

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL122123\  
 Data File : VL040930.D  
 Acq On : 21 Dec 2023 15:13  
 Operator : SY/MD  
 Sample : 05813-04  
 Misc : 400mL/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Dec 22 00:07:34 2023  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL122023AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD T0-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022  
 QLast Update : Thu Dec 21 07:32:42 2023  
 Response via : Initial Calibration

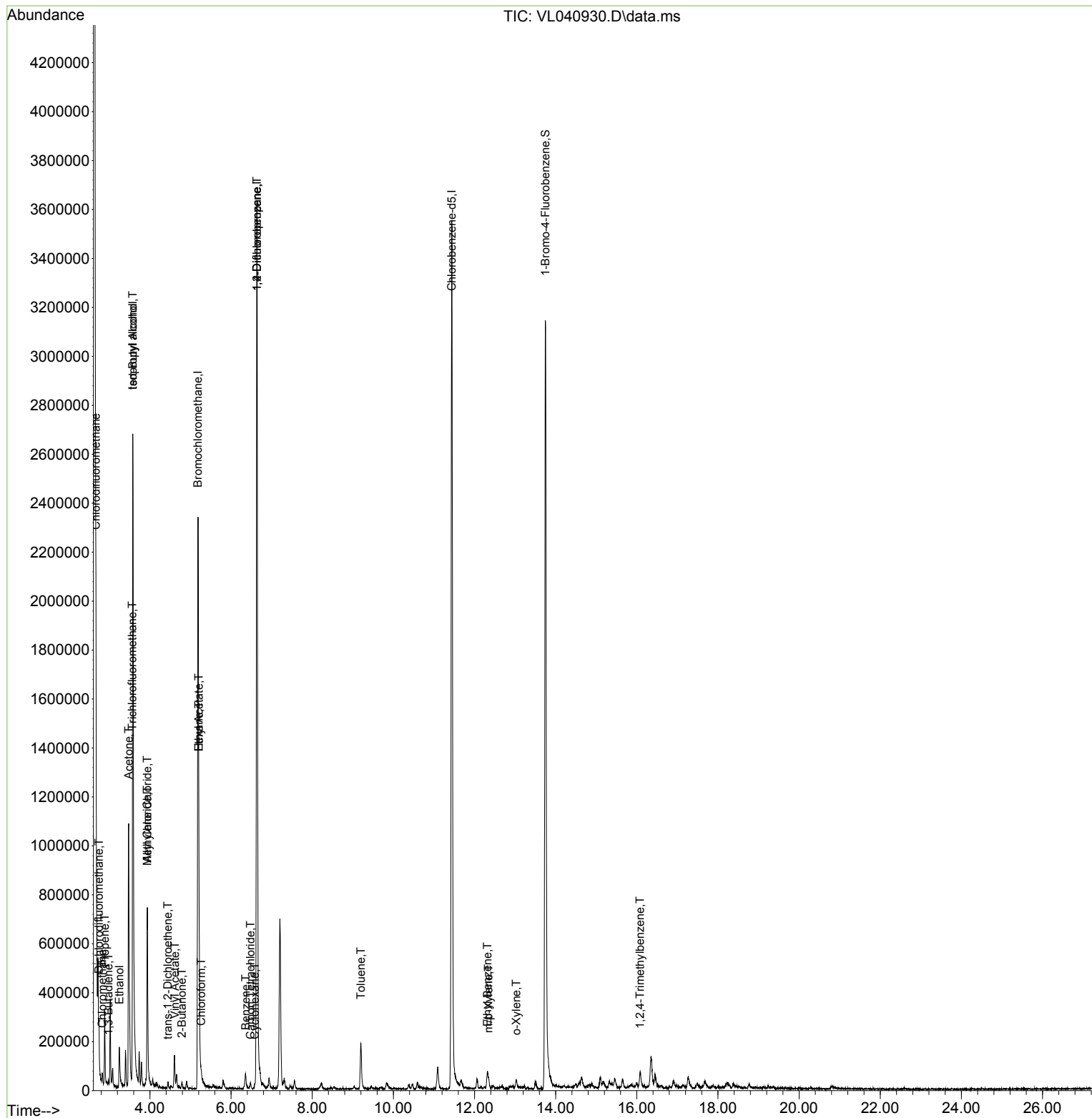
| Compound                     | R.T.   | QIon  | Response | Conc     | Units  | Dev(Min) |
|------------------------------|--------|-------|----------|----------|--------|----------|
| -----                        |        |       |          |          |        |          |
| Internal Standards           |        |       |          |          |        |          |
| 1) Bromochloromethane        | 5.182  | 49    | 1094081  | 10.000   | ppbv   | 0.00     |
| 33) 1,4-Difluorobenzene      | 6.639  | 114   | 2732928  | 10.000   | ppbv   | 0.00     |
| 55) Chlorobenzene-d5         | 11.439 | 117   | 2287832  | 10.000   | ppbv   | 0.00     |
|                              |        |       |          |          |        |          |
| System Monitoring Compounds  |        |       |          |          |        |          |
| 68) 1-Bromo-4-Fluorobenzene  | 13.748 | 95    | 1682061  | 9.981    | ppbv   | 0.00     |
| Spiked Amount                | 10.000 | Range | 65 - 135 | Recovery | =      | 99.800%  |
|                              |        |       |          |          |        |          |
| Target Compounds             |        |       |          |          |        |          |
|                              |        |       |          |          | Qvalue |          |
| 2) Dichlorodifluoromethane   | 2.742  | 85    | 110639   | 0.531    | ppbv   | 99       |
| 3) Chlorodifluoromethane     | 2.668  | 51    | 369656   | 2.245    | ppbv # | 64       |
| 4) Chloromethane             | 2.822  | 50    | 14495    | 0.239    | ppbv # | 84       |
| 9) Propene                   | 2.886  | 41    | 71233    | 1.311    | ppbv   | 97       |
| 11) Trichlorofluoromethane   | 3.568  | 101   | 37182    | 0.228    | ppbv   | 88       |
| 13) Ethanol                  | 3.250  | 45    | 166980   | 12.184   | ppbv   | 100      |
| 15) Acetone                  | 3.475  | 43    | 1125501  | 8.577    | ppbv   | 98       |
| 16) 1,3-Butadiene            | 2.976  | 39    | 3253     | 0.058    | ppbv   | 97       |
| 17) tert-Butyl alcohol       | 3.578  | 59    | 100981   | 1.040    | ppbv   | 98       |
| 19) Isopropyl Alcohol        | 3.578  | 45    | 2886844  | 42.163   | ppbv # | 98       |
| 20) Methylene Chloride       | 3.938  | 84    | 238605   | 5.101    | ppbv   | 93       |
| 21) Allyl Chloride           | 3.935  | 41    | 7406     | 0.095    | ppbv # | 18       |
| 22) trans-1,2-Dichloroethene | 4.439  | 96    | 5687     | 0.095    | ppbv # | 62       |
| 23) Vinyl Acetate            | 4.613  | 43    | 15909    | 0.110    | ppbv # | 1        |
| 25) Ethyl Acetate            | 5.205  | 43    | 176302   | 0.775    | ppbv # | 81       |
| 26) Hexane                   | 5.205  | 57    | 218397   | 2.167    | ppbv # | 43       |
| 29) Chloroform               | 5.266  | 83    | 7385     | 0.043    | ppbv   | 85       |
| 30) Cyclohexane              | 6.584  | 84    | 3358     | 0.040    | ppbv # | 1        |
| 34) 2-Butanone               | 4.787  | 43    | 28304    | 0.196    | ppbv # | 85       |
| 35) Carbon Tetrachloride     | 6.481  | 117   | 5442     | 0.032    | ppbv # | 66       |
| 36) Benzene                  | 6.359  | 78    | 41693    | 0.195    | ppbv # | 87       |
| 39) 1,2-Dichloropropane      | 6.639  | 63    | 680988   | 8.111    | ppbv # | 24       |
| 53) Toluene                  | 9.201  | 91    | 65877    | 0.278    | ppbv # | 20       |
| 58) Ethyl Benzene            | 12.317 | 91    | 31307    | 0.107    | ppbv   | 90       |
| 59) m/p-Xylene               | 12.343 | 91    | 16422    | 0.066    | ppbv # | 100      |
| 60) o-Xylene                 | 13.031 | 91    | 17356    | 0.074    | ppbv   | 66       |
| 74) 1,2,4-Trimethylbenzene   | 16.079 | 105   | 9647     | 0.039    | ppbv # | 42       |
| -----                        |        |       |          |          |        |          |

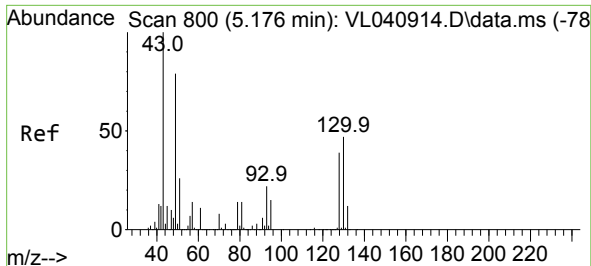
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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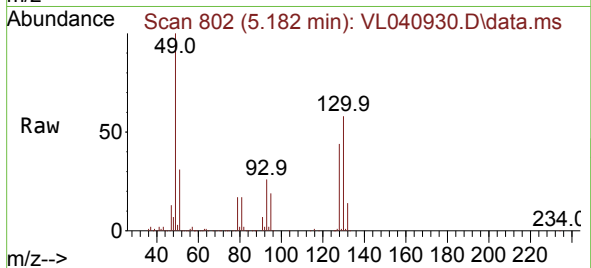
Quant Time: Dec 22 00:07:34 2023  
Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL122023AIR.M  
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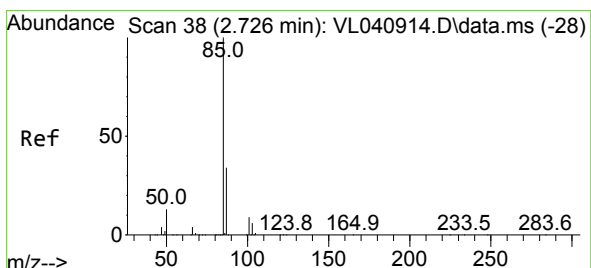
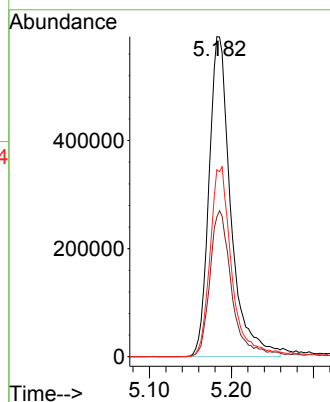
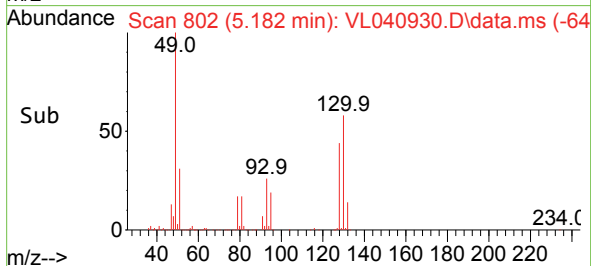


