

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN091518\  
 Data File : VN051225.D  
 Acq On : 15 Sep 2018 16:19  
 Operator : MD\SY  
 Sample : PB112879ZHE#06  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 12 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Quant Time: Sep 17 02:15:54 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N091018W.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Sep 11 02:27:09 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.67  | 168  | 434393   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.59  | 114  | 676957   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 537640   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.35 | 152  | 164313   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-----------------------------|-------|------|----------|-------|--------|----------|
| 33) 1,2-Dichloroethane-d4   | 8.03  | 65   | 229824   | 47.54 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 95.08% |          |
| 35) Dibromofluoromethane    | 7.59  | 113  | 248605   | 48.87 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 97.74% |          |
| 50) Toluene-d8              | 10.09 | 98   | 843765   | 43.71 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 87.42% |          |
| 62) 4-Bromofluorobenzene    | 12.40 | 95   | 220074   | 34.47 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 68.94% |          |

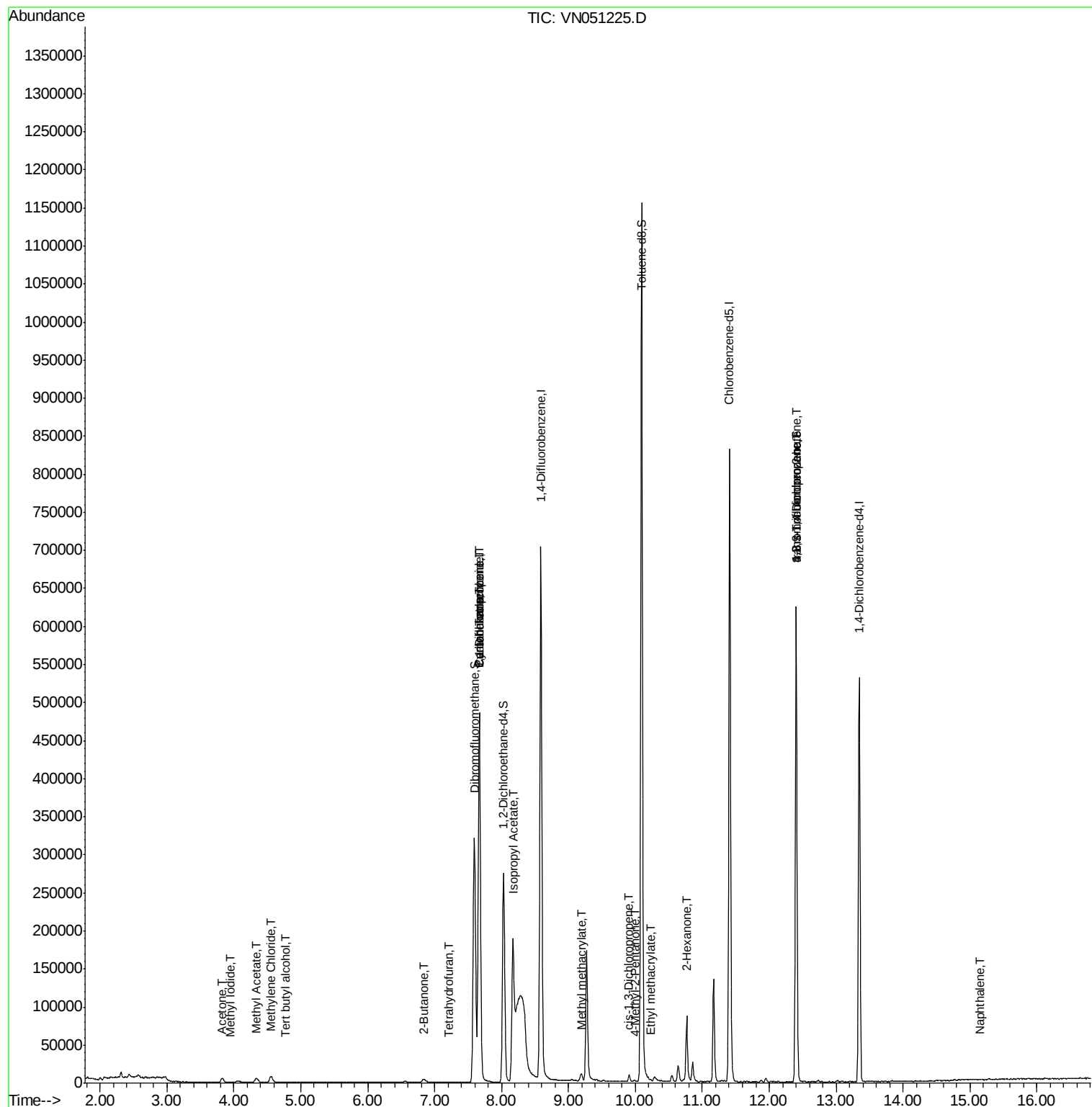
| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 3) Chloromethane               | 2.06  | 50   | 1753     | Below Cal | #      | 67     |
| 5) Bromomethane                | 2.57  | 94   | 2232     | Below Cal |        | 99     |
| 10) Methyl Iodide              | 3.96  | 142  | 184      | 5.67      | ug/l # | 44     |
| 11) Tert butyl alcohol         | 4.78  | 59   | 438      | 1.19      | ug/l # | 73     |
| 16) Acetone                    | 3.82  | 43   | 8730     | 1.50      | ug/l   | 96     |
| 18) Methyl Acetate             | 4.34  | 43   | 11360    | 2.93      | ug/l   | 98     |
| 20) Methylene Chloride         | 4.55  | 84   | 6668     | 1.25      | ug/l   | 98     |
| 25) 2-Butanone                 | 6.85  | 43   | 5318     | 2.80      | ug/l   | 97     |
| 29) Tetrahydrofuran            | 7.21  | 42   | 481      | 0.41      | ug/l # | 31     |
| 31) Cyclohexane                | 7.67  | 56   | 6927     | 0.65      | ug/l # | 1      |
| 36) 1,1-Dichloropropene        | 7.67  | 75   | 28149    | 3.79      | ug/l # | 47     |
| 38) Carbon Tetrachloride       | 7.67  | 117  | 36997    | 5.06      | ug/l # | 17     |
| 43) Isopropyl Acetate          | 8.17  | 43   | 243618   | 32.08     | ug/l # | 81     |
| 48) Methyl methacrylate        | 9.18  | 41   | 5460     | 1.48      | ug/l # | 16     |
| 51) 4-Methyl-2-Pentanone       | 9.99  | 43   | 1600     | 0.38      | ug/l # | 72     |
| 54) cis-1,3-Dichloropropene    | 9.90  | 75   | 1693     | 0.20      | ug/l # | 63     |
| 56) Ethyl methacrylate         | 10.23 | 69   | 1345     | 2.65      | ug/l # | 80     |
| 59) 2-Hexanone                 | 10.77 | 43   | 13304    | 4.67      | ug/l # | 59     |
| 76) 1,2,3-Trichloropropane     | 12.40 | 75   | 102237   | 39.83     | ug/l # | 100    |
| 81) trans-1,4-Dichloro-2-buten | 12.40 | 75   | 102237   | 118.17    | ug/l # | 15     |
| 95) Naphthalene                | 15.15 | 128  | 89       | 5.35      | ug/l # | 69     |

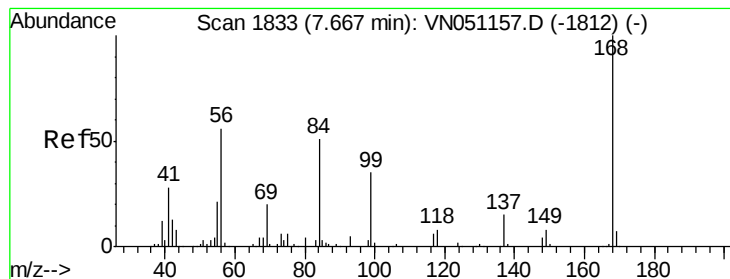
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Sep 17 02:15:54 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N091018W.M  
Quant Title : SW846 8260  
QLast Update : Tue Sep 11 02:27:09 2018  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.00 ug/l

RT: 7.67 min Scan# 1833

Delta R.T. -0.00 min

Lab File: VN051225.D

Acq: 15 Sep 2018 16:19

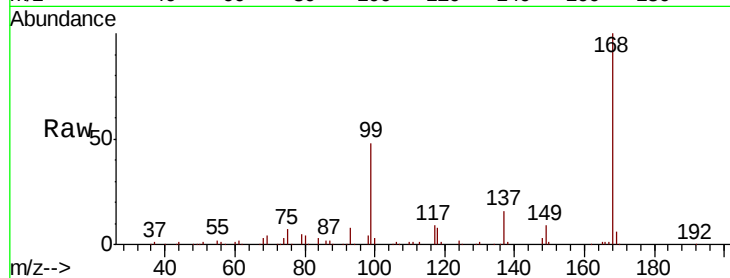
Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion:168 Resp: 434393

