

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL063020\  
 Data File : VL035140.D  
 Acq On : 1 Jul 2020 00:55  
 Operator : SY/AP  
 Sample : OC062920 CAN 10661  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Jul 01 03:03:38 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL061920AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Sat Jun 20 02:10:36 2020  
 QLast Update : Sat Jun 20 02:10:36 2020  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.66  | 49   | 1121723  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.18  | 114  | 2773238  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.12 | 117  | 2709821  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.46  | 95    | 2241106  | 9.96     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 99.60% |

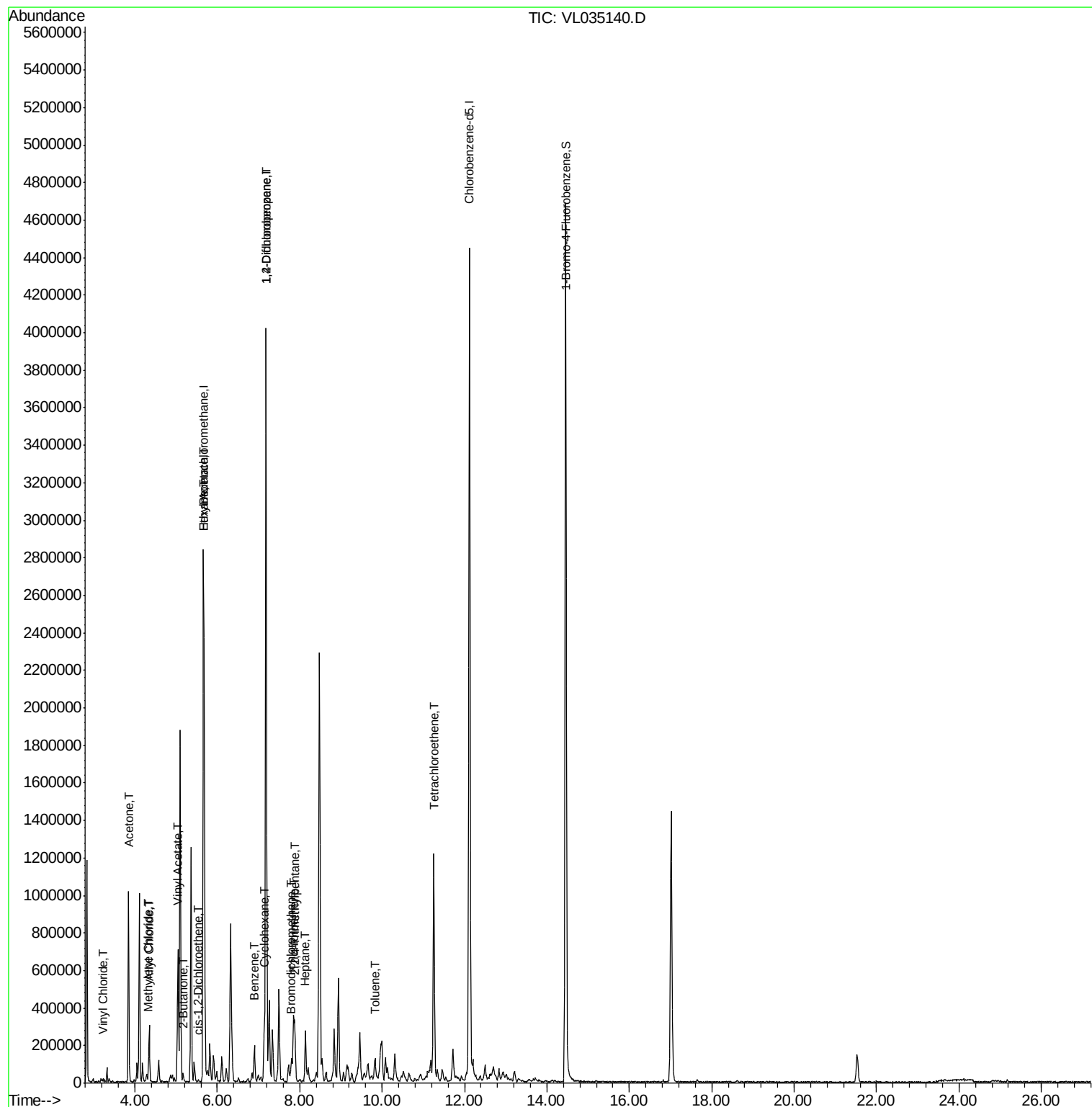
| Target Compounds           |       |     |        |              | Ovalue |
|----------------------------|-------|-----|--------|--------------|--------|
| 5) Vinyl Chloride          | 3.22  | 62  | 11792  | 0.179 ppbv # | 74     |
| 10) Heptane                | 8.14  | 43  | 85777  | 0.675 ppbv # | 26     |
| 15) Acetone                | 3.84  | 43  | 329555 | 2.430 ppbv # | 62     |
| 20) Methylene Chloride     | 4.32  | 84  | 4205   | 0.077 ppbv # | 31     |
| 21) Allyl Chloride         | 4.35  | 41  | 50653  | 0.628 ppbv # | 56     |
| 23) Vinyl Acetate          | 5.04  | 43  | 232364 | 1.412 ppbv # | 1      |
| 25) Ethyl Acetate          | 5.68  | 43  | 361869 | 1.478 ppbv # | 76     |
| 26) Hexane                 | 5.68  | 57  | 537743 | 4.873 ppbv # | 40     |
| 30) Cyclohexane            | 7.14  | 84  | 36590  | 0.462 ppbv # | 1      |
| 31) cis-1,2-Dichloroethene | 5.54  | 61  | 3468   | 0.034 ppbv # | 64     |
| 34) 2-Butanone             | 5.17  | 43  | 11333  | 0.071 ppbv # | 24     |
| 36) Benzene                | 6.90  | 78  | 127243 | 0.593 ppbv # | 93     |
| 38) Trichloroethene        | 7.85  | 130 | 90622  | 1.086 ppbv   | 98     |
| 39) 1,2-Dichloropropane    | 7.19  | 63  | 759078 | 9.038 ppbv # | 25     |
| 42) Bromodichloromethane   | 7.80  | 83  | 7367   | 0.042 ppbv # | 31     |
| 44) 2,2,4-Trimethylpentane | 7.88  | 57  | 163135 | 0.435 ppbv # | 57     |
| 52) Tetrachloroethene      | 11.25 | 164 | 281888 | 3.725 ppbv   | 92     |
| 53) Toluene                | 9.83  | 91  | 13016  | 0.057 ppbv # | 1      |

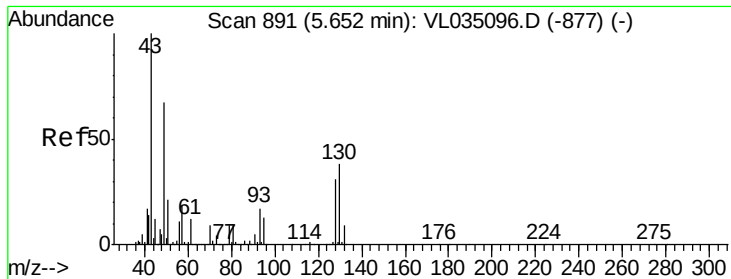
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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MSVOA\_L  
ClientSampleId :

Quant Time: Jul 01 03:03:38 2020  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL061920AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Sat Jun 20 02:10:36 2020  
QLast Update : Sat Jun 20 02:10:36 2020  
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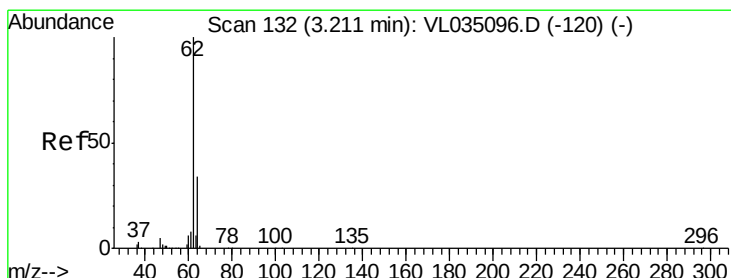
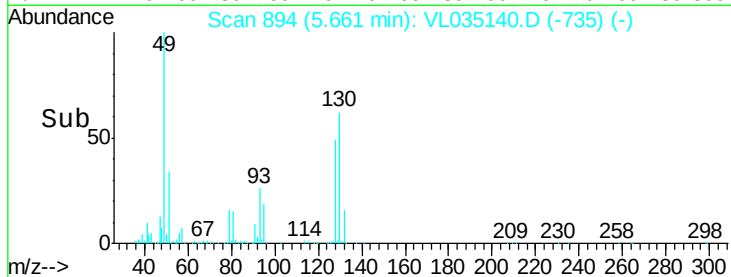
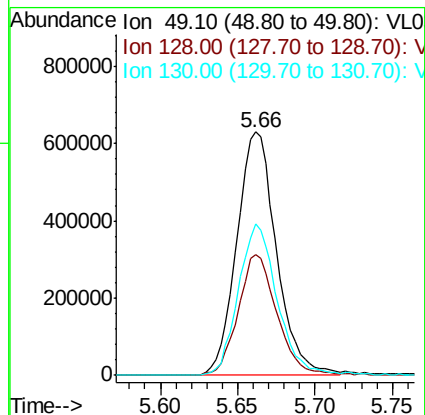
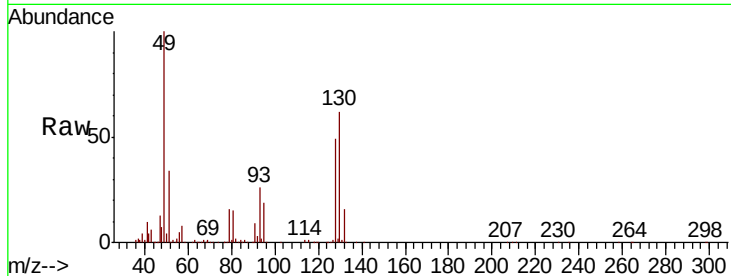




