

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL050624\  
 Data File : VL041216.D  
 Acq On : 6 May 2024 13:42  
 Operator : SY/MD  
 Sample : P2334-10DUP  
 Misc : 400mL/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

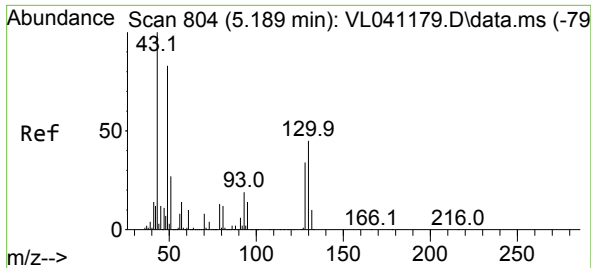
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 BA-03-IA02-20240425DUP

Quant Time: May 07 05:23:45 2024  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL042924AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
 QLast Update : Tue May 07 05:19:44 2024  
 Response via : Initial Calibration

| Compound                    |                           | R.T.   | QIon  | Response | Conc     | Units | Dev(Min) |
|-----------------------------|---------------------------|--------|-------|----------|----------|-------|----------|
| -----                       |                           |        |       |          |          |       |          |
| Internal Standards          |                           |        |       |          |          |       |          |
| 1)                          | Bromochloromethane        | 5.189  | 49    | 741749   | 10.000   | ppbv  | 0.00     |
| 33)                         | 1,4-Difluorobenzene       | 6.648  | 114   | 1929621  | 10.000   | ppbv  | 0.00     |
| 55)                         | Chlorobenzene-d5          | 11.465 | 117   | 1814878  | 10.000   | ppbv  | 0.00     |
|                             |                           |        |       |          |          |       |          |
| System Monitoring Compounds |                           |        |       |          |          |       |          |
| 68)                         | 1-Bromo-4-Fluorobenzene   | 13.773 | 95    | 1376801  | 10.049   | ppbv  | 0.00     |
| Spiked Amount               |                           | 10.000 | Range | 65 - 135 | Recovery | =     | 100.500% |
|                             |                           |        |       |          |          |       |          |
| Target Compounds            |                           |        |       |          |          |       | Qvalue   |
| 3)                          | Chlorodifluoromethane     | 2.652  | 51    | 102528   | 0.910    | ppbv  | # 68     |
| 4)                          | Chloromethane             | 2.816  | 50    | 2741     | 0.062    | ppbv  | # 78     |
| 9)                          | Propene                   | 2.703  | 41    | 7656     | 0.174    | ppbv  | # 15     |
| 10)                         | Heptane                   | 7.571  | 43    | 4262     | 0.040    | ppbv  | # 64     |
| 11)                         | Trichlorofluoromethane    | 3.562  | 101   | 29392    | 0.288    | ppbv  | # 96     |
| 12)                         | 1,1,2-Trichlorotrifluo... | 4.063  | 101   | 5146     | 0.068    | ppbv  | # 14     |
| 13)                         | Ethanol                   | 3.243  | 45    | 115772   | 11.714   | ppbv  | # 93     |
| 15)                         | Acetone                   | 3.468  | 43    | 781982   | 8.933    | ppbv  | # 100    |
| 16)                         | 1,3-Butadiene             | 2.967  | 39    | 2952     | 0.067    | ppbv  | # 19     |
| 19)                         | Isopropyl Alcohol         | 3.584  | 45    | 44666    | 0.778    | ppbv  | # 41     |
| 20)                         | Methylene Chloride        | 3.931  | 84    | 732759   | 24.071   | ppbv  | # 98     |
| 23)                         | Vinyl Acetate             | 4.620  | 43    | 10321    | 0.107    | ppbv  | # 33     |
| 25)                         | Ethyl Acetate             | 5.211  | 43    | 629938   | 3.605    | ppbv  | # 78     |
| 26)                         | Hexane                    | 5.211  | 57    | 851325   | 10.918   | ppbv  | # 42     |
| 29)                         | Chloroform                | 5.269  | 83    | 6111     | 0.057    | ppbv  | # 99     |
| 34)                         | 2-Butanone                | 4.800  | 43    | 11471    | 0.117    | ppbv  | # 20     |
| 35)                         | Carbon Tetrachloride      | 6.491  | 117   | 37415    | 0.345    | ppbv  | # 97     |
| 36)                         | Benzene                   | 6.362  | 78    | 6868     | 0.042    | ppbv  | # 92     |
| 38)                         | Trichloroethene           | 7.285  | 130   | 923929   | 15.311   | ppbv  | # 98     |
| 39)                         | 1,2-Dichloropropane       | 6.652  | 63    | 487525   | 7.812    | ppbv  | # 24     |
| 41)                         | Tetrahydrofuran           | 5.211  | 42    | 314125   | 4.418    | ppbv  | # 51     |
| 44)                         | 2,2,4-Trimethylpentane    | 7.320  | 57    | 13458    | 0.048    | ppbv  | # 37     |
| 52)                         | Tetrachloroethene         | 10.606 | 164   | 30443    | 0.535    | ppbv  | # 96     |
| 53)                         | Toluene                   | 9.221  | 91    | 99035    | 0.527    | ppbv  | # 98     |
| 58)                         | Ethyl Benzene             | 12.336 | 91    | 9089     | 0.037    | ppbv  | # 91     |
| 59)                         | m/p-Xylene                | 12.372 | 91    | 10539    | 0.050    | ppbv  | # 1      |
| -----                       |                           |        |       |          |          |       |          |

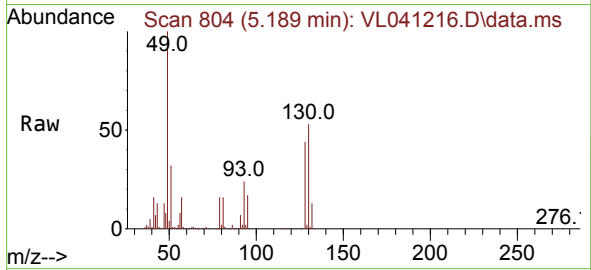
(#) = qualifier out of range (m) = manual integration (+) = signals summed



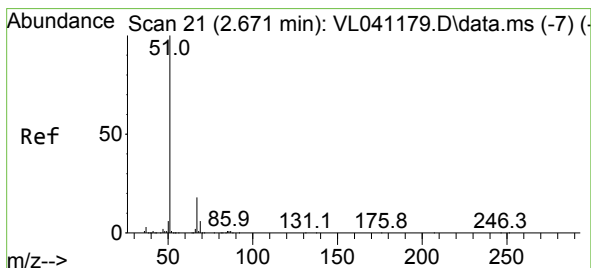
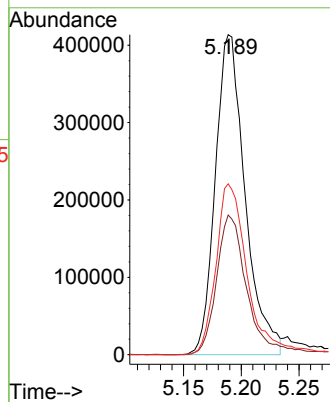
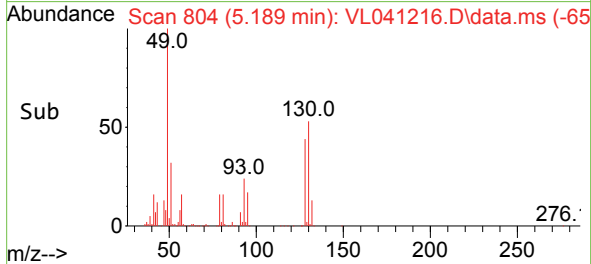


#1  
Bromochloromethane  
Concen: 10.000 ppbv  
RT: 5.189 min Scan# 804  
Delta R.T. -0.006 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

Instrument : MSVOA\_L  
ClientSampleId : BA-03-IA02-20240425DUP

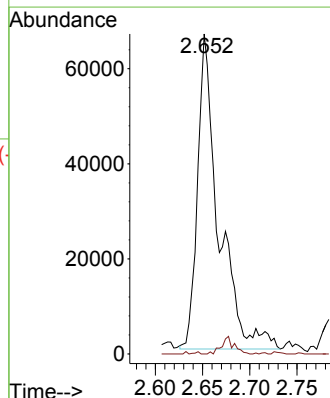
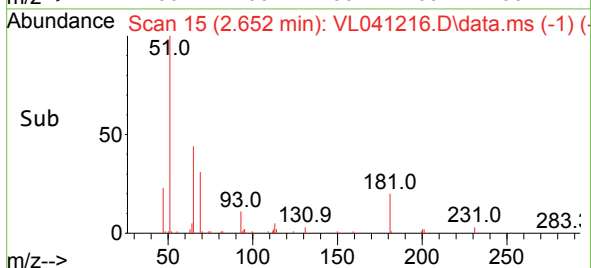
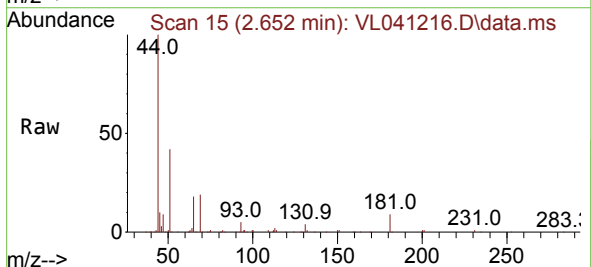


