

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL022625\  
 Data File : VL042055.D  
 Acq On : 26 Feb 2025 11:40  
 Operator : SY/MD  
 Sample : Q1419-02  
 Misc : 400mL/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 IA1

Quant Time: Feb 27 00:27:20 2025  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL022525AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD T0-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
 QLast Update : Wed Feb 26 01:08:36 2025  
 Response via : Initial Calibration

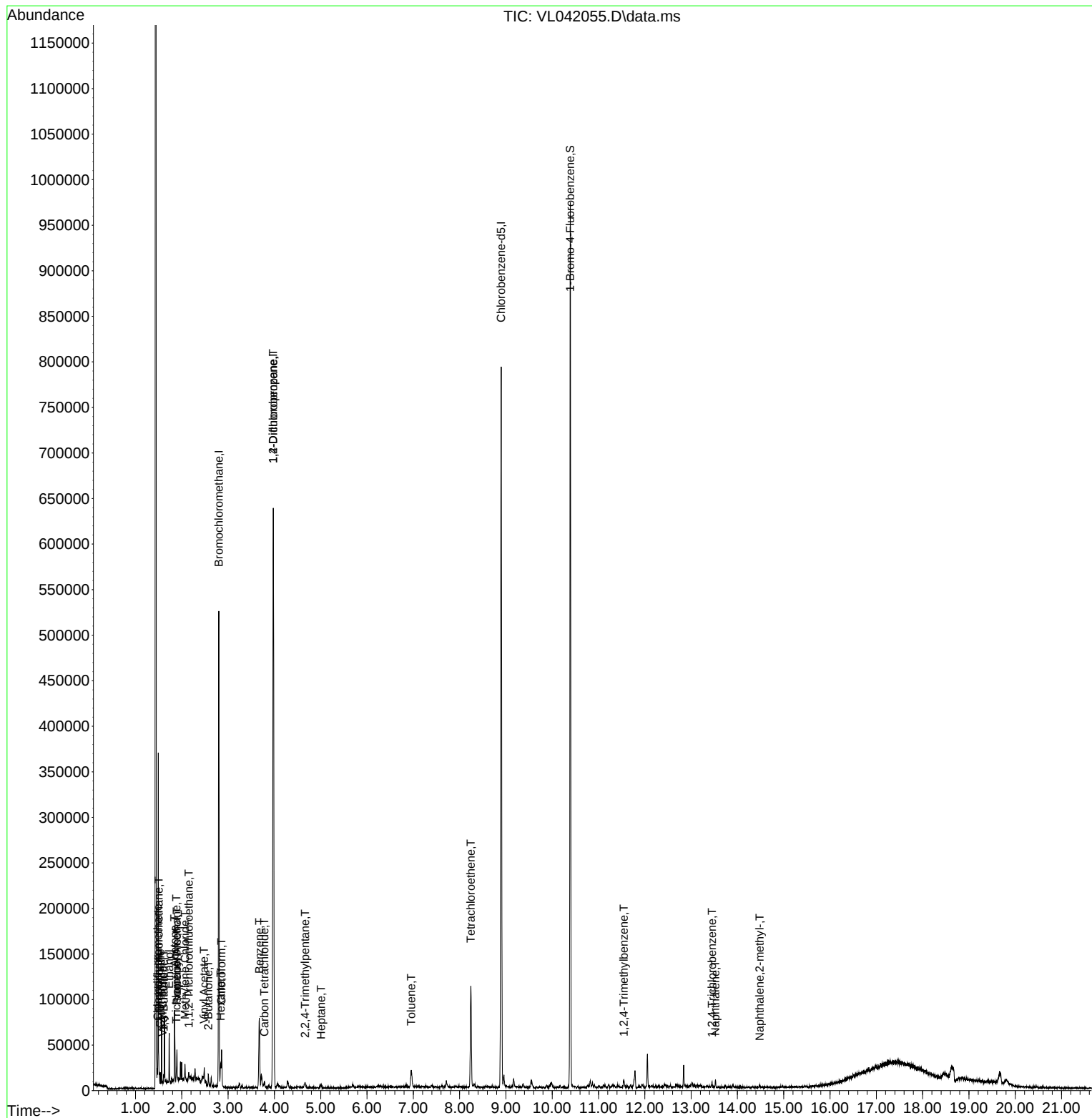
| Compound                    |                           | R.T.   | QIon  | Response | Conc     | Units  | Dev(Min) |
|-----------------------------|---------------------------|--------|-------|----------|----------|--------|----------|
| -----                       |                           |        |       |          |          |        |          |
| Internal Standards          |                           |        |       |          |          |        |          |
| 1)                          | Bromochloromethane        | 2.800  | 49    | 157204   | 10.000   | ppbv   | 0.00     |
| 33)                         | 1,4-Difluorobenzene       | 3.975  | 114   | 381648   | 10.000   | ppbv   | 0.00     |
| 55)                         | Chlorobenzene-d5          | 8.898  | 117   | 315276   | 10.000   | ppbv   | 0.00     |
| System Monitoring Compounds |                           |        |       |          |          |        |          |
| 68)                         | 1-Bromo-4-Fluorobenzene   | 10.390 | 95    | 249506   | 10.287   | ppbv   | 0.00     |
| Spiked Amount               |                           | 10.000 | Range | 65 - 135 | Recovery | =      | 102.900% |
| Target Compounds            |                           |        |       |          |          |        |          |
|                             |                           |        |       |          |          |        | Qvalue   |
| 2)                          | Dichlorodifluoromethane   | 1.502  | 85    | 6898     | 0.422    | ppbv   | 99       |
| 3)                          | Chlorodifluoromethane     | 1.479  | 51    | 11916    | 0.522    | ppbv # | 86       |
| 4)                          | Chloromethane             | 1.538  | 50    | 2903     | 0.480    | ppbv # | 82       |
| 5)                          | Vinyl Chloride            | 1.586  | 62    | 213      | 0.037    | ppbv # | 43       |
| 9)                          | Propene                   | 1.894  | 41    | 1219     | 0.131    | ppbv   | 91       |
| 10)                         | Heptane                   | 5.007  | 43    | 1461     | 0.050    | ppbv # | 28       |
| 11)                         | Trichlorofluoromethane    | 1.884  | 101   | 3397     | 0.207    | ppbv   | 98       |
| 12)                         | 1,1,2-Trichlorotrifluo... | 2.149  | 101   | 1017     | 0.078    | ppbv   | 83       |
| 13)                         | Ethanol                   | 1.729  | 45    | 18480    | 31.276   | ppbv   | 96       |
| 15)                         | Acetone                   | 1.842  | 43    | 35580    | 2.563    | ppbv   | 99       |
| 16)                         | 1,3-Butadiene             | 1.609  | 39    | 1636     | 0.253    | ppbv # | 73       |
| 19)                         | Isopropyl Alcohol         | 1.894  | 45    | 13839    | 1.735    | ppbv # | 64       |
| 20)                         | Methylene Chloride        | 2.068  | 84    | 2153     | 0.410    | ppbv   | 90       |
| 23)                         | Vinyl Acetate             | 2.483  | 43    | 4943     | 0.506    | ppbv # | 52       |
| 26)                         | Hexane                    | 2.842  | 57    | 6563     | 0.292    | ppbv # | 44       |
| 29)                         | Chloroform                | 2.858  | 83    | 15138    | 0.501    | ppbv   | 96       |
| 34)                         | 2-Butanone                | 2.573  | 43    | 8375     | 0.282    | ppbv   | 94       |
| 35)                         | Carbon Tetrachloride      | 3.781  | 117   | 892      | 0.034    | ppbv # | 1        |
| 36)                         | Benzene                   | 3.674  | 78    | 46245    | 1.157    | ppbv   | 94       |
| 39)                         | 1,2-Dichloropropane       | 3.975  | 63    | 99797    | 6.581    | ppbv # | 24       |
| 44)                         | 2,2,4-Trimethylpentane    | 4.661  | 57    | 3246     | 0.046    | ppbv # | 43       |
| 52)                         | Tetrachloroethene         | 8.241  | 164   | 19604    | 1.433    | ppbv   | 96       |
| 53)                         | Toluene                   | 6.956  | 91    | 8869     | 0.199    | ppbv # | 69       |
| 74)                         | 1,2,4-Trimethylbenzene    | 11.545 | 105   | 2021     | 0.036    | ppbv # | 59       |
| 79)                         | Naphthalene               | 13.526 | 128   | 3874     | 0.102    | ppbv # | 93       |
| 80)                         | Naphthalene,2-methyl-     | 14.481 | 142   | 1043     | 0.100    | ppbv   | 93       |
| 81)                         | 1,2,4-Trichlorobenzene    | 13.452 | 180   | 1008     | 0.048    | ppbv   | 99       |
| -----                       |                           |        |       |          |          |        |          |

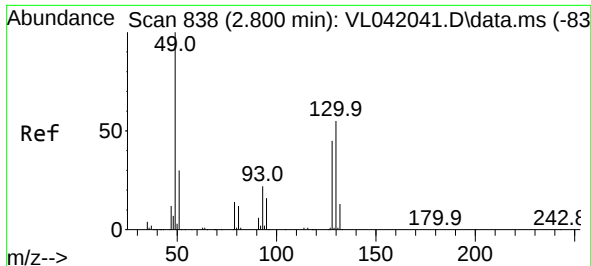
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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ClientSampleId :  
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Quant Time: Feb 27 00:27:20 2025  
Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL022525AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
QLast Update : Wed Feb 26 01:08:36 2025  
Response via : Initial Calibration

