

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL060221\  
 Data File : VL037108.D  
 Acq On : 2 Jun 2021 19:13  
 Operator : SY/AP  
 Sample : M2548-11  
 Misc : 400mL/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Jun 03 03:22:16 2021  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL051821AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Tue May 18 12:00:15 2021  
 QLast Update : Tue May 18 12:00:15 2021  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.65  | 49   | 1326872  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.16  | 114  | 3950603  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.07 | 117  | 3559391  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.40  | 95    | 2588631  | 9.68     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 96.80% |

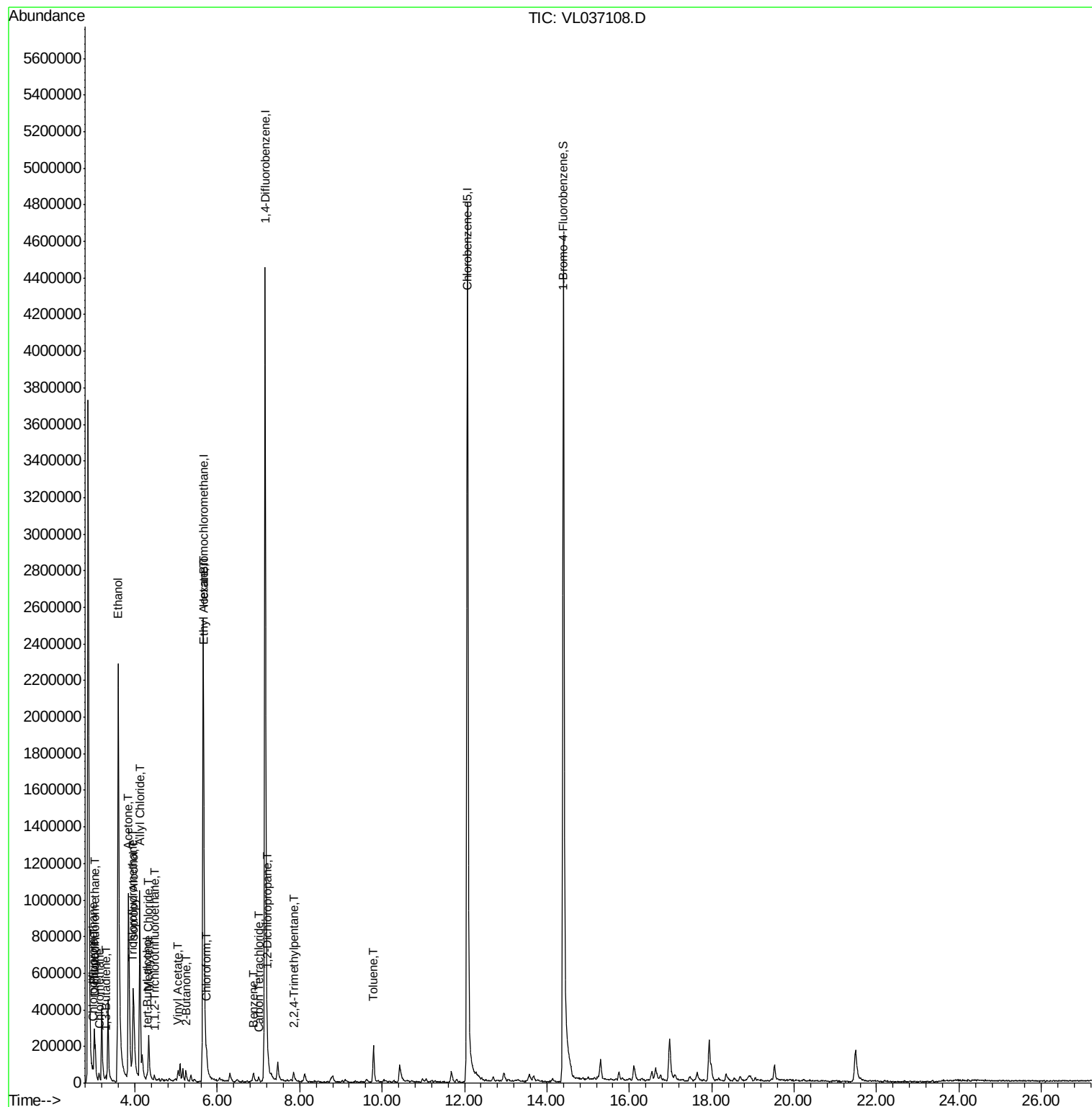
| Target Compounds               | R.T. | QIon | Response | Conc    | Units  | Ovalue |
|--------------------------------|------|------|----------|---------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.04 | 85   | 137267   | 0.610   | ppbv   | 98     |
| 3) Chlorodifluoromethane       | 2.98 | 51   | 101042   | 0.416   | ppbv # | 90     |
| 4) Chloromethane               | 3.13 | 50   | 18946    | 0.229   | ppbv   | 95     |
| 9) Propene                     | 3.01 | 41   | 72898    | 0.837   | ppbv # | 71     |
| 11) Trichlorofluoromethane     | 3.94 | 101  | 53472    | 0.257   | ppbv   | 89     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.47 | 101  | 5635     | 0.038   | ppbv # | 3      |
| 13) Ethanol                    | 3.59 | 45   | 3327220  | 286.486 | ppbv   | 94     |
| 15) Acetone                    | 3.84 | 43   | 1462093  | 10.758  | ppbv   | 94     |
| 16) 1,3-Butadiene              | 3.30 | 39   | 2642     | 0.031   | ppbv # | 10     |
| 17) tert-Butyl alcohol         | 4.29 | 59   | 8562     | 0.069   | ppbv # | 72     |
| 19) Isopropyl Alcohol          | 3.96 | 45   | 681405   | 9.327   | ppbv # | 38     |
| 20) Methylene Chloride         | 4.33 | 84   | 102193   | 1.403   | ppbv   | 96     |
| 21) Allyl Chloride             | 4.12 | 41   | 349548   | 3.409   | ppbv # | 50     |
| 23) Vinyl Acetate              | 5.05 | 43   | 7860     | 0.036   | ppbv # | 86     |
| 25) Ethyl Acetate              | 5.67 | 43   | 155448   | 0.476   | ppbv # | 85     |
| 26) Hexane                     | 5.67 | 57   | 199886   | 1.198   | ppbv # | 49     |
| 29) Chloroform                 | 5.74 | 83   | 52000    | 0.221   | ppbv   | 97     |
| 34) 2-Butanone                 | 5.24 | 43   | 62108    | 0.432   | ppbv # | 87     |
| 35) Carbon Tetrachloride       | 7.01 | 117  | 12754    | 0.049   | ppbv # | 75     |
| 36) Benzene                    | 6.88 | 78   | 20092    | 0.059   | ppbv # | 85     |
| 39) 1,2-Dichloropropane        | 7.21 | 63   | 12562    | 0.096   | ppbv # | 24     |
| 44) 2,2,4-Trimethylpentane     | 7.85 | 57   | 40795    | 0.070   | ppbv # | 55     |
| 53) Toluene                    | 9.79 | 91   | 150412   | 0.371   | ppbv   | 97     |

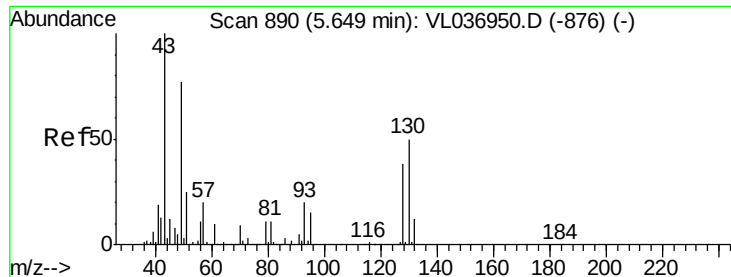
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL060221\  
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Instrument :  
MSVOA\_L  
ClientSampleId :

Quant Time: Jun 03 03:22:16 2021  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL051821AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Tue May 18 12:00:15 2021  
QLast Update : Tue May 18 12:00:15 2021  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 891

Delta R.T. 0.00 min

Lab File: VL037108.D

Acq: 2 Jun 2021 19:13

Instrument :

MSVOA\_L

ClientSampleId :

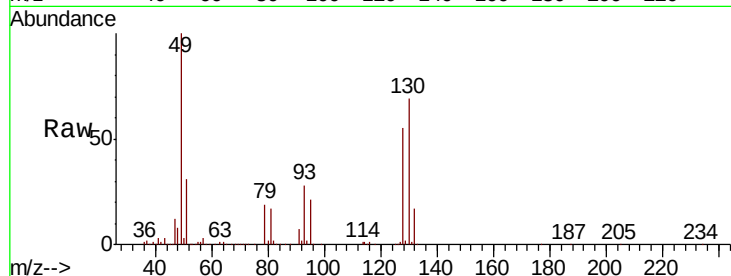
Tot Ion: 49 Resp: 1326872

Ion Ratio Lower Upper

49 100

128 57.7 26.9 80.7

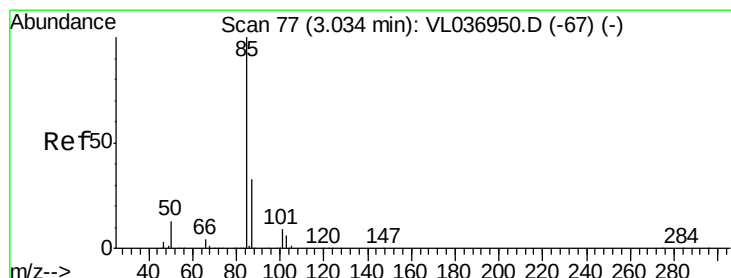
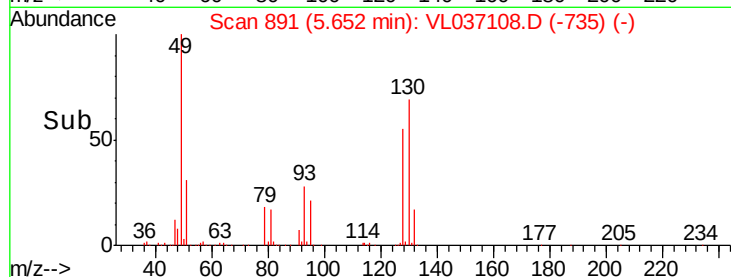
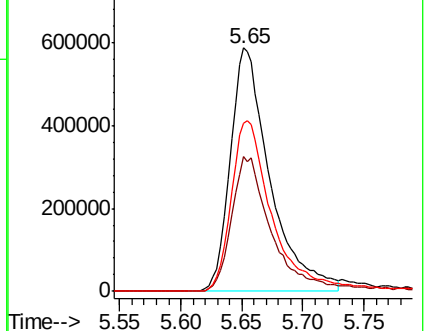
130 74.8 33.8 101.4



