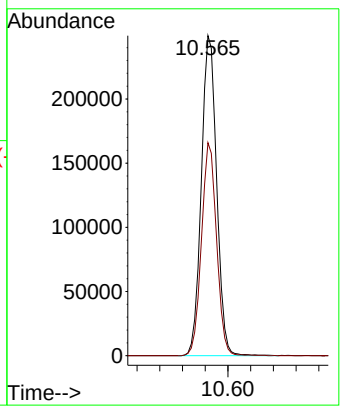


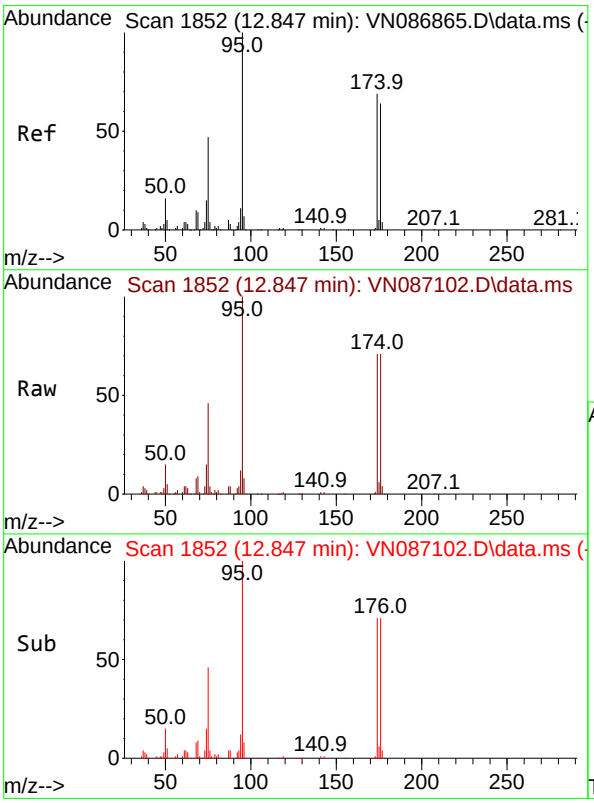

#50
Toluene-d8
Concen: 53.793 ug/l
RT: 10.565 min Scan# 14
Delta R.T. -0.006 min
Lab File: VN087102.D
Acq: 19 Jun 2025 10:26

**Instrument :**
MSVOA_N
**ClientSampleId :**
VN0619WBL01

Tgt Ion: 98 Resp: 465529

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 98 | 100 | | |
| 100 | 65.6 | 53.4 | 80.0 |

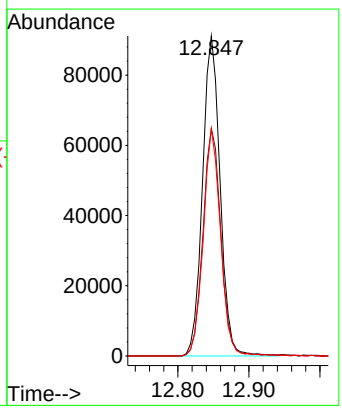


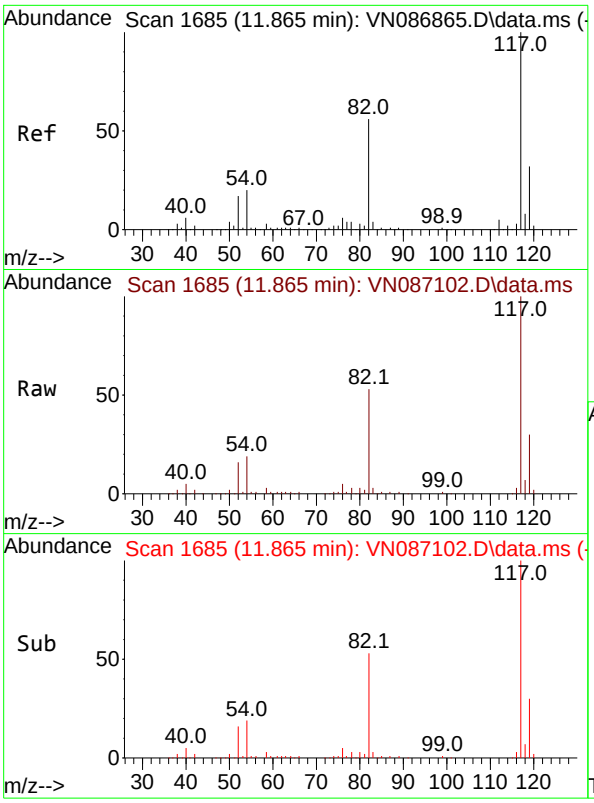




#62
4-Bromofluorobenzene
Concen: 48.914 ug/l
RT: 12.847 min Scan# 1852
Delta R.T. -0.000 min
Lab File: VN087102.D
Acq: 19 Jun 2025 10:26

Tgt Ion: 95 Resp: 157268

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 174 | 72.8 | 0.0 | 141.8 |
| 176 | 69.7 | 0.0 | 132.6 |



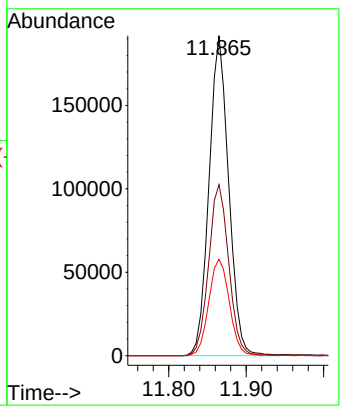


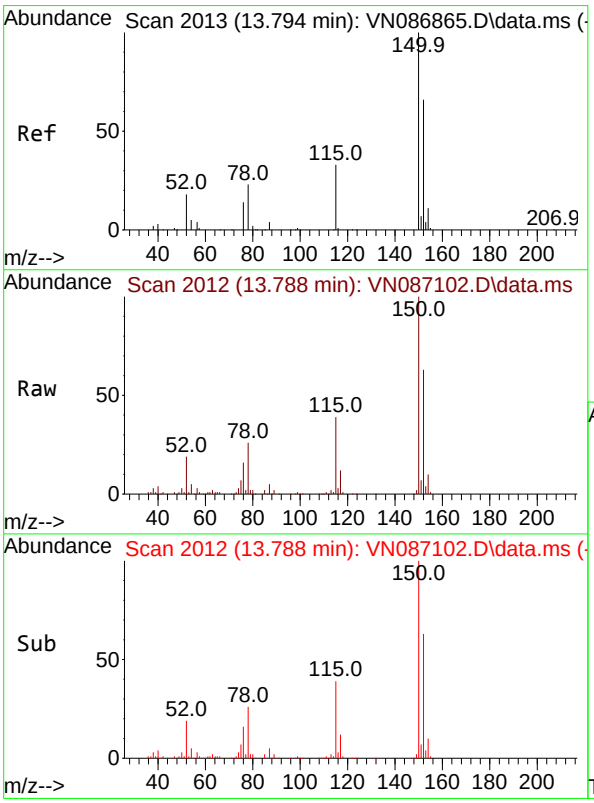

#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN087102.D
Acq: 19 Jun 2025 10:26

**Instrument :**
MSVOA_N
**ClientSampleId :**
VN0619WBL01

Tgt Ion:117 Resp: 337249

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 82 | 53.4 | 44.6 | 67.0 |
| 119 | 30.2 | 25.5 | 38.3 |

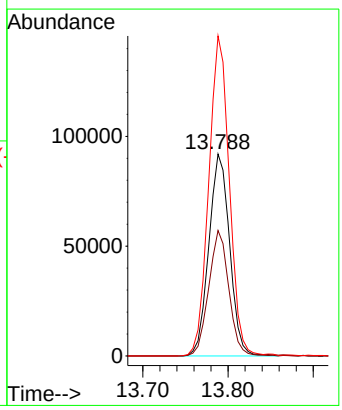



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2012
Delta R.T. -0.006 min
Lab File: VN087102.D
Acq: 19 Jun 2025 10:26

Tgt Ion:152 Resp: 156562

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 152 | 100 | | |
| 115 | 59.9 | 30.1 | 90.5 |
| 150 | 156.9 | 0.0 | 345.0 |



Raw Data: **VN087104.D**

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | |
| Client Sample ID: | VN0619WBS01 | SDG No.: | Q2333 |
| Lab Sample ID: | VN0619WBS01 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087104.D | 1 | | 06/19/25 12:22 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 1634-04-4 | Methyl tert-butyl Ether | 18.1 | | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 19.2 | | 0.15 | 1.00 | ug/L |
| 108-88-3 | Toluene | 19.5 | | 0.14 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 18.6 | | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 38.5 | | 0.24 | 2.00 | ug/L |
| 1330-20-7 | Total Xylenes | 57.2 | | 0.36 | 3.00 | ug/L |
| 95-47-6 | o-Xylene | 18.7 | | 0.12 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 18.1 | | 0.12 | 1.00 | ug/L |
| 103-65-1 | n-propylbenzene | 17.7 | | 0.13 | 1.00 | ug/L |
| 108-67-8 | 1,3,5-Trimethylbenzene | 18.2 | | 0.15 | 1.00 | ug/L |
| 98-06-6 | tert-Butylbenzene | 16.6 | | 0.14 | 1.00 | ug/L |
| 95-63-6 | 1,2,4-Trimethylbenzene | 18.1 | | 0.14 | 1.00 | ug/L |
| 135-98-8 | sec-Butylbenzene | 16.4 | | 0.13 | 1.00 | ug/L |
| 99-87-6 | p-Isopropyltoluene | 16.5 | | 0.13 | 1.00 | ug/L |
| 104-51-8 | n-Butylbenzene | 15.1 | | 0.15 | 1.00 | ug/L |
| 91-20-3 | Naphthalene | 16.4 | | 0.20 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 48.3 | | 74 - 125 | 97% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 53.3 | | 75 - 124 | 107% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 49.9 | | 86 - 113 | 100% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 50.3 | | 77 - 121 | 101% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 169000 | 8.23 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 301000 | 9.106 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 265000 | 11.865 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 133000 | 13.788 | | | |

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | |
| Client Sample ID: | VN0619WBS01 | SDG No.: | Q2333 |
| Lab Sample ID: | VN0619WBS01 | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087104.D | 1 | | 06/19/25 12:22 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087104.D
Acq On : 19 Jun 2025 12:22
Operator : JC\MD
Sample : VN0619WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 20 01:21:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VN0619WBS01

