

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL060122\  
 Data File : VL039151.D  
 Acq On : 1 Jun 2022 17:09  
 Operator : SY/AP  
 Sample : N3106-01 4X  
 Misc : 400mL/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SV1

Quant Time: Jun 02 00:38:54 2022  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL053122AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LWed Jun 01 01:22:18 2022  
 QLast Update : Wed Jun 01 01:22:18 2022  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.67  | 49   | 1240372  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.18  | 114  | 3256702  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.09 | 117  | 2999023  | 10.00 | ppbv  | 0.00     |

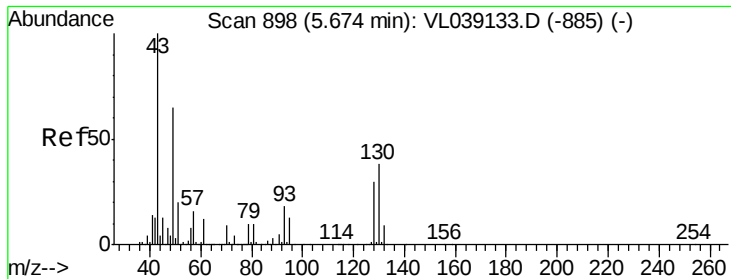
System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.42  | 95    | 2566770  | 10.35    | ppbv | 0.00    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 103.50% |

| Target Compounds           | R.T.  | QIon | Response | Conc   | Units  | Ovalue |
|----------------------------|-------|------|----------|--------|--------|--------|
| 2) Dichlorodifluoromethane | 3.06  | 85   | 12970    | 0.060  | ppbv   | 90     |
| 3) Chlorodifluoromethane   | 2.99  | 51   | 11286    | 0.072  | ppbv   | 95     |
| 4) Chloromethane           | 3.21  | 50   | 66999    | 0.826  | ppbv # | 64     |
| 7) Chloroethane            | 3.57  | 64   | 912      | 0.035  | ppbv # | 79     |
| 9) Propene                 | 3.21  | 41   | 2600097  | 37.783 | ppbv   | 94     |
| 10) Heptane                | 8.13  | 43   | 5161300  | 32.150 | ppbv   | 98     |
| 11) Trichlorofluoromethane | 3.96  | 101  | 6212     | 0.031  | ppbv   | 87     |
| 13) Ethanol                | 3.62  | 45   | 7331     | 1.953  | ppbv # | 100    |
| 15) Acetone                | 3.88  | 43   | 4867701  | 37.674 | ppbv # | 54     |
| 16) 1,3-Butadiene          | 3.31  | 39   | 876070   | 12.613 | ppbv # | 14     |
| 20) Methylene Chloride     | 4.35  | 84   | 137451   | 2.524  | ppbv   | 91     |
| 21) Allyl Chloride         | 4.37  | 41   | 130036   | 1.492  | ppbv # | 42     |
| 23) Vinyl Acetate          | 5.07  | 43   | 540772   | 5.058  | ppbv # | 1      |
| 25) Ethyl Acetate          | 5.70  | 43   | 6170163  | 21.188 | ppbv # | 76     |
| 26) Hexane                 | 5.70  | 57   | 8687158  | 67.881 | ppbv # | 39     |
| 34) 2-Butanone             | 5.26  | 43   | 159880   | 0.904  | ppbv # | 84     |
| 39) 1,2-Dichloropropane    | 7.18  | 63   | 855970   | 8.139  | ppbv # | 28     |
| 41) Tetrahydrofuran        | 5.98  | 42   | 199677   | 1.876  | ppbv # | 36     |
| 42) Bromodichloromethane   | 7.80  | 83   | 33922    | 0.140  | ppbv # | 26     |
| 43) Methyl Methacrylate    | 8.00  | 69   | 9220     | 0.090  | ppbv # | 1      |
| 44) 2,2,4-Trimethylpentane | 7.75  | 57   | 85852    | 0.186  | ppbv # | 1      |
| 51) 2-Hexanone             | 10.11 | 43   | 938697   | 4.555  | ppbv # | 32     |
| 52) Tetrachloroethene      | 11.22 | 164  | 114690   | 1.111  | ppbv   | 94     |

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





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 Instrument: MSVOA\_1

Delta R.T.

Lab File: ClientSampleId: SV1

Acq: 1 Jun 2022 17:09

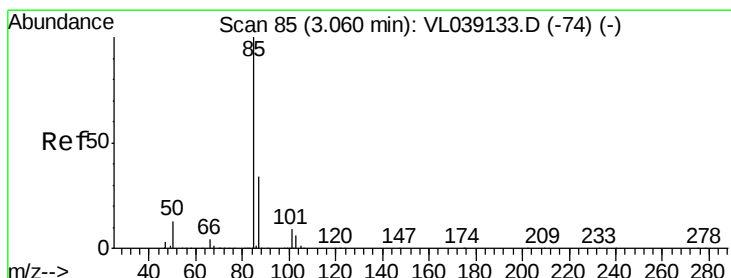
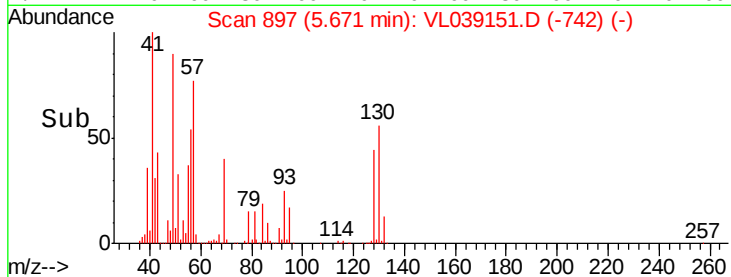
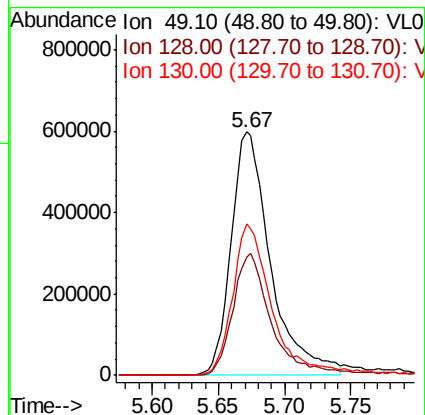
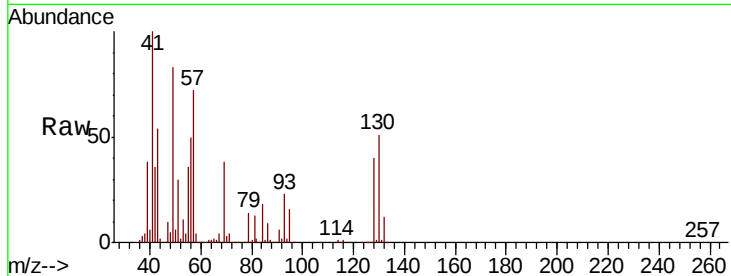
Tot Ion: 49 Resp: 1240372

Ion Ratio Lower Upper

49 100

128 50.6 24.7 74.1

130 64.2 31.4 94.0



#2

Dichlorodifluoromethane

Concen: 0.060 ppbv

RT: 3.06 min Scan# 86

Delta R.T. 0.00 min

Lab File: VL039151.D

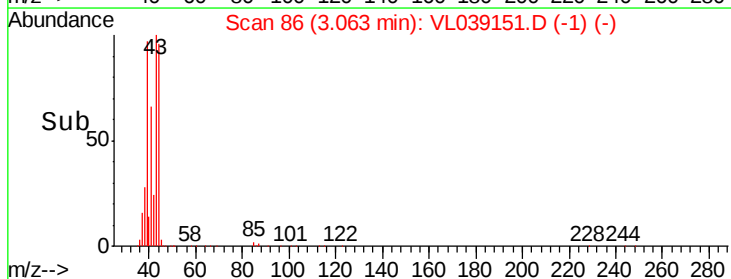
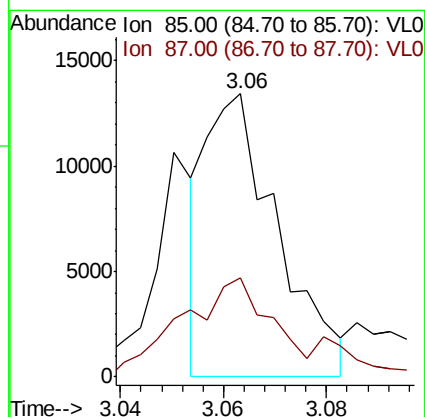
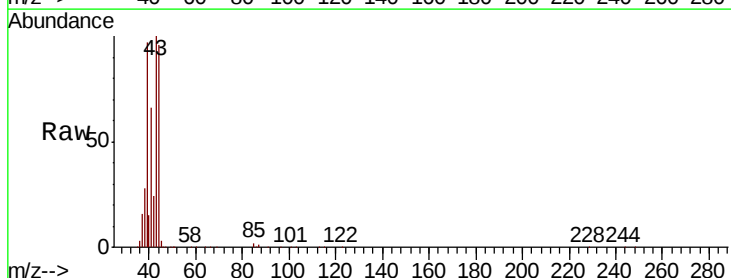
Acq: 1 Jun 2022 17:09

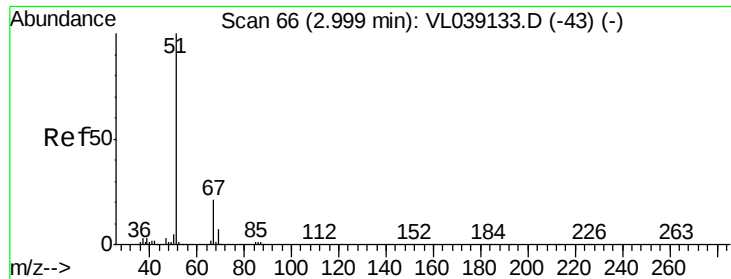
Tgt Ion: 85 Resp: 12970

Ion Ratio Lower Upper

85 100

87 27.8 26.9 40.3





#3

Chlorodifluoromethane

Concen: 0.072 ppbv

RT: 2.99 Instrument: MSVOA\_1

Delta R.T. ClientSampleId:

Lab File: SV1

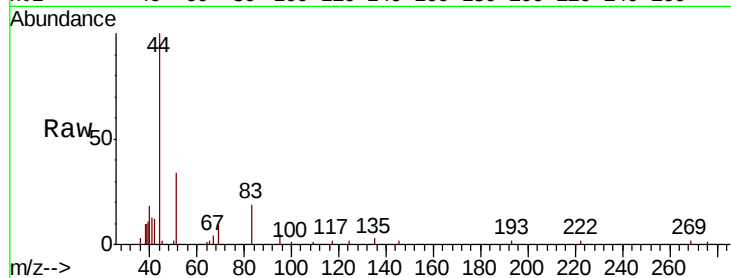
Acq: 1 Jun 2022 17:09

Tot Ion: 51 Resp: 11286

Ion Ratio Lower Upper

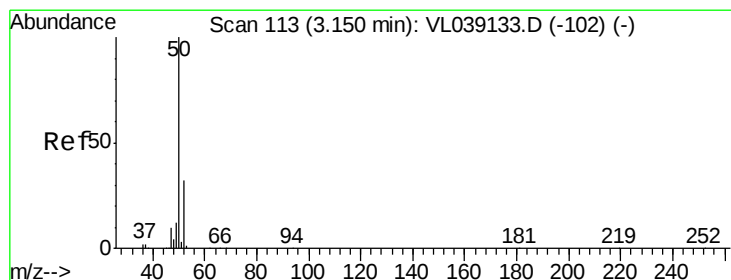
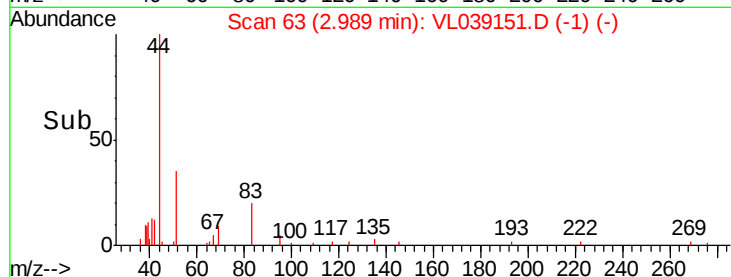
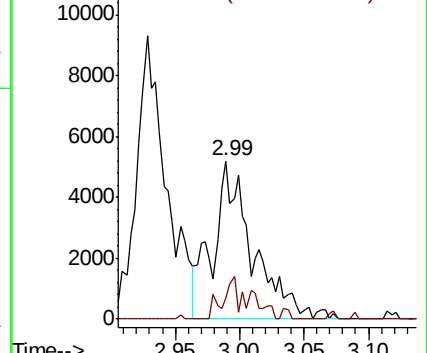
51 100

67 18.1 16.2 24.4



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.826 ppbv

RT: 3.21 min Scan# 133

Delta R.T. 0.06 min

Lab File: VL039151.D

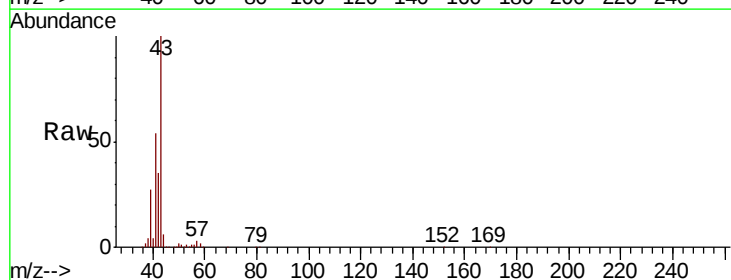
Acq: 1 Jun 2022 17:09

Tgt Ion: 50 Resp: 66999

Ion Ratio Lower Upper

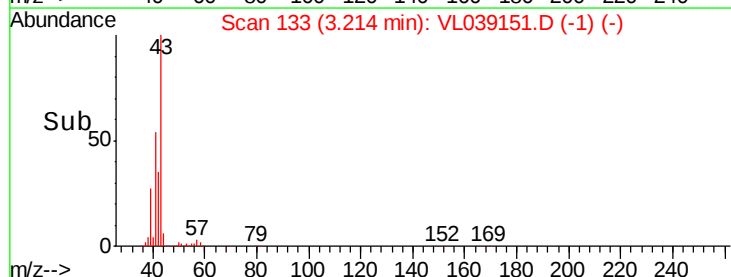
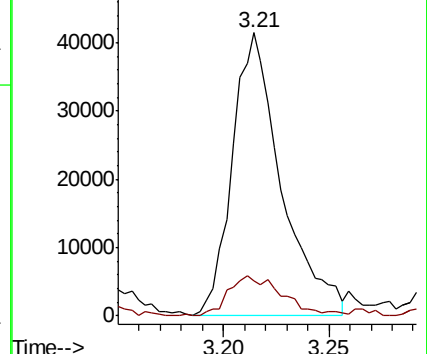
50 100

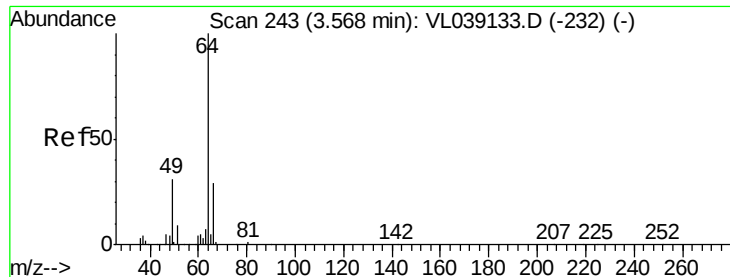
52 12.3 25.9 38.9#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#7

Chloroethane

Concen: 0.035 ppbv

RT: 3.57 Instrument:

Delta R.T. MSVOA\_L

Lab File: ClientSampleId:

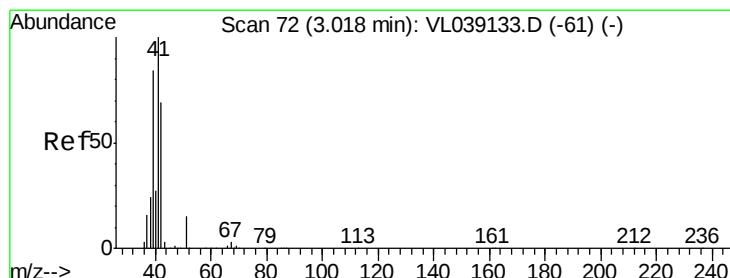
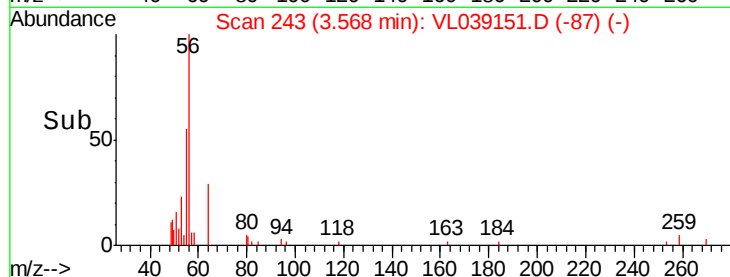
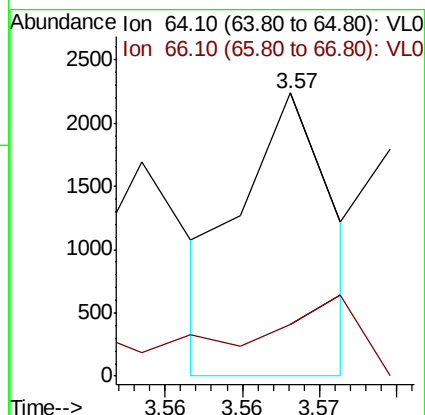
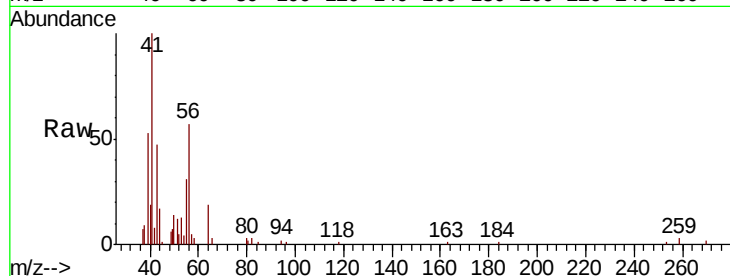
Acq: 1 Jun 2022 17:09 SV1

Tot Ion: 64 Resp: 912

Ion Ratio Lower Upper

64 100

66 18.3 23.6 35.4#



#9

Propene

Concen: 37.783 ppbv

RT: 3.21 min Scan# 133

Delta R.T. 0.20 min

Lab File: VL039151.D

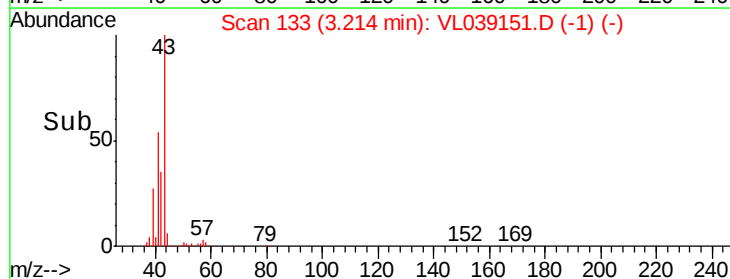
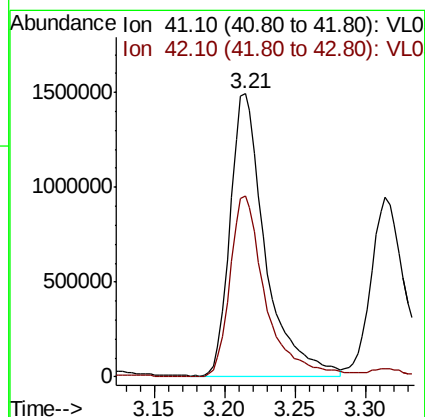
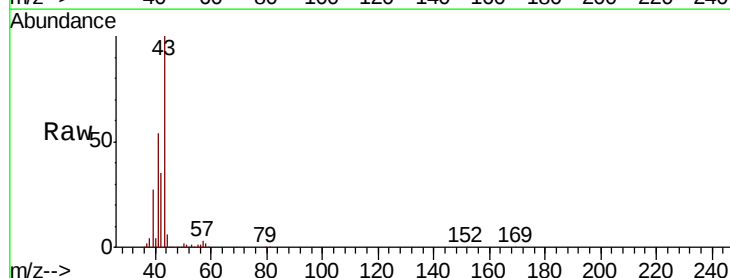
Acq: 1 Jun 2022 17:09