Ion Ratio Lower Upper

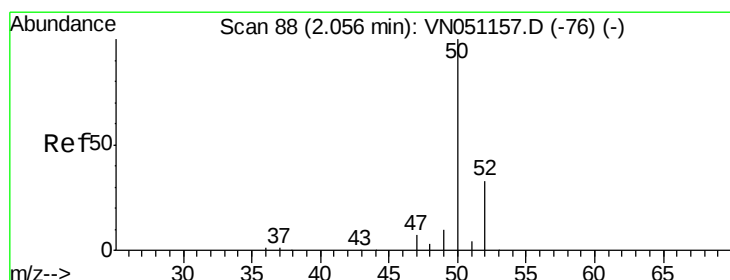
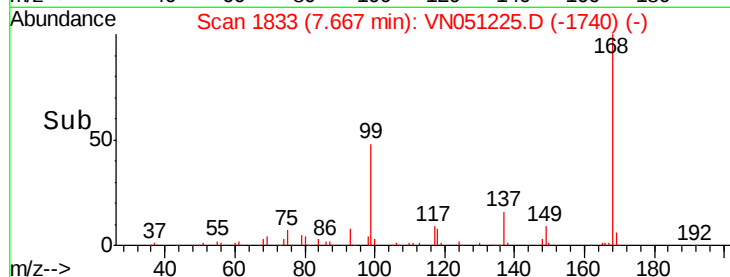
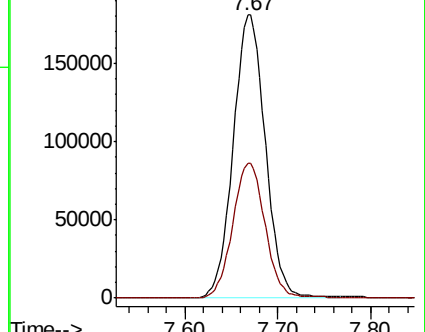
168 100

99 47.6 38.3 57.5



Abundance Ion 167.90 (167.60 to 168.60): VN051157.D (-1812) (-)

Ion 98.90 (98.60 to 99.60): VN051157.D (-1812) (-)



#3

Chloromethane

Concen: Below Cal

RT: 2.06 min Scan# 89

Delta R.T. 0.00 min

Lab File: VN051225.D

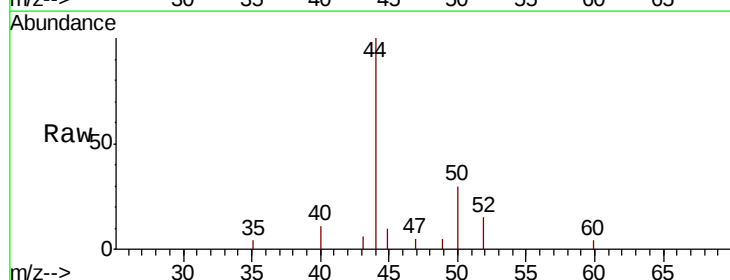
Acq: 15 Sep 2018 16:19

Tgt Ion: 50 Resp: 1753

Ion Ratio Lower Upper

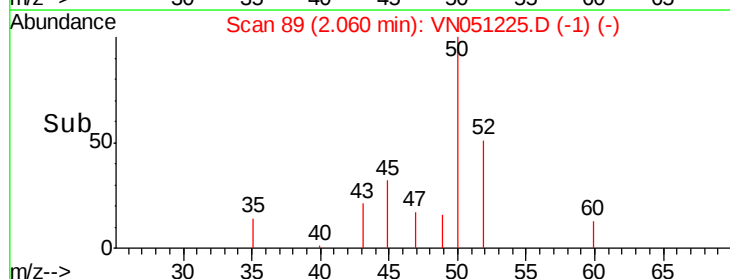
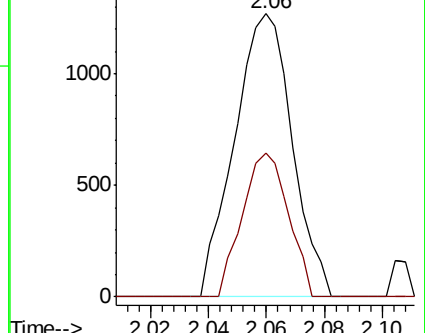
50 100

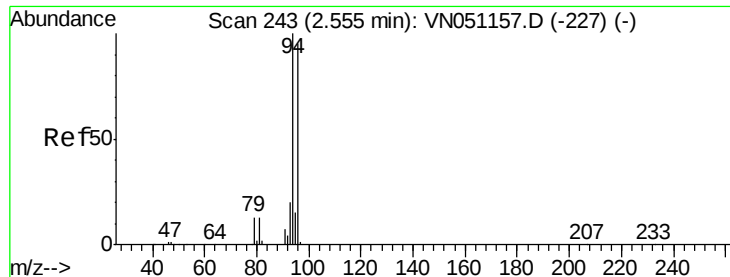
52 51.0 26.0 39.0#



Abundance Ion 49.90 (49.60 to 50.60): VN051157.D (-76) (-)

Ion 51.90 (51.60 to 52.60): VN051157.D (-76) (-)





#5

Bromomethane

Concen: Below Cal

RT: 2.57 min Scan# 249

Delta R.T. 0.01 min

Lab File: VN051225.D

Acq: 15 Sep 2018 16:19

Instrument :

MSVOA\_N

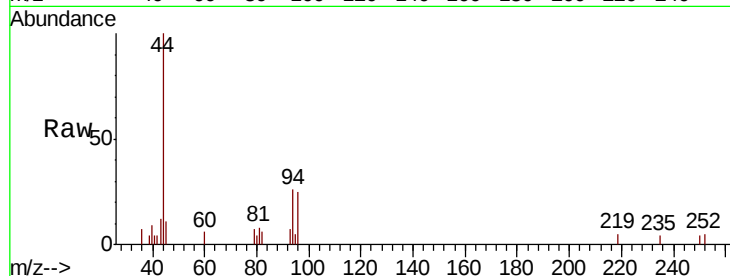
ClientSampled :

Tot Ion: 94 Resp: 2232

Ion Ratio Lower Upper

94 100

96 95.7 75.9 113.9



Abundance Ion 93.90 (93.60 to 94.60): VN0

Ion 95.90 (95.60 to 96.60): VN0

2.57

1200

1000

800

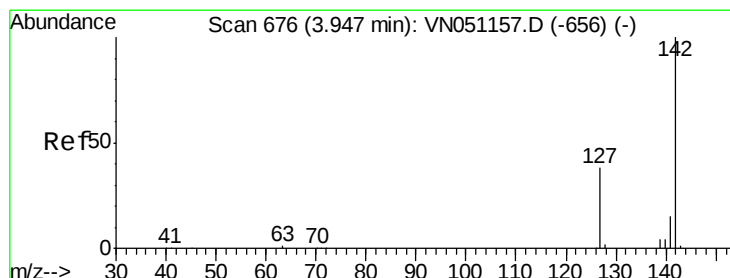
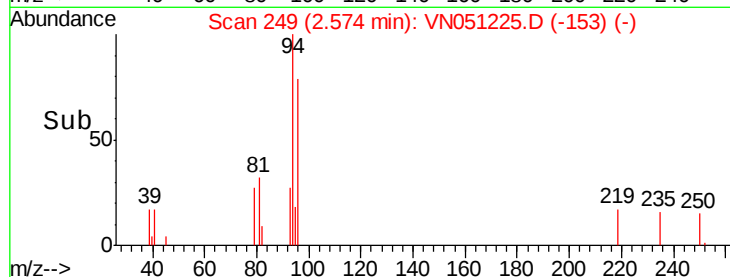
600

