

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL040821\  
 Data File : VL036763.D  
 Acq On : 8 Apr 2021 23:48  
 Operator : SY/AP  
 Sample : M1981-02DL2 80X  
 Misc : 400mL/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SG-4DL2

Quant Time: Apr 09 08:42:21 2021  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032521AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Mar 25 09:42:40 2021  
 QLast Update : Thu Mar 25 09:42:40 2021  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.65  | 49   | 1413652  | 10.00 | ppbv  | -0.02    |
| 33) 1,4-Difluorobenzene | 7.16  | 114  | 3450579  | 10.00 | ppbv  | -0.02    |
| 55) Chlorobenzene-d5    | 12.07 | 117  | 2763782  | 10.00 | ppbv  | -0.02    |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.41  | 95    | 1742819  | 7.91     | ppbv | -0.01  |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 79.10% |

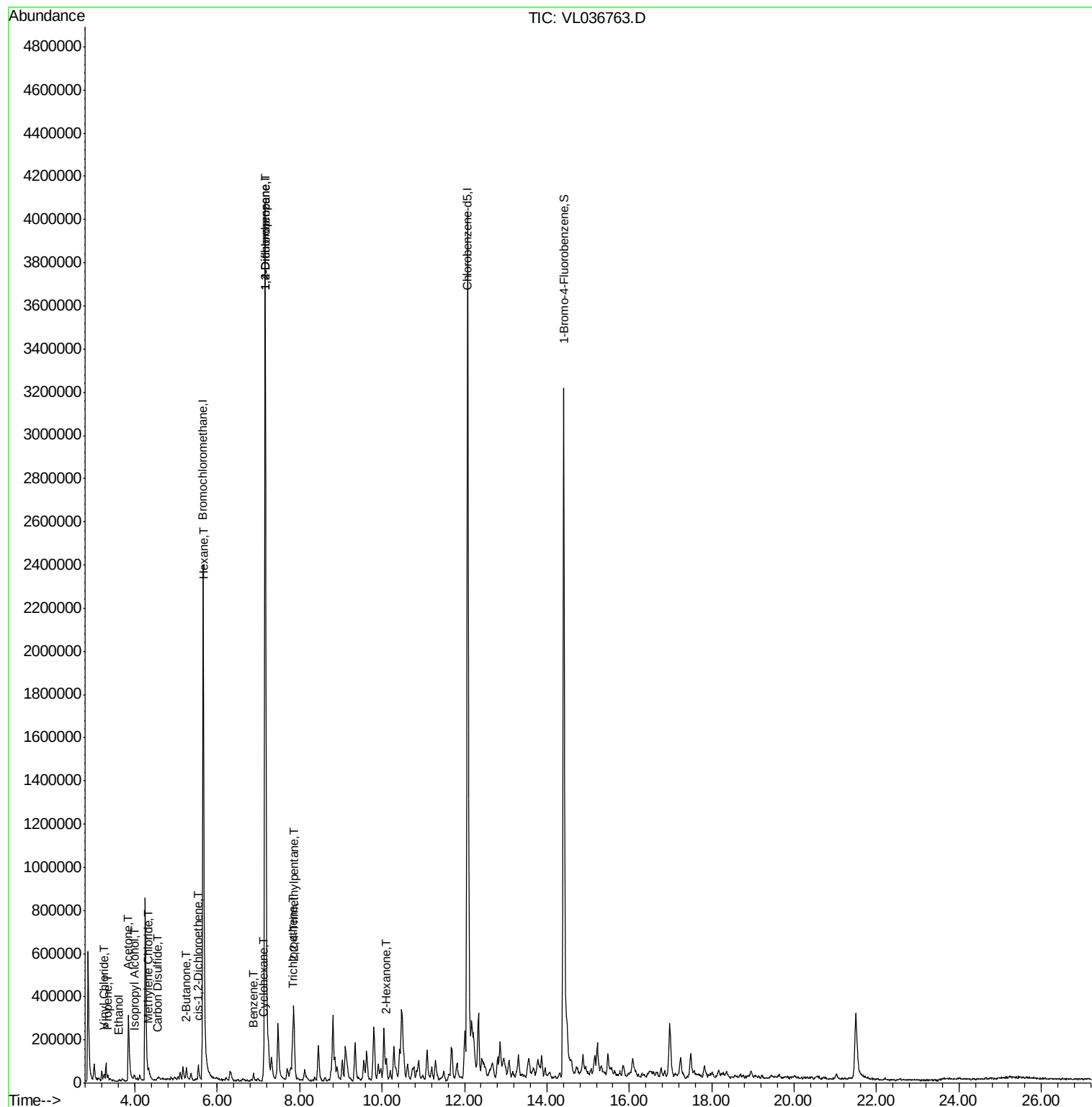
| Target Compounds           | R.T.  | QIon | Response | Conc  | Units  | Ovalue |
|----------------------------|-------|------|----------|-------|--------|--------|
| 5) Vinyl Chloride          | 3.25  | 62   | 15623    | 0.163 | ppbv # | 88     |
| 9) Propene                 | 3.35  | 41   | 3436     | 0.041 | ppbv   | 85     |
| 13) Ethanol                | 3.60  | 45   | 1034     | 0.103 | ppbv # | 34     |
| 15) Acetone                | 3.84  | 43   | 418910   | 3.011 | ppbv   | 95     |
| 19) Isopropyl Alcohol      | 3.98  | 45   | 17683    | 0.231 | ppbv # | 1      |
| 20) Methylene Chloride     | 4.33  | 84   | 9109     | 0.140 | ppbv # | 67     |
| 26) Hexane                 | 5.67  | 57   | 8641     | 0.056 | ppbv # | 53     |
| 27) Carbon Disulfide       | 4.54  | 76   | 7168     | 0.047 | ppbv # | 26     |
| 30) Cyclohexane            | 7.12  | 84   | 4436     | 0.036 | ppbv # | 1      |
| 31) cis-1,2-Dichloroethene | 5.54  | 61   | 39548    | 0.266 | ppbv   | 97     |
| 34) 2-Butanone             | 5.25  | 43   | 71480    | 0.424 | ppbv # | 80     |
| 36) Benzene                | 6.88  | 78   | 21036    | 0.066 | ppbv   | 98     |
| 38) Trichloroethene        | 7.83  | 130  | 46246    | 0.373 | ppbv # | 80     |
| 39) 1,2-Dichloropropane    | 7.16  | 63   | 894125   | 6.926 | ppbv # | 23     |
| 44) 2,2,4-Trimethylpentane | 7.85  | 57   | 107932   | 0.193 | ppbv # | 1      |
| 51) 2-Hexanone             | 10.10 | 43   | 20285    | 0.165 | ppbv # | 39     |

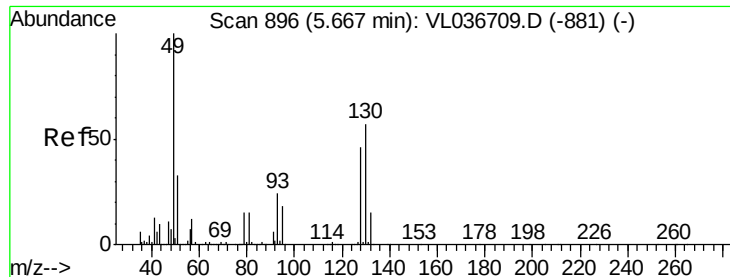
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Mar 25 09:42:40 2021  
QLast Update : Thu Mar 25 09:42:40 2021  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 892

Delta R.T. -0.02 min

Lab File: VL036763.D

Acq: 8 Apr 2021 23:48

Instrument :

MSVOA\_L

ClientSampleId :

