

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL031323\  
 Data File : VL040271.D  
 Acq On : 13 Mar 2023 19:07  
 Operator : SY/MD  
 Sample : 01897-02  
 Misc : 400mL/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 ROOF

Quant Time: Mar 14 04:55:52 2023  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL021523AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
 QLast Update : Tue Mar 14 04:52:39 2023  
 Response via : Initial Calibration

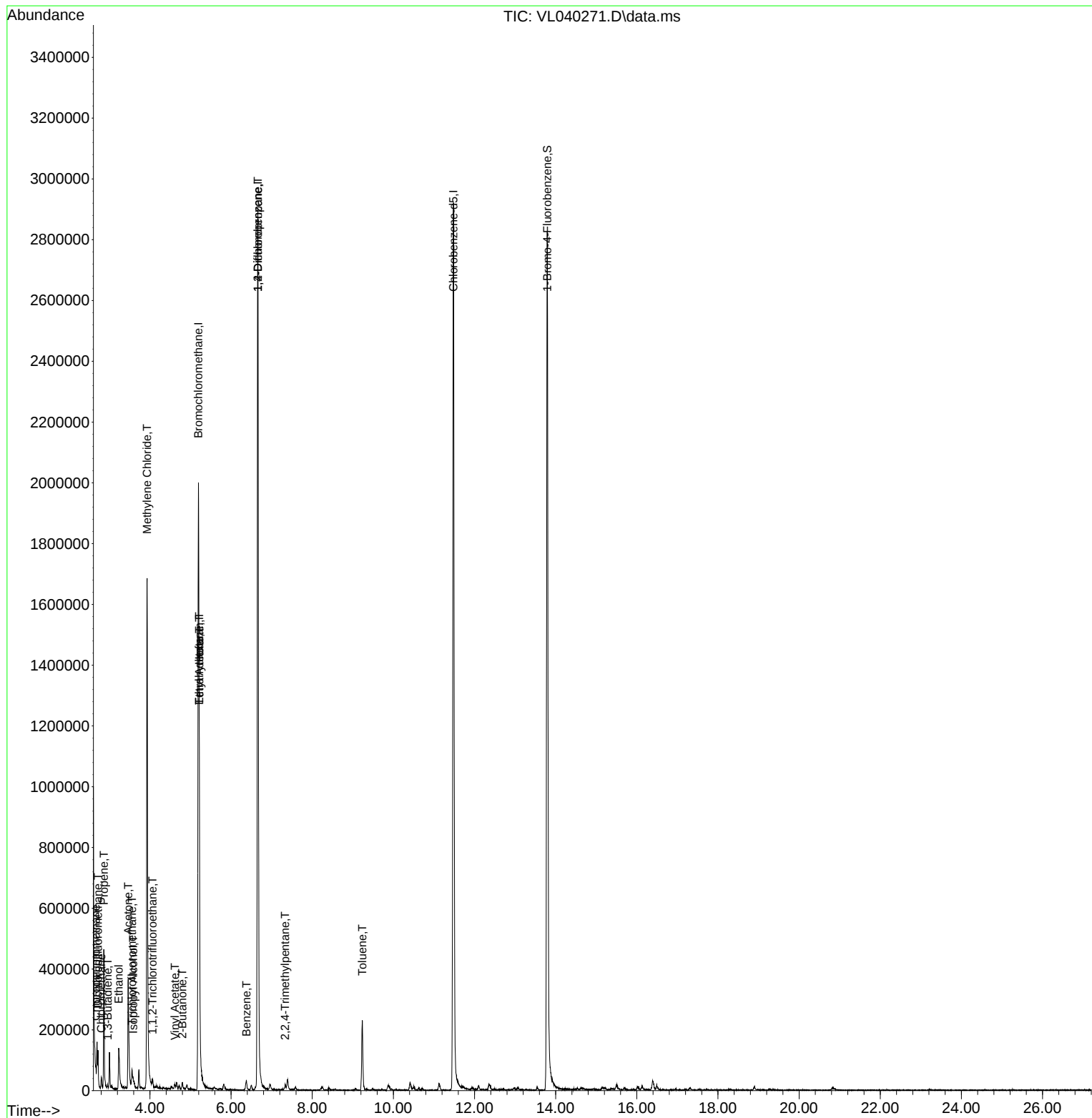
| Compound                      | R.T.   | QIon  | Response | Conc     | Units  | Dev(Min) |
|-------------------------------|--------|-------|----------|----------|--------|----------|
| -----                         |        |       |          |          |        |          |
| Internal Standards            |        |       |          |          |        |          |
| 1) Bromochloromethane         | 5.195  | 49    | 854300   | 10.000   | ppbv   | 0.00     |
| 33) 1,4-Difluorobenzene       | 6.658  | 114   | 2090246  | 10.000   | ppbv   | 0.00     |
| 55) Chlorobenzene-d5          | 11.481 | 117   | 1786866  | 10.000   | ppbv   | 0.00     |
| System Monitoring Compounds   |        |       |          |          |        |          |
| 68) 1-Bromo-4-Fluorobenzene   | 13.793 | 95    | 1426025  | 9.705    | ppbv   | 0.00     |
| Spiked Amount                 | 10.000 | Range | 65 - 135 | Recovery | =      | 97.100%  |
| Target Compounds              |        |       |          |          |        |          |
|                               |        |       |          |          | Qvalue |          |
| 2) Dichlorodifluoromethane    | 2.723  | 85    | 71900    | 0.452    | ppbv   | 94       |
| 3) Chlorodifluoromethane      | 2.665  | 51    | 62019    | 0.608    | ppbv # | 83       |
| 4) Chloromethane              | 2.803  | 50    | 26579    | 0.415    | ppbv # | 81       |
| 9) Propene                    | 2.864  | 41    | 109333   | 2.628    | ppbv   | 97       |
| 11) Trichlorofluoromethane    | 3.559  | 101   | 32683    | 0.229    | ppbv   | 90       |
| 12) 1,1,2-Trichlorotrifluo... | 4.063  | 101   | 4960     | 0.047    | ppbv # | 66       |
| 13) Ethanol                   | 3.231  | 45    | 160524   | 41.916   | ppbv   | 94       |
| 15) Acetone                   | 3.465  | 43    | 362768   | 3.527    | ppbv   | 94       |
| 16) 1,3-Butadiene             | 2.957  | 39    | 1832     | 0.039    | ppbv # | 8        |
| 19) Isopropyl Alcohol         | 3.587  | 45    | 31352    | 0.641    | ppbv # | 1        |
| 20) Methylene Chloride        | 3.931  | 84    | 584026   | 10.908   | ppbv   | 98       |
| 23) Vinyl Acetate             | 4.620  | 43    | 4864     | 0.156    | ppbv # | 46       |
| 25) Ethyl Acetate             | 5.218  | 43    | 214881   | 1.124    | ppbv # | 78       |
| 26) Hexane                    | 5.214  | 57    | 303976   | 3.703    | ppbv # | 37       |
| 34) 2-Butanone                | 4.800  | 43    | 22569    | 0.219    | ppbv # | 86       |
| 36) Benzene                   | 6.378  | 78    | 21505    | 0.132    | ppbv   | 94       |
| 39) 1,2-Dichloropropane       | 6.658  | 63    | 532835   | 8.420    | ppbv # | 26       |
| 41) Tetrahydrofuran           | 5.218  | 42    | 122054   | 2.043    | ppbv # | 47       |
| 44) 2,2,4-Trimethylpentane    | 7.330  | 57    | 9751     | 0.036    | ppbv # | 60       |
| 53) Toluene                   | 9.234  | 91    | 168008   | 0.964    | ppbv   | 99       |
| -----                         |        |       |          |          |        |          |

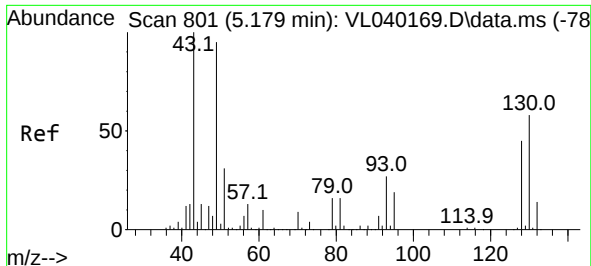
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL031323\  
Data File : VL040271.D  
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Sample : 01897-02  
Misc : 400mL/MSVOA\_L  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
ROOF