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.230 | 168 | 168651 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 300634 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 265368 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 132931 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.583 | 65 | 108975 | 48.261 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 96.520% | | | |
| 35) Dibromofluoromethane | 8.171 | 113 | 95048 | 53.349 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 106.700% | | | |
| 50) Toluene-d8 | 10.565 | 98 | 352249 | 49.943 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 99.880% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 131878 | 50.328 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 100.660% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.154 | 85 | 33152 | 19.715 | ug/l | 99 |
| 3) Chloromethane | 2.395 | 50 | 36144 | 16.645 | ug/l | 95 |
| 4) Vinyl Chloride | 2.554 | 62 | 45733 | 20.417 | ug/l | 98 |
| 5) Bromomethane | 3.001 | 94 | 24381 | 19.450 | ug/l | 97 |
| 6) Chloroethane | 3.154 | 64 | 29734 | 20.551 | ug/l | 97 |
| 7) Trichlorofluoromethane | 3.530 | 101 | 58381 | 19.949 | ug/l | 95 |
| 8) Diethyl Ether | 3.983 | 74 | 23263 | 18.244 | ug/l | 100 |
| 9) 1,1,2-Trichlorotrifluo... | 4.400 | 101 | 36694 | 19.957 | ug/l | 99 |
| 10) Methyl Iodide | 4.612 | 142 | 25387 | 10.651 | ug/l | 94 |
| 11) Tert butyl alcohol | 5.536 | 59 | 47889 | 78.161 | ug/l | 100 |
| 12) 1,1-Dichloroethene | 4.365 | 96 | 36579 | 19.487 | ug/l | 89 |
| 13) Acrolein | 4.200 | 56 | 14516 | 74.847 | ug/l | 99 |
| 14) Allyl chloride | 5.042 | 41 | 53678 | 17.243 | ug/l | 97 |
| 15) Acrylonitrile | 5.730 | 53 | 125605 | 87.707 | ug/l | 98 |
| 16) Acetone | 4.448 | 43 | 106591 | 89.014 | ug/l | 96 |
| 17) Carbon Disulfide | 4.742 | 76 | 106591 | 20.529 | ug/l | 99 |
| 18) Methyl Acetate | 5.053 | 43 | 52756 | 15.118 | ug/l | 96 |
| 19) Methyl tert-butyl Ether | 5.812 | 73 | 123313 | 18.143 | ug/l | 98 |
| 20) Methylene Chloride | 5.300 | 84 | 41638 | 18.573 | ug/l | 96 |
| 21) trans-1,2-Dichloroethene | 5.806 | 96 | 39921 | 19.115 | ug/l | 93 |
| 22) Diisopropyl ether | 6.689 | 45 | 116762 | 17.793 | ug/l | 96 |
| 23) Vinyl Acetate | 6.618 | 43 | 504210 | 90.941 | ug/l | 98 |
| 24) 1,1-Dichloroethane | 6.589 | 63 | 72207 | 19.121 | ug/l | 99 |
| 25) 2-Butanone | 7.489 | 43 | 158665 | 81.516 | ug/l | 99 |
| 26) 2,2-Dichloropropane | 7.500 | 77 | 62735 | 21.356 | ug/l | 100 |
| 27) cis-1,2-Dichloroethene | 7.500 | 96 | 47158 | 18.881 | ug/l | 99 |
| 28) Bromochloromethane | 7.824 | 49 | 30970 | 16.679 | ug/l | 93 |
| 29) Tetrahydrofuran | 7.847 | 42 | 104052 | 82.062 | ug/l | 97 |
| 30) Chloroform | 7.977 | 83 | 71775 | 19.032 | ug/l | 99 |
| 31) Cyclohexane | 8.265 | 56 | 64243 | 17.542 | ug/l | 96 |
| 32) 1,1,1-Trichloroethane | 8.177 | 97 | 61007 | 19.019 | ug/l | 94 |
| 36) 1,1-Dichloropropene | 8.377 | 75 | 52501 | 19.776 | ug/l | 98 |
| 37) Ethyl Acetate | 7.571 | 43 | 60681 | 17.955 | ug/l | 100 |
| 38) Carbon Tetrachloride | 8.365 | 117 | 51019 | 19.575 | ug/l | 99 |
| 39) Methylcyclohexane | 9.606 | 83 | 59566 | 16.377 | ug/l | 96 |
| 40) Benzene | 8.612 | 78 | 166491 | 19.178 | ug/l | 98 |

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087104.D
Acq On : 19 Jun 2025 12:22
Operator : JC\MD
Sample : VN0619WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 20 01:21:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VN0619WBS01

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 41) Methacrylonitrile | 7.788 | 41 | 30797 | 16.226 | ug/l | | 93 |
| 42) 1,2-Dichloroethane | 8.677 | 62 | 49646 | 18.854 | ug/l | | 100 |
| 43) Isopropyl Acetate | 8.694 | 43 | 93856 | 17.303 | ug/l | | 98 |
| 44) Trichloroethene | 9.353 | 130 | 40989 | 19.912 | ug/l | | 96 |
| 45) 1,2-Dichloropropane | 9.624 | 63 | 41287 | 19.548 | ug/l | | 96 |
| 46) Dibromomethane | 9.712 | 93 | 28698 | 20.457 | ug/l | | 98 |
| 47) Bromodichloromethane | 9.888 | 83 | 55507 | 19.231 | ug/l | | 98 |
| 48) Methyl methacrylate | 9.682 | 41 | 40484 | 16.216 | ug/l | | 95 |
| 49) 1,4-Dioxane | 9.700 | 88 | 15863 | 349.264 | ug/l | # | 99 |
| 51) 4-Methyl-2-Pentanone | 10.447 | 43 | 279386 | 85.559 | ug/l | | 99 |
| 52) Toluene | 10.629 | 92 | 103384 | 19.487 | ug/l | | 99 |
| 53) t-1,3-Dichloropropene | 10.835 | 75 | 61414 | 19.028 | ug/l | | 98 |
| 54) cis-1,3-Dichloropropene | 10.312 | 75 | 68133 | 19.730 | ug/l | | 97 |
| 55) 1,1,2-Trichloroethane | 11.018 | 97 | 40248 | 19.716 | ug/l | | 99 |
| 56) Ethyl methacrylate | 10.882 | 69 | 58604 | 18.024 | ug/l | | 94 |
| 57) 1,3-Dichloropropane | 11.165 | 76 | 68142 | 19.242 | ug/l | | 99 |
| 58) 2-Chloroethyl Vinyl ether | 10.159 | 63 | 170894 | 88.120 | ug/l | | 99 |
| 59) 2-Hexanone | 11.206 | 43 | 159103 | 75.642 | ug/l | | 92 |
| 60) Dibromochloromethane | 11.359 | 129 | 42423 | 19.946 | ug/l | | 99 |
| 61) 1,2-Dibromoethane | 11.471 | 107 | 40038 | 19.135 | ug/l | | 99 |
| 64) Tetrachloroethene | 11.106 | 164 | 31369 | 18.678 | ug/l | | 97 |
| 65) Chlorobenzene | 11.888 | 112 | 114996 | 19.648 | ug/l | | 100 |
| 66) 1,1,1,2-Tetrachloroethane | 11.959 | 131 | 36384 | 19.339 | ug/l | | 99 |
| 67) Ethyl Benzene | 11.965 | 91 | 187103 | 18.559 | ug/l | | 99 |
| 68) m/p-Xylenes | 12.071 | 106 | 148640 | 38.516 | ug/l | | 99 |
| 69) o-Xylene | 12.394 | 106 | 69033 | 18.678 | ug/l | | 100 |
| 70) Styrene | 12.412 | 104 | 121336 | 19.185 | ug/l | | 99 |
| 71) Bromoform | 12.576 | 173 | 28191 | 20.223 | ug/l | # | 98 |
| 73) Isopropylbenzene | 12.694 | 105 | 175452 | 18.117 | ug/l | | 100 |
| 74) N-amyl acetate | 12.529 | 43 | 59044m | 17.448 | ug/l | | |
| 75) 1,1,2,2-Tetrachloroethane | 12.935 | 83 | 62799 | 19.142 | ug/l | | 97 |
| 76) 1,2,3-Trichloropropane | 12.994 | 75 | 61035m | 19.316 | ug/l | | |
| 77) Bromobenzene | 12.976 | 156 | 43802 | 19.723 | ug/l | | 95 |
| 78) n-propylbenzene | 13.035 | 91 | 208663 | 17.730 | ug/l | | 99 |
| 79) 2-Chlorotoluene | 13.123 | 91 | 127425 | 18.054 | ug/l | | 99 |
| 80) 1,3,5-Trimethylbenzene | 13.171 | 105 | 145386 | 18.184 | ug/l | | 100 |
| 81) trans-1,4-Dichloro-2-b... | 12.735 | 75 | 24382 | 17.762 | ug/l | # | 89 |
| 82) 4-Chlorotoluene | 13.218 | 91 | 131206 | 18.373 | ug/l | | 99 |
| 83) tert-Butylbenzene | 13.435 | 119 | 121825 | 16.646 | ug/l | | 100 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 145127 | 18.101 | ug/l | | 99 |
| 85) sec-Butylbenzene | 13.618 | 105 | 174730 | 16.440 | ug/l | | 100 |
| 86) p-Isopropyltoluene | 13.729 | 119 | 144675 | 16.467 | ug/l | | 99 |
| 87) 1,3-Dichlorobenzene | 13.729 | 146 | 84829 | 19.414 | ug/l | | 99 |
| 88) 1,4-Dichlorobenzene | 13.812 | 146 | 85402 | 19.170 | ug/l | | 97 |
| 89) n-Butylbenzene | 14.053 | 91 | 128130 | 15.056 | ug/l | | 99 |
| 90) Hexachloroethane | 14.335 | 117 | 26285 | 17.650 | ug/l | | 98 |
| 91) 1,2-Dichlorobenzene | 14.106 | 146 | 79570 | 18.954 | ug/l | | 99 |
| 92) 1,2-Dibromo-3-Chloropr... | 14.717 | 75 | 13393 | 17.070 | ug/l | | 98 |
| 93) 1,2,4-Trichlorobenzene | 15.388 | 180 | 42786 | 15.961 | ug/l | | 100 |
| 94) Hexachlorobutadiene | 15.500 | 225 | 13103 | 13.119 | ug/l | | 98 |
| 95) Naphthalene | 15.635 | 128 | 163318 | 16.368 | ug/l | | 100 |
| 96) 1,2,3-Trichlorobenzene | 15.835 | 180 | 40941 | 15.372 | ug/l | | 100 |

Sample Results: **VN087104.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087104.D
Acq On : 19 Jun 2025 12:22
Operator : JC\MD
Sample : VN0619WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 20 01:21:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VN0619WBS01

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

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

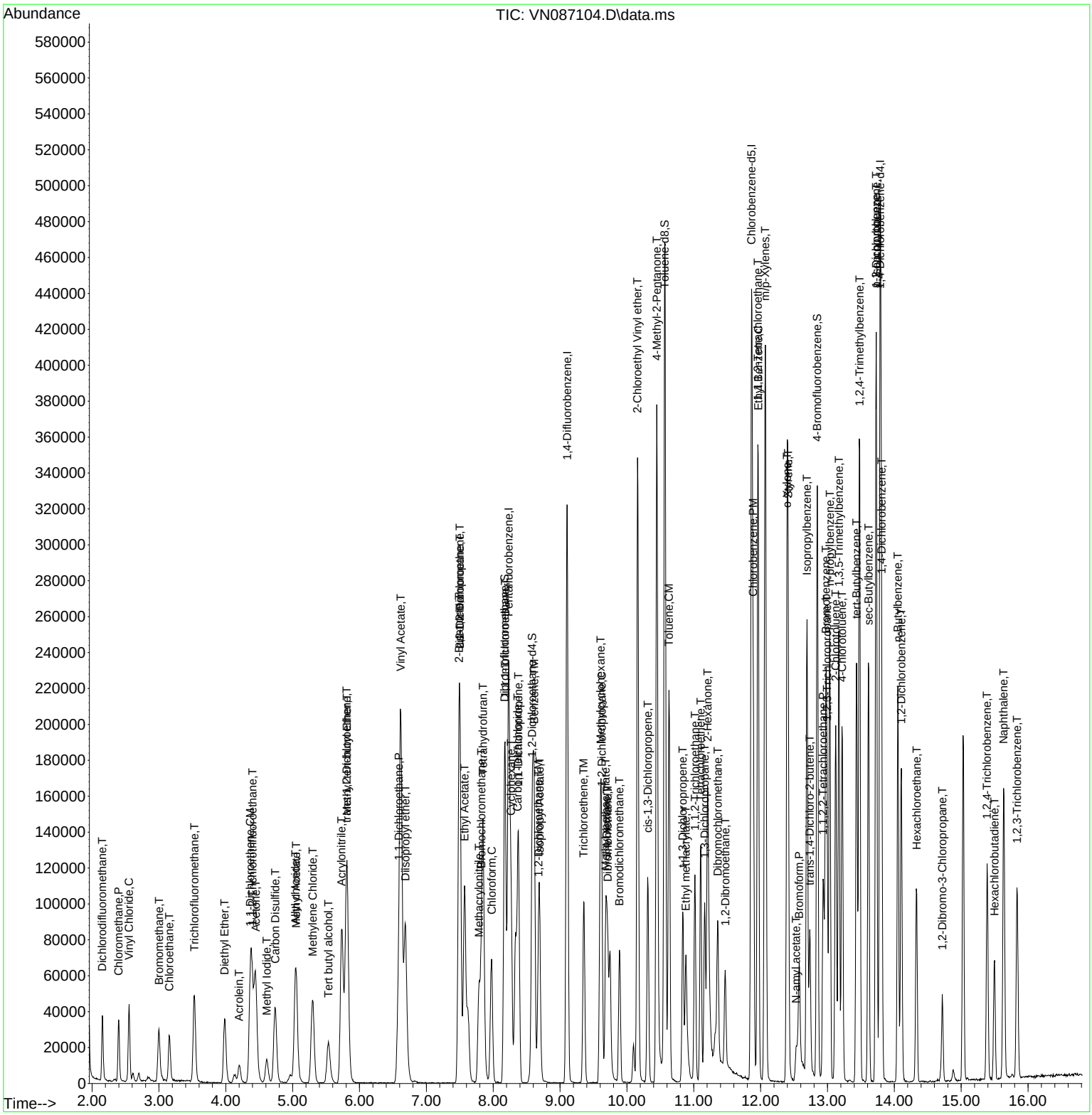
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087104.D
Acq On : 19 Jun 2025 12:22
Operator : JC\MD
Sample : VN0619WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 20 01:21:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
VN0619WBS01