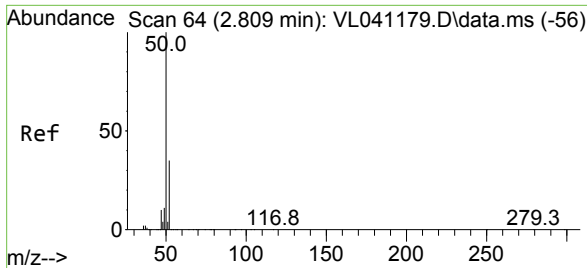
Tgt Ion: 49 Resp: 741749  
Ion Ratio Lower Upper  
49 100  
128 46.6 21.5 64.5  
130 57.8 27.2 81.6



#3  
Chlorodifluoromethane  
Concen: 0.910 ppbv  
RT: 2.652 min Scan# 15  
Delta R.T. -0.032 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

Tgt Ion: 51 Resp: 102528  
Ion Ratio Lower Upper  
51 100  
67 3.5 14.0 21.0

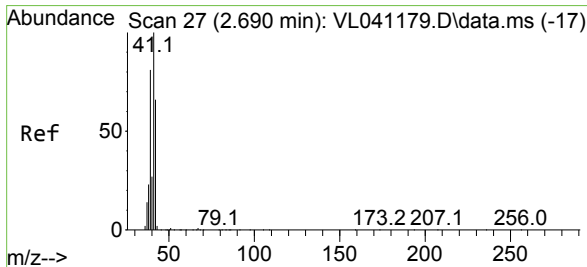
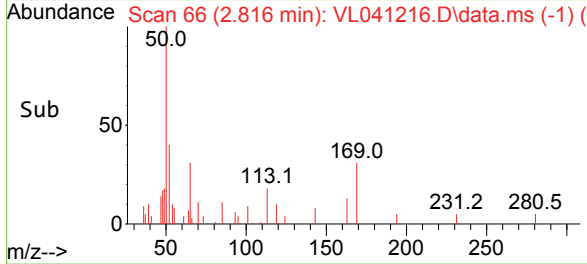
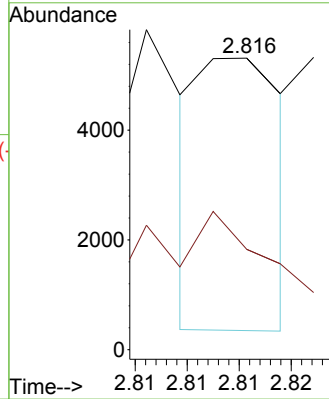
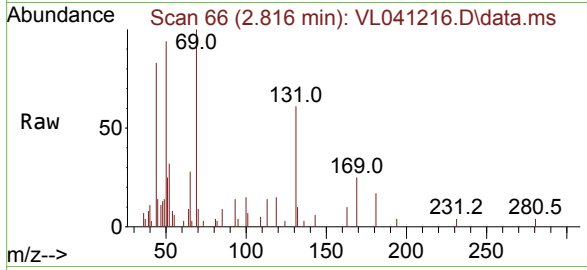




#4  
Chloromethane  
Concen: 0.062 ppbv  
RT: 2.816 min Scan# 60  
Delta R.T. -0.006 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

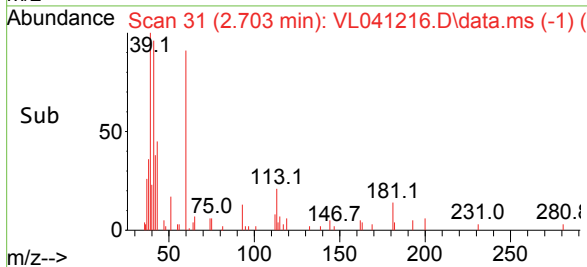
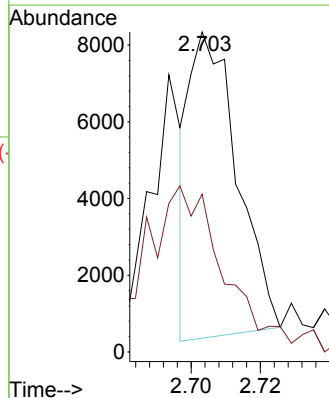
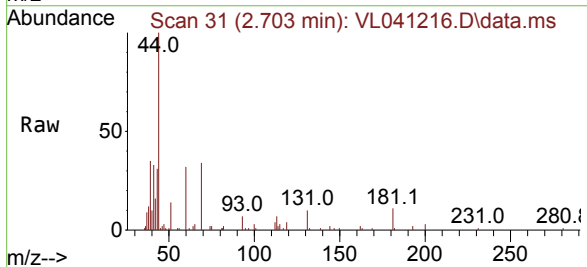
Instrument :  
MSVOA\_L  
ClientSampleId :  
BA-03-IA02-20240425DUP

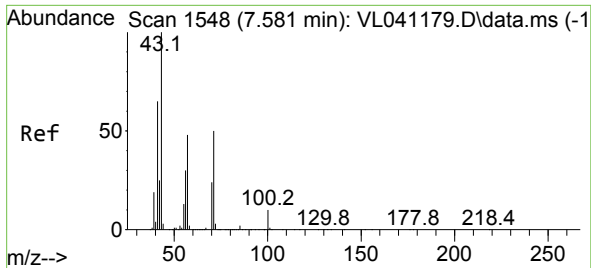
Tgt Ion: 50 Resp: 2741  
Ion Ratio Lower Upper  
50 100  
52 48.1 28.3 42.5#



#9  
Propene  
Concen: 0.174 ppbv  
RT: 2.703 min Scan# 31  
Delta R.T. 0.000 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

Tgt Ion: 41 Resp: 7656  
Ion Ratio Lower Upper  
41 100  
42 0.0 55.3 82.9#

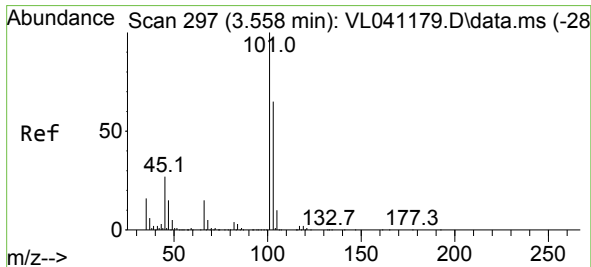
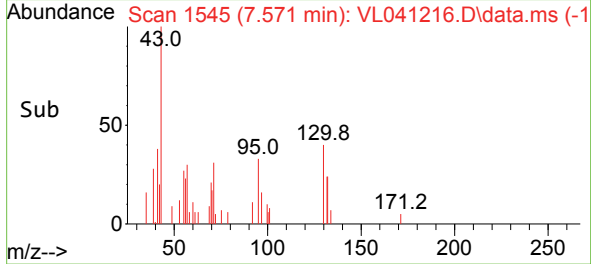
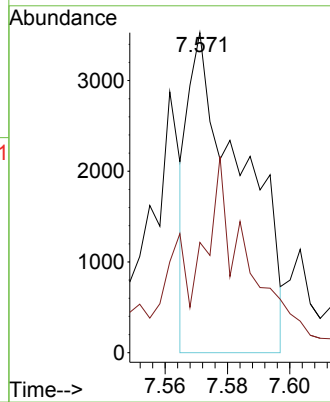
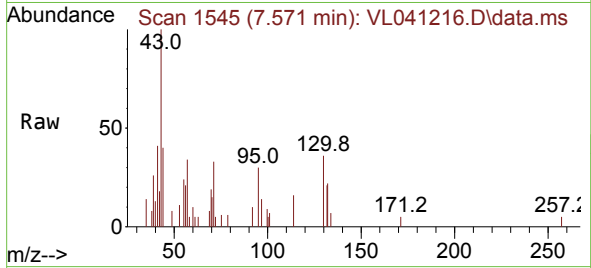




#10  
Heptane  
Concen: 0.040 ppbv  
RT: 7.571 min Scan# 11  
Delta R.T. -0.006 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

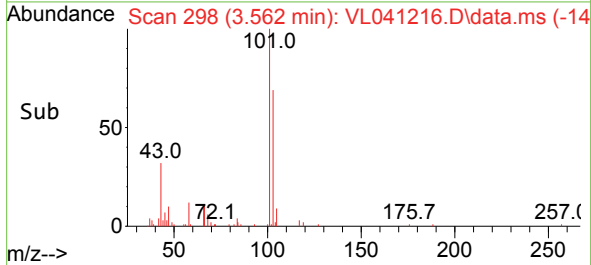
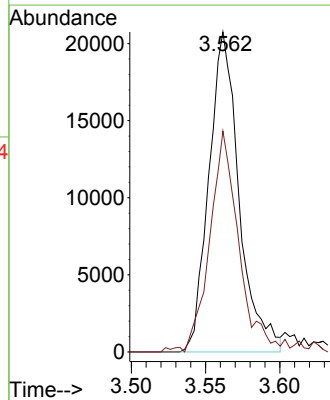
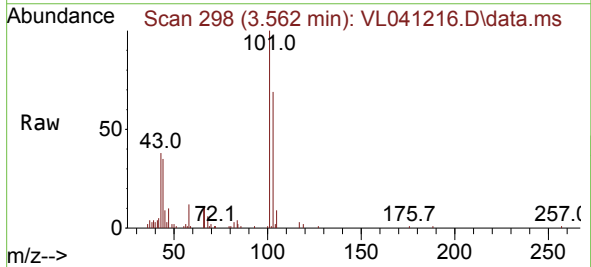
Instrument :  
MSVOA\_L  
ClientSampleId :  
BA-03-IA02-20240425DUP