Quant Time: Mar 14 04:55:52 2023  
Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL021523AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
QLast Update : Tue Mar 14 04:52:39 2023  
Response via : Initial Calibration

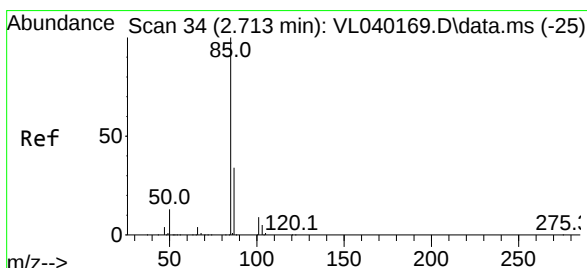
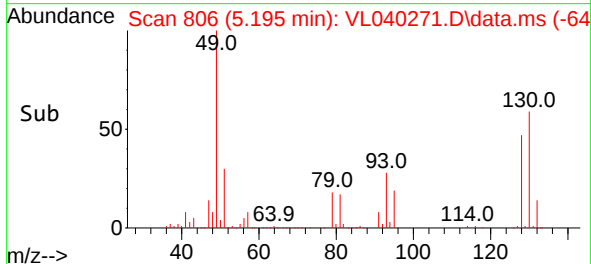
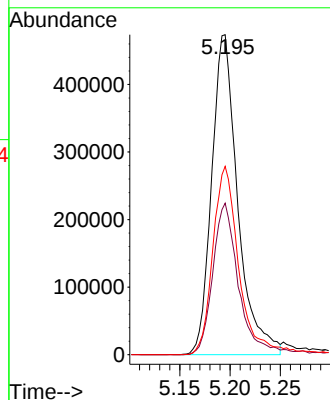
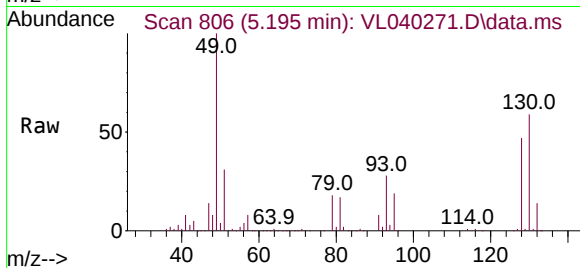




#1  
Bromochloromethane  
Concen: 10.000 ppbv  
RT: 5.195 min Scan# 80  
Delta R.T. 0.006 min  
Lab File: VL040271.D  
Acq: 13 Mar 2023 19:07

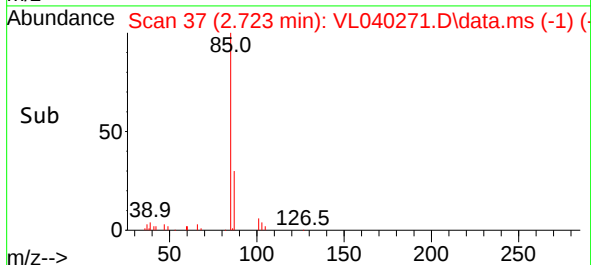
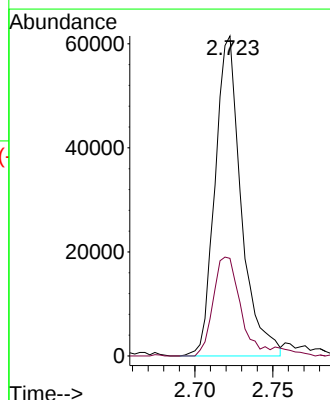
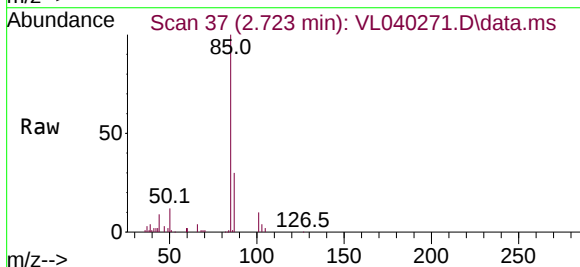
Instrument :  
MSVOA\_1  
ClientSampleId :  
ROOF

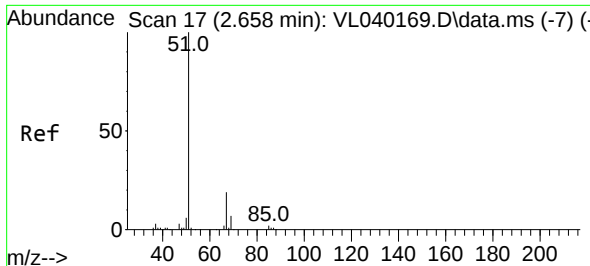
Tgt Ion: 49 Resp: 854300  
Ion Ratio Lower Upper  
49 100  
128 48.4 24.1 72.3  
130 60.8 30.9 92.8



#2  
Dichlorodifluoromethane  
Concen: 0.452 ppbv  
RT: 2.723 min Scan# 37  
Delta R.T. 0.010 min  
Lab File: VL040271.D  
Acq: 13 Mar 2023 19:07

Tgt Ion: 85 Resp: 71900  
Ion Ratio Lower Upper  
85 100  
87 30.5 27.0 40.6

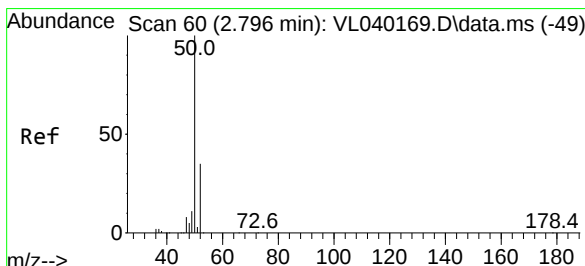
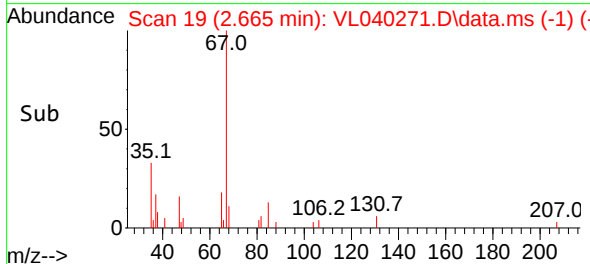
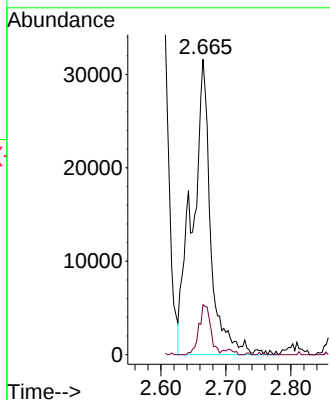
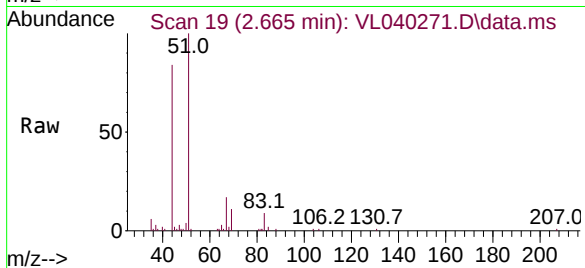




#3  
Chlorodifluoromethane  
Concen: 0.608 ppbv  
RT: 2.665 min Scan# 19  
Delta R.T. 0.007 min  
Lab File: VL040271.D  
Acq: 13 Mar 2023 19:07