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.610 ppbv

RT: 3.04 min Scan# 79

Delta R.T. 0.01 min

Lab File: VL037108.D

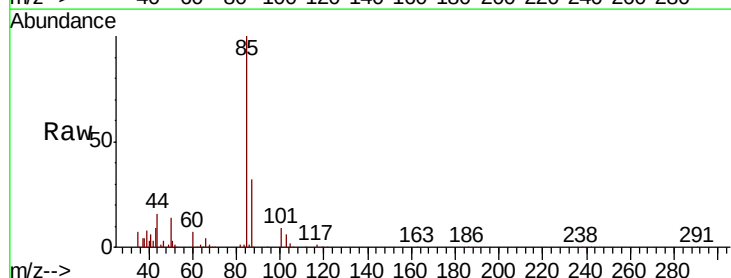
Acq: 2 Jun 2021 19:13

Tgt Ion: 85 Resp: 137267

Ion Ratio Lower Upper

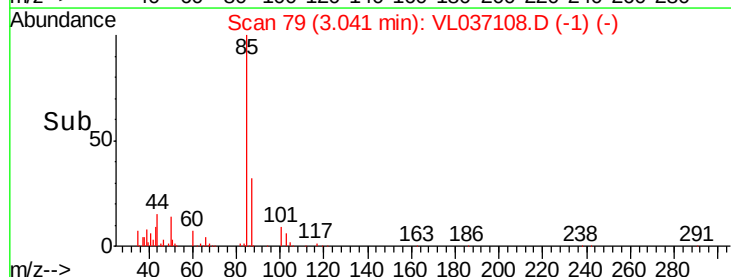
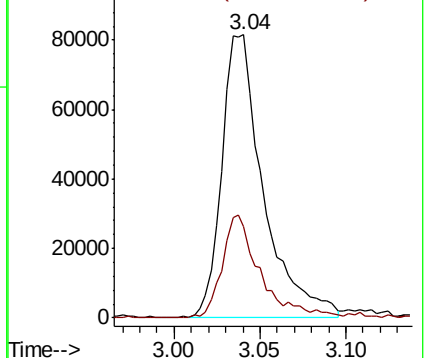
85 100

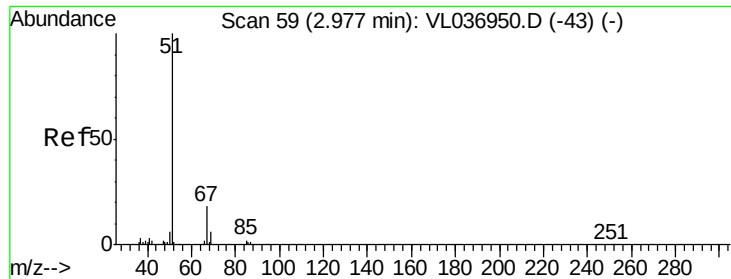
87 32.0 26.6 39.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

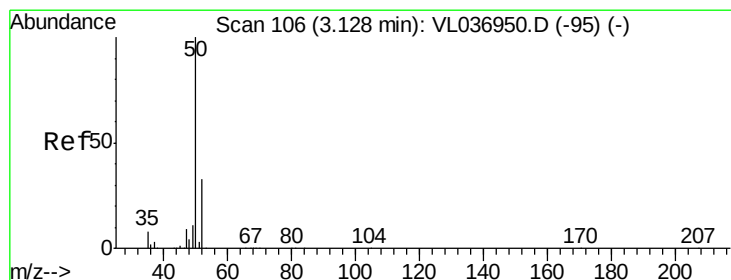
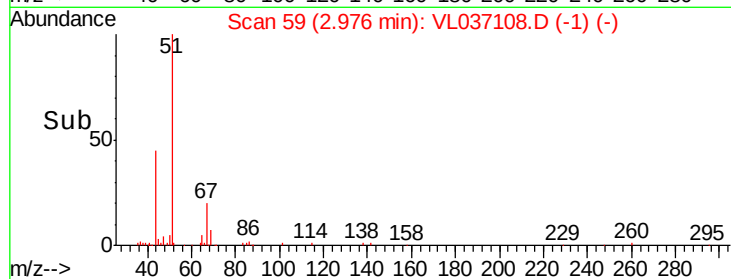
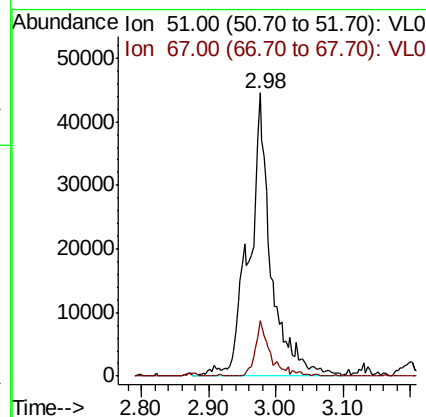
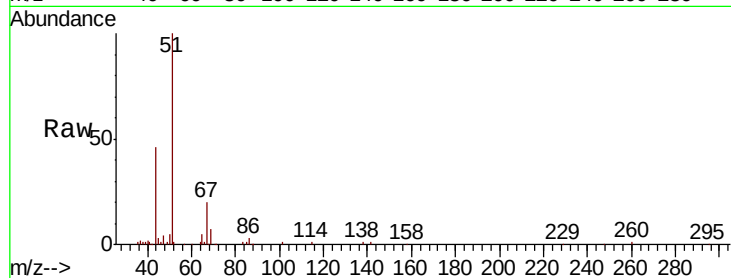




#3  
 Chlorodifluoromethane  
 Concen: 0.416 ppbv  
 RT: 2.98 min Scan# 59  
 Delta R.T. -0.00 min  
 Lab File: VL037108.D  
 Acq: 2 Jun 2021 19:13

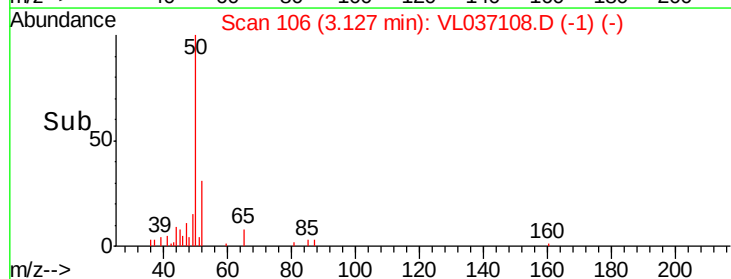
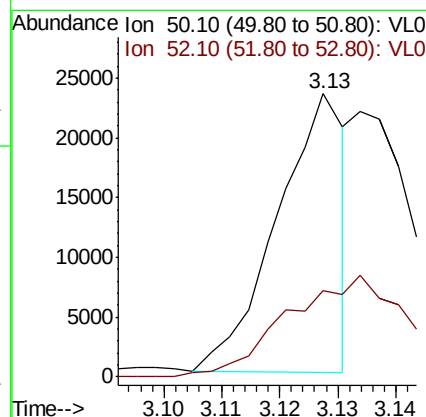
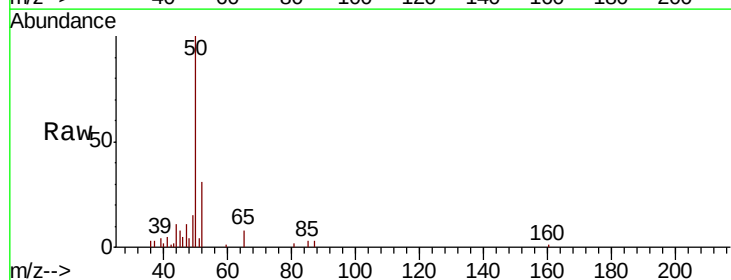
Instrument :  
 MSVOA\_L  
 ClientSampleId :

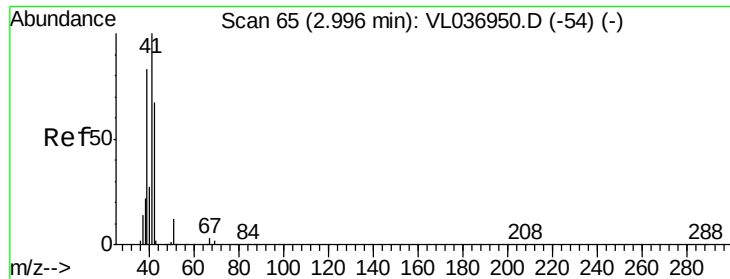
Tot Ion: 51 Resp: 101042  
 Ion Ratio Lower Upper  
 51 100  
 67 13.6 14.6 21.8#



#4  
 Chloromethane  
 Concen: 0.229 ppbv  
 RT: 3.13 min Scan# 106  
 Delta R.T. -0.00 min  
 Lab File: VL037108.D  
 Acq: 2 Jun 2021 19:13

Tgt Ion: 50 Resp: 18946  
 Ion Ratio Lower Upper  
 50 100  
 52 29.9 26.1 39.1

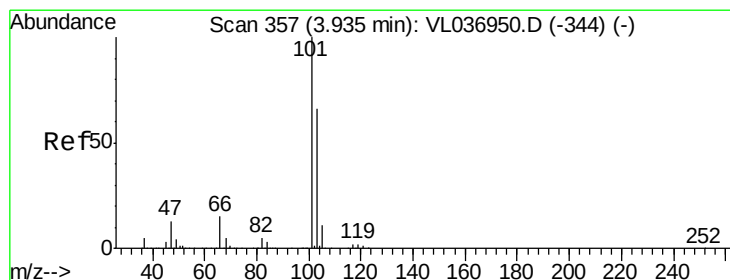
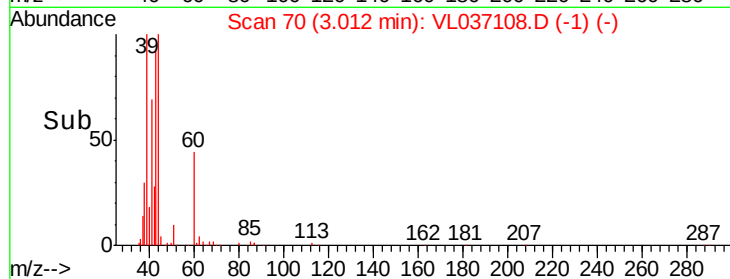
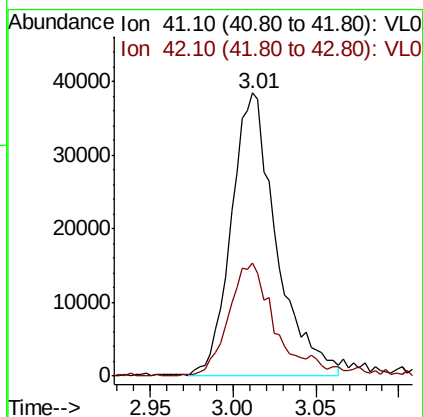
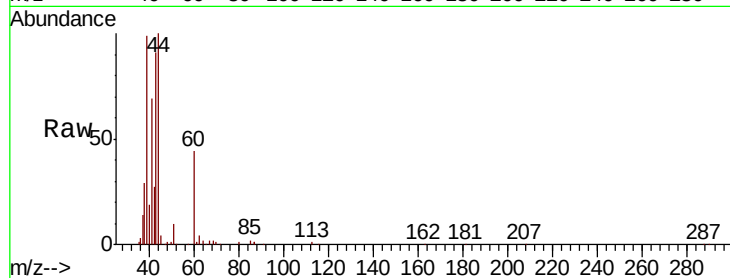