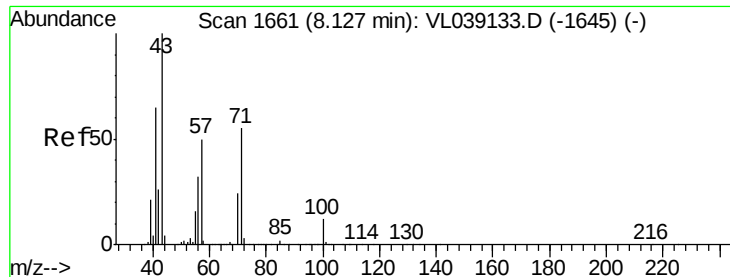
Tgt Ion: 41 Resp: 2600097

Ion Ratio Lower Upper

41 100

42 64.5 55.4 83.2





#10

Heptane

Concen: 32.150 ppbv

RT: 8.13 Instrument:

Delta R.T. MSVOA\_L

Lab File: ClientSampleId:

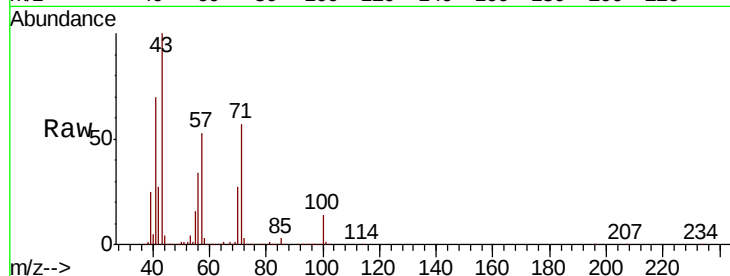
Acq: 1 Jun 2022 17:09 SV1

Tot Ion: 43 Resp: 5161300

Ion Ratio Lower Upper

43 100

57 53.2 41.4 62.2



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

8.13

2500000

2000000

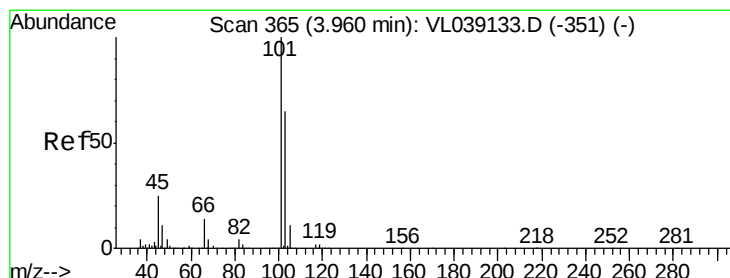
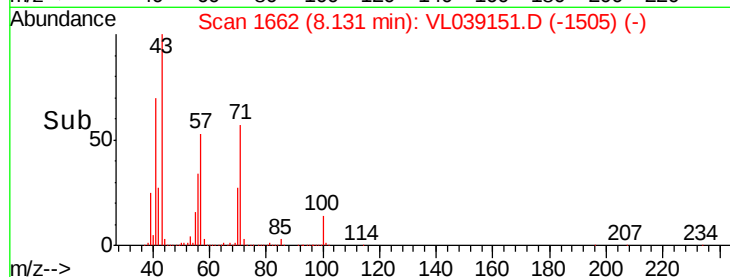
1500000

1000000

500000

0

Time-->



#11

Trichlorofluoromethane

Concen: 0.031 ppbv

RT: 3.96 min Scan# 365

Delta R.T. 0.00 min

Lab File: VL039151.D

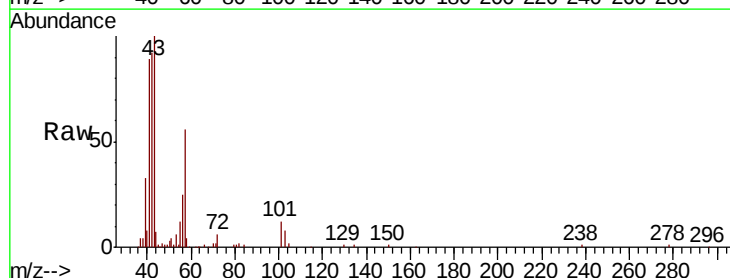
Acq: 1 Jun 2022 17:09

Tgt Ion:101 Resp: 6212

Ion Ratio Lower Upper

101 100

103 54.1 51.7 77.5



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V

3.96

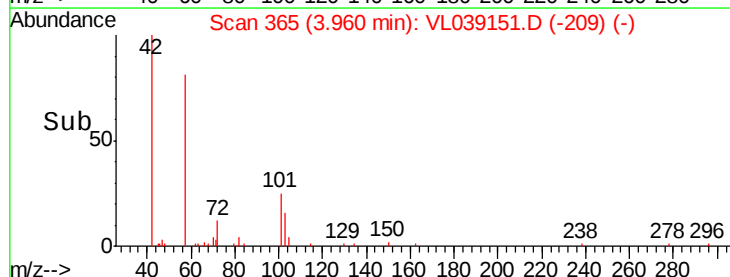
6000

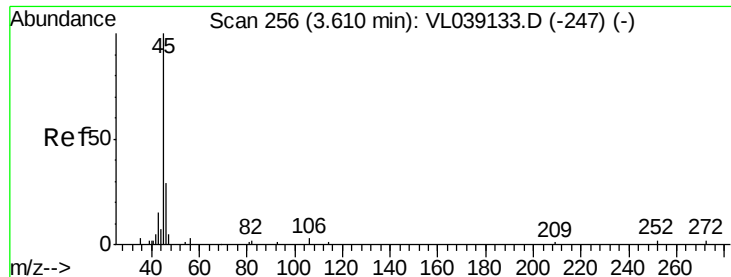
4000

2000

0

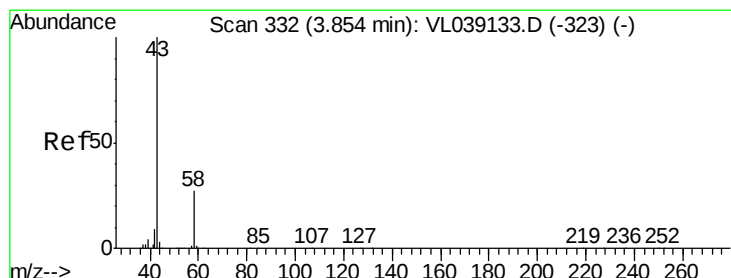
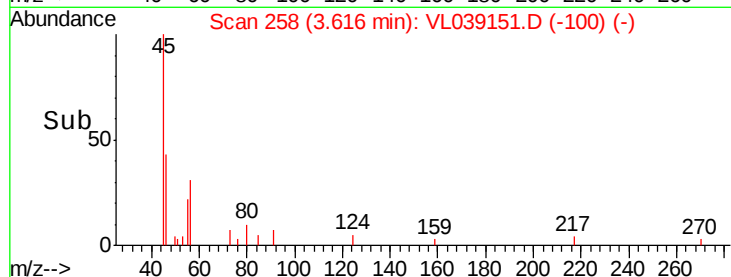
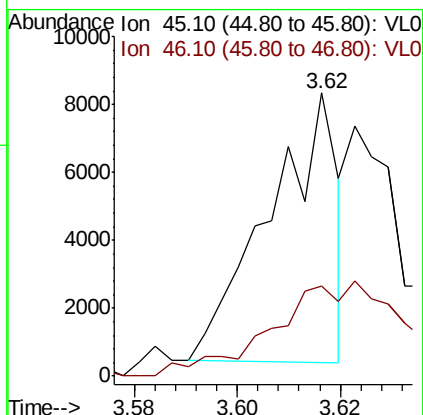
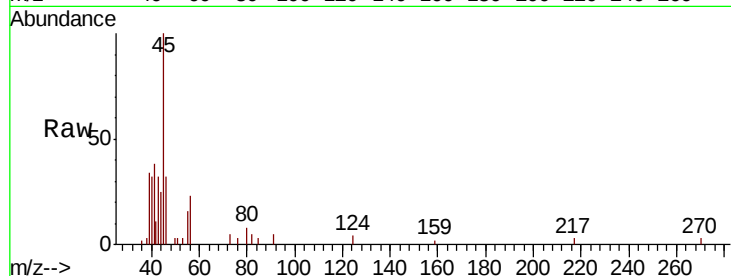
Time-->





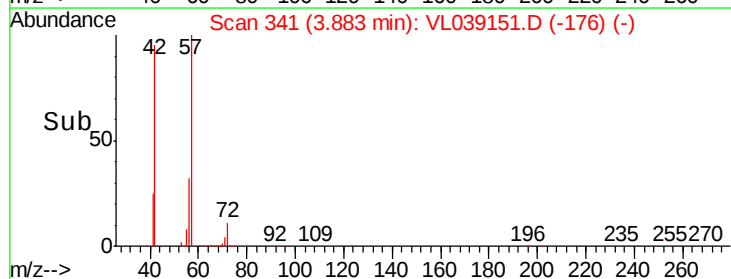
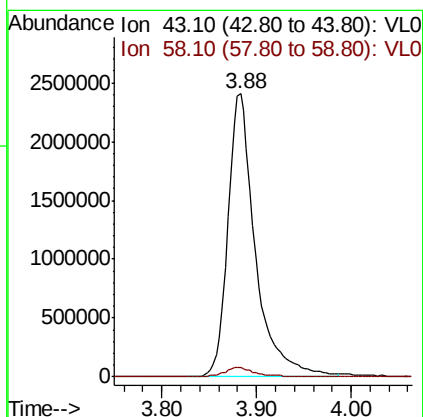
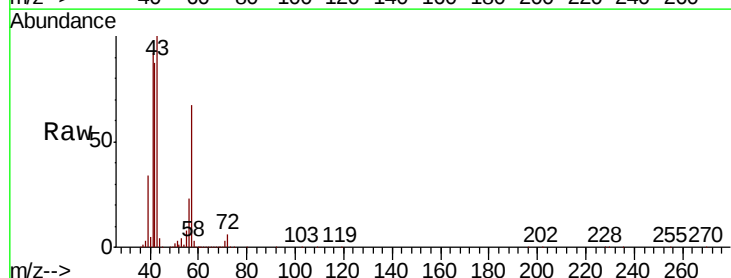
#13  
Ethanol  
Concen: 1.953 ppbv  
RT: 3.62  
Delta R.T. MSVOA\_L  
Lab File: ClientSampleId:  
SV1  
Acq: 1 Jun 2022 17:09