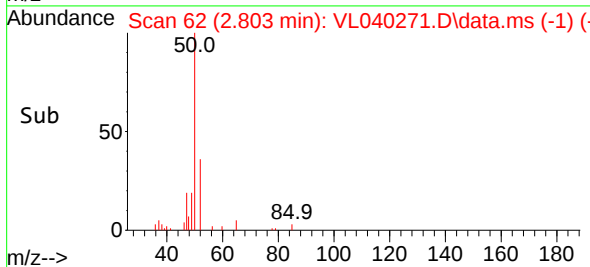
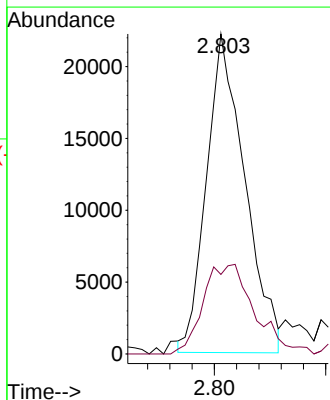
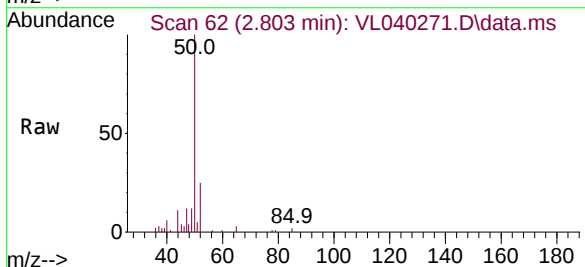
Instrument :  
MSVOA\_L  
ClientSampleId :  
ROOF

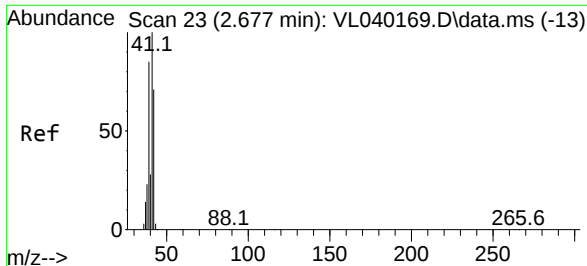
Tgt Ion: 51 Resp: 62019  
Ion Ratio Lower Upper  
51 100  
67 11.8 15.4 23.2#



#4  
Chloromethane  
Concen: 0.415 ppbv  
RT: 2.803 min Scan# 62  
Delta R.T. 0.003 min  
Lab File: VL040271.D  
Acq: 13 Mar 2023 19:07

Tgt Ion: 50 Resp: 26579  
Ion Ratio Lower Upper  
50 100  
52 24.3 28.3 42.5#

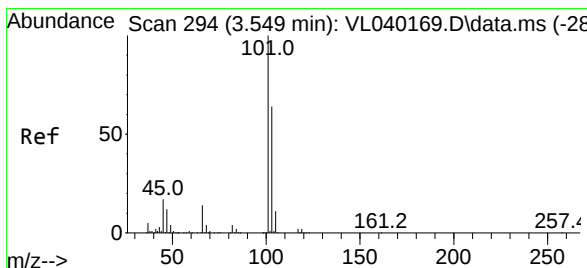
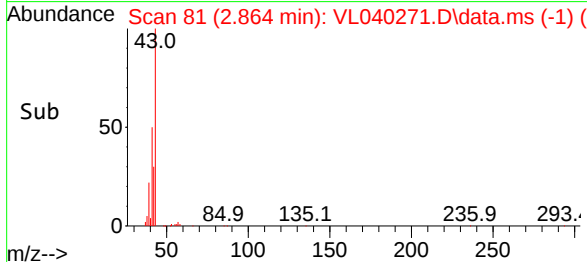
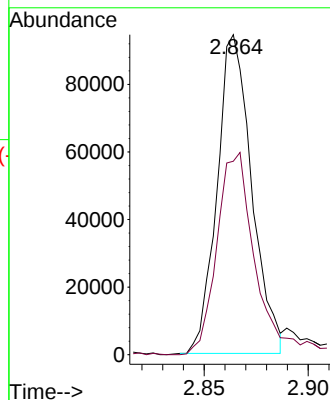
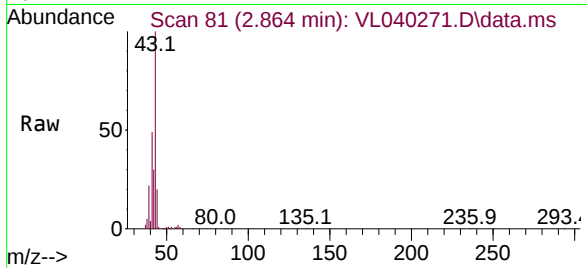




#9  
Propene  
Concen: 2.628 ppbv  
RT: 2.864 min Scan# 81  
Delta R.T. 0.187 min  
Lab File: VL040271.D  
Acq: 13 Mar 2023 19:07

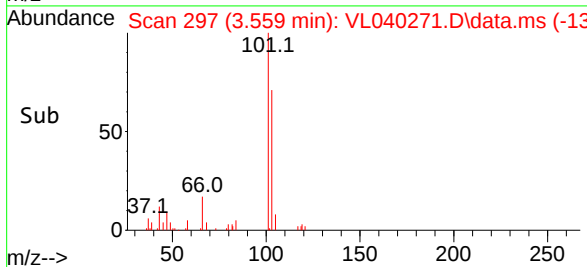
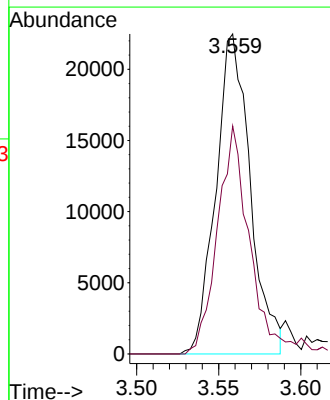
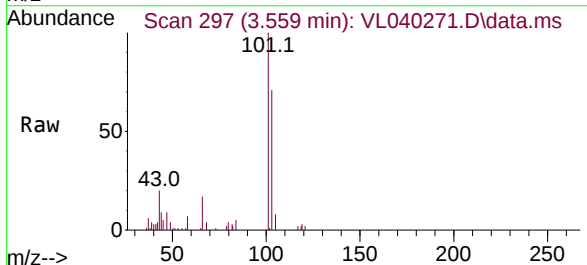
Instrument :  
MSVOA\_L  
ClientSampleId :  
ROOF

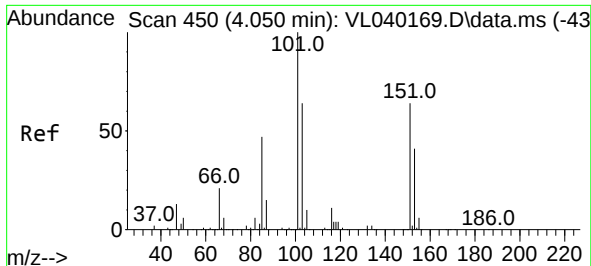
Tgt Ion: 41 Resp: 109333  
Ion Ratio Lower Upper  
41 100  
42 73.5 56.9 85.3



#11  
Trichlorofluoromethane  
Concen: 0.229 ppbv  
RT: 3.559 min Scan# 297  
Delta R.T. 0.007 min  
Lab File: VL040271.D  
Acq: 13 Mar 2023 19:07

Tgt Ion: 101 Resp: 32683  
Ion Ratio Lower Upper  
101 100  
103 71.3 51.0 76.6





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.047 ppbv

RT: 4.063 min Scan# 41

Delta R.T. 0.007 min

Lab File: VL040271.D

Acq: 13 Mar 2023 19:07

Instrument :

MSVOA\_L

ClientSampleId :

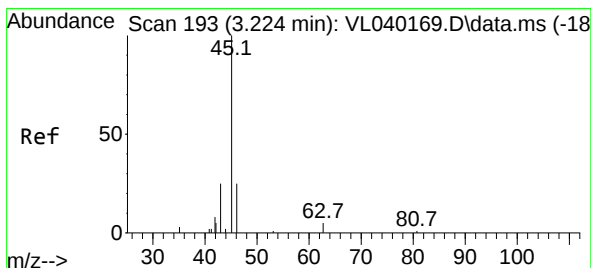
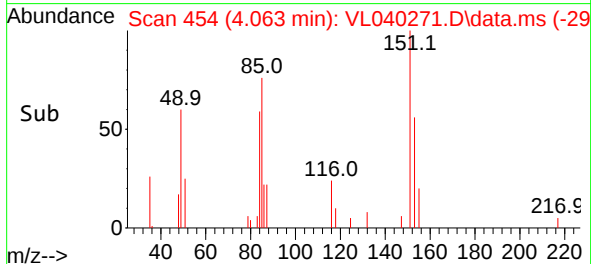
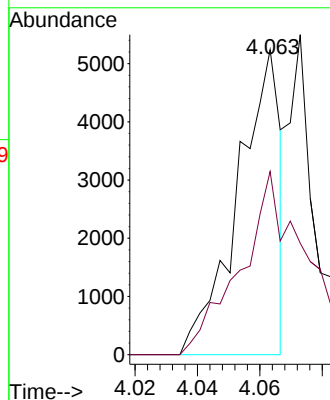
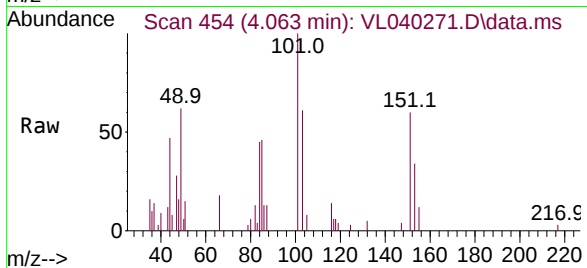
ROOF