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025



Raw Data: **VN087118.D**

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/13/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | TT172S1-20250613MS | SDG No.: | Q2333 |
| Lab Sample ID: | Q2329-11MS | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087118.D | 1 | | 06/19/25 17:31 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 1634-04-4 | Methyl tert-butyl Ether | 56.2 | | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 57.4 | | 0.15 | 1.00 | ug/L |
| 108-88-3 | Toluene | 58.6 | | 0.14 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 55.6 | | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 120 | | 0.24 | 2.00 | ug/L |
| 1330-20-7 | Total Xylenes | 179 | | 0.36 | 3.00 | ug/L |
| 95-47-6 | o-Xylene | 58.7 | | 0.12 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 54.2 | | 0.12 | 1.00 | ug/L |
| 103-65-1 | n-propylbenzene | 52.4 | | 0.13 | 1.00 | ug/L |
| 108-67-8 | 1,3,5-Trimethylbenzene | 54.3 | | 0.15 | 1.00 | ug/L |
| 98-06-6 | tert-Butylbenzene | 50.9 | | 0.14 | 1.00 | ug/L |
| 95-63-6 | 1,2,4-Trimethylbenzene | 54.7 | | 0.14 | 1.00 | ug/L |
| 135-98-8 | sec-Butylbenzene | 49.6 | | 0.13 | 1.00 | ug/L |
| 99-87-6 | p-Isopropyltoluene | 50.6 | | 0.13 | 1.00 | ug/L |
| 104-51-8 | n-Butylbenzene | 45.3 | | 0.15 | 1.00 | ug/L |
| 91-20-3 | Naphthalene | 52.9 | | 0.20 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 50.0 | | 74 - 125 | 100% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 55.7 | | 75 - 124 | 111% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 51.3 | | 86 - 113 | 103% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 52.6 | | 77 - 121 | 105% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 181000 | 8.23 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 323000 | 9.106 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 288000 | 11.865 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 146000 | 13.788 | | | |

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/13/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | TT172S1-20250613MS | SDG No.: | Q2333 |
| Lab Sample ID: | Q2329-11MS | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087118.D | 1 | | 06/19/25 17:31 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087118.D
Acq On : 19 Jun 2025 17:31
Operator : JC\MD
Sample : Q2329-11MS
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jun 20 01:29:27 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
TT172S1-20250613MS

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.230 | 168 | 180737 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 323339 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 287602 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 145576 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.582 | 65 | 121021 | 50.011 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 100.020% | | | |
| 35) Dibromofluoromethane | 8.177 | 113 | 106635 | 55.650 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 111.300% | | | |
| 50) Toluene-d8 | 10.565 | 98 | 389345 | 51.326 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 102.660% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 148165 | 52.573 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 105.140% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.153 | 85 | 100332 | 55.676 | ug/l | 100 |
| 3) Chloromethane | 2.395 | 50 | 113002 | 48.561 | ug/l | 97 |
| 4) Vinyl Chloride | 2.553 | 62 | 143221 | 59.664 | ug/l | 100 |
| 5) Bromomethane | 2.983 | 94 | 68685 | 51.131 | ug/l | 92 |
| 6) Chloroethane | 3.153 | 64 | 92057 | 59.370 | ug/l | 94 |
| 7) Trichlorofluoromethane | 3.524 | 101 | 185326 | 59.091 | ug/l | 97 |
| 8) Diethyl Ether | 3.977 | 74 | 79694 | 58.321 | ug/l | 94 |
| 9) 1,1,2-Trichlorotrifluo... | 4.400 | 101 | 113788 | 57.748 | ug/l | 99 |
| 10) Methyl Iodide | 4.618 | 142 | 80867 | 31.659 | ug/l | 99 |
| 11) Tert butyl alcohol | 5.541 | 59 | 171497 | 261.186 | ug/l | 99 |
| 12) 1,1-Dichloroethene | 4.365 | 96 | 117837 | 58.577 | ug/l | 98 |
| 13) Acrolein | 4.194 | 56 | 52266 | 251.473 | ug/l | 99 |
| 14) Allyl chloride | 5.047 | 41 | 169252 | 50.732 | ug/l | 94 |
| 15) Acrylonitrile | 5.736 | 53 | 413603 | 269.496 | ug/l | 99 |
| 16) Acetone | 4.442 | 43 | 314890 | 245.380 | ug/l | 98 |
| 17) Carbon Disulfide | 4.736 | 76 | 333594 | 59.951 | ug/l | 99 |
| 18) Methyl Acetate | 5.047 | 43 | 165839 | 44.346 | ug/l | 98 |
| 19) Methyl tert-butyl Ether | 5.818 | 73 | 409286 | 56.192 | ug/l | 100 |
| 20) Methylene Chloride | 5.300 | 84 | 132585 | 55.186 | ug/l | 96 |
| 21) trans-1,2-Dichloroethene | 5.806 | 96 | 127413 | 56.928 | ug/l | 94 |
| 22) Diisopropyl ether | 6.683 | 45 | 374500 | 53.253 | ug/l | 98 |
| 23) Vinyl Acetate | 6.618 | 43 | 1542168 | 259.551 | ug/l | 97 |
| 24) 1,1-Dichloroethane | 6.583 | 63 | 230943 | 57.065 | ug/l | 99 |
| 25) 2-Butanone | 7.494 | 43 | 519481 | 249.041 | ug/l | 97 |
| 26) 2,2-Dichloropropane | 7.500 | 77 | 172985 | 54.949 | ug/l | 100 |
| 27) cis-1,2-Dichloroethene | 7.500 | 96 | 153827 | 57.469 | ug/l | 96 |
| 28) Bromochloromethane | 7.824 | 49 | 95053 | 47.769 | ug/l | 92 |
| 29) Tetrahydrofuran | 7.847 | 42 | 344998 | 253.893 | ug/l | 95 |
| 30) Chloroform | 7.977 | 83 | 228488 | 56.534 | ug/l | 97 |
| 31) Cyclohexane | 8.265 | 56 | 200388 | 51.057 | ug/l | 93 |
| 32) 1,1,1-Trichloroethane | 8.177 | 97 | 193854 | 56.394 | ug/l | 99 |
| 36) 1,1-Dichloropropene | 8.377 | 75 | 167705 | 58.734 | ug/l | 100 |
| 37) Ethyl Acetate | 7.571 | 43 | 189405 | 52.109 | ug/l | 99 |
| 38) Carbon Tetrachloride | 8.371 | 117 | 163068 | 58.171 | ug/l | 98 |
| 39) Methylcyclohexane | 9.606 | 83 | 190684 | 48.745 | ug/l | 97 |
| 40) Benzene | 8.612 | 78 | 535976 | 57.404 | ug/l | 99 |

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087118.D
Acq On : 19 Jun 2025 17:31
Operator : JC\MD
Sample : Q2329-11MS
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jun 20 01:29:27 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
TT172S1-20250613MS

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 41) Methacrylonitrile | 7.782 | 41 | 103692 | 50.796 | ug/l | | 93 |
| 42) 1,2-Dichloroethane | 8.677 | 62 | 158483 | 55.962 | ug/l | | 100 |
| 43) Isopropyl Acetate | 8.694 | 43 | 291879 | 50.032 | ug/l | | 96 |
| 44) Trichloroethene | 9.359 | 130 | 215352 | 97.270 | ug/l | | 98 |
| 45) 1,2-Dichloropropane | 9.624 | 63 | 128642 | 56.632 | ug/l | | 99 |
| 46) Dibromomethane | 9.712 | 93 | 88375 | 58.573 | ug/l | | 99 |
| 47) Bromodichloromethane | 9.888 | 83 | 178318 | 57.442 | ug/l | | 98 |
| 48) Methyl methacrylate | 9.682 | 41 | 136295 | 50.759 | ug/l | | 94 |
| 49) 1,4-Dioxane | 9.706 | 88 | 57592 | 1178.993 | ug/l | # | 96 |
| 51) 4-Methyl-2-Pentanone | 10.447 | 43 | 944616 | 268.964 | ug/l | | 97 |
| 52) Toluene | 10.629 | 92 | 334253 | 58.579 | ug/l | | 99 |
| 53) t-1,3-Dichloropropene | 10.835 | 75 | 198096 | 57.068 | ug/l | | 98 |
| 54) cis-1,3-Dichloropropene | 10.312 | 75 | 209243 | 56.337 | ug/l | | 97 |
| 55) 1,1,2-Trichloroethane | 11.018 | 97 | 126737 | 57.724 | ug/l | | 99 |
| 56) Ethyl methacrylate | 10.876 | 69 | 209456 | 59.895 | ug/l | | 93 |
| 57) 1,3-Dichloropropane | 11.165 | 76 | 219270 | 57.571 | ug/l | | 99 |
| 59) 2-Hexanone | 11.200 | 43 | 632533 | 279.606 | ug/l | | 93 |
| 60) Dibromochloromethane | 11.359 | 129 | 138037 | 60.343 | ug/l | | 99 |
| 61) 1,2-Dibromoethane | 11.470 | 107 | 132627 | 58.934 | ug/l | | 98 |
| 64) Tetrachloroethene | 11.106 | 164 | 104229 | 57.264 | ug/l | | 95 |
| 65) Chlorobenzene | 11.894 | 112 | 362505 | 57.149 | ug/l | | 98 |
| 66) 1,1,1,2-Tetrachloroethane | 11.959 | 131 | 118036 | 57.889 | ug/l | | 99 |
| 67) Ethyl Benzene | 11.965 | 91 | 607039 | 55.559 | ug/l | | 99 |
| 68) m/p-Xylenes | 12.070 | 106 | 486047 | 116.211 | ug/l | | 98 |
| 69) o-Xylene | 12.394 | 106 | 235034 | 58.675 | ug/l | | 96 |
| 70) Styrene | 12.412 | 104 | 398866 | 58.190 | ug/l | | 99 |
| 71) Bromoform | 12.576 | 173 | 91748 | 60.729 | ug/l | # | 99 |
| 73) Isopropylbenzene | 12.694 | 105 | 574771 | 54.196 | ug/l | | 99 |
| 74) N-amyl acetate | 12.512 | 43 | 169068 | 45.621 | ug/l | | 95 |
| 75) 1,1,2,2-Tetrachloroethane | 12.935 | 83 | 199250 | 55.457 | ug/l | | 99 |
| 76) 1,2,3-Trichloropropane | 12.994 | 75 | 163580m | 47.272 | ug/l | | |
| 77) Bromobenzene | 12.982 | 156 | 139561 | 57.381 | ug/l | | 96 |
| 78) n-propylbenzene | 13.035 | 91 | 675516 | 52.413 | ug/l | | 99 |
| 79) 2-Chlorotoluene | 13.123 | 91 | 407496 | 52.721 | ug/l | | 97 |
| 80) 1,3,5-Trimethylbenzene | 13.170 | 105 | 475753 | 54.335 | ug/l | | 98 |
| 81) trans-1,4-Dichloro-2-b... | 12.735 | 75 | 79351 | 52.787 | ug/l | | 91 |
| 82) 4-Chlorotoluene | 13.217 | 91 | 419800 | 53.678 | ug/l | | 98 |
| 83) tert-Butylbenzene | 13.435 | 119 | 407771 | 50.876 | ug/l | | 99 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 480566 | 54.733 | ug/l | | 100 |
| 85) sec-Butylbenzene | 13.612 | 105 | 576942 | 49.567 | ug/l | | 100 |
| 86) p-Isopropyltoluene | 13.729 | 119 | 486569 | 50.571 | ug/l | | 98 |
| 87) 1,3-Dichlorobenzene | 13.729 | 146 | 268884 | 56.190 | ug/l | | 98 |
| 88) 1,4-Dichlorobenzene | 13.812 | 146 | 271234 | 55.596 | ug/l | | 100 |
| 89) n-Butylbenzene | 14.053 | 91 | 422443 | 45.329 | ug/l | | 99 |
| 90) Hexachloroethane | 14.329 | 117 | 86124 | 52.807 | ug/l | | 100 |
| 91) 1,2-Dichlorobenzene | 14.106 | 146 | 258146 | 56.151 | ug/l | | 100 |
| 92) 1,2-Dibromo-3-Chloropr... | 14.717 | 75 | 44690 | 52.011 | ug/l | | 95 |
| 93) 1,2,4-Trichlorobenzene | 15.388 | 180 | 141709 | 48.271 | ug/l | | 99 |
| 94) Hexachlorobutadiene | 15.494 | 225 | 42186 | 38.570 | ug/l | | 98 |
| 95) Naphthalene | 15.635 | 128 | 577711 | 52.869 | ug/l | | 99 |
| 96) 1,2,3-Trichlorobenzene | 15.835 | 180 | 137332 | 47.084 | ug/l | | 99 |