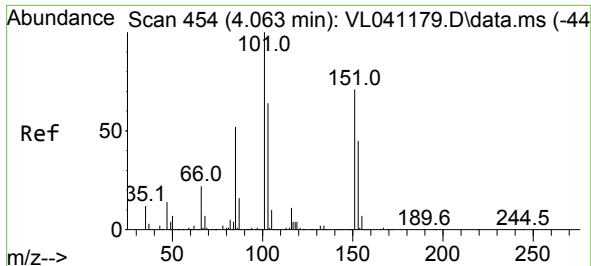
Tgt Ion: 43 Resp: 4262  
Ion Ratio Lower Upper  
43 100  
57 73.1 38.7 58.1#



#11  
Trichlorofluoromethane  
Concen: 0.288 ppbv  
RT: 3.562 min Scan# 298  
Delta R.T. -0.006 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

Tgt Ion:101 Resp: 29392  
Ion Ratio Lower Upper  
101 100  
103 67.6 51.6 77.4

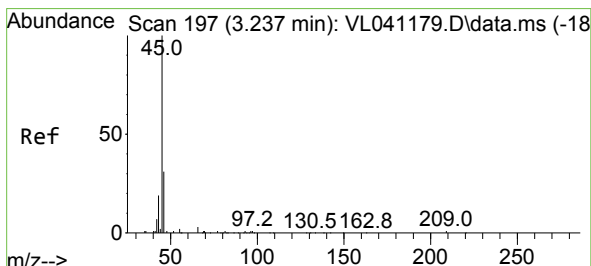
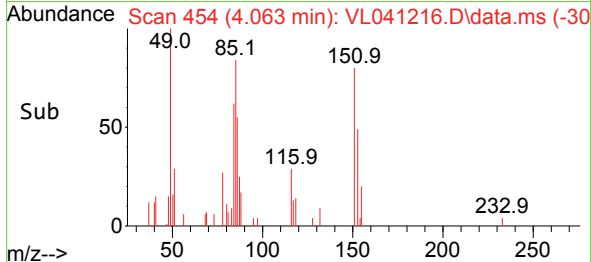
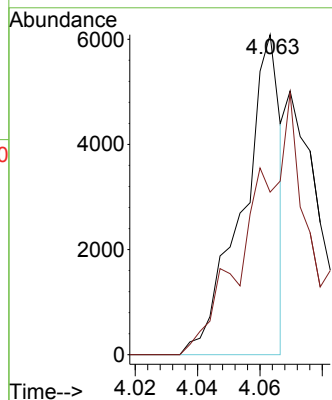
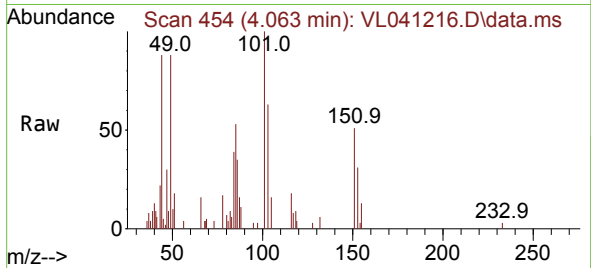




#12  
1,1,2-Trichlorotrifluoroethane  
Concen: 0.068 ppbv  
RT: 4.063 min Scan# 411  
Delta R.T. -0.006 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

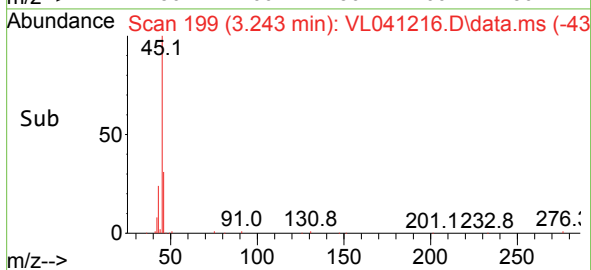
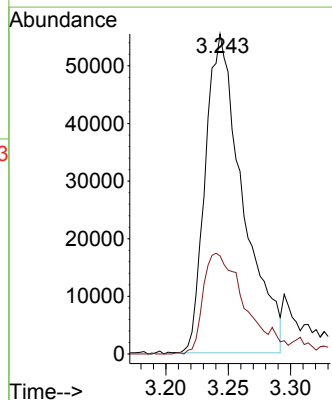
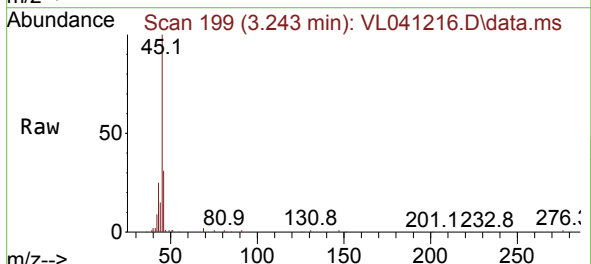
Instrument :  
MSVOA\_L  
ClientSampleId :  
BA-03-IA02-20240425DUP

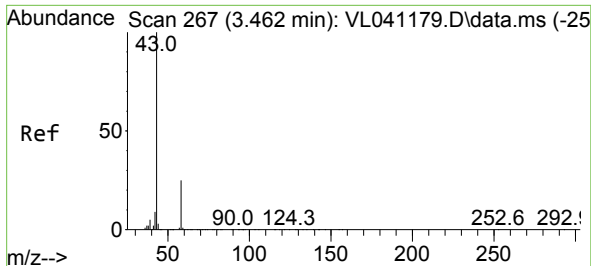
Tgt Ion:101 Resp: 5146  
Ion Ratio Lower Upper  
101 100  
151 0.0 56.8 85.2#



#13  
Ethanol  
Concen: 11.714 ppbv  
RT: 3.243 min Scan# 199  
Delta R.T. 0.000 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

Tgt Ion: 45 Resp: 115772  
Ion Ratio Lower Upper  
45 100  
46 41.0 14.8 59.0





#15

Acetone

Concen: 8.933 ppbv

RT: 3.468 min Scan# 20

Delta R.T. -0.006 min

Lab File: VL041216.D

Acq: 6 May 2024 13:42

Instrument :

MSVOA\_L

ClientSampleId :

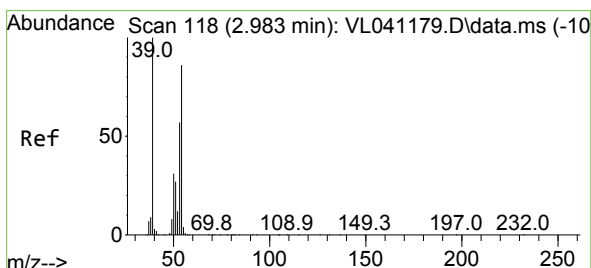
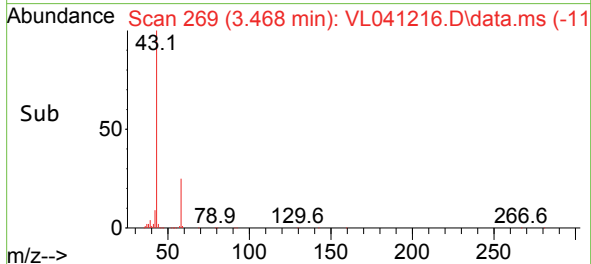
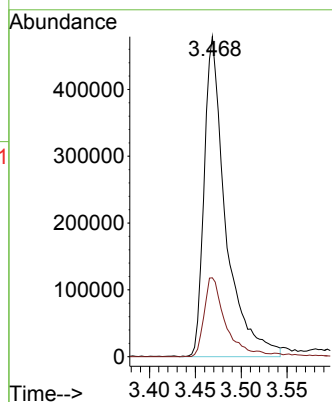
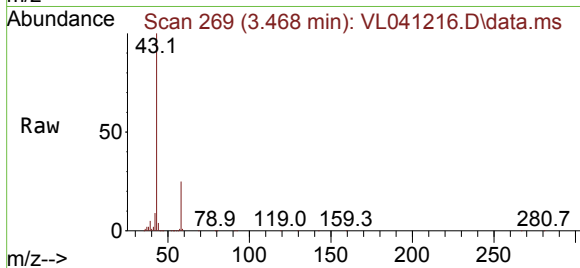
BA-03-IA02-20240425DUP

Tgt Ion: 43 Resp: 781982

Ion Ratio Lower Upper

43 100

58 26.5 21.4 32.0



#16

1,3-Butadiene

Concen: 0.067 ppbv

RT: 2.967 min Scan# 113

Delta R.T. -0.026 min

Lab File: VL041216.D

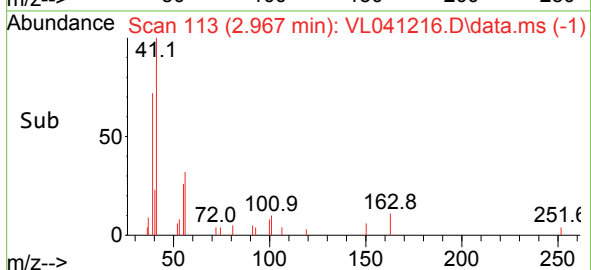
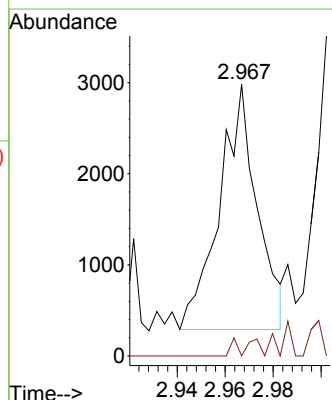
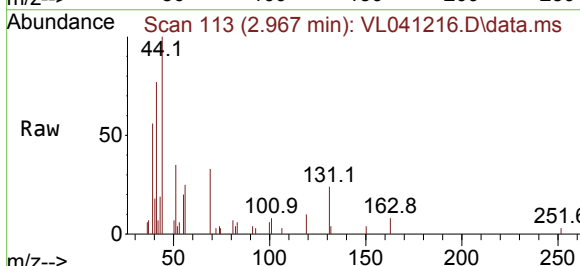
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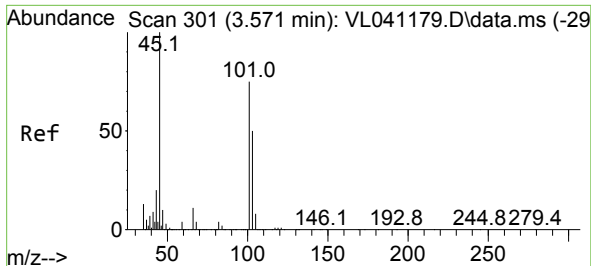
Tgt Ion: 39 Resp: 2952

