

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL042324\  
 Data File : VL041155.D  
 Acq On : 23 Apr 2024 11:19  
 Operator : SY/MD  
 Sample : QC042224 CAN 10595  
 Misc : 400mL/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

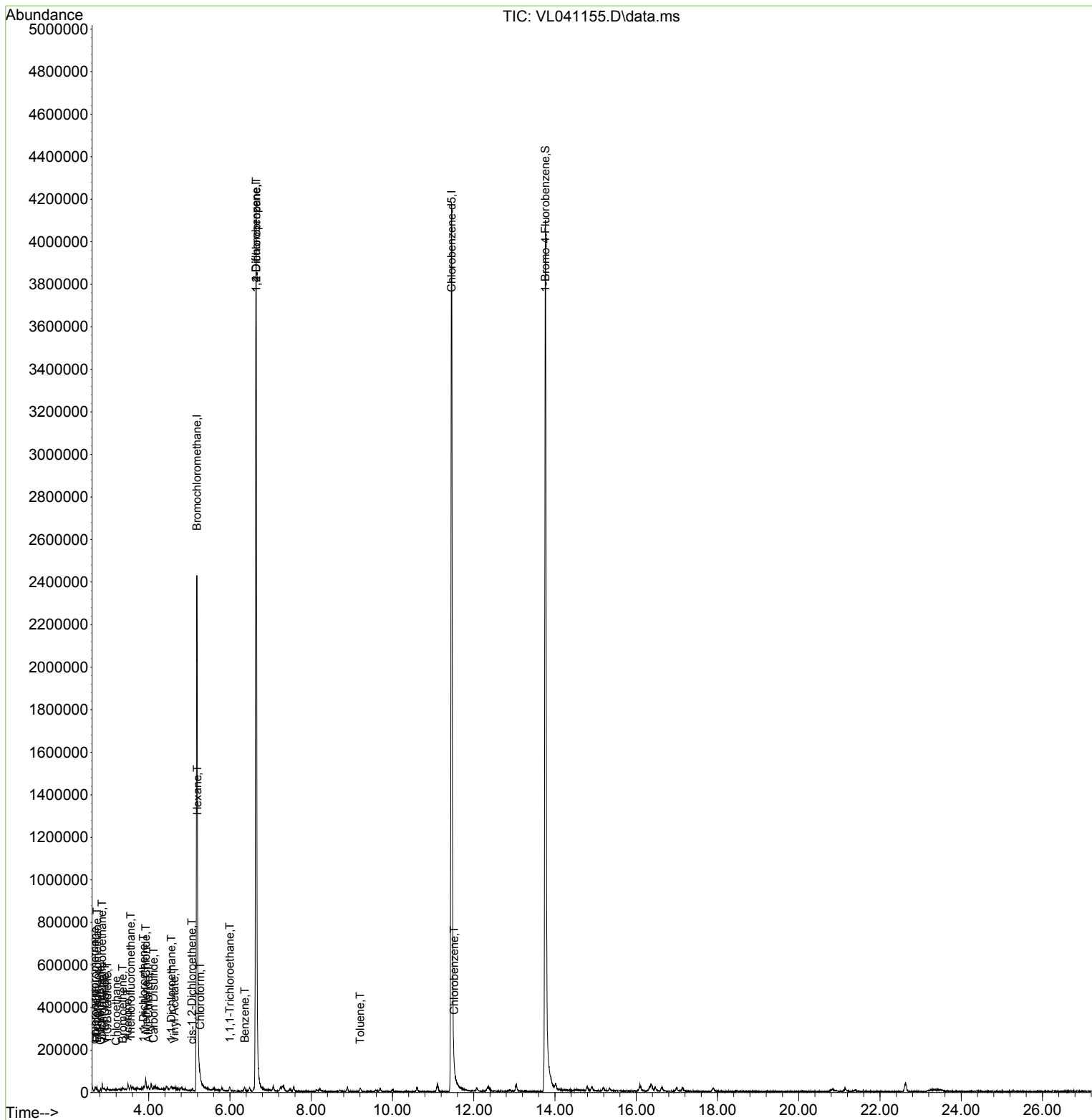
Instrument :  
 MSVOA\_L  
 ClientSampleId :

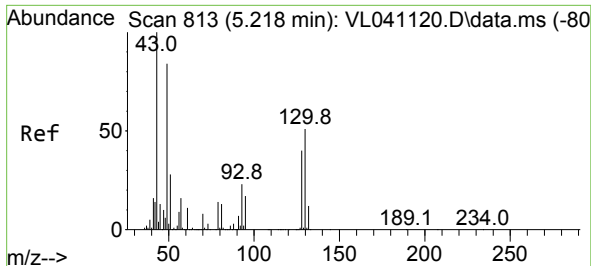
Quant Time: Apr 24 02:50:28 2024  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL040424AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
 QLast Update : Wed Apr 24 02:47:46 2024  
 Response via : Initial Calibration

| Compound                     | R.T.   | QIon  | Response | Conc     | Units  | Dev(Min) |
|------------------------------|--------|-------|----------|----------|--------|----------|
| -----                        |        |       |          |          |        |          |
| Internal Standards           |        |       |          |          |        |          |
| 1) Bromochloromethane        | 5.185  | 49    | 1213852  | 10.000   | ppbv   | 0.00     |
| 33) 1,4-Difluorobenzene      | 6.642  | 114   | 3143184  | 10.000   | ppbv   | 0.00     |
| 55) Chlorobenzene-d5         | 11.455 | 117   | 2782672  | 10.000   | ppbv   | 0.00     |
| System Monitoring Compounds  |        |       |          |          |        |          |
| 68) 1-Bromo-4-Fluorobenzene  | 13.764 | 95    | 2154303  | 9.628    | ppbv   | 0.00     |
| Spiked Amount                | 10.000 | Range | 65 - 135 | Recovery | =      | 96.300%  |
| Target Compounds             |        |       |          |          |        |          |
|                              |        |       |          |          | Qvalue |          |
| 2) Dichlorodifluoromethane   | 2.732  | 85    | 10432    | 0.050    | ppbv   | 89       |
| 3) Chlorodifluoromethane     | 2.674  | 51    | 12938    | 0.069    | ppbv # | 87       |
| 4) Chloromethane             | 2.812  | 50    | 6725     | 0.095    | ppbv # | 77       |
| 5) Vinyl Chloride            | 2.922  | 62    | 4557     | 0.067    | ppbv   | 100      |
| 7) Chloroethane              | 3.198  | 64    | 1231     | 0.049    | ppbv # | 44       |
| 8) Dichlorotetrafluoroethane | 2.851  | 85    | 12333    | 0.070    | ppbv   | 89       |
| 9) Propene                   | 2.700  | 41    | 4454     | 0.075    | ppbv # | 57       |
| 11) Trichlorofluoromethane   | 3.555  | 101   | 10408    | 0.055    | ppbv   | 97       |
| 14) Bromoethene              | 3.362  | 108   | 4126     | 0.077    | ppbv # | 81       |
| 15) Acetone                  | 3.484  | 43    | 9822     | 0.075    | ppbv # | 49       |
| 16) 1,3-Butadiene            | 2.983  | 39    | 2330     | 0.036    | ppbv # | 10       |
| 18) 1,1-Dichloroethene       | 3.874  | 96    | 1756     | 0.030    | ppbv # | 42       |
| 20) Methylene Chloride       | 3.928  | 84    | 12447    | 0.230    | ppbv   | 94       |
| 21) Allyl Chloride           | 3.993  | 41    | 3775     | 0.047    | ppbv # | 5        |
| 23) Vinyl Acetate            | 4.632  | 43    | 6256     | 0.047    | ppbv # | 71       |
| 24) 1,1-Dichloroethane       | 4.558  | 63    | 5798     | 0.047    | ppbv # | 87       |
| 26) Hexane                   | 5.201  | 57    | 13882    | 0.125    | ppbv # | 70       |
| 27) Carbon Disulfide         | 4.124  | 76    | 7404     | 0.055    | ppbv # | 63       |
| 29) Chloroform               | 5.269  | 83    | 10541    | 0.056    | ppbv   | 99       |
| 31) cis-1,2-Dichloroethene   | 5.066  | 61    | 3890     | 0.037    | ppbv # | 63       |
| 32) 1,1,1-Trichloroethane    | 5.996  | 97    | 8633     | 0.050    | ppbv # | 54       |
| 36) Benzene                  | 6.365  | 78    | 13560    | 0.059    | ppbv # | 87       |
| 39) 1,2-Dichloropropane      | 6.645  | 63    | 783979   | 8.614    | ppbv # | 25       |
| 53) Toluene                  | 9.208  | 91    | 8632     | 0.036    | ppbv # | 81       |
| 57) Chlorobenzene            | 11.516 | 112   | 6286     | 0.033    | ppbv # | 53       |
| -----                        |        |       |          |          |        |          |

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

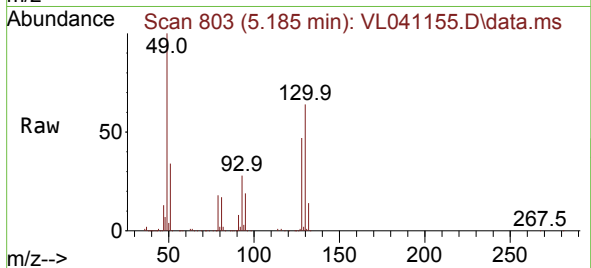
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Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL040424AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LFri Aug 26 06:05:16 2022  
QLast Update : Wed Apr 24 02:47:46 2024  
Response via : Initial Calibration