Tgt Ion:101 Resp: 4960

Ion Ratio Lower Upper

101 100

151 96.0 54.7 82.1#



#13

Ethanol

Concen: 41.916 ppbv

RT: 3.231 min Scan# 195

Delta R.T. 0.000 min

Lab File: VL040271.D

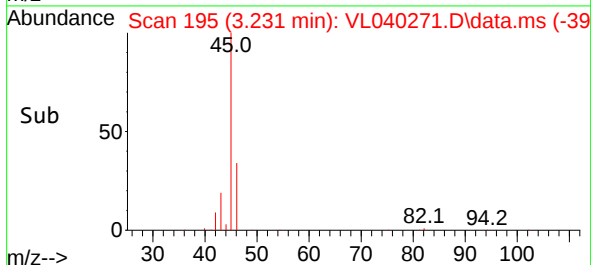
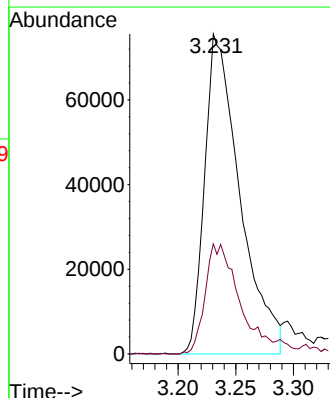
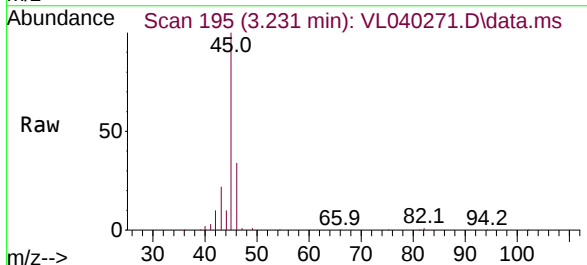
Acq: 13 Mar 2023 19:07

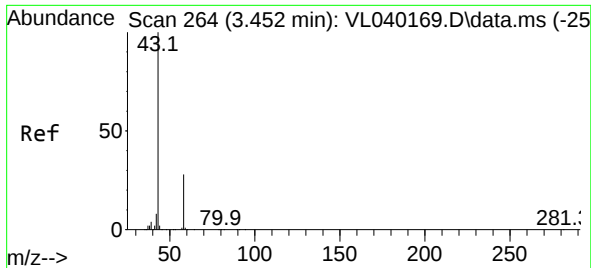
Tgt Ion: 45 Resp: 160524

Ion Ratio Lower Upper

45 100

46 36.5 13.3 53.1





#15

Acetone

Concen: 3.527 ppbv

RT: 3.465 min Scan# 2

Delta R.T. 0.010 min

Lab File: VL040271.D

Acq: 13 Mar 2023 19:07

Instrument :

MSVOA\_L

ClientSampleId :

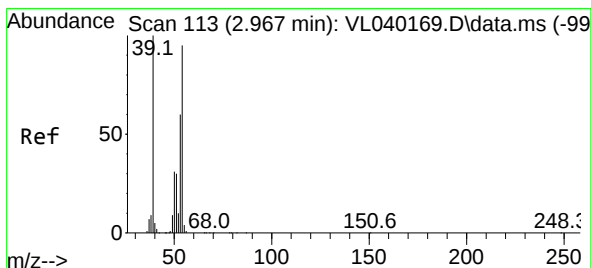
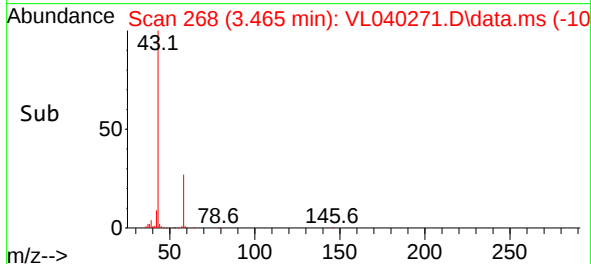
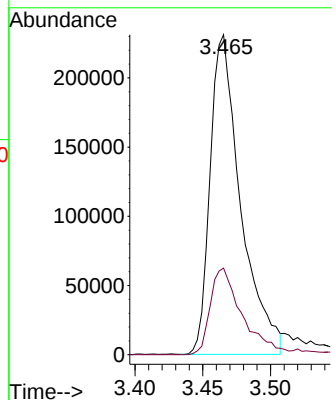
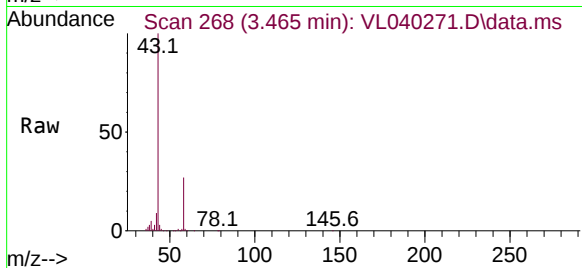
ROOF

Tgt Ion: 43 Resp: 362768

Ion Ratio Lower Upper

43 100

58 31.1 22.4 33.6



#16

1,3-Butadiene

Concen: 0.039 ppbv

RT: 2.957 min Scan# 110

Delta R.T. -0.013 min

Lab File: VL040271.D

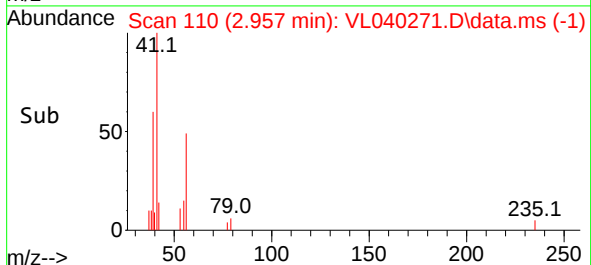
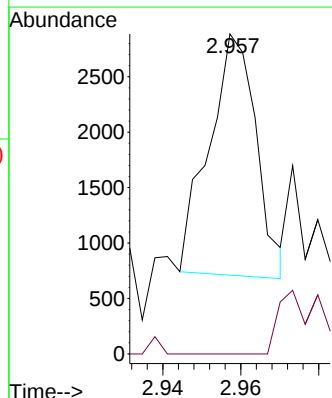
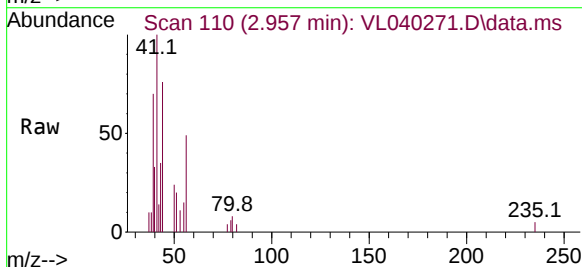
Acq: 13 Mar 2023 19:07

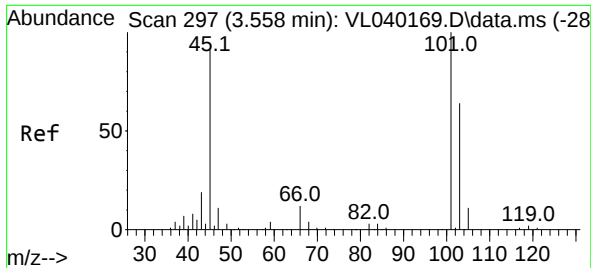
Tgt Ion: 39 Resp: 1832

Ion Ratio Lower Upper

39 100

54 0.0 66.7 100.1#





#19

Isopropyl Alcohol

Concen: 0.641 ppbv

RT: 3.587 min Scan# 306

Delta R.T. 0.026 min

Lab File: VL040271.D

Acq: 13 Mar 2023 19:07

Instrument :