400

200

0

Time--> 2.50 2.55 2.60



#10

Methyl Iodide

Concen: 5.67 ug/l

RT: 3.96 min Scan# 679

Delta R.T. 0.01 min

Lab File: VN051225.D

Acq: 15 Sep 2018 16:19

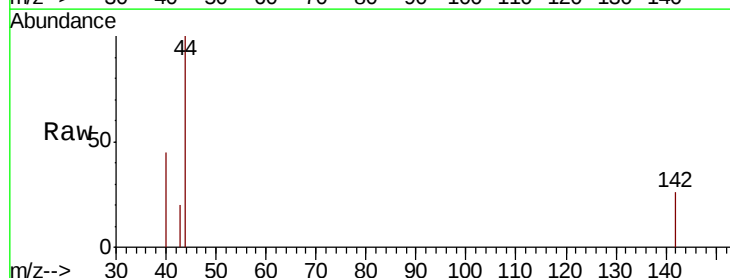
Tgt Ion: 142 Resp: 184

Ion Ratio Lower Upper

142 100

127 0.0 31.0 46.4#

141 0.0 11.3 16.9#



Abundance Ion 141.80 (141.50 to 142.50): V

Ion 126.80 (126.50 to 127.50): V

Ion 140.80 (140.50 to 141.50): V

300

250

200

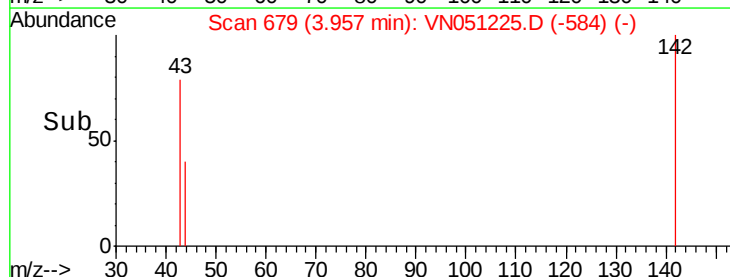
150

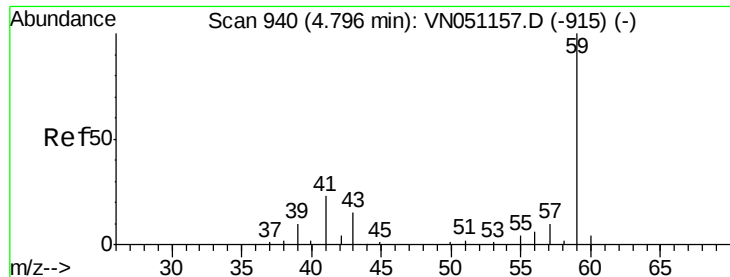
100

50

0

Time--> 3.94 3.95 3.96 3.97 3.98

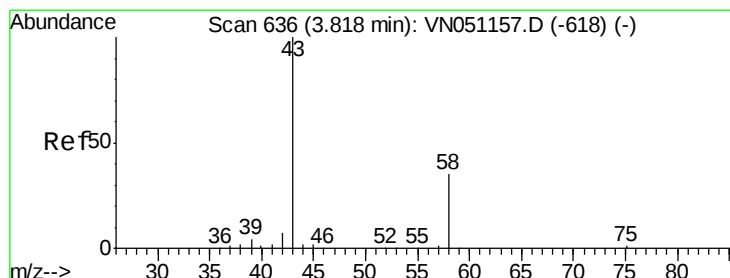
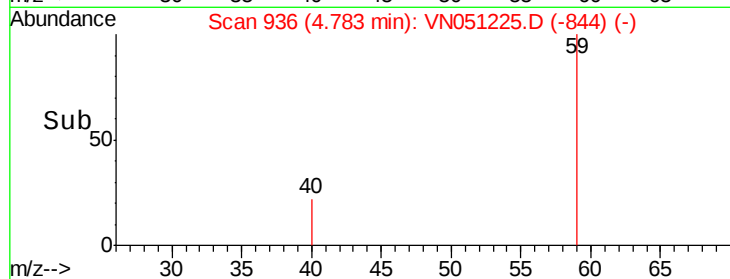
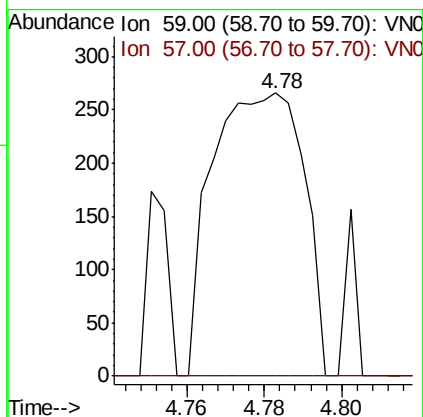
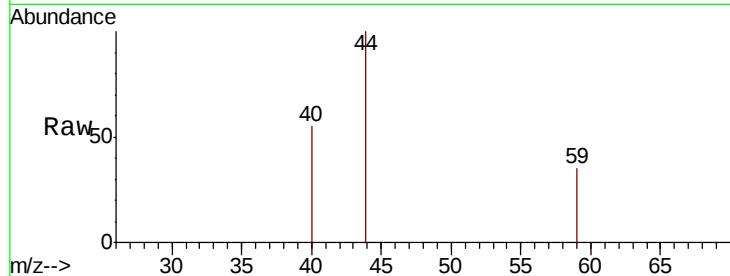




#11  
Tert butyl alcohol  
Concen: 1.19 ug/l  
RT: 4.78 min Scan# 936  
Delta R.T. -0.00 min  
Lab File: VN051225.D  
Acq: 15 Sep 2018 16:19

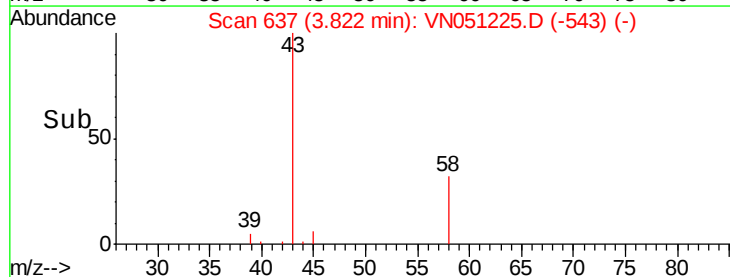
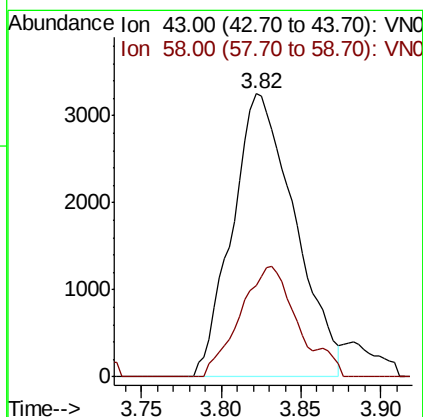
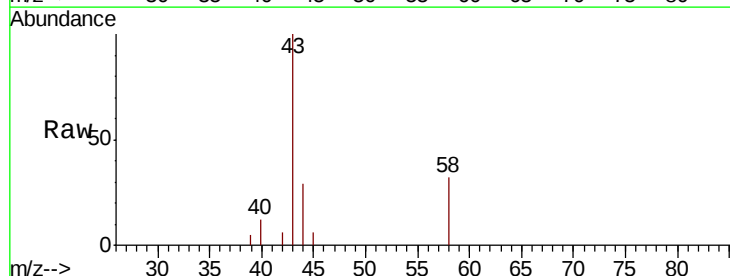
Instrument :  
MSVOA\_N  
ClientSampled :

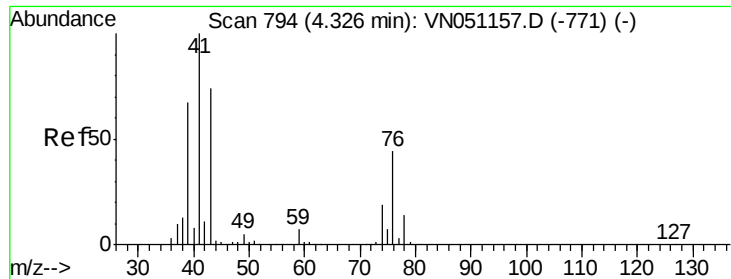
Tot Ion: 59 Resp: 438  
Ion Ratio Lower Upper  
59 100  
57 0.0 8.1 12.1#



#16  
Acetone  
Concen: 1.50 ug/l  
RT: 3.82 min Scan# 637  
Delta R.T. 0.00 min  
Lab File: VN051225.D  
Acq: 15 Sep 2018 16:19