#9  
 Propene  
 Concen: 0.837 ppbv  
 RT: 3.01 min Scan# 70  
 Delta R.T. 0.02 min  
 Lab File: VL037108.D  
 Acq: 2 Jun 2021 19:13

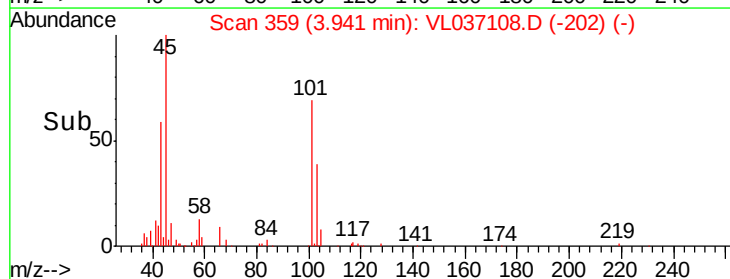
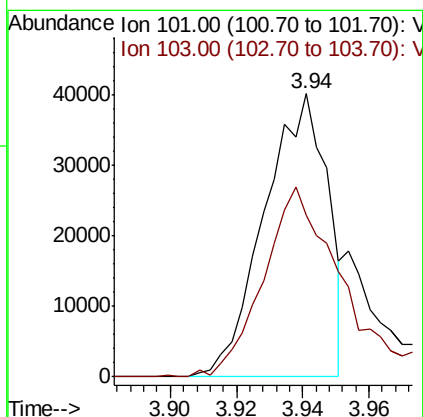
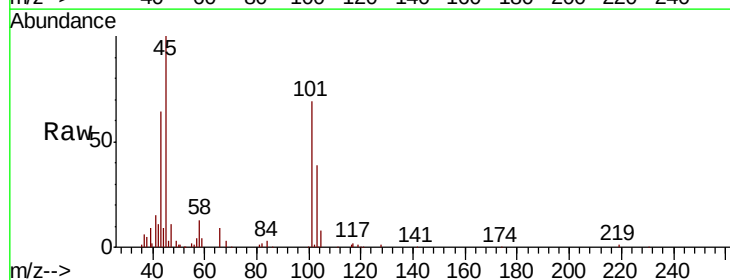
Instrument :  
 MSVOA\_L  
 ClientSampleId :

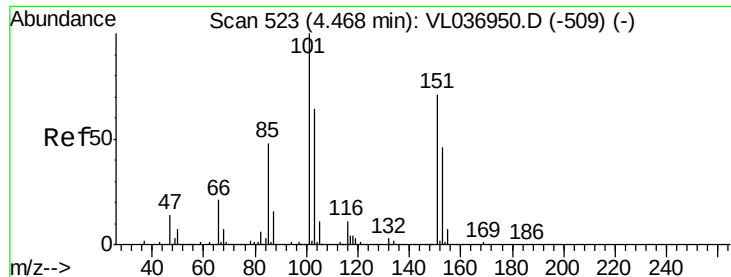
Tot Ion: 41 Resp: 72898  
 Ion Ratio Lower Upper  
 41 100  
 42 43.9 53.9 80.9#



#11  
 Trichlorofluoromethane  
 Concen: 0.257 ppbv  
 RT: 3.94 min Scan# 359  
 Delta R.T. 0.01 min  
 Lab File: VL037108.D  
 Acq: 2 Jun 2021 19:13

Tgt Ion: 101 Resp: 53472  
 Ion Ratio Lower Upper  
 101 100  
 103 57.2 52.6 79.0





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.038 ppbv

RT: 4.47 min Scan# 523

Delta R.T. -0.00 min

Lab File: VL037108.D

Acq: 2 Jun 2021 19:13

Instrument :

MSVOA\_L

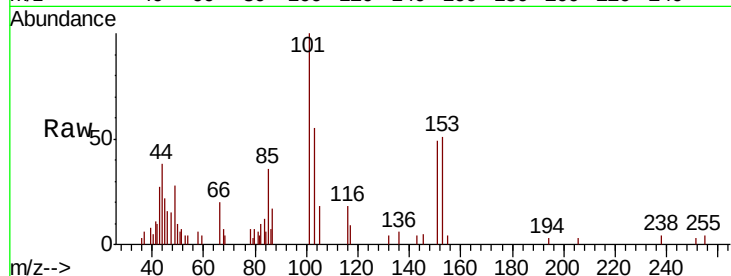
ClientSampleId :

Tot Ion:101 Resp: 5635

Ion Ratio Lower Upper

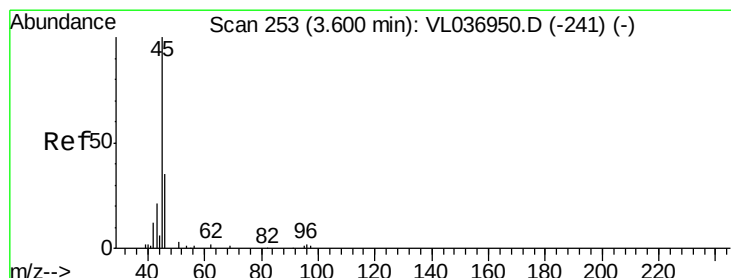
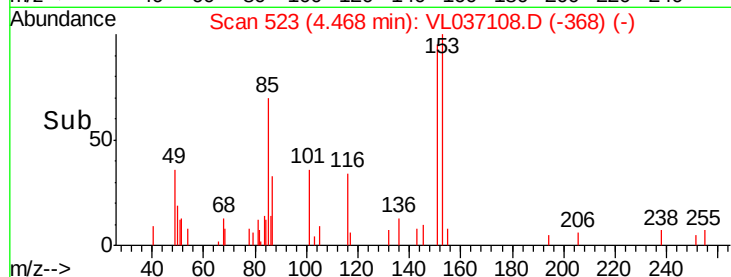
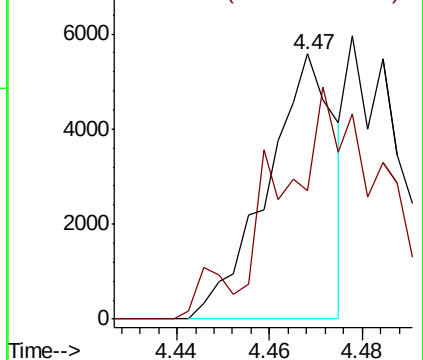
101 100

151 153.1 57.7 86.5#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 286.486 ppbv

RT: 3.59 min Scan# 250

Delta R.T. -0.01 min

Lab File: VL037108.D

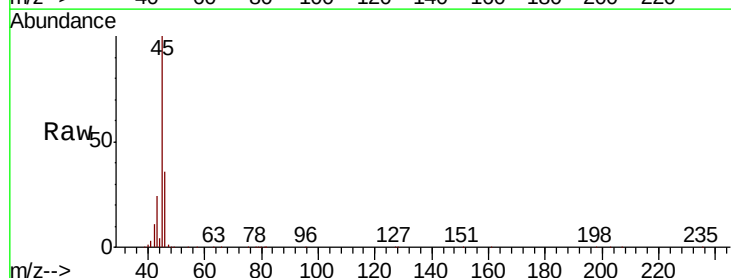
Acq: 2 Jun 2021 19:13

Tgt Ion: 45 Resp: 3327220

Ion Ratio Lower Upper

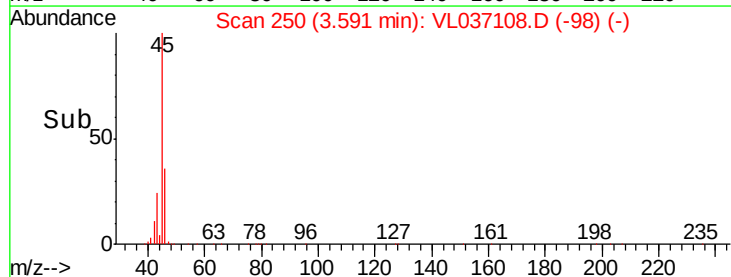
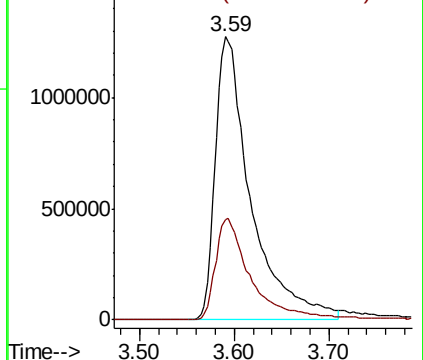
45 100

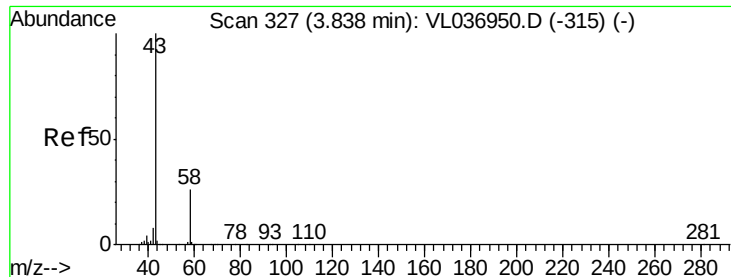
46 37.1 16.3 65.3



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 10.758 ppbv

RT: 3.84 min Scan# 327

Delta R.T. -0.00 min

Lab File: VL037108.D

Acq: 2 Jun 2021 19:13

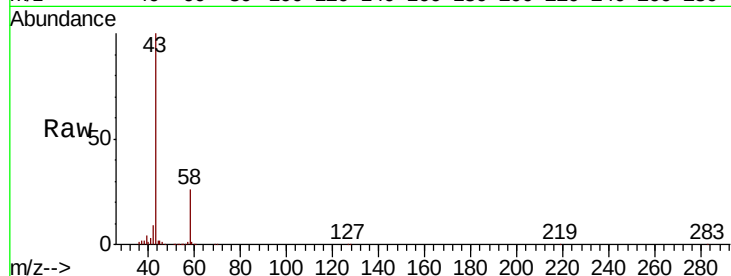
Instrument :  
MSVOA\_L  
ClientSampleId :