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087118.D
Acq On : 19 Jun 2025 17:31
Operator : JC\MD
Sample : Q2329-11MS
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 20 Sample Multiplier: 1

**Instrument :**
MSVOA_N
**ClientSampleId :**
TT172S1-20250613MS

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

Quant Time: Jun 20 01:29:27 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

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

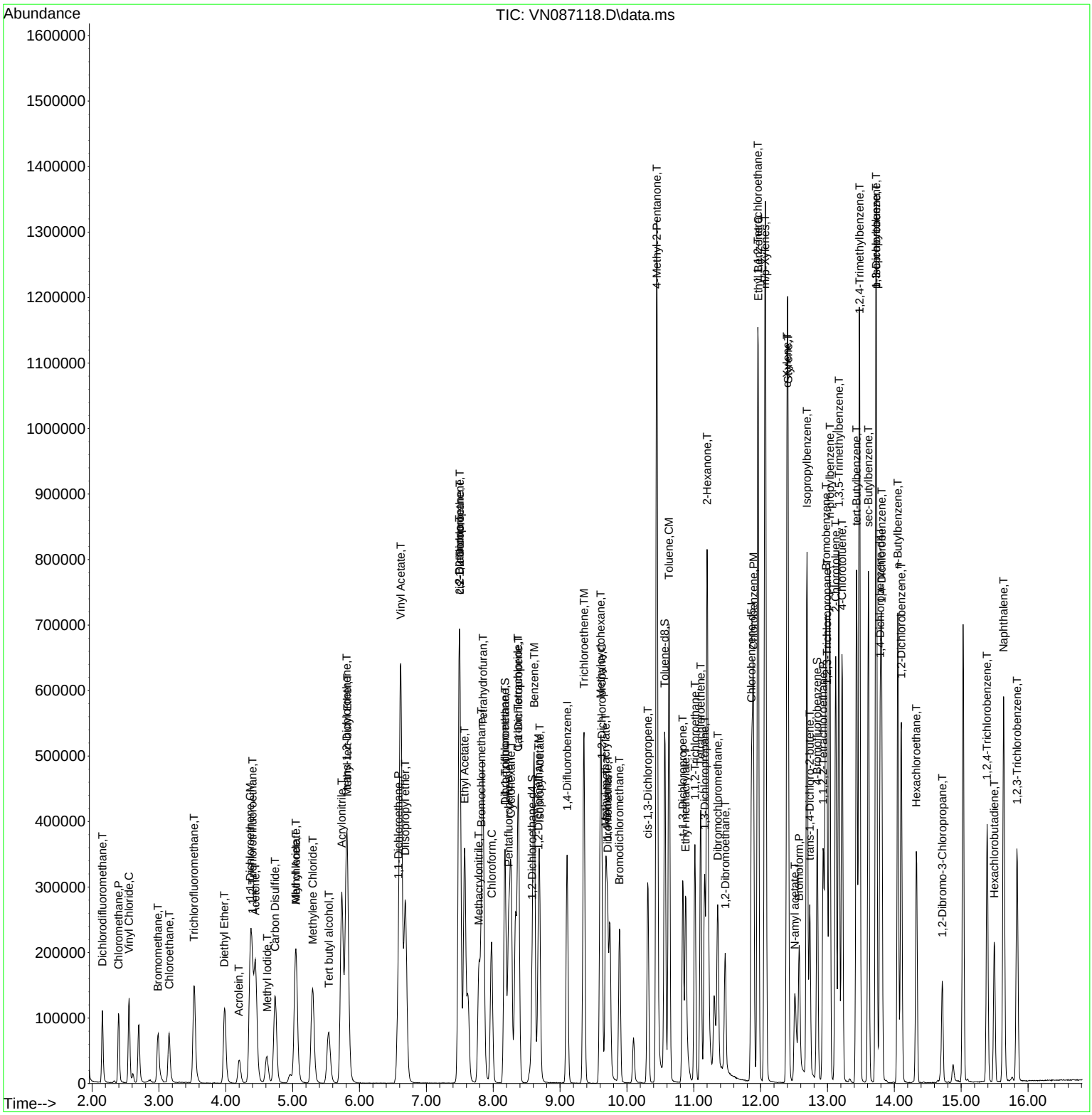
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087118.D
Acq On : 19 Jun 2025 17:31
Operator : JC\MD
Sample : Q2329-11MS
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jun 20 01:29:27 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
TT172S1-20250613MS

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025



Raw Data: **VN087119.D**

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/13/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | TT172S1-20250613MSD | SDG No.: | Q2333 |
| Lab Sample ID: | Q2329-12MSD | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087119.D | 1 | | 06/19/25 17:52 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| 1634-04-4 | Methyl tert-butyl Ether | 52.3 | | 0.16 | 1.00 | ug/L |
| 71-43-2 | Benzene | 53.1 | | 0.15 | 1.00 | ug/L |
| 108-88-3 | Toluene | 53.7 | | 0.14 | 1.00 | ug/L |
| 100-41-4 | Ethyl Benzene | 52.9 | | 0.13 | 1.00 | ug/L |
| 179601-23-1 | m/p-Xylenes | 110 | | 0.24 | 2.00 | ug/L |
| 1330-20-7 | Total Xylenes | 166 | | 0.36 | 3.00 | ug/L |
| 95-47-6 | o-Xylene | 55.9 | | 0.12 | 1.00 | ug/L |
| 98-82-8 | Isopropylbenzene | 51.7 | | 0.12 | 1.00 | ug/L |
| 103-65-1 | n-propylbenzene | 49.7 | | 0.13 | 1.00 | ug/L |
| 108-67-8 | 1,3,5-Trimethylbenzene | 51.1 | | 0.15 | 1.00 | ug/L |
| 98-06-6 | tert-Butylbenzene | 48.4 | | 0.14 | 1.00 | ug/L |
| 95-63-6 | 1,2,4-Trimethylbenzene | 52.0 | | 0.14 | 1.00 | ug/L |
| 135-98-8 | sec-Butylbenzene | 47.4 | | 0.13 | 1.00 | ug/L |
| 99-87-6 | p-Isopropyltoluene | 47.8 | | 0.13 | 1.00 | ug/L |
| 104-51-8 | n-Butylbenzene | 42.8 | | 0.15 | 1.00 | ug/L |
| 91-20-3 | Naphthalene | 50.2 | | 0.20 | 1.00 | ug/L |
| **SURROGATES** | | | | | | |
| 17060-07-0 | 1,2-Dichloroethane-d4 | 44.7 | | 74 - 125 | 89% | SPK: 50 |
| 1868-53-7 | Dibromofluoromethane | 49.1 | | 75 - 124 | 98% | SPK: 50 |
| 2037-26-5 | Toluene-d8 | 45.9 | | 86 - 113 | 92% | SPK: 50 |
| 460-00-4 | 4-Bromofluorobenzene | 46.6 | | 77 - 121 | 93% | SPK: 50 |
| **INTERNAL STANDARDS** | | | | | | |
| 363-72-4 | Pentafluorobenzene | 177000 | 8.23 | | | |
| 540-36-3 | 1,4-Difluorobenzene | 324000 | 9.106 | | | |
| 3114-55-4 | Chlorobenzene-d5 | 282000 | 11.865 | | | |
| 3855-82-1 | 1,4-Dichlorobenzene-d4 | 142000 | 13.788 | | | |

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | LiRo Engineers, Inc. | Date Collected: | 06/13/25 |
| Project: | RFK Bridge RMB-Randall Island | Date Received: | 06/13/25 |
| Client Sample ID: | TT172S1-20250613MSD | SDG No.: | Q2333 |
| Lab Sample ID: | Q2329-12MSD | Matrix: | Water |
| Analytical Method: | 8260D | % Solid: | 0 |
| Sample Wt/Vol: | 5 Units: mL | Final Vol: | 5000 uL |
| Soil Aliquot Vol: | uL | Test: | VOCMS Group1 |
| GC Column: | RXI-624 ID : 0.25 | Level : | LOW |
| Prep Method : | | | |

| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
|---|---|---|---|---|
| VN087119.D | 1 | | 06/19/25 17:52 | VN061925 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087119.D
Acq On : 19 Jun 2025 17:52
Operator : JC\MD
Sample : Q2329-12MSD
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jun 20 01:30:25 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
TT172S1-20250613MSD