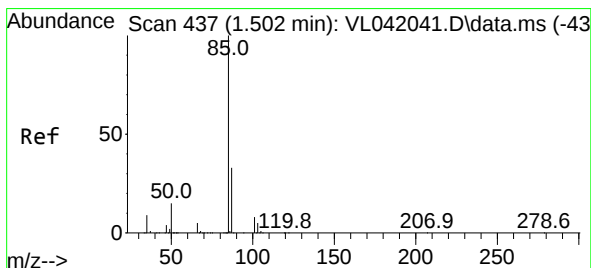
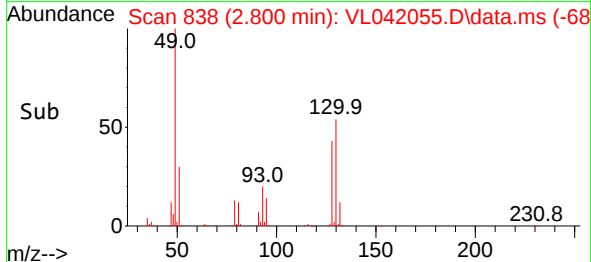
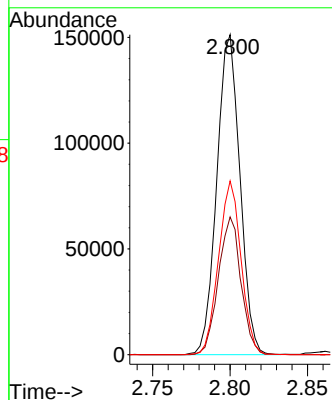
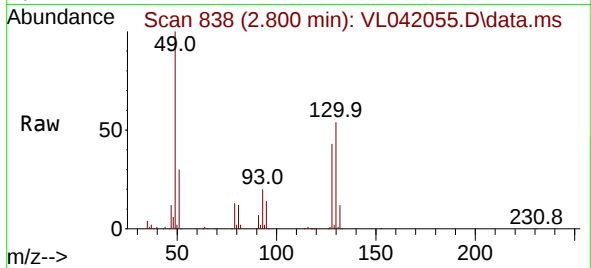




#1  
 Bromochloromethane  
 Concen: 10.000 ppbv  
 RT: 2.800 min Scan# 838  
 Delta R.T. -0.000 min  
 Lab File: VL042055.D  
 Acq: 26 Feb 2025 11:40

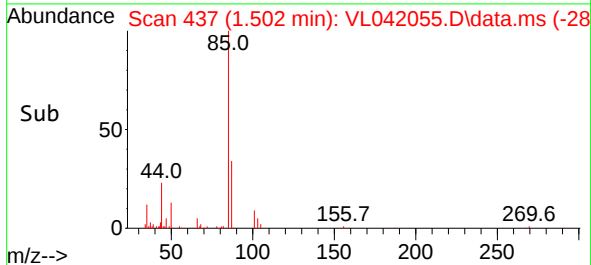
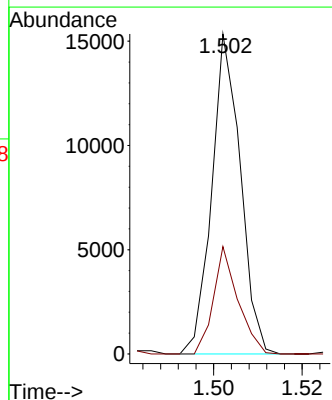
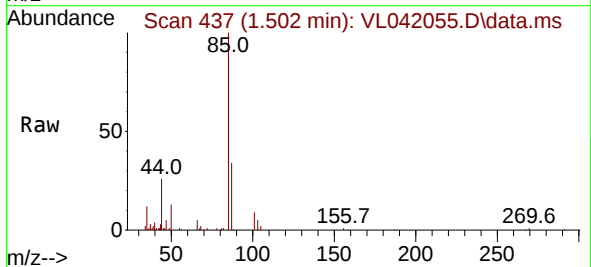
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 IA1

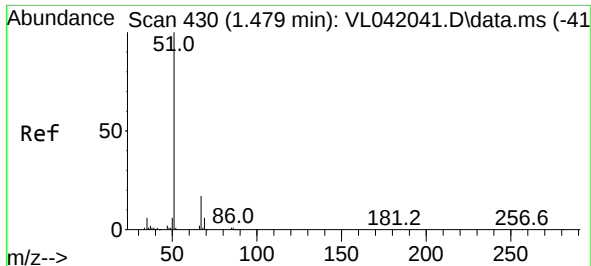
Tgt Ion: 49 Resp: 157204  
 Ion Ratio Lower Upper  
 49 100  
 128 42.1 21.6 64.8  
 130 52.8 27.8 83.4



#2  
 Dichlorodifluoromethane  
 Concen: 0.422 ppbv  
 RT: 1.502 min Scan# 437  
 Delta R.T. -0.000 min  
 Lab File: VL042055.D  
 Acq: 26 Feb 2025 11:40

Tgt Ion: 85 Resp: 6898  
 Ion Ratio Lower Upper  
 85 100  
 87 33.6 26.4 39.6

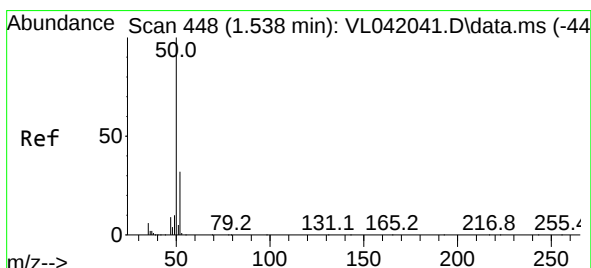
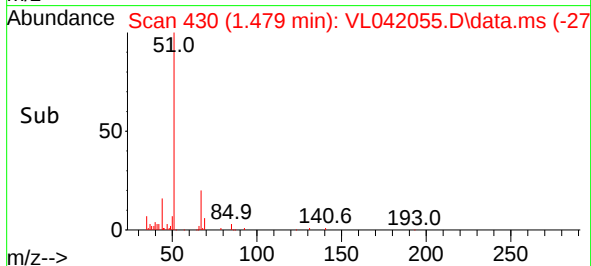
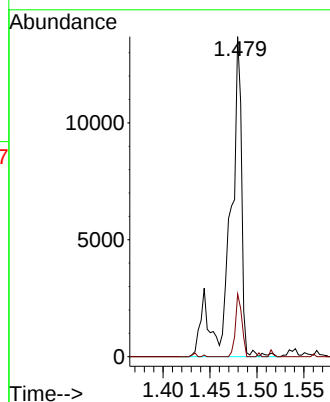
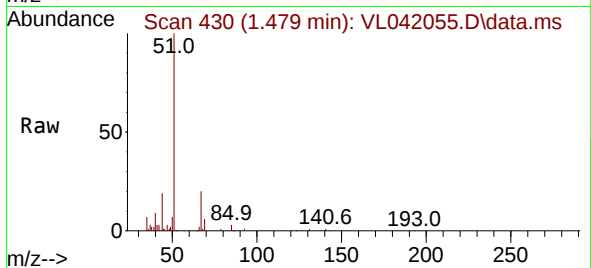




#3  
Chlorodifluoromethane  
Concen: 0.522 ppbv  
RT: 1.479 min Scan# 41  
Delta R.T. -0.000 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

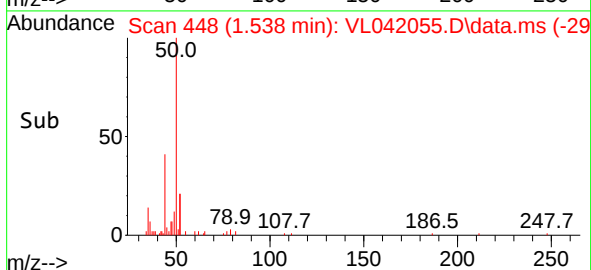
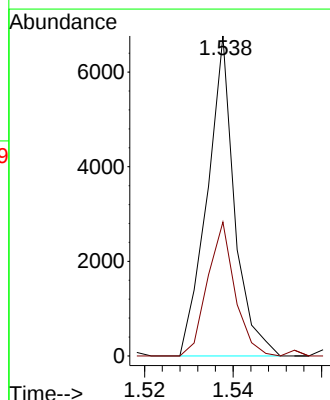
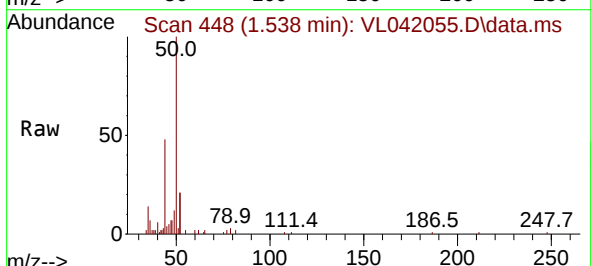
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA1

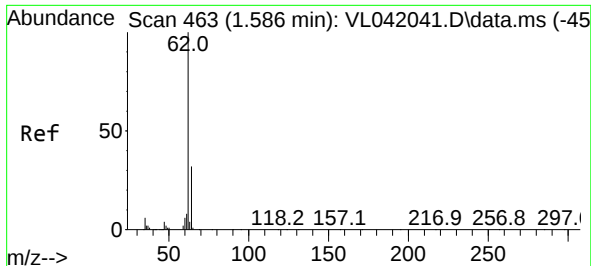
Tgt Ion: 51 Resp: 11916  
Ion Ratio Lower Upper  
51 100  
67 11.1 13.7 20.5#



#4  
Chloromethane  
Concen: 0.480 ppbv  
RT: 1.538 min Scan# 448  
Delta R.T. -0.000 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

Tgt Ion: 50 Resp: 2903  
Ion Ratio Lower Upper  
50 100  
52 41.9 25.4 38.0#

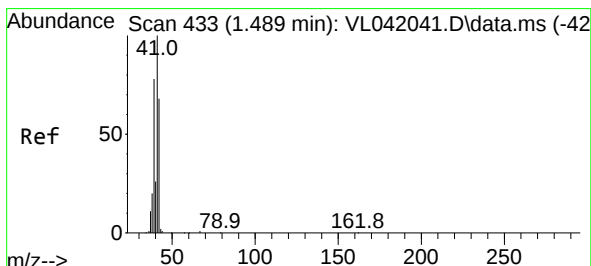
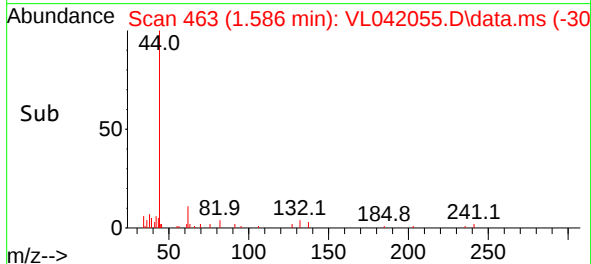
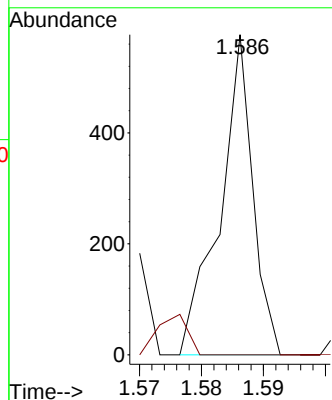
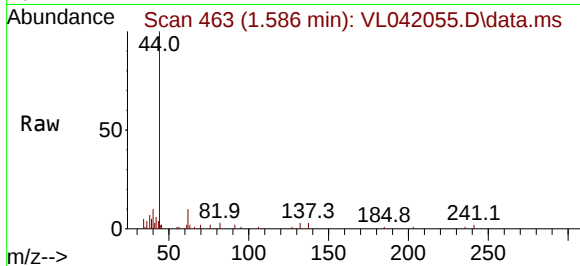