Tot Ion: 43 Resp: 1462093

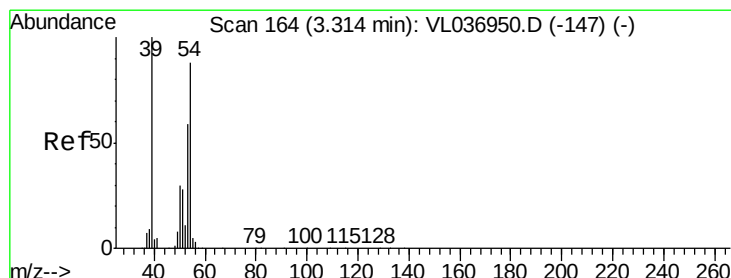
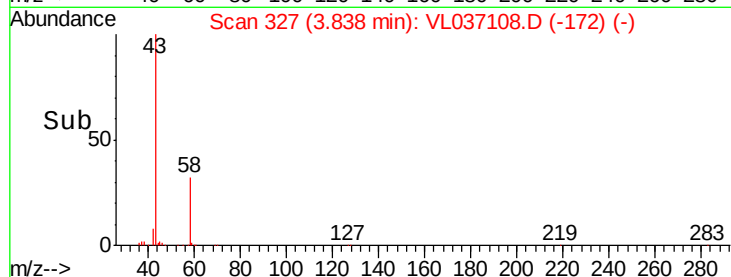
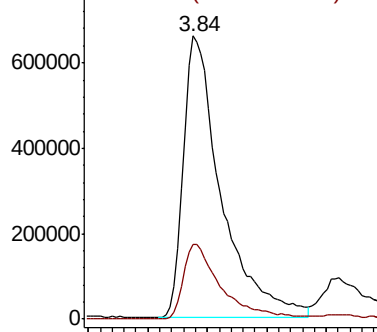
Ion Ratio Lower Upper

43 100

58 26.7 24.0 36.0



Abundance Ion 43.10 (42.80 to 43.80): VL0  
Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.031 ppbv

RT: 3.30 min Scan# 159

Delta R.T. -0.02 min

Lab File: VL037108.D

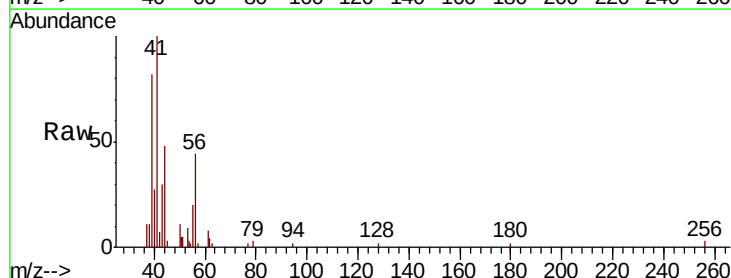
Acq: 2 Jun 2021 19:13

Tgt Ion: 39 Resp: 2642

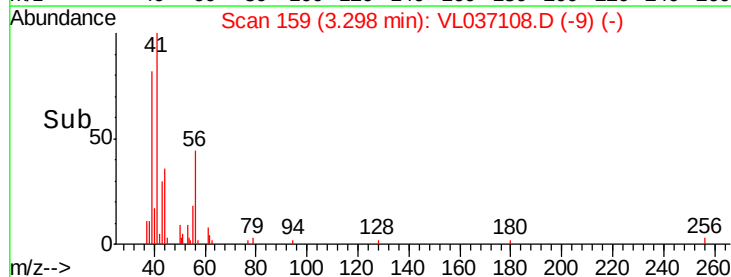
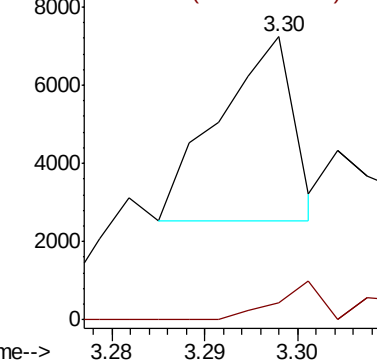
Ion Ratio Lower Upper

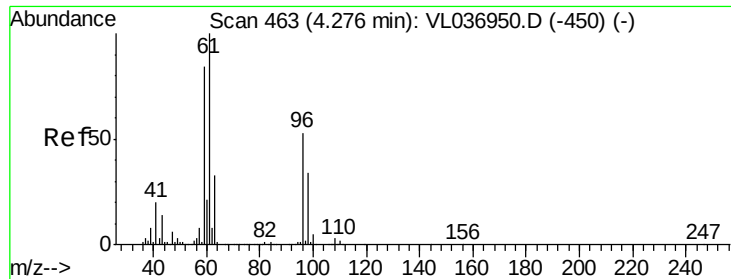
39 100

54 0.0 63.2 94.8#



Abundance Ion 39.10 (38.80 to 39.80): VL0  
Ion 54.10 (53.80 to 54.80): VL0

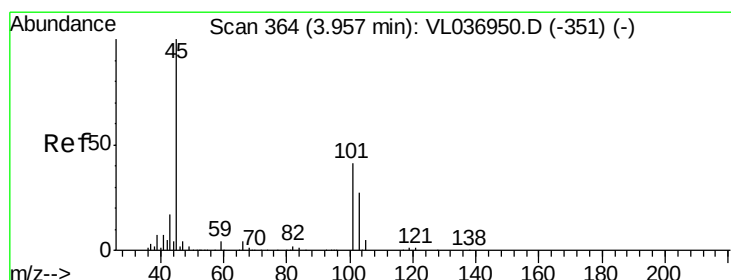
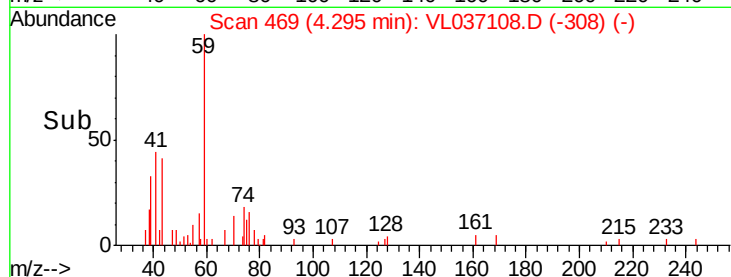
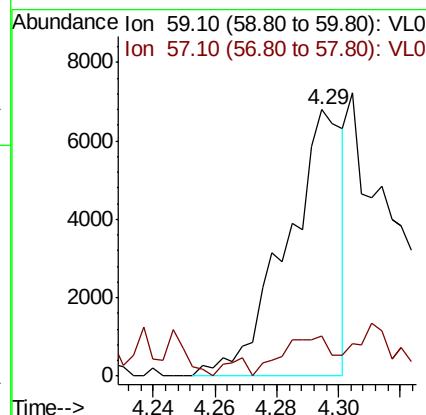
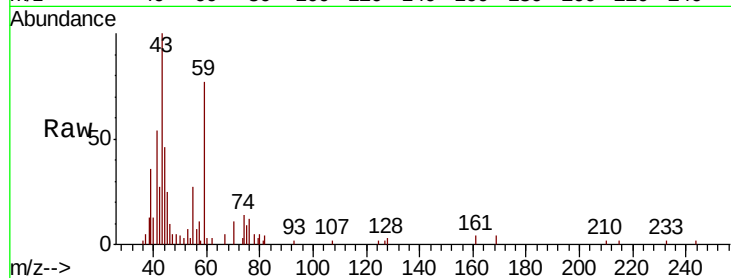




#17  
tert-Butyl alcohol  
Concen: 0.069 ppbv  
RT: 4.29 min Scan# 469  
Delta R.T. 0.02 min  
Lab File: VL037108.D  
Acq: 2 Jun 2021 19:13

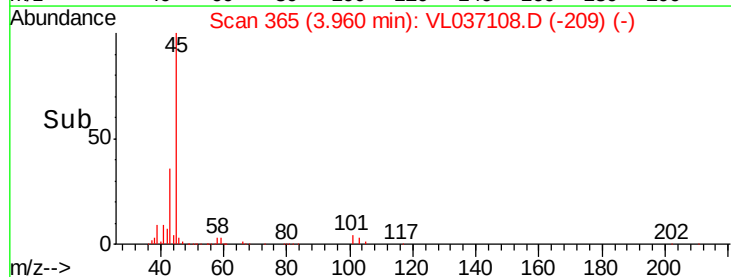
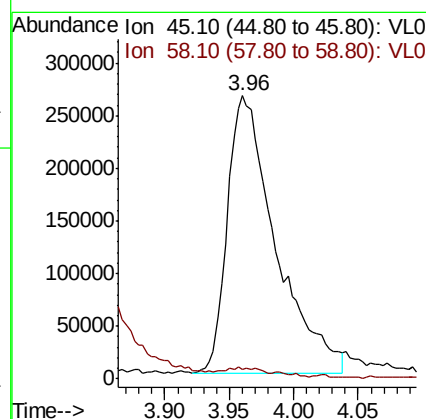
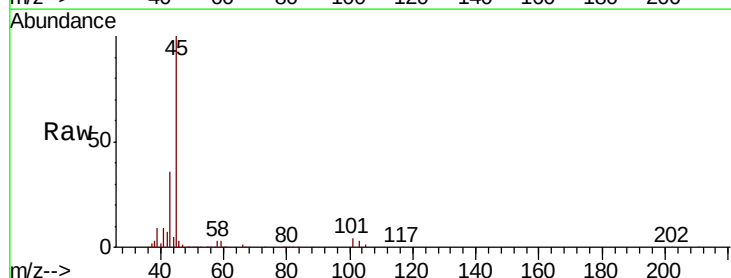
Instrument :  
MSVOA\_L  
ClientSampled :

Tot Ion: 59 Resp: 8562  
Ion Ratio Lower Upper  
59 100  
57 0.0 8.3 12.5#

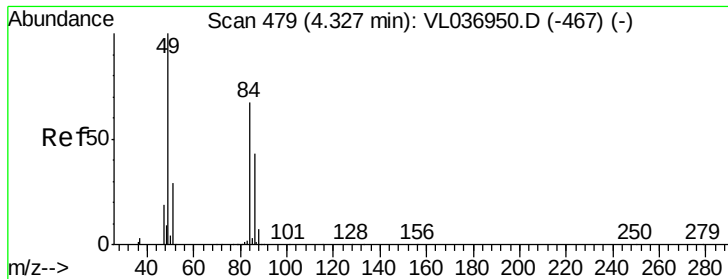


#19  
Isopropyl Alcohol  
Concen: 9.327 ppbv  
RT: 3.96 min Scan# 365  
Delta R.T. 0.00 min  
Lab File: VL037108.D  
Acq: 2 Jun 2021 19:13