SG-4DL2

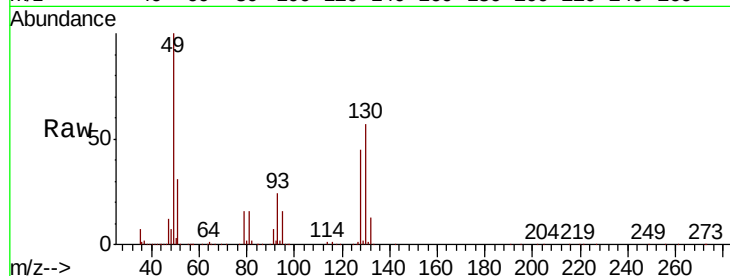
Tot Ion: 49 Resp: 1413652

Ion Ratio Lower Upper

49 100

128 47.7 23.5 70.6

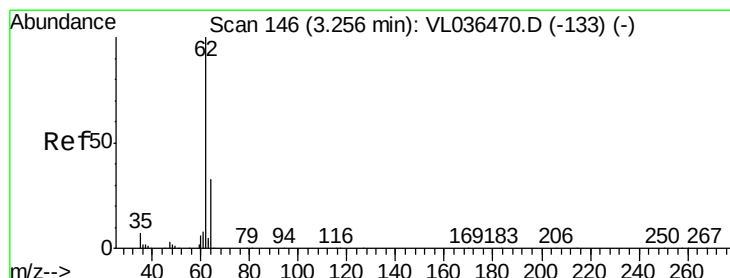
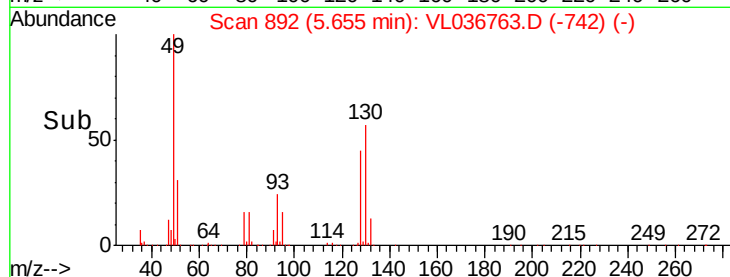
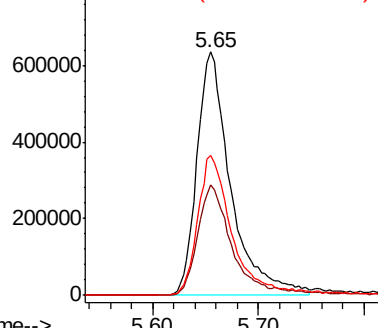
130 59.3 29.1 87.4



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#5

Vinyl Chloride

Concen: 0.163 ppbv

RT: 3.25 min Scan# 144

Delta R.T. -0.01 min

Lab File: VL036763.D

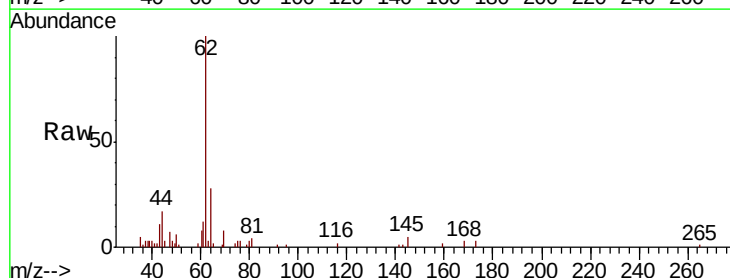
Acq: 8 Apr 2021 23:48

Tgt Ion: 62 Resp: 15623

Ion Ratio Lower Upper

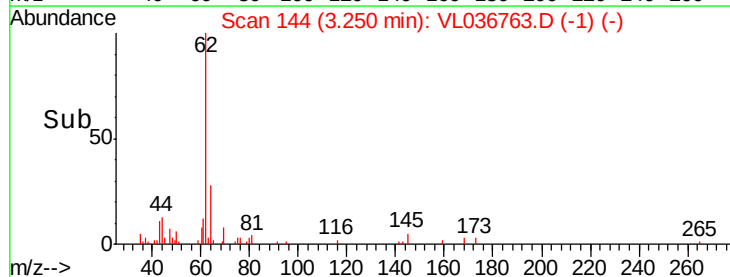
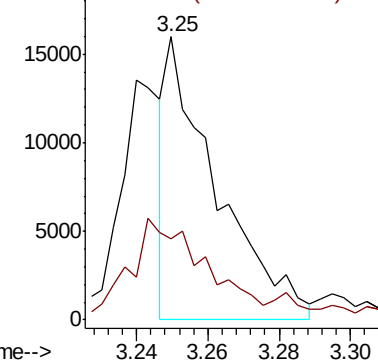
62 100

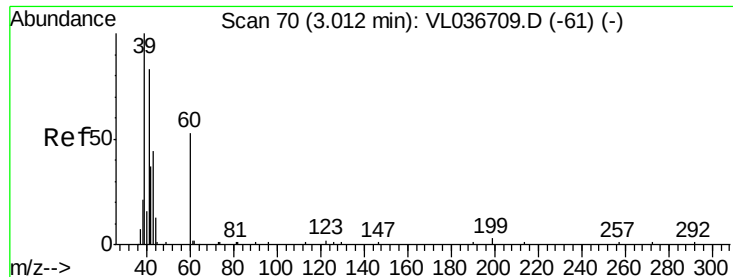
64 26.0 26.4 39.6#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0





#9

Propene

Concen: 0.041 ppbv

RT: 3.35 min Scan# 174

Delta R.T. 0.34 min

Lab File: VL036763.D

Acq: 8 Apr 2021 23:48

Instrument :

MSVOA\_L

ClientSampleId :

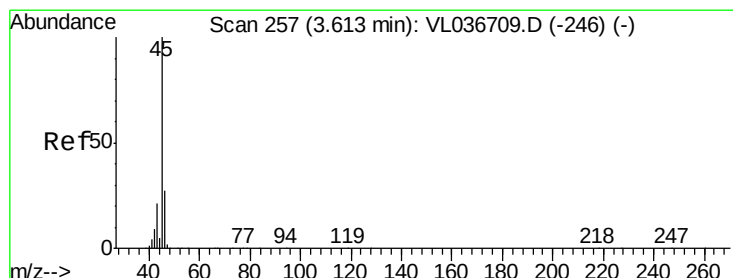
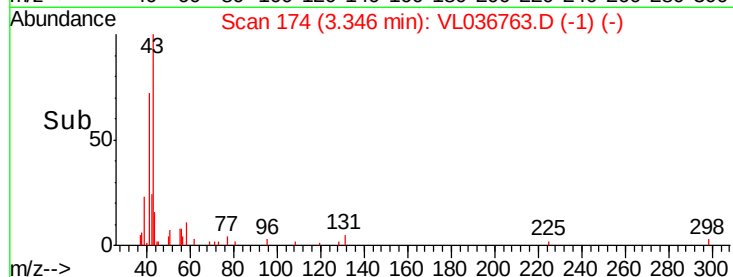
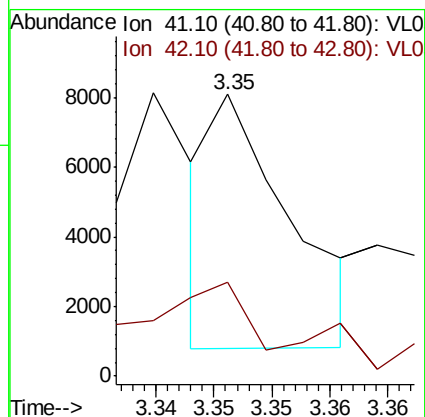
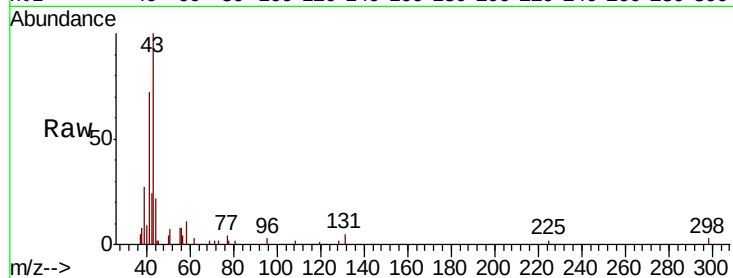
SG-4DL2