MSVOA\_L

ClientSampleId :

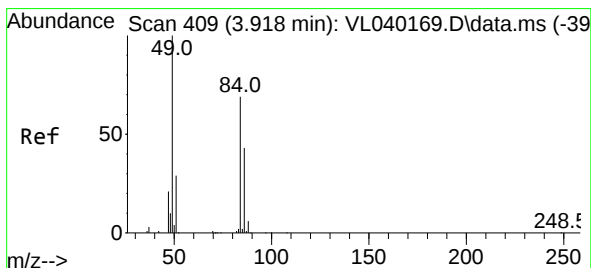
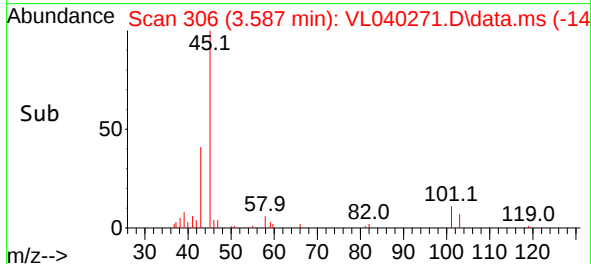
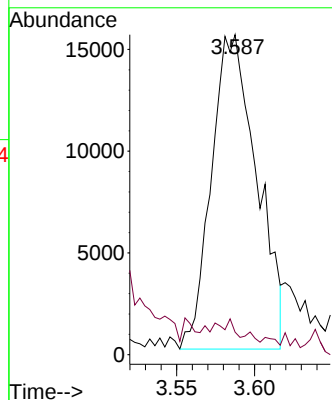
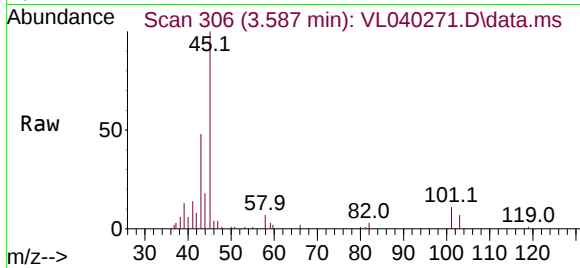
ROOF

Tgt Ion: 45 Resp: 31352

Ion Ratio Lower Upper

45 100

58 360.1 2.6 3.8#



#20

Methylene Chloride

Concen: 10.908 ppbv

RT: 3.931 min Scan# 413

Delta R.T. 0.010 min

Lab File: VL040271.D

Acq: 13 Mar 2023 19:07

Tgt Ion: 84 Resp: 584026

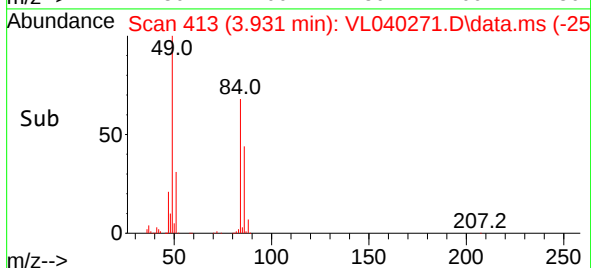
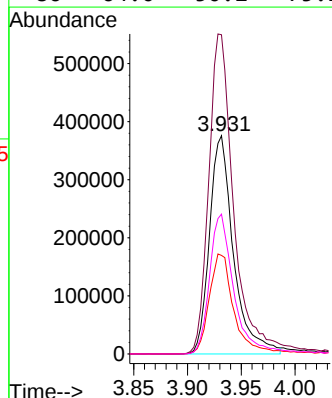
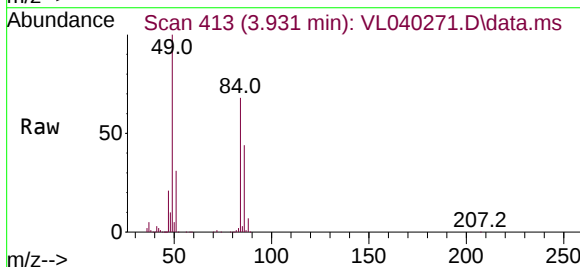
Ion Ratio Lower Upper

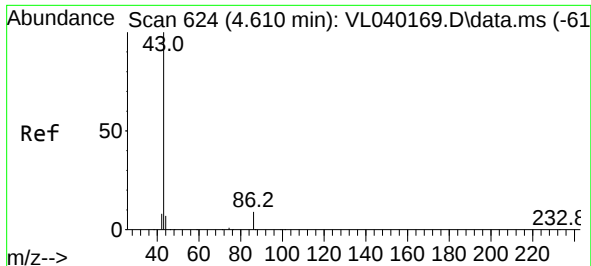
84 100

49 146.2 115.5 173.3

51 45.1 33.1 49.7

86 64.0 50.2 75.2

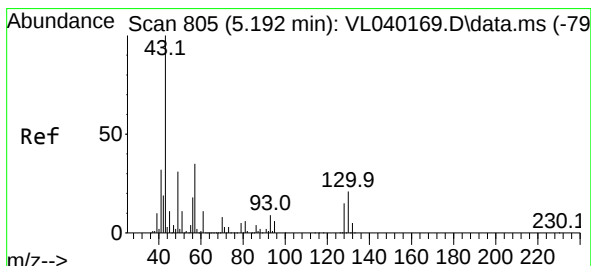
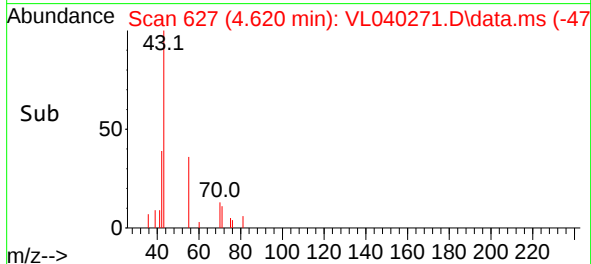
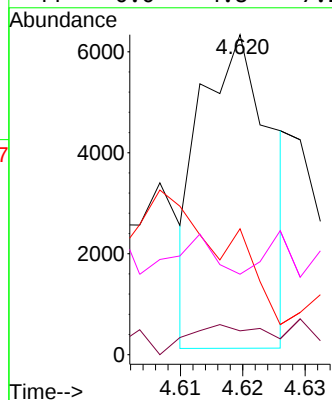
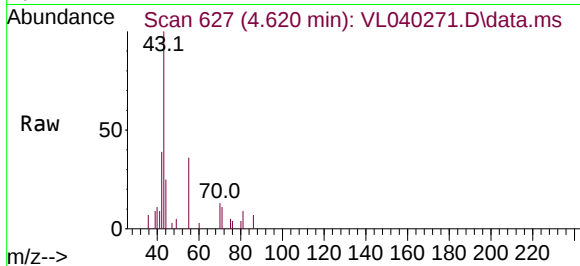




#23  
 Vinyl Acetate  
 Concen: 0.156 ppbv  
 RT: 4.620 min Scan# 61  
 Delta R.T. 0.000 min  
 Lab File: VL040271.D  
 Acq: 13 Mar 2023 19:07

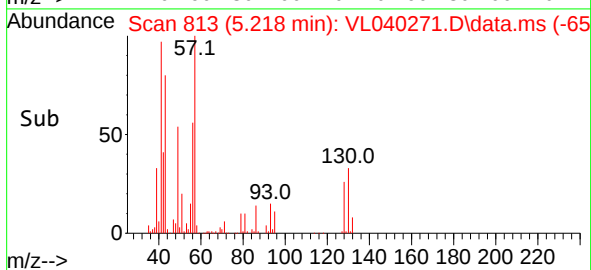
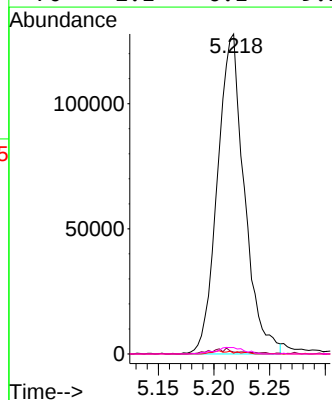
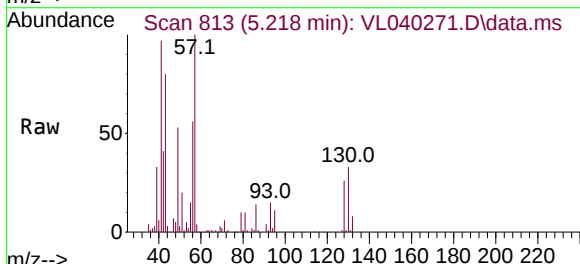
Instrument :  
 MSVOA\_1  
 ClientSampleId :  
 ROOF