#1  
 Bromochloromethane  
 Concen: 10.000 ppbv  
 RT: 5.182 min Scan# 80  
 Delta R.T. 0.006 min  
 Lab File: VL040930.D  
 Acq: 21 Dec 2023 15:13

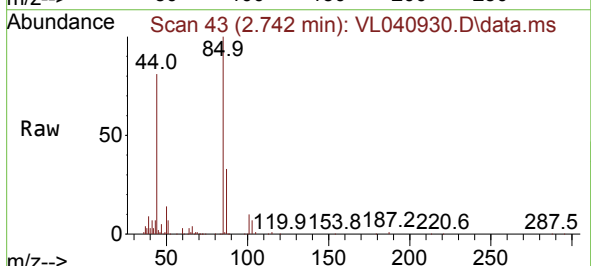
Instrument :  
 MSVOA\_L  
 ClientSampleId :



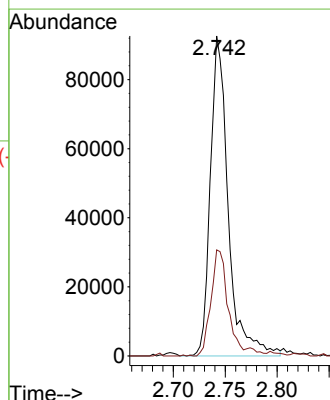
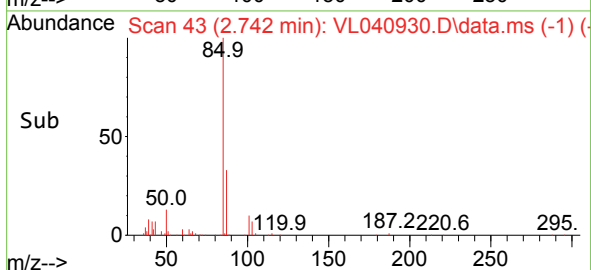
Tgt Ion: 49 Resp: 1094081  
 Ion Ratio Lower Upper  
 49 100  
 128 47.0 23.8 71.2  
 130 60.6 30.1 90.5

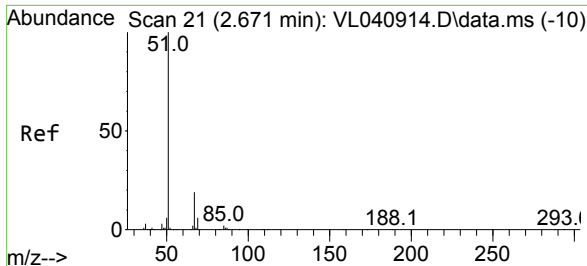


#2  
 Dichlorodifluoromethane  
 Concen: 0.531 ppbv  
 RT: 2.742 min Scan# 43  
 Delta R.T. 0.016 min  
 Lab File: VL040930.D  
 Acq: 21 Dec 2023 15:13



Tgt Ion: 85 Resp: 110639  
 Ion Ratio Lower Upper  
 85 100  
 87 33.2 27.0 40.6

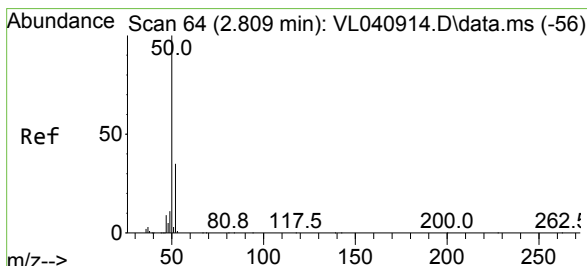
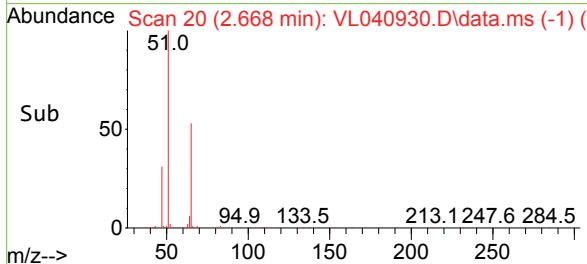
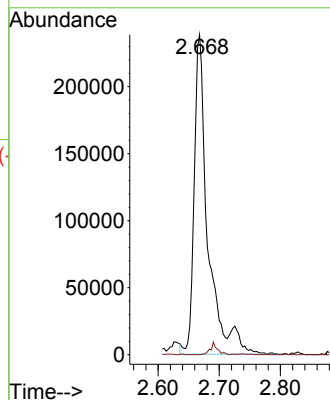
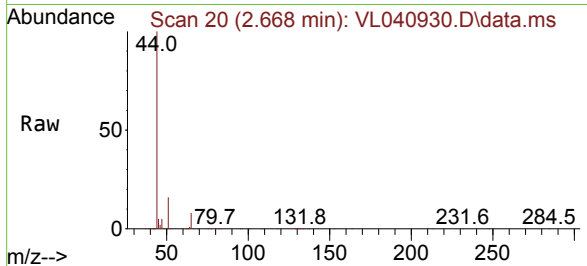




#3  
Chlorodifluoromethane  
Concen: 2.245 ppbv  
RT: 2.668 min Scan# 20  
Delta R.T. -0.003 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

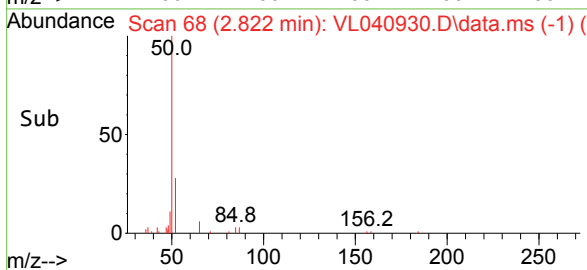
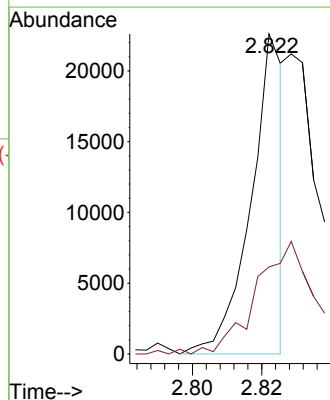
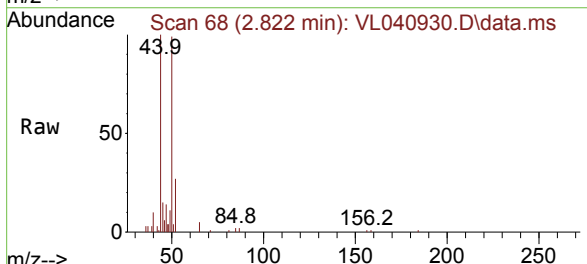
Instrument :  
MSVOA\_L  
ClientSampleId :

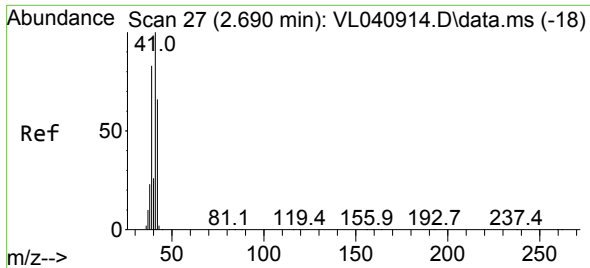
Tgt Ion: 51 Resp: 369656  
Ion Ratio Lower Upper  
51 100  
67 2.2 14.7 22.1#



#4  
Chloromethane  
Concen: 0.239 ppbv  
RT: 2.822 min Scan# 68  
Delta R.T. 0.013 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

Tgt Ion: 50 Resp: 14495  
Ion Ratio Lower Upper  
50 100  
52 25.7 28.0 42.0#

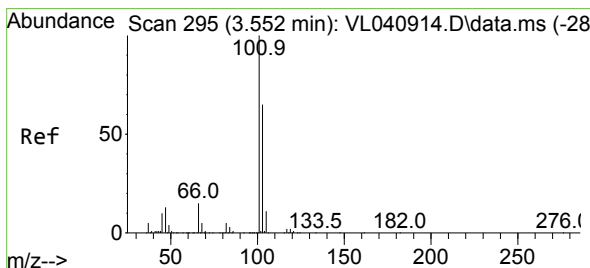
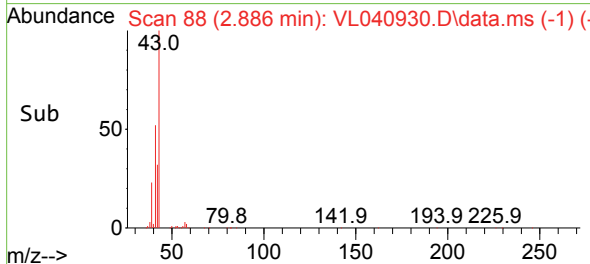
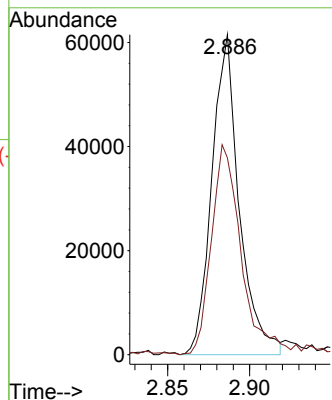
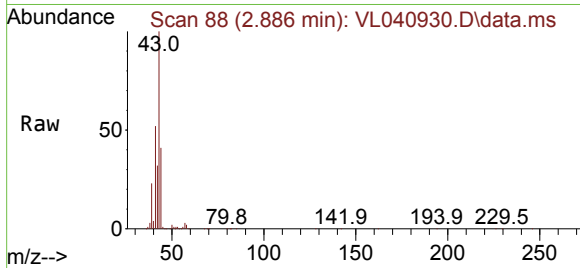