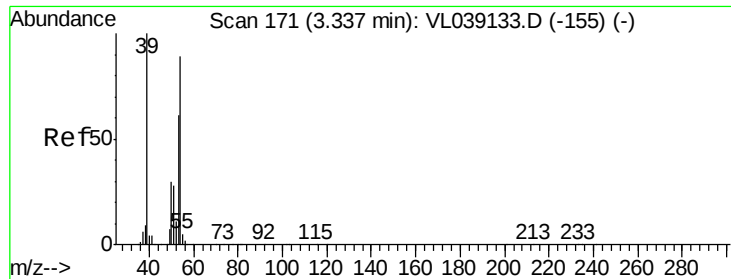
Tot Ion: 45 Resp: 7331  
Ion Ratio Lower Upper  
45 100  
46 0.0 0.0 0.0



#15  
Acetone  
Concen: 37.674 ppbv  
RT: 3.88 min Scan# 341  
Delta R.T. 0.03 min  
Lab File: VL039151.D  
Acq: 1 Jun 2022 17:09

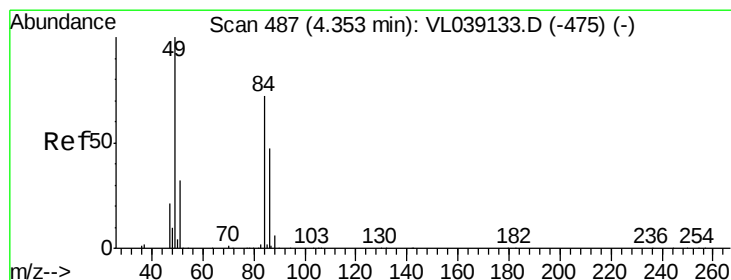
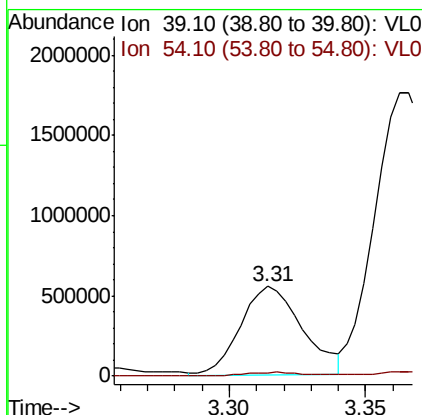
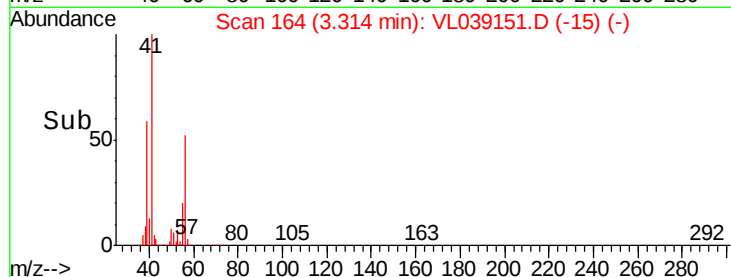
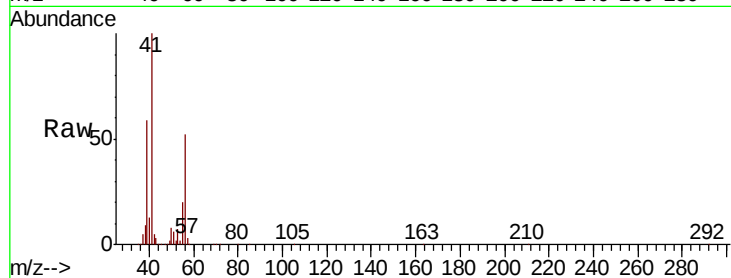
Tgt Ion: 43 Resp: 4867701  
Ion Ratio Lower Upper  
43 100  
58 3.9 22.5 33.7#





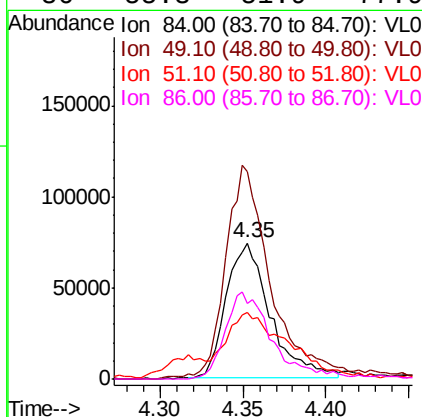
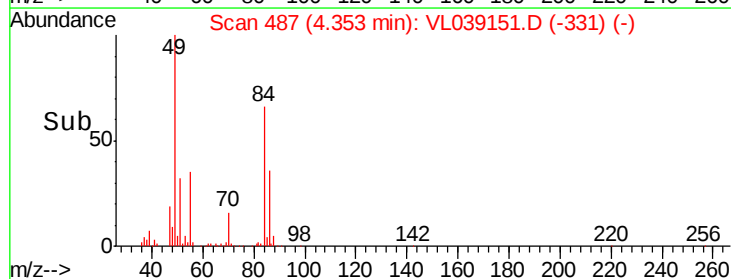
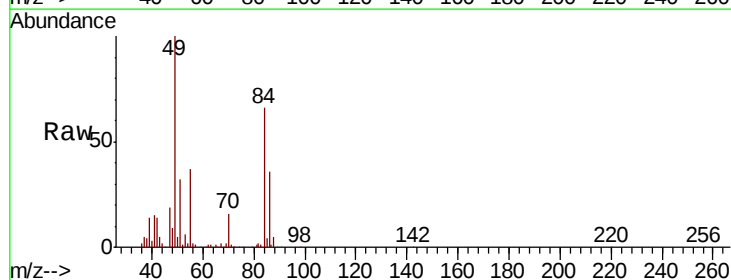
#16  
 1,3-Butadiene  
 Concen: 12.613 ppbv  
 RT: 3.31  
 Delta R.T. MSVOA\_L  
 Lab File: ClientSampleId :  
 Acq: 1 Jun 2022 17:09

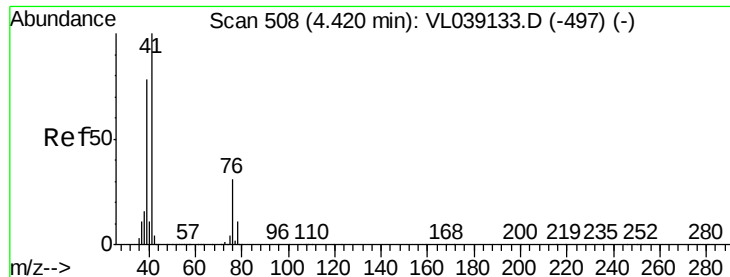
Tot Ion: 39 Resp: 876070  
 Ion Ratio Lower Upper  
 39 100  
 54 4.8 65.8 98.6#



#20  
 Methylene Chloride  
 Concen: 2.524 ppbv  
 RT: 4.35 min Scan# 487  
 Delta R.T. 0.00 min  
 Lab File: VL039151.D  
 Acq: 1 Jun 2022 17:09

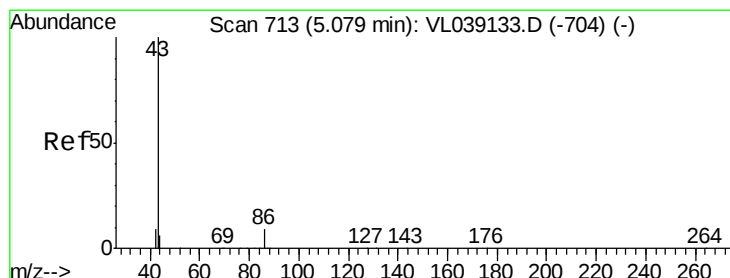
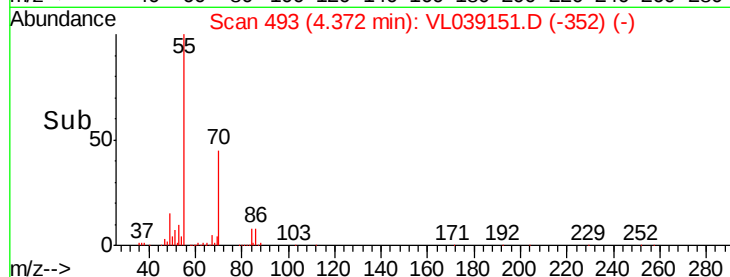
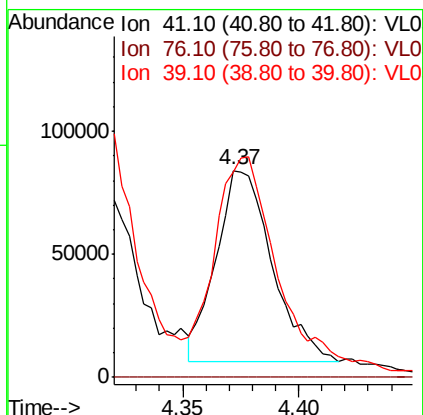
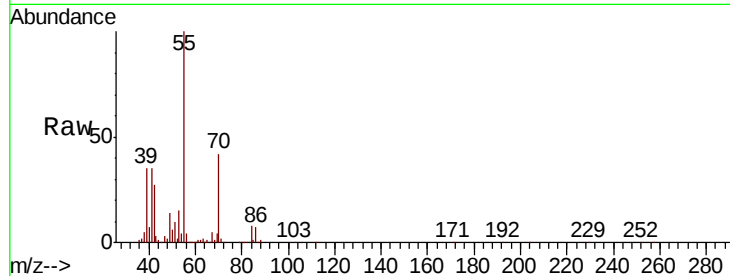
Tgt Ion: 84 Resp: 137451  
 Ion Ratio Lower Upper  
 84 100  
 49 149.9 111.1 166.7  
 51 42.3 35.3 52.9  
 86 55.3 51.9 77.9