#1  
 Bromochloromethane  
 Concen: 10.000 ppbv  
 RT: 5.66 min Scan# 894  
 Delta R.T. 0.01 min  
 Lab File: VL035140.D  
 Acq: 1 Jul 2020 00:55

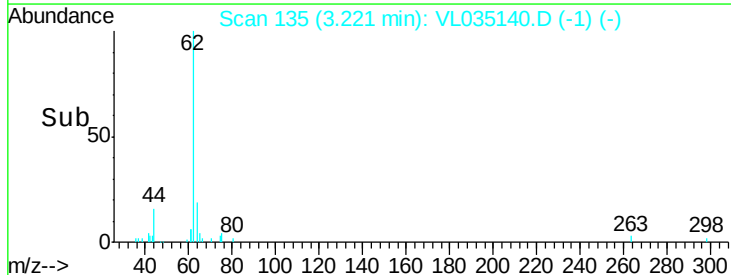
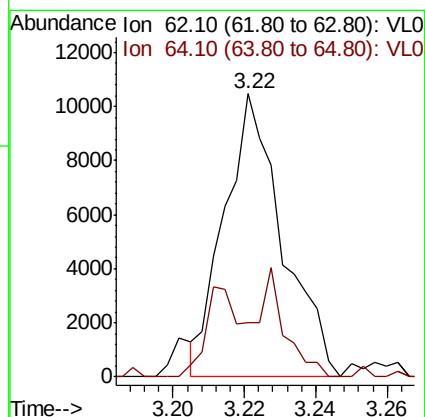
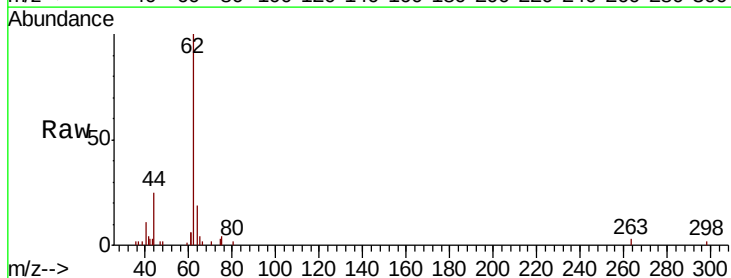
Instrument :  
 MSVOA\_L  
 ClientSampleId :

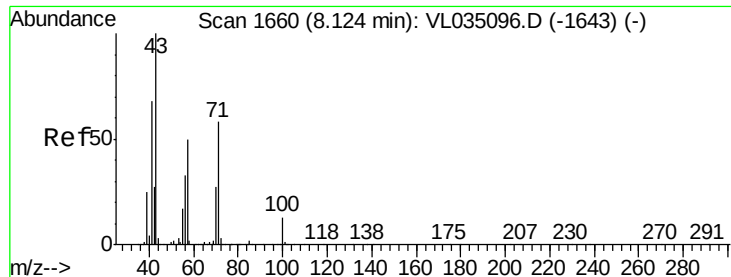
Tot Ion: 49 Resp: 1121723  
 Ion Ratio Lower Upper  
 49 100  
 128 49.0 22.9 68.5  
 130 61.8 29.0 87.0



#5  
 Vinyl Chloride  
 Concen: 0.179 ppbv  
 RT: 3.22 min Scan# 135  
 Delta R.T. 0.01 min  
 Lab File: VL035140.D  
 Acq: 1 Jul 2020 00:55

Tgt Ion: 62 Resp: 11792  
 Ion Ratio Lower Upper  
 62 100  
 64 19.1 27.0 40.4#

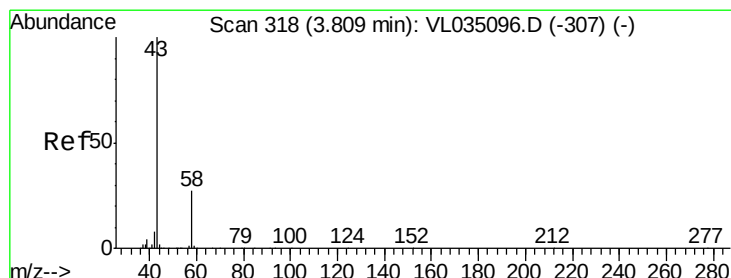
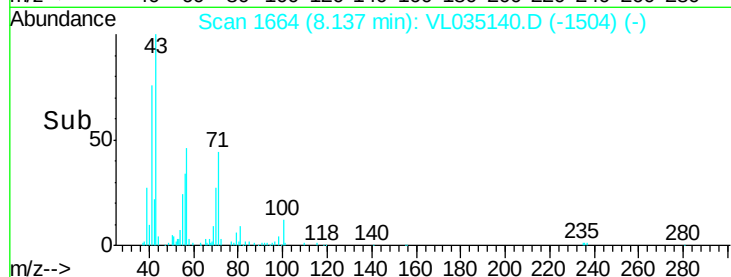
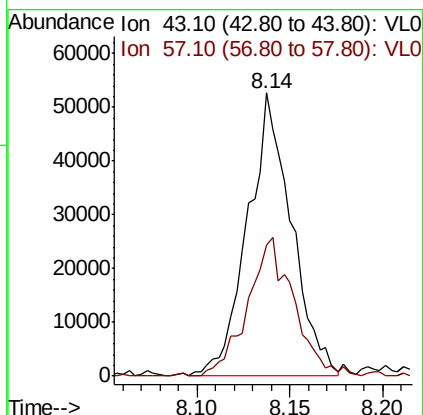
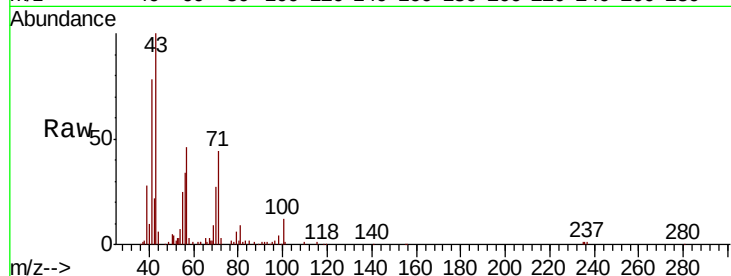




#10  
Heptane  
Concen: 0.675 ppbv  
RT: 8.14 min Scan# 1664  
Delta R.T. 0.01 min  
Lab File: VL035140.D  
Acq: 1 Jul 2020 00:55

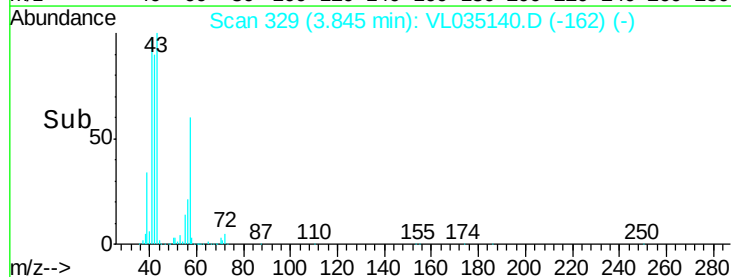
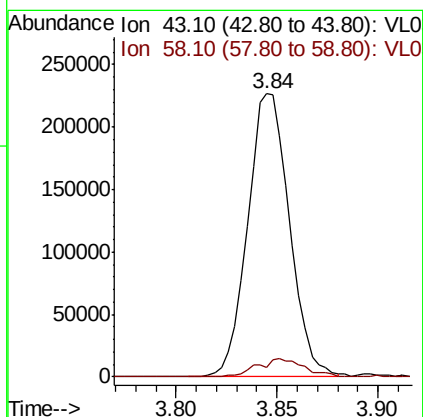
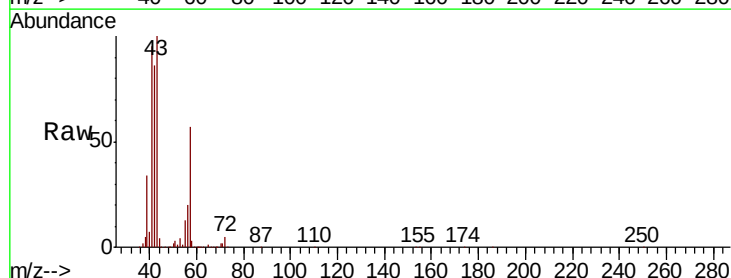
Instrument :  
MSVOA\_L  
ClientSampleId :