Tot Ion: 41 Resp: 3436

Ion Ratio Lower Upper

41 100

42 59.0 57.0 85.4



#13

Ethanol

Concen: 0.103 ppbv

RT: 3.60 min Scan# 253

Delta R.T. -0.01 min

Lab File: VL036763.D

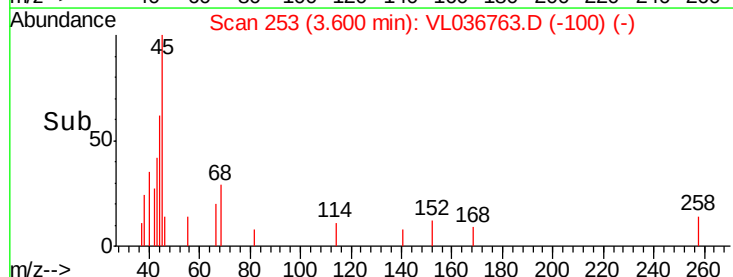
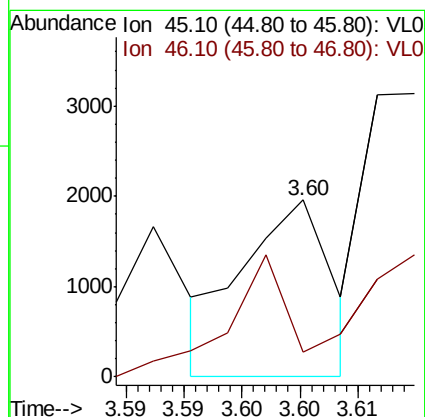
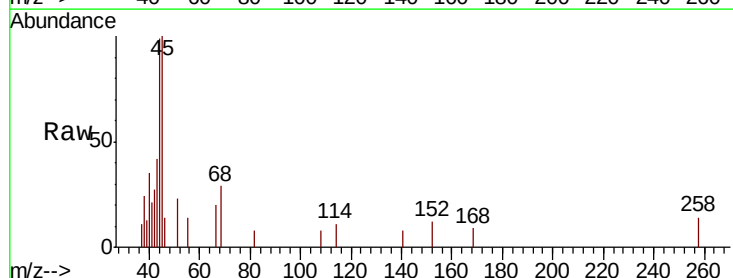
Acq: 8 Apr 2021 23:48

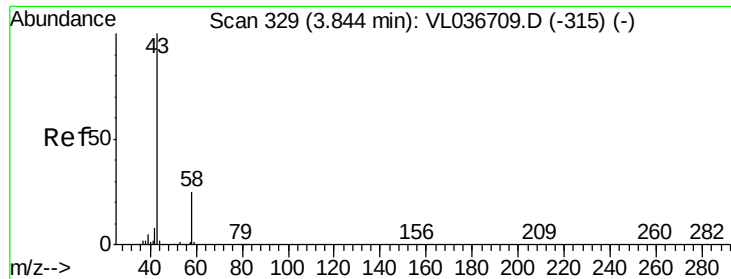
Tgt Ion: 45 Resp: 1034

Ion Ratio Lower Upper

45 100

46 0.0 16.6 66.2#

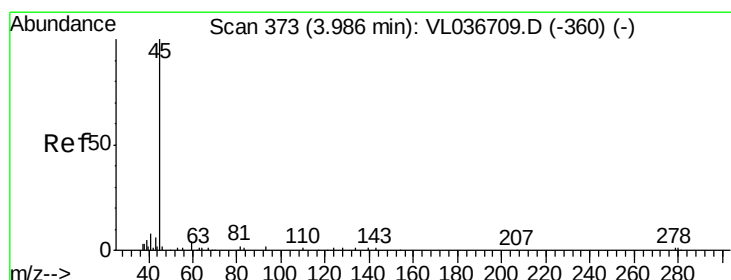
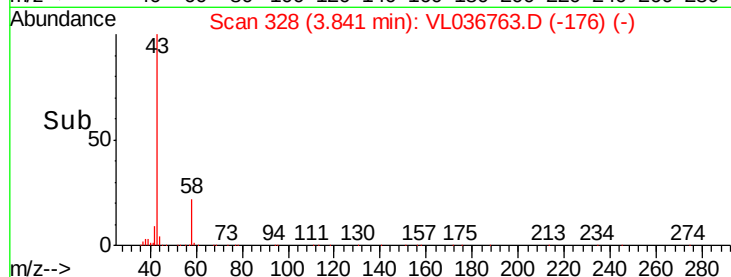
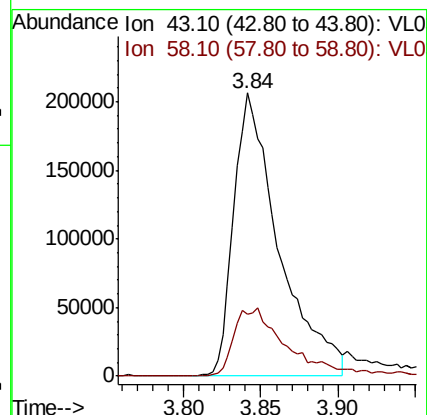
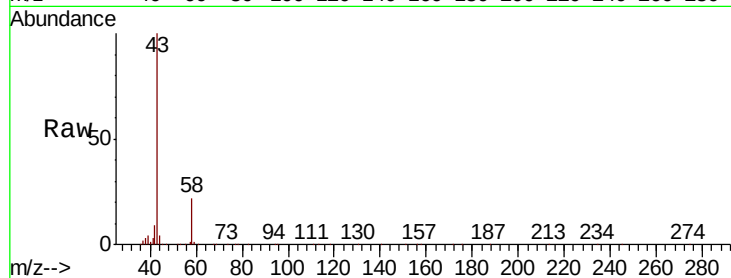




#15  
Acetone  
Concen: 3.011 ppbv  
RT: 3.84 min Scan# 328  
Delta R.T. -0.01 min  
Lab File: VL036763.D  
Acq: 8 Apr 2021 23:48

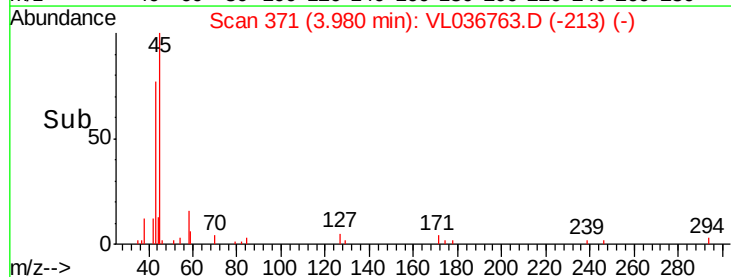
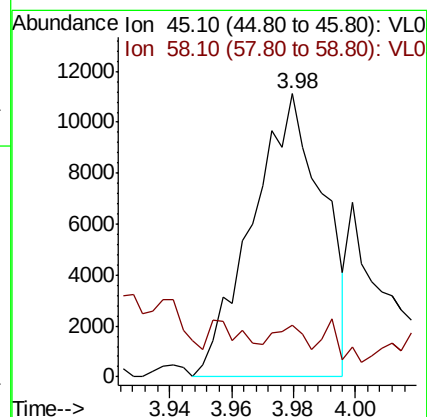
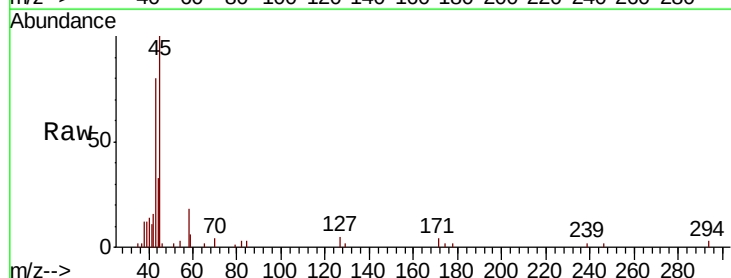
Instrument :  
MSVOA\_L  
ClientSampleId :  
SG-4DL2

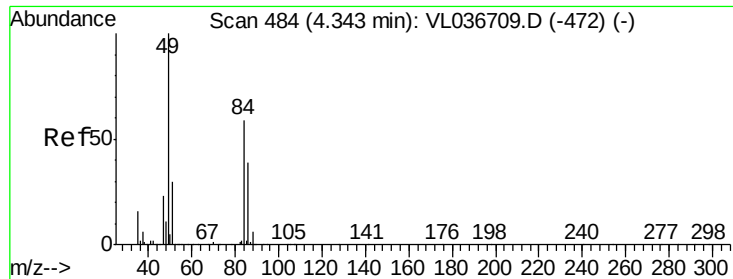
Tot Ion: 43 Resp: 418910  
Ion Ratio Lower Upper  
43 100  
58 29.3 21.2 31.8