Tgt Ion: 45 Resp: 681405  
Ion Ratio Lower Upper  
45 100  
58 5.5 37.2 55.8#



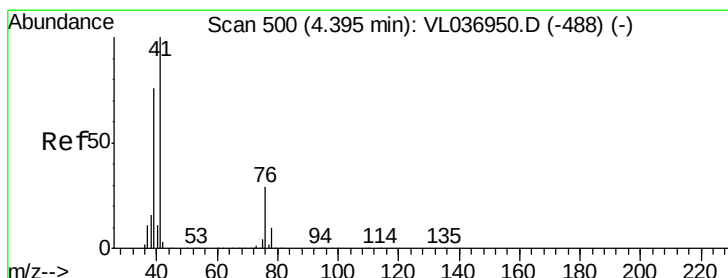
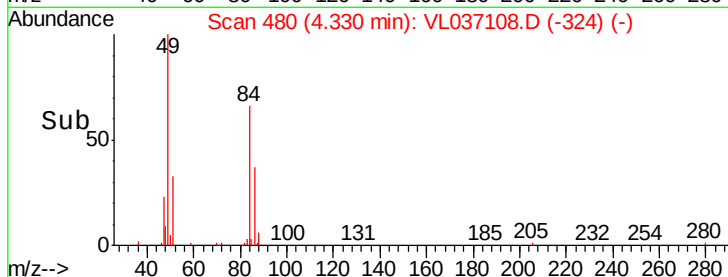
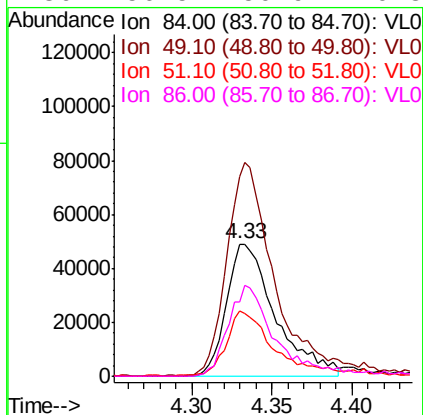
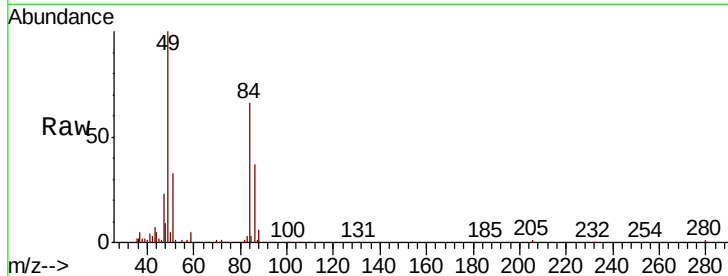




#20  
Methylene Chloride  
Concen: 1.403 ppbv  
RT: 4.33 min Scan# 480  
Delta R.T. 0.00 min  
Lab File: VL037108.D  
Acq: 2 Jun 2021 19:13

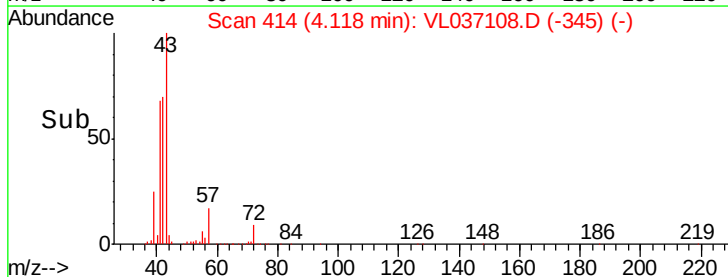
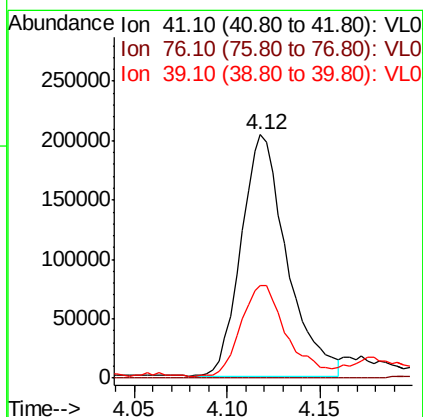
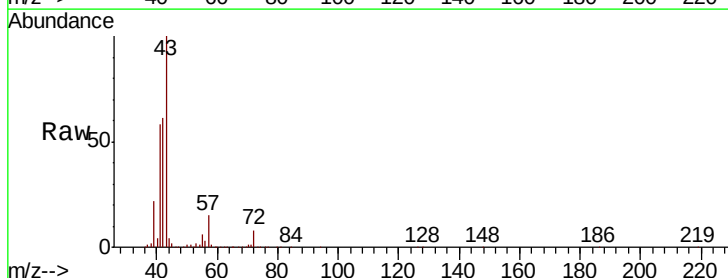
Instrument :  
MSVOA\_L  
ClientSampled :

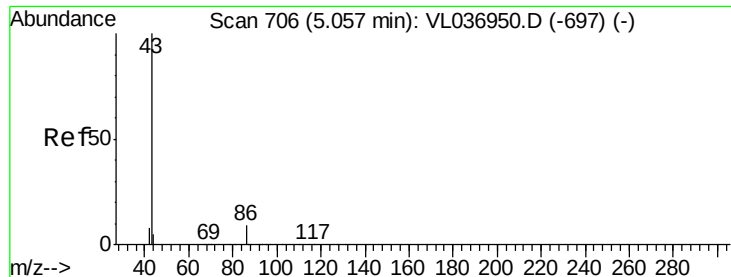
Tot Ion: 84 Resp: 102193  
Ion Ratio Lower Upper  
84 100  
49 149.5 119.8 179.6  
51 48.3 35.1 52.7  
86 56.5 50.9 76.3



#21  
Allyl Chloride  
Concen: 3.409 ppbv  
RT: 4.12 min Scan# 414  
Delta R.T. -0.28 min  
Lab File: VL037108.D  
Acq: 2 Jun 2021 19:13

Tgt Ion: 41 Resp: 349548  
Ion Ratio Lower Upper  
41 100  
76 0.0 24.9 37.3#  
39 37.7 63.7 95.5#





#23

Vinyl Acetate

Concen: 0.036 ppbv

RT: 5.05 min Scan# 705

Delta R.T. -0.00 min

Lab File: VL037108.D

Acq: 2 Jun 2021 19:13

Instrument :

MSVOA\_L

ClientSampleId :

Tot Ion: 43 Resp: 7860

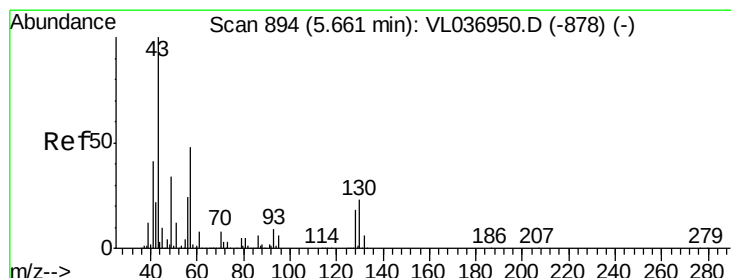
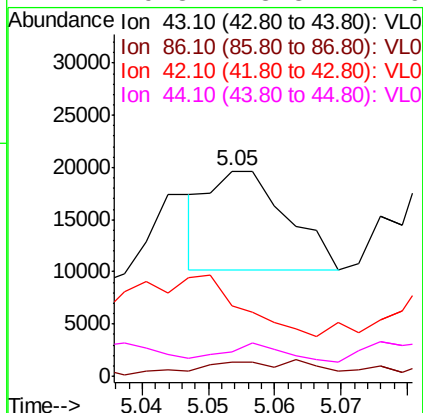
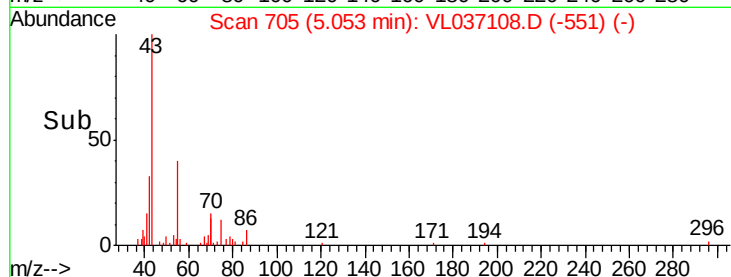
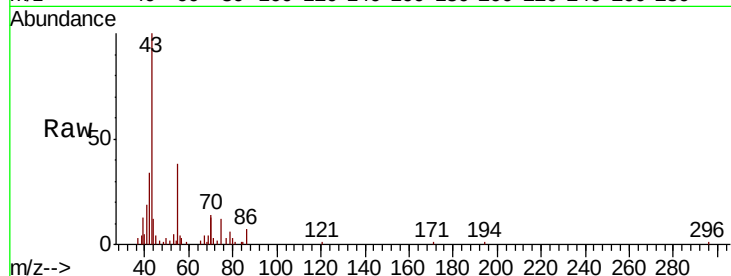
Ion Ratio Lower Upper

43 100

86 8.9 5.8 8.8#

42 16.7 7.4 11.2#

44 9.8 3.3 4.9#



#25

Ethyl Acetate

Concen: 0.476 ppbv

RT: 5.67 min Scan# 898

Delta R.T. 0.01 min

Lab File: VL037108.D

Acq: 2 Jun 2021 19:13

Tgt Ion: 43 Resp: 155448

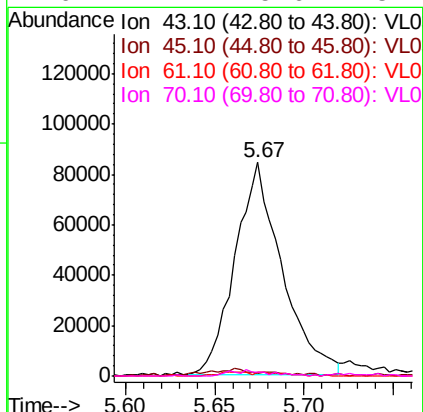
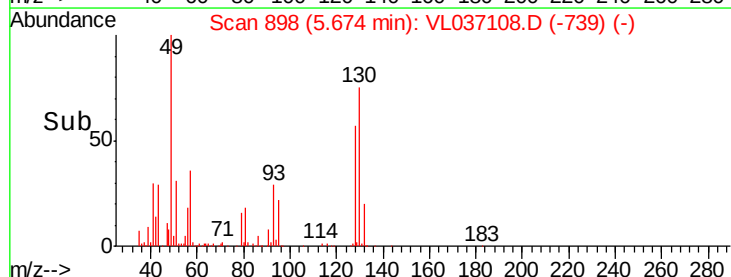
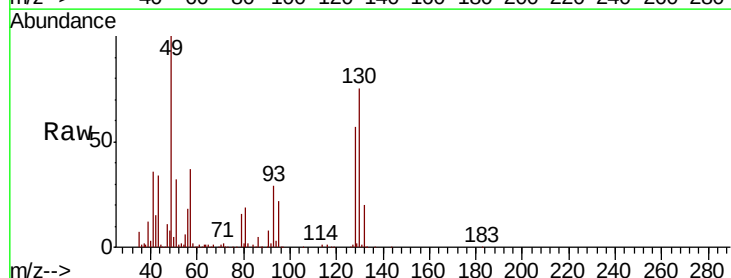
Ion Ratio Lower Upper