#5  
 Vinyl Chloride  
 Concen: 0.037 ppbv  
 RT: 1.586 min Scan# 41  
 Delta R.T. -0.000 min  
 Lab File: VL042055.D  
 Acq: 26 Feb 2025 11:40

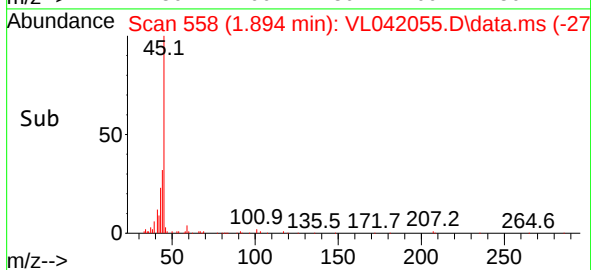
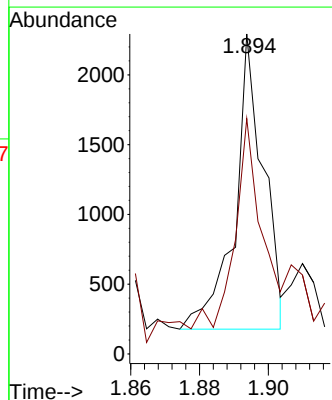
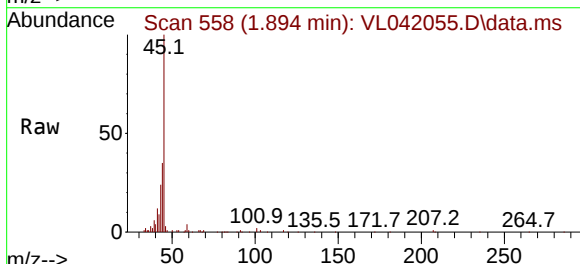
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 IA1

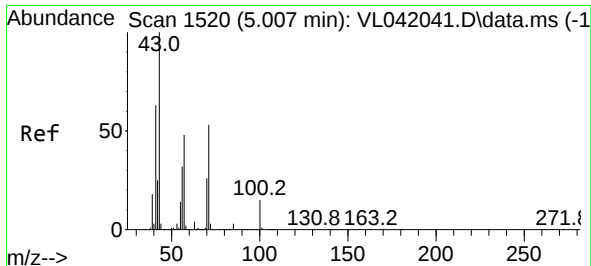
Tgt Ion: 62 Resp: 213  
 Ion Ratio Lower Upper  
 62 100  
 64 0.0 25.3 37.9#



#9  
 Propene  
 Concen: 0.131 ppbv  
 RT: 1.894 min Scan# 558  
 Delta R.T. 0.404 min  
 Lab File: VL042055.D  
 Acq: 26 Feb 2025 11:40

Tgt Ion: 41 Resp: 1219  
 Ion Ratio Lower Upper  
 41 100  
 42 76.9 55.8 83.6

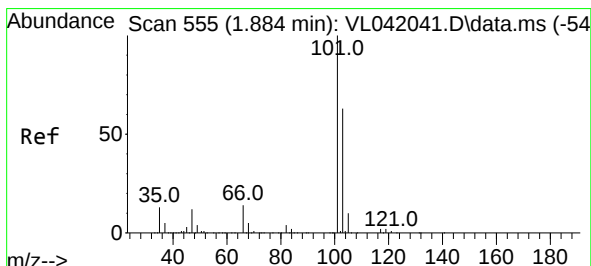
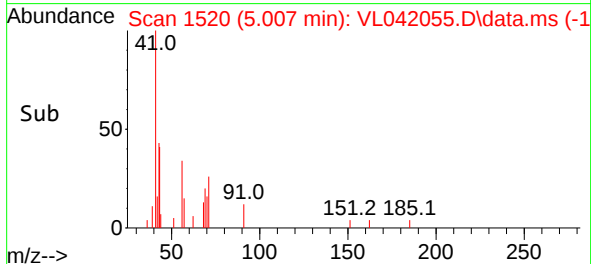
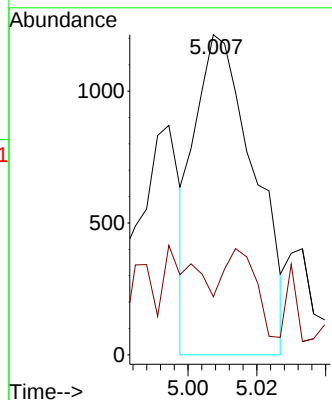
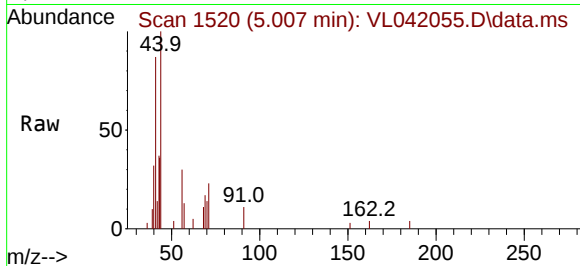




#10  
Heptane  
Concen: 0.050 ppbv  
RT: 5.007 min Scan# 11  
Delta R.T. -0.000 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

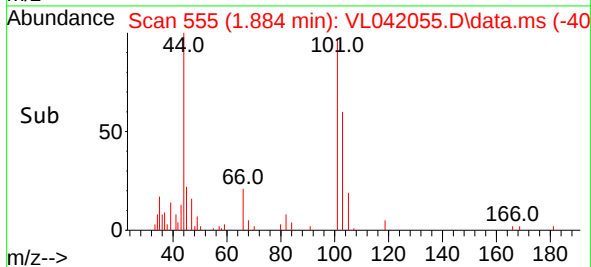
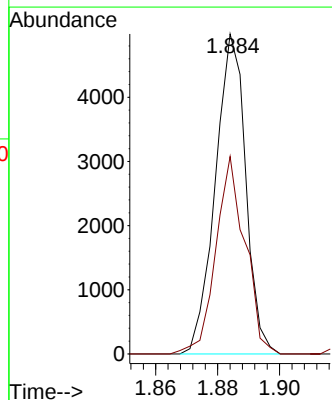
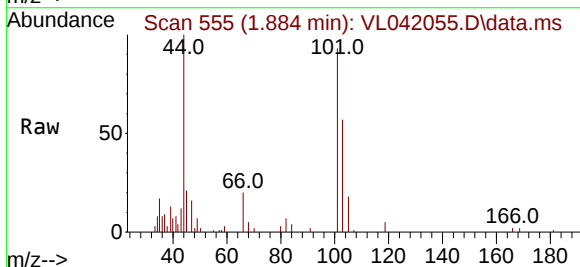
Instrument :  
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ClientSampleId :  
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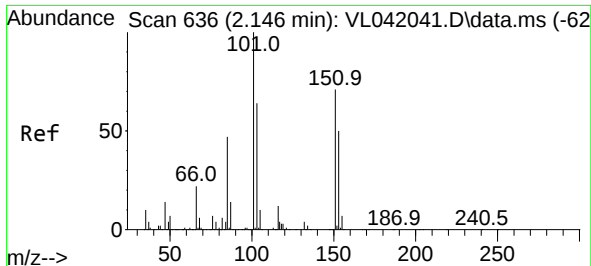
Tgt Ion: 43 Resp: 1461  
Ion Ratio Lower Upper  
43 100  
57 0.0 39.4 59.0#



#11  
Trichlorofluoromethane  
Concen: 0.207 ppbv  
RT: 1.884 min Scan# 555  
Delta R.T. -0.000 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

Tgt Ion:101 Resp: 3397  
Ion Ratio Lower Upper  
101 100  
103 61.7 50.6 75.8

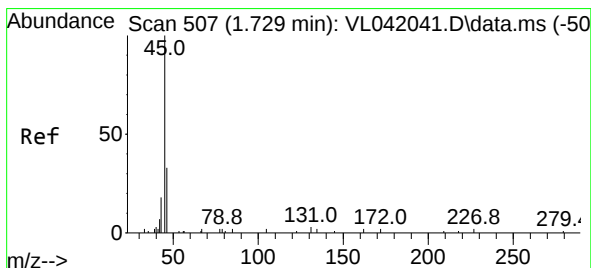
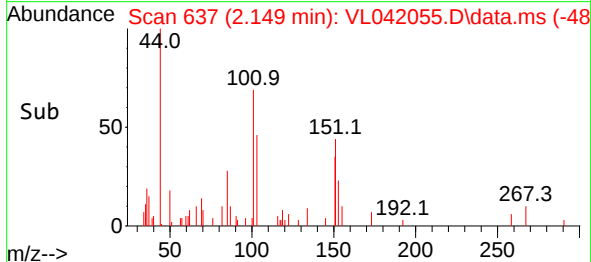
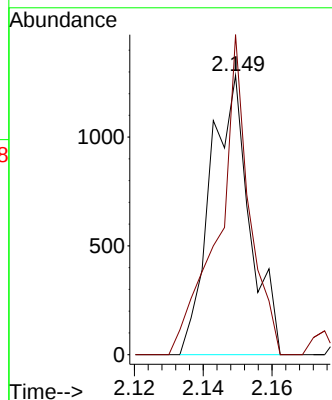
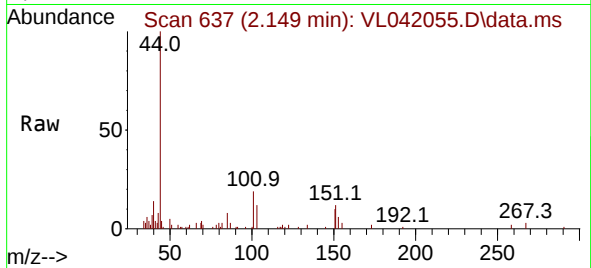




#12  
1,1,2-Trichlorotrifluoroethane  
Concen: 0.078 ppbv  
RT: 2.149 min Scan# 61  
Delta R.T. 0.003 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