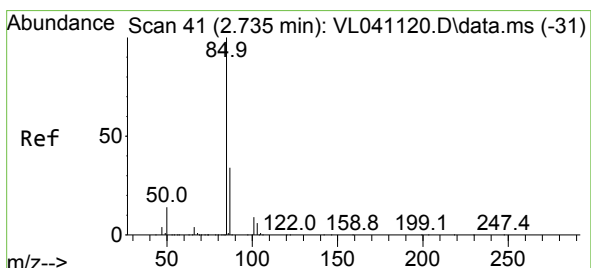
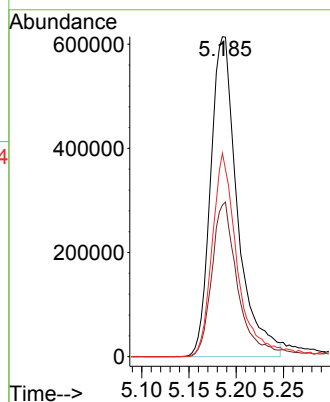
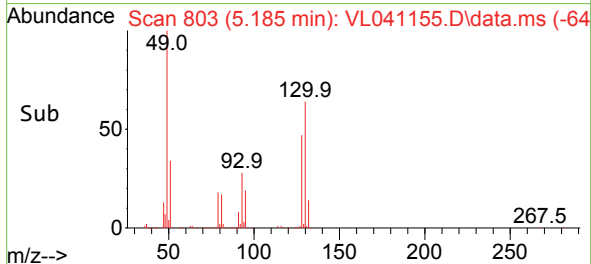


#1  
 Bromochloromethane  
 Concen: 10.000 ppbv  
 RT: 5.185 min Scan# 80  
 Delta R.T. -0.004 min  
 Lab File: VL041155.D  
 Acq: 23 Apr 2024 11:19

Instrument :  
 MSVOA\_L  
 ClientSampleId :

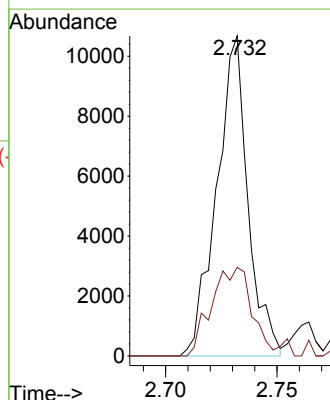
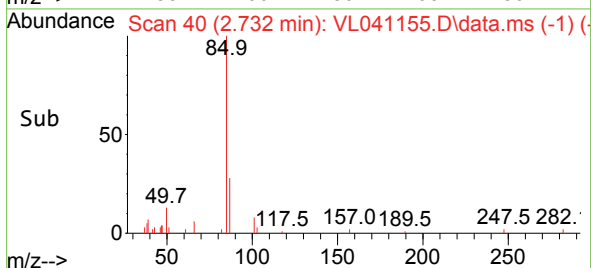
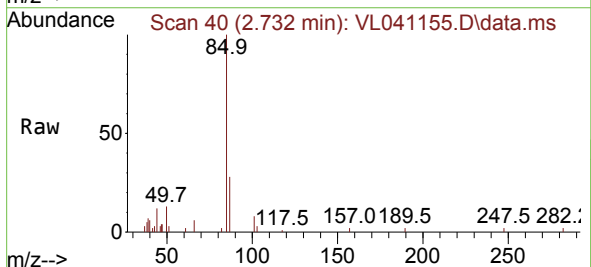


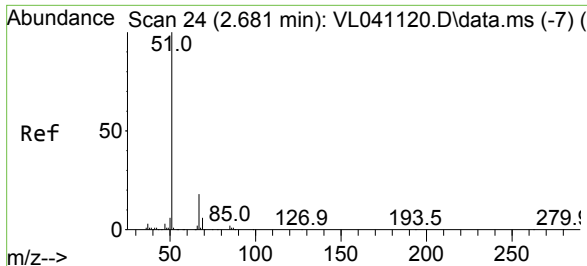
Tgt Ion: 49 Resp: 1213852  
 Ion Ratio Lower Upper  
 49 100  
 128 49.0 23.6 71.0  
 130 62.0 30.1 90.5



#2  
 Dichlorodifluoromethane  
 Concen: 0.050 ppbv  
 RT: 2.732 min Scan# 40  
 Delta R.T. -0.003 min  
 Lab File: VL041155.D  
 Acq: 23 Apr 2024 11:19

Tgt Ion: 85 Resp: 10432  
 Ion Ratio Lower Upper  
 85 100  
 87 27.7 27.0 40.6

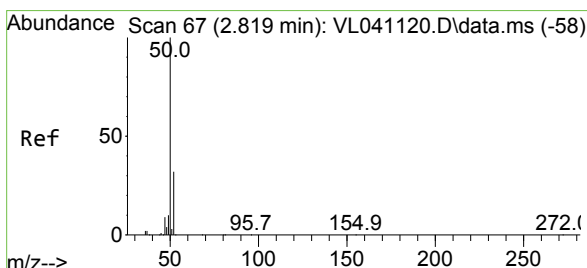
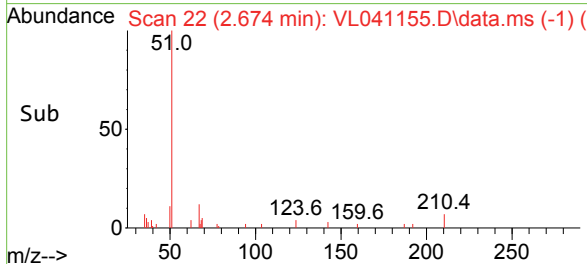
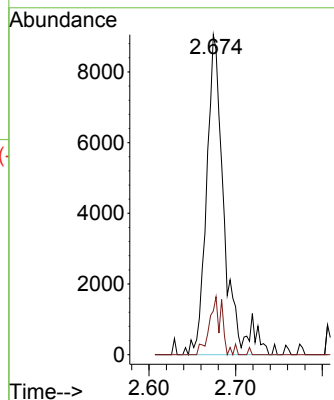
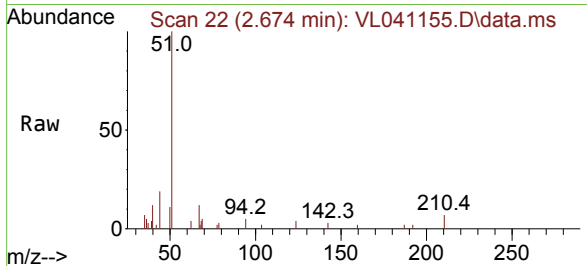




#3  
Chlorodifluoromethane  
Concen: 0.069 ppbv  
RT: 2.674 min Scan# 21  
Delta R.T. -0.007 min  
Lab File: VL041155.D  
Acq: 23 Apr 2024 11:19

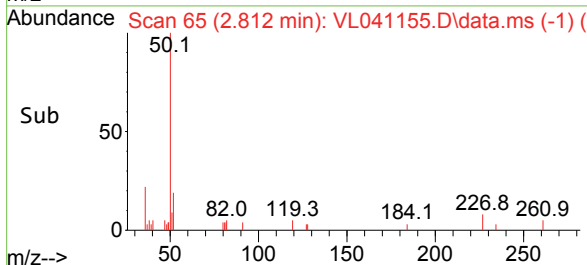
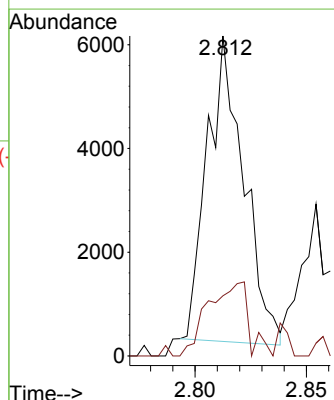
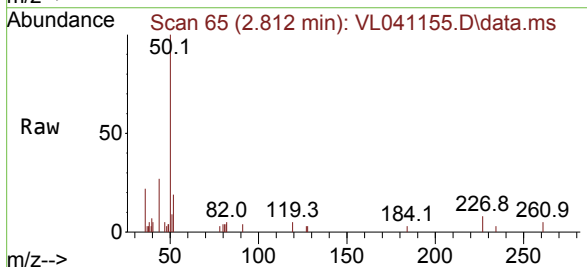
Instrument :  
MSVOA\_L  
ClientSampleId :

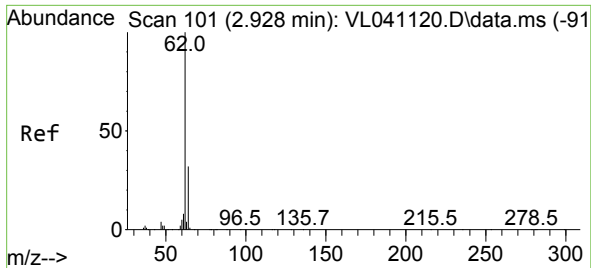
Tgt Ion: 51 Resp: 12938  
Ion Ratio Lower Upper  
51 100  
67 12.8 14.9 22.3#



#4  
Chloromethane  
Concen: 0.095 ppbv  
RT: 2.812 min Scan# 65  
Delta R.T. -0.007 min  
Lab File: VL041155.D  
Acq: 23 Apr 2024 11:19

Tgt Ion: 50 Resp: 6725  
Ion Ratio Lower Upper  
50 100  
52 19.9 26.0 39.0#

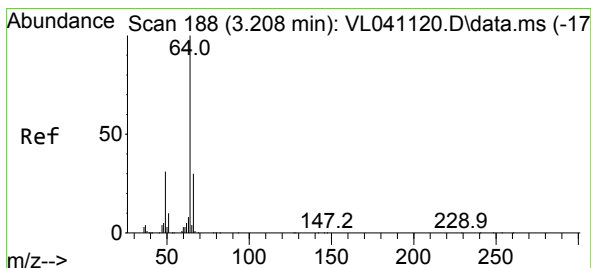
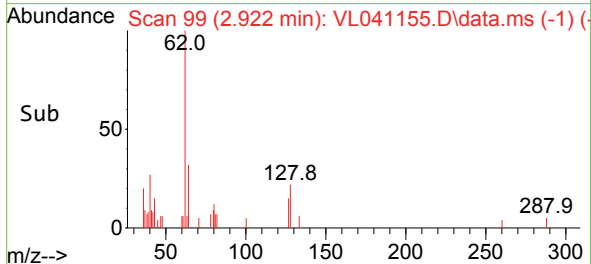
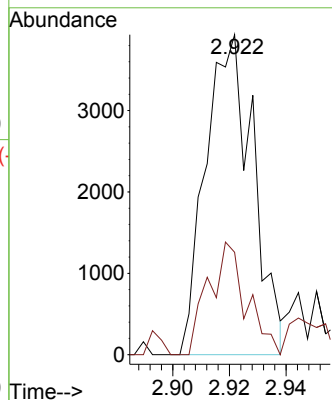
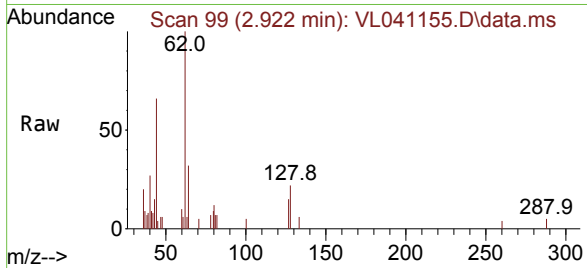