Ion Ratio Lower Upper

39 100

54 7.6 62.2 93.4#

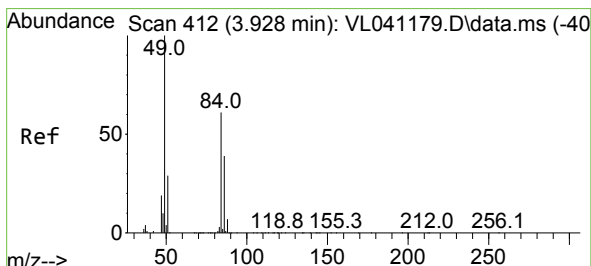
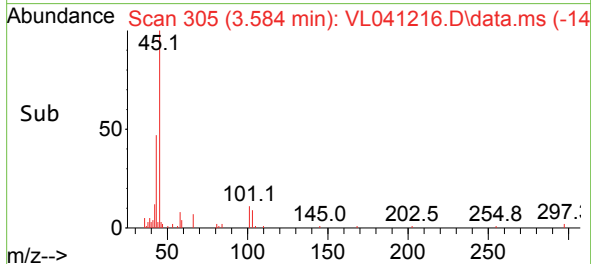
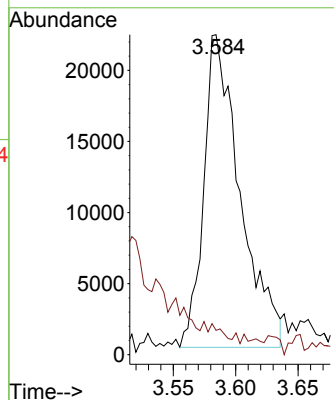
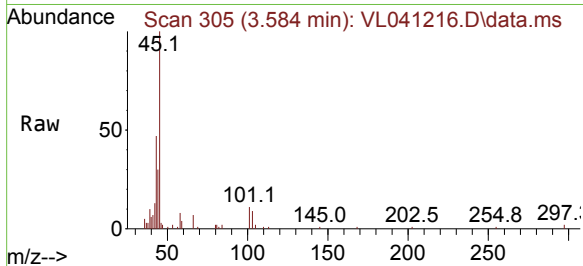




#19  
Isopropyl Alcohol  
Concen: 0.778 ppbv  
RT: 3.584 min Scan# 301  
Delta R.T. 0.003 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

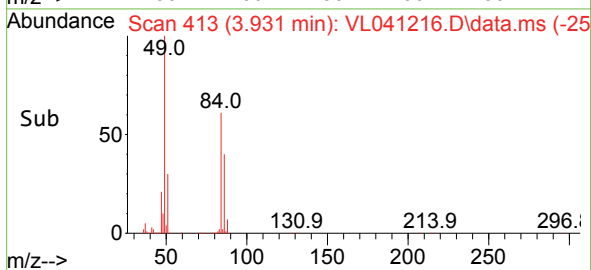
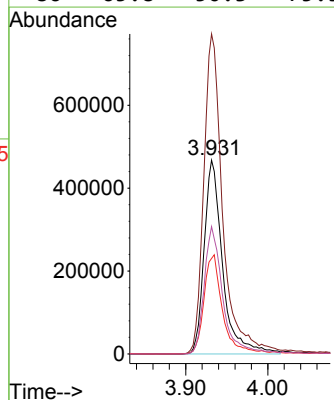
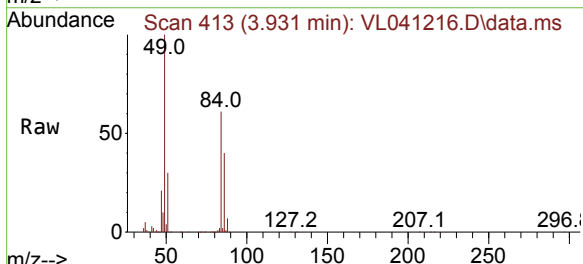
Instrument :  
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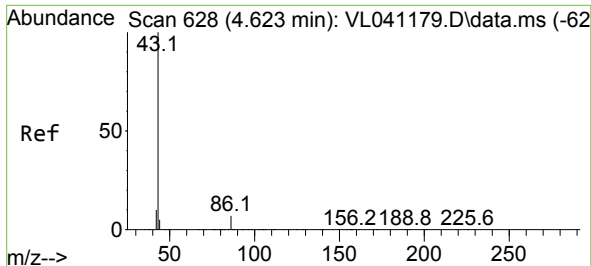
Tgt Ion: 45 Resp: 44666  
Ion Ratio Lower Upper  
45 100  
58 0.0 26.8 40.2#



#20  
Methylene Chloride  
Concen: 24.071 ppbv  
RT: 3.931 min Scan# 413  
Delta R.T. -0.006 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

Tgt Ion: 84 Resp: 732759  
Ion Ratio Lower Upper  
84 100  
49 165.2 130.4 195.6  
51 49.3 38.0 57.0  
86 65.8 50.3 75.5

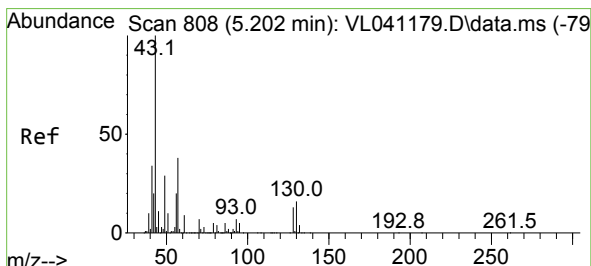
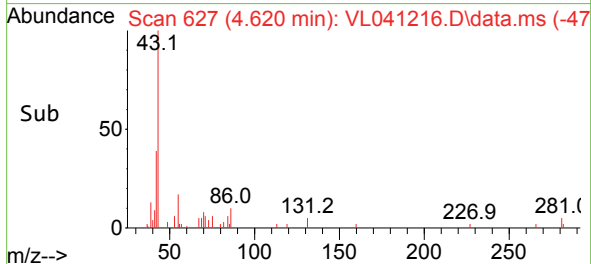
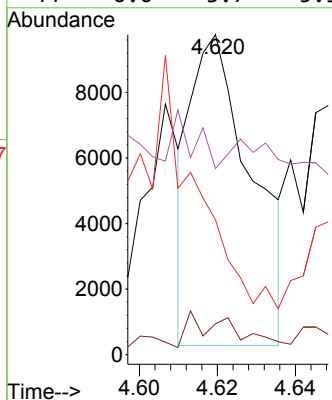
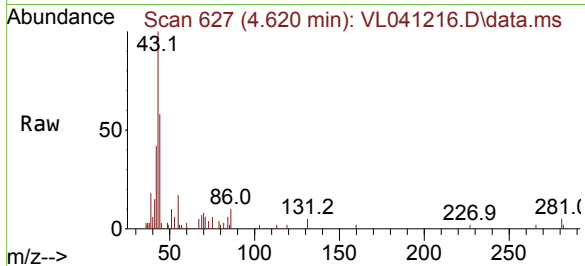




#23  
Vinyl Acetate  
Concen: 0.107 ppbv  
RT: 4.620 min Scan# 61  
Delta R.T. -0.009 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

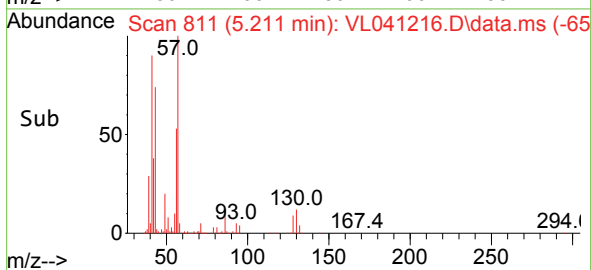
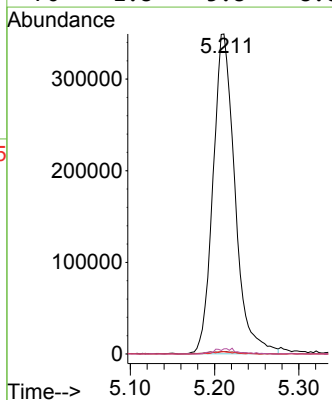
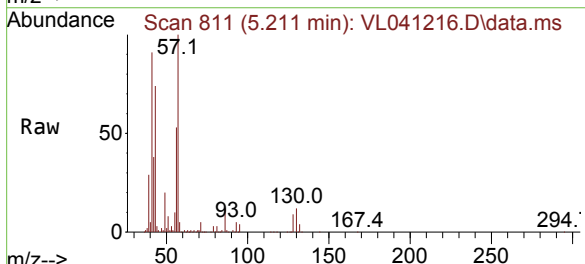
Instrument :  
MSVOA\_L  
ClientSampleId :  
BA-03-IA02-20240425DUP