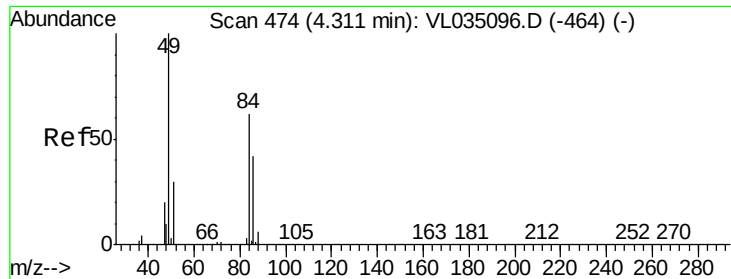
Tot Ion: 43 Resp: 85777  
Ion Ratio Lower Upper  
43 100  
57 0.0 41.9 62.9#



#15  
Acetone  
Concen: 2.430 ppbv  
RT: 3.84 min Scan# 329  
Delta R.T. 0.04 min  
Lab File: VL035140.D  
Acq: 1 Jul 2020 00:55

Tgt Ion: 43 Resp: 329555  
Ion Ratio Lower Upper  
43 100  
58 7.5 21.8 32.6#

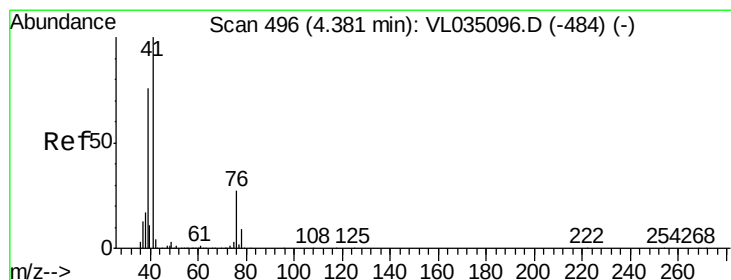
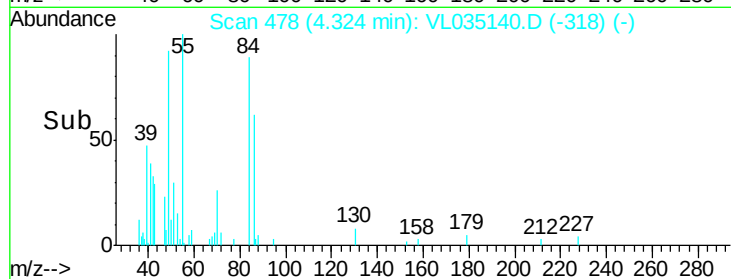
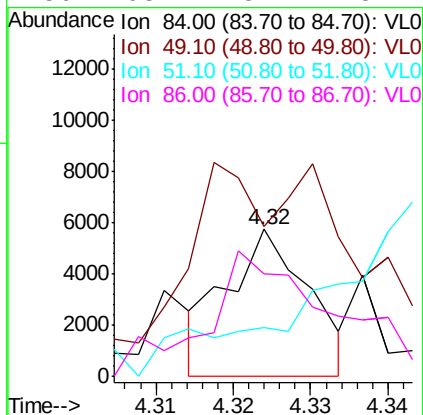
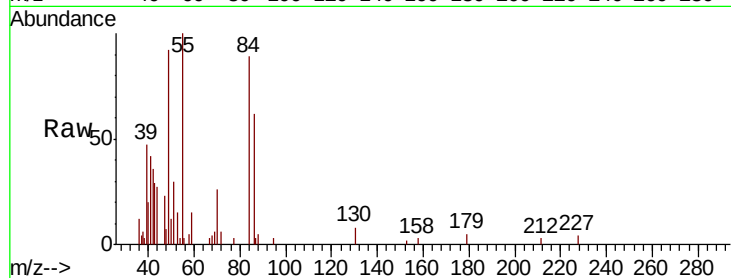




#20  
Methylene Chloride  
Concen: 0.077 ppbv  
RT: 4.32 min Scan# 478  
Delta R.T. 0.01 min  
Lab File: VL035140.D  
Acq: 1 Jul 2020 00:55

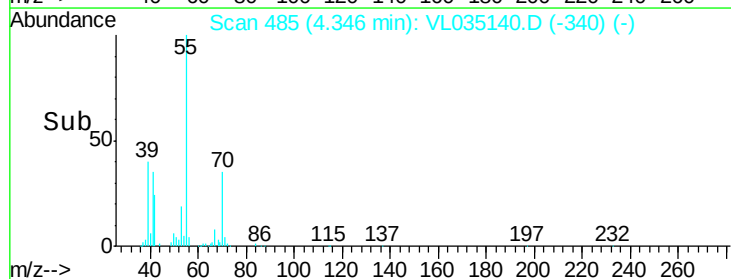
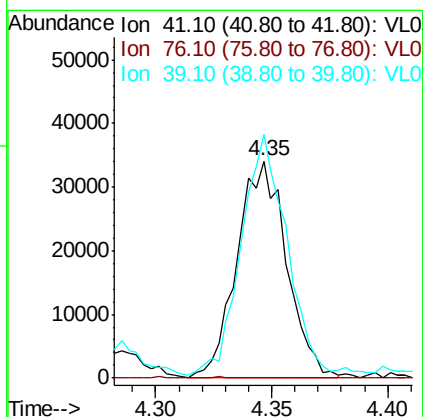
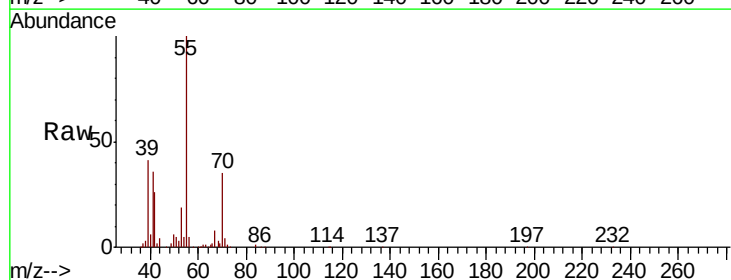
Instrument :  
MSVOA\_L  
ClientSampleId :

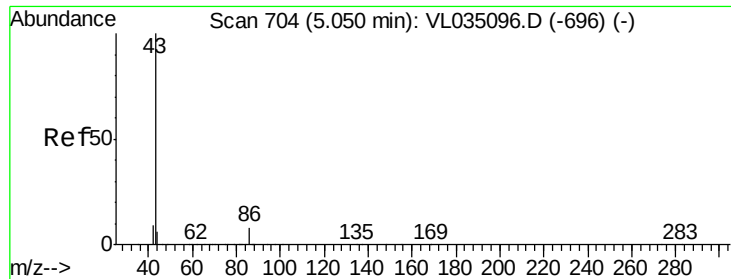
| Tot Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 84      | 100   |       |        |
| 49      | 32.9  | 128.8 | 193.2# |
| 51      | 1.5   | 38.7  | 58.1#  |
| 86      | 68.4  | 54.1  | 81.1   |



#21  
Allyl Chloride  
Concen: 0.628 ppbv  
RT: 4.35 min Scan# 485  
Delta R.T. -0.04 min  
Lab File: VL035140.D  
Acq: 1 Jul 2020 00:55

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 41      | 100   |       |       |
| 76      | 0.0   | 22.6  | 34.0# |
| 39      | 111.6 | 61.6  | 92.4# |





#23

Vinyl Acetate

Concen: 1.412 ppbv

RT: 5.04 min Scan# 702

Delta R.T. -0.01 min

Lab File: VL035140.D

Acq: 1 Jul 2020 00:55

Instrument :

MSVOA\_L

ClientSampleId :