#9  
 Propene  
 Concen: 1.311 ppbv  
 RT: 2.886 min Scan# 81  
 Delta R.T. 0.196 min  
 Lab File: VL040930.D  
 Acq: 21 Dec 2023 15:13

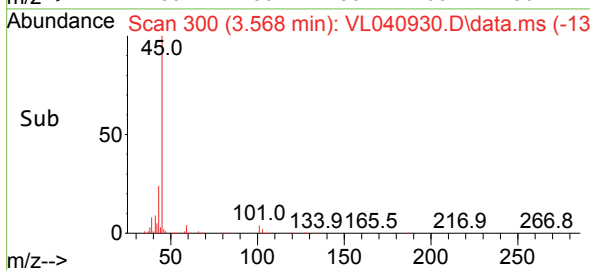
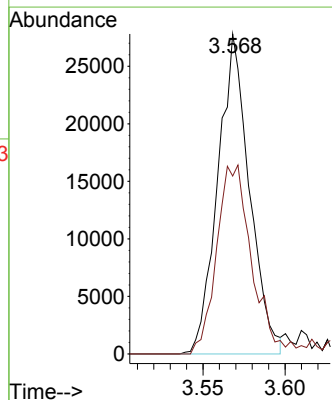
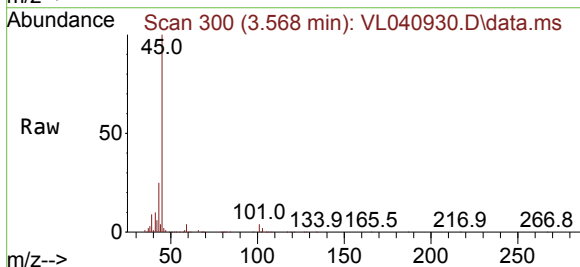
Instrument :  
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 ClientSampleId :

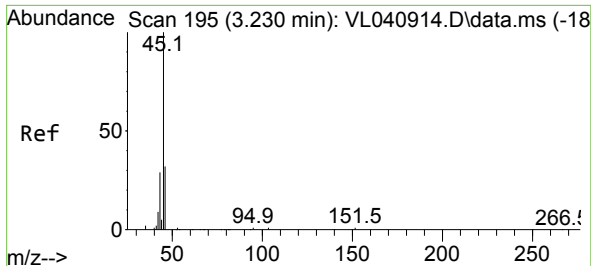
Tgt Ion: 41 Resp: 71233  
 Ion Ratio Lower Upper  
 41 100  
 42 72.3 55.8 83.6



#11  
 Trichlorofluoromethane  
 Concen: 0.228 ppbv  
 RT: 3.568 min Scan# 300  
 Delta R.T. 0.016 min  
 Lab File: VL040930.D  
 Acq: 21 Dec 2023 15:13

Tgt Ion: 101 Resp: 37182  
 Ion Ratio Lower Upper  
 101 100  
 103 55.6 51.9 77.9

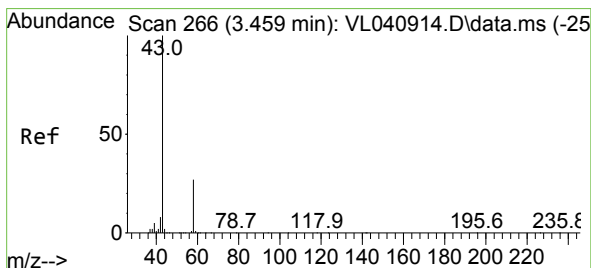
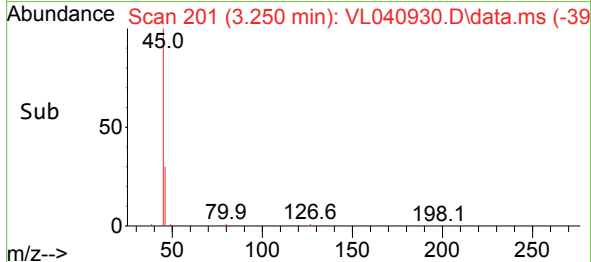
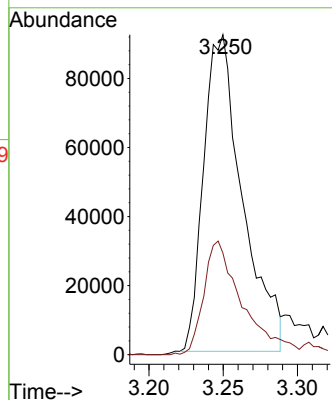
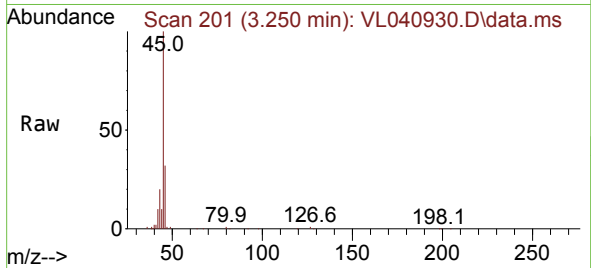




#13  
Ethanol  
Concen: 12.184 ppbv  
RT: 3.250 min Scan# 201  
Delta R.T. 0.019 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

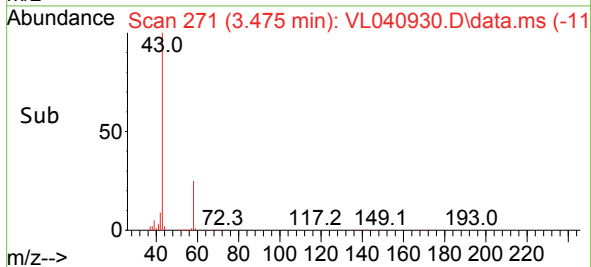
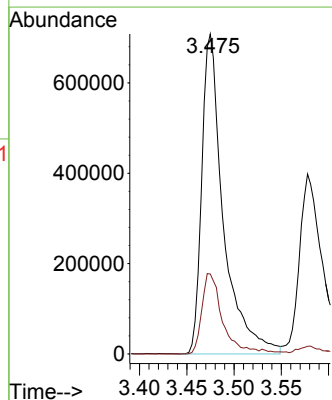
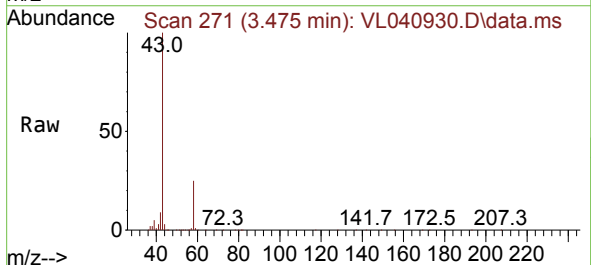
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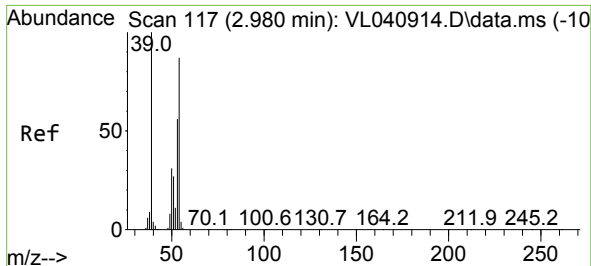
Tgt Ion: 45 Resp: 166980  
Ion Ratio Lower Upper  
45 100  
46 37.6 15.0 60.0



#15  
Acetone  
Concen: 8.577 ppbv  
RT: 3.475 min Scan# 271  
Delta R.T. 0.016 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

Tgt Ion: 43 Resp: 1125501  
Ion Ratio Lower Upper  
43 100  
58 24.5 20.6 30.8

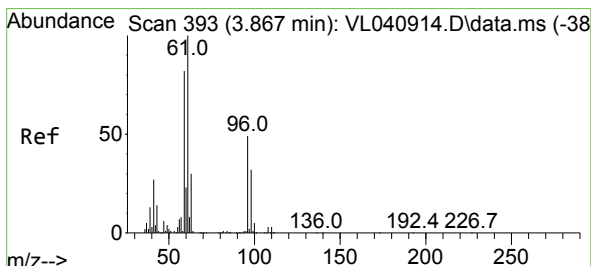
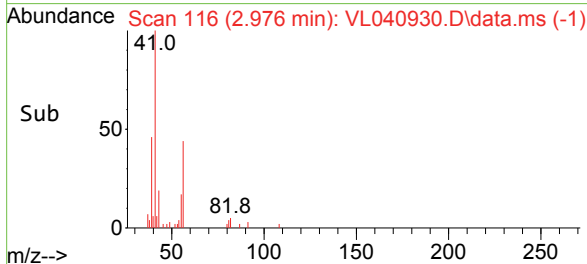
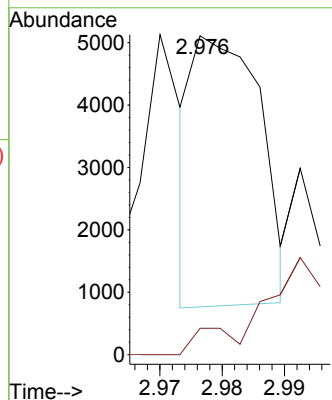
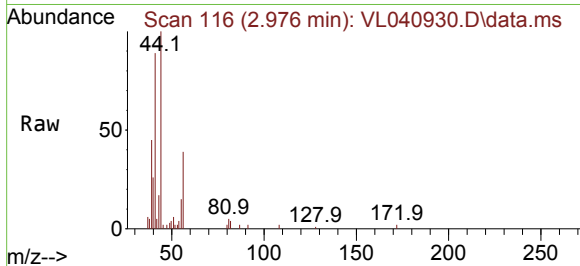




#16  
1,3-Butadiene  
Concen: 0.058 ppbv  
RT: 2.976 min Scan# 117  
Delta R.T. -0.003 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