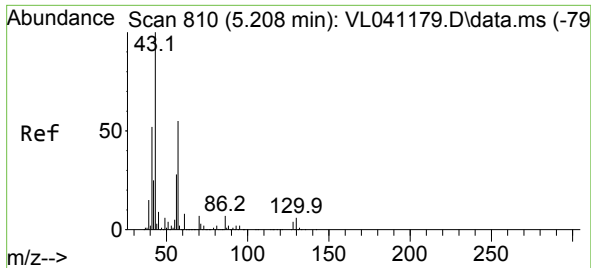
Tgt Ion: 43 Resp: 10321  
Ion Ratio Lower Upper  
43 100  
86 14.3 4.9 7.3#  
42 53.9 8.0 12.0#  
44 0.0 3.7 5.5#



#25  
Ethyl Acetate  
Concen: 3.605 ppbv  
RT: 5.211 min Scan# 811  
Delta R.T. 0.007 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

Tgt Ion: 43 Resp: 629938  
Ion Ratio Lower Upper  
43 100  
45 1.1 8.2 12.2#  
61 0.7 7.7 11.5#  
70 1.8 5.8 8.6#

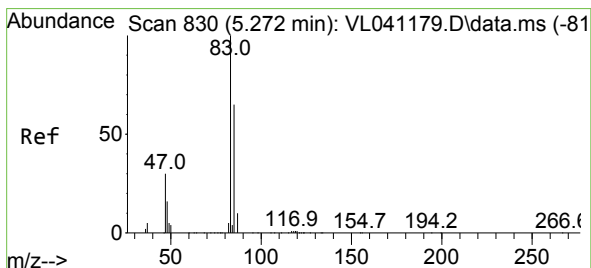
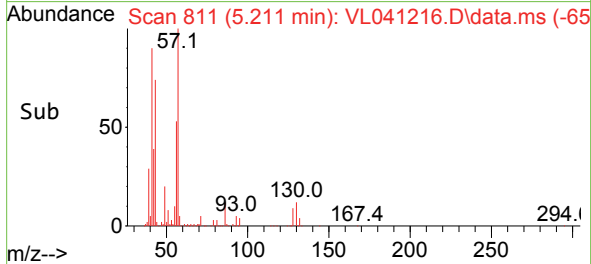
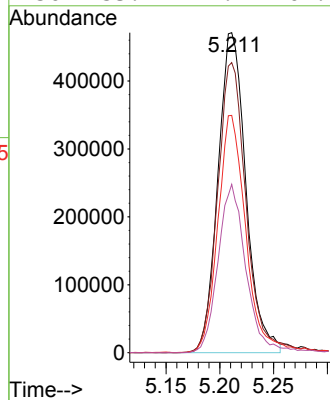
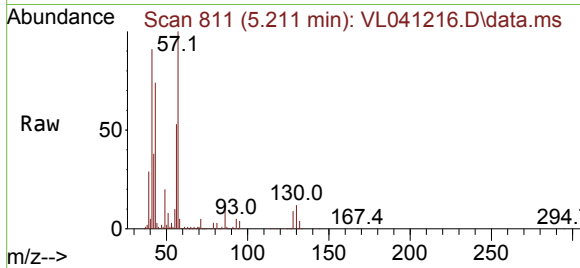




#26  
Hexane  
Concen: 10.918 ppbv  
RT: 5.211 min Scan# 810  
Delta R.T. -0.003 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

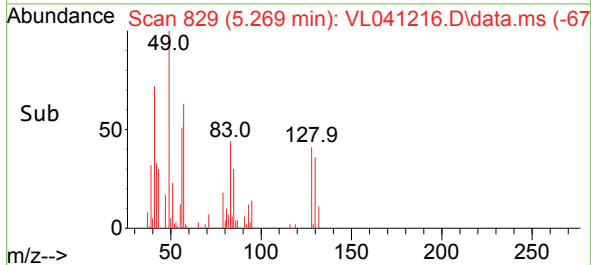
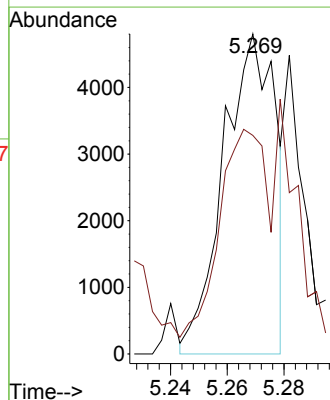
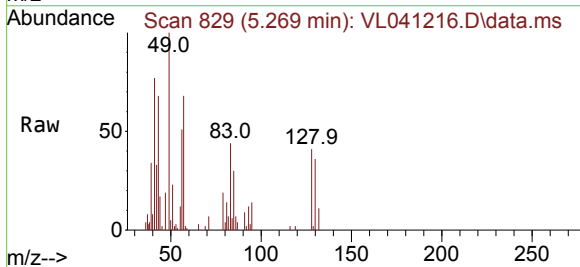
Instrument :  
MSVOA\_L  
ClientSampleId :  
BA-03-IA02-20240425DUP

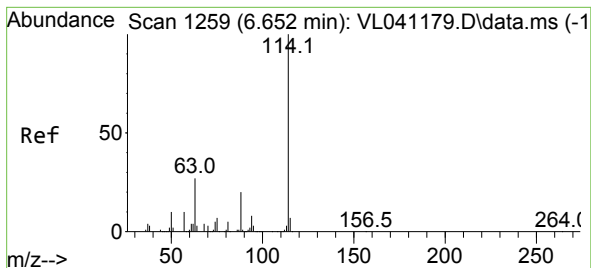
Tgt Ion: 57 Resp: 851325  
Ion Ratio Lower Upper  
57 100  
41 94.1 75.8 113.8  
43 75.1 187.0 280.4#  
56 53.1 42.7 64.1



#29  
Chloroform  
Concen: 0.057 ppbv  
RT: 5.269 min Scan# 829  
Delta R.T. -0.009 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

Tgt Ion: 83 Resp: 6111  
Ion Ratio Lower Upper  
83 100  
85 65.2 51.7 77.5





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 6.648 min Scan# 11

Delta R.T. -0.006 min

Lab File: VL041216.D

Acq: 6 May 2024 13:42

Instrument :

MSVOA\_L

ClientSampleId :

BA-03-IA02-20240425DUP

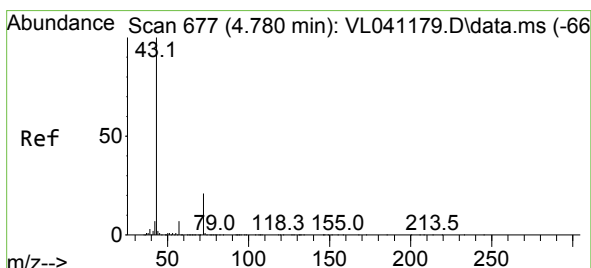
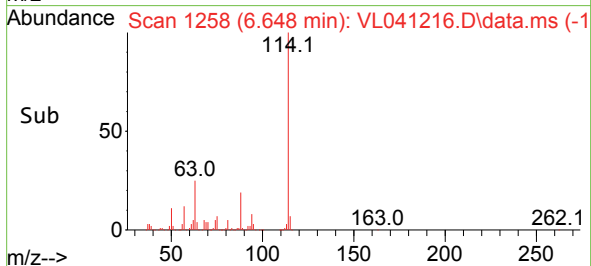
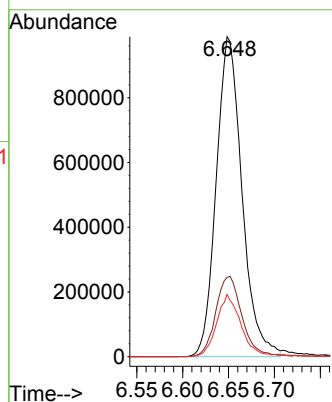
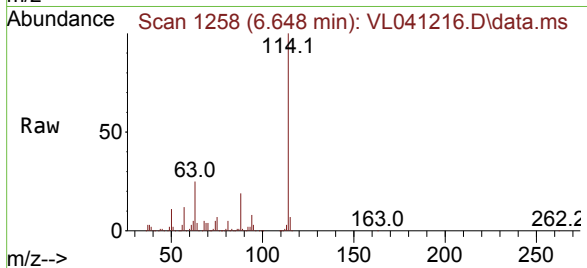
Tgt Ion:114 Resp: 1929621

Ion Ratio Lower Upper

114 100

63 26.0 21.8 32.6

88 18.5 15.2 22.8



#34

2-Butanone

Concen: 0.117 ppbv

RT: 4.800 min Scan# 683

Delta R.T. 0.013 min

Lab File: VL041216.D

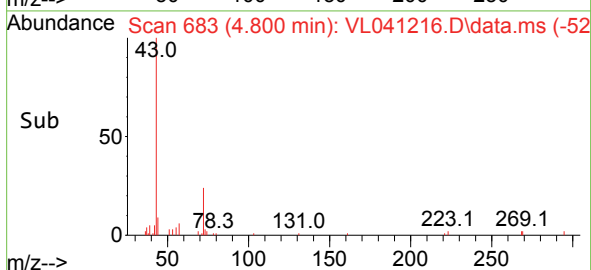
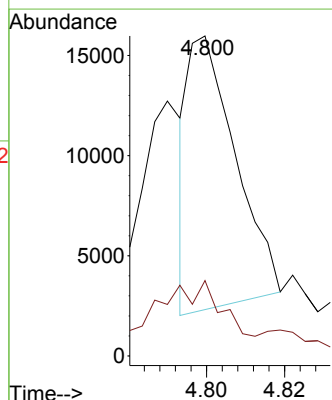
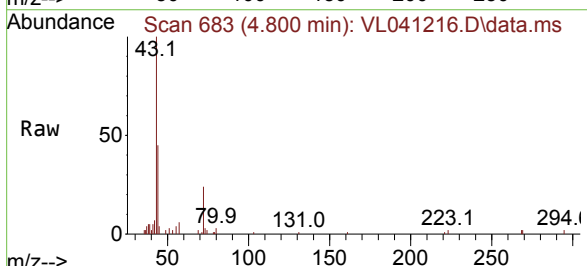
Acq: 6 May 2024 13:42