#5  
 Vinyl Chloride  
 Concen: 0.067 ppbv  
 RT: 2.922 min Scan# 91  
 Delta R.T. -0.003 min  
 Lab File: VL041155.D  
 Acq: 23 Apr 2024 11:19

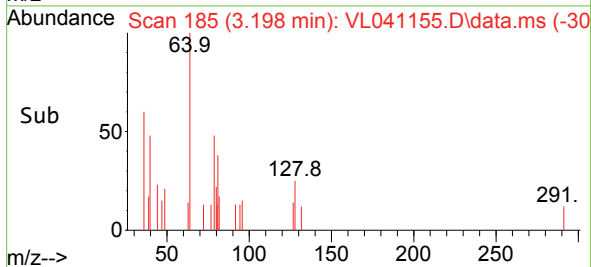
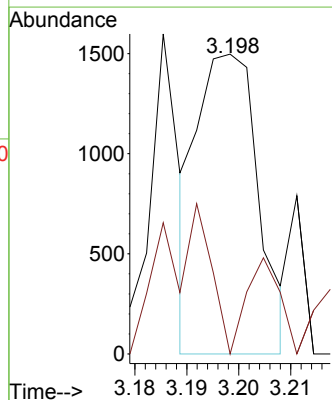
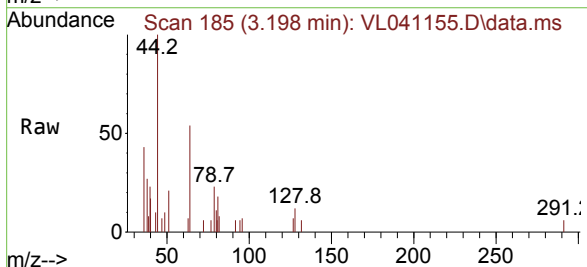
Instrument :  
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 ClientSampleId :

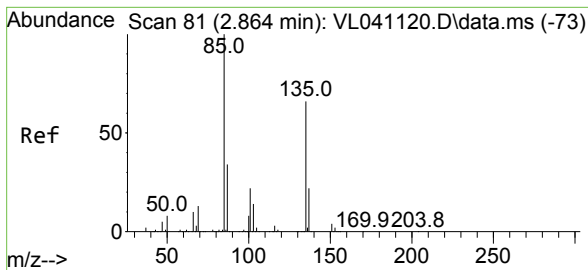
Tgt Ion: 62 Resp: 4557  
 Ion Ratio Lower Upper  
 62 100  
 64 32.0 25.6 38.4



#7  
 Chloroethane  
 Concen: 0.049 ppbv  
 RT: 3.198 min Scan# 185  
 Delta R.T. -0.000 min  
 Lab File: VL041155.D  
 Acq: 23 Apr 2024 11:19

Tgt Ion: 64 Resp: 1231  
 Ion Ratio Lower Upper  
 64 100  
 66 0.0 24.2 36.4#

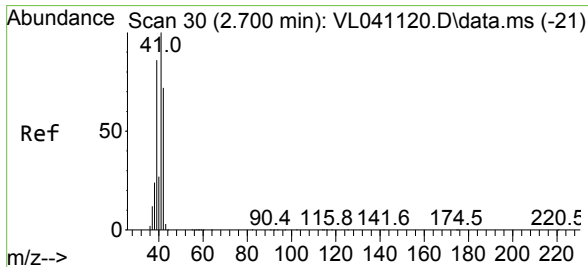
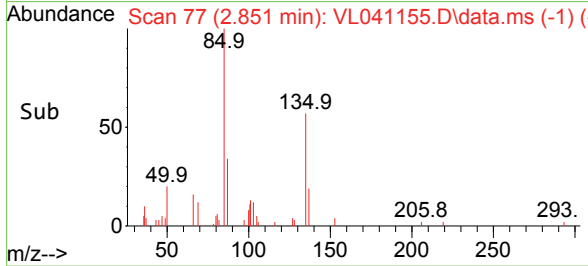
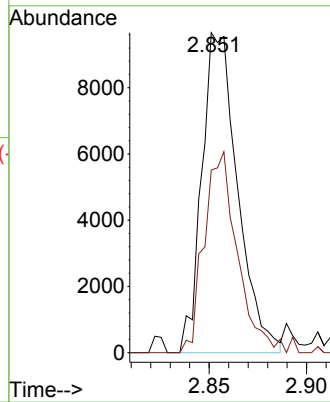
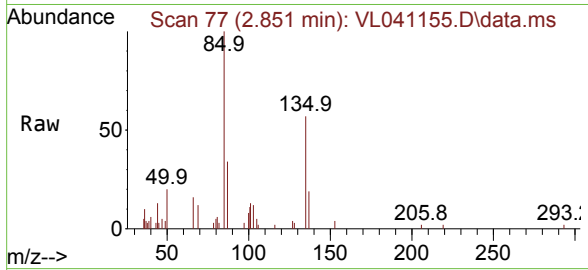




#8  
Dichlorotetrafluoroethane  
Concen: 0.070 ppbv  
RT: 2.851 min Scan# 71  
Delta R.T. -0.010 min  
Lab File: VL041155.D  
Acq: 23 Apr 2024 11:19

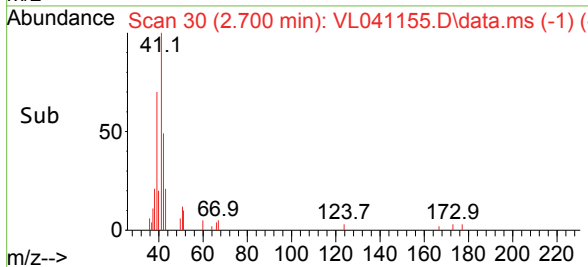
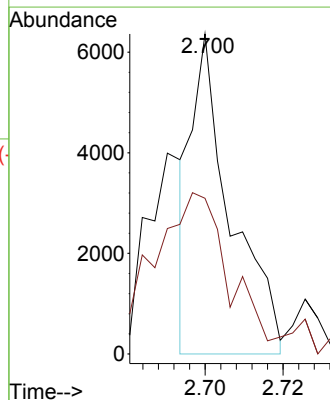
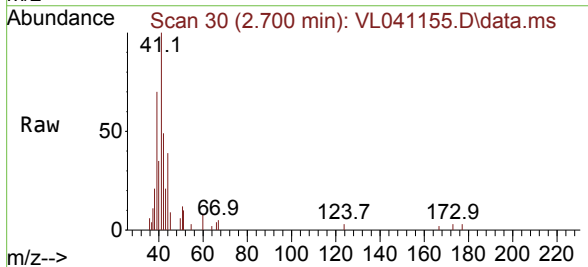
Instrument :  
MSVOA\_L  
ClientSampleId :

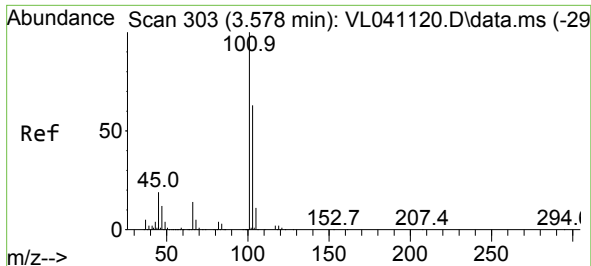
Tgt Ion: 85 Resp: 12333  
Ion Ratio Lower Upper  
85 100  
135 58.8 54.2 81.2



#9  
Propene  
Concen: 0.075 ppbv  
RT: 2.700 min Scan# 30  
Delta R.T. -0.000 min  
Lab File: VL041155.D  
Acq: 23 Apr 2024 11:19

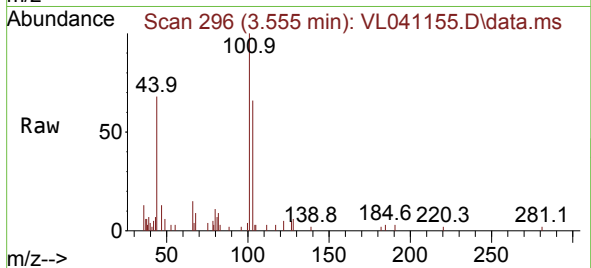
Tgt Ion: 41 Resp: 4454  
Ion Ratio Lower Upper  
41 100  
42 111.4 60.1 90.1#