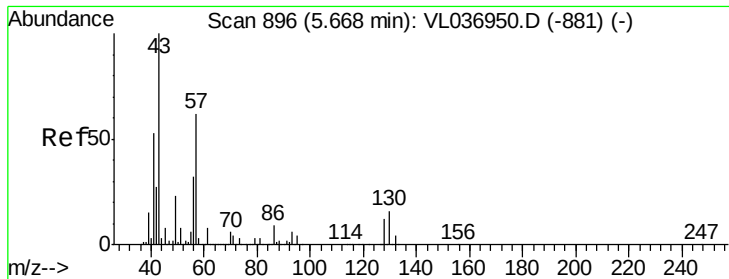
43 100

45 5.6 7.8 11.8#

61 2.5 7.8 11.8#

70 2.4 5.6 8.4#





#26

Hexane

Concen: 1.198 ppbv

RT: 5.67 min Scan# 897

Delta R.T. 0.00 min

Lab File: VL037108.D

Acq: 2 Jun 2021 19:13

Instrument :

MSVOA\_L

ClientSampleId :

Tot Ion: 57 Resp: 199886

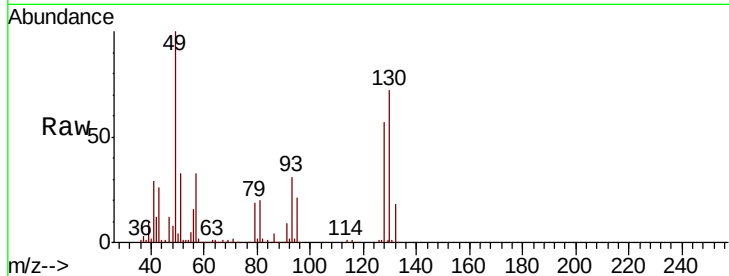
Ion Ratio Lower Upper

57 100

41 95.4 70.5 105.7

43 81.4 165.8 248.8#

56 53.8 42.2 63.4

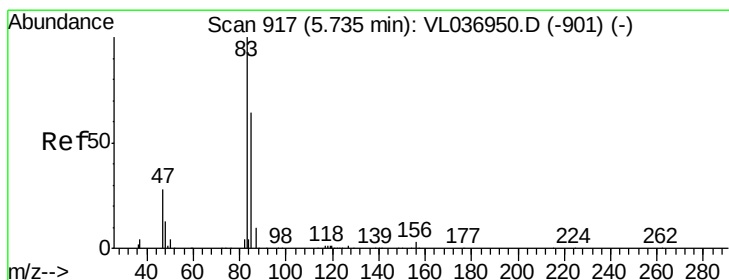
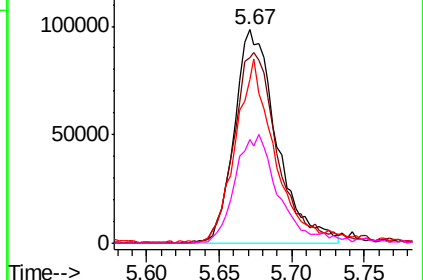
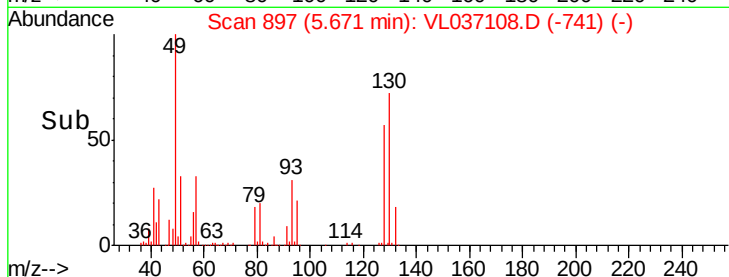


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#29

Chloroform

Concen: 0.221 ppbv

RT: 5.74 min Scan# 917

Delta R.T. -0.00 min

Lab File: VL037108.D

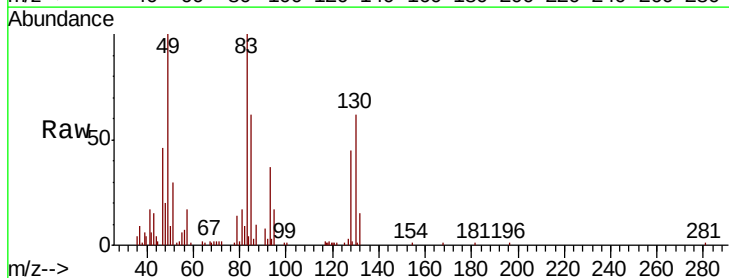
Acq: 2 Jun 2021 19:13

Tgt Ion: 83 Resp: 52000

Ion Ratio Lower Upper

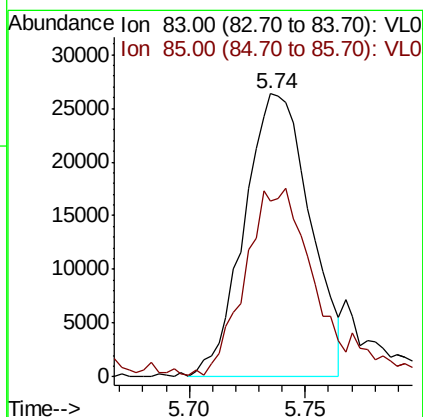
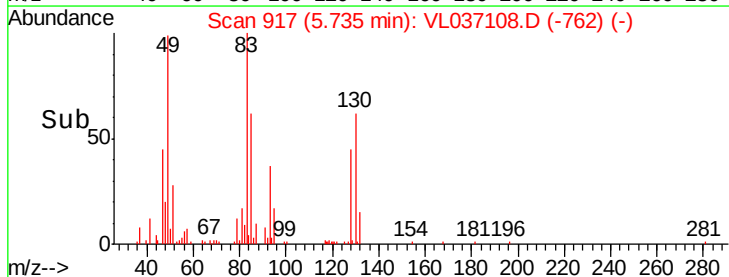
83 100

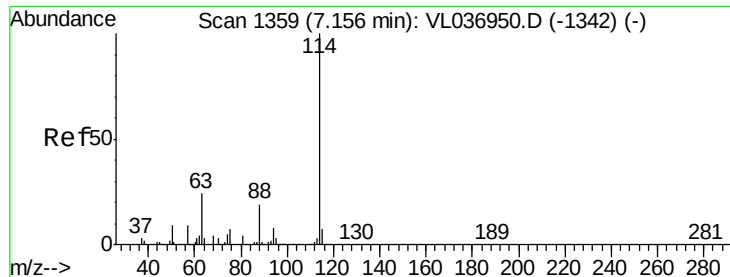
85 61.3 51.1 76.7



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0

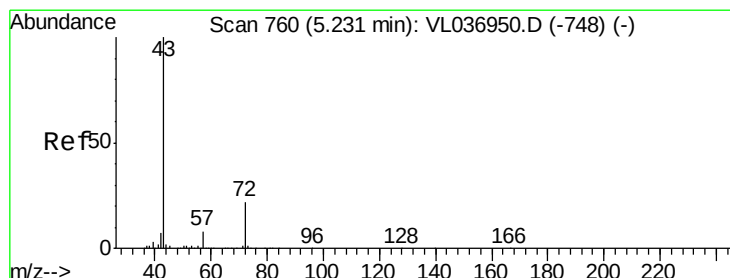
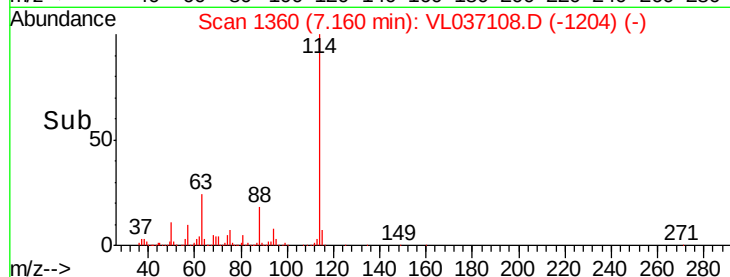
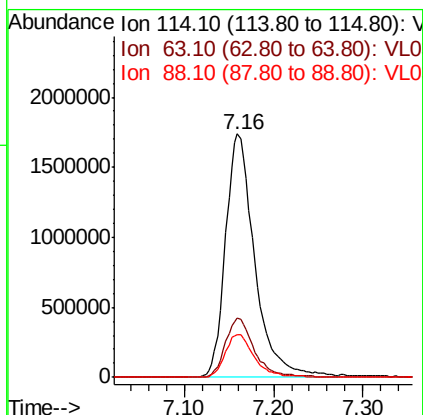
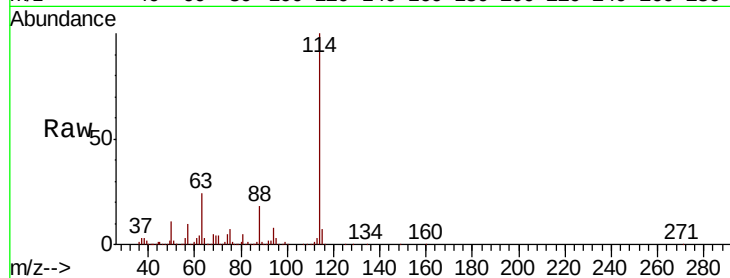




#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.16 min Scan# 1360  
 Delta R.T. 0.00 min  
 Lab File: VL037108.D  
 Acq: 2 Jun 2021 19:13