Tot Ion: 43 Resp: 232364

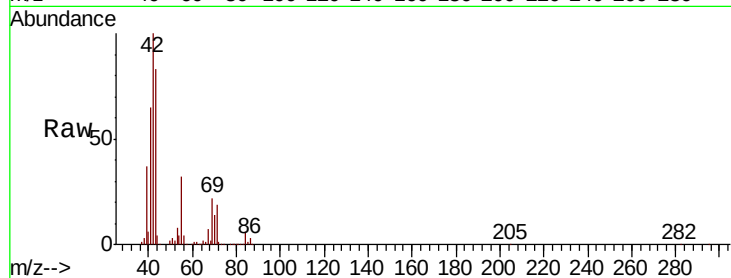
Ion Ratio Lower Upper

43 100

86 3.5 6.2 9.2#

42 120.0 8.1 12.1#

44 4.3 4.6 7.0#

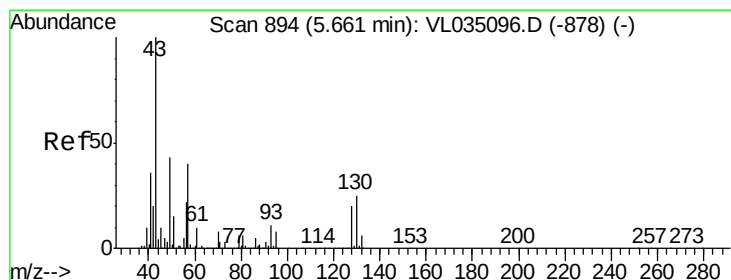
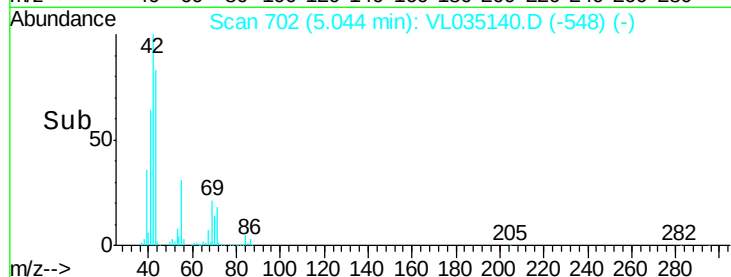
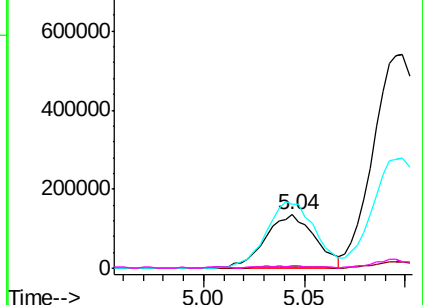


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 1.478 ppbv

RT: 5.68 min Scan# 900

Delta R.T. 0.02 min

Lab File: VL035140.D

Acq: 1 Jul 2020 00:55

Tgt Ion: 43 Resp: 361869

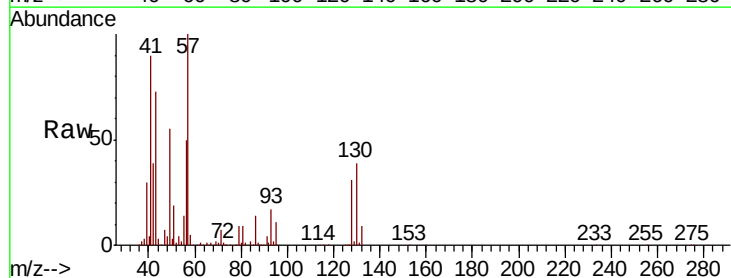
Ion Ratio Lower Upper

43 100

45 0.2 8.4 12.6#

61 0.3 8.0 12.0#

70 1.7 6.3 9.5#

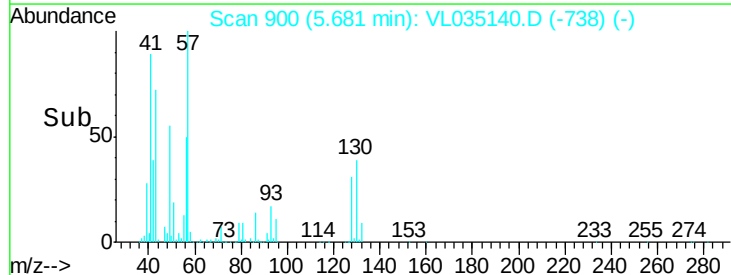
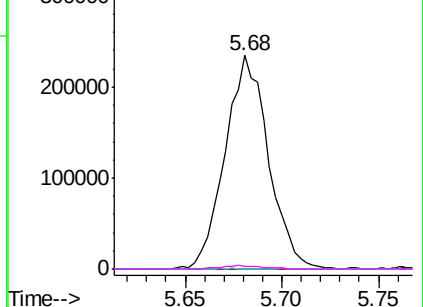


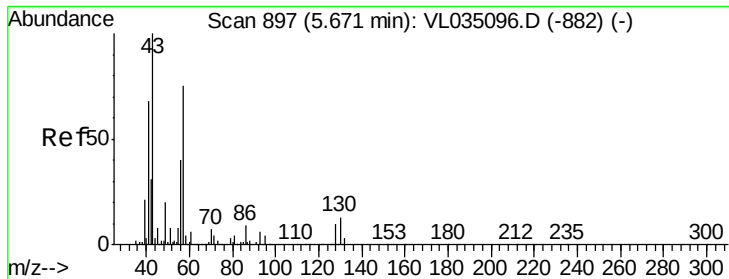
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0





#26

Hexane

Concen: 4.873 ppbv

RT: 5.68 min Scan# 900

Delta R.T. 0.01 min

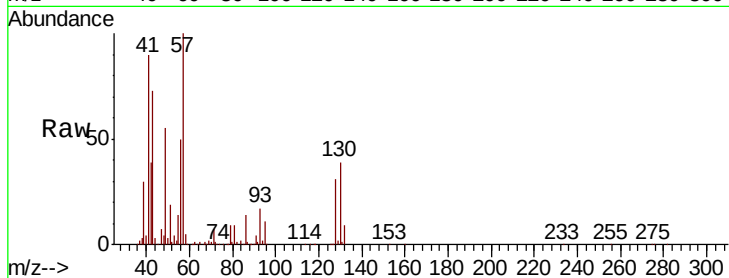
Lab File: VL035140.D

Acq: 1 Jul 2020 00:55

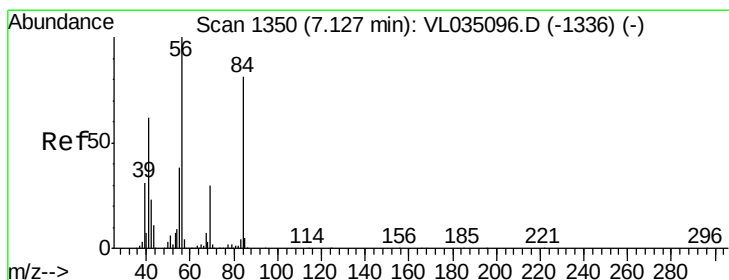
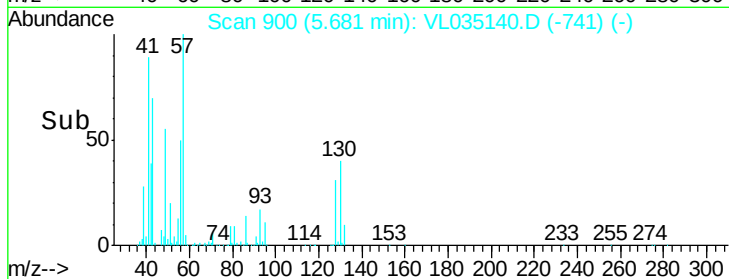
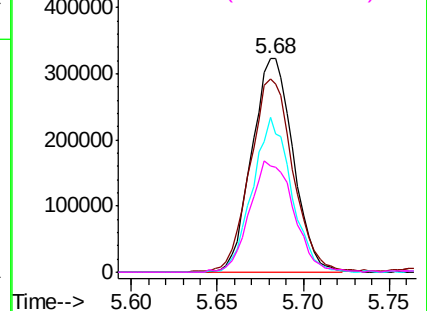
Instrument :  
MSVOA\_L  
ClientSampleId :

Tot Ion: 57 Resp: 537743

| Ion | Ratio | Lower | Upper  |
|-----|-------|-------|--------|
| 57  | 100   |       |        |
| 41  | 94.8  | 72.9  | 109.3  |
| 43  | 68.3  | 181.3 | 271.9# |
| 56  | 55.5  | 43.1  | 64.7   |