#19  
Isopropyl Alcohol  
Concen: 0.231 ppbv  
RT: 3.98 min Scan# 371  
Delta R.T. 0.01 min  
Lab File: VL036763.D  
Acq: 8 Apr 2021 23:48

Tgt Ion: 45 Resp: 17683  
Ion Ratio Lower Upper  
45 100  
58 693.9 2.9 4.3#

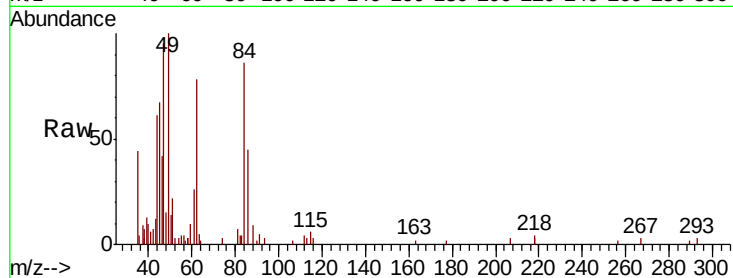




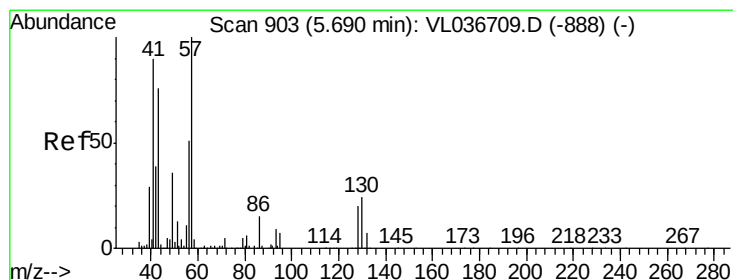
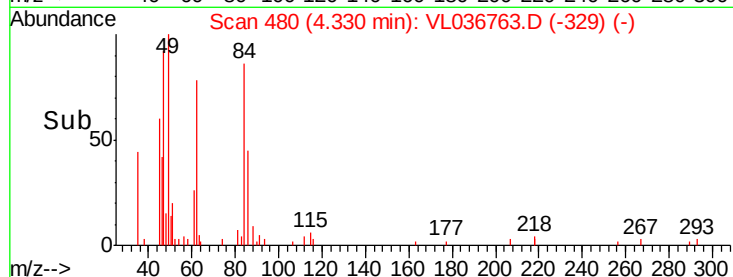
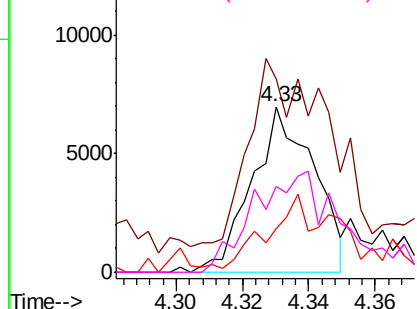
#20  
Methylene Chloride  
Concen: 0.140 ppbv  
RT: 4.33 min Scan# 480  
Delta R.T. -0.01 min  
Lab File: VL036763.D  
Acq: 8 Apr 2021 23:48

Instrument :  
MSVOA\_L  
ClientSampled :  
SG-4DL2

Tot Ion: 84 Resp: 9109  
Ion Ratio Lower Upper  
84 100  
49 100.8 122.9 184.3#  
51 22.6 36.9 55.3#  
86 51.8 48.2 72.4

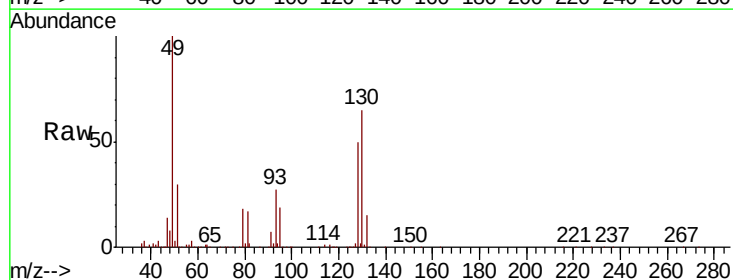


Abundance Ion 84.00 (83.70 to 84.70): VL0  
Ion 49.10 (48.80 to 49.80): VL0  
Ion 51.10 (50.80 to 51.80): VL0  
Ion 86.00 (85.70 to 86.70): VL0

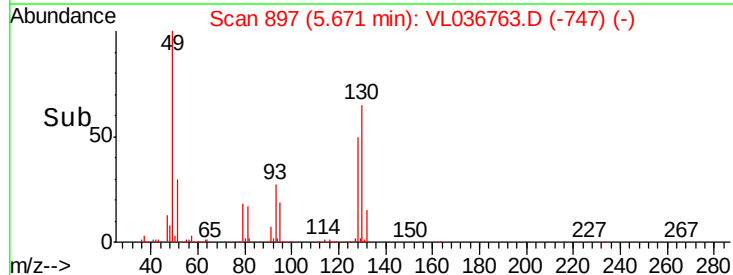
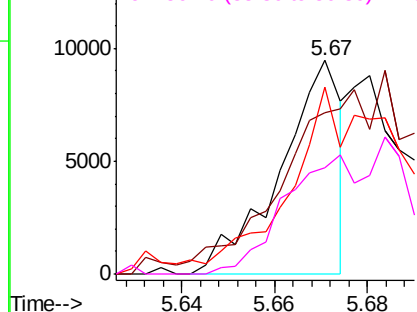


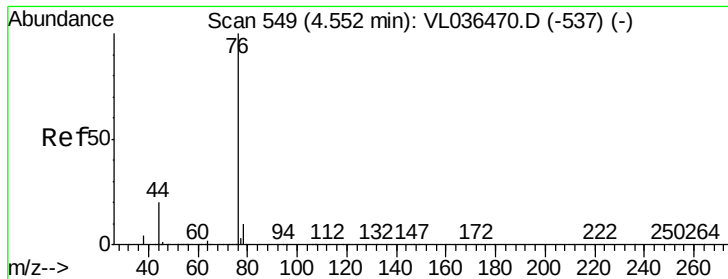
#26  
Hexane  
Concen: 0.056 ppbv  
RT: 5.67 min Scan# 897  
Delta R.T. -0.02 min  
Lab File: VL036763.D  
Acq: 8 Apr 2021 23:48

Tgt Ion: 57 Resp: 8641  
Ion Ratio Lower Upper  
57 100  
41 0.0 77.2 115.8#  
43 191.0 173.8 260.6  
56 0.0 43.8 65.6#



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





#27

Carbon Disulfide

Concen: 0.047 ppbv

RT: 4.54 min Scan# 545

Delta R.T. -0.01 min

Lab File: VL036763.D

Acq: 8 Apr 2021 23:48

Instrument :

MSVOA\_L

ClientSampleId :

SG-4DL2

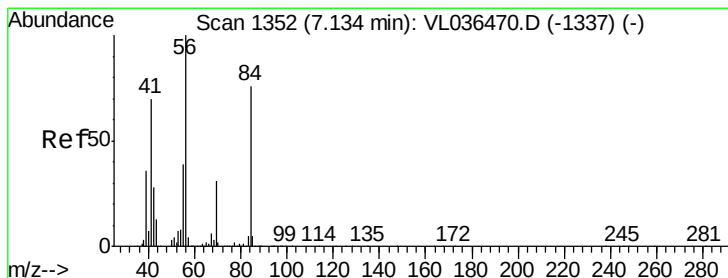
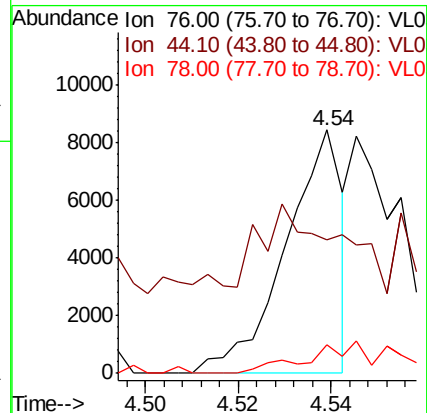
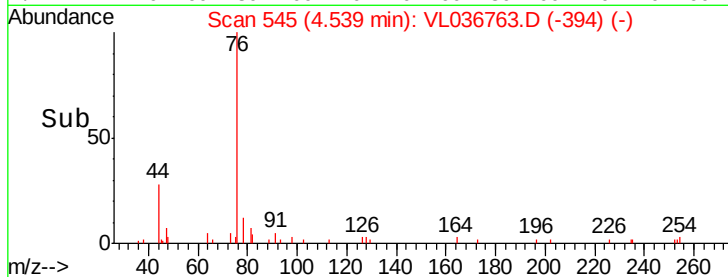
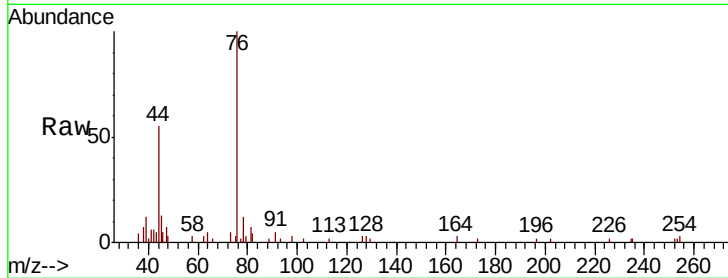
Tot Ion: 76 Resp: 7168