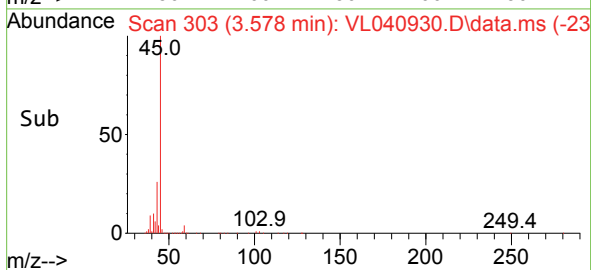
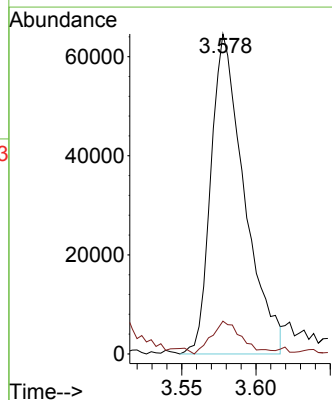
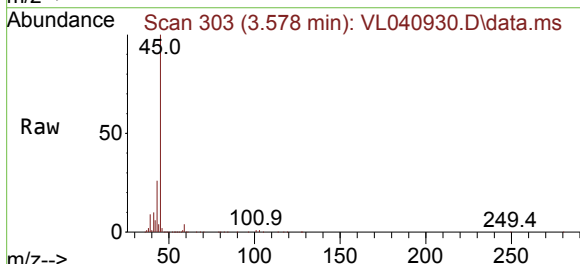
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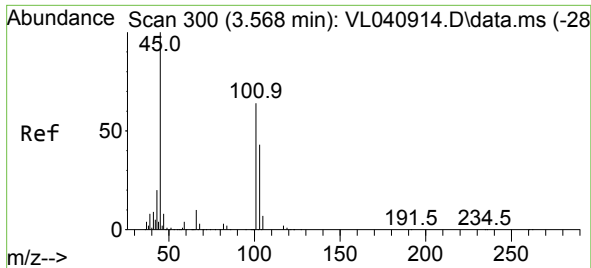
Tgt Ion: 39 Resp: 3253  
Ion Ratio Lower Upper  
39 100  
54 77.3 63.8 95.6



#17  
tert-Butyl alcohol  
Concen: 1.040 ppbv  
RT: 3.578 min Scan# 303  
Delta R.T. -0.289 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

Tgt Ion: 59 Resp: 100981  
Ion Ratio Lower Upper  
59 100  
57 9.7 8.3 12.5

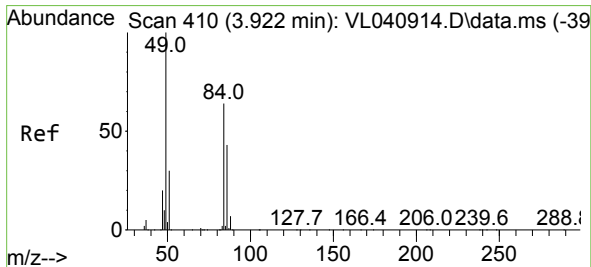
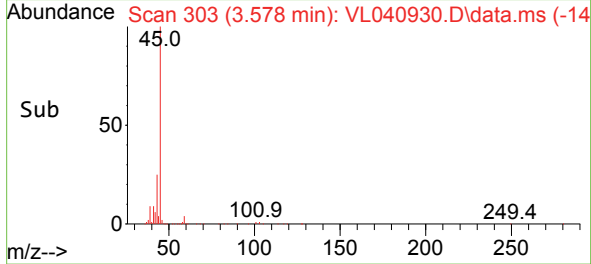
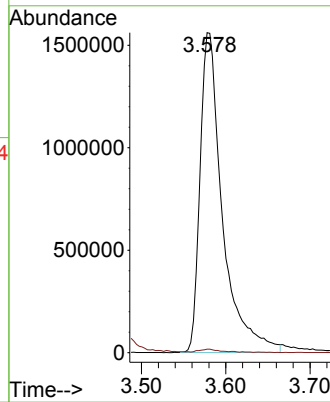
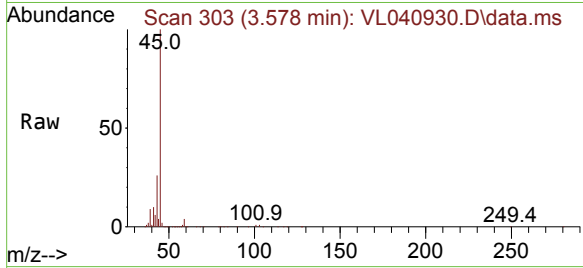




#19  
Isopropyl Alcohol  
Concen: 42.163 ppbv  
RT: 3.578 min Scan# 300  
Delta R.T. 0.010 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

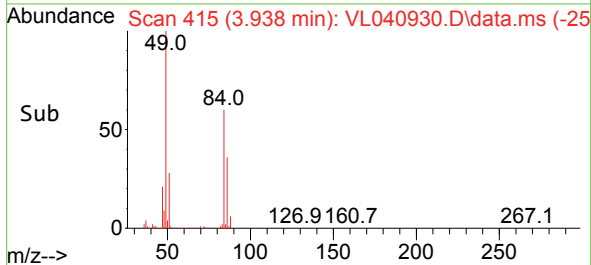
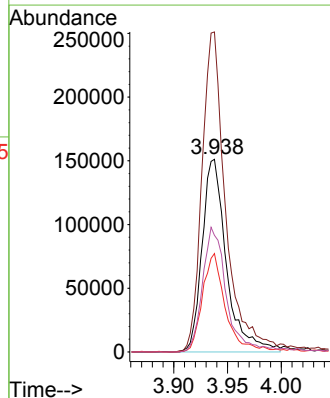
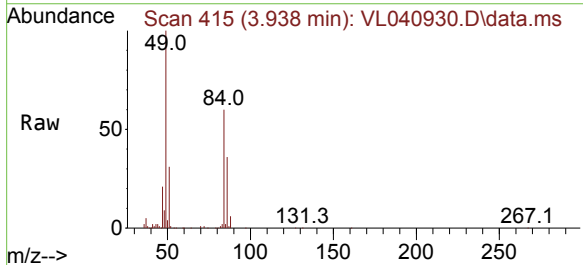
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MSVOA\_L  
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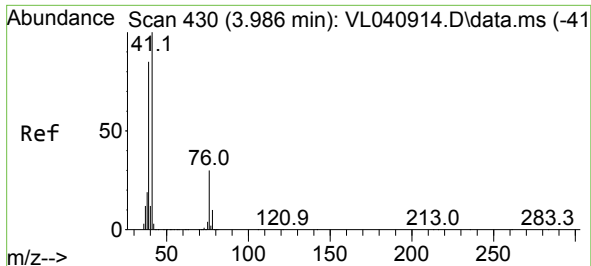
Tgt Ion: 45 Resp: 2886844  
Ion Ratio Lower Upper  
45 100  
58 1.3 1.5 2.3#



#20  
Methylene Chloride  
Concen: 5.101 ppbv  
RT: 3.938 min Scan# 415  
Delta R.T. 0.016 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

Tgt Ion: 84 Resp: 238605  
Ion Ratio Lower Upper  
84 100  
49 165.4 124.6 187.0  
51 50.8 37.2 55.8  
86 60.6 53.4 80.0

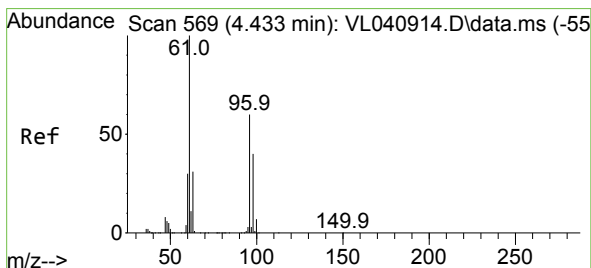
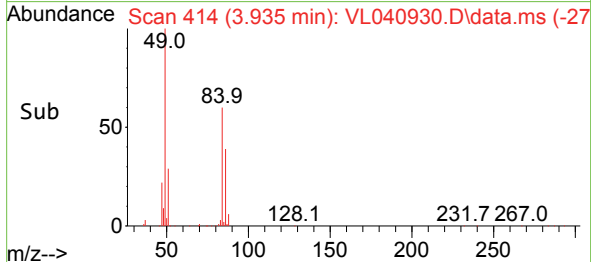
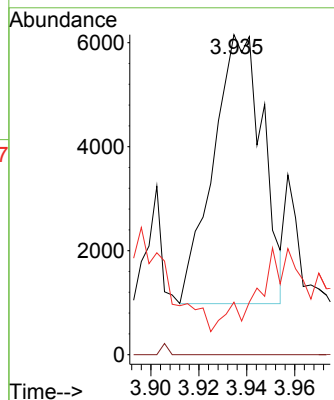
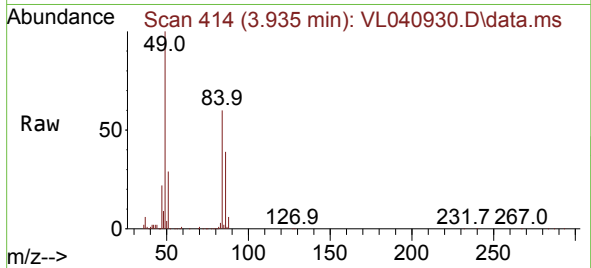




#21  
 Allyl Chloride  
 Concen: 0.095 ppbv  
 RT: 3.935 min Scan# 41  
 Delta R.T. -0.051 min  
 Lab File: VL040930.D  
 Acq: 21 Dec 2023 15:13

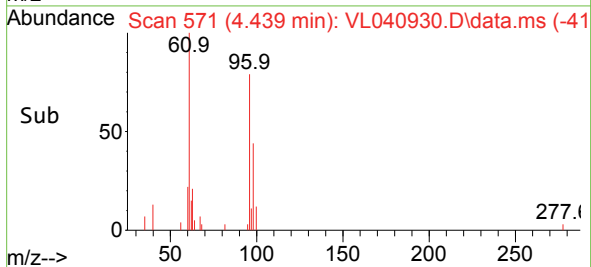
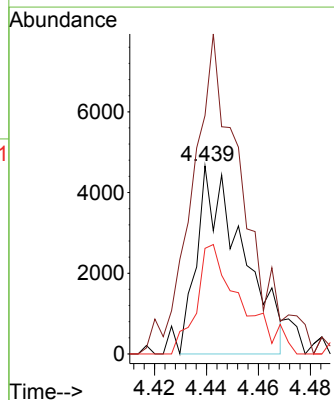
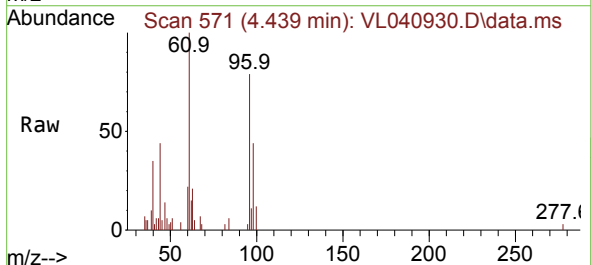
Instrument :  
 MSVOA\_L  
 ClientSampleId :