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



#30

Cyclohexane

Concen: 0.462 ppbv

RT: 7.14 min Scan# 1355

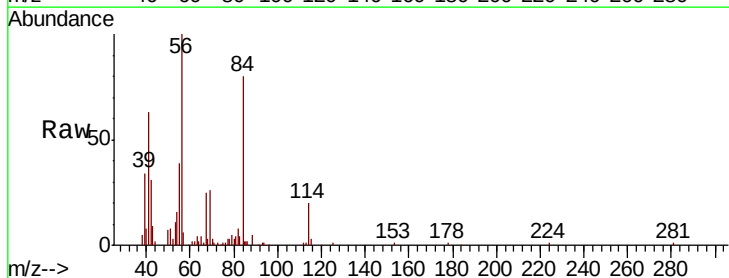
Delta R.T. 0.02 min

Lab File: VL035140.D

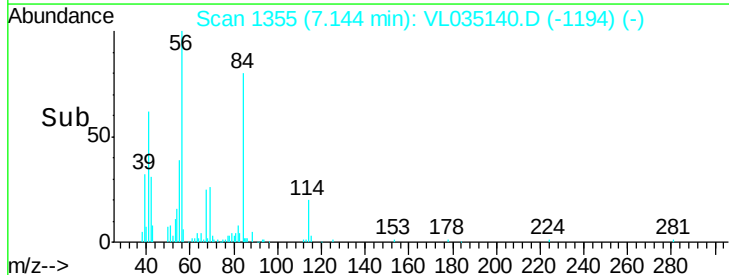
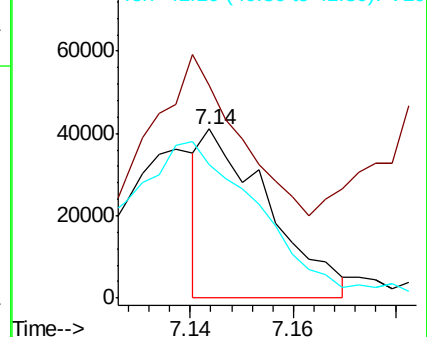
Acq: 1 Jul 2020 00:55

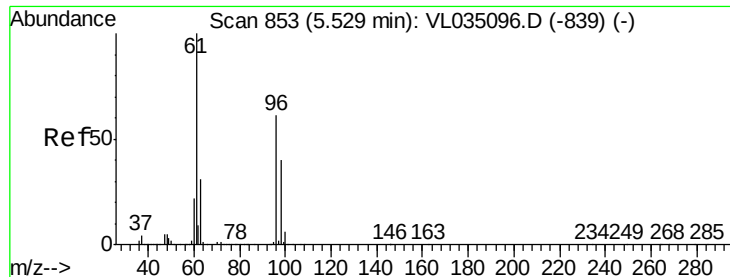
Tgt Ion: 84 Resp: 36590

| Ion | Ratio | Lower | Upper  |
|-----|-------|-------|--------|
| 84  | 100   |       |        |
| 56  | 263.5 | 108.0 | 162.0# |
| 41  | 198.9 | 65.6  | 98.4#  |



Abundance Ion 84.20 (83.90 to 84.90): VL0  
Ion 56.10 (55.80 to 56.80): VL0  
Ion 41.10 (40.80 to 41.80): VL0



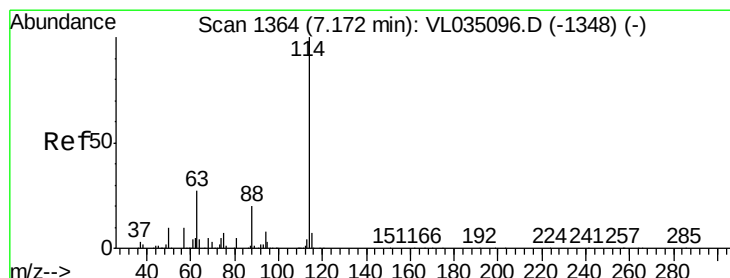
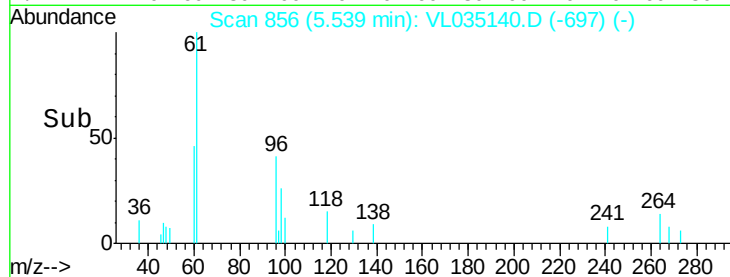
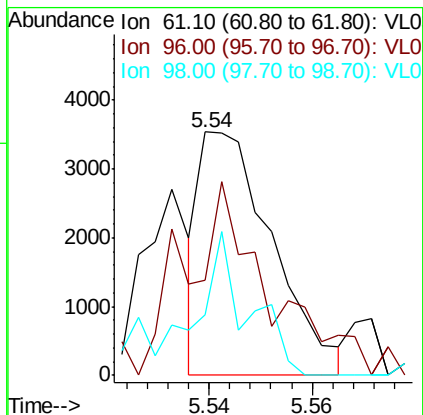
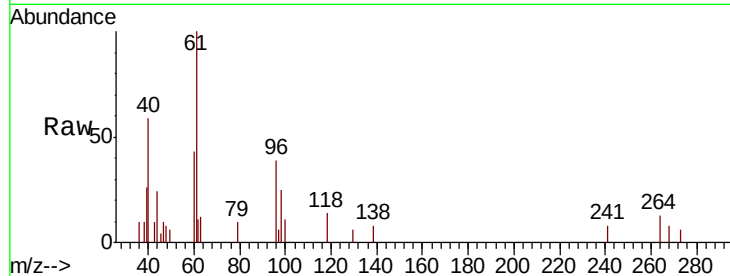


#31

cis-1,2-Dichloroethene  
 Concen: 0.034 ppbv  
 RT: 5.54 min Scan# 856  
 Delta R.T. 0.01 min  
 Lab File: VL035140.D  
 Acq: 1 Jul 2020 00:55

Instrument :  
 MSVOA\_L  
 ClientSampled :

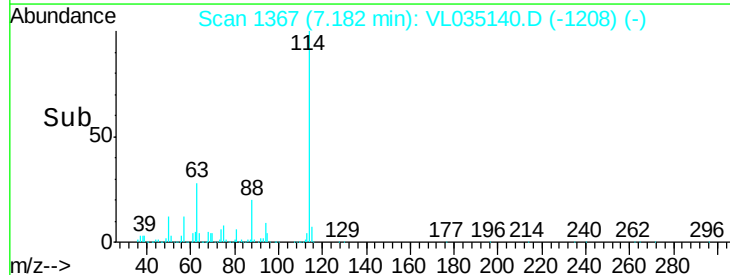
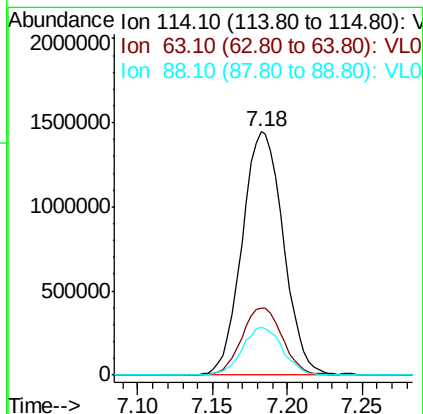
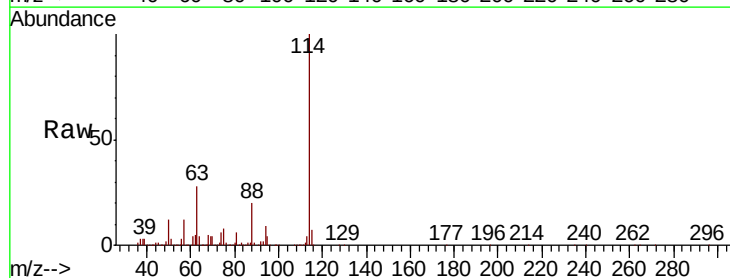
Tot Ion: 61 Resp: 3468  
 Ion Ratio Lower Upper  
 61 100  
 96 25.4 48.8 73.2#  
 98 28.1 31.9 47.9#



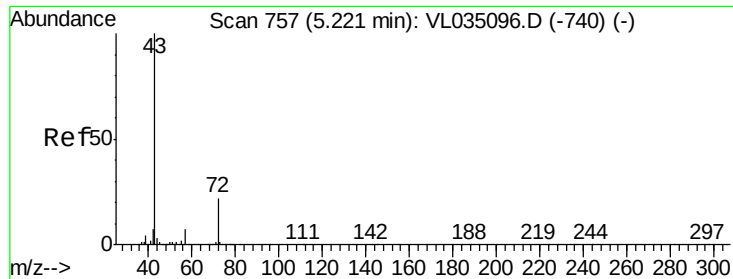
#33

1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.18 min Scan# 1367  
 Delta R.T. 0.01 min  
 Lab File: VL035140.D  
 Acq: 1 Jul 2020 00:55

Tgt Ion: 114 Resp: 2773238  
 Ion Ratio Lower Upper  
 114 100  
 63 27.4 21.9 32.9  
 88 19.3 15.6 23.4