Ion Ratio Lower Upper

76 100

44 67.5 17.5 26.3#

78 0.0 8.6 13.0#



#30

Cyclohexane

Concen: 0.036 ppbv

RT: 7.12 min Scan# 1347

Delta R.T. -0.02 min

Lab File: VL036763.D

Acq: 8 Apr 2021 23:48

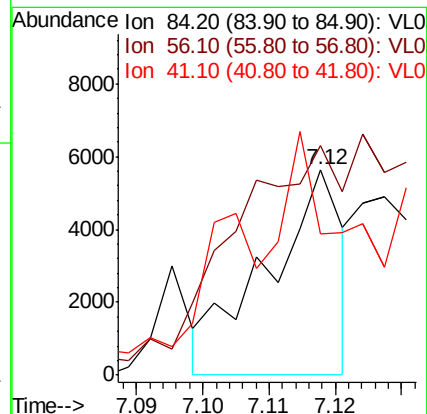
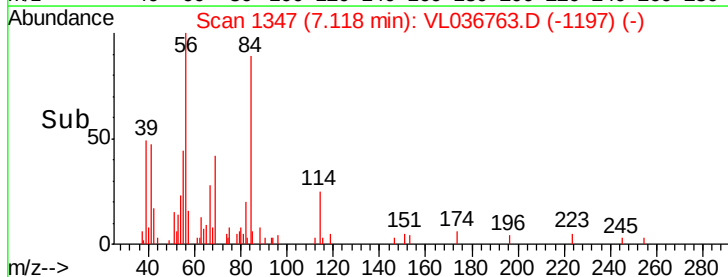
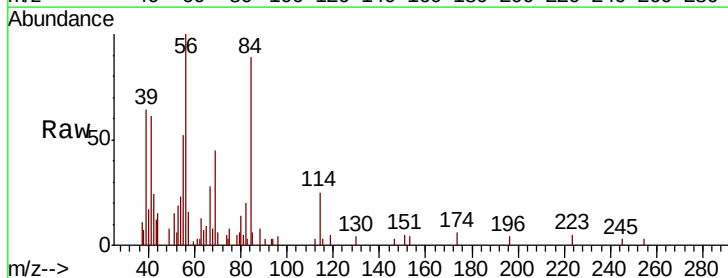
Tgt Ion: 84 Resp: 4436

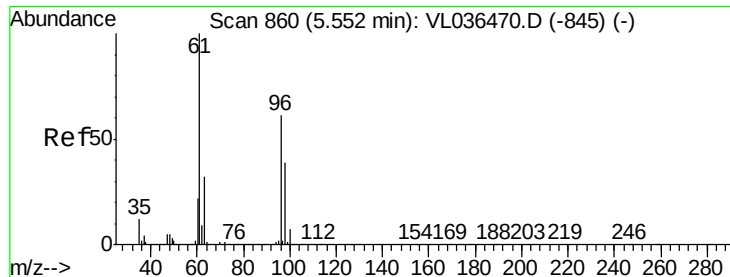
Ion Ratio Lower Upper

84 100

56 0.0 114.6 171.8#

41 300.8 75.3 112.9#



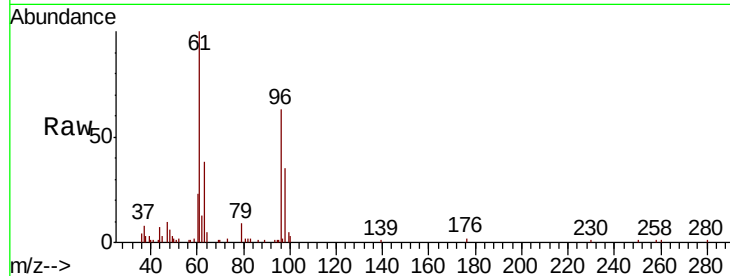


#31

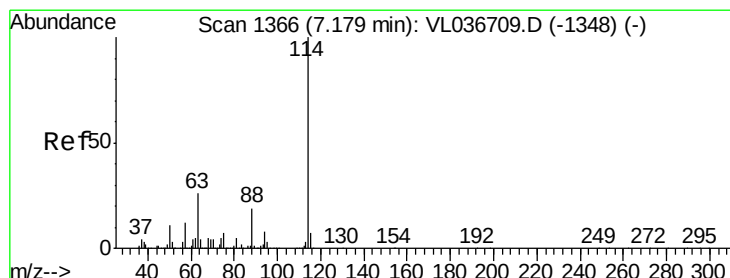
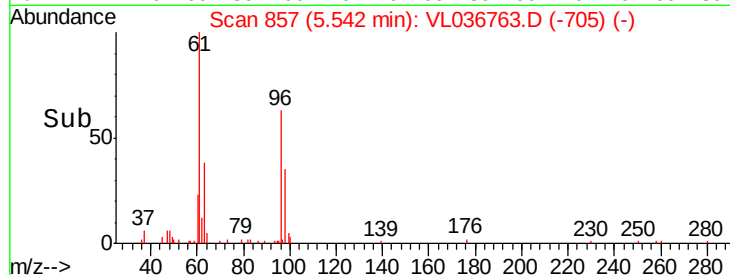
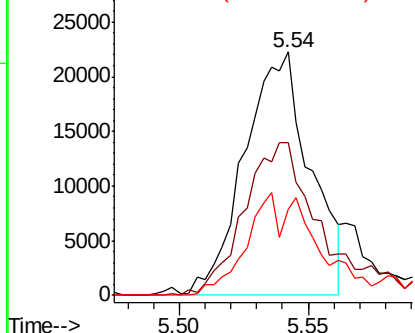
cis-1,2-Dichloroethene  
 Concen: 0.266 ppbv  
 RT: 5.54 min Scan# 857  
 Delta R.T. -0.01 min  
 Lab File: VL036763.D  
 Acq: 8 Apr 2021 23:48

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SG-4DL2

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 61      | 100   |       |       |
| 96      | 61.3  | 48.7  | 73.1  |
| 98      | 35.4  | 31.4  | 47.0  |



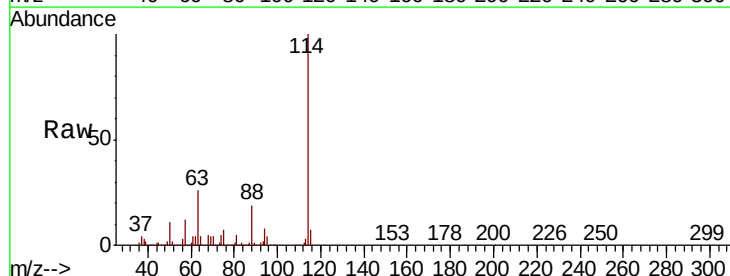
Abundance Ion 61.10 (60.80 to 61.80): VL0  
 Ion 96.00 (95.70 to 96.70): VL0  
 Ion 98.00 (97.70 to 98.70): VL0