Tgt Ion: 43 Resp: 8730  
Ion Ratio Lower Upper  
43 100  
58 32.1 27.8 41.6

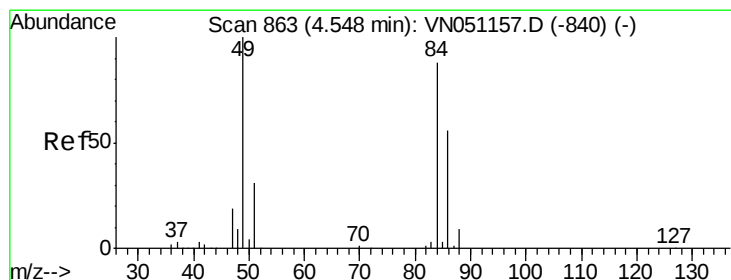
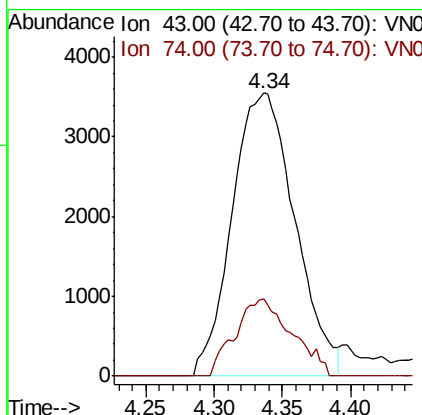
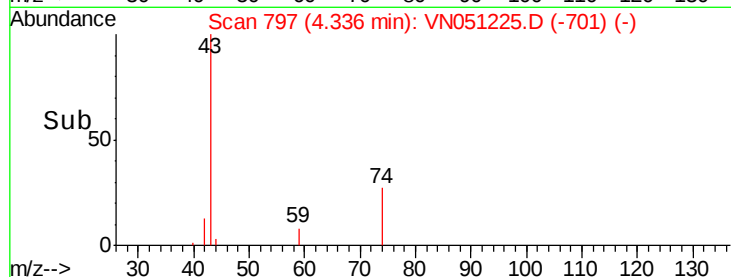
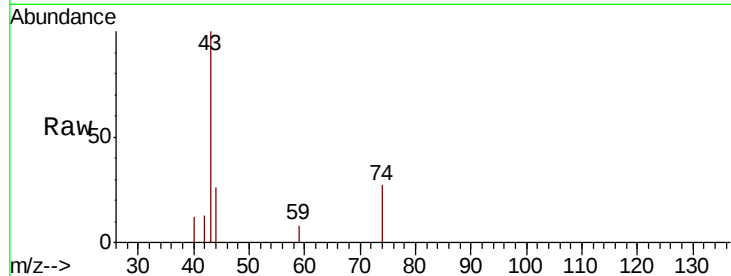




#18  
Methyl Acetate  
Concen: 2.93 ug/l  
RT: 4.34 min Scan# 797  
Delta R.T. 0.01 min  
Lab File: VN051225.D  
Acq: 15 Sep 2018 16:19

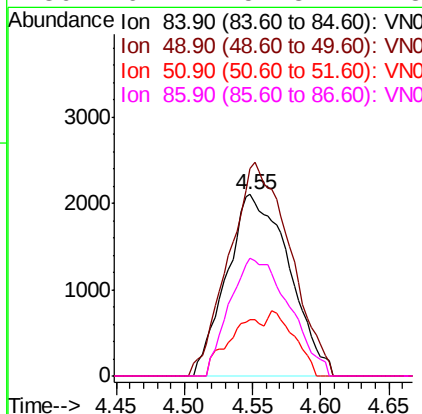
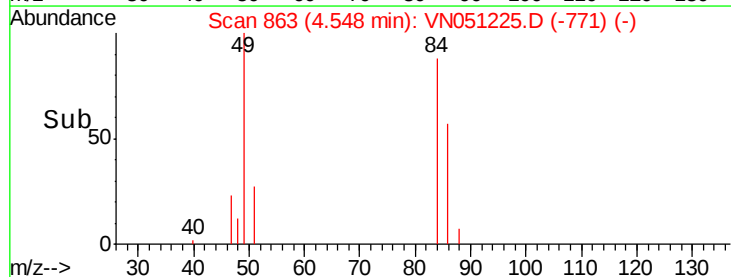
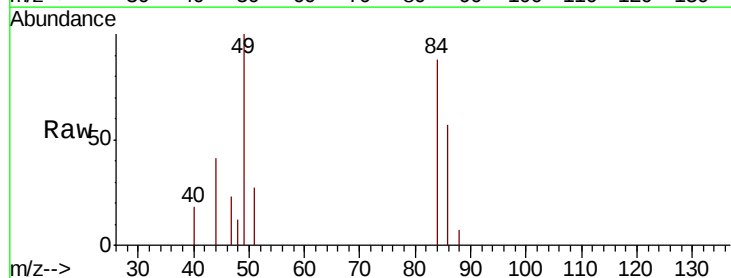
Instrument :  
MSVOA\_N  
ClientSampleId :

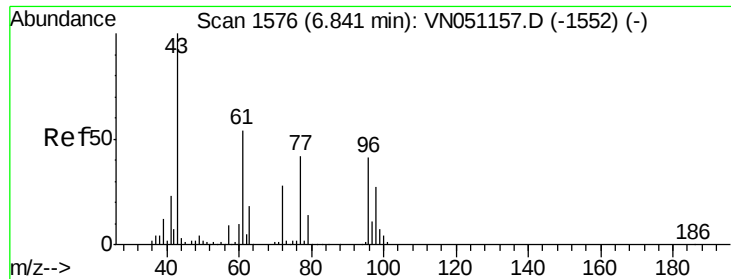
Tot Ion: 43 Resp: 11360  
Ion Ratio Lower Upper  
43 100  
74 24.6 20.7 31.1



#20  
Methylene Chloride  
Concen: 1.25 ug/l  
RT: 4.55 min Scan# 863  
Delta R.T. -0.00 min  
Lab File: VN051225.D  
Acq: 15 Sep 2018 16:19

Tgt Ion: 84 Resp: 6668  
Ion Ratio Lower Upper  
84 100  
49 113.9 90.2 135.2  
51 30.9 28.4 42.6  
86 64.7 51.8 77.8

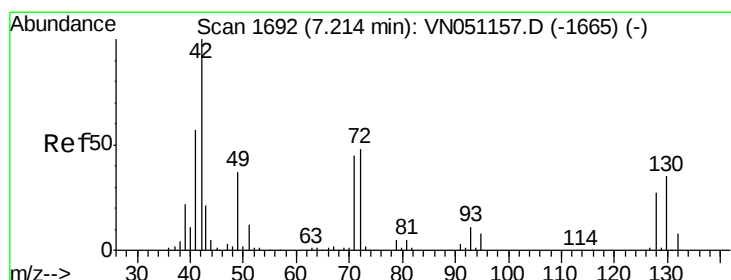
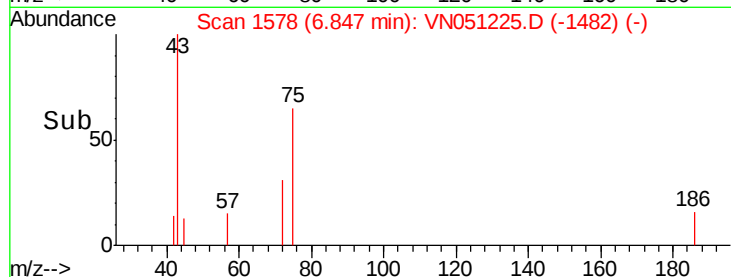
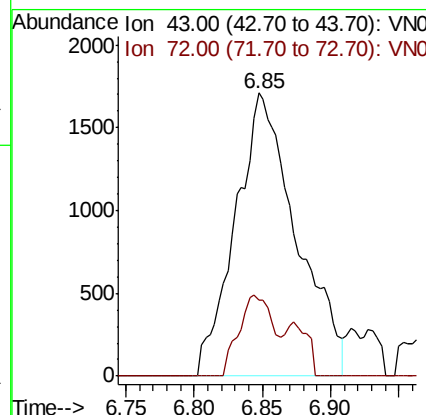
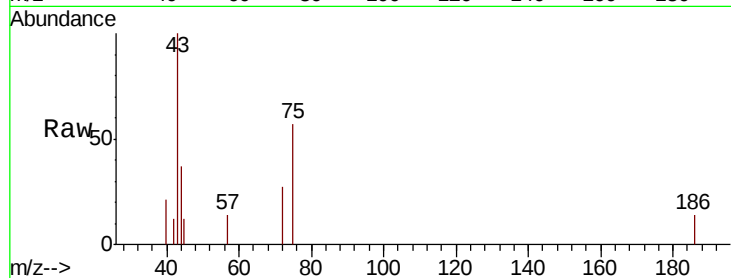




#25  
2-Butanone  
Concen: 2.80 ug/l  
RT: 6.85 min Scan# 1578  
Delta R.T. 0.01 min  
Lab File: VN051225.D  
Acq: 15 Sep 2018 16:19