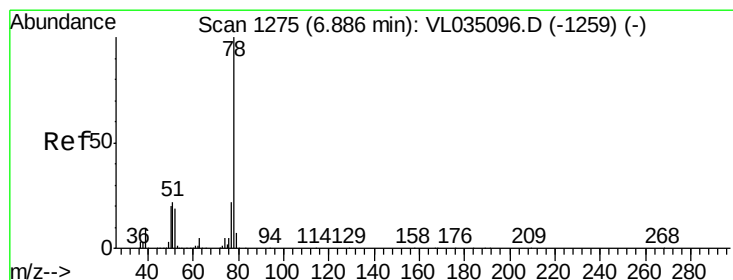
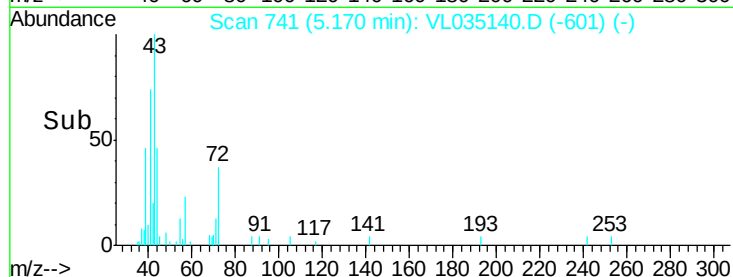
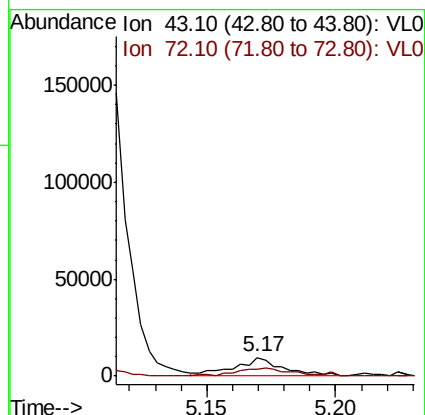
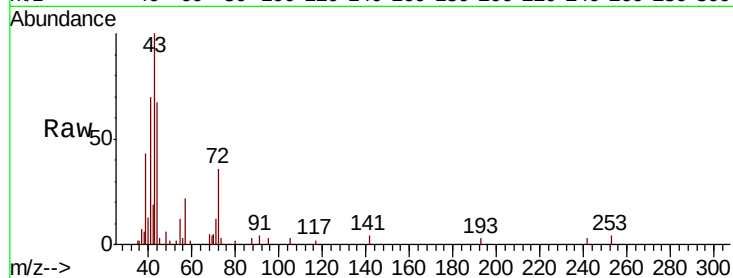




#34  
2-Butanone  
Concen: 0.071 ppbv  
RT: 5.17 min Scan# 741  
Delta R.T. -0.05 min  
Lab File: VL035140.D  
Acq: 1 Jul 2020 00:55

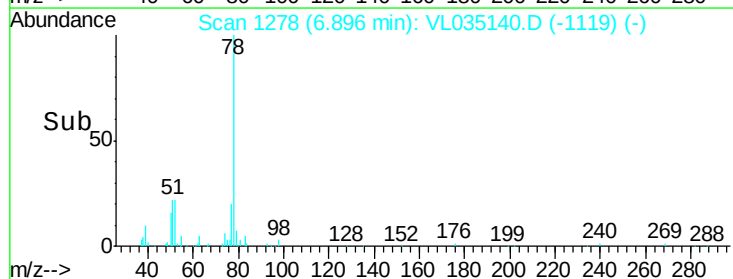
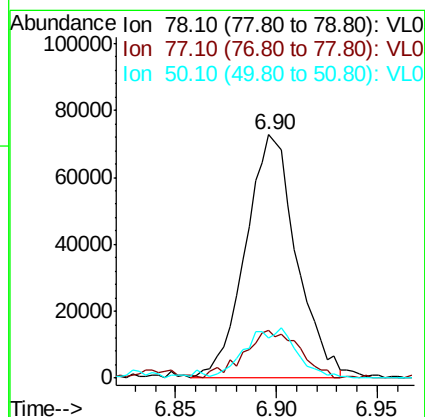
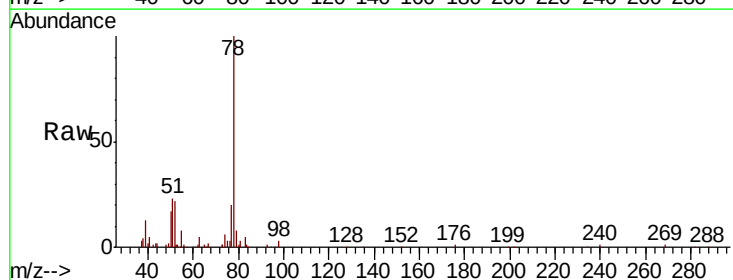
Instrument :  
MSVOA\_L  
ClientSampleId :

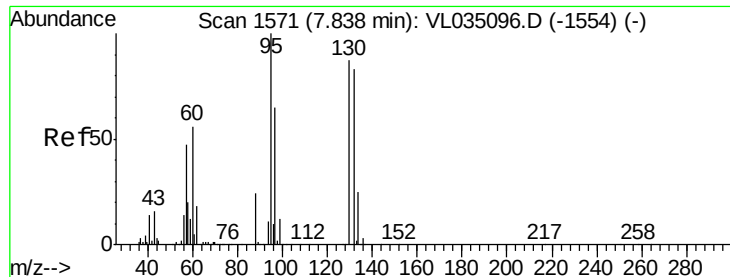
Tot Ion: 43 Resp: 11333  
Ion Ratio Lower Upper  
43 100  
72 59.6 18.3 27.5#



#36  
Benzene  
Concen: 0.593 ppbv  
RT: 6.90 min Scan# 1278  
Delta R.T. 0.01 min  
Lab File: VL035140.D  
Acq: 1 Jul 2020 00:55

Tgt Ion: 78 Resp: 127243  
Ion Ratio Lower Upper  
78 100  
77 19.9 17.8 26.6  
50 15.8 16.2 24.2#





#38

Trichloroethene

Concen: 1.086 ppbv

RT: 7.85 min Scan# 1574

Delta R.T. 0.01 min

Lab File: VL035140.D

Acq: 1 Jul 2020 00:55

Instrument :

MSVOA\_L

ClientSampleId :

Tot Ion:130 Resp: 90622

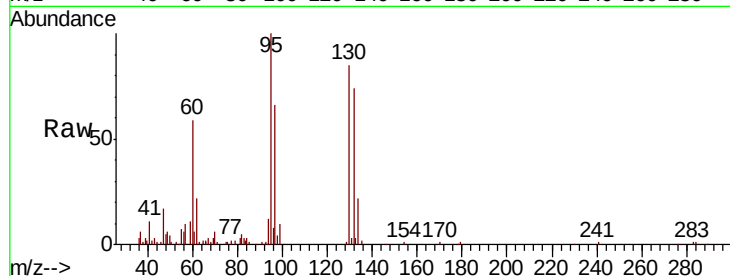
Ion Ratio Lower Upper

130 100

95 115.8 91.4 137.2

132 91.1 75.8 113.6

97 76.5 59.8 89.8

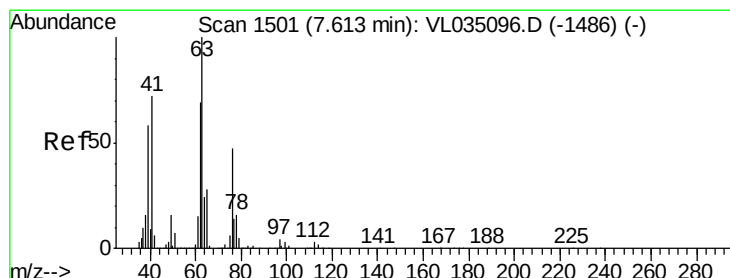
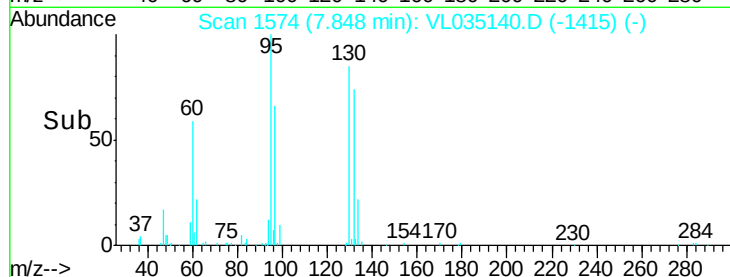
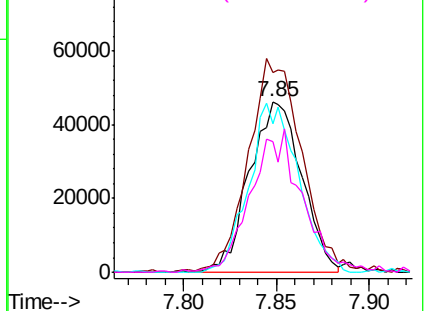