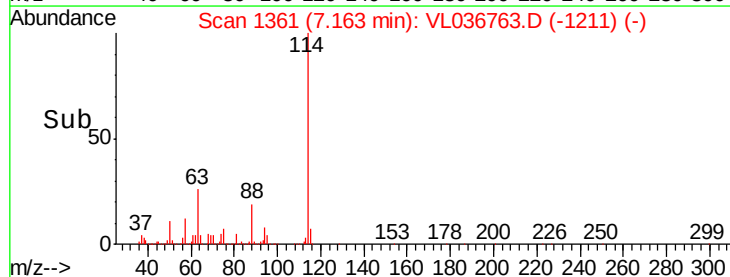
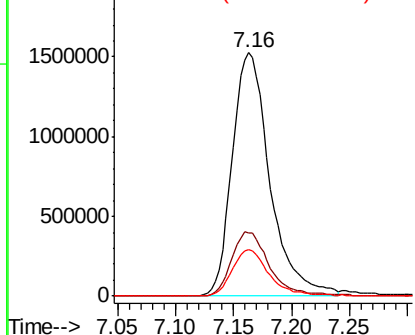
#33

1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.16 min Scan# 1361  
 Delta R.T. -0.02 min  
 Lab File: VL036763.D  
 Acq: 8 Apr 2021 23:48

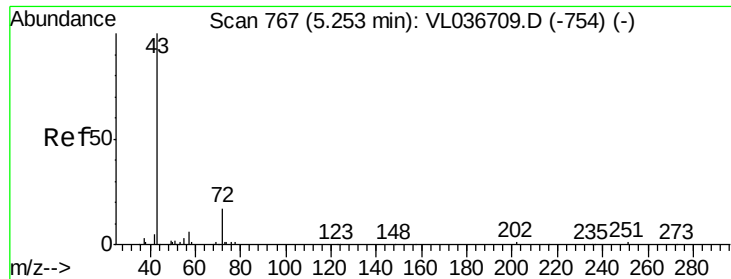
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 26.9  | 22.4  | 33.6  |
| 88      | 19.0  | 15.4  | 23.0  |



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



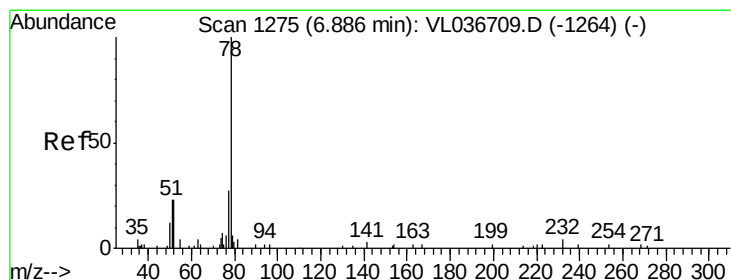
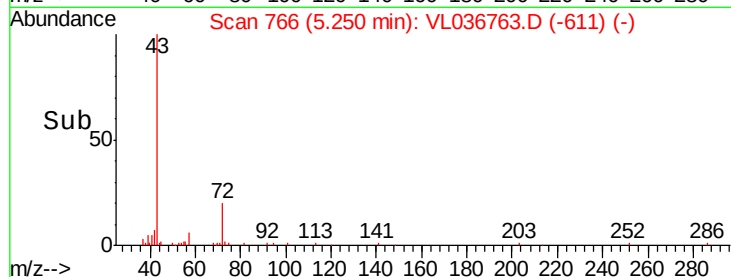
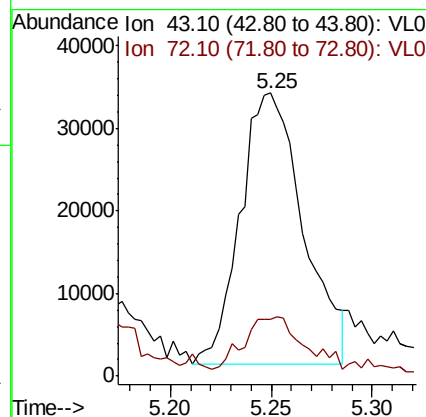
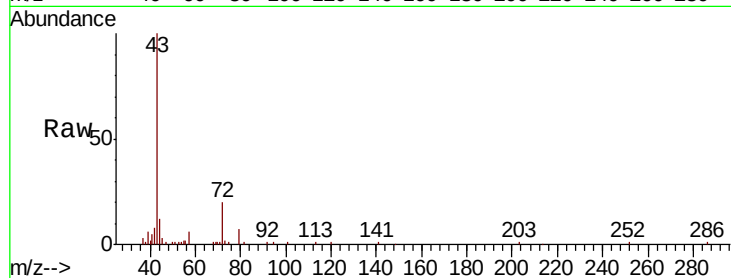




#34  
 2-Butanone  
 Concen: 0.424 ppbv  
 RT: 5.25 min Scan# 766  
 Delta R.T. -0.00 min  
 Lab File: VL036763.D  
 Acq: 8 Apr 2021 23:48

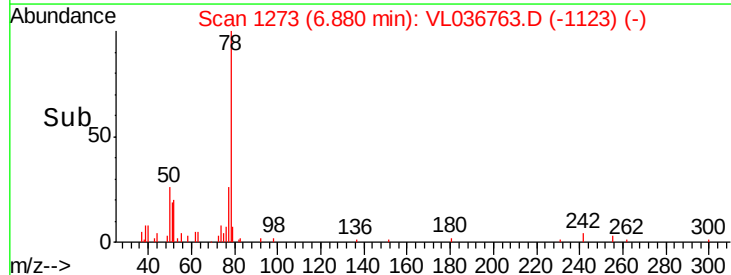
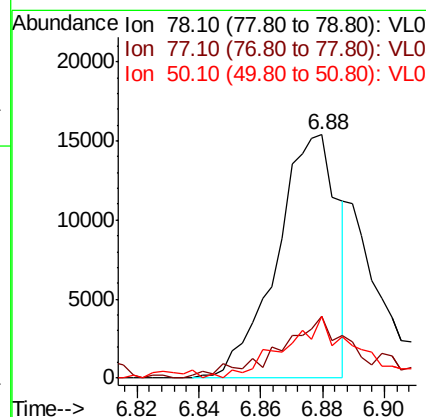
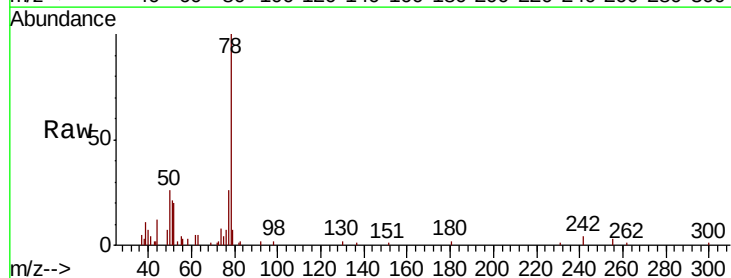
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SG-4DL2

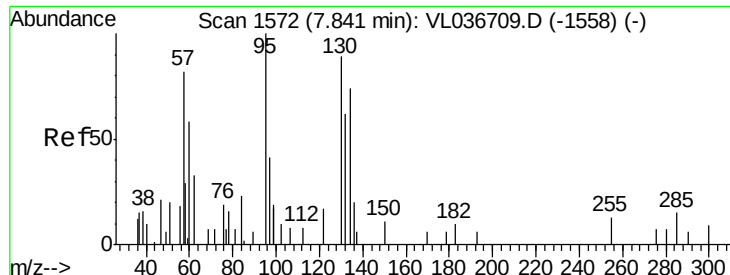
Tot Ion: 43 Resp: 71480  
 Ion Ratio Lower Upper  
 43 100  
 72 30.8 17.0 25.6#



#36  
 Benzene  
 Concen: 0.066 ppbv  
 RT: 6.88 min Scan# 1273  
 Delta R.T. -0.02 min  
 Lab File: VL036763.D  
 Acq: 8 Apr 2021 23:48

Tgt Ion: 78 Resp: 21036  
 Ion Ratio Lower Upper  
 78 100  
 77 24.2 18.0 27.0  
 50 20.2 16.5 24.7





#38

Trichloroethene

Concen: 0.373 ppbv

RT: 7.83 min Scan# 1567

Delta R.T. -0.02 min

Lab File: VL036763.D

Acq: 8 Apr 2021 23:48

Instrument :