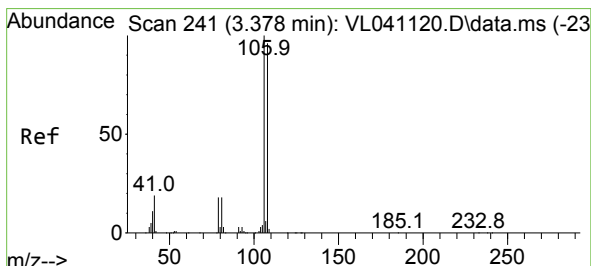
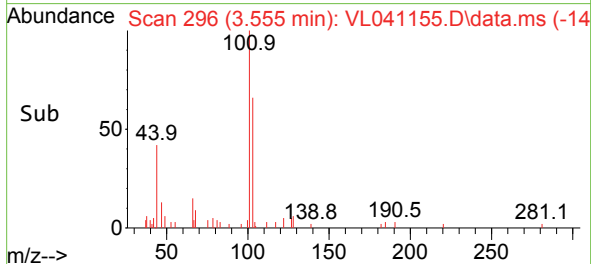
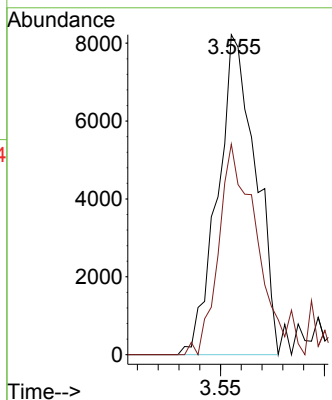


#11  
 Trichlorofluoromethane  
 Concen: 0.055 ppbv  
 RT: 3.555 min Scan# 241  
 Delta R.T. -0.007 min  
 Lab File: VL041155.D  
 Acq: 23 Apr 2024 11:19

Instrument :  
 MSVOA\_L  
 ClientSampleId :

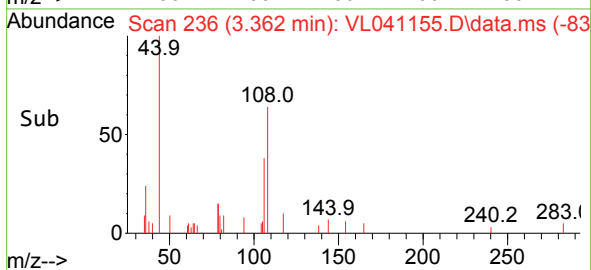
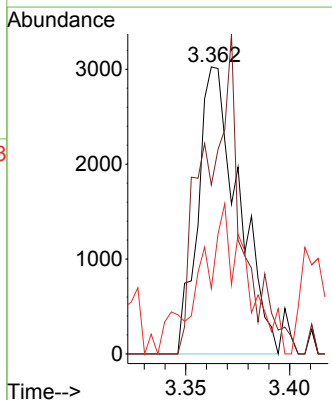
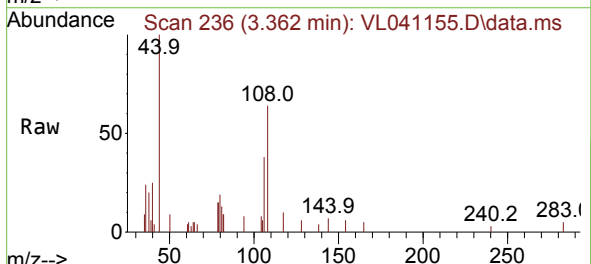


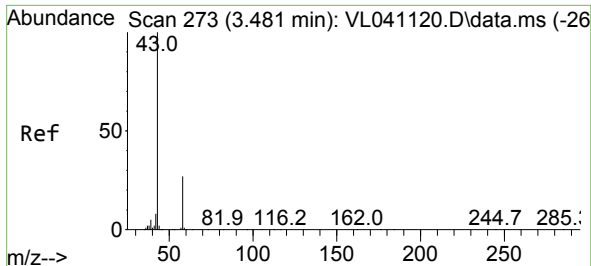
Tgt Ion:101 Resp: 10408  
 Ion Ratio Lower Upper  
 101 100  
 103 65.8 50.6 75.8



#14  
 Bromoethene  
 Concen: 0.077 ppbv  
 RT: 3.362 min Scan# 236  
 Delta R.T. -0.007 min  
 Lab File: VL041155.D  
 Acq: 23 Apr 2024 11:19

Tgt Ion:108 Resp: 4126  
 Ion Ratio Lower Upper  
 108 100  
 106 101.4 86.0 129.0  
 79 60.6 15.4 23.2#

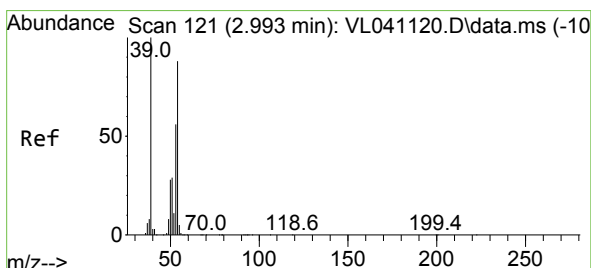
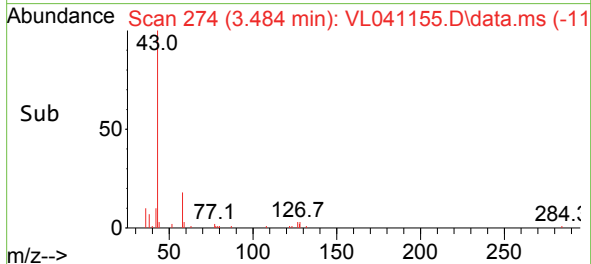
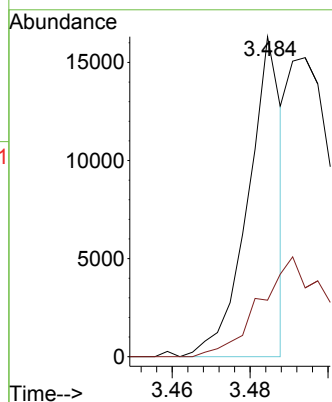
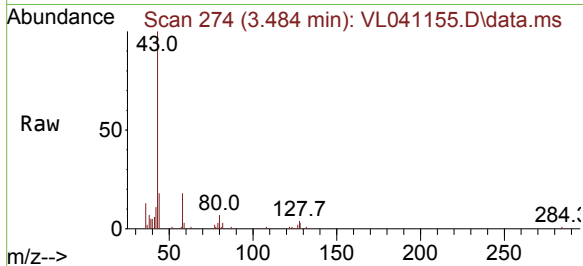




#15  
Acetone  
Concen: 0.075 ppbv  
RT: 3.484 min Scan# 21  
Delta R.T. 0.016 min  
Lab File: VL041155.D  
Acq: 23 Apr 2024 11:19

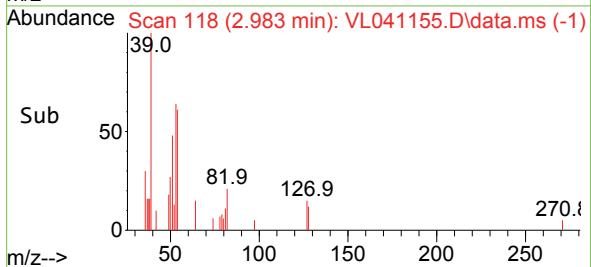
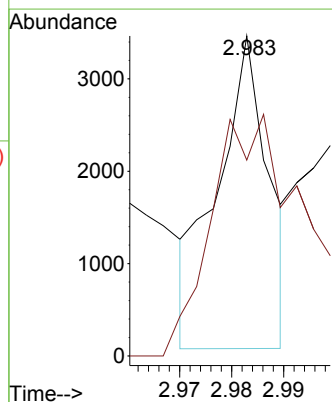
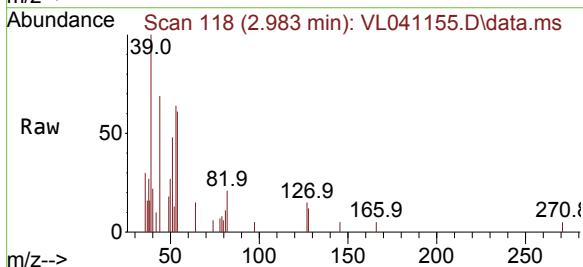
Instrument :  
MSVOA\_L  
ClientSampleId :

Tgt Ion: 43 Resp: 9822  
Ion Ratio Lower Upper  
43 100  
58 0.0 21.1 31.7#

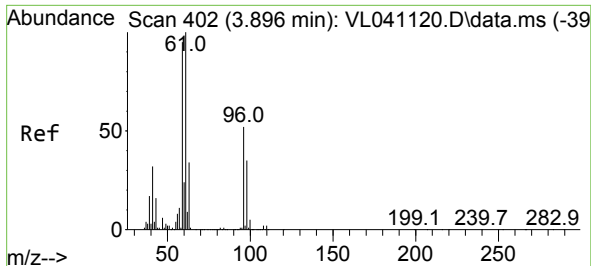


#16  
1,3-Butadiene  
Concen: 0.036 ppbv  
RT: 2.983 min Scan# 118  
Delta R.T. -0.007 min  
Lab File: VL041155.D  
Acq: 23 Apr 2024 11:19

Tgt Ion: 39 Resp: 2330  
Ion Ratio Lower Upper  
39 100  
54 158.2 63.5 95.3#







#18

1,1-Dichloroethene

Concen: 0.030 ppbv

RT: 3.874 min Scan# 395

Delta R.T. -0.007 min

Lab File: VL041155.D

Acq: 23 Apr 2024 11:19

Instrument :

MSVOA\_L

ClientSampleId :