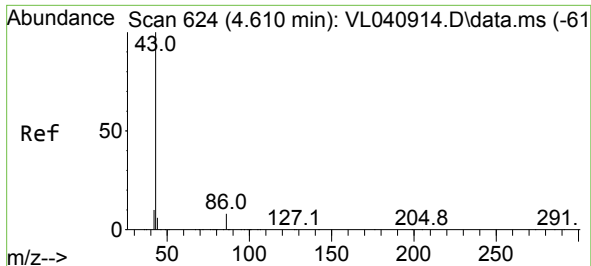
Tgt Ion: 41 Resp: 7406  
 Ion Ratio Lower Upper  
 41 100  
 76 1.9 23.9 35.9#  
 39 0.0 66.5 99.7#



#22  
 trans-1,2-Dichloroethene  
 Concen: 0.095 ppbv  
 RT: 4.439 min Scan# 571  
 Delta R.T. 0.007 min  
 Lab File: VL040930.D  
 Acq: 21 Dec 2023 15:13

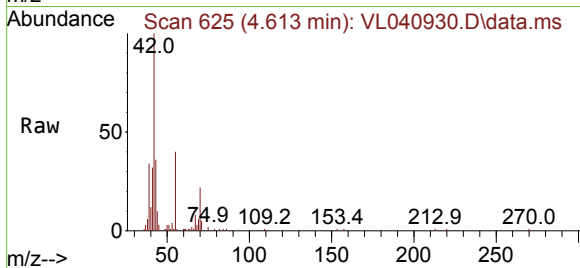
Tgt Ion: 96 Resp: 5687  
 Ion Ratio Lower Upper  
 96 100  
 61 109.6 133.0 199.6#  
 98 44.2 53.7 80.5#



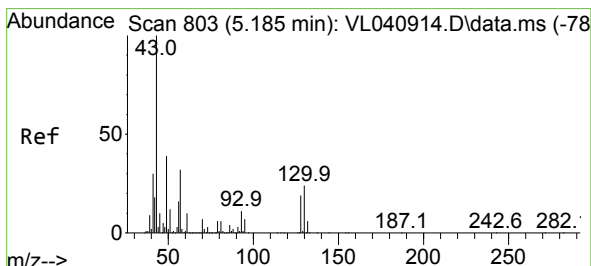
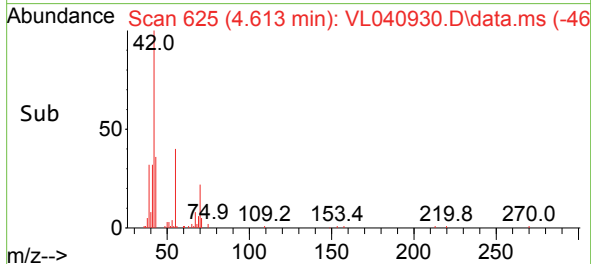
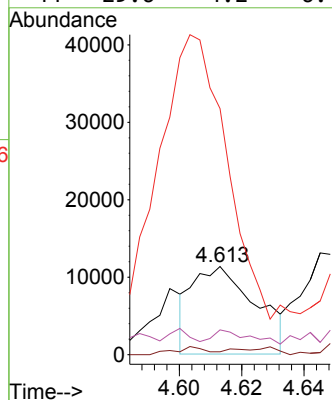


#23  
 Vinyl Acetate  
 Concen: 0.110 ppbv  
 RT: 4.613 min Scan# 61  
 Delta R.T. 0.003 min  
 Lab File: VL040930.D  
 Acq: 21 Dec 2023 15:13

Instrument :  
 MSVOA\_L  
 ClientSampleId :

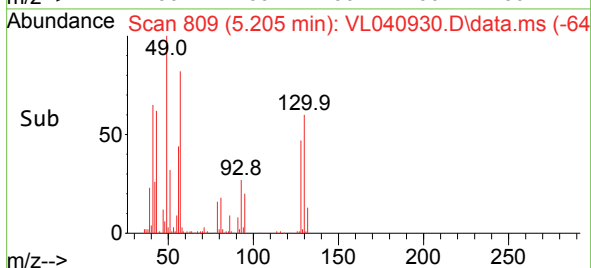
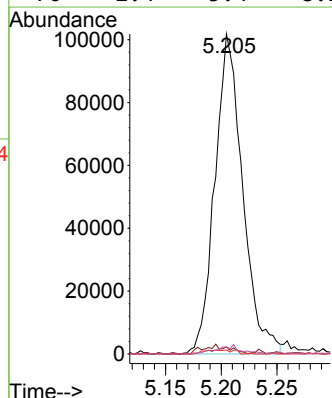
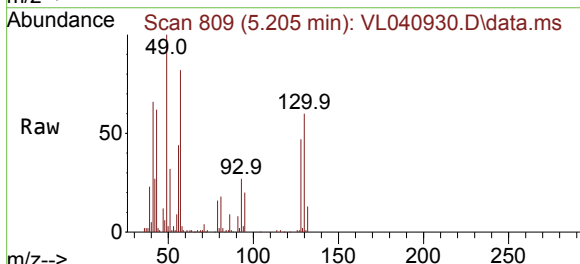


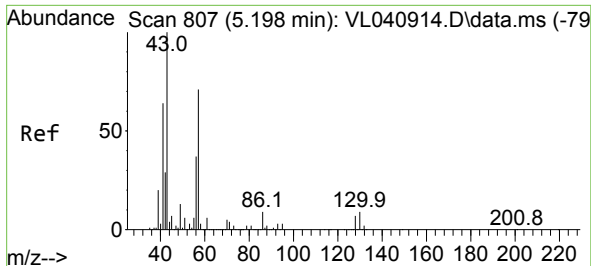
|             |             |
|-------------|-------------|
| Tgt Ion: 43 | Resp: 15909 |
| Ion Ratio   | Lower Upper |
| 43 100      |             |
| 86 0.0      | 5.5 8.3#    |
| 42 411.5    | 8.4 12.6#   |
| 44 29.6     | 4.2 6.4#    |



#25  
 Ethyl Acetate  
 Concen: 0.775 ppbv  
 RT: 5.205 min Scan# 809  
 Delta R.T. 0.019 min  
 Lab File: VL040930.D  
 Acq: 21 Dec 2023 15:13

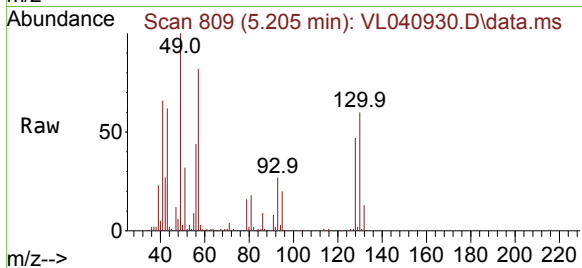
|     |         |       |        |
|-----|---------|-------|--------|
| Tgt | Ion: 43 | Resp: | 176302 |
| Ion | Ratio   | Lower | Upper  |
| 43  | 100     |       |        |
| 45  | 3.0     | 8.2   | 12.2#  |
| 61  | 1.4     | 7.6   | 11.4#  |
| 70  | 2.4     | 5.4   | 8.2#   |



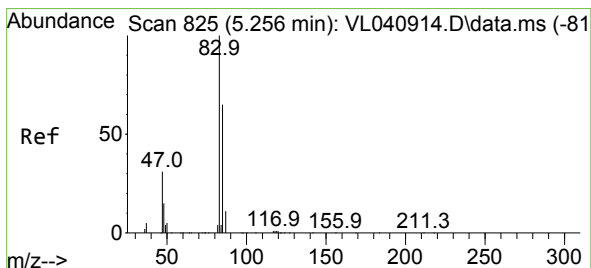
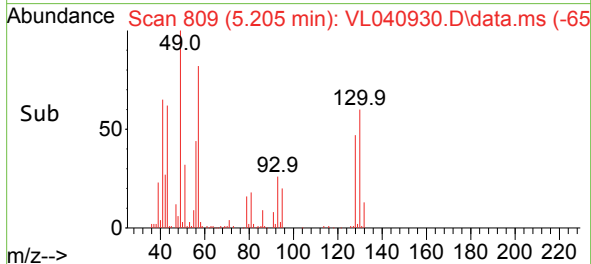
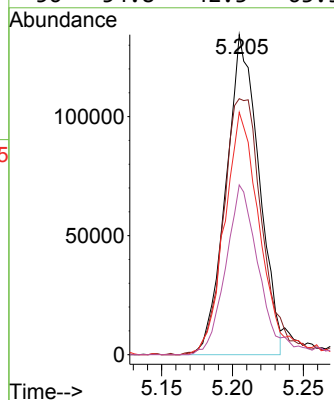


#26  
Hexane  
Concen: 2.167 ppbv  
RT: 5.205 min Scan# 807  
Delta R.T. 0.007 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

Instrument :  
MSVOA\_L  
ClientSampleId :

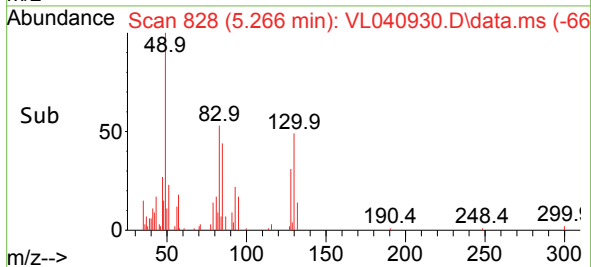
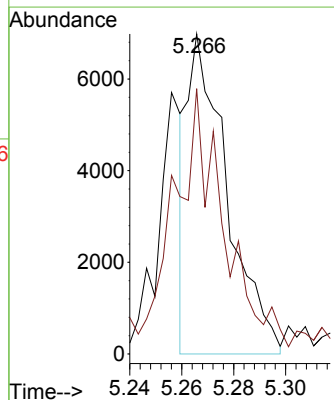
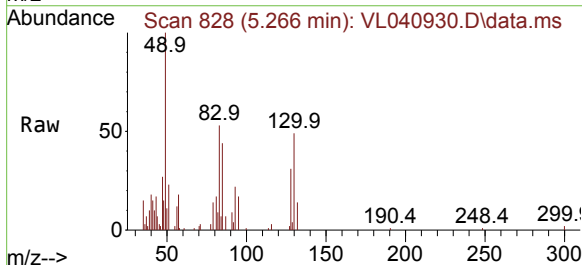