MSVOA\_L

ClientSampleId :

SG-4DL2

Tot Ion:130 Resp: 46246

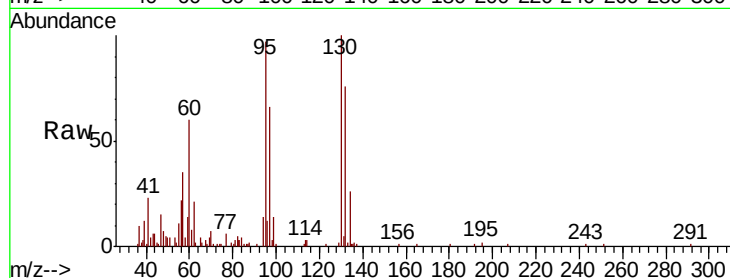
Ion Ratio Lower Upper

130 100

95 95.5 95.7 143.5#

132 74.3 76.2 114.4#

97 64.5 61.8 92.6

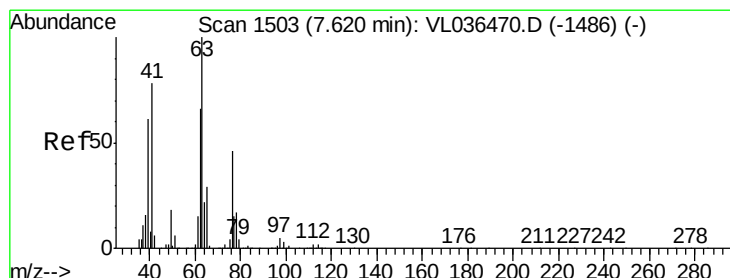
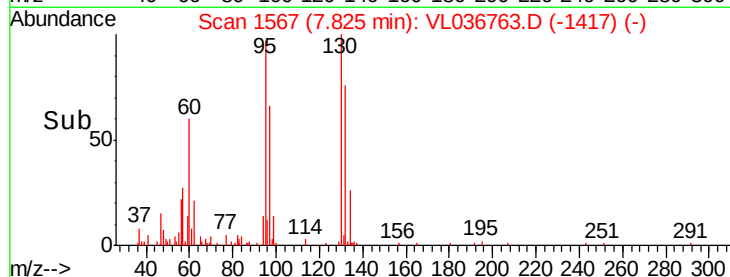
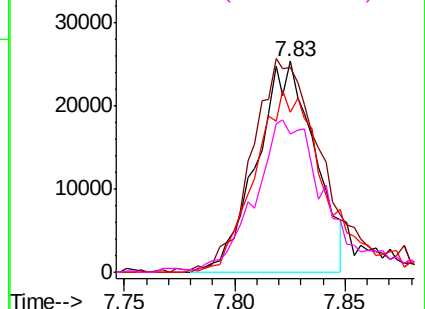


Abundance Ion 130.00 (129.70 to 130.70): V

Ion 95.00 (94.70 to 95.70): VL0

Ion 132.00 (131.70 to 132.70): V

Ion 97.00 (96.70 to 97.70): VL0



#39

1,2-Dichloropropane

Concen: 6.926 ppbv

RT: 7.16 min Scan# 1360

Delta R.T. -0.46 min

Lab File: VL036763.D

Acq: 8 Apr 2021 23:48

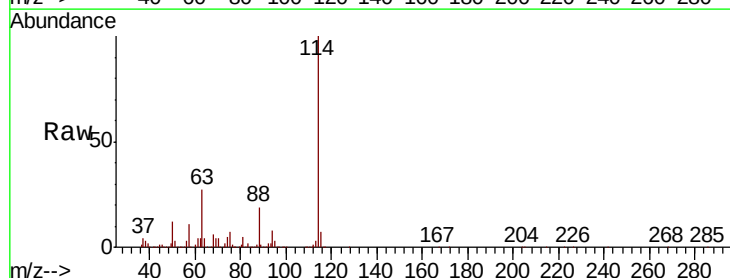
Tgt Ion: 63 Resp: 894125

Ion Ratio Lower Upper

63 100

41 0.0 62.4 93.6#

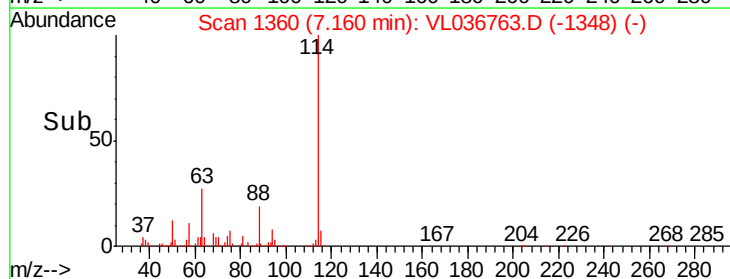
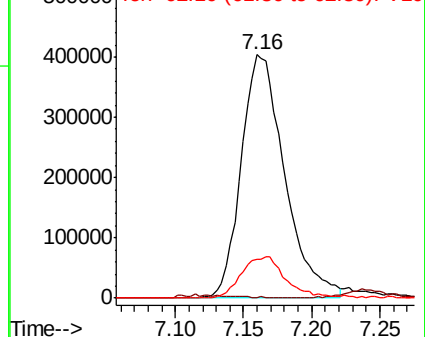
62 16.1 52.8 79.2#

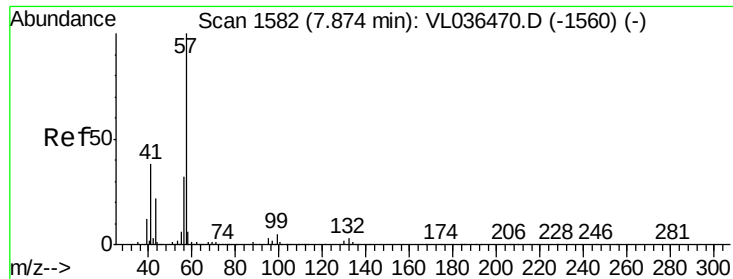


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0

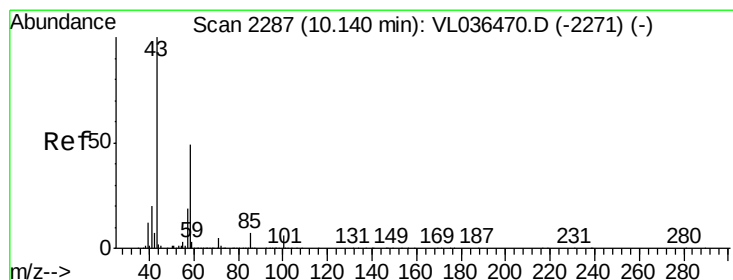
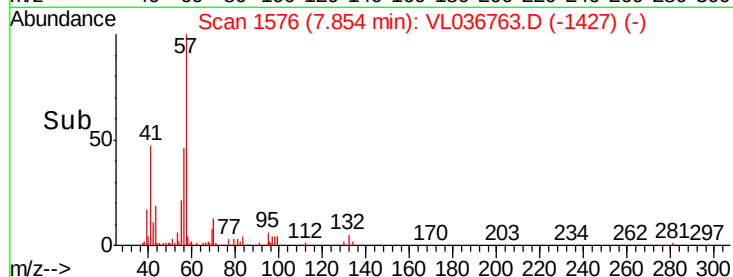
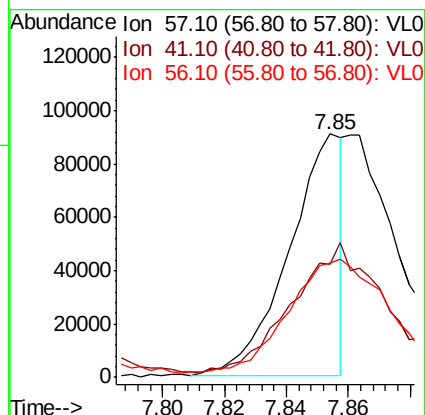
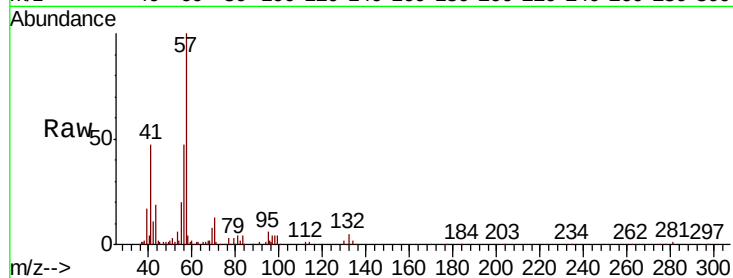