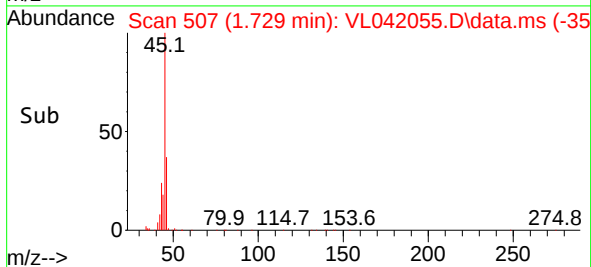
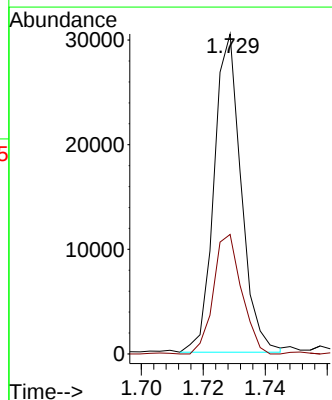
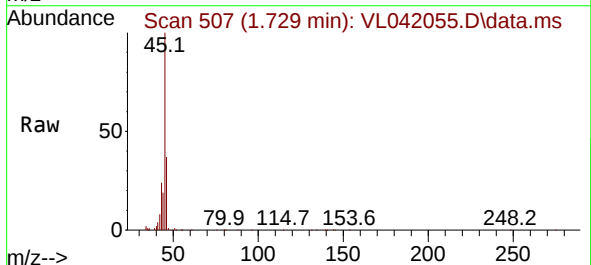
Instrument :  
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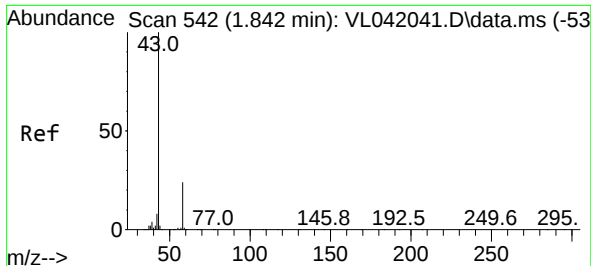
Tgt Ion:101 Resp: 1017  
Ion Ratio Lower Upper  
101 100  
151 93.0 62.6 94.0



#13  
Ethanol  
Concen: 31.276 ppbv  
RT: 1.729 min Scan# 507  
Delta R.T. -0.000 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

Tgt Ion: 45 Resp: 18480  
Ion Ratio Lower Upper  
45 100  
46 39.9 17.1 68.3

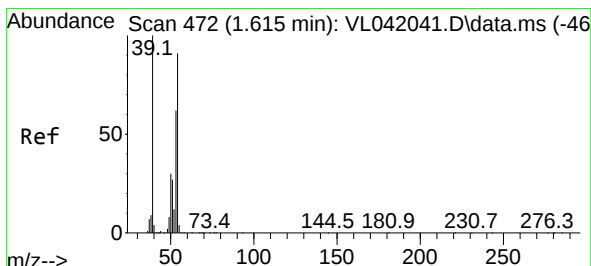
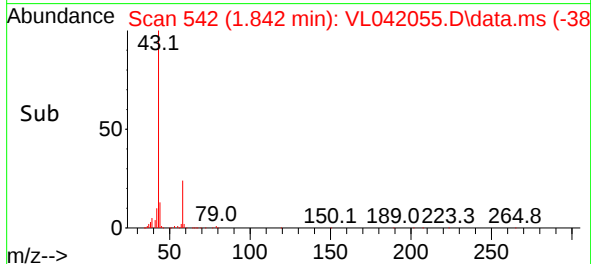
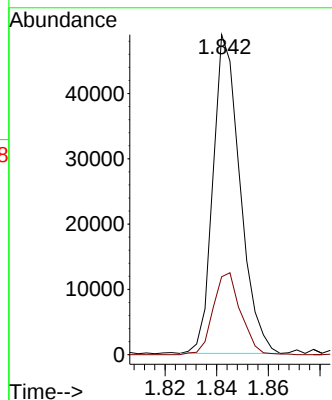
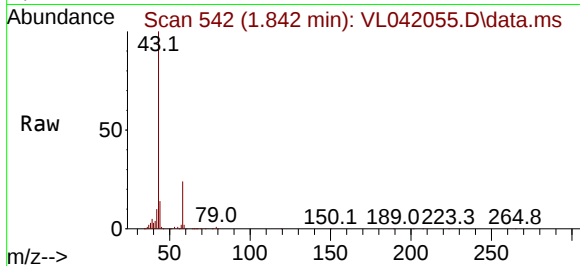




#15  
Acetone  
Concen: 2.563 ppbv  
RT: 1.842 min Scan# 54  
Delta R.T. -0.000 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

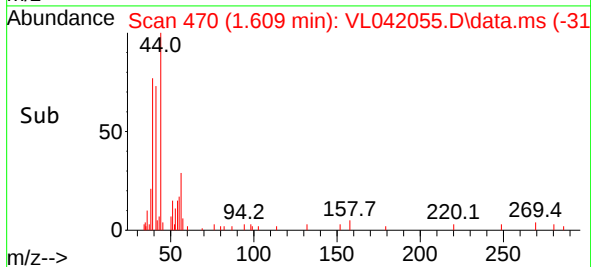
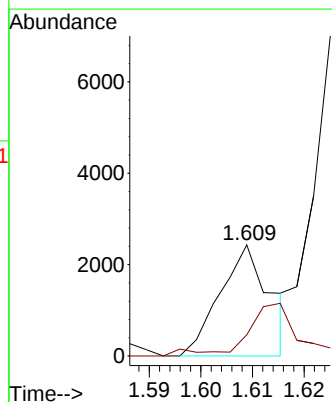
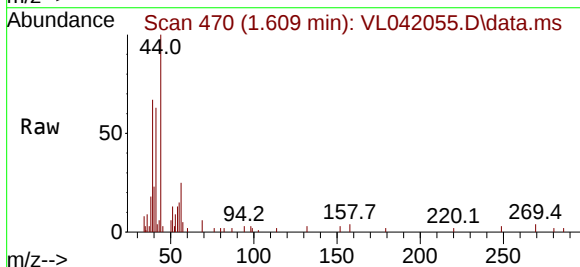
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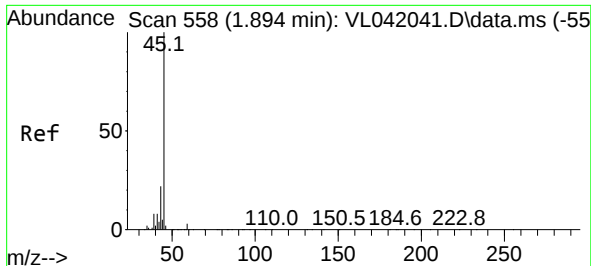
Tgt Ion: 43 Resp: 35580  
Ion Ratio Lower Upper  
43 100  
58 26.2 20.7 31.1



#16  
1,3-Butadiene  
Concen: 0.253 ppbv  
RT: 1.609 min Scan# 470  
Delta R.T. -0.007 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

Tgt Ion: 39 Resp: 1636  
Ion Ratio Lower Upper  
39 100  
54 51.8 59.6 89.4#

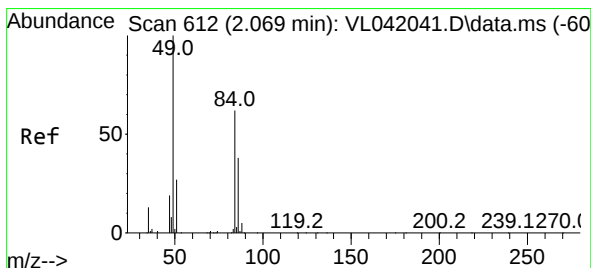
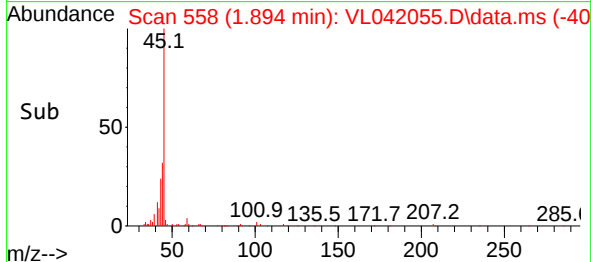
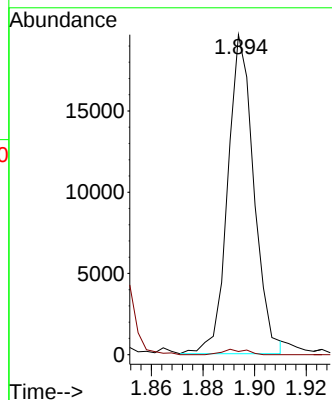
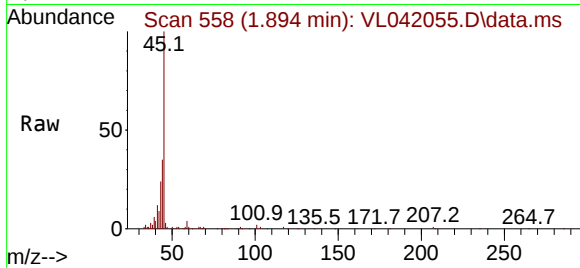




#19  
Isopropyl Alcohol  
Concen: 1.735 ppbv  
RT: 1.894 min Scan# 558  
Delta R.T. -0.000 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

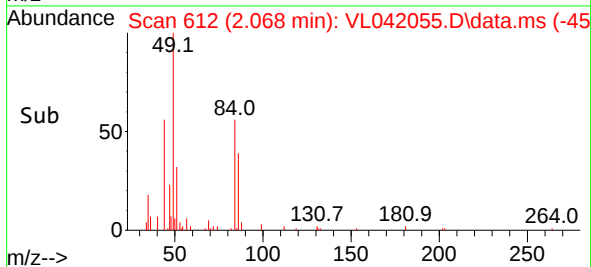
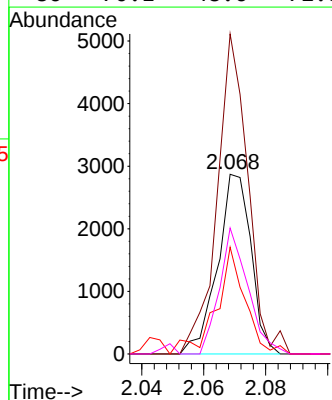
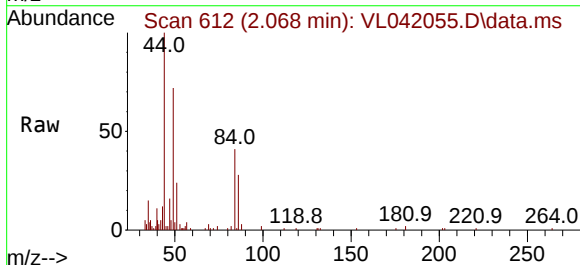
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA1