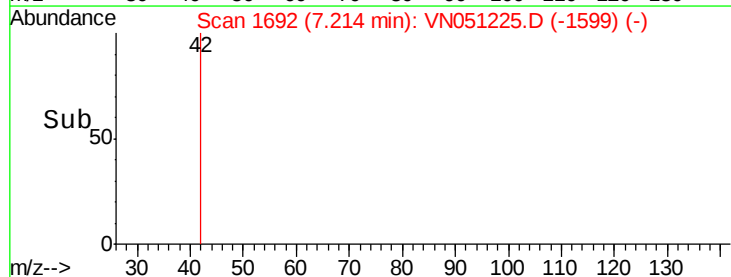
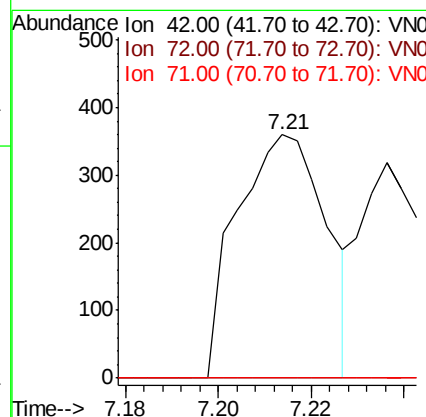
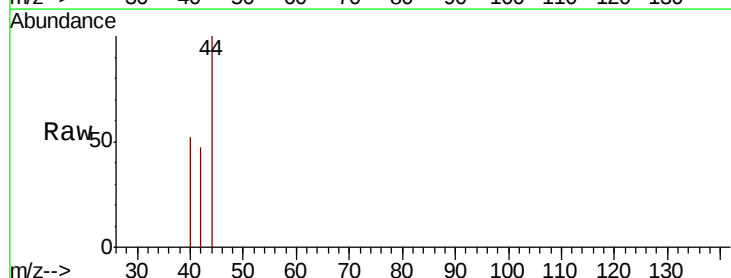
Instrument :  
MSVOA\_N  
ClientSampleId :

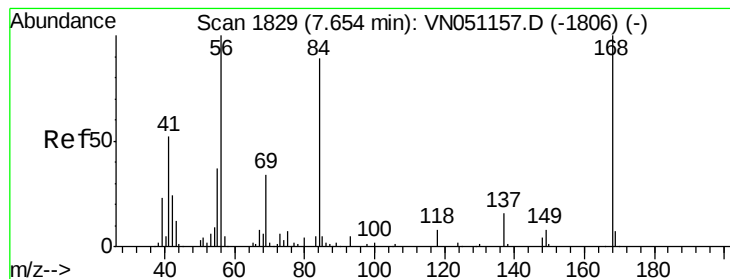
Tot Ion: 43 Resp: 5318  
Ion Ratio Lower Upper  
43 100  
72 27.1 23.0 34.6



#29  
Tetrahydrofuran  
Concen: 0.41 ug/l  
RT: 7.21 min Scan# 1692  
Delta R.T. -0.00 min  
Lab File: VN051225.D  
Acq: 15 Sep 2018 16:19

Tgt Ion: 42 Resp: 481  
Ion Ratio Lower Upper  
42 100  
72 0.0 37.4 56.0#  
71 0.0 34.7 52.1#





#31

Cyclohexane

Concen: 0.65 ug/l

RT: 7.67 min Scan# 1834

Delta R.T. 0.02 min

Lab File: VN051225.D

Acq: 15 Sep 2018 16:19

Instrument :  
MSVOA\_N  
ClientSampled :

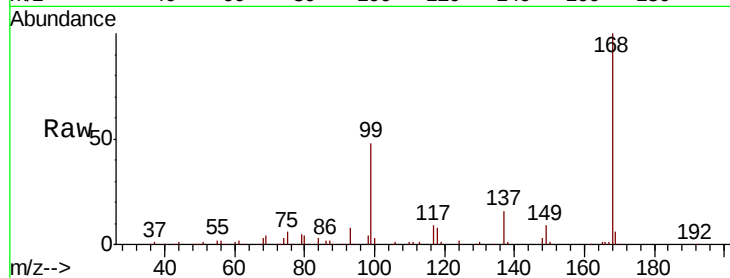
Tot Ion: 56 Resp: 6927

Ion Ratio Lower Upper

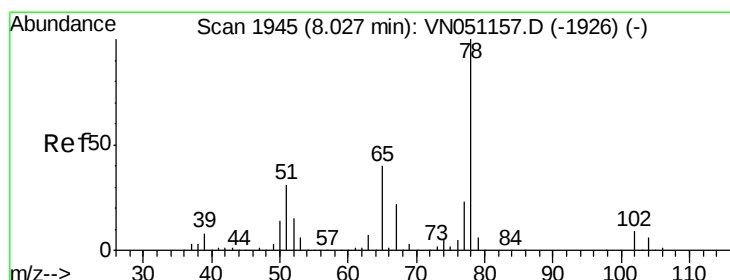
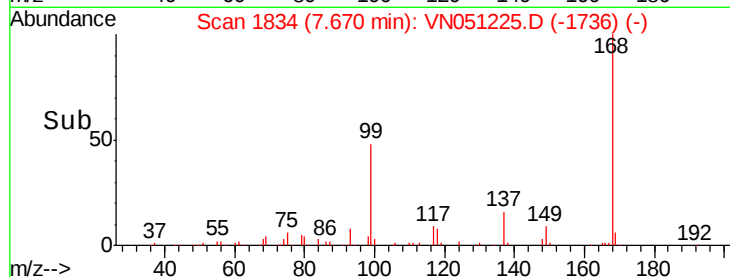
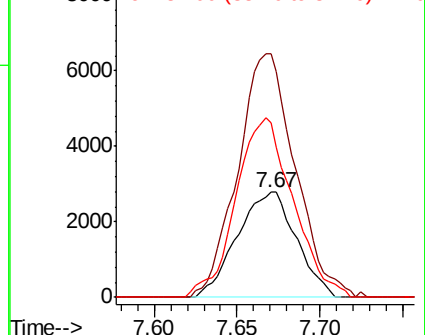
56 100

69 231.3 26.3 39.5#

84 160.2 69.4 104.0#



Abundance Ion 56.00 (55.70 to 56.70): VN0  
Ion 69.00 (68.70 to 69.70): VN0  
Ion 84.00 (83.70 to 84.70): VN0



#33

1,2-Dichloroethane-d4

Concen: 47.54 ug/l

RT: 8.03 min Scan# 1946

Delta R.T. 0.00 min

Lab File: VN051225.D

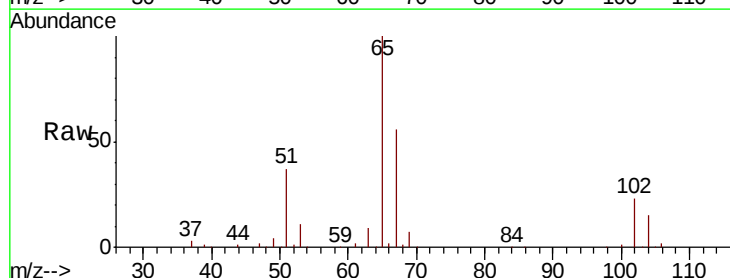
Acq: 15 Sep 2018 16:19

Tgt Ion: 65 Resp: 229824

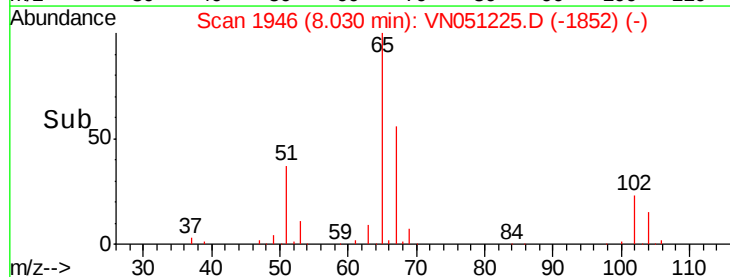
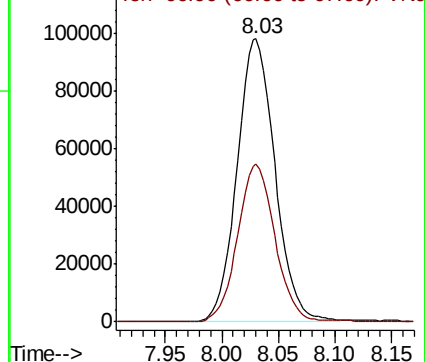
Ion Ratio Lower Upper