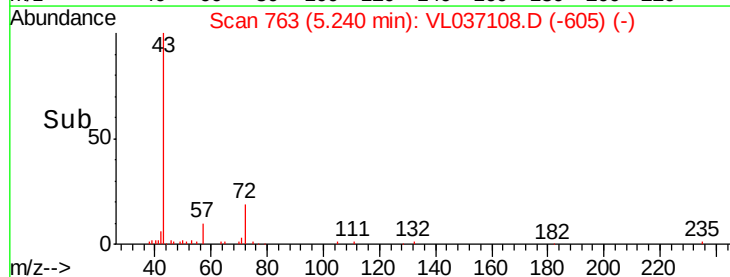
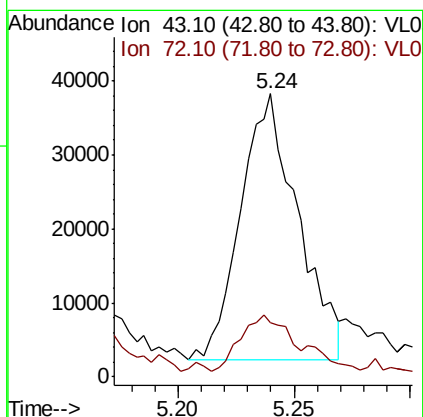
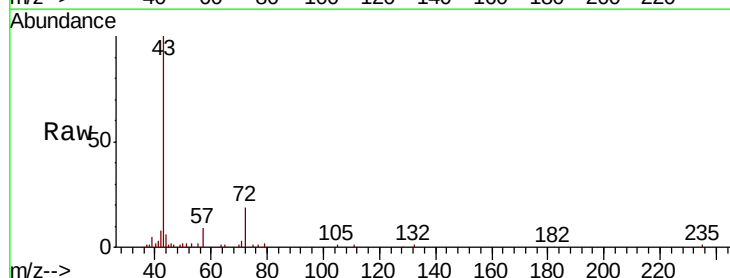
Instrument :  
 MSVOA\_L  
 ClientSampleId :

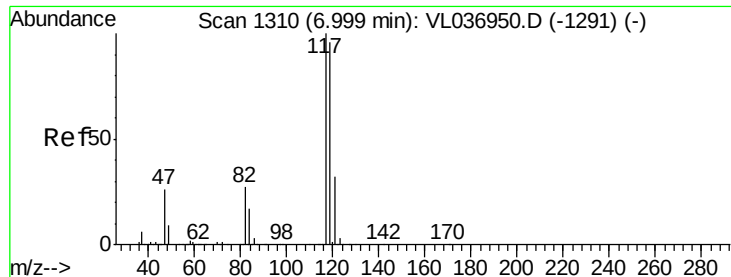
Tot Ion:114 Resp: 3950603  
 Ion Ratio Lower Upper  
 114 100  
 63 24.2 19.6 29.4  
 88 17.9 14.6 21.8



#34  
 2-Butanone  
 Concen: 0.432 ppbv  
 RT: 5.24 min Scan# 763  
 Delta R.T. 0.01 min  
 Lab File: VL037108.D  
 Acq: 2 Jun 2021 19:13

Tgt Ion: 43 Resp: 62108  
 Ion Ratio Lower Upper  
 43 100  
 72 30.1 19.0 28.4#





#35

Carbon Tetrachloride

Concen: 0.049 ppbv

RT: 7.01 min Scan# 1312

Delta R.T. 0.01 min

Lab File: VL037108.D

Acq: 2 Jun 2021 19:13

Instrument :

MSVOA\_L

ClientSampleId :

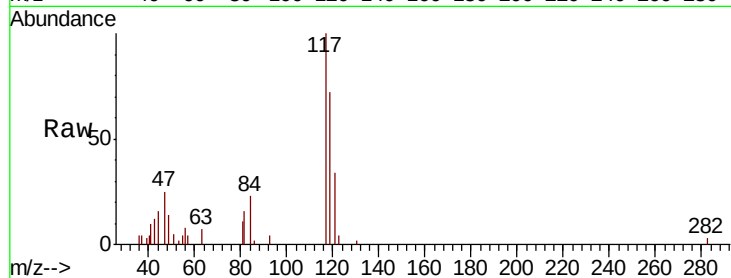
Tot Ion:117 Resp: 12754

Ion Ratio Lower Upper

117 100

119 66.7 76.6 114.8#

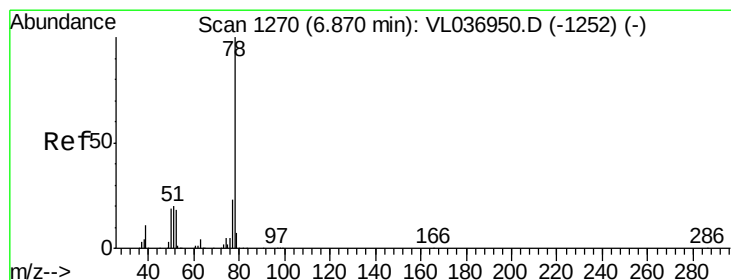
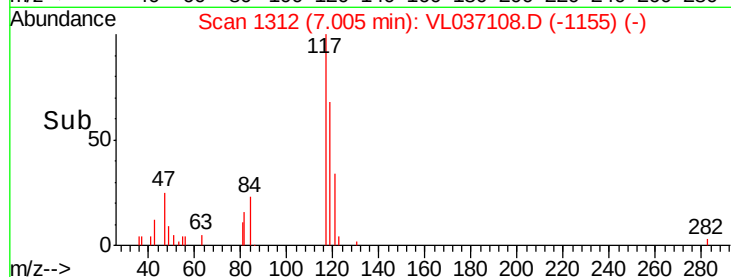
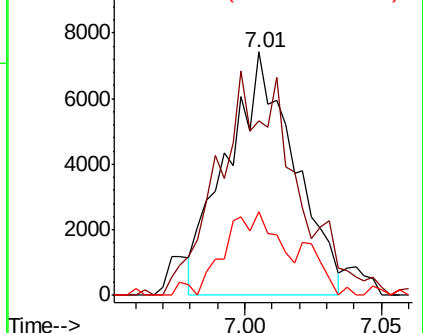
121 37.6 25.8 38.6



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.059 ppbv

RT: 6.88 min Scan# 1272

Delta R.T. 0.01 min

Lab File: VL037108.D

Acq: 2 Jun 2021 19:13

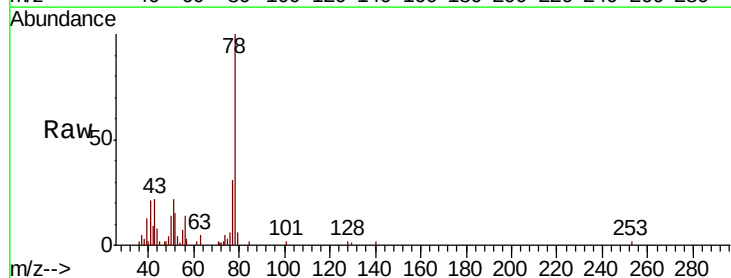
Tgt Ion: 78 Resp: 20092

Ion Ratio Lower Upper

78 100

77 31.3 18.6 28.0#

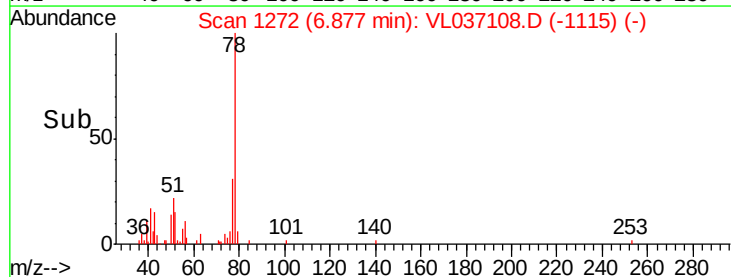
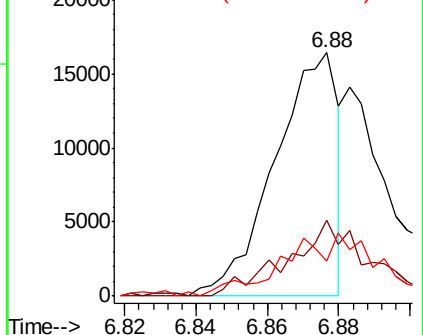
50 12.7 15.0 22.4#

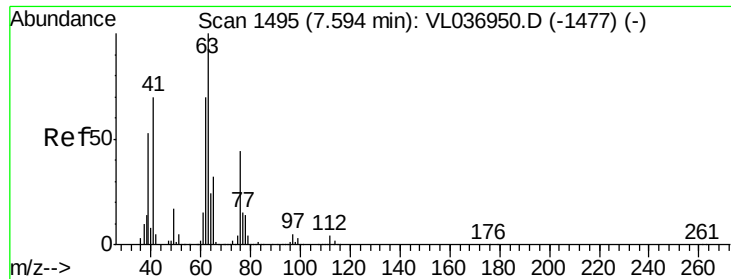


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0

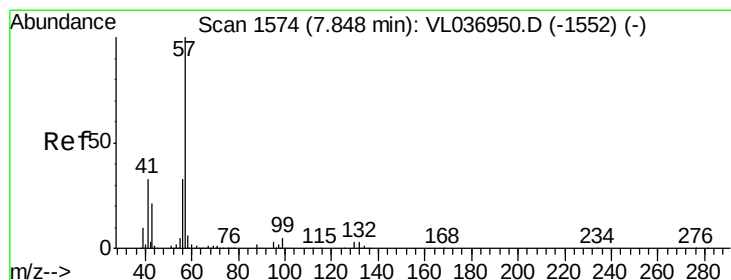
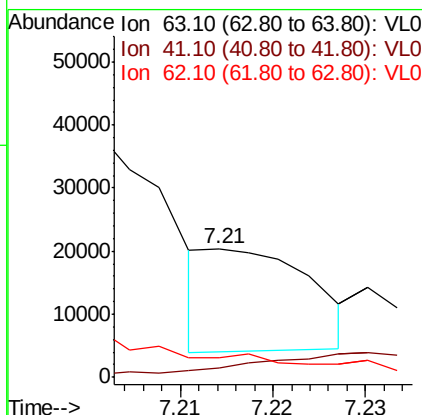
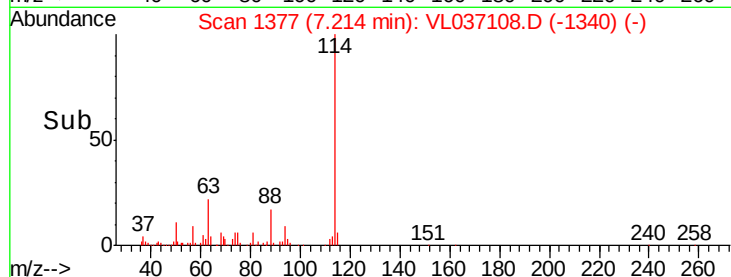
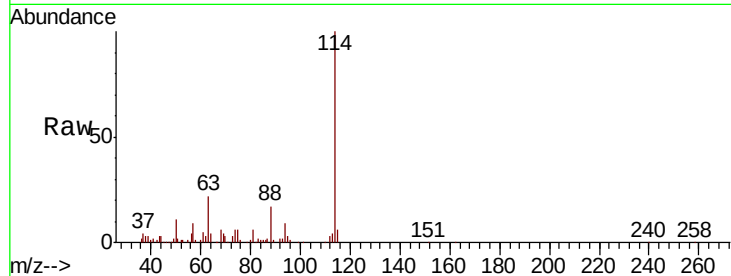