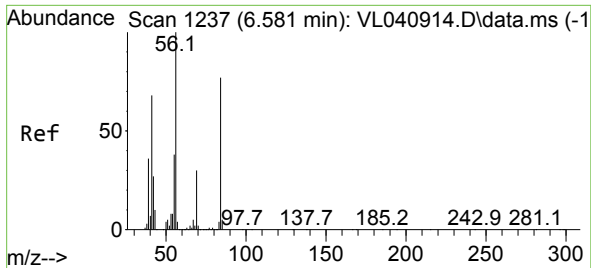
Tgt Ion: 57 Resp: 218397  
Ion Ratio Lower Upper  
57 100  
41 95.1 75.2 112.8  
43 81.9 188.0 282.0#  
56 54.8 42.3 63.5



#29  
Chloroform  
Concen: 0.043 ppbv  
RT: 5.266 min Scan# 828  
Delta R.T. 0.010 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

Tgt Ion: 83 Resp: 7385  
Ion Ratio Lower Upper  
83 100  
85 77.0 52.3 78.5

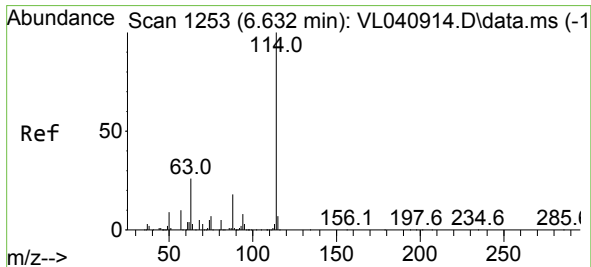
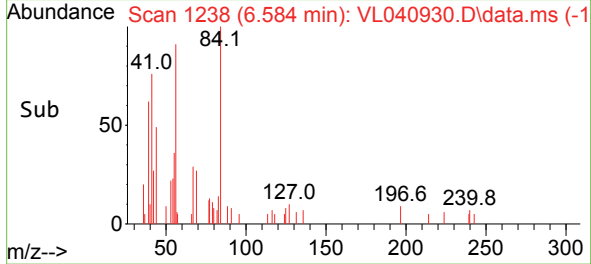
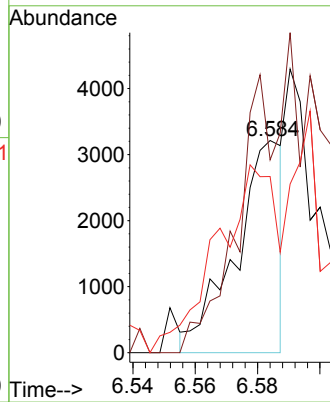
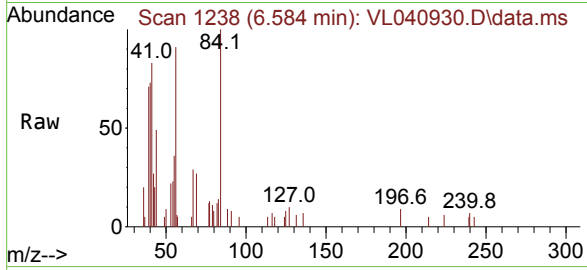




#30  
Cyclohexane  
Concen: 0.040 ppbv  
RT: 6.584 min Scan# 11  
Delta R.T. 0.003 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

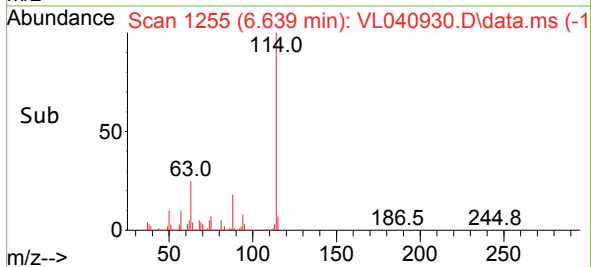
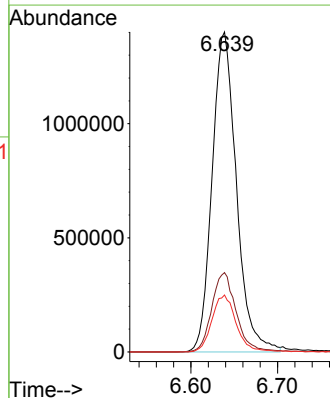
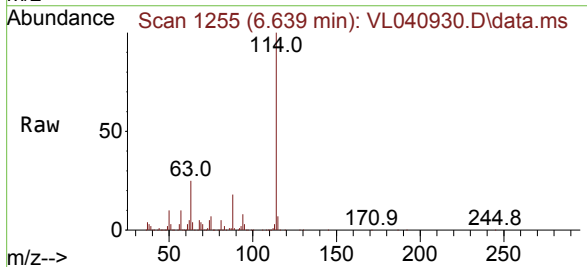
Instrument :  
MSVOA\_L  
ClientSampleId :

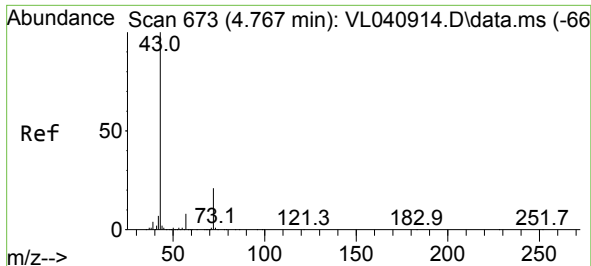
Tgt Ion: 84 Resp: 3358  
Ion Ratio Lower Upper  
84 100  
56 0.0 111.4 167.2#  
41 0.0 70.0 105.0#



#33  
1,4-Difluorobenzene  
Concen: 10.000 ppbv  
RT: 6.639 min Scan# 1255  
Delta R.T. 0.006 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

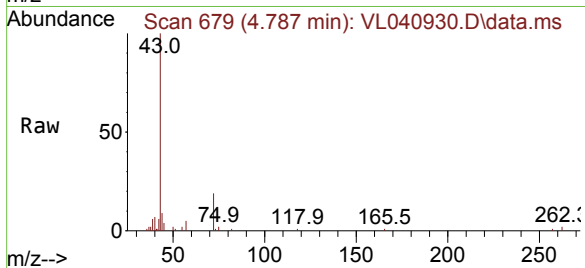
Tgt Ion: 114 Resp: 2732928  
Ion Ratio Lower Upper  
114 100  
63 25.2 21.0 31.6  
88 17.9 14.3 21.5



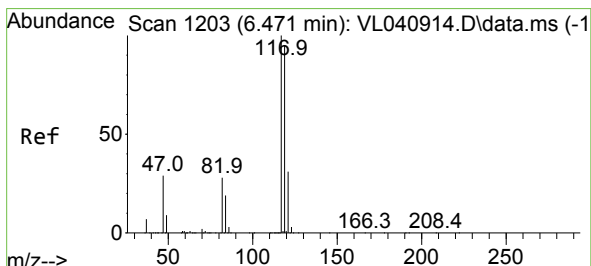
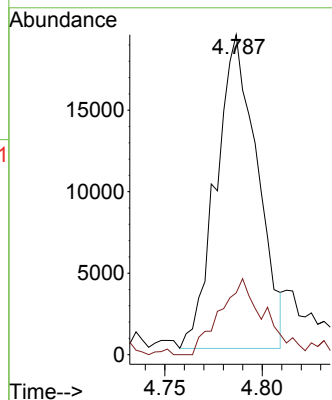
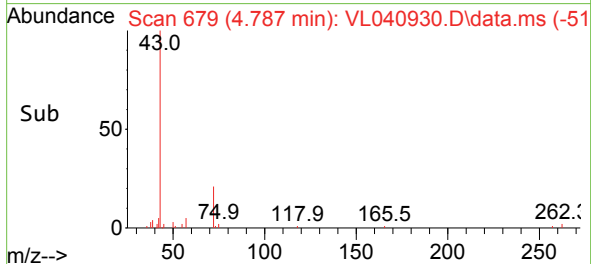


#34  
2-Butanone  
Concen: 0.196 ppbv  
RT: 4.787 min Scan# 61  
Delta R.T. 0.019 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

Instrument :  
MSVOA\_L  
ClientSampleId :

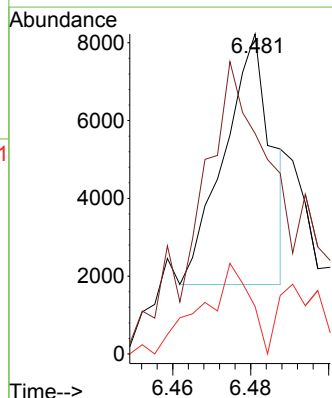
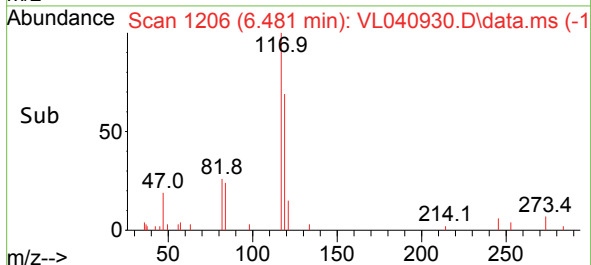
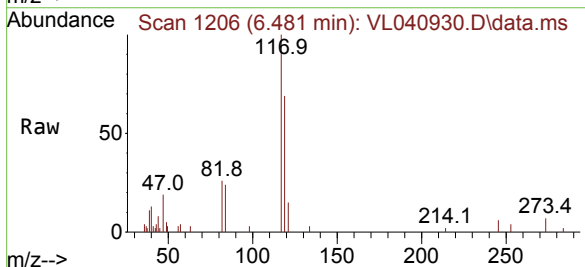


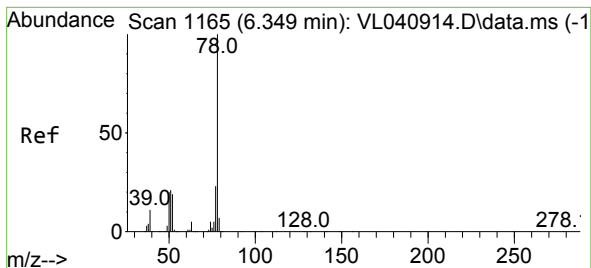
Tgt Ion: 43 Resp: 28304  
Ion Ratio Lower Upper  
43 100  
72 28.5 17.2 25.8#



#35  
Carbon Tetrachloride  
Concen: 0.032 ppbv  
RT: 6.481 min Scan# 1206  
Delta R.T. 0.010 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