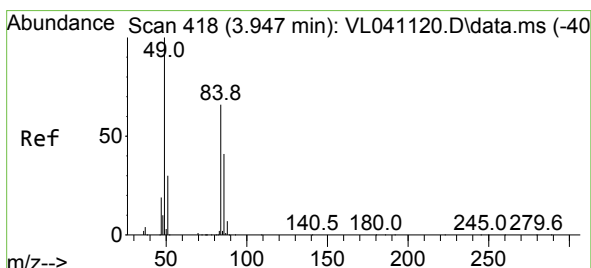
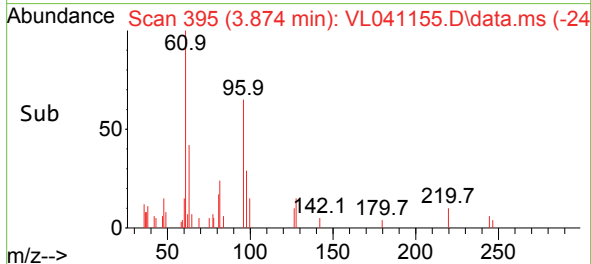
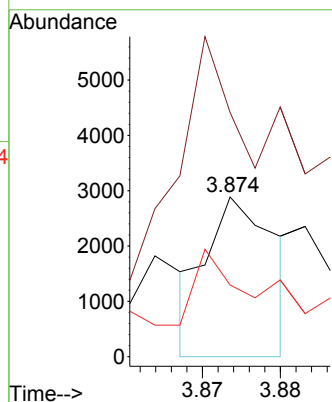
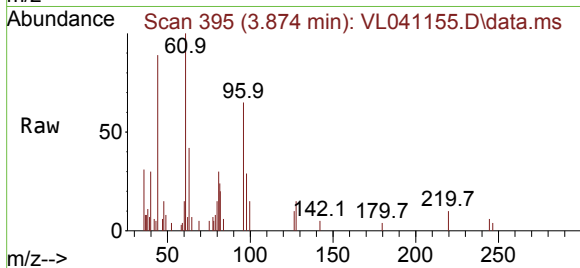
Tgt Ion: 96 Resp: 1756

Ion Ratio Lower Upper

96 100

61 84.8 152.6 228.8#

98 53.8 54.0 81.0#



#20

Methylene Chloride

Concen: 0.230 ppbv

RT: 3.928 min Scan# 412

Delta R.T. -0.003 min

Lab File: VL041155.D

Acq: 23 Apr 2024 11:19

Tgt Ion: 84 Resp: 12447

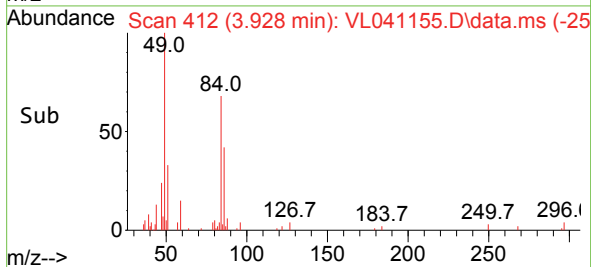
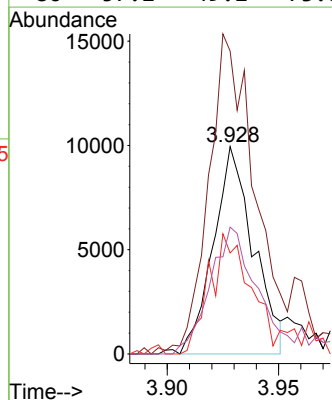
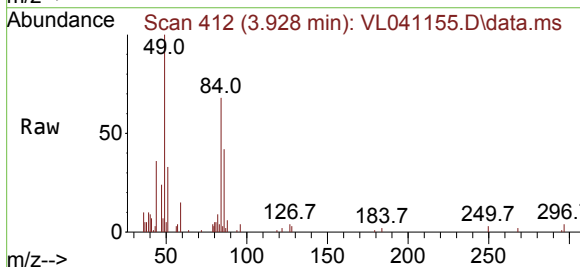
Ion Ratio Lower Upper

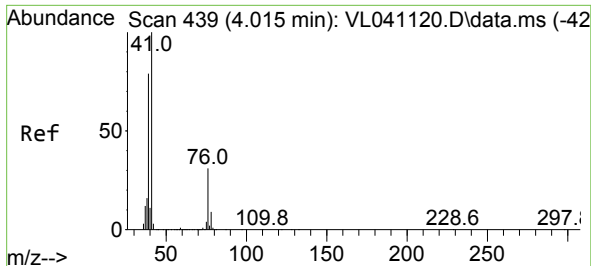
84 100

49 142.3 120.7 181.1

51 48.7 36.6 54.8

86 57.2 49.2 73.8





#21

Allyl Chloride

Concen: 0.047 ppbv

RT: 3.993 min Scan# 41

Delta R.T. -0.003 min

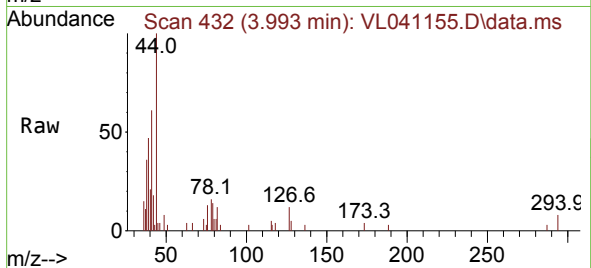
Lab File: VL041155.D

Acq: 23 Apr 2024 11:19

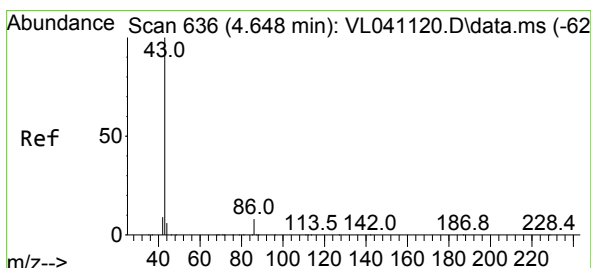
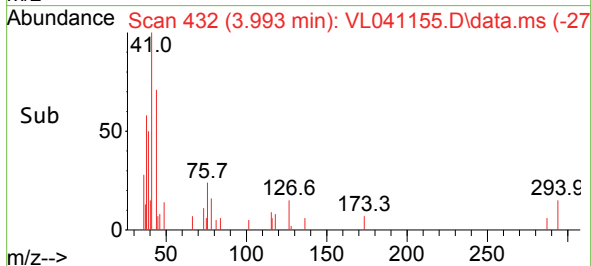
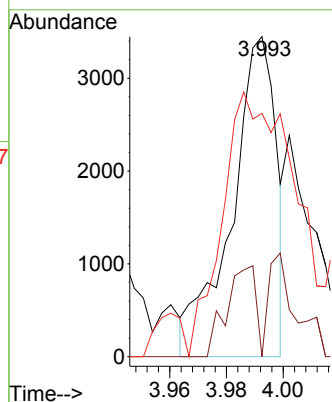
Instrument :

MSVOA\_L

ClientSampleId :



|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 41    | Resp: | 3775  |
| Ion      | Ratio | Lower | Upper |
| 41       | 100   |       |       |
| 76       | 0.0   | 25.7  | 38.5# |
| 39       | 180.6 | 65.7  | 98.5# |



#23

Vinyl Acetate

Concen: 0.047 ppbv

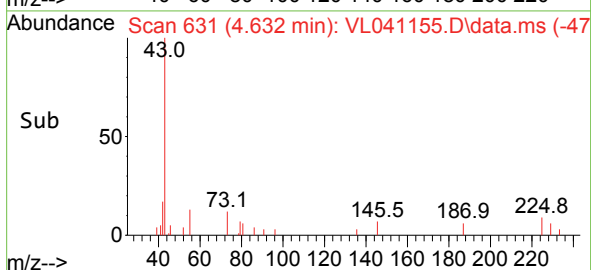
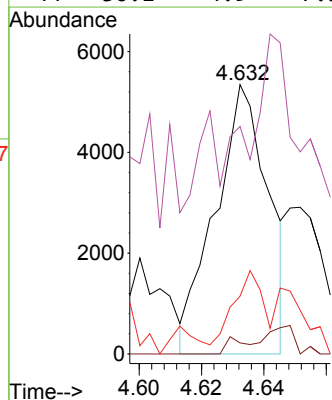
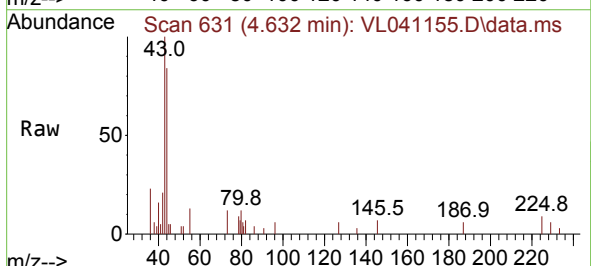
RT: 4.632 min Scan# 631

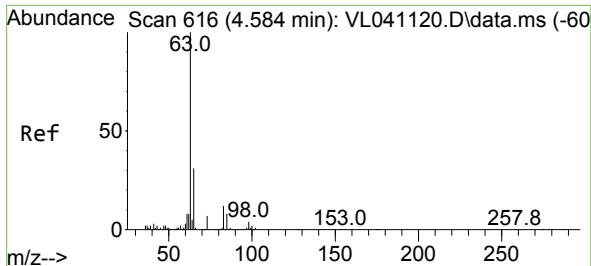
Delta R.T. 0.010 min

Lab File: VL041155.D

Acq: 23 Apr 2024 11:19

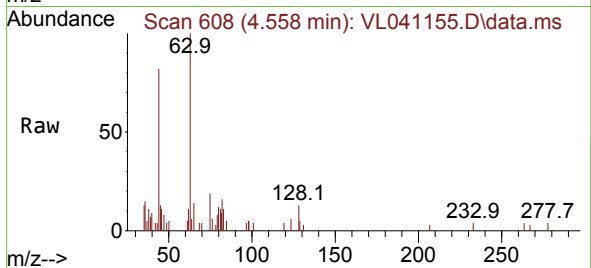
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 6256  |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 86       | 4.7   | 6.2   | 9.4#  |
| 42       | 12.5  | 7.7   | 11.5# |
| 44       | 36.1  | 4.9   | 7.3#  |