#39  
 1,2-Dichloropropane  
 Concen: 0.096 ppbv  
 RT: 7.21 min Scan# 1377  
 Delta R.T. -0.38 min  
 Lab File: VL037108.D  
 Acq: 2 Jun 2021 19:13

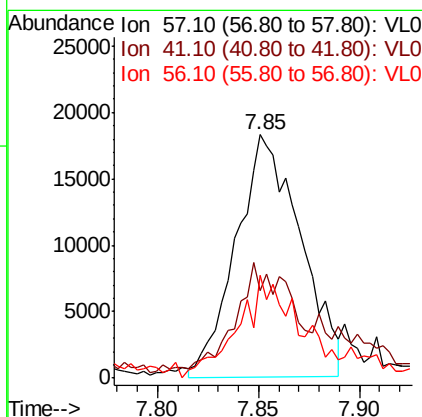
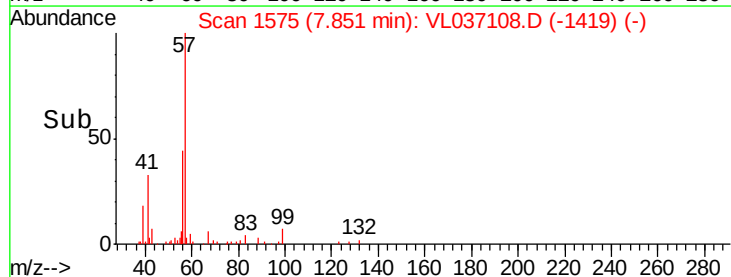
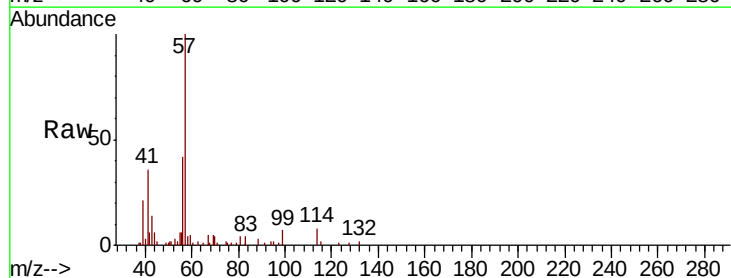
Instrument :  
 MSVOA\_L  
 ClientSampleId :

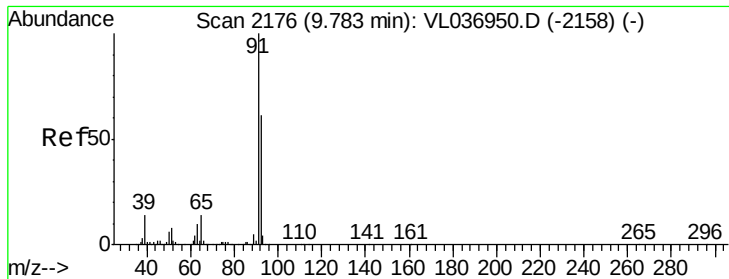
Tot Ion: 63 Resp: 12562  
 Ion Ratio Lower Upper  
 63 100  
 41 4.3 55.7 83.5#  
 62 10.5 56.2 84.4#



#44  
 2,2,4-Trimethylpentane  
 Concen: 0.070 ppbv  
 RT: 7.85 min Scan# 1575  
 Delta R.T. 0.00 min  
 Lab File: VL037108.D  
 Acq: 2 Jun 2021 19:13

Tgt Ion: 57 Resp: 40795  
 Ion Ratio Lower Upper  
 57 100  
 41 69.0 27.0 40.4#  
 56 46.7 25.4 38.2#





#53

Toluene

Concen: 0.371 ppbv

RT: 9.79 min Scan# 2178

Delta R.T. 0.01 min

Lab File: VL037108.D

Acq: 2 Jun 2021 19:13

Instrument :

MSVOA\_L

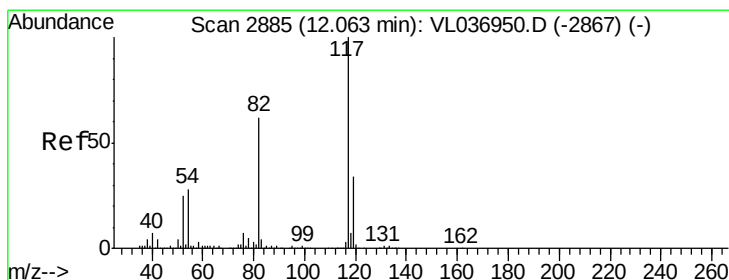
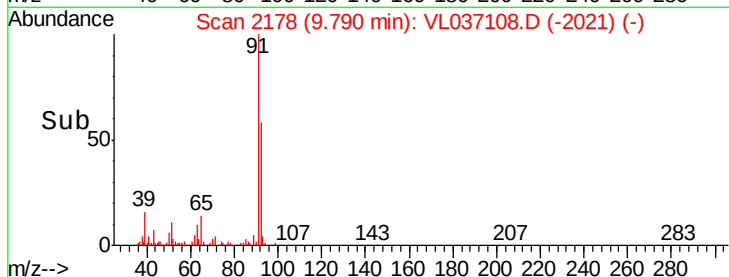
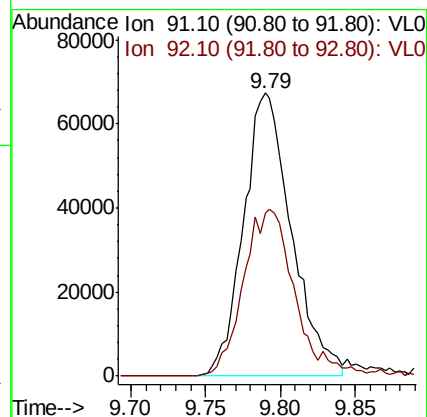
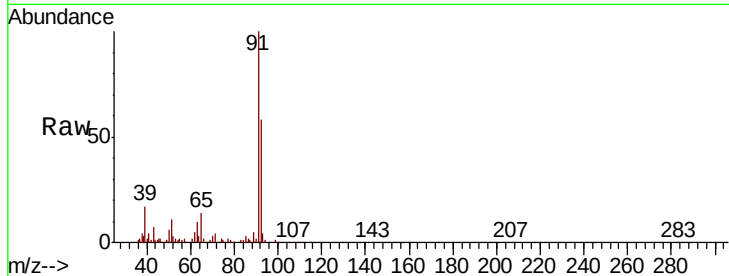
ClientSampleId :

Tot Ion: 91 Resp: 150412

Ion Ratio Lower Upper

91 100

92 64.0 49.5 74.3



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2887

Delta R.T. 0.01 min

Lab File: VL037108.D

Acq: 2 Jun 2021 19:13

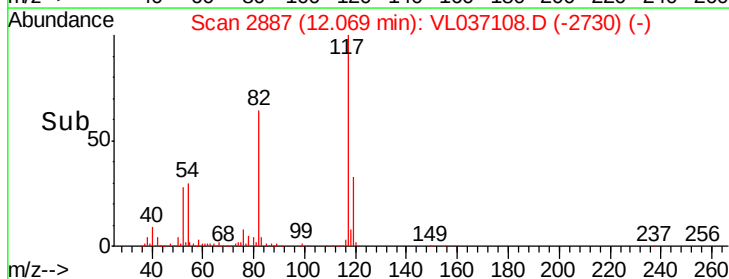
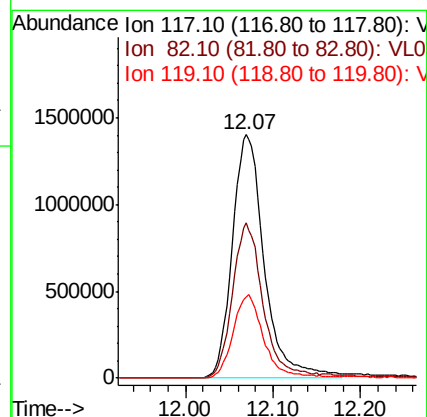
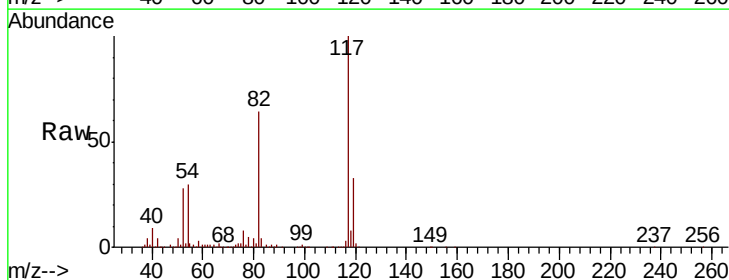
Tgt Ion: 117 Resp: 3559391

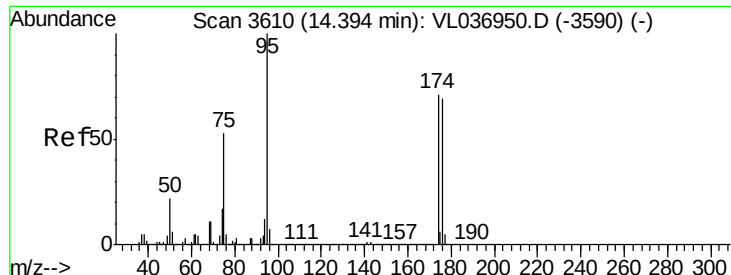
Ion Ratio Lower Upper

117 100

82 63.7 52.6 79.0

119 33.1 46.6 70.0#





#68

1-Bromo-4-Fluorobenzene

Concen: 9.681 ppbv

RT: 14.40 min Scan# 3612

Delta R.T. 0.01 min

Lab File: VL037108.D

Acq: 2 Jun 2021 19:13

Instrument :

MSVOA\_L

ClientSampleId :

Tot Ion: 95 Resp: 2588631

Ion Ratio Lower Upper

95 100

174 74.7 58.4 87.6

175 5.3 4.4 6.6