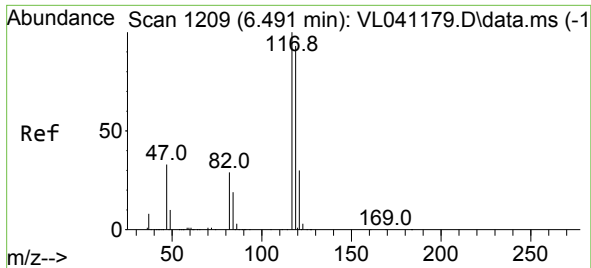
Tgt Ion: 43 Resp: 11471

Ion Ratio Lower Upper

43 100

72 59.4 17.3 25.9#

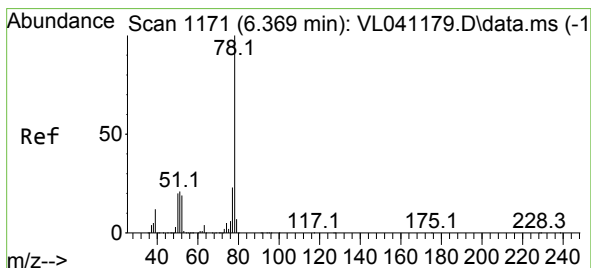
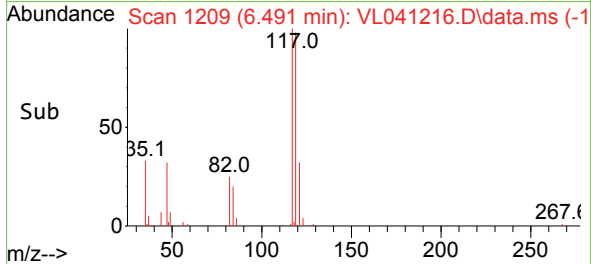
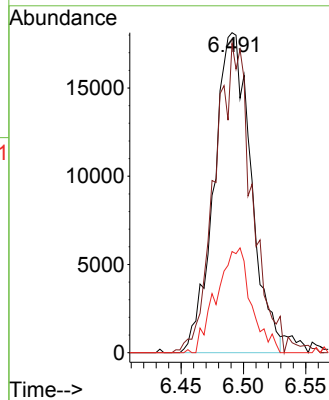
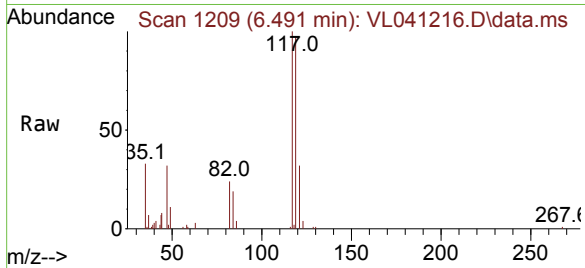




#35  
Carbon Tetrachloride  
Concen: 0.345 ppbv  
RT: 6.491 min Scan# 1169  
Delta R.T. -0.003 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

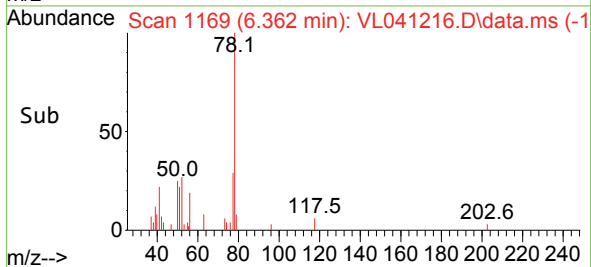
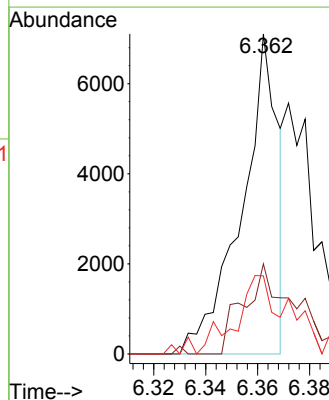
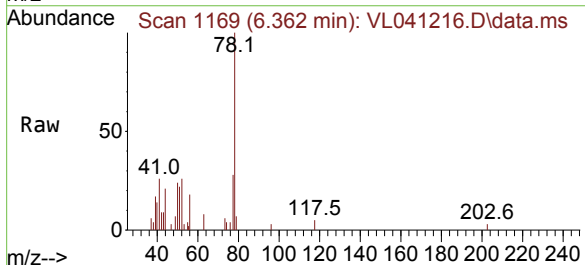
Instrument : MSVOA\_L  
ClientSampleId : BA-03-IA02-20240425DUP

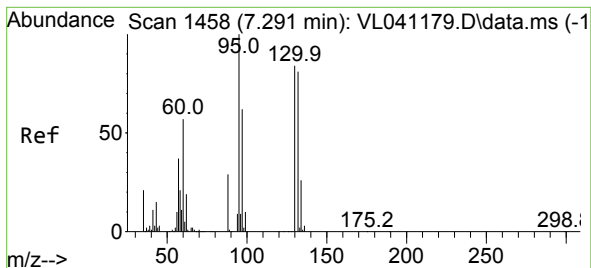
Tgt Ion:117 Resp: 37415  
Ion Ratio Lower Upper  
117 100  
119 95.8 74.3 111.5  
121 31.6 23.8 35.8



#36  
Benzene  
Concen: 0.042 ppbv  
RT: 6.362 min Scan# 1169  
Delta R.T. -0.009 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

Tgt Ion: 78 Resp: 6868  
Ion Ratio Lower Upper  
78 100  
77 25.7 18.3 27.5  
50 24.4 15.9 23.9#





#38

Trichloroethene

Concen: 15.311 ppbv

RT: 7.285 min Scan# 1458

Delta R.T. -0.006 min

Lab File: VL041216.D

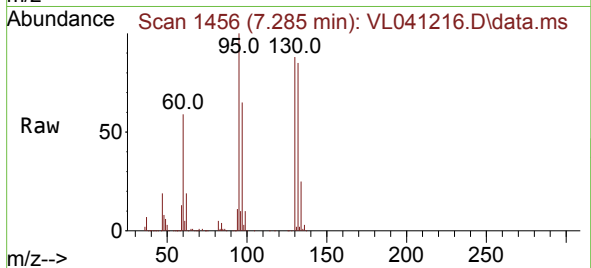
Acq: 6 May 2024 13:42

Instrument :

MSVOA\_L

ClientSampleId :

BA-03-IA02-20240425DUP



Tgt Ion:130 Resp: 923929

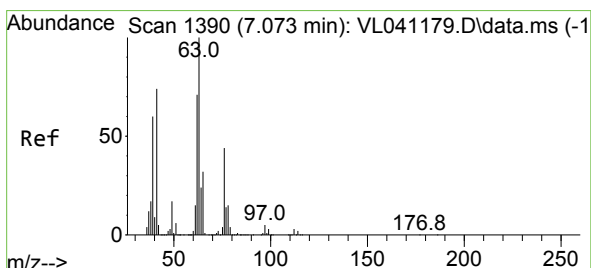
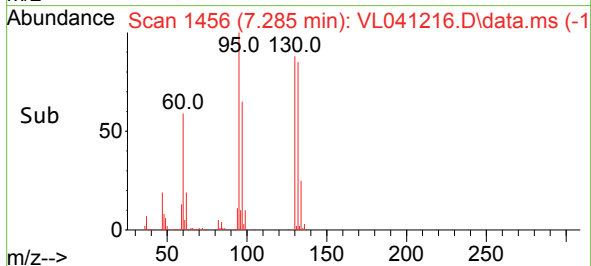
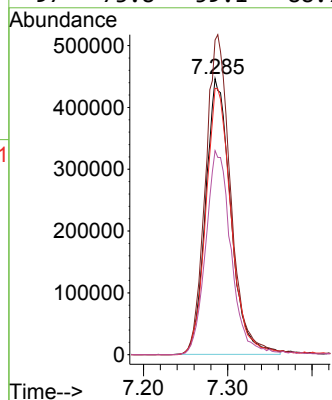
Ion Ratio Lower Upper

130 100

95 113.9 95.0 142.6

132 96.6 77.0 115.4

97 73.8 59.1 88.7



#39

1,2-Dichloropropane

Concen: 7.812 ppbv

RT: 6.652 min Scan# 1259

Delta R.T. -0.421 min

Lab File: VL041216.D

Acq: 6 May 2024 13:42

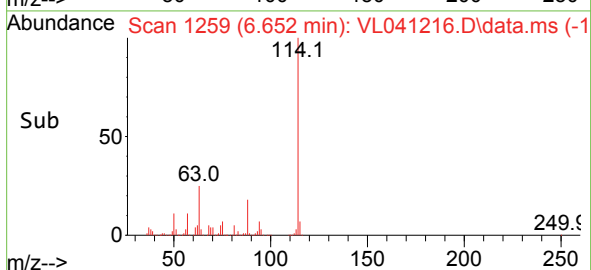
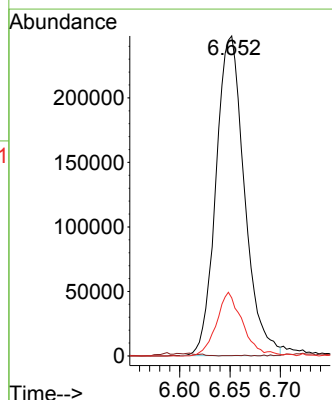
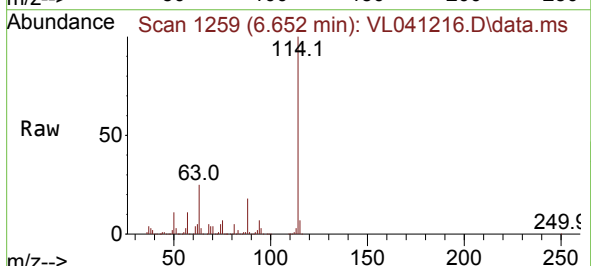
Tgt Ion: 63 Resp: 487525