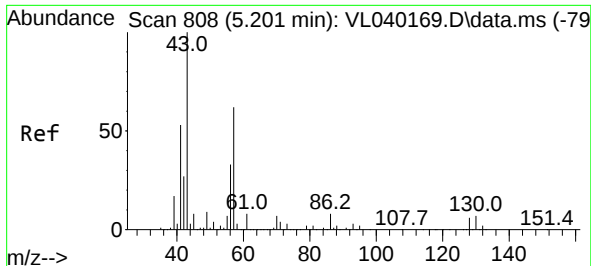
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 4864  |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 86       | 4.2   | 5.6   | 8.4#  |
| 42       | 50.1  | 7.6   | 11.4# |
| 44       | 0.0   | 4.8   | 7.2#  |



#25  
 Ethyl Acetate  
 Concen: 1.124 ppbv  
 RT: 5.218 min Scan# 813  
 Delta R.T. 0.019 min  
 Lab File: VL040271.D  
 Acq: 13 Mar 2023 19:07

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 43    | Resp: | 214881 |
| Ion      | Ratio | Lower | Upper  |
| 43       | 100   |       |        |
| 45       | 1.8   | 8.3   | 12.5#  |
| 61       | 0.8   | 8.4   | 12.6#  |
| 70       | 2.1   | 6.1   | 9.1#   |

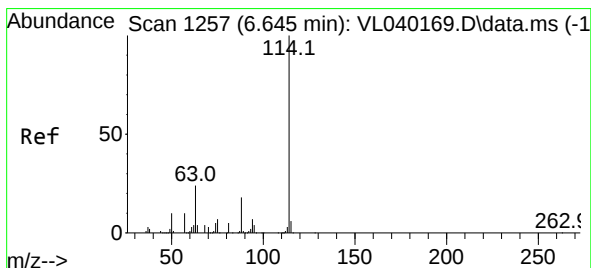
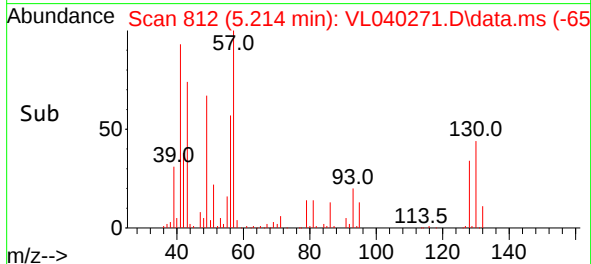
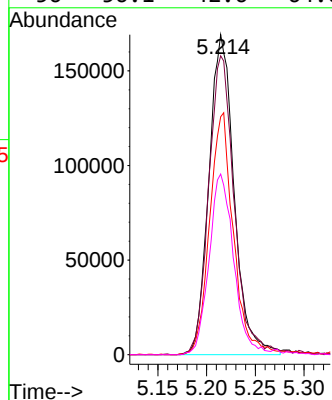
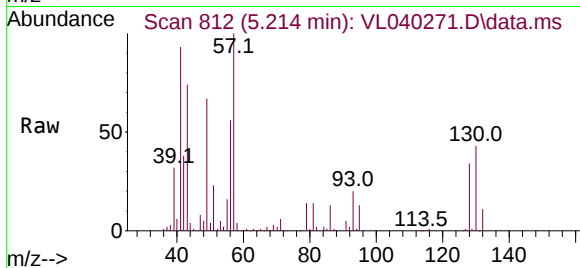




#26  
Hexane  
Concen: 3.703 ppbv  
RT: 5.214 min Scan# 811  
Delta R.T. 0.007 min  
Lab File: VL040271.D  
Acq: 13 Mar 2023 19:07

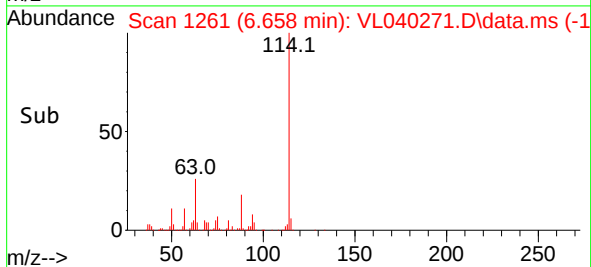
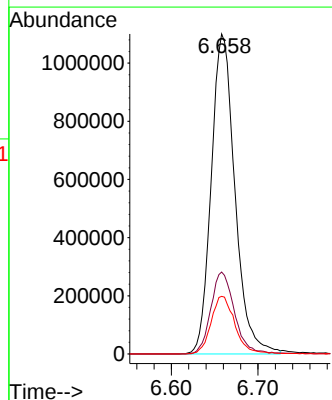
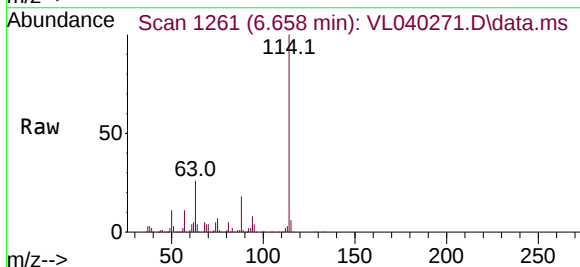
Instrument :  
MSVOA\_L  
ClientSampleId :  
ROOF

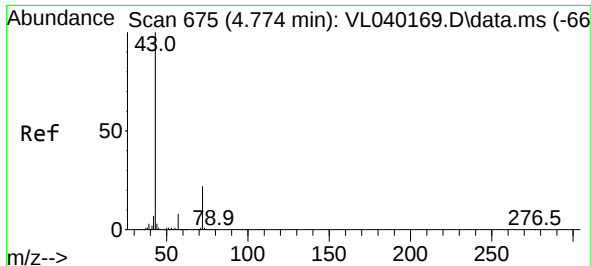
Tgt Ion: 57 Resp: 303976  
Ion Ratio Lower Upper  
57 100  
41 95.6 74.3 111.5  
43 73.0 193.0 289.4#  
56 56.1 42.6 64.0



#33  
1,4-Difluorobenzene  
Concen: 10.000 ppbv  
RT: 6.658 min Scan# 1261  
Delta R.T. 0.003 min  
Lab File: VL040271.D  
Acq: 13 Mar 2023 19:07

Tgt Ion: 114 Resp: 2090246  
Ion Ratio Lower Upper  
114 100  
63 26.0 20.4 30.6  
88 18.3 14.3 21.5





#34

2-Butanone

Concen: 0.219 ppbv

RT: 4.800 min Scan# 61

Delta R.T. 0.023 min

Lab File: VL040271.D

Acq: 13 Mar 2023 19:07

Instrument :

MSVOA\_L

ClientSampleId :