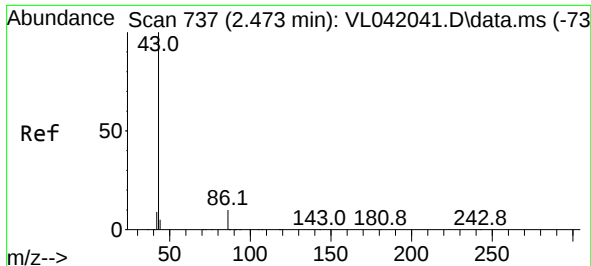
Tgt Ion: 45 Resp: 13839  
Ion Ratio Lower Upper  
45 100  
58 67.4 35.3 52.9#



#20  
Methylene Chloride  
Concen: 0.410 ppbv  
RT: 2.068 min Scan# 612  
Delta R.T. -0.000 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

Tgt Ion: 84 Resp: 2153  
Ion Ratio Lower Upper  
84 100  
49 173.7 130.0 195.0  
51 54.7 37.4 56.0  
86 70.1 48.6 72.8



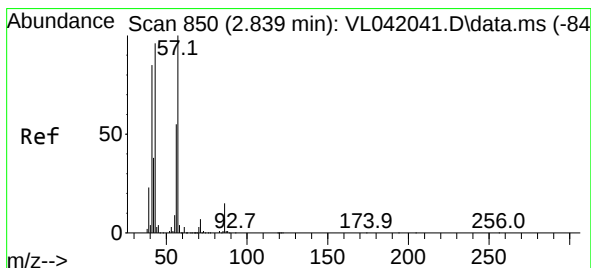
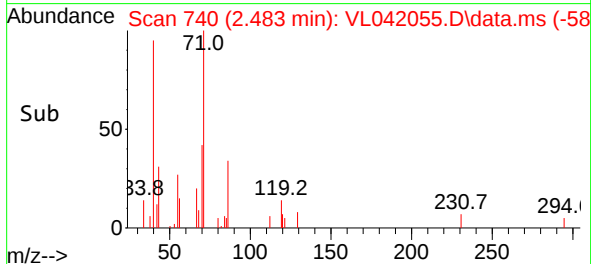
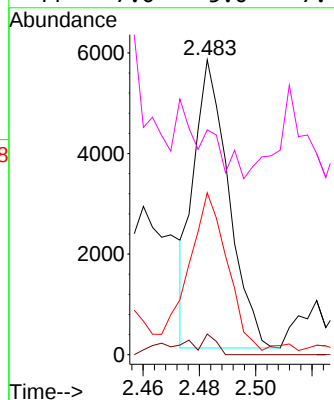
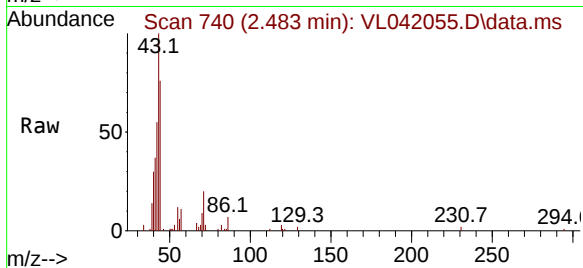


#23  
 Vinyl Acetate  
 Concen: 0.506 ppbv  
 RT: 2.483 min Scan# 740  
 Delta R.T. 0.010 min  
 Lab File: VL042055.D  
 Acq: 26 Feb 2025 11:40

Instrument :  
 MSVOA\_1  
 ClientSampleId :  
 IA1

Tgt Ion: 43 Resp: 4943

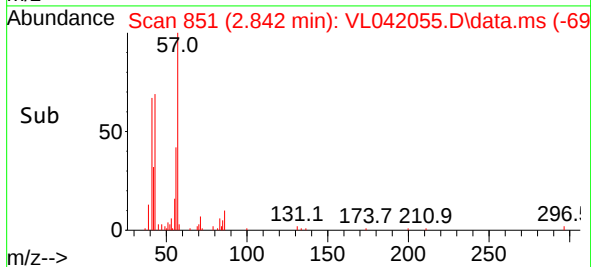
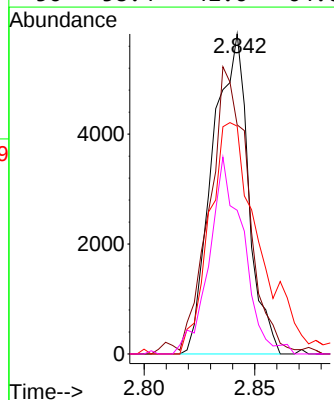
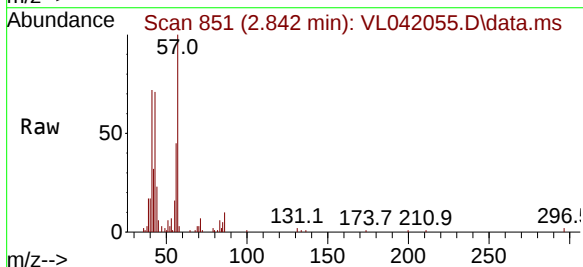
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 43  | 100   |       |       |
| 86  | 7.1   | 7.0   | 10.4  |
| 42  | 53.0  | 7.6   | 11.4# |
| 44  | 7.0   | 5.0   | 7.4   |

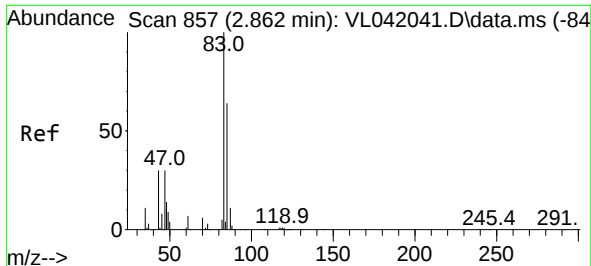


#26  
 Hexane  
 Concen: 0.292 ppbv  
 RT: 2.842 min Scan# 851  
 Delta R.T. 0.003 min  
 Lab File: VL042055.D  
 Acq: 26 Feb 2025 11:40

Tgt Ion: 57 Resp: 6563

| Ion | Ratio | Lower | Upper  |
|-----|-------|-------|--------|
| 57  | 100   |       |        |
| 41  | 98.9  | 70.6  | 106.0  |
| 43  | 105.2 | 199.4 | 299.0# |
| 56  | 58.4  | 42.6  | 64.0   |





#29

Chloroform

Concen: 0.501 ppbv

RT: 2.858 min Scan# 81

Delta R.T. -0.003 min

Lab File: VL042055.D

Acq: 26 Feb 2025 11:40

Instrument :

MSVOA\_L

ClientSampleId :

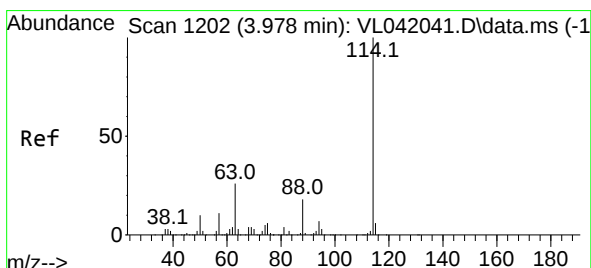
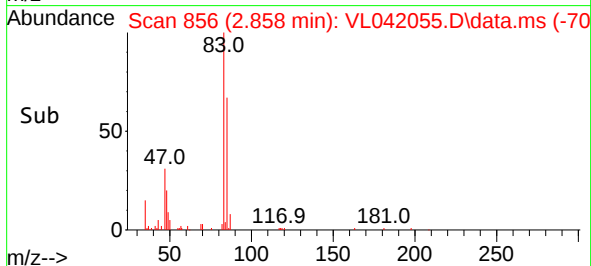
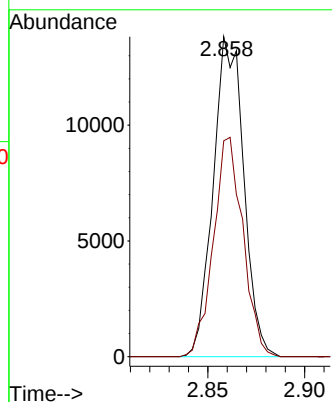
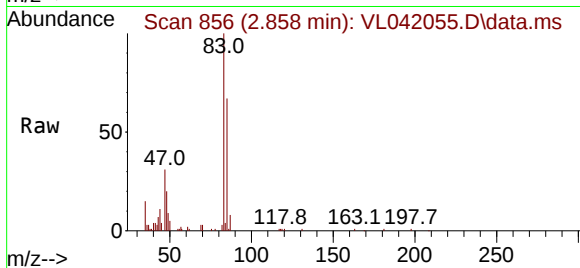
IA1

Tgt Ion: 83 Resp: 15138

Ion Ratio Lower Upper

83 100

85 67.4 51.2 76.8



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.975 min Scan# 1201

Delta R.T. -0.003 min

Lab File: VL042055.D

Acq: 26 Feb 2025 11:40

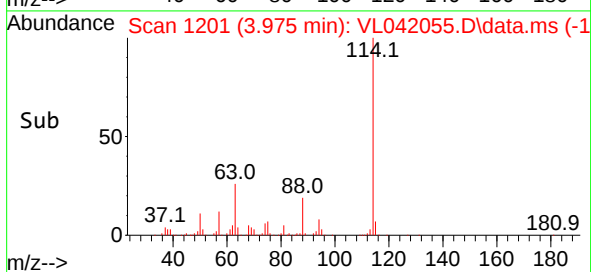
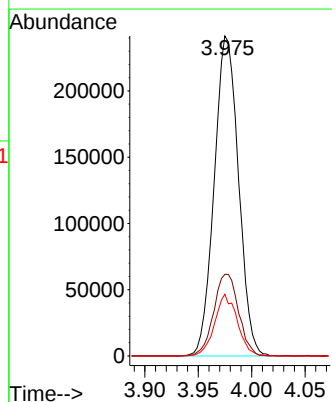
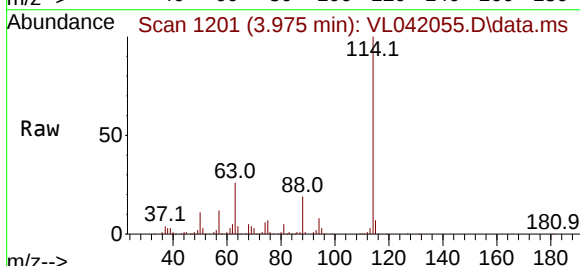
Tgt Ion: 114 Resp: 381648