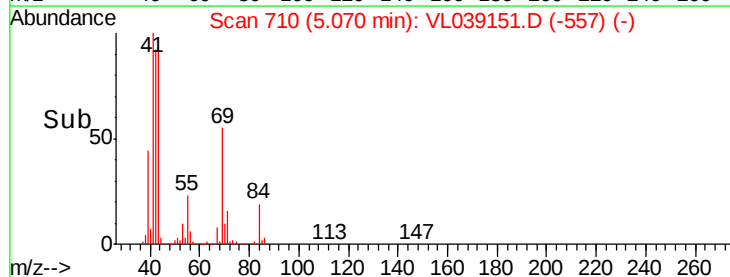
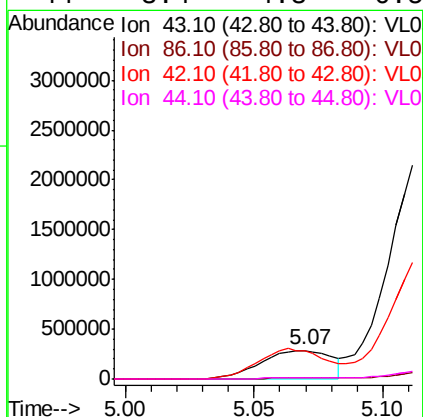
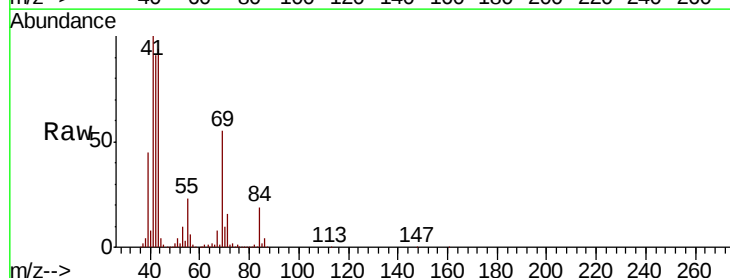
#21  
Allvl Chloride  
Concen: 1.492 ppbv  
RT: 4.37  
Delta R.T. MSVOA\_L  
Lab File: ClientSampleId :  
Acq: 1 Jun 2022 17:09

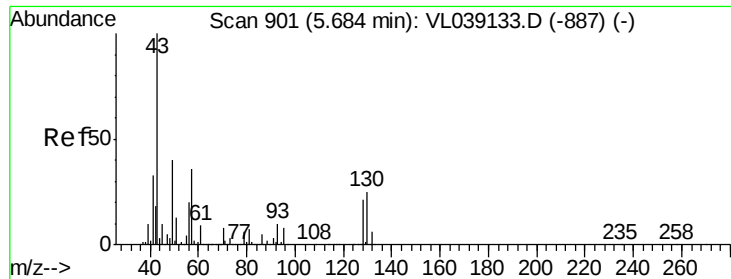
Tot Ion: 41 Resp: 130036  
Ion Ratio Lower Upper  
41 100  
76 4.0 24.2 36.2#  
39 131.5 62.2 93.2#



#23  
Vinyl Acetate  
Concen: 5.058 ppbv  
RT: 5.07 min Scan# 710  
Delta R.T. -0.01 min  
Lab File: VL039151.D  
Acq: 1 Jun 2022 17:09

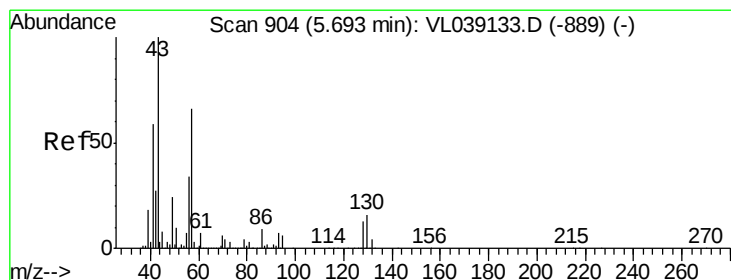
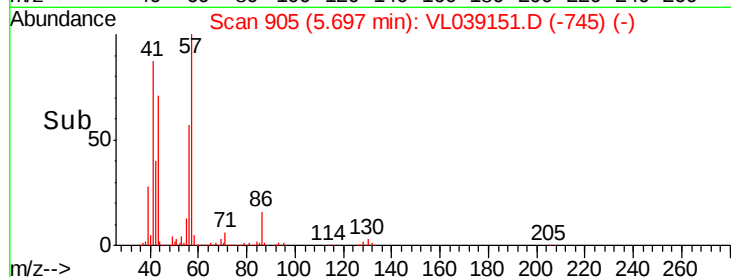
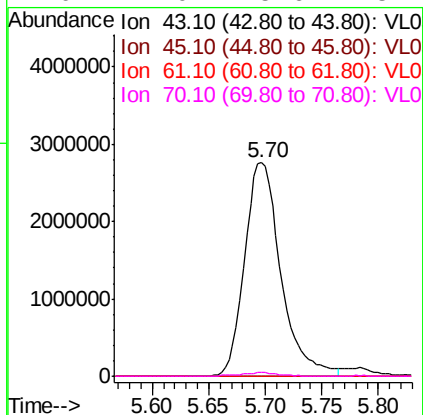
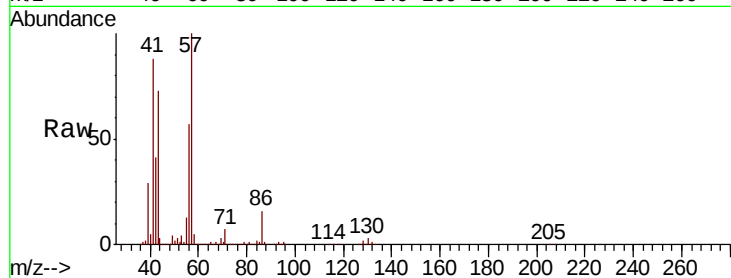
Tgt Ion: 43 Resp: 540772  
Ion Ratio Lower Upper  
43 100  
86 3.7 6.0 9.0#  
42 97.6 8.2 12.4#  
44 3.4 4.3 6.5#





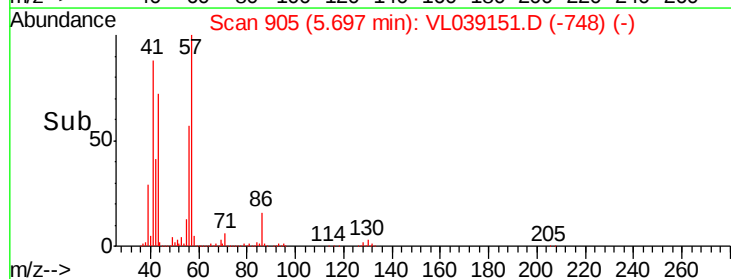
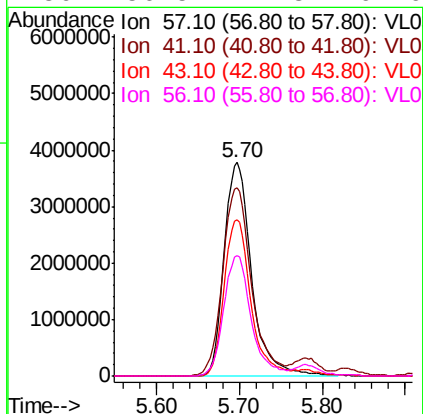
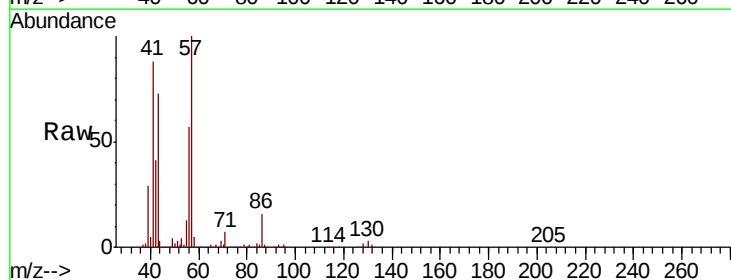
#25  
Ethyl Acetate  
Concen: 21.188 ppbv  
RT: 5.70 min  
Delta R.T.: 0.00 min  
Lab File: VL039151.D  
Acq: 1 Jun 2022 17:09

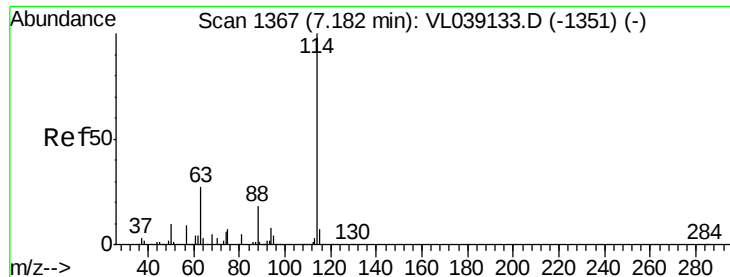
| Tot Ion: | 43    | Resp: | 6170163 |
|----------|-------|-------|---------|
| Ion      | Ratio | Lower | Upper   |
| 43       | 100   |       |         |
| 45       | 0.1   | 8.2   | 12.2#   |
| 61       | 0.2   | 8.4   | 12.6#   |
| 70       | 2.0   | 5.6   | 8.4#    |



#26  
Hexane  
Concen: 67.881 ppbv  
RT: 5.70 min Scan# 905  
Delta R.T.: 0.00 min  
Lab File: VL039151.D  
Acq: 1 Jun 2022 17:09

| Tgt Ion: | 57    | Resp: | 8687158 |
|----------|-------|-------|---------|
| Ion      | Ratio | Lower | Upper   |
| 57       | 100   |       |         |
| 41       | 92.3  | 72.4  | 108.6   |
| 43       | 74.0  | 187.0 | 280.6#  |
| 56       | 56.5  | 41.8  | 62.6    |