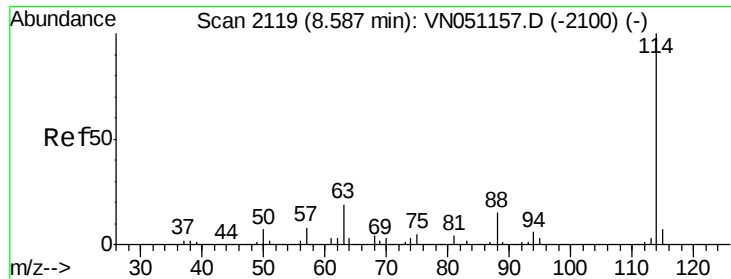
65 100

67 55.1 0.0 112.0



Abundance Ion 64.90 (64.60 to 65.60): VN0  
Ion 66.90 (66.60 to 67.60): VN0

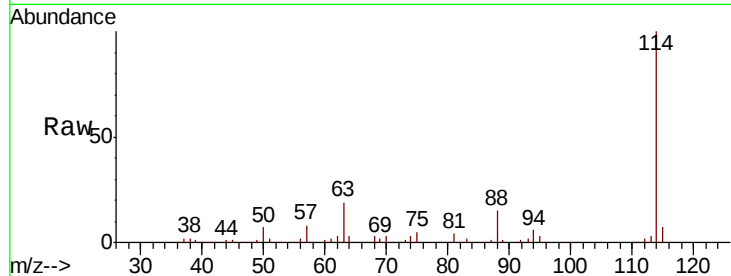




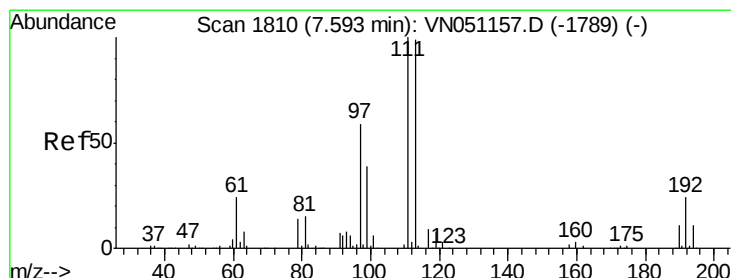
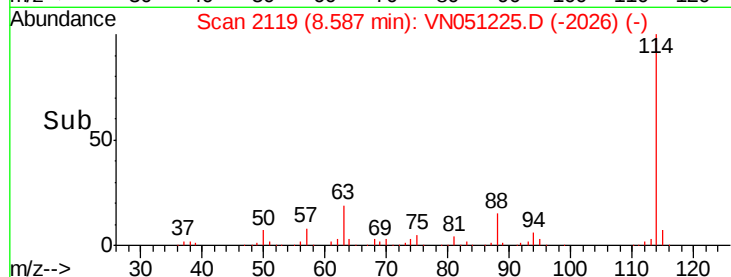
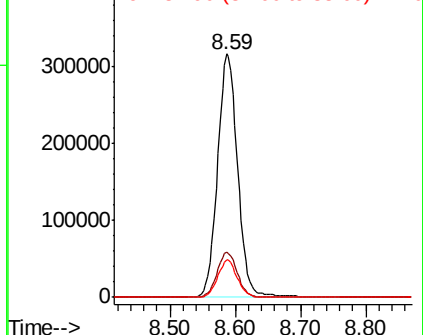
#34  
 1,4-Difluorobenzene  
 Concen: 50.00 ug/l  
 RT: 8.59 min Scan# 2119  
 Delta R.T. -0.00 min  
 Lab File: VN051225.D  
 Acq: 15 Sep 2018 16:19

Instrument :  
 MSVOA\_N  
 ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 18.6  | 0.0   | 37.8  |
| 88      | 15.3  | 0.0   | 30.8  |

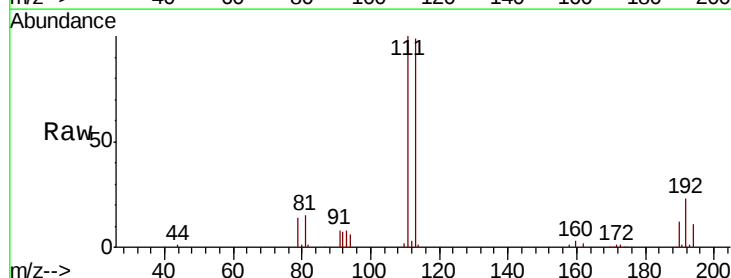


Abundance Ion 113.90 (113.60 to 114.60): V  
 Ion 63.00 (62.70 to 63.70): VN  
 Ion 87.90 (87.60 to 88.60): VN

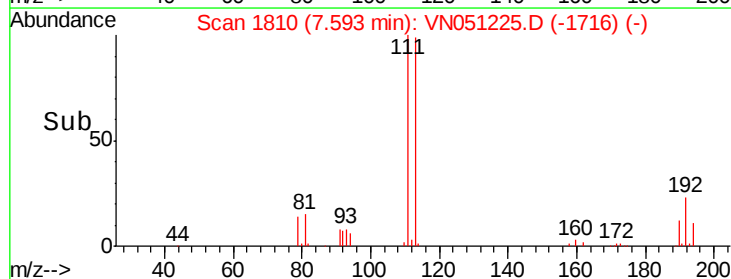
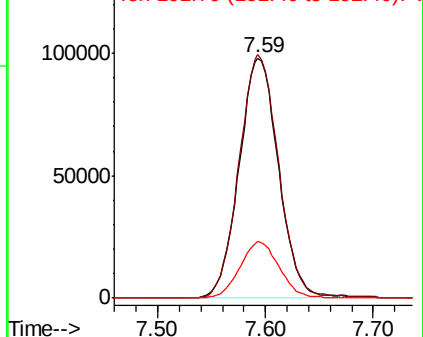


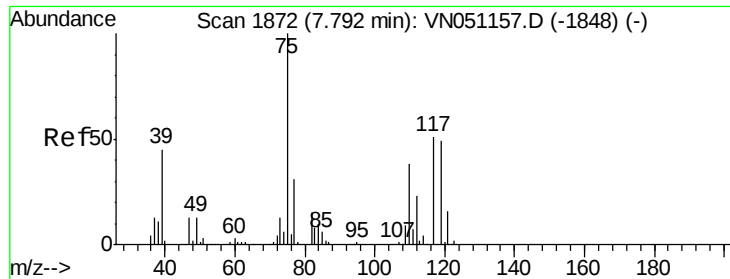
#35  
 Dibromofluoromethane  
 Concen: 48.87 ug/l  
 RT: 7.59 min Scan# 1810  
 Delta R.T. 0.00 min  
 Lab File: VN051225.D  
 Acq: 15 Sep 2018 16:19

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 113     | 100   |       |       |
| 111     | 101.9 | 83.0  | 124.6 |
| 192     | 23.5  | 18.7  | 28.1  |



Abundance Ion 112.80 (112.50 to 113.50): V  
 Ion 110.80 (110.50 to 111.50): V  
 Ion 191.70 (191.40 to 192.40): V

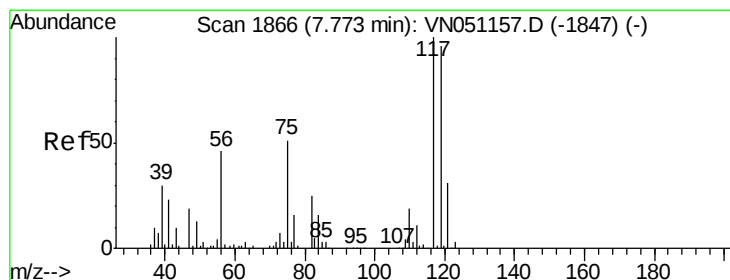
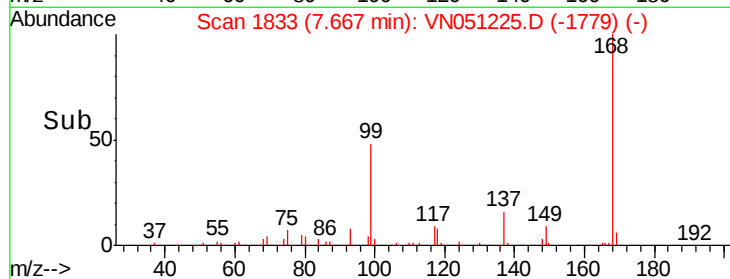
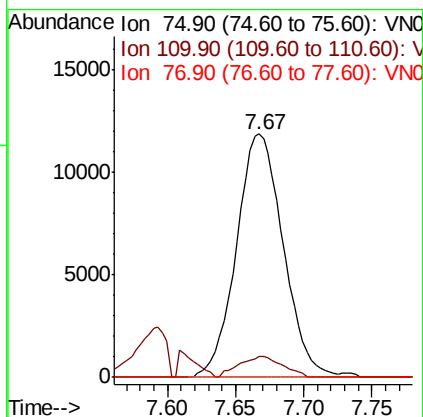
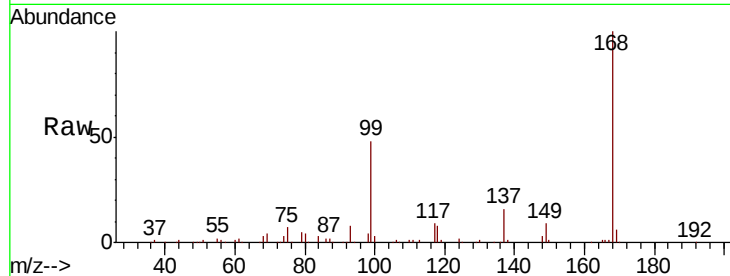