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Pentafluorobenzene | 8.230 | 168 | 177485 | 50.000 | ug/l | 0.00 |
| 34) 1,4-Difluorobenzene | 9.106 | 114 | 324249 | 50.000 | ug/l | 0.00 |
| 63) Chlorobenzene-d5 | 11.865 | 117 | 281966 | 50.000 | ug/l | 0.00 |
| 72) 1,4-Dichlorobenzene-d4 | 13.788 | 152 | 142178 | 50.000 | ug/l | 0.00 |
| System Monitoring Compounds | | | | | | |
| 33) 1,2-Dichloroethane-d4 | 8.583 | 65 | 106321 | 44.742 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 74 - 125 | | Recovery = 89.480% | | | |
| 35) Dibromofluoromethane | 8.171 | 113 | 94304 | 49.076 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 75 - 124 | | Recovery = 98.160% | | | |
| 50) Toluene-d8 | 10.565 | 98 | 349005 | 45.879 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 86 - 113 | | Recovery = 91.760% | | | |
| 62) 4-Bromofluorobenzene | 12.847 | 95 | 131657 | 46.584 | ug/l | 0.00 |
| Spiked Amount 50.000 | Range 77 - 121 | | Recovery = 93.160% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 2.154 | 85 | 91097 | 51.478 | ug/l | 99 |
| 3) Chloromethane | 2.395 | 50 | 103151 | 45.140 | ug/l | 99 |
| 4) Vinyl Chloride | 2.554 | 62 | 132183 | 56.075 | ug/l | 99 |
| 5) Bromomethane | 2.989 | 94 | 71309 | 54.057 | ug/l | 92 |
| 6) Chloroethane | 3.154 | 64 | 84512 | 55.503 | ug/l | 93 |
| 7) Trichlorofluoromethane | 3.530 | 101 | 168464 | 54.699 | ug/l | 100 |
| 8) Diethyl Ether | 3.983 | 74 | 74805 | 55.746 | ug/l | 92 |
| 9) 1,1,2-Trichlorotrifluo... | 4.395 | 101 | 103505 | 53.492 | ug/l | 99 |
| 10) Methyl Iodide | 4.612 | 142 | 92527 | 36.888 | ug/l | 98 |
| 11) Tert butyl alcohol | 5.536 | 59 | 156895 | 243.326 | ug/l | 98 |
| 12) 1,1-Dichloroethene | 4.371 | 96 | 109245 | 55.301 | ug/l | 93 |
| 13) Acrolein | 4.200 | 56 | 42318 | 207.340 | ug/l | 100 |
| 14) Allyl chloride | 5.048 | 41 | 153558 | 46.871 | ug/l | 95 |
| 15) Acrylonitrile | 5.736 | 53 | 381061 | 252.842 | ug/l | 99 |
| 16) Acetone | 4.448 | 43 | 286922 | 227.682 | ug/l | 100 |
| 17) Carbon Disulfide | 4.736 | 76 | 309512 | 56.642 | ug/l | 99 |
| 18) Methyl Acetate | 5.048 | 43 | 151644 | 41.293 | ug/l | 96 |
| 19) Methyl tert-butyl Ether | 5.812 | 73 | 374361 | 52.338 | ug/l | 98 |
| 20) Methylene Chloride | 5.295 | 84 | 125128 | 53.036 | ug/l | 93 |
| 21) trans-1,2-Dichloroethene | 5.812 | 96 | 117148 | 53.301 | ug/l | 92 |
| 22) Diisopropyl ether | 6.683 | 45 | 340365 | 49.286 | ug/l | 96 |
| 23) Vinyl Acetate | 6.618 | 43 | 1432710 | 245.547 | ug/l | 97 |
| 24) 1,1-Dichloroethane | 6.583 | 63 | 213618 | 53.751 | ug/l | 100 |
| 25) 2-Butanone | 7.489 | 43 | 478559 | 233.627 | ug/l | 96 |
| 26) 2,2-Dichloropropane | 7.500 | 77 | 158168 | 51.163 | ug/l | 99 |
| 27) cis-1,2-Dichloroethene | 7.500 | 96 | 141666 | 53.896 | ug/l | 96 |
| 28) Bromochloromethane | 7.824 | 49 | 86952 | 44.499 | ug/l | 92 |
| 29) Tetrahydrofuran | 7.847 | 42 | 311959 | 233.785 | ug/l | 94 |
| 30) Chloroform | 7.977 | 83 | 208999 | 52.659 | ug/l | 96 |
| 31) Cyclohexane | 8.265 | 56 | 182112 | 47.251 | ug/l | 94 |
| 32) 1,1,1-Trichloroethane | 8.177 | 97 | 178740 | 52.950 | ug/l | 97 |
| 36) 1,1-Dichloropropene | 8.377 | 75 | 153809 | 53.717 | ug/l | 98 |
| 37) Ethyl Acetate | 7.565 | 43 | 173325 | 47.551 | ug/l | 99 |
| 38) Carbon Tetrachloride | 8.371 | 117 | 150377 | 53.493 | ug/l | 98 |
| 39) Methylcyclohexane | 9.606 | 83 | 174796 | 44.558 | ug/l | 97 |
| 40) Benzene | 8.612 | 78 | 497556 | 53.139 | ug/l | 100 |

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087119.D
Acq On : 19 Jun 2025 17:52
Operator : JC\MD
Sample : Q2329-12MSD
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jun 20 01:30:25 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
TT172S1-20250613MSD

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 41) Methacrylonitrile | 7.789 | 41 | 93397 | 45.624 | ug/l | | 90 |
| 42) 1,2-Dichloroethane | 8.677 | 62 | 146825 | 51.700 | ug/l | | 100 |
| 43) Isopropyl Acetate | 8.694 | 43 | 269980 | 46.148 | ug/l | | 95 |
| 44) Trichloroethene | 9.359 | 130 | 206823 | 93.156 | ug/l | | 97 |
| 45) 1,2-Dichloropropane | 9.624 | 63 | 119679 | 52.538 | ug/l | | 98 |
| 46) Dibromomethane | 9.712 | 93 | 82681 | 54.645 | ug/l | | 99 |
| 47) Bromodichloromethane | 9.888 | 83 | 165037 | 53.015 | ug/l | | 99 |
| 48) Methyl methacrylate | 9.682 | 41 | 126622 | 47.024 | ug/l | | 95 |
| 49) 1,4-Dioxane | 9.700 | 88 | 51559 | 1052.526 | ug/l | # | 95 |
| 51) 4-Methyl-2-Pentanone | 10.447 | 43 | 869262 | 246.814 | ug/l | | 98 |
| 52) Toluene | 10.629 | 92 | 307149 | 53.678 | ug/l | | 99 |
| 53) t-1,3-Dichloropropene | 10.835 | 75 | 182930 | 52.551 | ug/l | | 99 |
| 54) cis-1,3-Dichloropropene | 10.312 | 75 | 195053 | 52.369 | ug/l | | 94 |
| 55) 1,1,2-Trichloroethane | 11.018 | 97 | 115996 | 52.683 | ug/l | | 99 |
| 56) Ethyl methacrylate | 10.882 | 69 | 194990 | 55.602 | ug/l | | 94 |
| 57) 1,3-Dichloropropane | 11.165 | 76 | 202641 | 53.055 | ug/l | | 100 |
| 59) 2-Hexanone | 11.200 | 43 | 576643 | 254.185 | ug/l | | 93 |
| 60) Dibromochloromethane | 11.359 | 129 | 128464 | 56.000 | ug/l | | 99 |
| 61) 1,2-Dibromoethane | 11.471 | 107 | 121399 | 53.793 | ug/l | | 99 |
| 64) Tetrachloroethene | 11.106 | 164 | 96507 | 54.082 | ug/l | | 96 |
| 65) Chlorobenzene | 11.888 | 112 | 336372 | 54.089 | ug/l | | 98 |
| 66) 1,1,1,2-Tetrachloroethane | 11.959 | 131 | 110949 | 55.501 | ug/l | | 99 |
| 67) Ethyl Benzene | 11.965 | 91 | 567034 | 52.935 | ug/l | | 99 |
| 68) m/p-Xylenes | 12.071 | 106 | 451077 | 110.005 | ug/l | | 97 |
| 69) o-Xylene | 12.394 | 106 | 219362 | 55.857 | ug/l | | 95 |
| 70) Styrene | 12.412 | 104 | 373229 | 55.538 | ug/l | | 98 |
| 71) Bromoform | 12.576 | 173 | 85568 | 57.770 | ug/l | # | 100 |
| 73) Isopropylbenzene | 12.694 | 105 | 535971 | 51.746 | ug/l | | 100 |
| 74) N-amyl acetate | 12.512 | 43 | 154996 | 42.823 | ug/l | | 97 |
| 75) 1,1,2,2-Tetrachloroethane | 12.935 | 83 | 184105 | 52.467 | ug/l | | 98 |
| 76) 1,2,3-Trichloropropane | 12.988 | 75 | 172985m | 51.185 | ug/l | | |
| 77) Bromobenzene | 12.976 | 156 | 130562 | 54.964 | ug/l | | 94 |
| 78) n-propylbenzene | 13.035 | 91 | 625891 | 49.723 | ug/l | | 99 |
| 79) 2-Chlorotoluene | 13.123 | 91 | 380272 | 50.375 | ug/l | | 97 |
| 80) 1,3,5-Trimethylbenzene | 13.171 | 105 | 437368 | 51.145 | ug/l | | 99 |
| 81) trans-1,4-Dichloro-2-b... | 12.735 | 75 | 73016 | 49.733 | ug/l | | 90 |
| 82) 4-Chlorotoluene | 13.218 | 91 | 391800 | 51.295 | ug/l | | 98 |
| 83) tert-Butylbenzene | 13.435 | 119 | 378819 | 48.393 | ug/l | | 99 |
| 84) 1,2,4-Trimethylbenzene | 13.482 | 105 | 445991 | 52.009 | ug/l | | 100 |
| 85) sec-Butylbenzene | 13.612 | 105 | 538763 | 47.394 | ug/l | | 100 |
| 86) p-Isopropyltoluene | 13.723 | 119 | 449281 | 47.811 | ug/l | | 99 |
| 87) 1,3-Dichlorobenzene | 13.729 | 146 | 247185 | 52.890 | ug/l | | 99 |
| 88) 1,4-Dichlorobenzene | 13.812 | 146 | 253319 | 53.165 | ug/l | | 99 |
| 89) n-Butylbenzene | 14.053 | 91 | 389128 | 42.752 | ug/l | | 99 |
| 90) Hexachloroethane | 14.329 | 117 | 80747 | 50.694 | ug/l | | 99 |
| 91) 1,2-Dichlorobenzene | 14.106 | 146 | 236809 | 52.741 | ug/l | | 100 |
| 92) 1,2-Dibromo-3-Chloropr... | 14.717 | 75 | 41104 | 48.981 | ug/l | | 95 |
| 93) 1,2,4-Trichlorobenzene | 15.388 | 180 | 134773 | 47.005 | ug/l | | 100 |
| 94) Hexachlorobutadiene | 15.500 | 225 | 39567 | 37.040 | ug/l | | 99 |
| 95) Naphthalene | 15.635 | 128 | 535992 | 50.223 | ug/l | | 100 |
| 96) 1,2,3-Trichlorobenzene | 15.835 | 180 | 129799 | 45.564 | ug/l | | 100 |

Sample Results: **VN087119.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087119.D
Acq On : 19 Jun 2025 17:52
Operator : JC\MD
Sample : Q2329-12MSD
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jun 20 01:30:25 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
TT172S1-20250613MSD