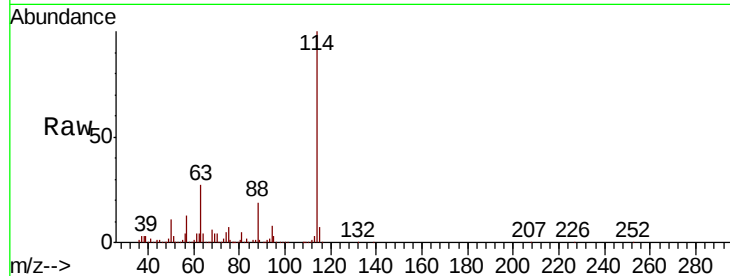




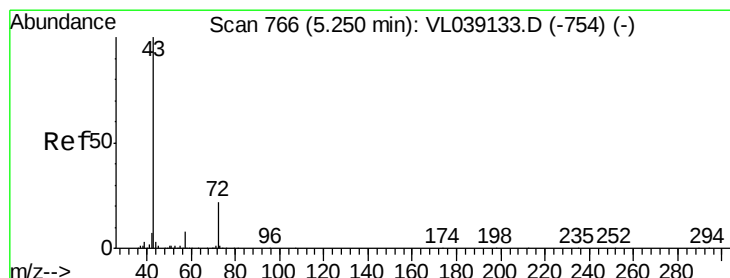
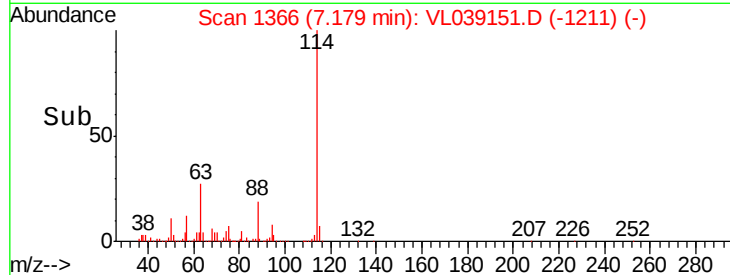
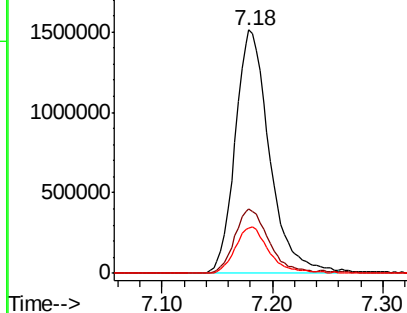
#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.18  
 Delta R.T. MSVOA\_L  
 Lab File: ClientSampleId :  
 Acq: 1 Jun 2022 17:09

Tot Ion:114 Resp: 3256702

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 114 | 100   |       |       |
| 63  | 27.5  | 21.7  | 32.5  |
| 88  | 19.0  | 14.8  | 22.2  |



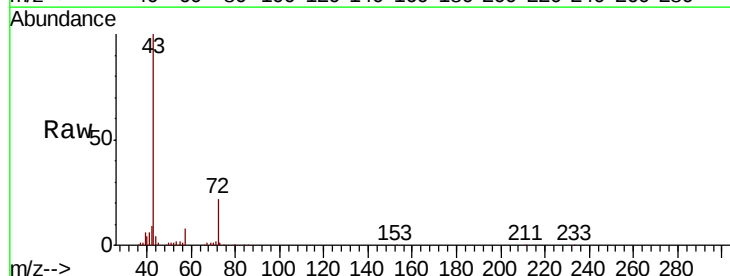
Abundance Ion 114.10 (113.80 to 114.80): VL0  
 Ion 63.10 (62.80 to 63.80): VL0  
 Ion 88.10 (87.80 to 88.80): VL0



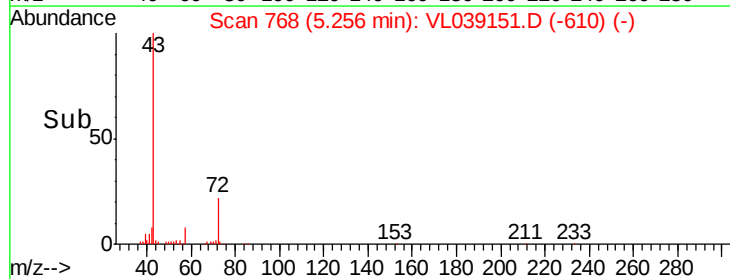
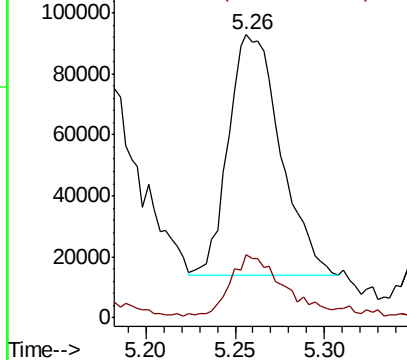
#34  
 2-Butanone  
 Concen: 0.904 ppbv  
 RT: 5.26 min Scan# 768  
 Delta R.T. 0.01 min  
 Lab File: VL039151.D  
 Acq: 1 Jun 2022 17:09

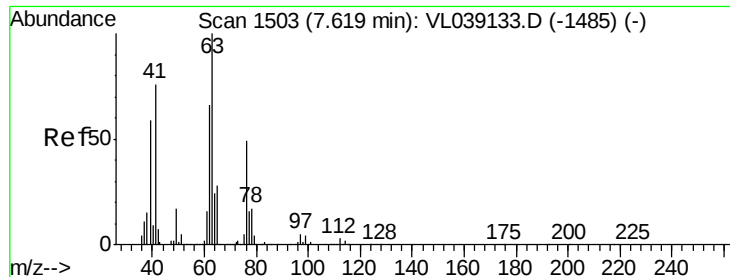
Tgt Ion: 43 Resp: 159880

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 43  | 100   |       |       |
| 72  | 30.6  | 18.2  | 27.2  |



Abundance Ion 43.10 (42.80 to 43.80): VL0  
 Ion 72.10 (71.80 to 72.80): VL0





#39

1,2-Dichloropropane

Concen: 8.139 ppbv

RT: 7.18 Instrument:

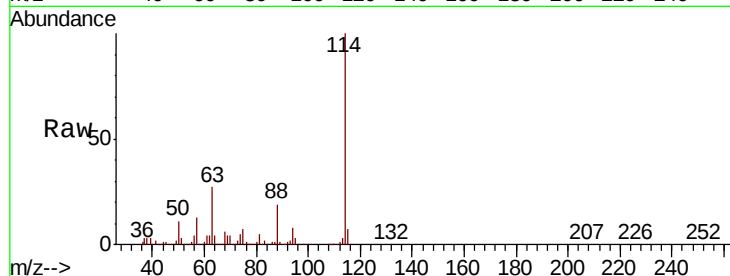
Delta R.T. MSVOA\_L

Lab File: ClientSampleId:

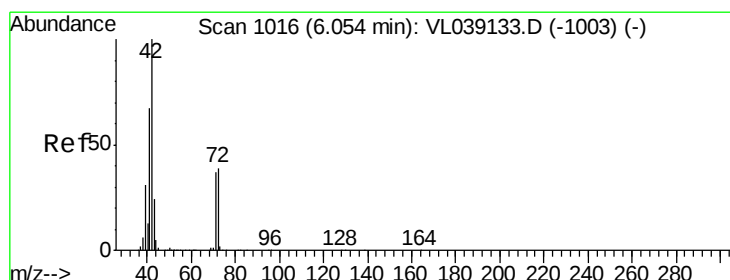
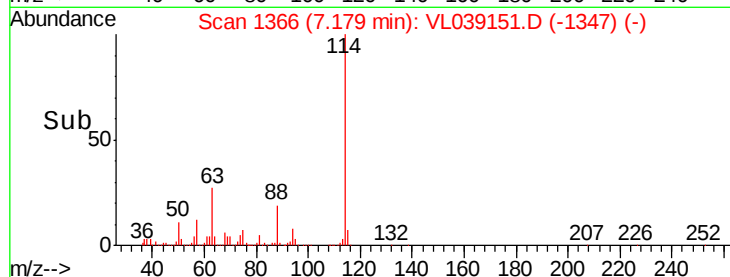
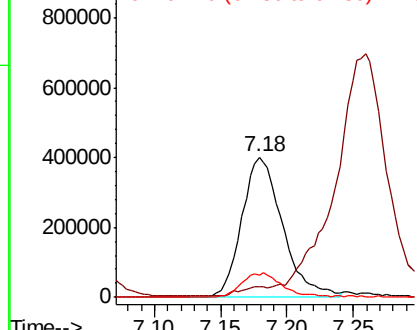
Acq: 1 Jun 2022 17:09 SV1

Tot Ion: 63 Resp: 855970

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 63  | 100   |       |       |
| 41  | 6.9   | 60.8  | 91.2# |
| 62  | 16.0  | 52.9  | 79.3# |



Abundance Ion 63.10 (62.80 to 63.80): VL0  
Ion 41.10 (40.80 to 41.80): VL0  
Ion 62.10 (61.80 to 62.80): VL0



#41

Tetrahydrofuran

Concen: 1.876 ppbv

RT: 5.98 min Scan# 994

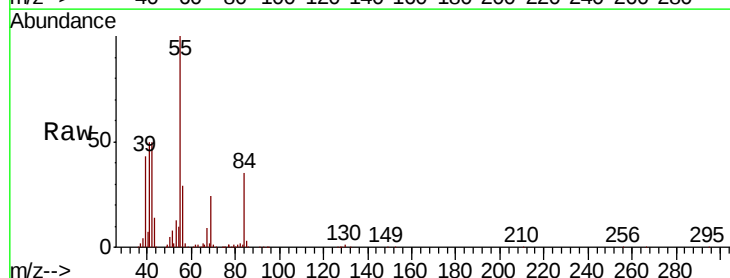
Delta R.T. -0.07 min

Lab File: VL039151.D

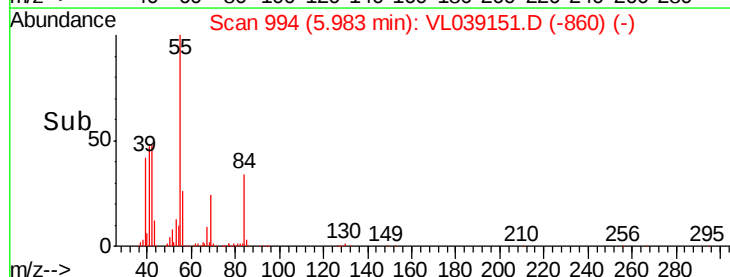
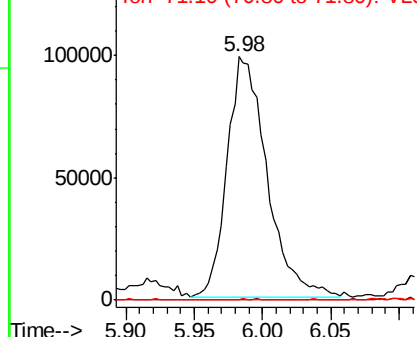
Acq: 1 Jun 2022 17:09