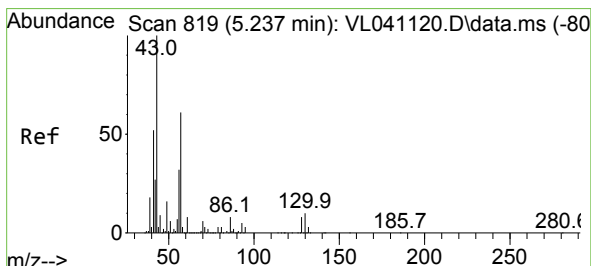
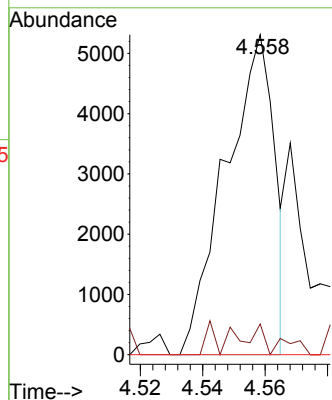
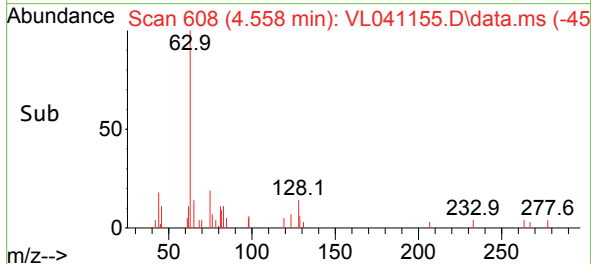


#24  
1,1-Dichloroethane  
Concen: 0.047 ppbv  
RT: 4.558 min Scan# 608  
Delta R.T. -0.003 min  
Lab File: VL041155.D  
Acq: 23 Apr 2024 11:19

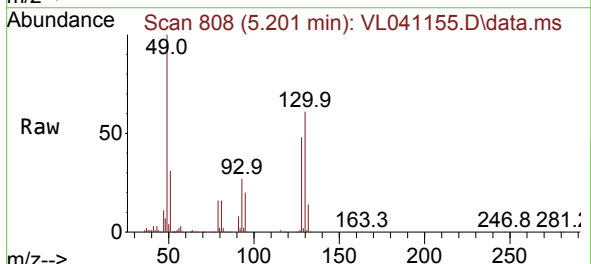
Instrument :  
MSVOA\_L  
ClientSampleId :



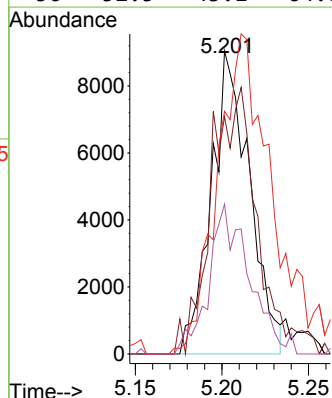
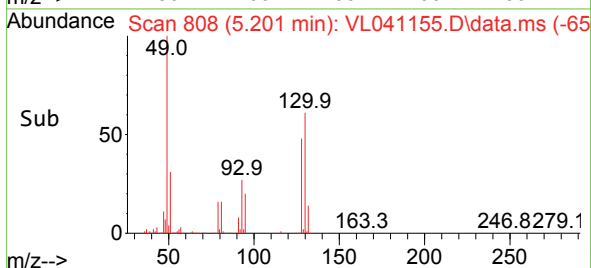
Tgt Ion: 63 Resp: 5798  
Ion Ratio Lower Upper  
63 100  
98 9.6 2.1 6.3#  
100 0.0 1.1 3.3#

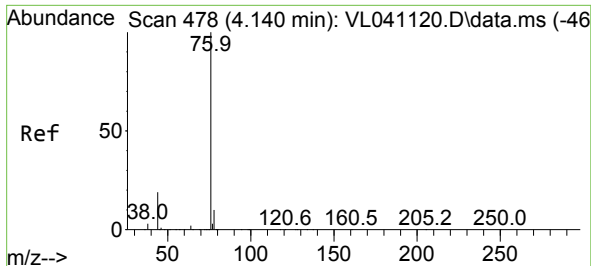


#26  
Hexane  
Concen: 0.125 ppbv  
RT: 5.201 min Scan# 808  
Delta R.T. -0.007 min  
Lab File: VL041155.D  
Acq: 23 Apr 2024 11:19



Tgt Ion: 57 Resp: 13882  
Ion Ratio Lower Upper  
57 100  
41 107.6 73.8 110.8  
43 162.6 186.2 279.2#  
56 52.5 43.1 64.7

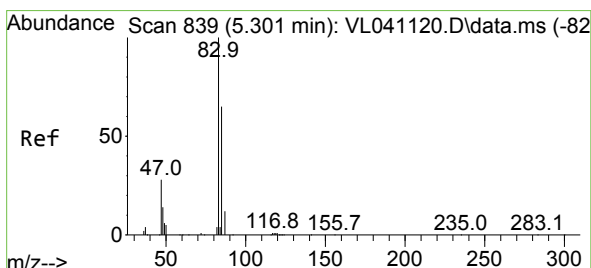
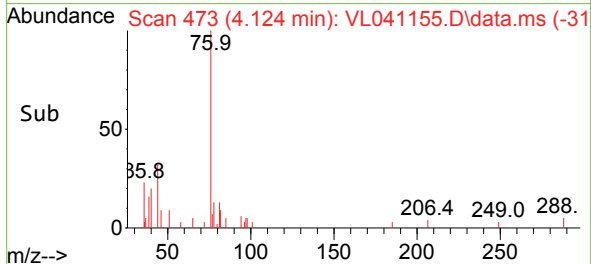
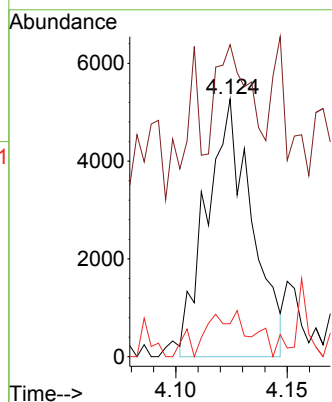
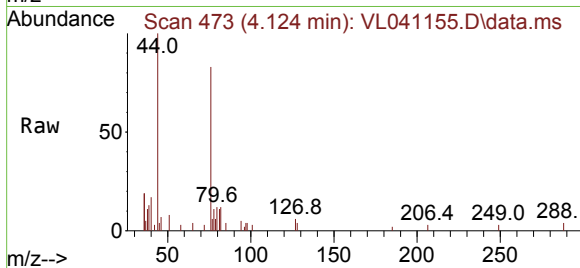




#27  
Carbon Disulfide  
Concen: 0.055 ppbv  
RT: 4.124 min Scan# 41  
Delta R.T. -0.000 min  
Lab File: VL041155.D  
Acq: 23 Apr 2024 11:19

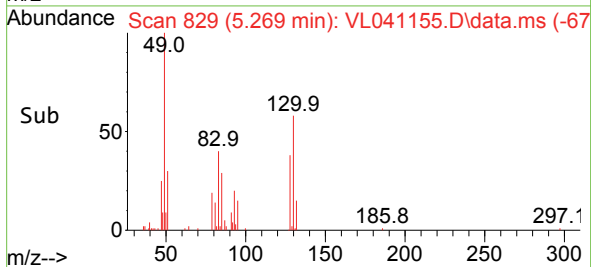
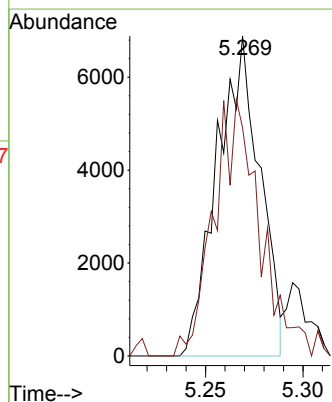
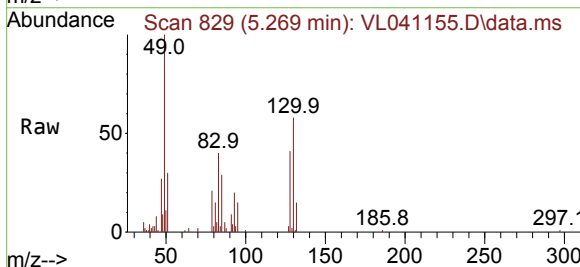
Instrument :  
MSVOA\_L  
ClientSampleId :

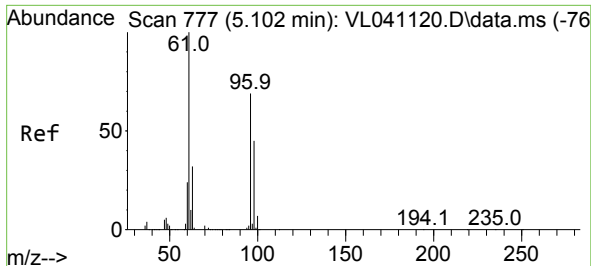
Tgt Ion: 76 Resp: 7404  
Ion Ratio Lower Upper  
76 100  
44 0.0 16.3 24.5#  
78 18.2 7.9 11.9#



#29  
Chloroform  
Concen: 0.056 ppbv  
RT: 5.269 min Scan# 829  
Delta R.T. -0.000 min  
Lab File: VL041155.D  
Acq: 23 Apr 2024 11:19