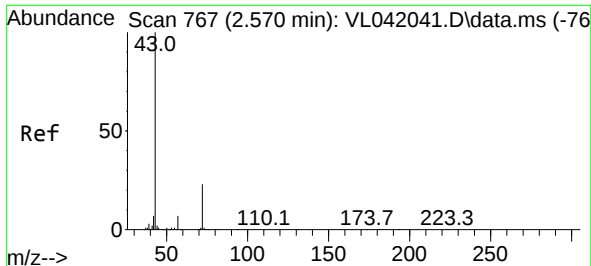
Ion Ratio Lower Upper

114 100

63 26.2 20.1 30.1

88 18.0 14.3 21.5

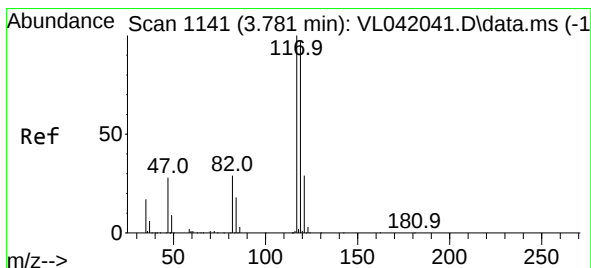
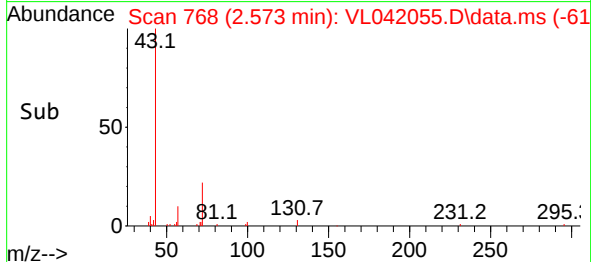
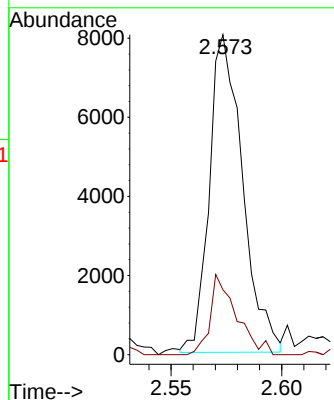
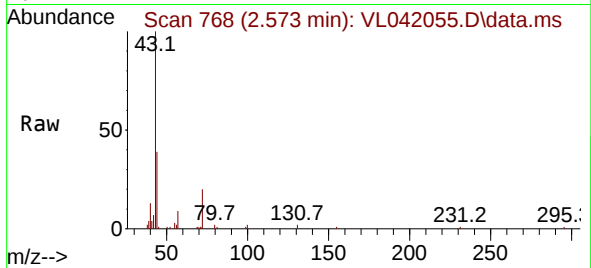




#34  
2-Butanone  
Concen: 0.282 ppbv  
RT: 2.573 min Scan# 768  
Delta R.T. 0.003 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

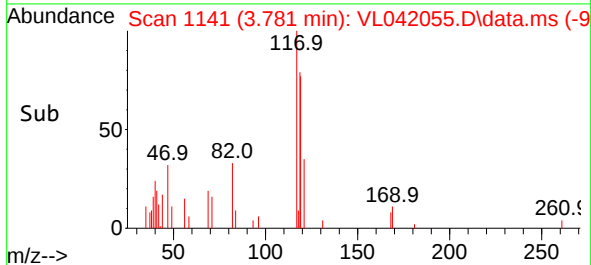
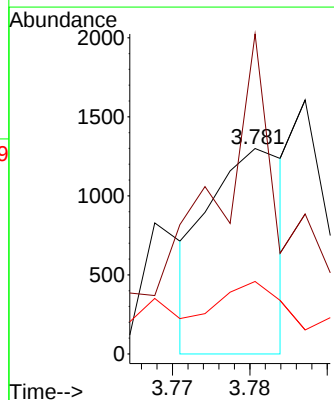
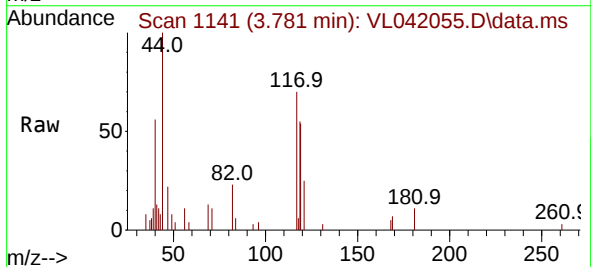
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA1

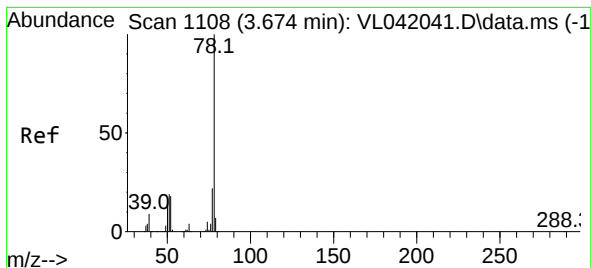
Tgt Ion: 43 Resp: 8375  
Ion Ratio Lower Upper  
43 100  
72 20.2 18.5 27.7



#35  
Carbon Tetrachloride  
Concen: 0.034 ppbv  
RT: 3.781 min Scan# 1141  
Delta R.T. -0.000 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

Tgt Ion: 117 Resp: 892  
Ion Ratio Lower Upper  
117 100  
119 236.9 77.8 116.8#  
121 40.1 23.4 35.0#





#36

Benzene

Concen: 1.157 ppbv

RT: 3.674 min Scan# 1108

Delta R.T. -0.000 min

Lab File: VL042055.D

Acq: 26 Feb 2025 11:40

Instrument :

MSVOA\_L

ClientSampleId :

IA1

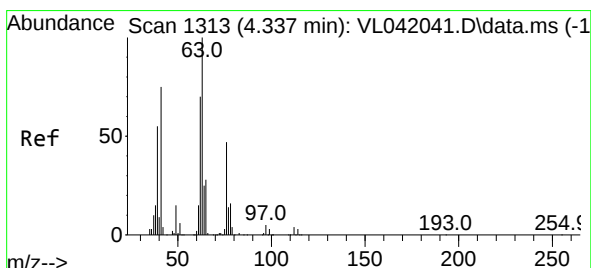
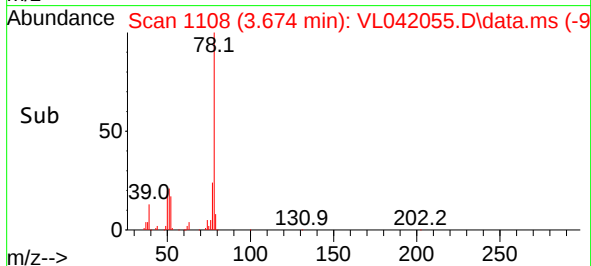
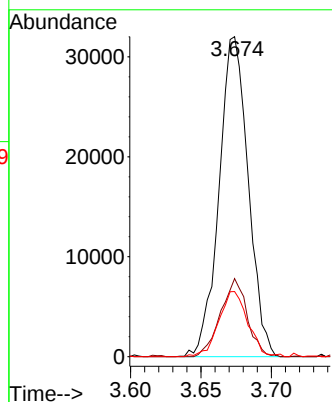
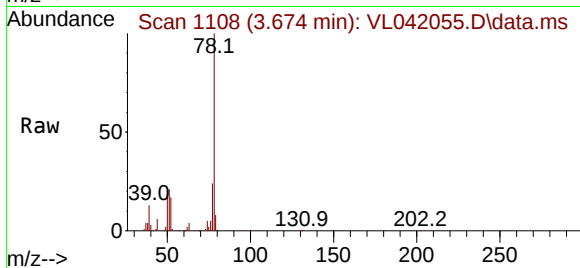
Tgt Ion: 78 Resp: 46245

Ion Ratio Lower Upper

78 100

77 24.4 17.7 26.5

50 20.4 13.9 20.9



#39

1,2-Dichloropropane

Concen: 6.581 ppbv

RT: 3.975 min Scan# 1201

Delta R.T. -0.363 min

Lab File: VL042055.D

Acq: 26 Feb 2025 11:40

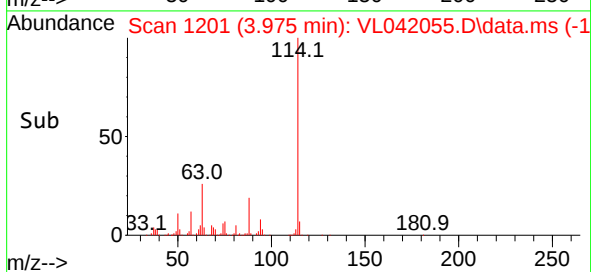
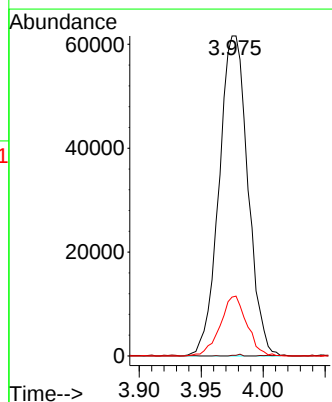
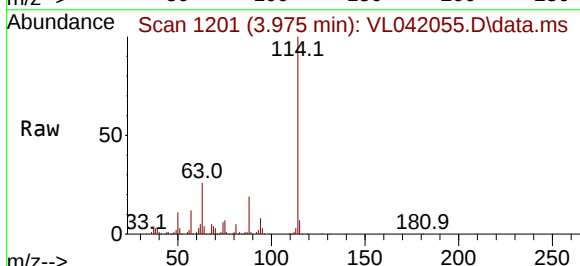
Tgt Ion: 63 Resp: 99797