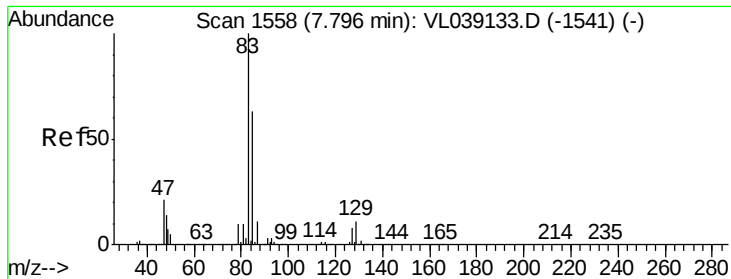
Tgt Ion: 42 Resp: 199677

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 42  | 100   |       |       |
| 72  | 0.0   | 32.0  | 48.0# |
| 71  | 0.0   | 31.1  | 46.7# |



Abundance Ion 42.10 (41.80 to 42.80): VL0  
Ion 72.10 (71.80 to 72.80): VL0  
Ion 71.10 (70.80 to 71.80): VL0

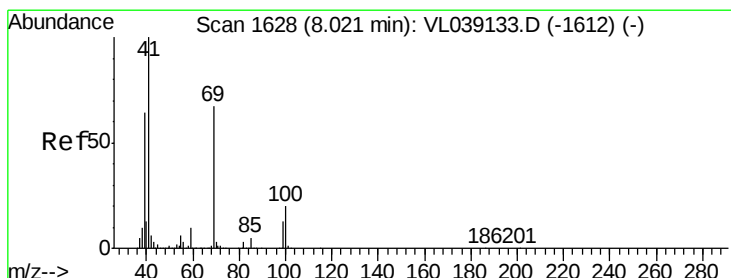
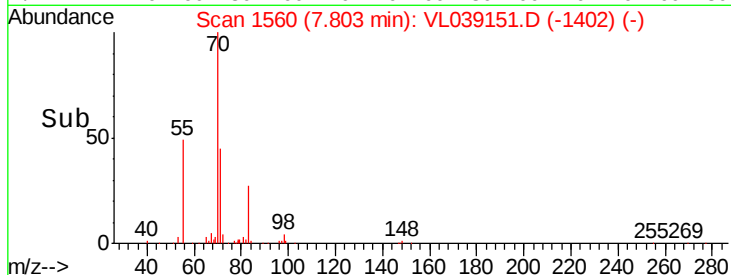
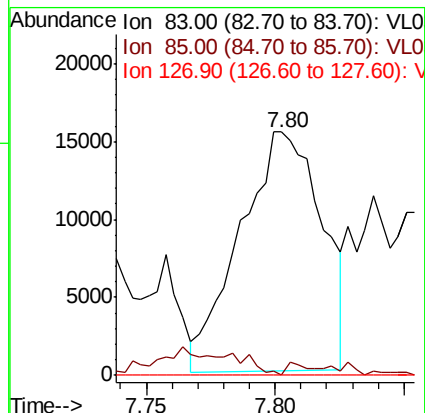
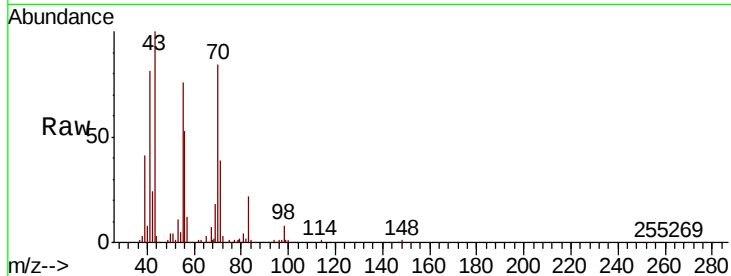




#42

Bromodichloromethane  
 Concen: 0.140 ppbv  
 RT: 7.80  
 Delta R.T. MSVOA\_L  
 Lab File: ClientSampleId:  
 Acq: 1 Jun 2022 17:09

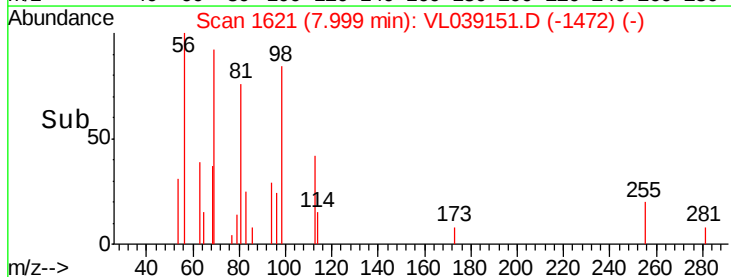
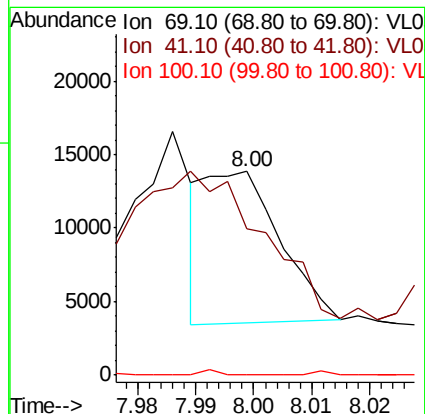
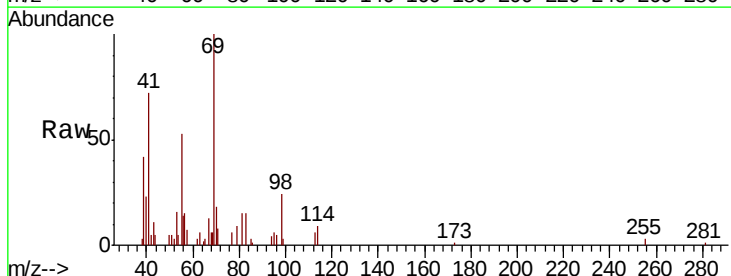
| Tot Ion   | 83    | Resp  | 33922 |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 83        | 100   |       |       |
| 85        | 0.0   | 50.2  | 75.4# |
| 127       | 0.0   | 6.6   | 9.8#  |

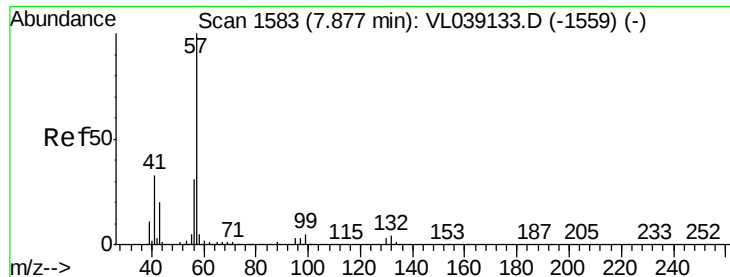


#43

Methyl Methacrylate  
 Concen: 0.090 ppbv  
 RT: 8.00 min Scan# 1621  
 Delta R.T. -0.02 min  
 Lab File: VL039151.D  
 Acq: 1 Jun 2022 17:09

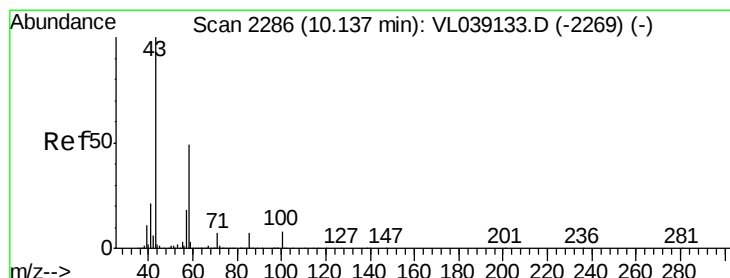
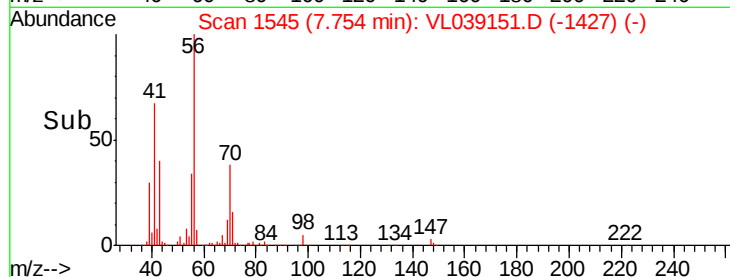
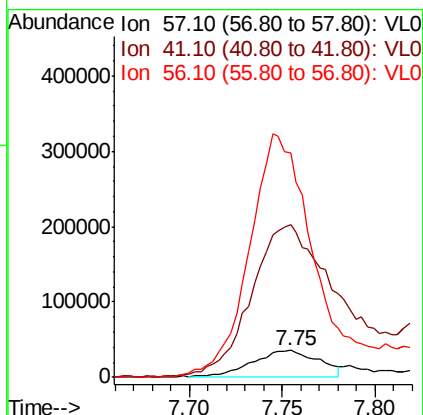
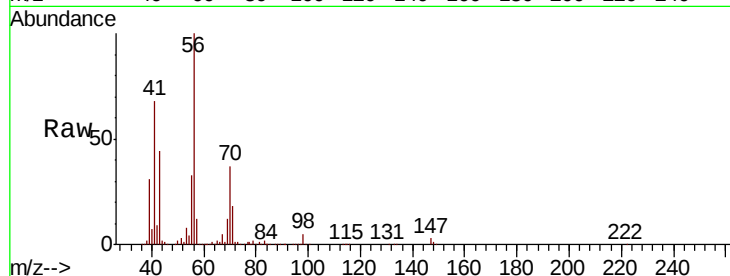
| Tgt Ion   | 69    | Resp  | 9220   |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 69        | 100   |       |        |
| 41        | 0.0   | 121.9 | 182.9# |
| 100       | 0.0   | 24.1  | 36.1#  |