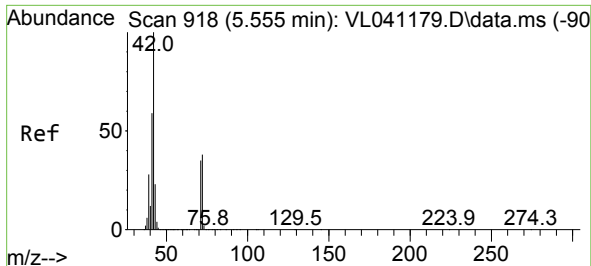
Ion Ratio Lower Upper

63 100

41 0.0 59.4 89.0#

62 18.2 56.8 85.2#

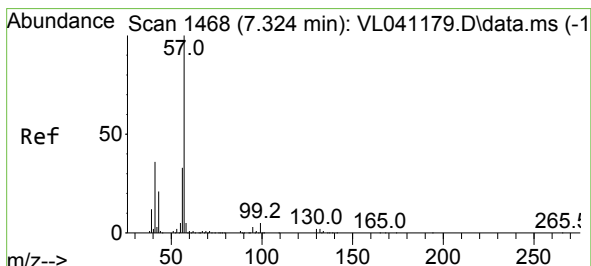
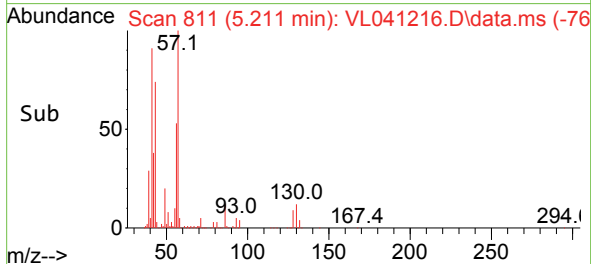
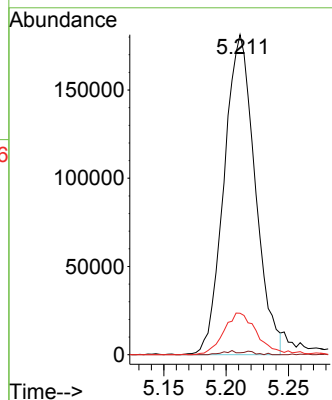
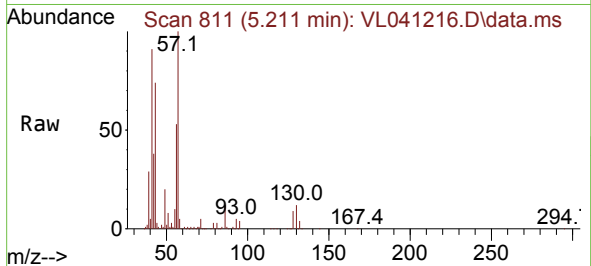




#41  
Tetrahydrofuran  
Concen: 4.418 ppbv  
RT: 5.211 min Scan# 811  
Delta R.T. -0.347 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

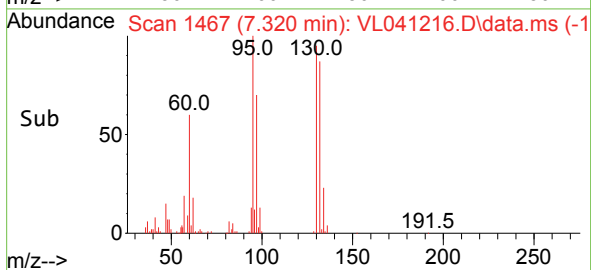
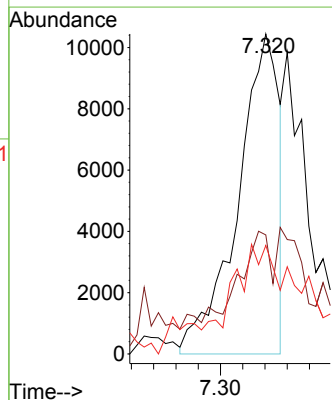
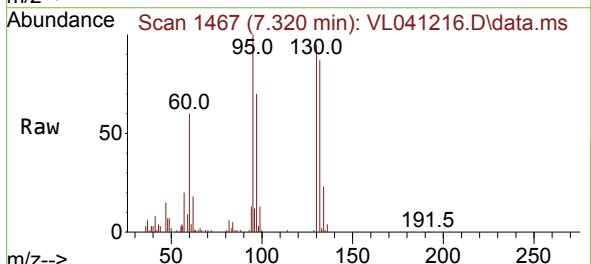
Instrument :  
MSVOA\_L  
ClientSampleId :  
BA-03-IA02-20240425DUP

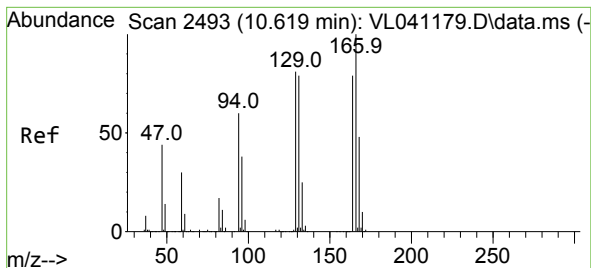
Tgt Ion: 42 Resp: 314125  
Ion Ratio Lower Upper  
42 100  
72 1.0 29.4 44.0#  
71 14.6 29.1 43.7#



#44  
2,2,4-Trimethylpentane  
Concen: 0.048 ppbv  
RT: 7.320 min Scan# 1467  
Delta R.T. -0.006 min  
Lab File: VL041216.D  
Acq: 6 May 2024 13:42

Tgt Ion: 57 Resp: 13458  
Ion Ratio Lower Upper  
57 100  
41 0.0 29.5 44.3#  
56 67.6 25.3 37.9#





#52

Tetrachloroethene

Concen: 0.535 ppbv

RT: 10.606 min Scan# 2493

Delta R.T. -0.006 min

Lab File: VL041216.D

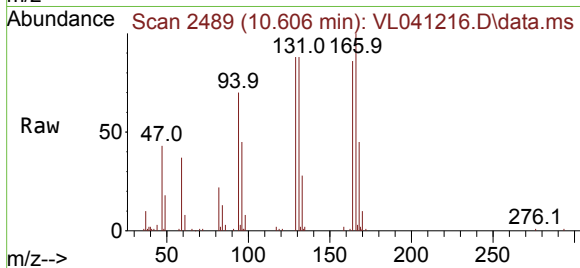
Acq: 6 May 2024 13:42

Instrument :

MSVOA\_L

ClientSampleId :

BA-03-IA02-20240425DUP



Tgt Ion:164 Resp: 30443

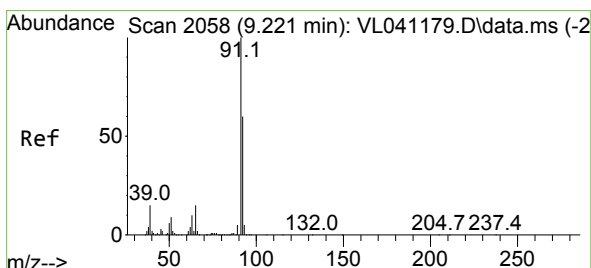
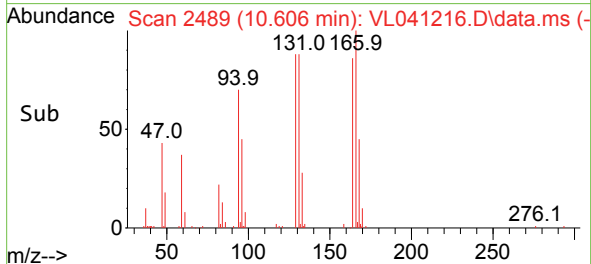
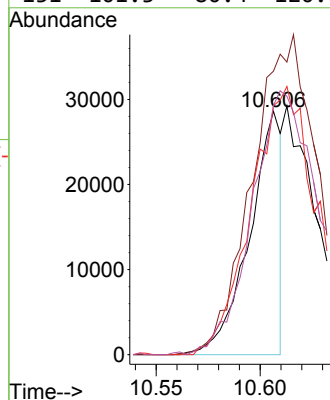
Ion Ratio Lower Upper