Tgt Ion: 117 Resp: 5442  
Ion Ratio Lower Upper  
117 100  
119 67.2 76.3 114.5#  
121 4.5 24.9 37.3#





#36

Benzene

Concen: 0.195 ppbv

RT: 6.359 min Scan# 1165

Delta R.T. 0.010 min

Lab File: VL040930.D

Acq: 21 Dec 2023 15:13

Instrument :

MSVOA\_L

ClientSampleId :

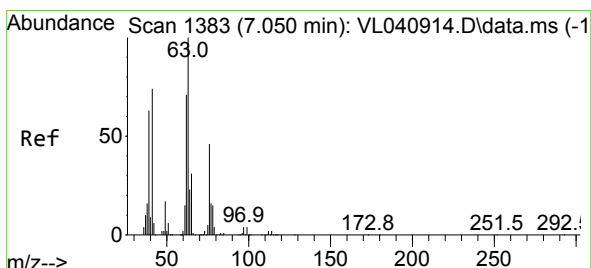
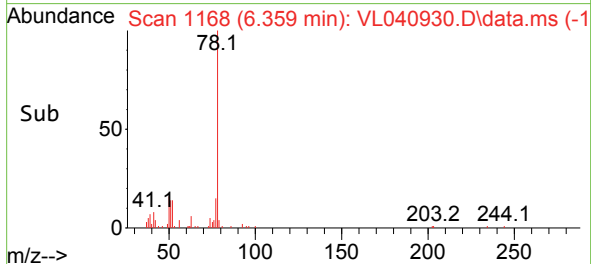
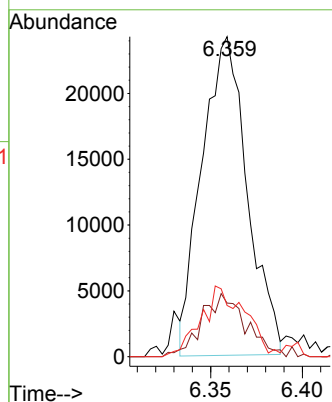
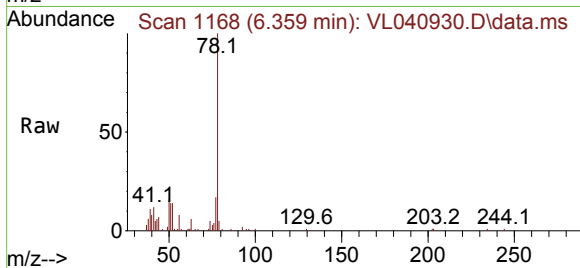
Tgt Ion: 78 Resp: 41693

Ion Ratio Lower Upper

78 100

77 15.3 18.4 27.6#

50 15.5 16.0 24.0#



#39

1,2-Dichloropropane

Concen: 8.111 ppbv

RT: 6.639 min Scan# 1255

Delta R.T. -0.411 min

Lab File: VL040930.D

Acq: 21 Dec 2023 15:13

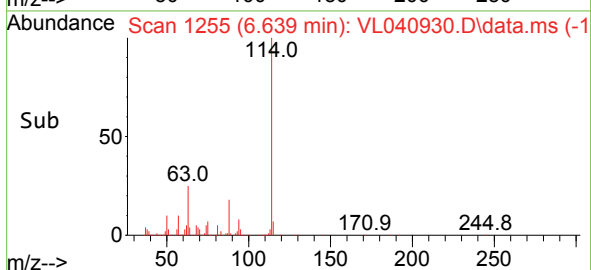
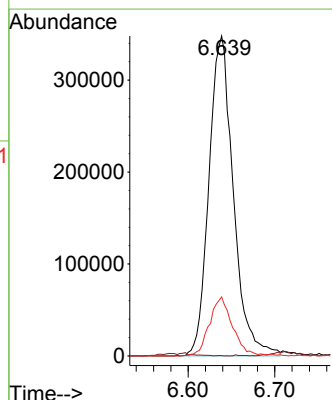
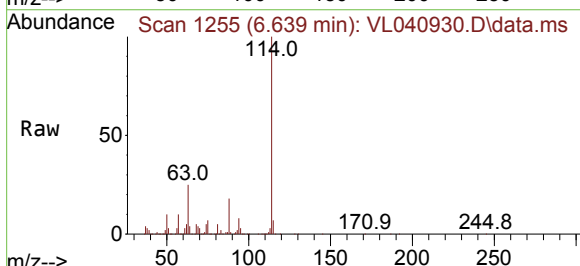
Tgt Ion: 63 Resp: 680988

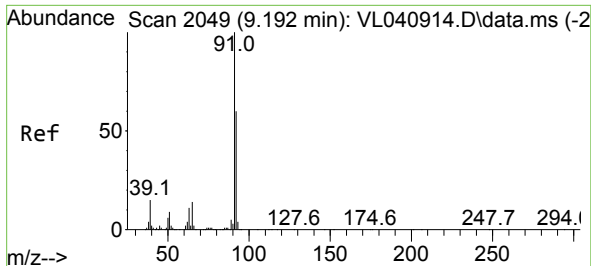
Ion Ratio Lower Upper

63 100

41 0.0 59.0 88.6#

62 18.4 56.6 85.0#

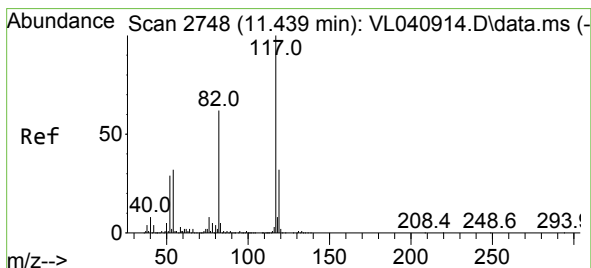
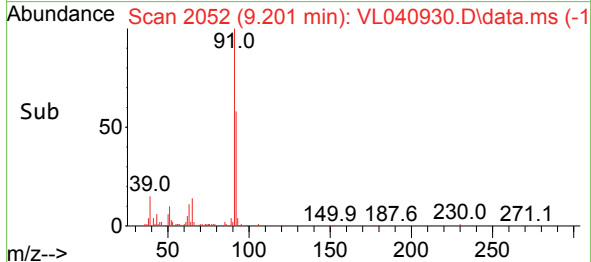
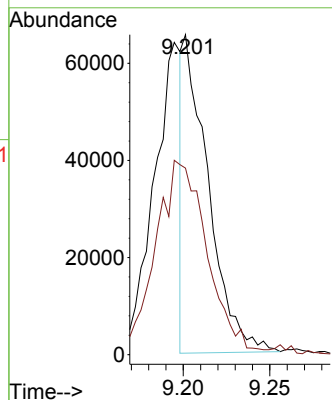
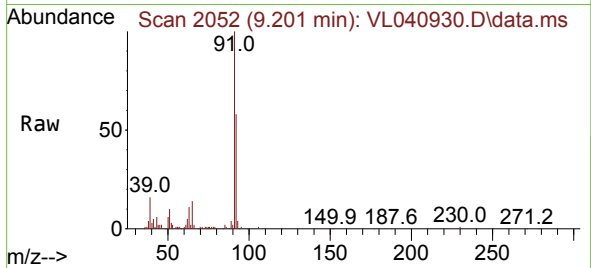




#53  
Toluene  
Concen: 0.278 ppbv  
RT: 9.201 min Scan# 2049  
Delta R.T. 0.010 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

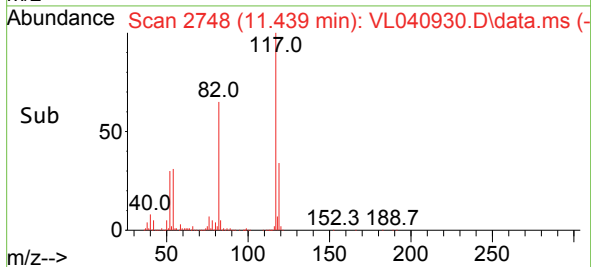
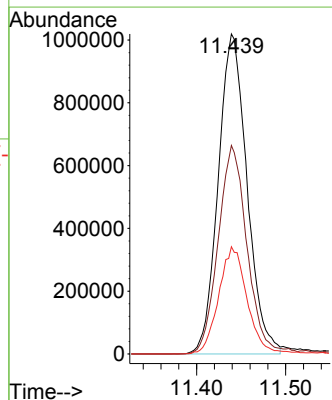
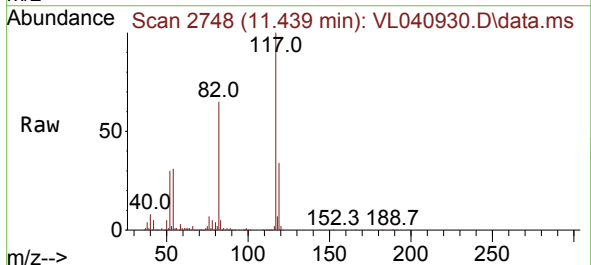
Instrument :  
MSVOA\_L  
ClientSampleId :

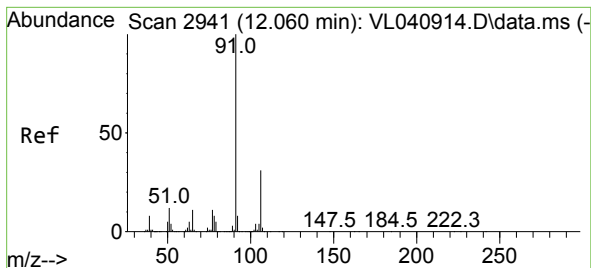
Tgt Ion: 91 Resp: 65877  
Ion Ratio Lower Upper  
91 100  
92 0.0 49.2 73.8#



#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 11.439 min Scan# 2748  
Delta R.T. 0.000 min  
Lab File: VL040930.D  
Acq: 21 Dec 2023 15:13

Tgt Ion: 117 Resp: 2287832  
Ion Ratio Lower Upper  
117 100  
82 65.9 49.6 74.4  
119 33.4 23.4 35.0





#58

Ethyl Benzene

Concen: 0.107 ppbv

RT: 12.317 min Scan# 3021

Delta R.T. 0.257 min

Lab File: VL040930.D

Acq: 21 Dec 2023 15:13

Instrument :