#36  
 1,1-Dichloropropene  
 Concen: 3.79 ug/l  
 RT: 7.67 min Scan# 1833  
 Delta R.T. -0.13 min  
 Lab File: VN051225.D  
 Acq: 15 Sep 2018 16:19

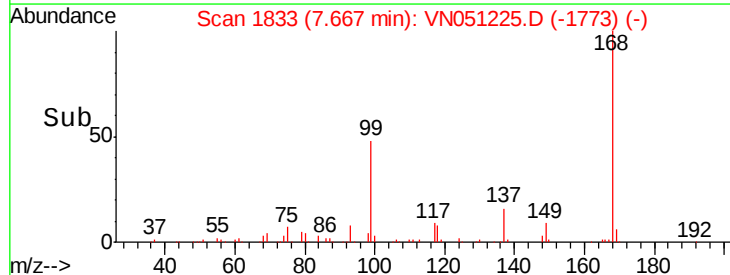
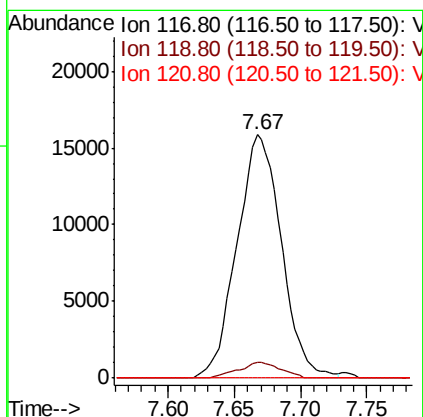
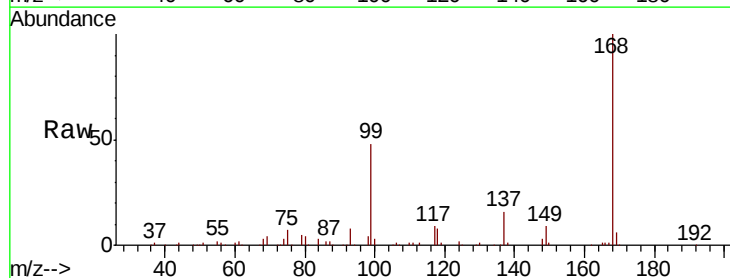
Instrument :  
 MSVOA\_N  
 ClientSampleId :

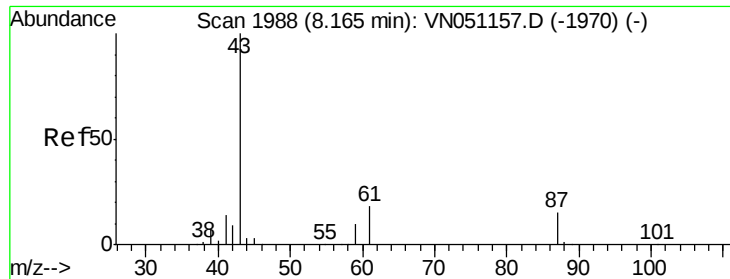
Tot Ion: 75 Resp: 28149  
 Ion Ratio Lower Upper  
 75 100  
 110 8.0 18.6 55.8#  
 77 0.0 25.2 37.8#



#38  
 Carbon Tetrachloride  
 Concen: 5.06 ug/l  
 RT: 7.67 min Scan# 1833  
 Delta R.T. -0.11 min  
 Lab File: VN051225.D  
 Acq: 15 Sep 2018 16:19

Tgt Ion: 117 Resp: 36997  
 Ion Ratio Lower Upper  
 117 100  
 119 6.6 76.8 115.2#  
 121 0.0 24.6 36.8#



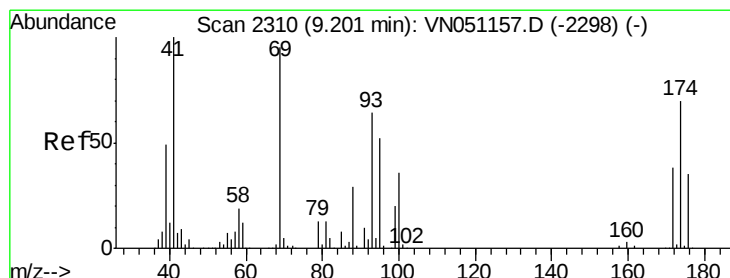
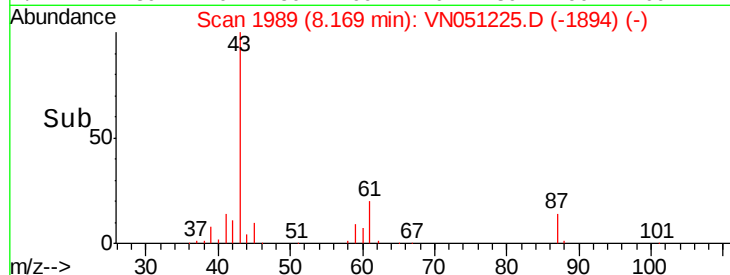
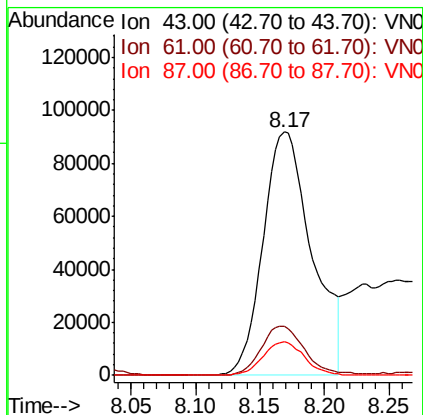
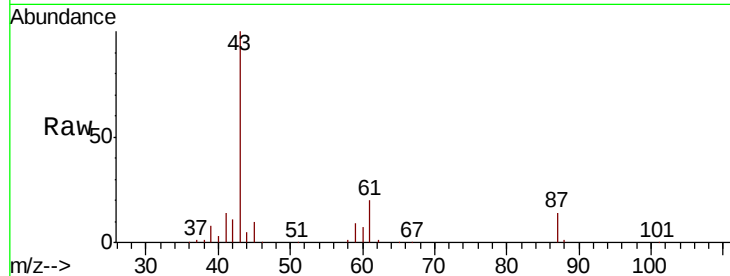


#43

Isopropyl Acetate  
 Concen: 32.08 ug/l  
 RT: 8.17 min Scan# 1989  
 Delta R.T. 0.01 min  
 Lab File: VN051225.D  
 Acq: 15 Sep 2018 16:19

Instrument :  
 MSVOA\_N  
 ClientSampleId :

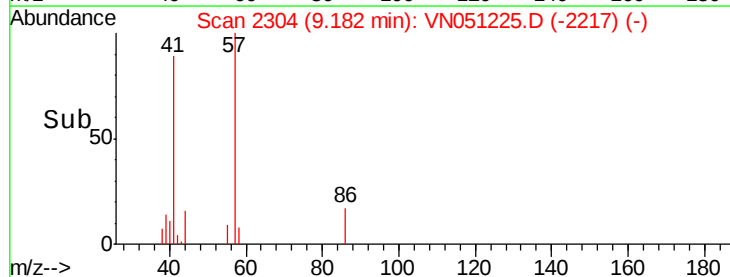
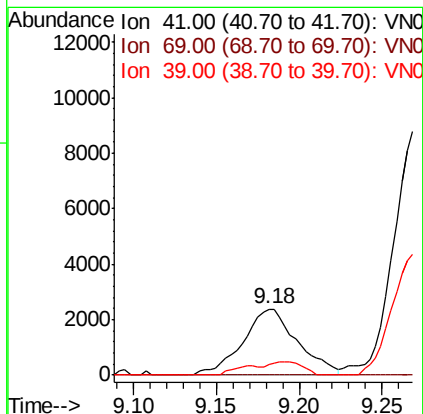
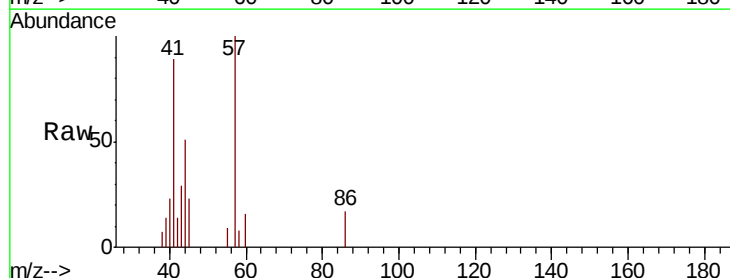
Tot Ion: 43 Resp: 243618  
 Ion Ratio Lower Upper  
 43 100  
 61 18.1 25.0 37.6#  
 87 11.7 11.8 17.8#