Abundance Ion 130.00 (129.70 to 130.70): V

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: 9.038 ppbv

RT: 7.19 min Scan# 1368

Delta R.T. -0.43 min

Lab File: VL035140.D

Acq: 1 Jul 2020 00:55

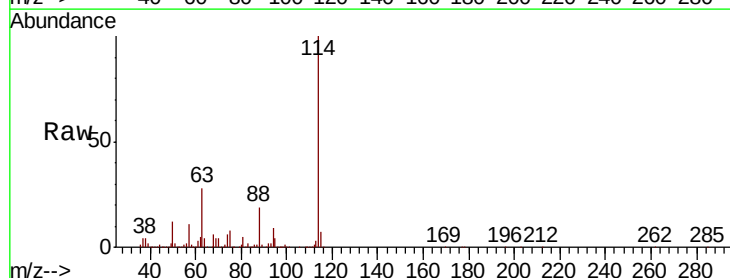
Tgt Ion: 63 Resp: 759078

Ion Ratio Lower Upper

63 100

41 0.0 58.0 87.0#

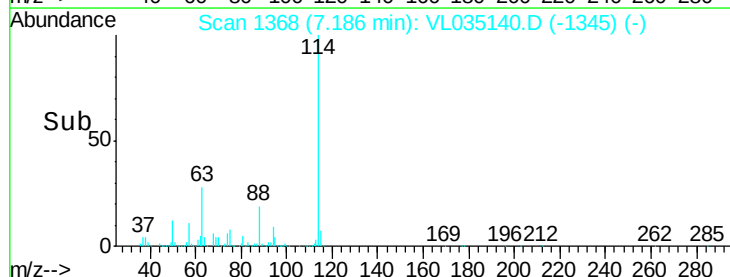
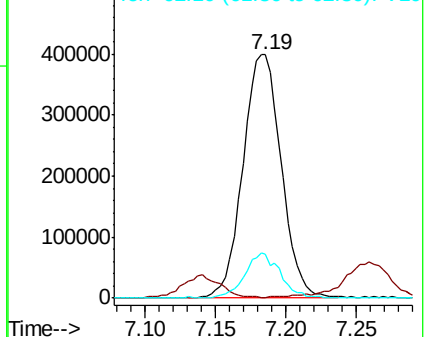
62 17.8 55.4 83.0#

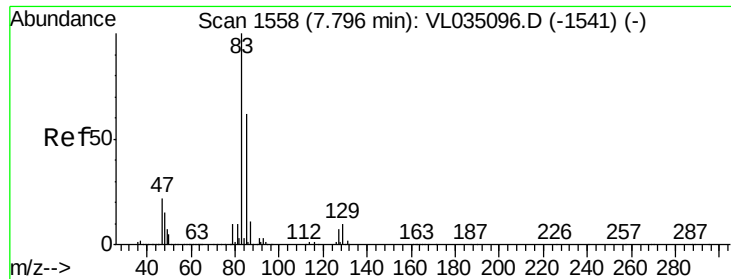


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#42

Bromodichloromethane

Concen: 0.042 ppbv

RT: 7.80 min Scan# 1560

Delta R.T. 0.01 min

Lab File: VL035140.D

Acq: 1 Jul 2020 00:55

Instrument :

MSVOA\_L

ClientSampleId :

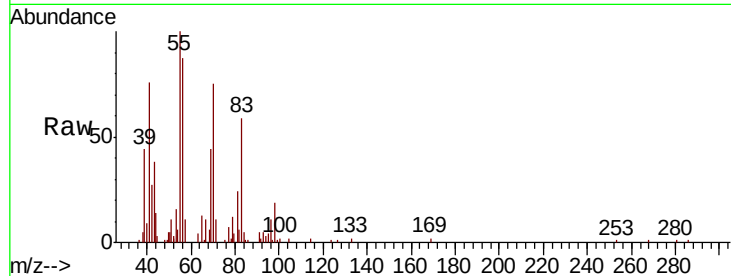
Tot Ion: 83 Resp: 7367

Ion Ratio Lower Upper

83 100

85 4.0 49.4 74.0#

127 0.0 5.9 8.9#

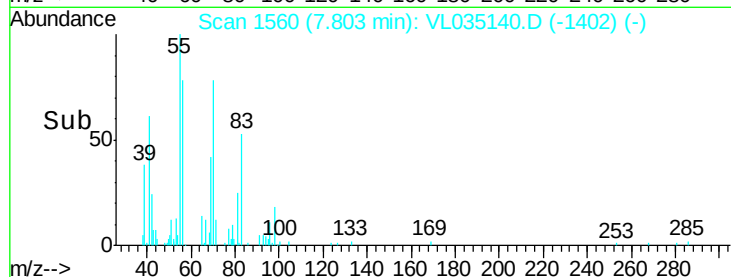


Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0

Ion 126.90 (126.60 to 127.60): VL0

Time-->



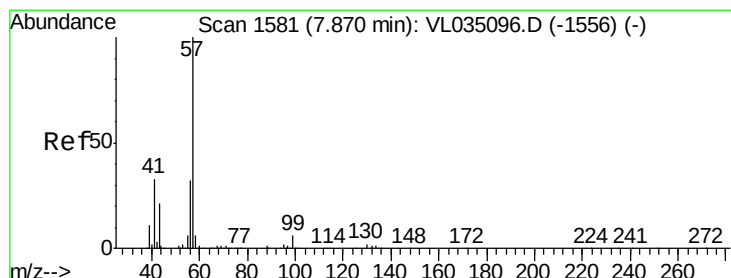
Abundance

Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0

Ion 126.90 (126.60 to 127.60): VL0

Time-->



#44

2,2,4-Trimethylpentane

Concen: 0.435 ppbv

RT: 7.88 min Scan# 1584

Delta R.T. 0.01 min

Lab File: VL035140.D

Acq: 1 Jul 2020 00:55

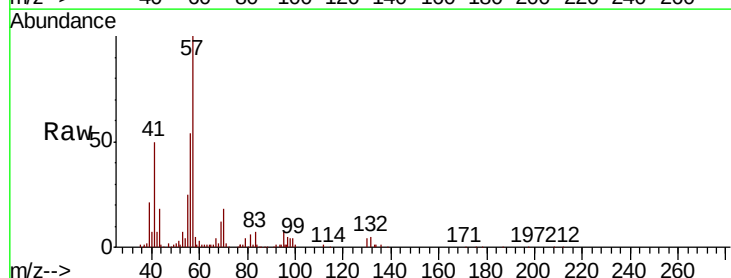
Tgt Ion: 57 Resp: 163135

Ion Ratio Lower Upper

57 100

41 56.7 26.2 39.2#

56 55.9 25.4 38.2#

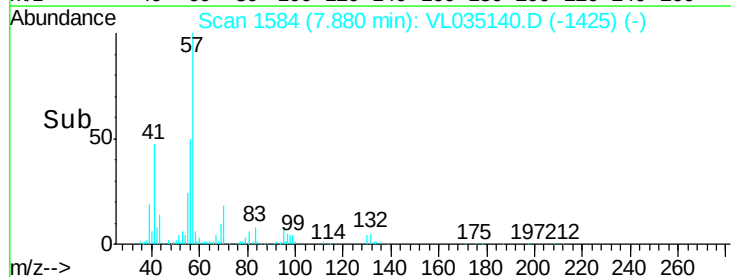


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0

Time-->



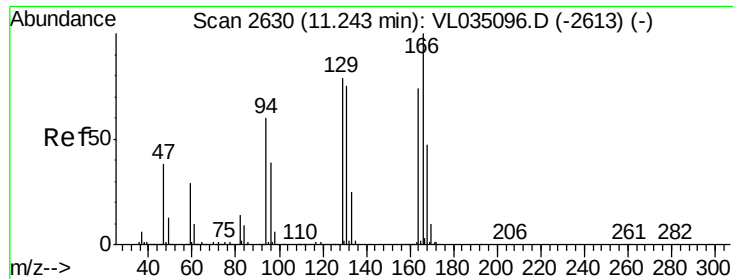
Abundance

Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0

Time-->



#52

Tetrachloroethene

Concen: 3.725 ppbv

RT: 11.25 min Scan# 2633

Delta R.T. 0.01 min

Lab File: VL035140.D

Acq: 1 Jul 2020 00:55

Instrument :

MSVOA\_L

ClientSampleId :