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

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

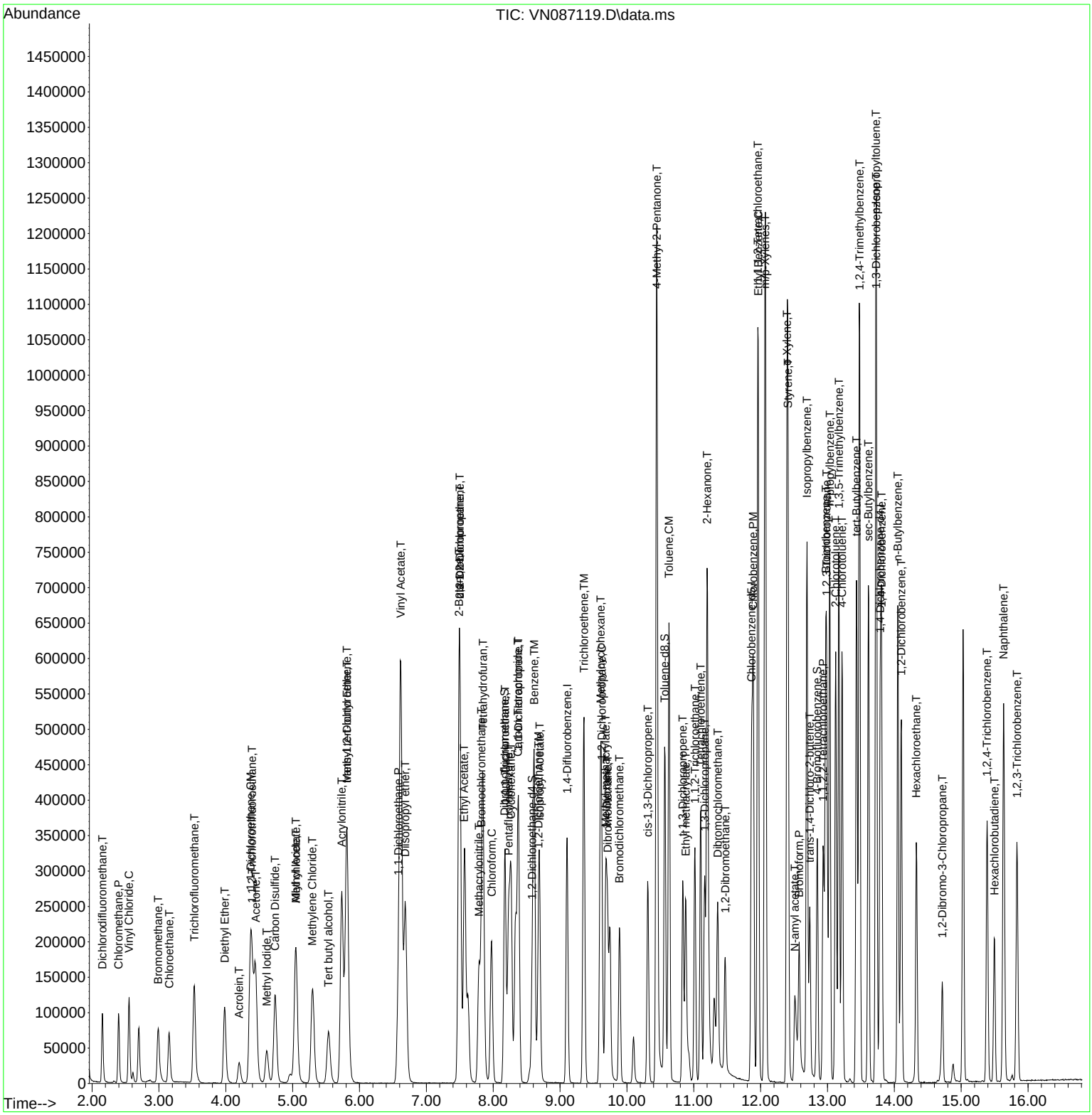
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN061925\
Data File : VN087119.D
Acq On : 19 Jun 2025 17:52
Operator : JC\MD
Sample : Q2329-12MSD
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jun 20 01:30:25 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N060625W.M
Quant Title : SW846 8260
QLast Update : Sat Jun 07 02:12:50 2025
Response via : Initial Calibration

**Instrument :**
MSVOA_N
**ClientSampleId :**
TT172S1-20250613MSD

**Manual Integrations APPROVED**

Reviewed By :John Carlone 06/20/2025
Supervised By :Mahesh Dadoda 06/21/2025



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

# Manual Integration Report

| Sequence: | vn060625 | Instrument | MSVOA_n |
|---|---|---|---|

| Sample ID | File ID | Parameter | Review By | Review On | Supervised By | Supervised On | Reason |
|---|---|---|---|---|---|---|---|
| VSTDICC001 | VN086862.D | 1,1,2-Trichlorotrifluoroethane | JOHN | 6/9/2025 8:02:09 AM | MMDadoda | 6/9/2025 1:13:18 PM | Peak Integrated by Software |
| VSTDICC001 | VN086862.D | 1,2,3-Trichloropropane | JOHN | 6/9/2025 8:02:09 AM | MMDadoda | 6/9/2025 1:13:18 PM | Peak Integrated by Software |
| VSTDICC001 | VN086862.D | 1,4-Dichlorobenzene | JOHN | 6/9/2025 8:02:09 AM | MMDadoda | 6/9/2025 1:13:18 PM | Peak Integrated by Software |
| VSTDICC001 | VN086862.D | 2-Hexanone | JOHN | 6/9/2025 8:02:09 AM | MMDadoda | 6/9/2025 1:13:18 PM | Peak Integrated by Software |
| VSTDICC001 | VN086862.D | N-amyl acetate | JOHN | 6/9/2025 8:02:09 AM | MMDadoda | 6/9/2025 1:13:18 PM | Peak Integrated by Software |
| VSTDICC005 | VN086863.D | 1,2,3-Trichloropropane | JOHN | 6/9/2025 8:02:13 AM | MMDadoda | 6/9/2025 1:13:19 PM | Peak Integrated by Software |
| VSTDICC005 | VN086863.D | N-amyl acetate | JOHN | 6/9/2025 8:02:13 AM | MMDadoda | 6/9/2025 1:13:19 PM | Peak Integrated by Software |
| VSTDICC020 | VN086864.D | 1,2,3-Trichloropropane | JOHN | 6/9/2025 8:02:19 AM | MMDadoda | 6/9/2025 1:13:21 PM | Peak Integrated by Software |
| VSTDICCC050 | VN086865.D | 1,2,3-Trichloropropane | JOHN | 6/9/2025 8:02:25 AM | MMDadoda | 6/9/2025 1:13:23 PM | Peak Integrated by Software |
| VSTDICC100 | VN086866.D | 1,2,3-Trichloropropane | JOHN | 6/9/2025 8:02:29 AM | MMDadoda | 6/9/2025 1:13:28 PM | Peak Integrated by Software |
| VSTDICC150 | VN086867.D | 1,2,3-Trichloropropane | JOHN | 6/9/2025 8:02:34 AM | MMDadoda | 6/9/2025 1:13:30 PM | Peak Integrated by Software |
| VSTDICV050 | VN086869.D | 1,2,3-Trichloropropane | JOHN | 6/9/2025 8:02:38 AM | MMDadoda | 6/9/2025 1:13:34 PM | Peak Integrated by Software |
| VSTDCCC050 | VN086886.D | 1,2,3-Trichloropropane | JOHN | 6/9/2025 8:02:55 AM | MMDadoda | 6/9/2025 1:13:44 PM | Peak Integrated by Software |

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

# Manual Integration Report

| Sequence: | vn060625 | Instrument | MSVOA_n |
|---|---|---|---|

| Sample ID | File ID | Parameter | Review By | Review On | Supervised By | Supervised On | Reason |
|---|---|---|---|---|---|---|---|

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

# Manual Integration Report

| Sequence: | VN061925 | Instrument | MSVOA_n |
|---|---|---|---|

| Sample ID | File ID | Parameter | Review By | Review On | Supervised By | Supervised On | Reason |
|---|---|---|---|---|---|---|---|
| VSTDCCC050 | VN087100.D | 1,2,3-Trichloropropane | JOHN | 6/20/2025 8:46:16 AM | MMdadoda | 6/21/2025 12:22:57 AM | Peak Integrated by Software |
| VN0619WBS01 | VN087104.D | 1,2,3-Trichloropropane | JOHN | 6/20/2025 8:46:21 AM | MMdadoda | 6/21/2025 12:23:01 AM | Peak Integrated by Software |
| VN0619WBS01 | VN087104.D | N-amyl acetate | JOHN | 6/20/2025 8:46:21 AM | MMdadoda | 6/21/2025 12:23:01 AM | Peak Integrated by Software |
| Q2333-01 | VN087106.D | n-Butylbenzene | JOHN | 6/20/2025 8:46:31 AM | MMdadoda | 6/21/2025 12:23:09 AM | Peak Integrated by Software |
| Q2333-02 | VN087107.D | n-Butylbenzene | JOHN | 6/20/2025 8:46:38 AM | MMdadoda | 6/21/2025 12:23:13 AM | Peak Integrated by Software |
| Q2333-02 | VN087107.D | p-Isopropyltoluene | JOHN | 6/20/2025 8:46:38 AM | MMdadoda | 6/21/2025 12:23:13 AM | Peak Integrated by Software |
| Q2333-02 | VN087107.D | sec-Butylbenzene | JOHN | 6/20/2025 8:46:38 AM | MMdadoda | 6/21/2025 12:23:13 AM | Peak Integrated by Software |
| Q2333-06 | VN087111.D | 1,3,5-Trimethylbenzene | JOHN | 6/20/2025 8:46:44 AM | MMdadoda | 6/21/2025 12:23:18 AM | Peak Integrated by Software |
| Q2333-06 | VN087111.D | n-Butylbenzene | JOHN | 6/20/2025 8:46:44 AM | MMdadoda | 6/21/2025 12:23:18 AM | Peak Integrated by Software |
| Q2333-06 | VN087111.D | sec-Butylbenzene | JOHN | 6/20/2025 8:46:44 AM | MMdadoda | 6/21/2025 12:23:18 AM | Peak Integrated by Software |
| Q2333-06DL | VN087116.D | 1,3,5-Trimethylbenzene | JOHN | 6/20/2025 8:46:50 AM | MMdadoda | 6/21/2025 12:23:41 AM | Peak Integrated by Software |
| Q2333-06DL | VN087116.D | n-Butylbenzene | JOHN | 6/20/2025 8:46:50 AM | MMdadoda | 6/21/2025 12:23:41 AM | Peak Integrated by Software |
| Q2333-06DL | VN087116.D | sec-Butylbenzene | JOHN | 6/20/2025 8:46:50 AM | MMdadoda | 6/21/2025 12:23:41 AM | Peak Integrated by Software |

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# Manual Integration Report

| Sequence: | VN061925 | Instrument | MSVOA_n |
|---|---|---|---|

| Sample ID | File ID | Parameter | Review By | Review On | Supervised By | Supervised On | Reason |
|---|---|---|---|---|---|---|---|
| Q2329-11MS | VN087118.D | 1,2,3-Trichloropropane | JOHN | 6/20/2025 8:48:09 AM | MMdadoda | 6/21/2025 12:23:24 AM | Peak Integrated by Software |
| Q2329-12MSD | VN087119.D | 1,2,3-Trichloropropane | JOHN | 6/20/2025 8:48:14 AM | MMdadoda | 6/21/2025 12:23:28 AM | Peak Integrated by Software |
| VSTDCCC050 | VN087120.D | 1,2,3-Trichloropropane | JOHN | 6/20/2025 8:48:18 AM | MMdadoda | 6/21/2025 12:23:33 AM | Peak Integrated by Software |
| VSTDCCC050 | VN087120.D | N-amyl acetate | JOHN | 6/20/2025 8:48:18 AM | MMdadoda | 6/21/2025 12:23:33 AM | Peak Integrated by Software |