164 100

166 116.0 101.1 151.7

129 102.3 81.7 122.5

131 101.3 80.4 120.6



#53

Toluene

Concen: 0.527 ppbv

RT: 9.221 min Scan# 2058

Delta R.T. 0.000 min

Lab File: VL041216.D

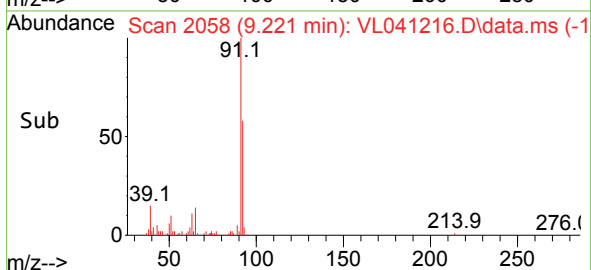
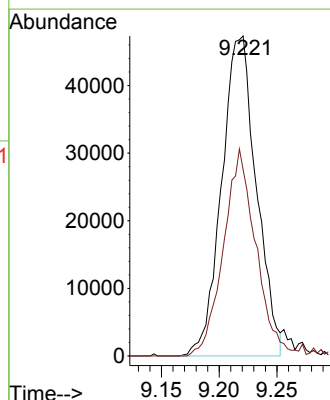
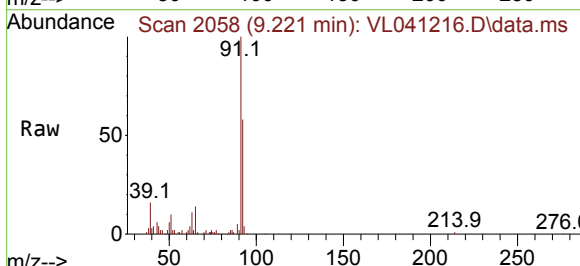
Acq: 6 May 2024 13:42

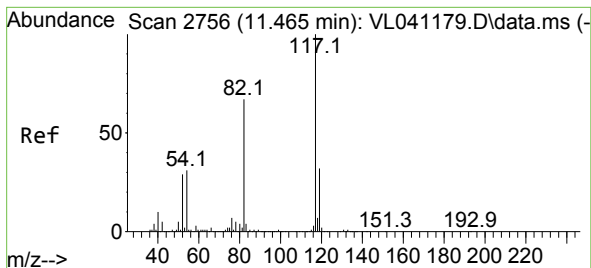
Tgt Ion: 91 Resp: 99035

Ion Ratio Lower Upper

91 100

92 61.6 48.2 72.4





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 11.465 min Scan# 21

Delta R.T. 0.000 min

Lab File: VL041216.D

Acq: 6 May 2024 13:42

Instrument :

MSVOA\_L

ClientSampleId :

BA-03-IA02-20240425DUP

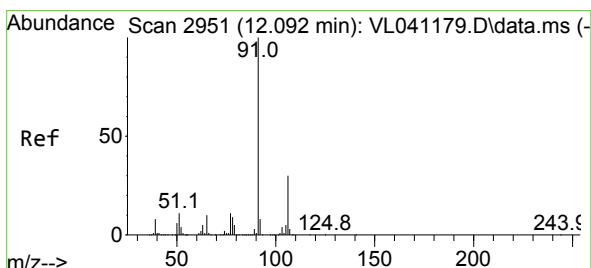
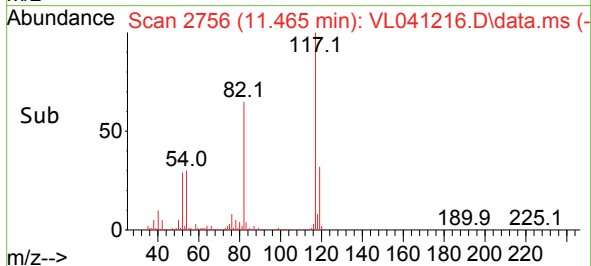
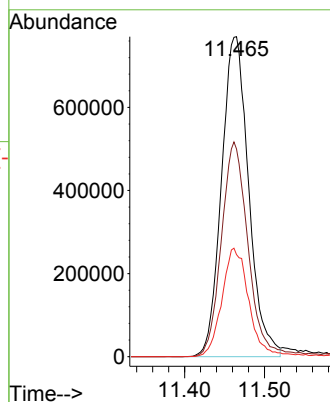
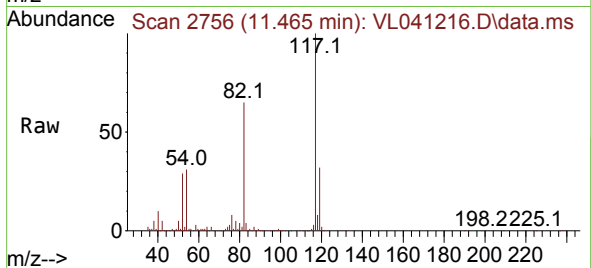
Tgt Ion:117 Resp: 1814878

Ion Ratio Lower Upper

117 100

82 66.7 53.6 80.4

119 34.0 27.2 40.8



#58

Ethyl Benzene

Concen: 0.037 ppbv

RT: 12.336 min Scan# 3027

Delta R.T. 0.251 min

Lab File: VL041216.D

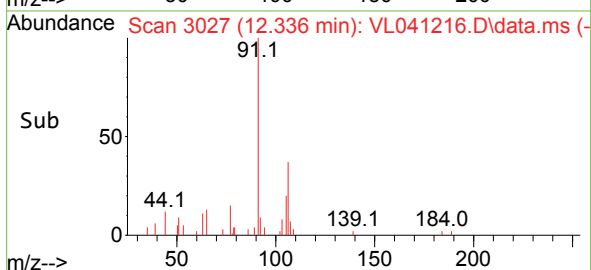
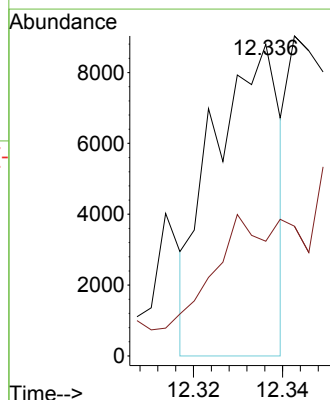
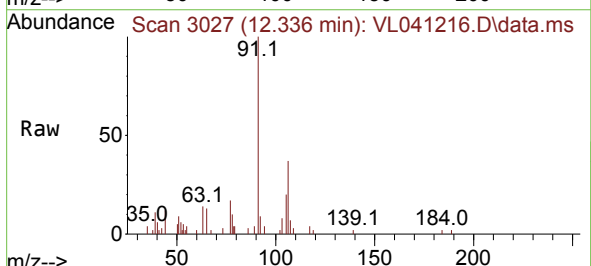
Acq: 6 May 2024 13:42

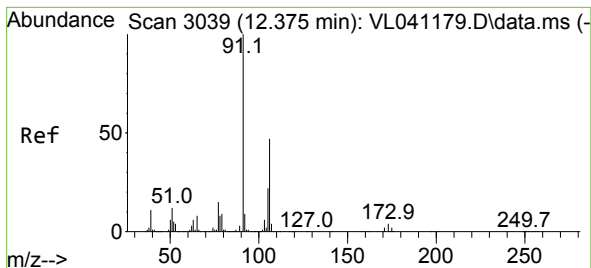
Tgt Ion: 91 Resp: 9089

Ion Ratio Lower Upper

91 100

106 35.1 24.3 36.5





#59

m/p-Xylene

Concen: 0.050 ppbv

RT: 12.372 min Scan# 3039

Delta R.T. 0.003 min

Lab File: VL041216.D

Acq: 6 May 2024 13:42

Instrument :

MSVOA\_L

ClientSampleId :

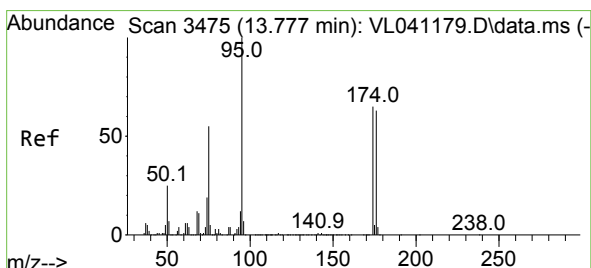
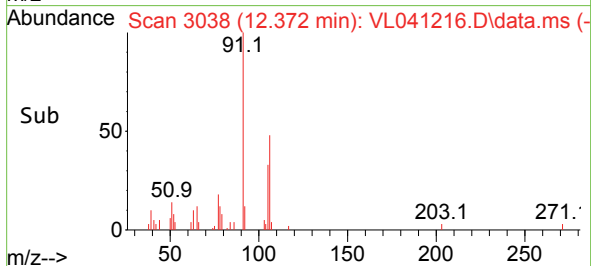
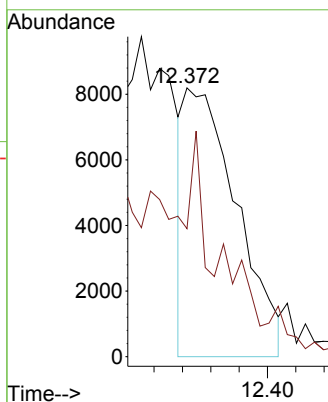
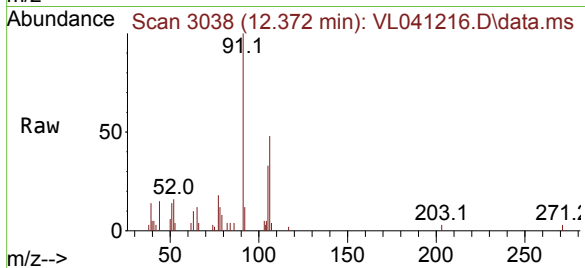
BA-03-IA02-20240425DUP

Tgt Ion: 91 Resp: 10539

Ion Ratio Lower Upper

91 100

106 178.1 35.7 53.5#



#68

1-Bromo-4-Fluorobenzene

Concen: 10.049 ppbv

RT: 13.773 min Scan# 3474

Delta R.T. 0.000 min

Lab File: VL041216.D

Acq: 6 May 2024 13:42

Tgt Ion: 95 Resp: 1376801

Ion Ratio Lower Upper

95 100

174 66.7 53.6 80.4

175 5.0 4.2 6.4