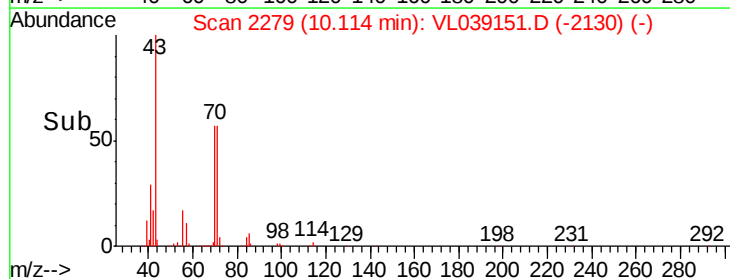
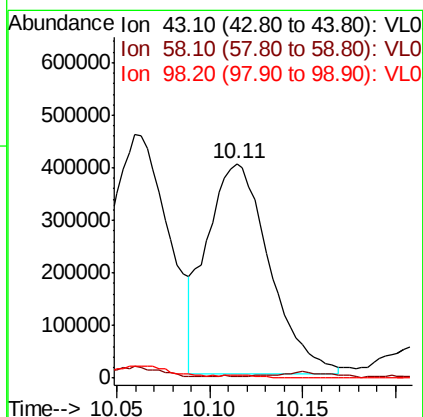
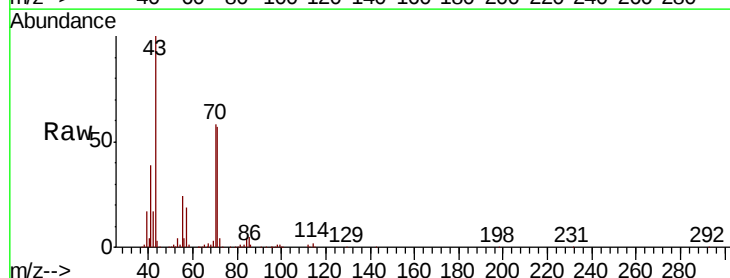
#44  
 2,2,4-Trimethylpentane  
 Concen: 0.186 ppbv  
 RT: 7.75  
 Delta R.T. MSVOA\_L  
 Lab File: ClientSampleId :  
 Acq: 1 Jun 2022 17:09

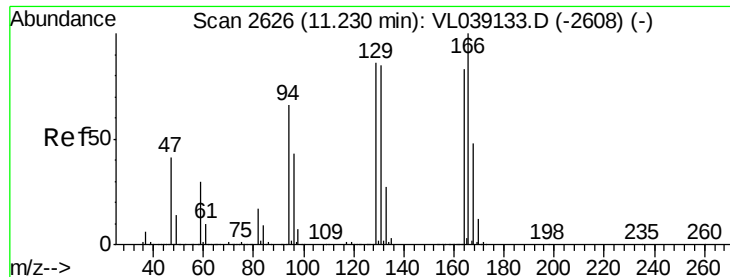
| Tot Ion | 57    | Resp  | 85852 |
|---------|-------|-------|-------|
| Ion     | Ratio | Lower | Upper |
| 57      | 100   |       |       |
| 41      | 763.6 | 26.2  | 39.4# |
| 56      | 955.5 | 24.7  | 37.1# |



#51  
 2-Hexanone  
 Concen: 4.555 ppbv  
 RT: 10.11 min Scan# 2279  
 Delta R.T. -0.02 min  
 Lab File: VL039151.D  
 Acq: 1 Jun 2022 17:09

| Tgt Ion | 43    | Resp  | 938697 |
|---------|-------|-------|--------|
| Ion     | Ratio | Lower | Upper  |
| 43      | 100   |       |        |
| 58      | 3.0   | 40.0  | 60.0#  |
| 98      | 0.0   | 0.1   | 0.1#   |





#52

Tetrachloroethene

Concen: 1.111 ppbv

RT: 11.22

Delta R.T.

Lab File:

Acq: 1 Jun 2022 17:09

Instrument:

MSVOA\_L

ClientSampleId:

SV1

Tot Ion:164 Resp: 114690

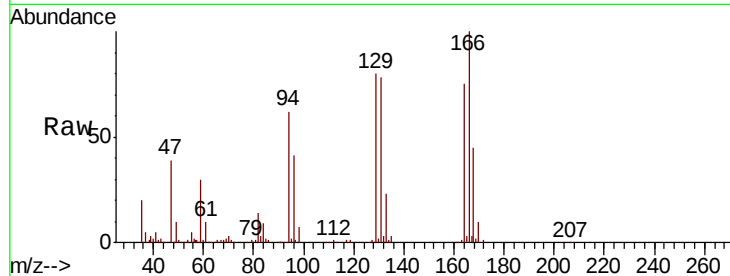
Ion Ratio Lower Upper

164 100

166 133.3 96.3 144.5

129 106.4 82.5 123.7

131 104.2 82.1 123.1

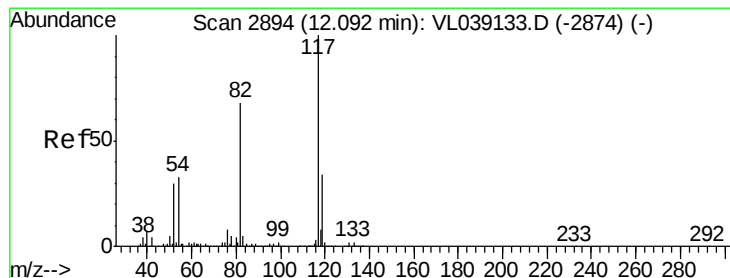
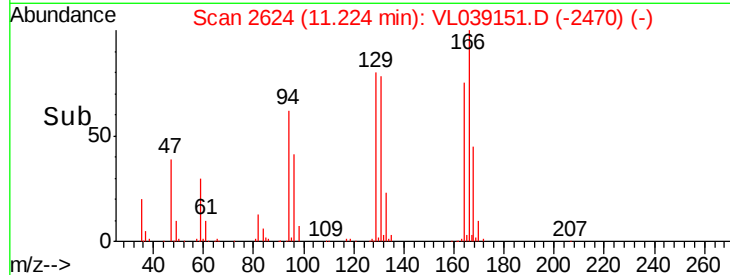
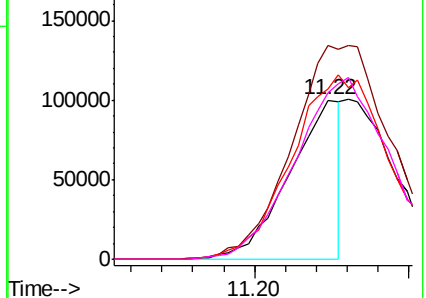


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.09 min Scan# 2893

Delta R.T. -0.00 min

Lab File: VL039151.D

Acq: 1 Jun 2022 17:09

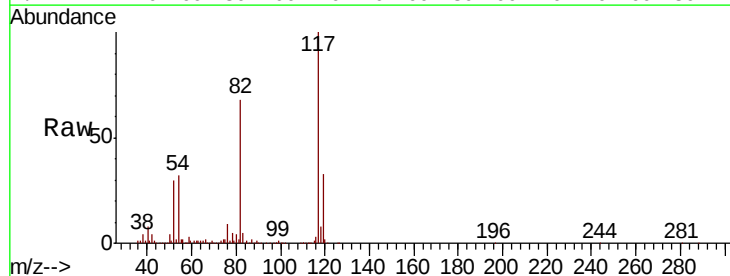
Tgt Ion:117 Resp: 2999023

Ion Ratio Lower Upper

117 100

82 73.3 55.1 82.7

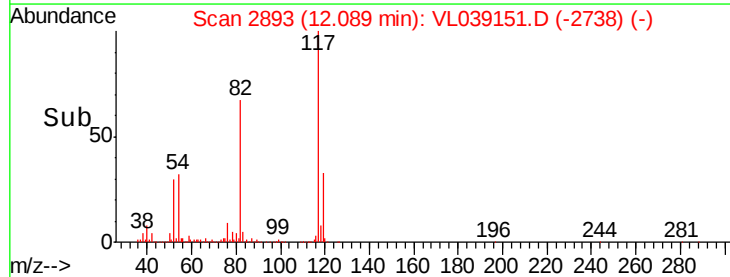
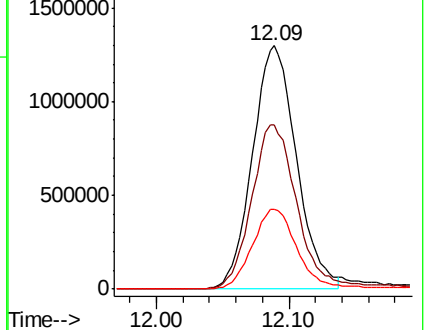
119 34.4 24.7 37.1

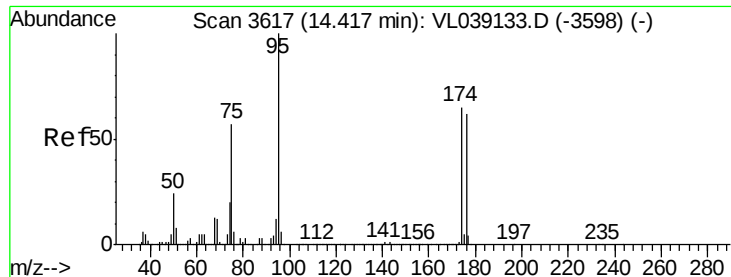


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): V

Ion 119.10 (118.80 to 119.80): V





#68

1-Bromo-4-Fluorobenzene

Concen: 10.352 ppbv

RT: 14.42 Instrument :

Delta R.T MSVOA\_L

Lab File: ClientSampleId :

Acq: 1 Jun 2022 17:09 SV1

Tot Ion: 95 Resp: 2566770

Ion Ratio Lower Upper

95 100

174 68.0 53.8 80.8

175 5.0 4.1 6.1