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Fax : 908 789 8922

**Instrument ID: MSVOA_N**

## Daily Analysis Runlog For Sequence/QCBatch ID # VN060625

| | | | | | |
|---|---|---|---|---|---|
| Review By | John Carlone | Review On | 6/9/2025 8:08:23 AM | | |
| Supervise By | Mahesh Dadoda | Supervise On | 6/9/2025 1:13:51 PM | | |
| SubDirectory | VN060625 | HP Acquire Method | | HP Processing Method | 82N060625W.M |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | VP134155 |
| Initial Calibration Stds | VP134242,VP134243,VP134244,VP134245,VP134246,VP134247 |
| CCC | VP134156 |
| Internal Standard/PEM | |
| ICV/I.BLK | VP134248 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | Data File Name | Date-Time | Operator | Status |
|---|---|---|---|---|---|
| 1 | BFB | VN086861.D | 06 Jun 2025 07:59 | JC\MD | Ok |
| 2 | VSTDICC001 | VN086862.D | 06 Jun 2025 12:44 | JC\MD | Ok,M |
| 3 | VSTDICC005 | VN086863.D | 06 Jun 2025 13:17 | JC\MD | Ok,M |
| 4 | VSTDICC020 | VN086864.D | 06 Jun 2025 13:40 | JC\MD | Ok,M |
| 5 | VSTDICCC050 | VN086865.D | 06 Jun 2025 14:03 | JC\MD | Ok,M |
| 6 | VSTDICC100 | VN086866.D | 06 Jun 2025 14:26 | JC\MD | Ok,M |
| 7 | VSTDICC150 | VN086867.D | 06 Jun 2025 14:49 | JC\MD | Ok,M |
| 8 | IBLK | VN086868.D | 06 Jun 2025 15:12 | JC\MD | Ok |
| 9 | VSTDICV050 | VN086869.D | 06 Jun 2025 15:54 | JC\MD | Ok,M |
| 10 | VN0606WBL01 | VN086870.D | 06 Jun 2025 16:47 | JC\MD | Ok |
| 11 | VN0606WBL02 | VN086871.D | 06 Jun 2025 17:10 | JC\MD | Ok |
| 12 | VN0606WBS01 | VN086872.D | 06 Jun 2025 17:33 | JC\MD | Ok,M |
| 13 | VN0606WBSD01 | VN086873.D | 06 Jun 2025 17:56 | JC\MD | Ok,M |
| 14 | Q2254-01 | VN086874.D | 06 Jun 2025 18:19 | JC\MD | Not Ok |
| 15 | Q2237-02 | VN086875.D | 06 Jun 2025 18:42 | JC\MD | Ok |
| 16 | Q2216-02 | VN086876.D | 06 Jun 2025 19:05 | JC\MD | Ok |
| 17 | Q2216-03 | VN086877.D | 06 Jun 2025 19:28 | JC\MD | Ok |
| 18 | Q2216-04 | VN086878.D | 06 Jun 2025 19:51 | JC\MD | Ok |
| 19 | Q2216-05 | VN086879.D | 06 Jun 2025 20:13 | JC\MD | Not Ok |
| 20 | Q2216-06 | VN086880.D | 06 Jun 2025 20:36 | JC\MD | Not Ok |
| 21 | Q2206-04 | VN086881.D | 06 Jun 2025 20:59 | JC\MD | Not Ok |

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**Instrument ID: MSVOA_N**

## Daily Analysis Runlog For Sequence/QCBatch ID # VN060625

| | | | | | |
|---|---|---|---|---|---|
| Review By | John Carlone | Review On | 6/9/2025 8:08:23 AM | | |
| Supervise By | Mahesh Dadoda | Supervise On | 6/9/2025 1:13:51 PM | | |
| SubDirectory | VN060625 | HP Acquire Method | | HP Processing Method | 82N060625W.M |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | VP134155 |
| Initial Calibration Stds | VP134242,VP134243,VP134244,VP134245,VP134246,VP134247 |
| CCC | VP134156 |
| Internal Standard/PEM | |
| ICV/I.BLK | VP134248 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| | | | | | |
|---|---|---|---|---|---|
| 22 | Q2242-04 | VN086882.D | 06 Jun 2025 21:21 | JC\MD | Not Ok |
| 23 | Q2192-01 | VN086883.D | 06 Jun 2025 21:44 | JC\MD | Not Ok |
| 24 | Q2198-02 | VN086884.D | 06 Jun 2025 22:07 | JC\MD | Not Ok |
| 25 | Q2198-04 | VN086885.D | 06 Jun 2025 22:29 | JC\MD | Not Ok |
| 26 | VSTDCCC050 | VN086886.D | 06 Jun 2025 22:52 | JC\MD | Not Ok |

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**Instrument ID: MSVOA_N**

## Daily Analysis Runlog For Sequence/QCBatch ID # VN061925

| | | | | | |
|---|---|---|---|---|---|
| Review By | John Carlone | Review On | 6/20/2025 8:50:20 AM | | |
| Supervise By | Mahesh Dadoda | Supervise On | 6/21/2025 12:24:10 AM | | |
| SubDirectory | VN061925 | HP Acquire Method | | HP Processing Method | 82N060625W.M |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | VP134425 |
| Initial Calibration Stds | |
| CCC | VP134426,VP134427 |
| Internal Standard/PEM | |
| ICV/I.BLK | |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | Data File Name | Date-Time | Operator | Status |
|---|---|---|---|---|---|
| 1 | BFB | VN087099.D | 19 Jun 2025 08:58 | JC\MD | Ok |
| 2 | VSTDCCC050 | VN087100.D | 19 Jun 2025 09:31 | JC\MD | Ok,M |
| 3 | VN0619MBL01 | VN087101.D | 19 Jun 2025 10:05 | JC\MD | Ok |
| 4 | VN0619WBL01 | VN087102.D | 19 Jun 2025 10:26 | JC\MD | Ok |
| 5 | Q2329-15 | VN087103.D | 19 Jun 2025 10:47 | JC\MD | Ok |
| 6 | VN0619WBS01 | VN087104.D | 19 Jun 2025 12:22 | JC\MD | Ok,M |
| 7 | VN0619WBSD01 | VN087105.D | 19 Jun 2025 12:56 | JC\MD | Not Ok |
| 8 | Q2333-01 | VN087106.D | 19 Jun 2025 13:17 | JC\MD | Ok,M |
| 9 | Q2333-02 | VN087107.D | 19 Jun 2025 13:38 | JC\MD | Dilution |
| 10 | Q2333-03 | VN087108.D | 19 Jun 2025 13:59 | JC\MD | ReRun |
| 11 | Q2333-04 | VN087109.D | 19 Jun 2025 14:21 | JC\MD | Ok |
| 12 | Q2333-05 | VN087110.D | 19 Jun 2025 14:42 | JC\MD | Ok |
| 13 | Q2333-06 | VN087111.D | 19 Jun 2025 15:03 | JC\MD | Dilution |
| 14 | IBLK | VN087112.D | 19 Jun 2025 15:24 | JC\MD | Ok |
| 15 | IBLK | VN087113.D | 19 Jun 2025 15:45 | JC\MD | Ok |
| 16 | Q2333-02DL | VN087114.D | 19 Jun 2025 16:07 | JC\MD | Ok |
| 17 | Q2333-03 | VN087115.D | 19 Jun 2025 16:28 | JC\MD | Ok |
| 18 | Q2333-06DL | VN087116.D | 19 Jun 2025 16:49 | JC\MD | Ok,M |
| 19 | Q2329-10 | VN087117.D | 19 Jun 2025 17:10 | JC\MD | Ok |
| 20 | Q2329-11MS | VN087118.D | 19 Jun 2025 17:31 | JC\MD | Ok,M |
| 21 | Q2329-12MSD | VN087119.D | 19 Jun 2025 17:52 | JC\MD | Ok,M |

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**Instrument ID: MSVOA_N**

## Daily Analysis Runlog For Sequence/QCBatch ID # VN061925

| | | | | | |
|---|---|---|---|---|---|
| Review By | John Carlone | Review On | 6/20/2025 8:50:20 AM | | |
| Supervise By | Mahesh Dadoda | Supervise On | 6/21/2025 12:24:10 AM | | |
| SubDirectory | VN061925 | HP Acquire Method | | HP Processing Method | 82N060625W.M |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | VP134425 |
| Initial Calibration Stds | |
| CCC | VP134426,VP134427 |
| Internal Standard/PEM | |
| ICV/I.BLK | |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| | | | | | |
|---|---|---|---|---|---|
| 22 | VSTDCCC050 | VN087120.D | 19 Jun 2025 18:13 | JC\MD | Ok,M |

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**Instrument ID:** MSVOA_N

## Daily Analysis Runlog For Sequence/QCBatch ID # VN060625

| | | | | | |
|---|---|---|---|---|---|
| Review By | John Carlone | Review On | 6/9/2025 8:08:23 AM | | |
| Supervise By | Mahesh Dadoda | Supervise On | 6/9/2025 1:13:51 PM | | |
| SubDirectory | VN060625 | HP Acquire Method | | HP Processing Method | 82N060625W.M |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | VP134155 |
| Initial Calibration Stds | VP134242,VP134243,VP134244,VP134245,VP134246,VP134247 |
| CCC | VP134156 |
| Internal Standard/PEM | |
| ICV/I.BLK | VP134248 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | ClientID | Data File Name | Date-Time | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | BFB | BFB | VN086861.D | 06 Jun 2025 07:59 | | JC\MD | Ok |
| 2 | VSTDICC001 | VSTDICC001 | VN086862.D | 06 Jun 2025 12:44 | Method failed for com.#13 | JC\MD | Ok,M |
| 3 | VSTDICC005 | VSTDICC005 | VN086863.D | 06 Jun 2025 13:17 | | JC\MD | Ok,M |
| 4 | VSTDICC020 | VSTDICC020 | VN086864.D | 06 Jun 2025 13:40 | | JC\MD | Ok,M |
| 5 | VSTDICCC050 | VSTDICCC050 | VN086865.D | 06 Jun 2025 14:03 | | JC\MD | Ok,M |
| 6 | VSTDICC100 | VSTDICC100 | VN086866.D | 06 Jun 2025 14:26 | | JC\MD | Ok,M |
| 7 | VSTDICC150 | VSTDICC150 | VN086867.D | 06 Jun 2025 14:49 | | JC\MD | Ok,M |
| 8 | IBLK | IBLK | VN086868.D | 06 Jun 2025 15:12 | | JC\MD | Ok |
| 9 | VSTDICV050 | ICVVN060625 | VN086869.D | 06 Jun 2025 15:54 | | JC\MD | Ok,M |
| 10 | VN0606WBL01 | VN0606WBL01 | VN086870.D | 06 Jun 2025 16:47 | | JC\MD | Ok |
| 11 | VN0606WBL02 | VN0606WBL02 | VN086871.D | 06 Jun 2025 17:10 | | JC\MD | Ok |
| 12 | VN0606WBS01 | VN0606WBS01 | VN086872.D | 06 Jun 2025 17:33 | | JC\MD | Ok,M |
| 13 | VN0606WBSD01 | VN0606WBSD01 | VN086873.D | 06 Jun 2025 17:56 | | JC\MD | Ok,M |
| 14 | Q2254-01 | BP-VPB-182-GW-810-8 | VN086874.D | 06 Jun 2025 18:19 | vial A pH<2 endccc out of tune | JC\MD | Not Ok |
| 15 | Q2237-02 | TW-WTS-10 | VN086875.D | 06 Jun 2025 18:42 | vial A pH<2 | JC\MD | Ok |
| 16 | Q2216-02 | 3887 | VN086876.D | 06 Jun 2025 19:05 | vial A pH<2 | JC\MD | Ok |
| 17 | Q2216-03 | 3888 | VN086877.D | 06 Jun 2025 19:28 | vial A pH<2 | JC\MD | Ok |
| 18 | Q2216-04 | 3864 | VN086878.D | 06 Jun 2025 19:51 | vial A pH<2 | JC\MD | Ok |