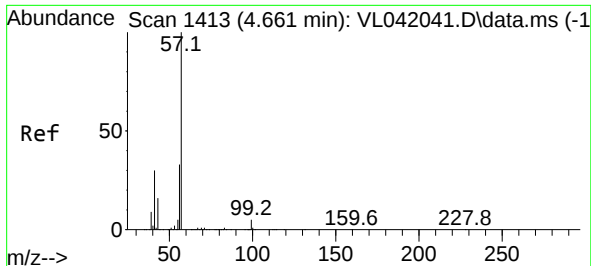
Ion Ratio Lower Upper

63 100

41 0.2 60.1 90.1#

62 18.4 55.8 83.8#

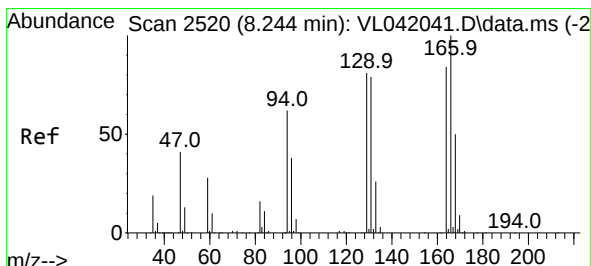
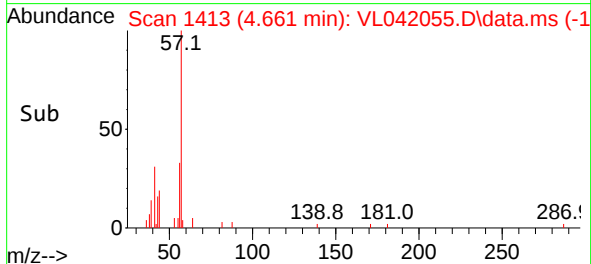
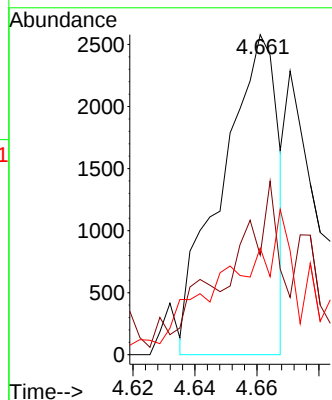
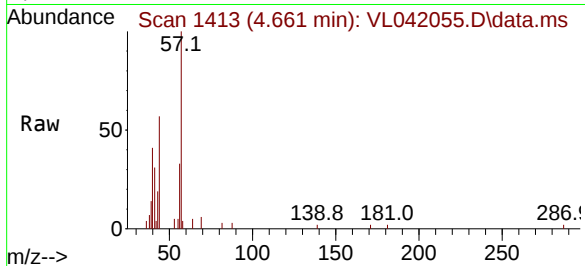




#44  
2,2,4-Trimethylpentane  
Concen: 0.046 ppbv  
RT: 4.661 min Scan# 1413  
Delta R.T. -0.000 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

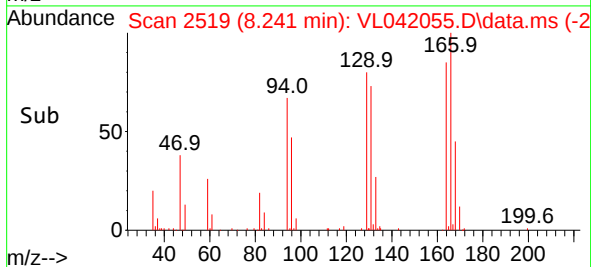
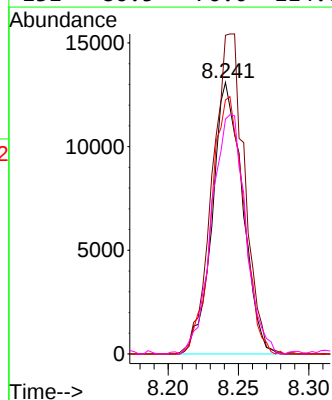
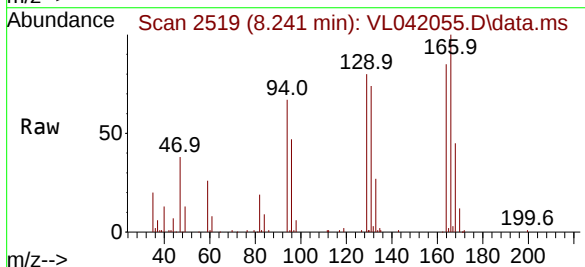
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA1

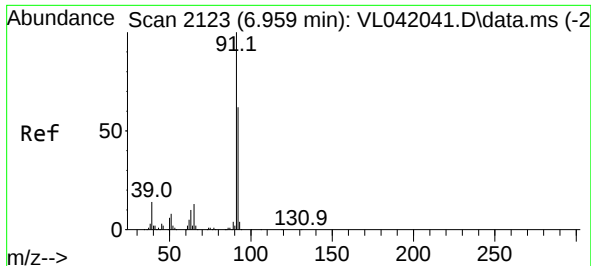
Tgt Ion: 57 Resp: 3246  
Ion Ratio Lower Upper  
57 100  
41 0.0 24.4 36.6#  
56 0.0 26.5 39.7#



#52  
Tetrachloroethene  
Concen: 1.433 ppbv  
RT: 8.241 min Scan# 2519  
Delta R.T. -0.003 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

Tgt Ion: 164 Resp: 19604  
Ion Ratio Lower Upper  
164 100  
166 116.9 95.7 143.5  
129 94.7 77.1 115.7  
131 86.5 76.0 114.0

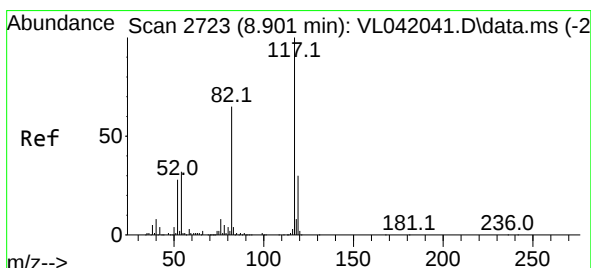
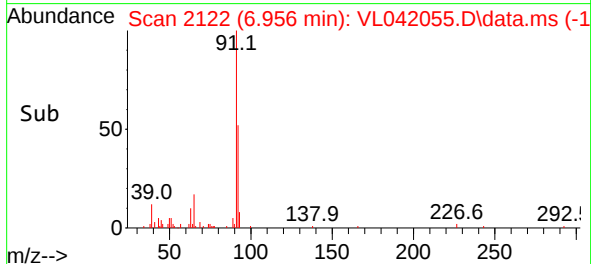
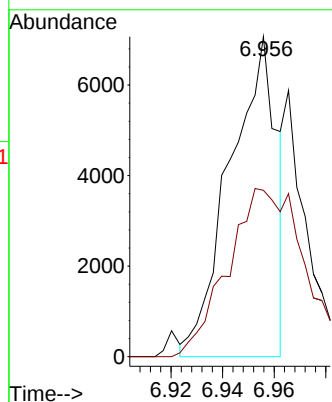
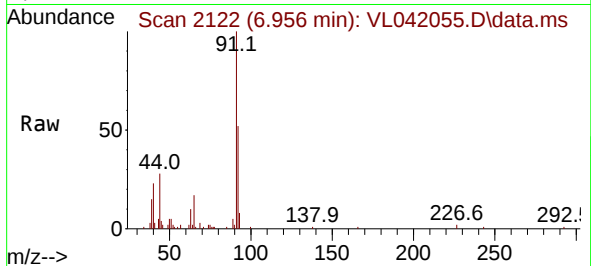




#53  
Toluene  
Concen: 0.199 ppbv  
RT: 6.956 min Scan# 2122  
Delta R.T. -0.003 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

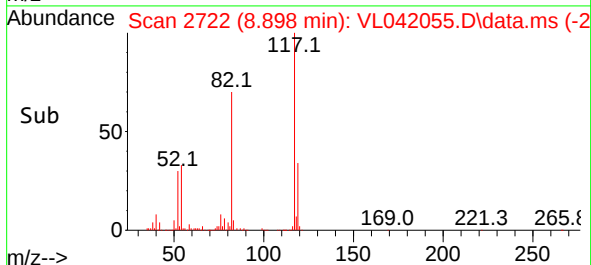
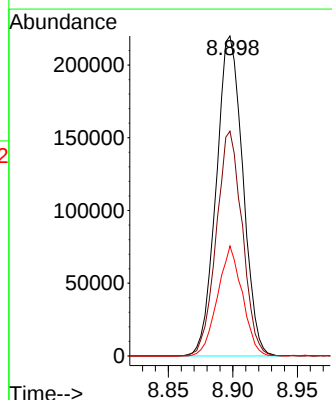
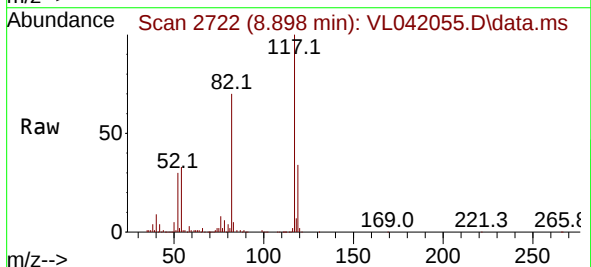
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA1

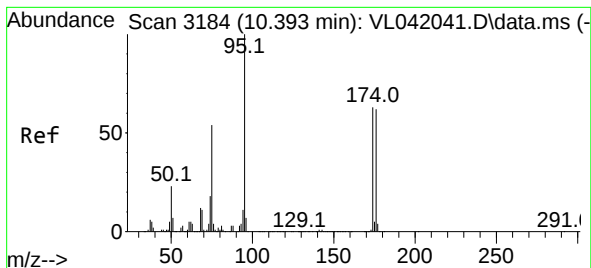
Tgt Ion: 91 Resp: 8869  
Ion Ratio Lower Upper  
91 100  
92 85.1 49.0 73.6#



#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 8.898 min Scan# 2722  
Delta R.T. -0.003 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

Tgt Ion: 117 Resp: 315276  
Ion Ratio Lower Upper  
117 100  
82 68.6 55.0 82.6  
119 32.0 25.9 38.9