MSVOA\_L

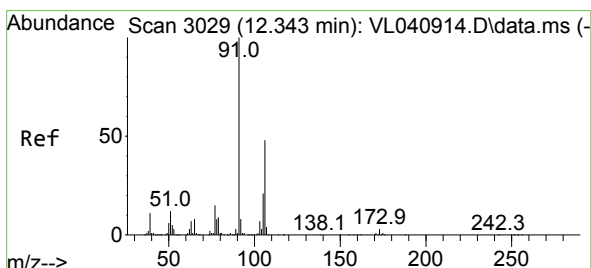
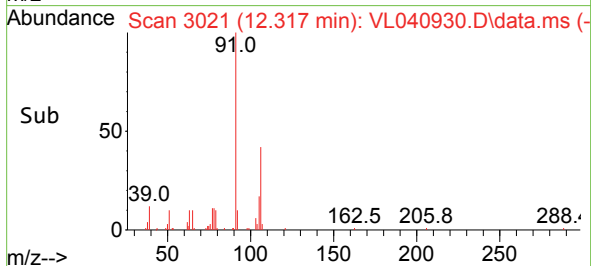
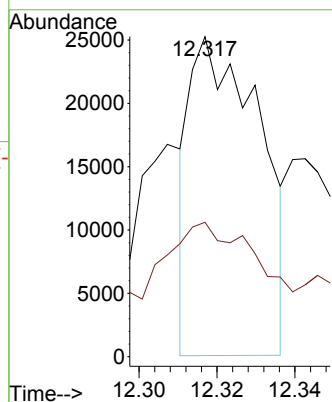
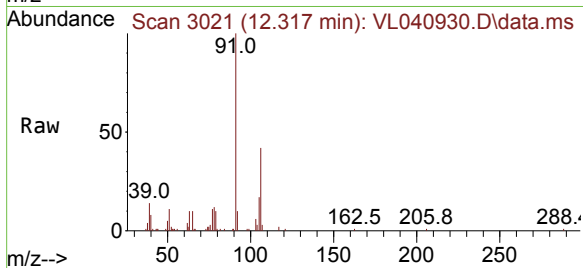
ClientSampleId :

Tgt Ion: 91 Resp: 31307

Ion Ratio Lower Upper

91 100

106 36.6 24.9 37.3



#59

m/p-Xylene

Concen: 0.066 ppbv

RT: 12.343 min Scan# 3029

Delta R.T. 0.000 min

Lab File: VL040930.D

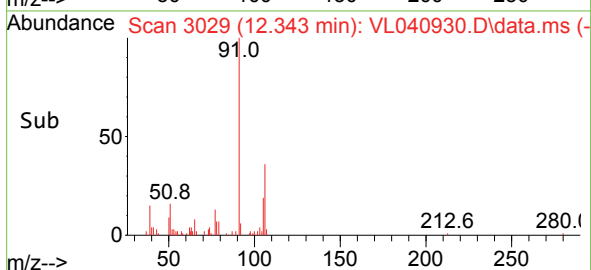
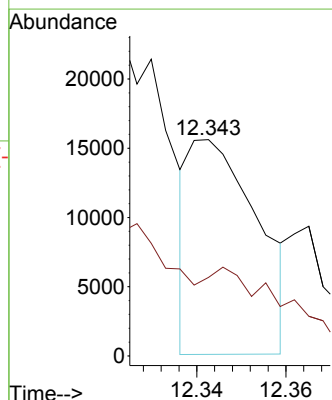
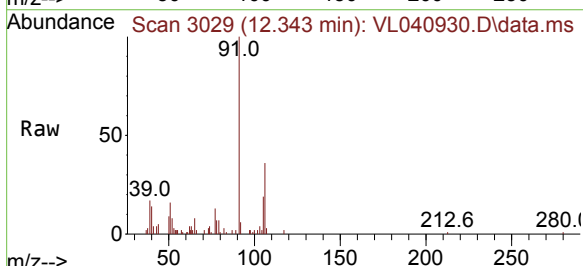
Acq: 21 Dec 2023 15:13

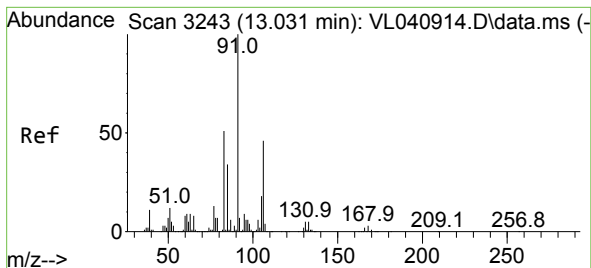
Tgt Ion: 91 Resp: 16422

Ion Ratio Lower Upper

91 100

106 0.0 0.0 0.0





#60

o-Xylene

Concen: 0.074 ppbv

RT: 13.031 min Scan# 31

Delta R.T. 0.000 min

Lab File: VL040930.D

Acq: 21 Dec 2023 15:13

Instrument :

MSVOA\_L

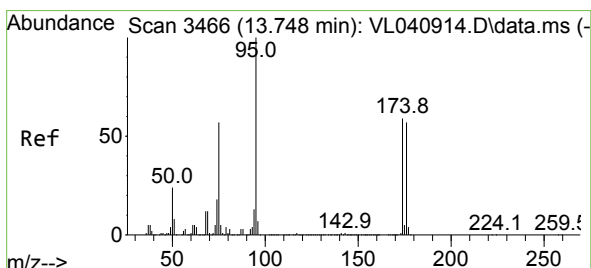
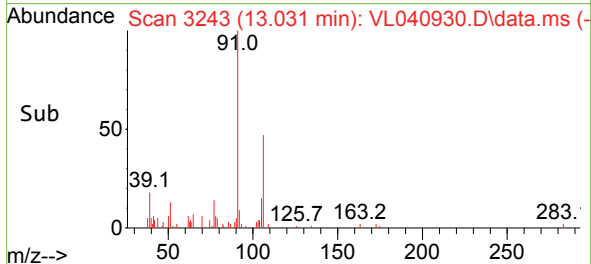
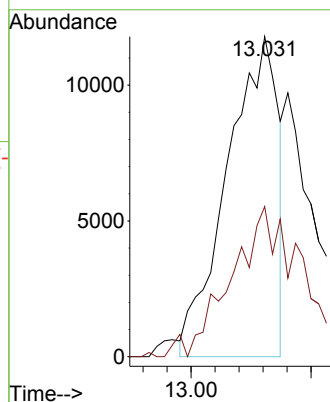
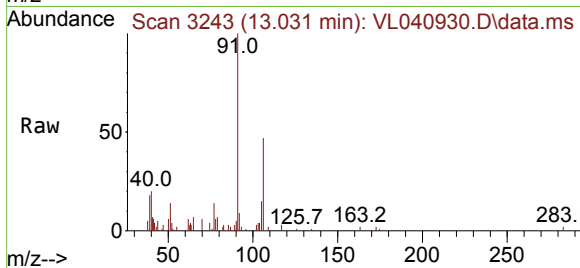
ClientSampleId :

Tgt Ion: 91 Resp: 17356

Ion Ratio Lower Upper

91 100

106 67.6 22.6 67.7



#68

1-Bromo-4-Fluorobenzene

Concen: 9.981 ppbv

RT: 13.748 min Scan# 3466

Delta R.T. 0.000 min

Lab File: VL040930.D

Acq: 21 Dec 2023 15:13

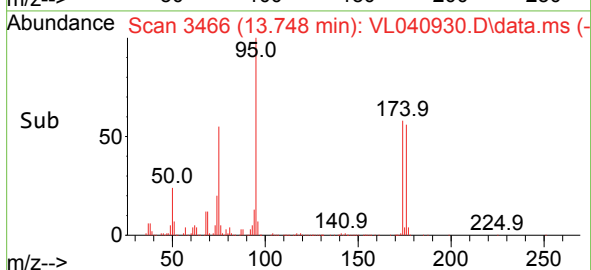
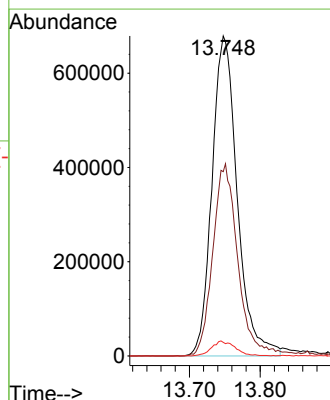
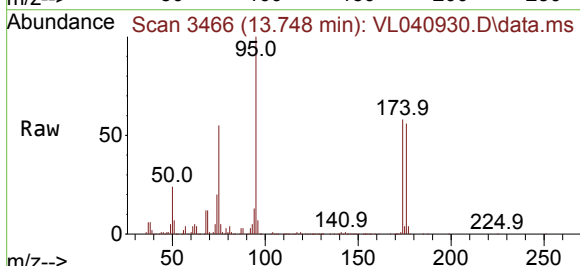
Tgt Ion: 95 Resp: 1682061

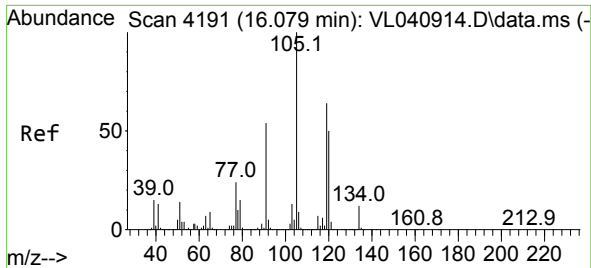
Ion Ratio Lower Upper

95 100

174 61.1 48.0 72.0

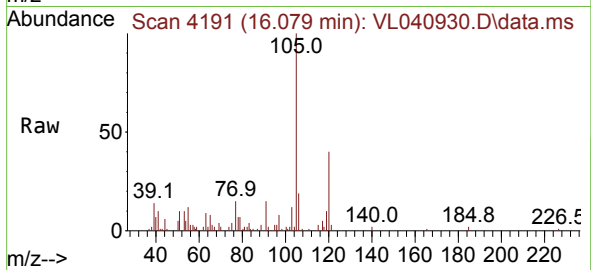
175 4.4 3.7 5.5





#74  
 1,2,4-Trimethylbenzene  
 Concen: 0.039 ppbv  
 RT: 16.079 min Scan# 4191  
 Delta R.T. 0.000 min  
 Lab File: VL040930.D  
 Acq: 21 Dec 2023 15:13

Instrument :  
 MSVOA\_L  
 ClientSampleId :



Tgt Ion:105 Resp: 9647

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 105 | 100   |       |       |
| 120 | 17.5  | 40.2  | 60.4# |
| 91  | 0.0   | 43.0  | 64.6# |
| 77  | 4.2   | 18.9  | 28.3# |