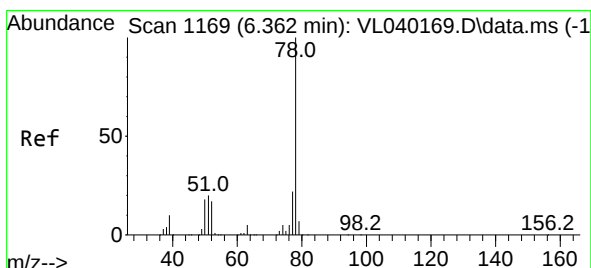
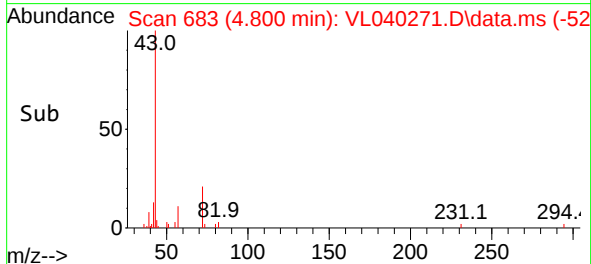
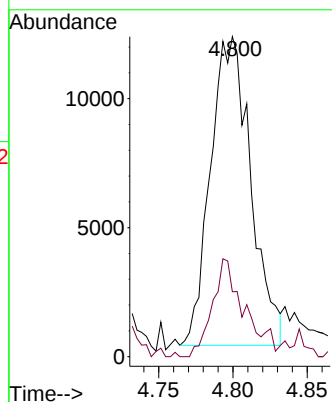
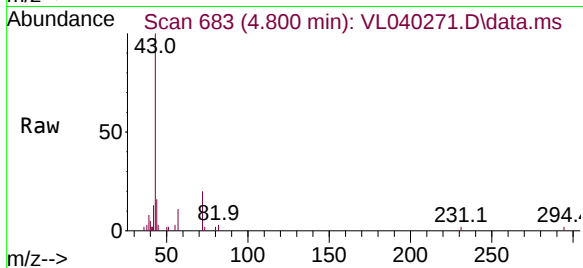
ROOF

Tgt Ion: 43 Resp: 22569

Ion Ratio Lower Upper

43 100

72 28.9 17.8 26.8#



#36

Benzene

Concen: 0.132 ppbv

RT: 6.378 min Scan# 1174

Delta R.T. 0.010 min

Lab File: VL040271.D

Acq: 13 Mar 2023 19:07

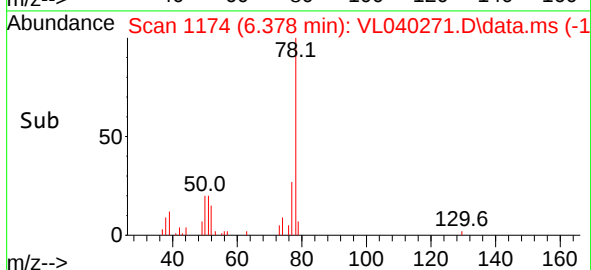
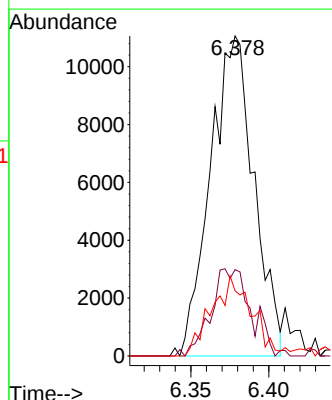
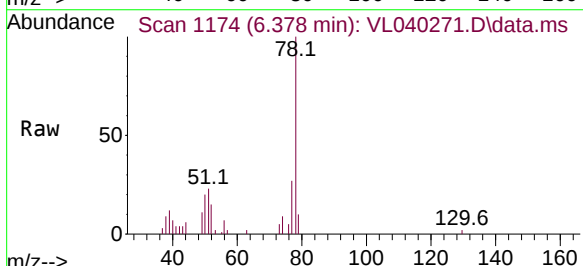
Tgt Ion: 78 Resp: 21505

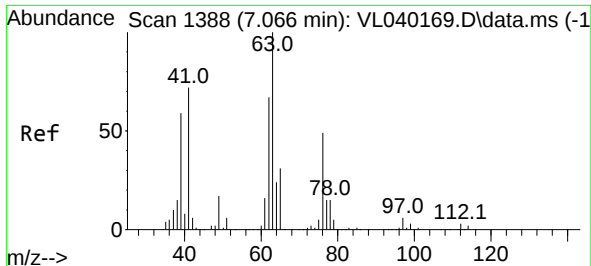
Ion Ratio Lower Upper

78 100

77 25.3 17.5 26.3

50 20.4 14.6 22.0





#39

1,2-Dichloropropane

Concen: 8.420 ppbv

RT: 6.658 min Scan# 11

Delta R.T. -0.415 min

Lab File: VL040271.D

Acq: 13 Mar 2023 19:07

Instrument :

MSVOA\_L

ClientSampleId :

ROOF

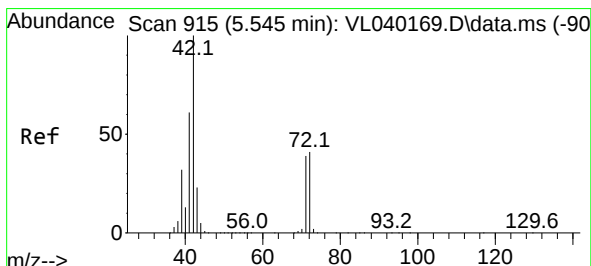
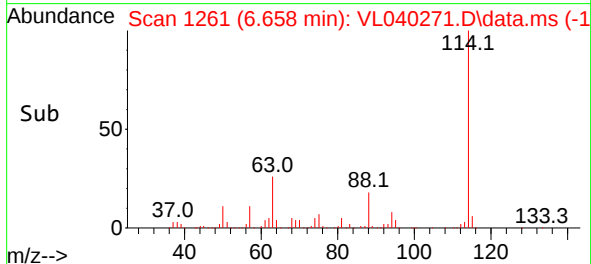
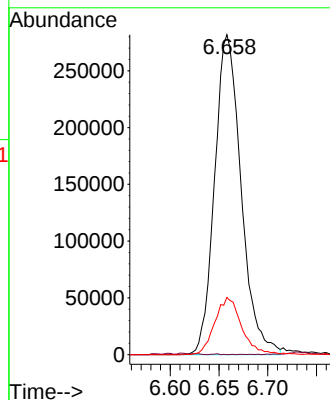
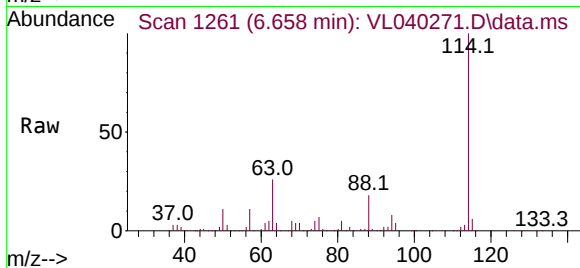
Tgt Ion: 63 Resp: 532835

Ion Ratio Lower Upper

63 100

41 0.0 57.6 86.4#

62 17.9 54.0 81.0#



#41

Tetrahydrofuran

Concen: 2.043 ppbv

RT: 5.218 min Scan# 813

Delta R.T. -0.334 min

Lab File: VL040271.D

Acq: 13 Mar 2023 19:07

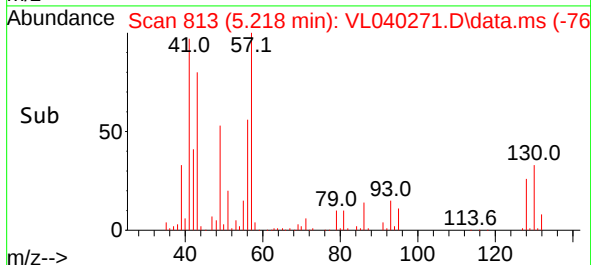
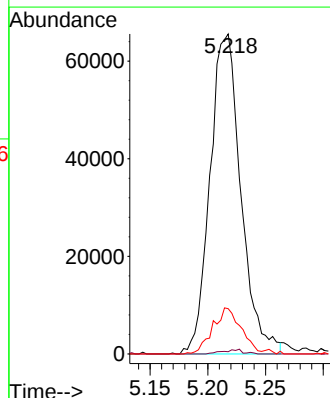
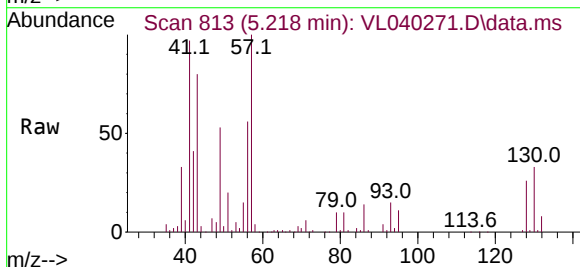
Tgt Ion: 42 Resp: 122054