Tot Ion:164 Resp: 281888

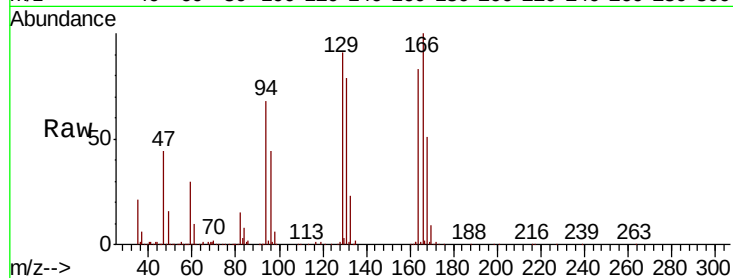
Ion Ratio Lower Upper

164 100

166 120.2 107.5 161.3

129 110.1 84.9 127.3

131 95.2 81.1 121.7

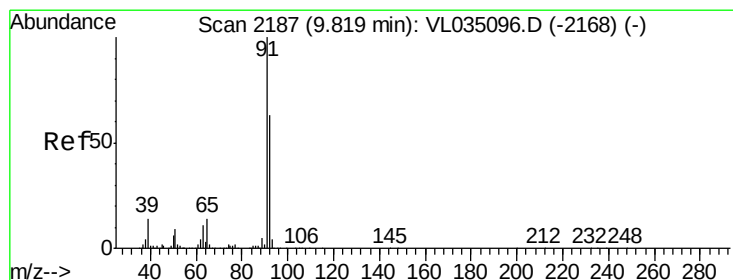
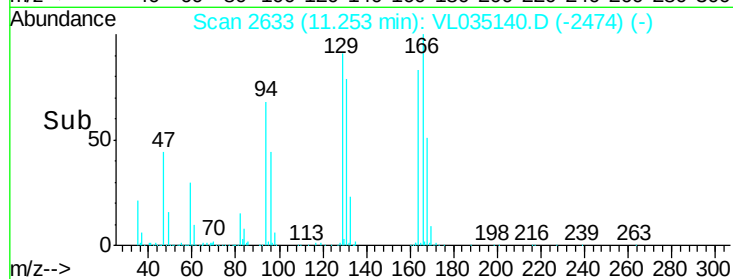
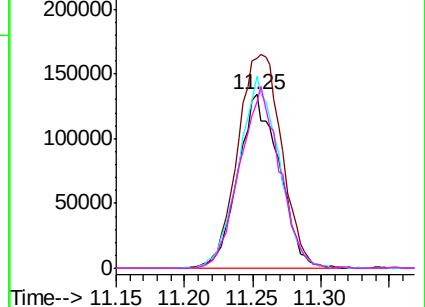


Abundance Ion 163.90 (163.60 to 164.60): V

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



#53

Toluene

Concen: 0.057 ppbv

RT: 9.83 min Scan# 2192

Delta R.T. 0.02 min

Lab File: VL035140.D

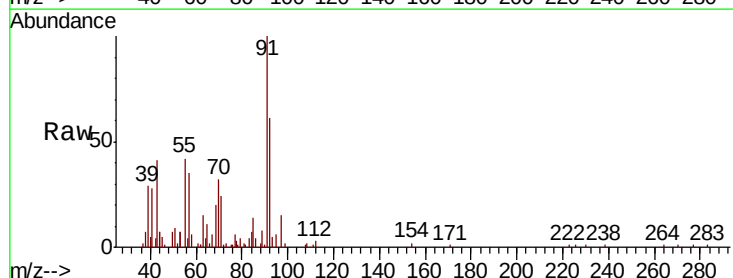
Acq: 1 Jul 2020 00:55

Tgt Ion: 91 Resp: 13016

Ion Ratio Lower Upper

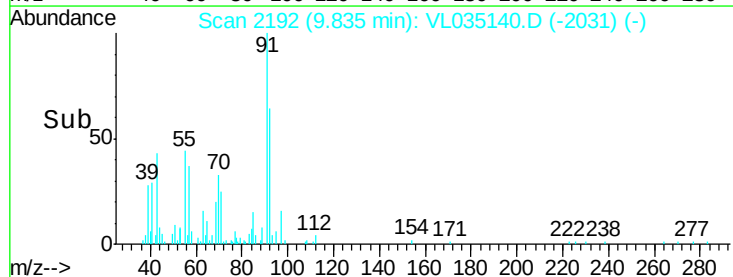
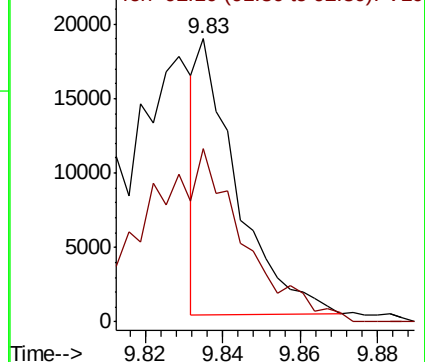
91 100

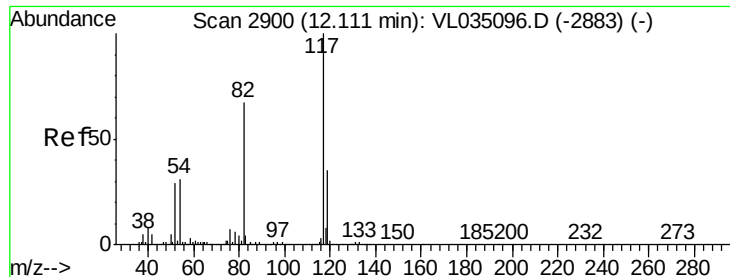
92 160.8 49.0 73.6#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

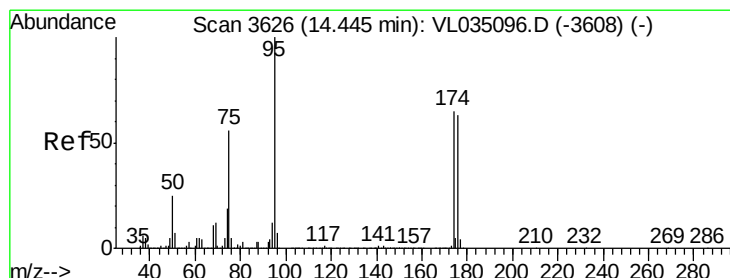
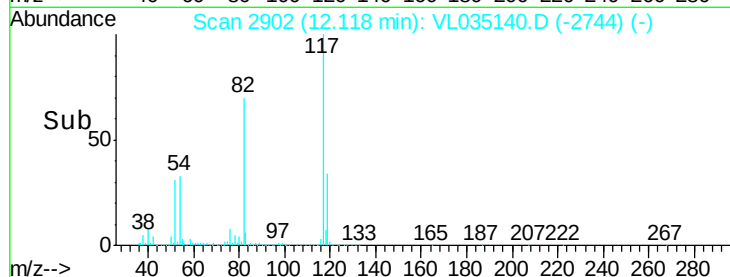
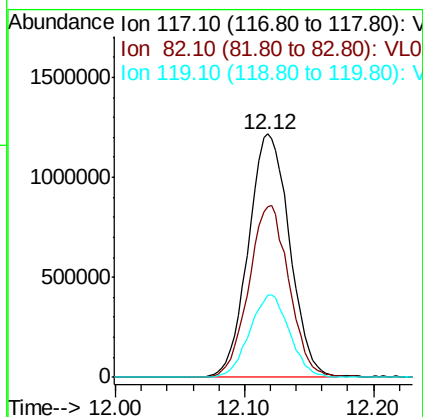
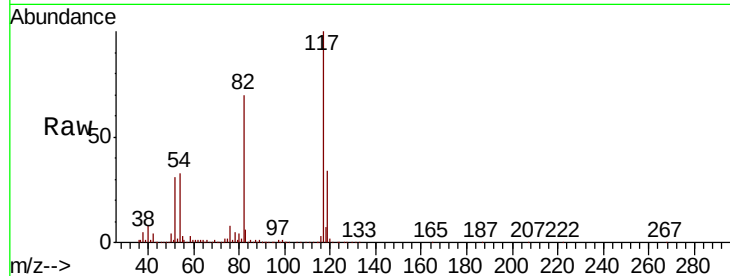




#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.12 min Scan# 2902  
Delta R.T. 0.01 min  
Lab File: VL035140.D  
Acq: 1 Jul 2020 00:55

Instrument :  
MSVOA\_L  
ClientSampleId :

Tot Ion:117 Resp: 2709821  
Ion Ratio Lower Upper  
117 100  
82 69.8 50.4 75.6  
119 33.0 25.4 38.0



#68  
1-Bromo-4-Fluorobenzene  
Concen: 9.956 ppbv  
RT: 14.46 min Scan# 3629  
Delta R.T. 0.01 min  
Lab File: VL035140.D  
Acq: 1 Jul 2020 00:55

Tgt Ion: 95 Resp: 2241106  
Ion Ratio Lower Upper  
95 100  
174 64.7 52.2 78.2  
175 4.6 4.0 6.0