Tgt Ion: 83 Resp: 10541  
Ion Ratio Lower Upper  
83 100  
85 65.0 51.5 77.3

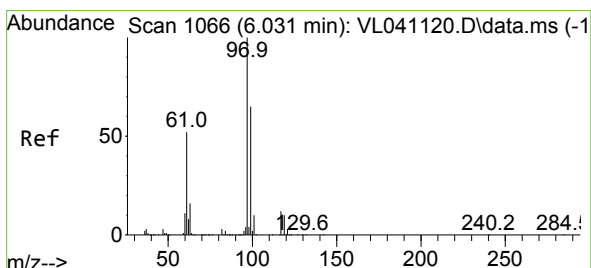
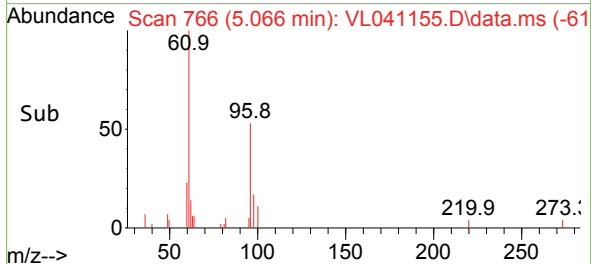
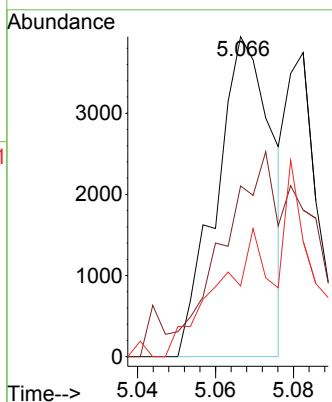
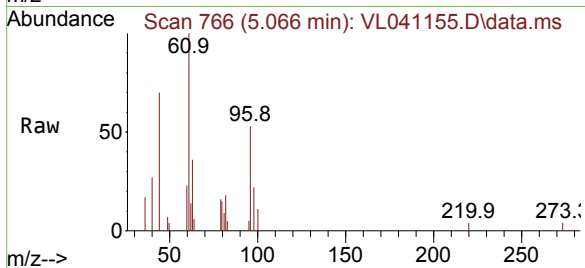




#31  
 cis-1,2-Dichloroethene  
 Concen: 0.037 ppbv  
 RT: 5.066 min Scan# 7  
 Delta R.T. -0.010 min  
 Lab File: VL041155.D  
 Acq: 23 Apr 2024 11:19

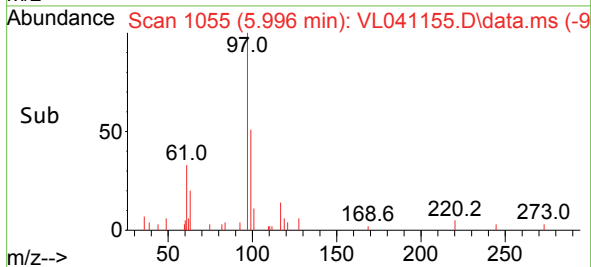
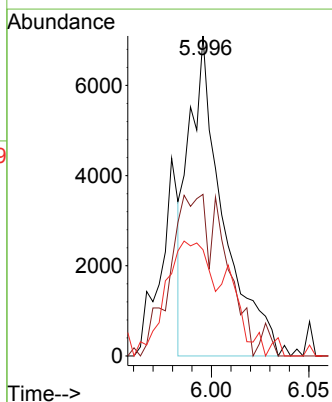
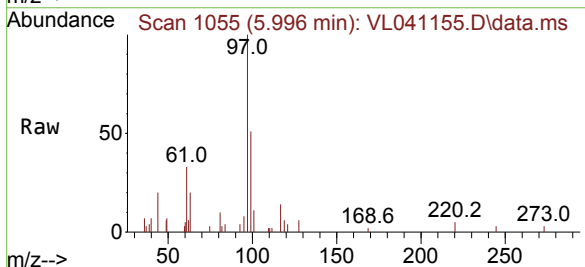
Instrument :  
 MSVOA\_L  
 ClientSampleId :

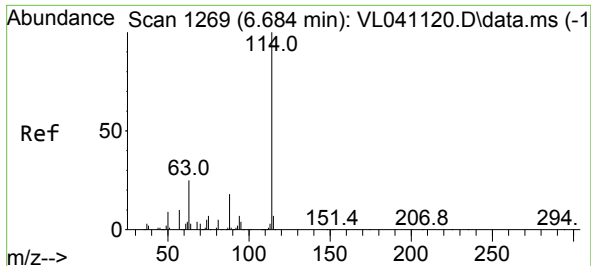
Tgt Ion: 61 Resp: 3890  
 Ion Ratio Lower Upper  
 61 100  
 96 45.6 54.9 82.3#  
 98 12.7 35.9 53.9#



#32  
 1,1,1-Trichloroethane  
 Concen: 0.050 ppbv  
 RT: 5.996 min Scan# 1055  
 Delta R.T. -0.000 min  
 Lab File: VL041155.D  
 Acq: 23 Apr 2024 11:19

Tgt Ion: 97 Resp: 8633  
 Ion Ratio Lower Upper  
 97 100  
 99 84.2 52.0 78.0#  
 61 0.0 40.5 60.7#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 6.642 min Scan# 1170

Delta R.T. -0.003 min

Lab File: VL041155.D

Acq: 23 Apr 2024 11:19

Instrument :

MSVOA\_L

ClientSampleId :

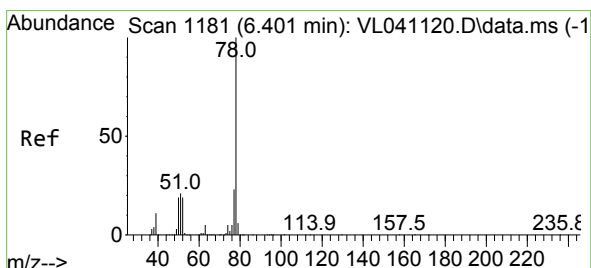
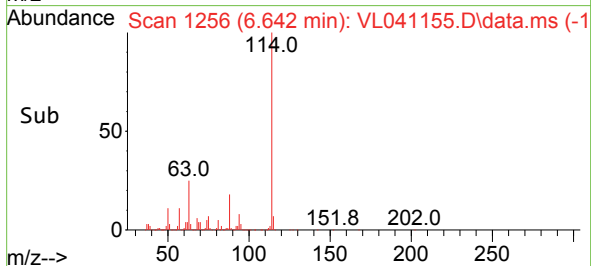
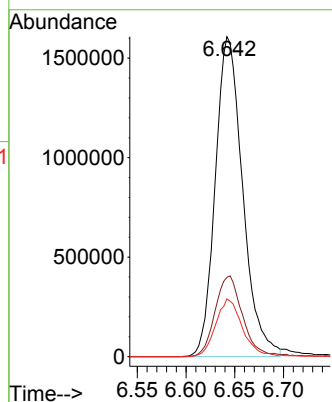
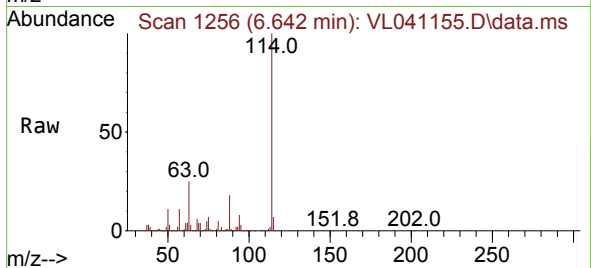
Tgt Ion:114 Resp: 3143184

Ion Ratio Lower Upper

114 100

63 25.7 20.9 31.3

88 18.0 14.5 21.7



#36

Benzene

Concen: 0.059 ppbv

RT: 6.365 min Scan# 1170

Delta R.T. 0.003 min

Lab File: VL041155.D

Acq: 23 Apr 2024 11:19

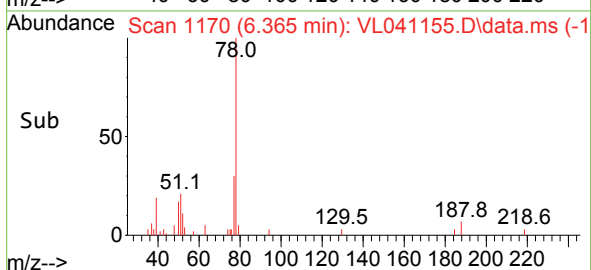
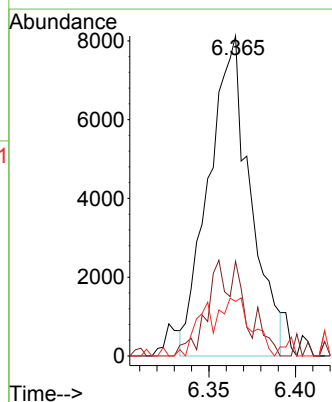
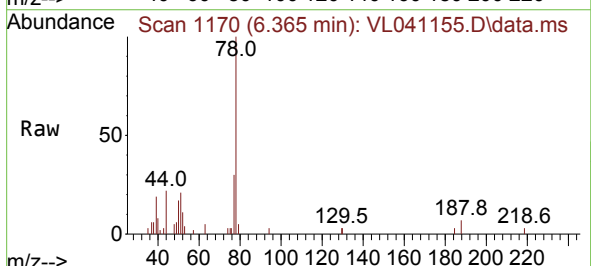
Tgt Ion: 78 Resp: 13560

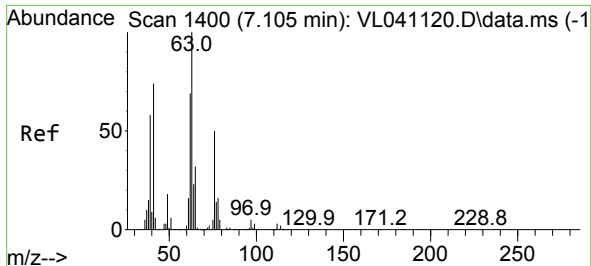
Ion Ratio Lower Upper

78 100

77 32.1 18.2 27.4#

50 16.4 15.4 23.2





#39

1,2-Dichloropropane

Concen: 8.614 ppbv

RT: 6.645 min Scan# 11

Delta R.T. -0.418 min

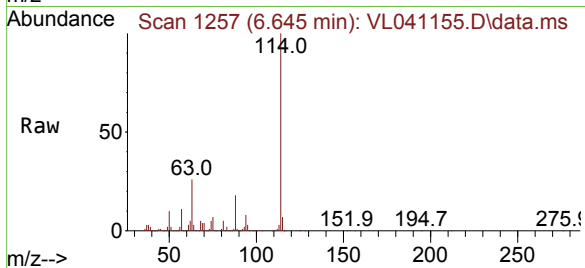
Lab File: VL041155.D

Acq: 23 Apr 2024 11:19

Instrument :

MSVOA\_L

ClientSampleId :