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**Instrument ID:** MSVOA_N

## Daily Analysis Runlog For Sequence/QCBatch ID # VN060625

| | | | | | |
|---|---|---|---|---|---|
| Review By | John Carlone | Review On | 6/9/2025 8:08:23 AM | | |
| Supervise By | Mahesh Dadoda | Supervise On | 6/9/2025 1:13:51 PM | | |
| SubDirectory | VN060625 | HP Acquire Method | | HP Processing Method | 82N060625W.M |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | VP134155 |
| Initial Calibration Stds | VP134242,VP134243,VP134244,VP134245,VP134246,VP134247 |
| CCC | VP134156 |
| Internal Standard/PEM | |
| ICV/I.BLK | VP134248 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 19 | Q2216-05 | 3865 | VN086879.D | 06 Jun 2025 20:13 | vial A pH<2 Out of Tune | JC\MD | Not Ok |
| 20 | Q2216-06 | 3851 | VN086880.D | 06 Jun 2025 20:36 | vial A pH<2 Out of Tune | JC\MD | Not Ok |
| 21 | Q2206-04 | TP-1 | VN086881.D | 06 Jun 2025 20:59 | vial A pH<2 Out of Tune | JC\MD | Not Ok |
| 22 | Q2242-04 | TP09-MHJ | VN086882.D | 06 Jun 2025 21:21 | vial A pH<2 Out of Tune | JC\MD | Not Ok |
| 23 | Q2192-01 | SB-1 | VN086883.D | 06 Jun 2025 21:44 | vial A pH<2 Out of Tune | JC\MD | Not Ok |
| 24 | Q2198-02 | B-202-SB02 | VN086884.D | 06 Jun 2025 22:07 | vial A pH<2 Out of Tune | JC\MD | Not Ok |
| 25 | Q2198-04 | B-207-SB02 | VN086885.D | 06 Jun 2025 22:29 | vial A pH<2 Out of Tune | JC\MD | Not Ok |
| 26 | VSTDCCC050 | VSTDCCC050EC | VN086886.D | 06 Jun 2025 22:52 | Out of Tune | JC\MD | Not Ok |

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**Instrument ID:** MSVOA_N

## Daily Analysis Runlog For Sequence/QCBatch ID # VN061925

| | | | | | |
|---|---|---|---|---|---|
| Review By | John Carlone | Review On | 6/20/2025 8:50:20 AM | | |
| Supervise By | Mahesh Dadoda | Supervise On | 6/21/2025 12:24:10 AM | | |
| SubDirectory | VN061925 | HP Acquire Method | | HP Processing Method | 82N060625W.M |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | VP134425 |
| Initial Calibration Stds | |
| CCC | VP134426,VP134427 |
| Internal Standard/PEM | |
| ICV/I.BLK | |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | ClientID | Data File Name | Date-Time | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | BFB | BFB | VN087099.D | 19 Jun 2025 08:58 | | JC\MD | Ok |
| 2 | VSTDCCC050 | VSTDCCC050 | VN087100.D | 19 Jun 2025 09:31 | pH#Lot#V12668 | JC\MD | Ok,M |
| 3 | VN0619MBL01 | VN0619MBL01 | VN087101.D | 19 Jun 2025 10:05 | | JC\MD | Ok |
| 4 | VN0619WBL01 | VN0619WBL01 | VN087102.D | 19 Jun 2025 10:26 | | JC\MD | Ok |
| 5 | Q2329-15 | EB01-20250613 | VN087103.D | 19 Jun 2025 10:47 | vial B pH<2 EB | JC\MD | Ok |
| 6 | VN0619WBS01 | VN0619WBS01 | VN087104.D | 19 Jun 2025 12:22 | | JC\MD | Ok,M |
| 7 | VN0619WBSD01 | VN0619WBSD01 | VN087105.D | 19 Jun 2025 12:56 | Recovery fail | JC\MD | Not Ok |
| 8 | Q2333-01 | MW-06 | VN087106.D | 19 Jun 2025 13:17 | vial A pH<2 | JC\MD | Ok,M |
| 9 | Q2333-02 | MW-08 | VN087107.D | 19 Jun 2025 13:38 | vial A pH<2 Need 20x | JC\MD | Dilution |
| 10 | Q2333-03 | MW-10 | VN087108.D | 19 Jun 2025 13:59 | vial A pH<2 E flag of previous sample | JC\MD | ReRun |
| 11 | Q2333-04 | MW-11 | VN087109.D | 19 Jun 2025 14:21 | vial A pH<2 | JC\MD | Ok |
| 12 | Q2333-05 | MW-13 | VN087110.D | 19 Jun 2025 14:42 | vial A pH<2 | JC\MD | Ok |
| 13 | Q2333-06 | MW-12 | VN087111.D | 19 Jun 2025 15:03 | vial A pH<2 Need 10x | JC\MD | Dilution |
| 14 | IBLK | IBLK | VN087112.D | 19 Jun 2025 15:24 | | JC\MD | Ok |
| 15 | IBLK | IBLK | VN087113.D | 19 Jun 2025 15:45 | | JC\MD | Ok |
| 16 | Q2333-02DL | MW-08DL | VN087114.D | 19 Jun 2025 16:07 | vial B pH<2 | JC\MD | Ok |
| 17 | Q2333-03 | MW-10 | VN087115.D | 19 Jun 2025 16:28 | vial B pH<2 | JC\MD | Ok |

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**Instrument ID:** MSVOA_N

## Daily Analysis Runlog For Sequence/QCBatch ID # VN061925

| | | | | | |
|---|---|---|---|---|---|
| Review By | John Carlone | Review On | 6/20/2025 8:50:20 AM | | |
| Supervise By | Mahesh Dadoda | Supervise On | 6/21/2025 12:24:10 AM | | |
| SubDirectory | VN061925 | HP Acquire Method | | HP Processing Method | 82N060625W.M |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | VP134425 |
| Initial Calibration Stds | |
| CCC | VP134426,VP134427 |
| Internal Standard/PEM | |
| ICV/I.BLK | |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 18 | Q2333-06DL | MW-12DL | VN087116.D | 19 Jun 2025 16:49 | vial B pH<2 | JC\MD | Ok,M |
| 19 | Q2329-10 | TT172S1-20250613 | VN087117.D | 19 Jun 2025 17:10 | vial A pH<2 | JC\MD | Ok |
| 20 | Q2329-11MS | TT172S1-20250613MS | VN087118.D | 19 Jun 2025 17:31 | vial A pH<2 | JC\MD | Ok,M |
| 21 | Q2329-12MSD | TT172S1-20250613MS | VN087119.D | 19 Jun 2025 17:52 | vial A pH<2 | JC\MD | Ok,M |
| 22 | VSTDCCC050 | VSTDCCC050EC | VN087120.D | 19 Jun 2025 18:13 | | JC\MD | Ok,M |

M : Manual Integration


# SHIPPING DOCUMENTS

# CHEMTECH
## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

Chemtech Project Number: Q2333

COC Number:

### CLIENT INFORMATION

COMPANY: Liro Environmental Inc.
ADDRESS: 690 Delaware Ave
CITY: Buffalo STATE: NY ZIP: 14209
ATTENTION: Martin Wesolowski
PHONE:716.970.4273 FAX:716.882.9640

### PROJECT INFORMATION

PROJECT NAME: RMB, RFK Bridge Randall's Island
PROJECT #: RMB-2023 LOCATION: NY
PROJECT MANAGER: Martin Wesolowski
E-MAIL: Wesolowskim@liro.com
PHONE:716-970-9640 FAX:716-882-9640

### BILLING INFORMATION

BILL TO: Same PO#
ADDRESS: Same
CITY: Same STATE: ZIP:
ATTENTION Same PHONE:

### DATA TURNAROUND INFORMATION

FAX:_____ DAYS*
HARD COPY:_____DAYS*
EDD_____DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

### DATA DELIVERABLE INFORMATION

☐ RESEULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other_____
☐ EDD Format_____

### ANALYSIS

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| CP-51 VOCs | CP-51 SVOCs | Tables 2 & 3 | | | | | | |

### PRESERVATIVES

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| A | Ice | | | | | | | |

### COMMENTS

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # of Bottles | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | MW-06 | GW | | X | 6/12/25 | 8:55 | 5 | X | X | X | | | | | | |
| 2. | MW-08 | GW | | X | 6/12/25 | 9:30 | 5 | X | X | X | | | | | | |
| 3. | MW-10 | GW | | X | 6/12/25 | 11:45 | 5 | X | X | X | | | | | | |
| 4. | MW-11 | GW | | X | 6/12/25 | 12:20 | 5 | X | X | X | | | | | | |
| 5. | MW-13 | GW | | X | 6/12/25 | 13:15 | 5 | X | X | X | | | | | | |
| 6. | MW-12 | GW | | X | 6/12/25 | 12:50 | 5 | X | X | X | | | | | | |
| 7. | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | |

### SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

| RELINQUISHED BY SAMPLER | DATE/TIME | RECEIVED BY |
|---|---|---|
| 1. Esther S Lonfeld | 6-13-25 1500 | 1. 6-13-25 1500 |
| RELINQUISHED BY | DATE/TIME | RECEIVED BY |
| 2. | | 2. |
| RELINQUISHED BY | DATE/TIME | RECEIVED FOR LAB BY |
| 3. | 6-13-25 1855 | 3. |

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 3.8 °C
MeOH extraction requires an additional 4oz. Jar for percent solid ☐ Ice in Cooler?:_____
Comments:

Page_____of_____

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
CHEMTECH: ☐ Picked Up ☐ Overnight

**Shipment Complete** ☐ YES ☐ NO

**WHITE** - CHEMTECH COPYFOR RETURN TO CLIENT **YELLOW** - CHEMTECH COPY **PINK** - SAMPLER COPY

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

# Laboratory Certification

| Certified By | License No. |
|---|---|
| | |
| CAS EPA CLP Contract | 68HERH20D0011 |
| | |
| Connecticut | PH-0830 |
| | |
| DOD ELAP (ANAB) | L2219 |
| | |
| Maine | 2024021 |
| | |
| Maryland | 296 |
| | |
| New Hampshire | 255424 Rev 1 |
| | |
| New Jersey | 20012 |
| | |
| New York | 11376 |
| | |
| Pennsylvania | 68-00548 |
| | |
| Soil Permit | 525-24-234-08441 |
| | |
| Texas | T104704488 |

QA Control Code: A2070148

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

# LOGIN REPORT/SAMPLE TRANSFER

**Order ID :** Q2333 LIRO01
**Client Name :** LiRo Engineers, Inc.
**Client Contact :** Martin Wesolowski
**Invoice Name :** LiRo Engineers, Inc.
**Invoice Contact :** Martin Wesolowski

**Order Date :** 6/13/2025 3:21:44 PM
**Project Name :** RFK Bridge RMB-Randall
**Receive DateTime :** 6/13/2025 ~~12:00:00 AM~~ ~~18:15~~ 18:55
**Purchase Order :**

**Project Mgr :**
**Report Type :** NYS ASP A
**EDD Type :** Excel NY
**Hard Copy Date :**
**Date Signoff :**

| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|
| Q2333-01 | MW-06 | Water | 06/12/2025 | 08:55 | | | | | |
| | | | | | VOCMS Group1 | | 8260-Low | | 10 Bus. Days |
| Q2333-02 | MW-08 | Water | 06/12/2025 | 09:30 | | | | | |
| | | | | | VOCMS Group1 | | 8260-Low | | 10 Bus. Days |
| Q2333-03 | MW-10 | Water | 06/12/2025 | 11:45 | | | | | |
| | | | | | VOCMS Group1 | | 8260-Low | | 10 Bus. Days |
| Q2333-04 | MW-11 | Water | 06/12/2025 | 12:20 | | | | | |
| | | | | | VOCMS Group1 | | 8260-Low | | 10 Bus. Days |
| Q2333-05 | MW-13 | Water | 06/12/2025 | 13:15 | | | | | |
| | | | | | VOCMS Group1 | | 8260-Low | | 10 Bus. Days |
| Q2333-06 | MW-12 | Water | 06/12/2025 | 12:50 | | | | | |
| | | | | | VOCMS Group1 | | 8260-Low | | 10 Bus. Days |

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| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|

**Relinguished By :** DW
**Date / Time :** 6/16/25 0900

**Received By :** Guy
**Date / Time :** 06/16/25 9:00 RgH4

SAMPLES RECEIVED ON 6/13/25 @ 1855
PLACED IN SM-REF-2

**Storage Area :** VOA Refridgerator Room