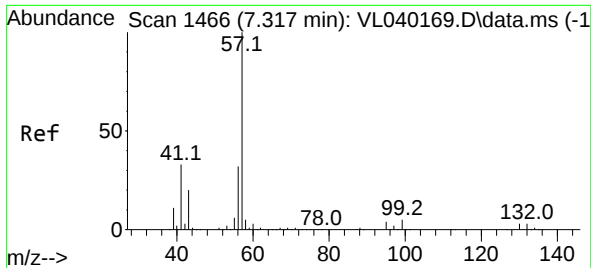
Ion Ratio Lower Upper

42 100

72 0.9 33.0 49.4#

71 13.6 31.4 47.2#

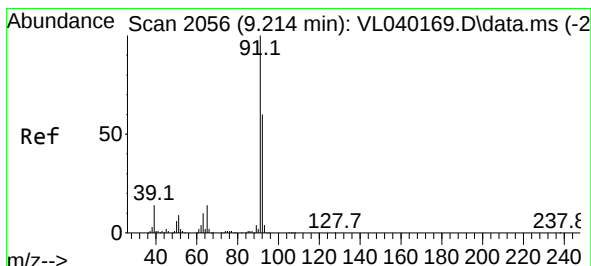
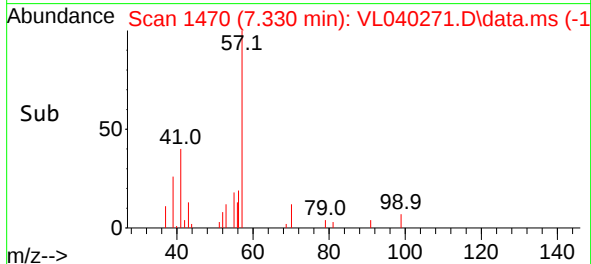
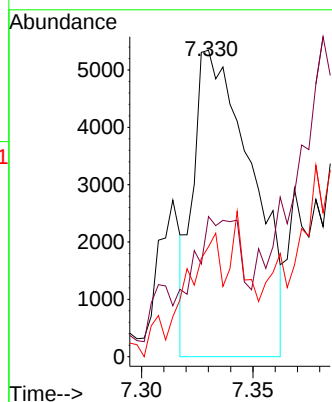
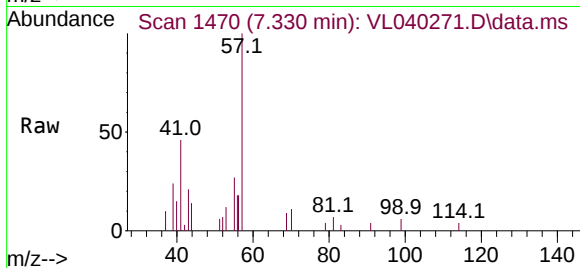




#44  
 2,2,4-Trimethylpentane  
 Concen: 0.036 ppbv  
 RT: 7.330 min Scan# 1466  
 Delta R.T. 0.003 min  
 Lab File: VL040271.D  
 Acq: 13 Mar 2023 19:07

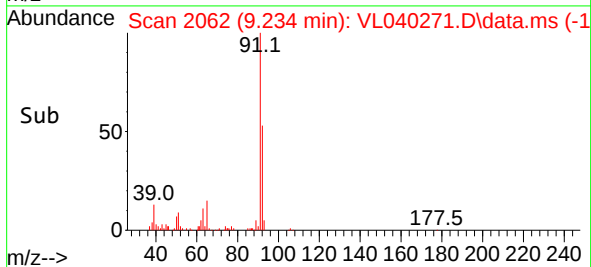
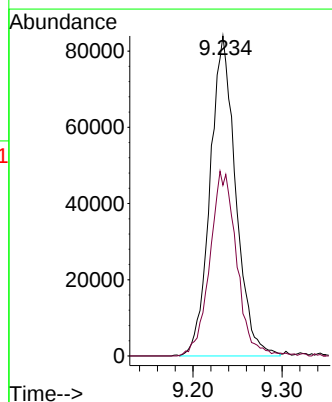
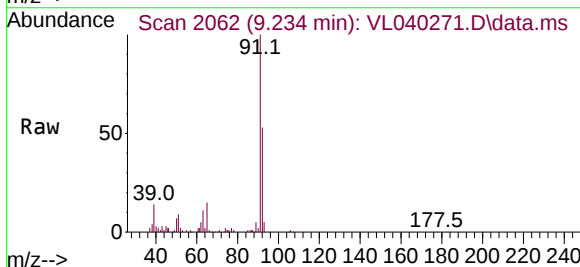
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 ROOF

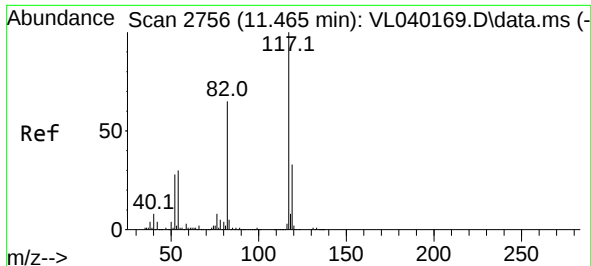
Tgt Ion: 57 Resp: 9751  
 Ion Ratio Lower Upper  
 57 100  
 41 0.0 26.2 39.4#  
 56 43.1 24.9 37.3#



#53  
 Toluene  
 Concen: 0.964 ppbv  
 RT: 9.234 min Scan# 2062  
 Delta R.T. 0.010 min  
 Lab File: VL040271.D  
 Acq: 13 Mar 2023 19:07

Tgt Ion: 91 Resp: 168008  
 Ion Ratio Lower Upper  
 91 100  
 92 60.5 48.9 73.3

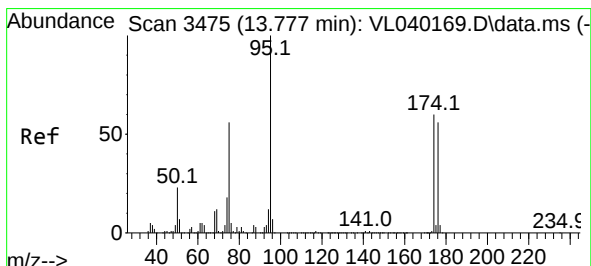
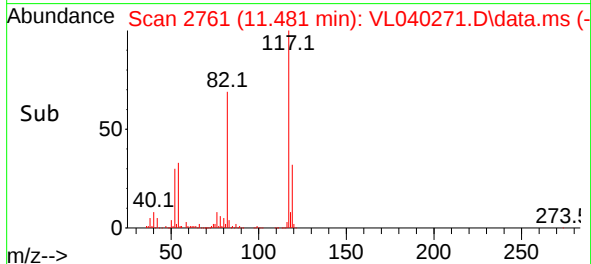
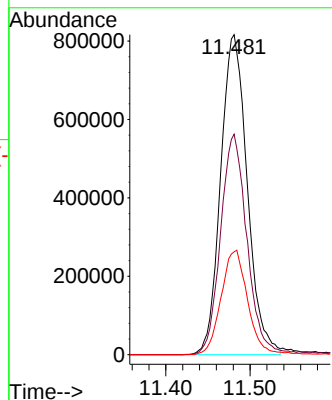
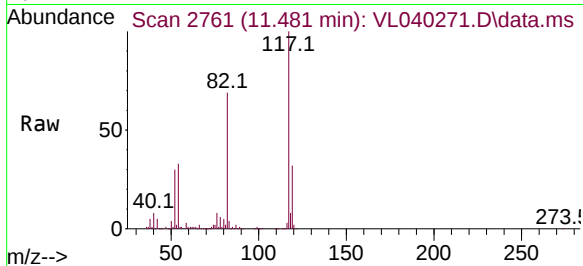




#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 11.481 min Scan# 21  
Delta R.T. 0.007 min  
Lab File: VL040271.D  
Acq: 13 Mar 2023 19:07

Instrument :  
MSVOA\_L  
ClientSampleId :  
ROOF

Tgt Ion:117 Resp: 1786866  
Ion Ratio Lower Upper  
117 100  
82 69.5 53.3 79.9  
119 33.1 24.6 37.0



#68  
1-Bromo-4-Fluorobenzene  
Concen: 9.705 ppbv  
RT: 13.793 min Scan# 3480  
Delta R.T. 0.010 min  
Lab File: VL040271.D  
Acq: 13 Mar 2023 19:07

Tgt Ion: 95 Resp: 1426025  
Ion Ratio Lower Upper  
95 100  
174 58.2 48.2 72.2  
175 4.2 3.4 5.2