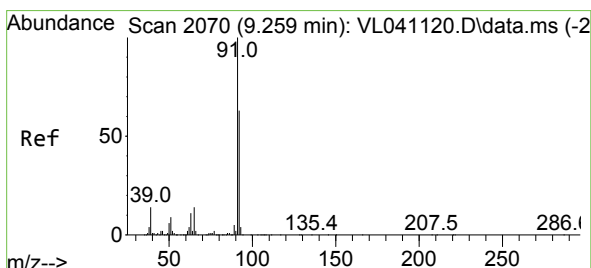
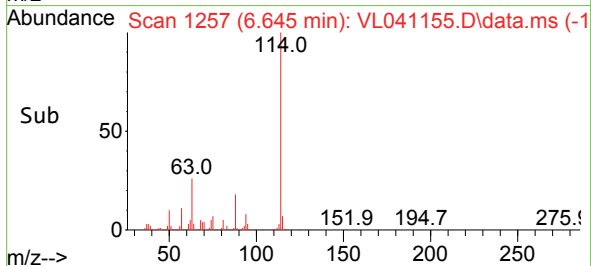
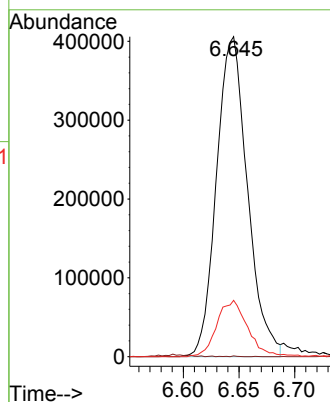
Tgt Ion: 63 Resp: 783979

Ion Ratio Lower Upper

63 100

41 0.3 58.7 88.1#

62 17.6 55.5 83.3#



#53

Toluene

Concen: 0.036 ppbv

RT: 9.208 min Scan# 2054

Delta R.T. -0.003 min

Lab File: VL041155.D

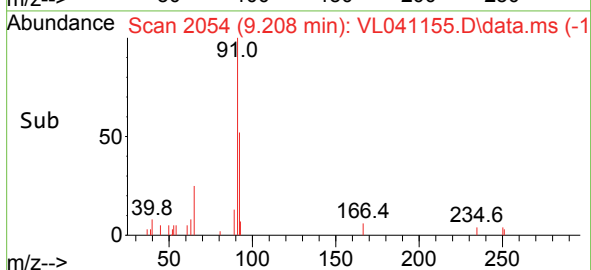
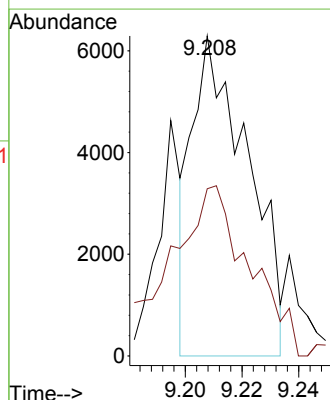
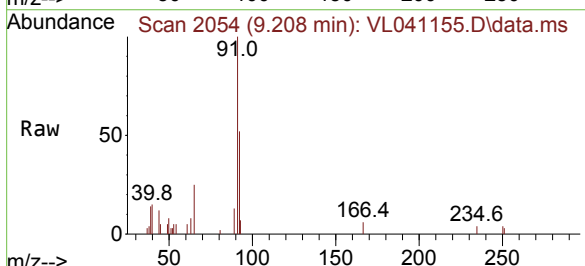
Acq: 23 Apr 2024 11:19

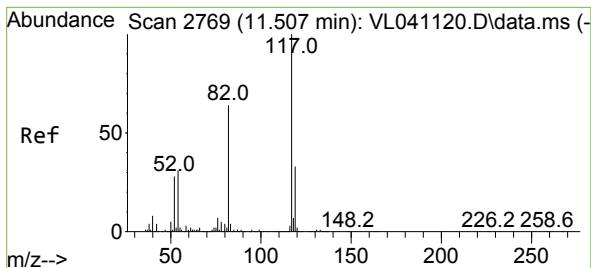
Tgt Ion: 91 Resp: 8632

Ion Ratio Lower Upper

91 100

92 76.0 49.0 73.4#





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 11.455 min Scan# 21

Delta R.T. -0.000 min

Lab File: VL041155.D

Acq: 23 Apr 2024 11:19

Instrument :

MSVOA\_L

ClientSampleId :

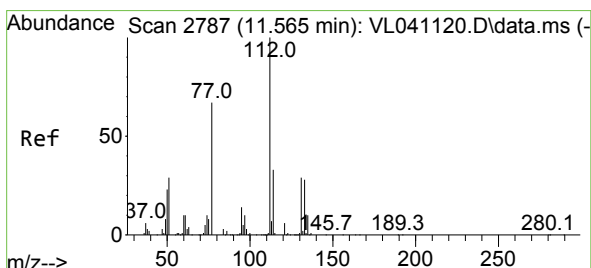
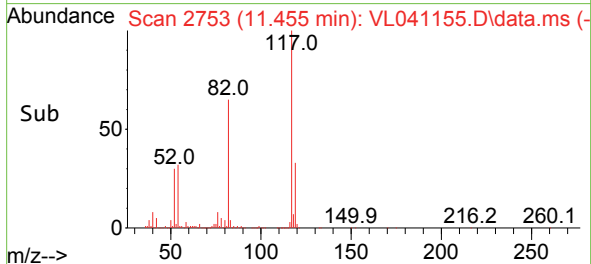
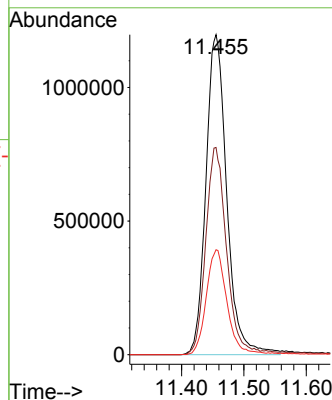
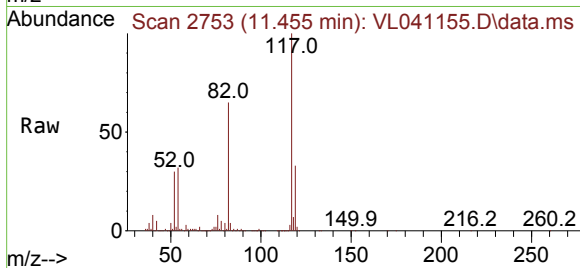
Tgt Ion:117 Resp: 2782672

Ion Ratio Lower Upper

117 100

82 66.3 51.0 76.6

119 33.1 25.2 37.8



#57

Chlorobenzene

Concen: 0.033 ppbv

RT: 11.516 min Scan# 2772

Delta R.T. -0.000 min

Lab File: VL041155.D

Acq: 23 Apr 2024 11:19

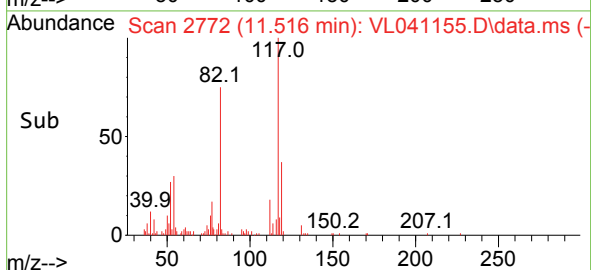
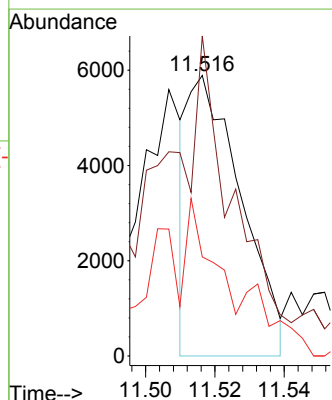
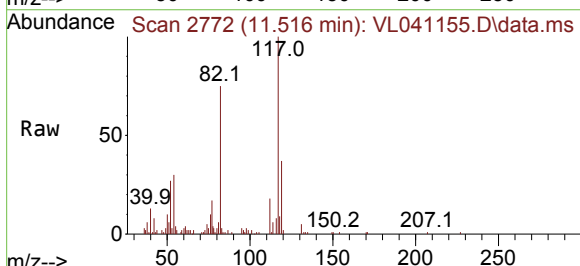
Tgt Ion:112 Resp: 6286

Ion Ratio Lower Upper

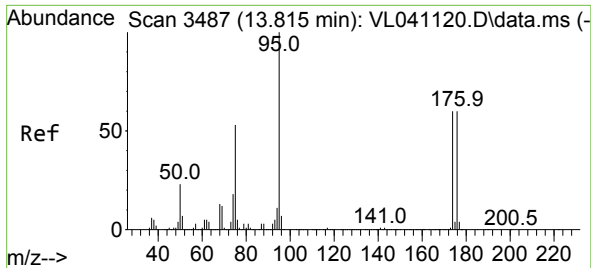
112 100

77 114.6 54.0 81.0#

114 20.4 29.3 35.9#

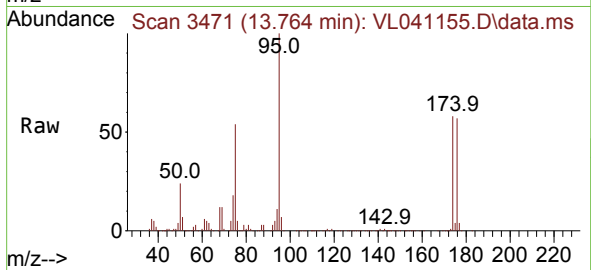






#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 9.628 ppbv  
 RT: 13.764 min Scan# 34  
 Delta R.T. -0.000 min  
 Lab File: VL041155.D  
 Acq: 23 Apr 2024 11:19

Instrument :  
 MSVOA\_L  
 ClientSampleId :



Tgt Ion: 95 Resp: 2154303  

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 95  | 100   |       |       |
| 174 | 62.5  | 49.3  | 73.9  |
| 175 | 4.3   | 3.6   | 5.4   |