#44  
 2,2,4-Trimethylpentane  
 Concen: 0.193 ppbv  
 RT: 7.85 min Scan# 1576  
 Delta R.T. -0.02 min  
 Lab File: VL036763.D  
 Acq: 8 Apr 2021 23:48

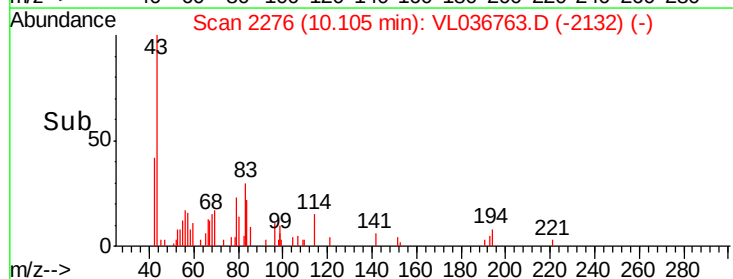
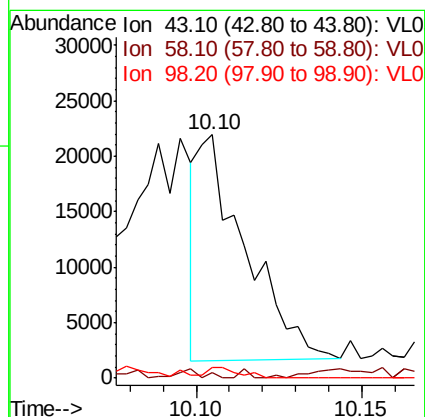
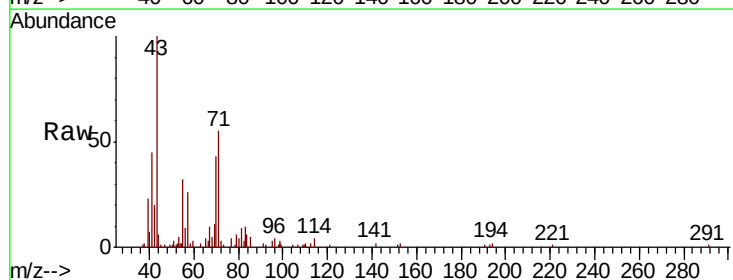
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SG-4DL2

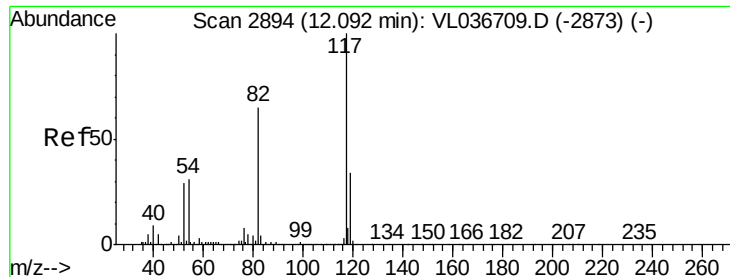
Tot Ion: 57 Resp: 107932  
 Ion Ratio Lower Upper  
 57 100  
 41 103.0 28.8 43.2#  
 56 101.5 26.1 39.1#



#51  
 2-Hexanone  
 Concen: 0.165 ppbv  
 RT: 10.10 min Scan# 2276  
 Delta R.T. -0.04 min  
 Lab File: VL036763.D  
 Acq: 8 Apr 2021 23:48

Tgt Ion: 43 Resp: 20285  
 Ion Ratio Lower Upper  
 43 100  
 58 6.4 37.7 56.5#  
 98 0.0 0.2 0.2#

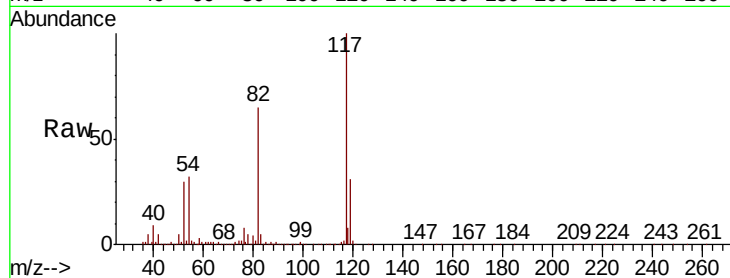




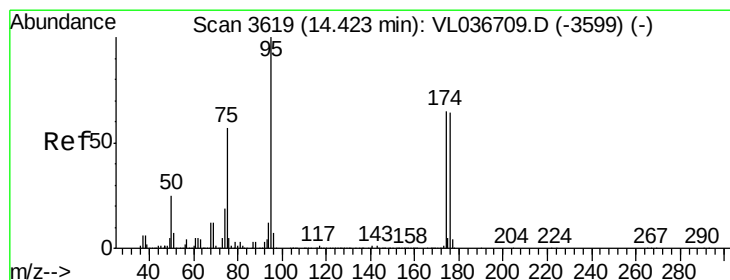
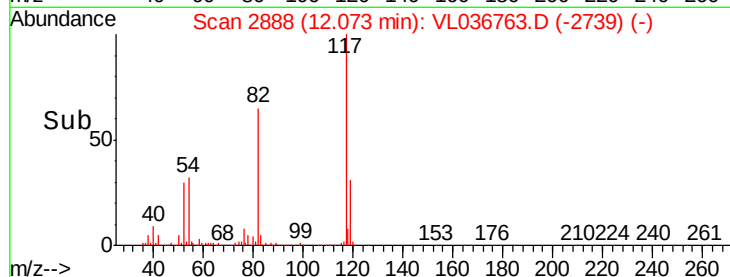
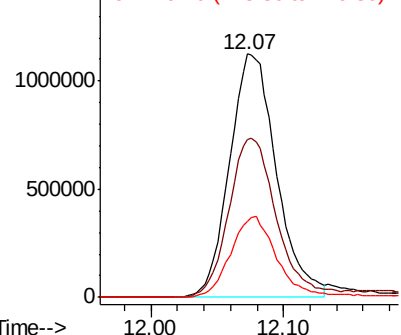
#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.07 min Scan# 2888  
Delta R.T. -0.02 min  
Lab File: VL036763.D  
Acq: 8 Apr 2021 23:48

Instrument :  
MSVOA\_L  
ClientSampleId :  
SG-4DL2

Tot Ion:117 Resp: 2763782  
Ion Ratio Lower Upper  
117 100  
82 67.2 57.4 86.0  
119 34.1 47.4 71.0#

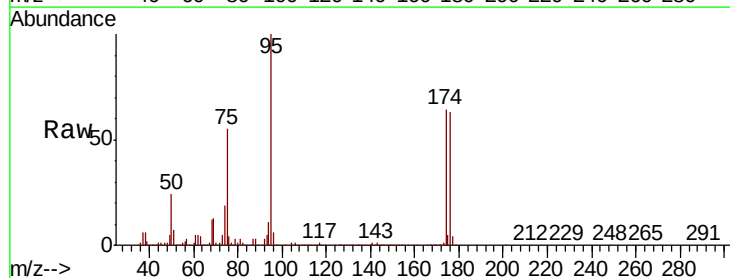


Abundance Ion 117.10 (116.80 to 117.80): V  
Ion 82.10 (81.80 to 82.80): VL0  
Ion 119.10 (118.80 to 119.80): V



#68  
1-Bromo-4-Fluorobenzene  
Concen: 7.912 ppbv  
RT: 14.41 min Scan# 3615  
Delta R.T. -0.01 min  
Lab File: VL036763.D  
Acq: 8 Apr 2021 23:48

Tgt Ion: 95 Resp: 1742819  
Ion Ratio Lower Upper  
95 100  
174 70.3 51.0 76.6  
175 5.2 3.9 5.9



Abundance Ion 95.10 (94.80 to 95.80): VL0  
Ion 174.00 (173.70 to 174.70): V  
Ion 175.00 (174.70 to 175.70): V