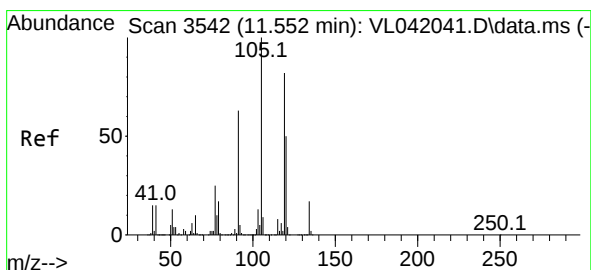
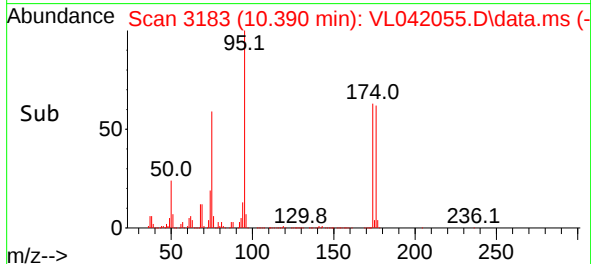
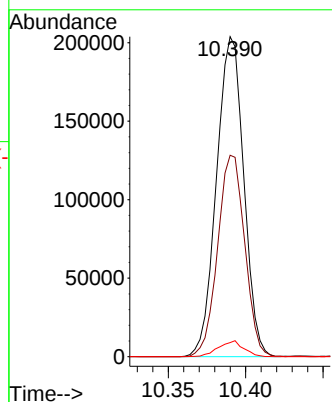
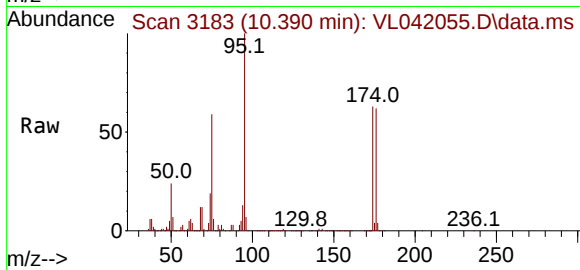




#68  
1-Bromo-4-Fluorobenzene  
Concen: 10.287 ppbv  
RT: 10.390 min Scan# 3184  
Delta R.T. -0.003 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

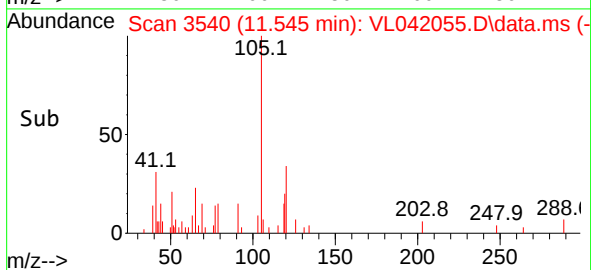
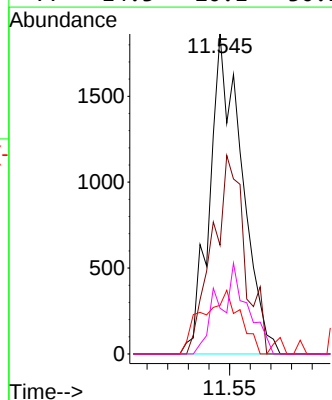
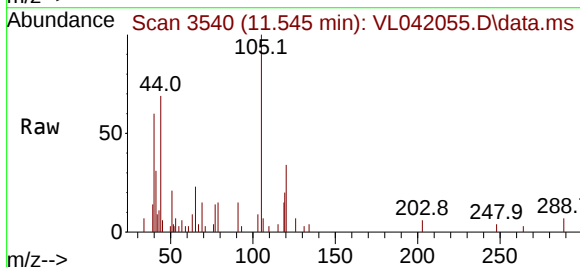
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA1

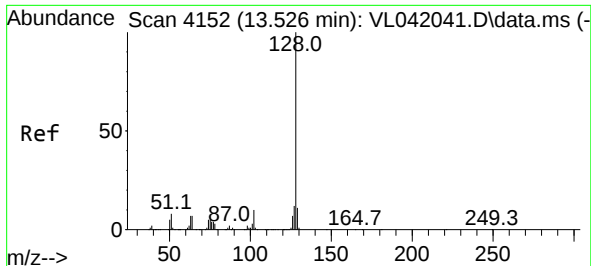
Tgt Ion: 95 Resp: 249506  
Ion Ratio Lower Upper  
95 100  
174 62.5 51.8 77.6  
175 4.6 3.9 5.9



#74  
1,2,4-Trimethylbenzene  
Concen: 0.036 ppbv  
RT: 11.545 min Scan# 3540  
Delta R.T. -0.007 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

Tgt Ion: 105 Resp: 2021  
Ion Ratio Lower Upper  
105 100  
120 34.0 40.2 60.2#  
91 15.2 51.4 77.2#  
77 14.3 20.1 30.1#

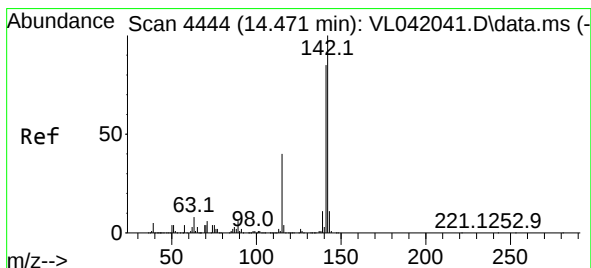
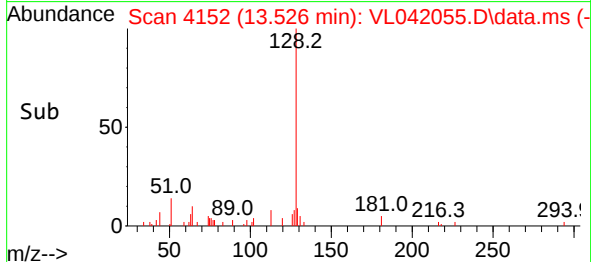
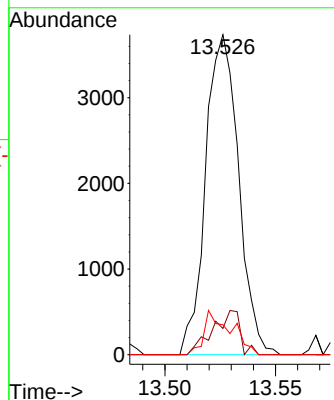
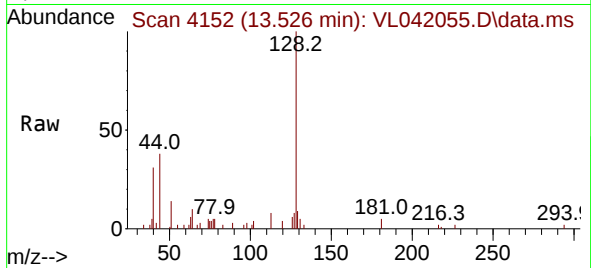




#79  
Naphthalene  
Concen: 0.102 ppbv  
RT: 13.526 min Scan# 4152  
Delta R.T. -0.000 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

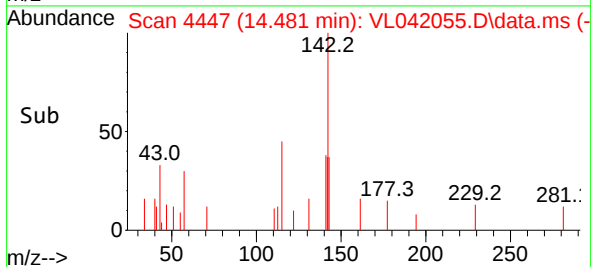
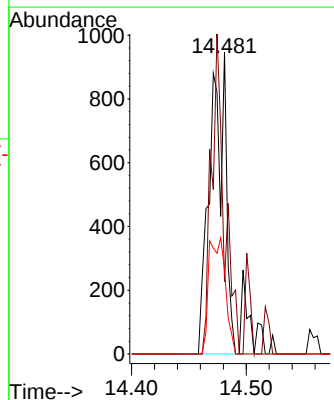
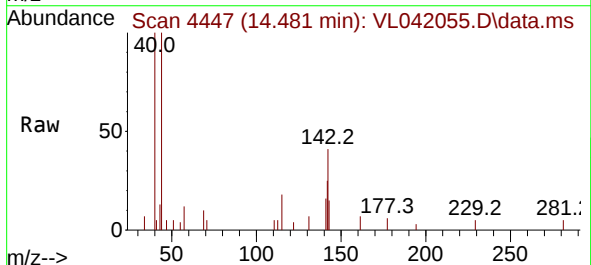
Instrument :  
MSVOA\_L  
ClientSampleId :  
IA1

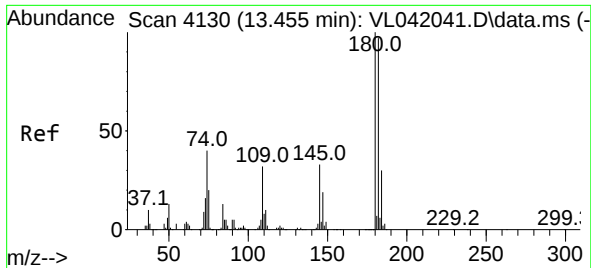
Tgt Ion:128 Resp: 3874  
Ion Ratio Lower Upper  
128 100  
127 8.2 9.8 14.6#  
129 9.4 8.6 12.8



#80  
Naphthalene,2-methyl-  
Concen: 0.100 ppbv  
RT: 14.481 min Scan# 4447  
Delta R.T. 0.010 min  
Lab File: VL042055.D  
Acq: 26 Feb 2025 11:40

Tgt Ion:142 Resp: 1043  
Ion Ratio Lower Upper  
142 100  
141 89.5 65.8 98.6  
115 34.9 29.5 44.3





#81

1,2,4-Trichlorobenzene

Concen: 0.048 ppbv

RT: 13.452 min Scan# 41

Delta R.T. -0.003 min

Lab File: VL042055.D

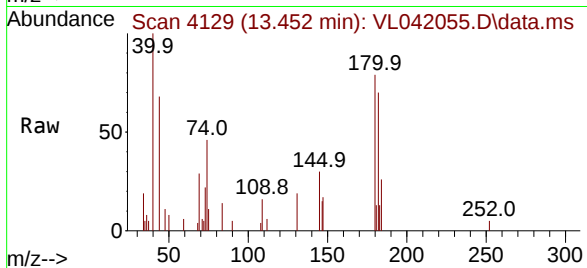
Acq: 26 Feb 2025 11:40

Instrument :

MSVOA\_L

ClientSampleId :

IA1



|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 180   | Resp: | 1008  |
| Ion      | Ratio | Lower | Upper |
| 180      | 100   |       |       |
| 182      | 92.3  | 75.1  | 112.7 |
| 184      | 30.0  | 23.8  | 35.6  |