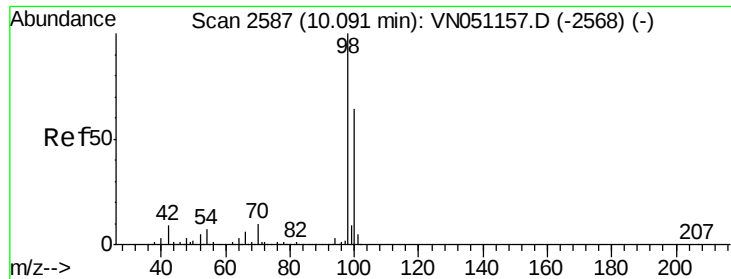


#48

Methyl methacrylate  
 Concen: 1.48 ug/l  
 RT: 9.18 min Scan# 2304  
 Delta R.T. -0.02 min  
 Lab File: VN051225.D  
 Acq: 15 Sep 2018 16:19

Tgt Ion: 41 Resp: 5460  
 Ion Ratio Lower Upper  
 41 100  
 69 0.0 77.7 116.5#  
 39 12.0 41.6 62.4#





#50

Toluene-d8

Concen: 43.71 ug/l

RT: 10.09 min Scan# 2587

Delta R.T. -0.00 min

Lab File: VN051225.D

Acq: 15 Sep 2018 16:19

Instrument :

MSVOA\_N

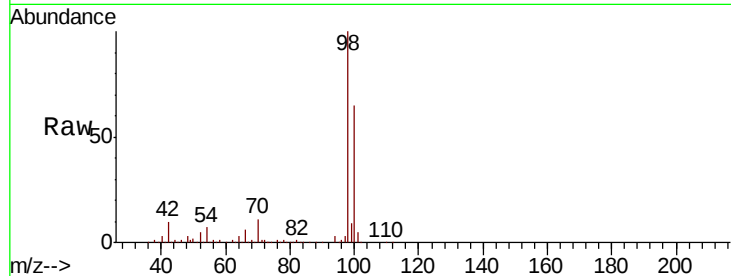
ClientSampled :

Tot Ion: 98 Resp: 843765

Ion Ratio Lower Upper

98 100

100 64.7 52.0 78.0



Abundance Ion 98.00 (97.70 to 98.70): VN051157.D (-2568) (-)

Ion 100.00 (99.70 to 100.70): VN051157.D (-2568) (-)

10.09

500000

400000

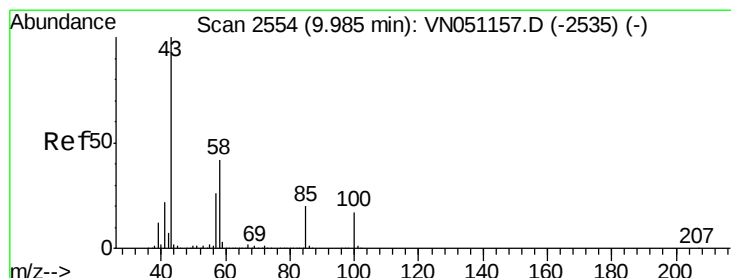
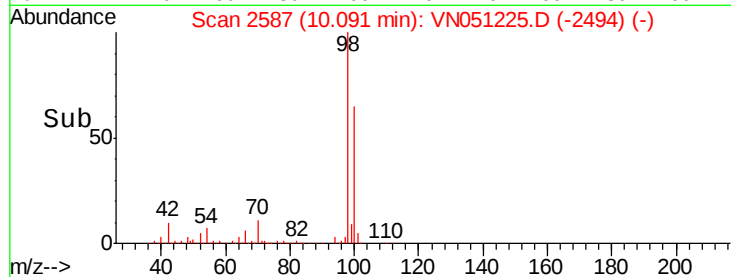
300000

200000

100000

0

Time-->



#51

4-Methyl-2-Pentanone

Concen: 0.38 ug/l

RT: 9.99 min Scan# 2554

Delta R.T. -0.00 min

Lab File: VN051225.D

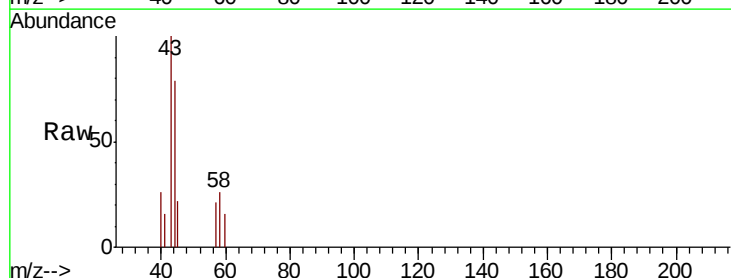
Acq: 15 Sep 2018 16:19

Tgt Ion: 43 Resp: 1600

Ion Ratio Lower Upper

43 100

58 24.3 33.5 50.3#



Abundance Ion 43.00 (42.70 to 43.70): VN051157.D (-2535) (-)

Ion 58.00 (57.70 to 58.70): VN051157.D (-2535) (-)

9.99

1200

1000

800

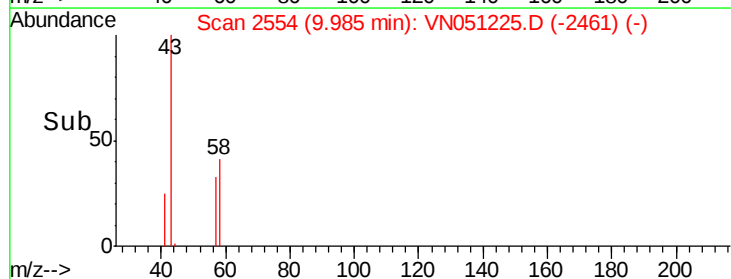
600

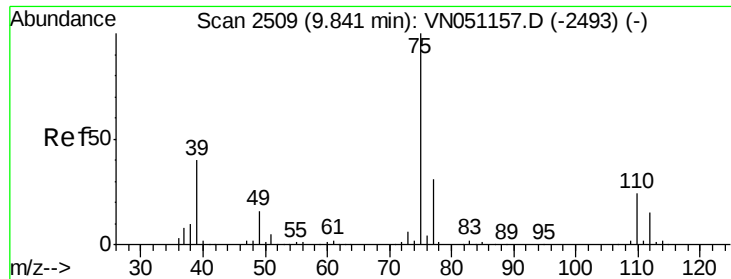
400

200

0

Time-->



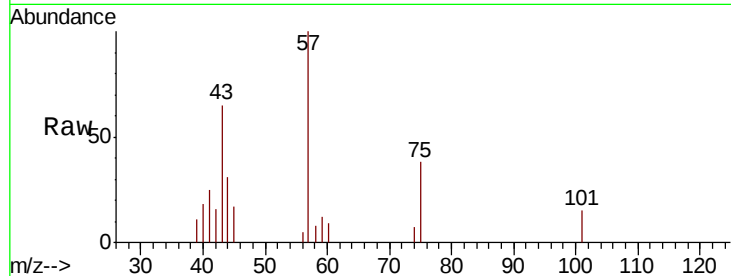


#54

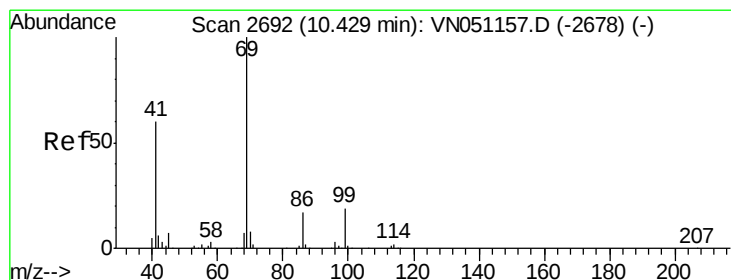
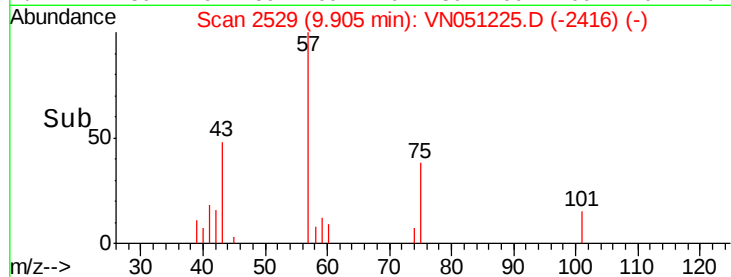
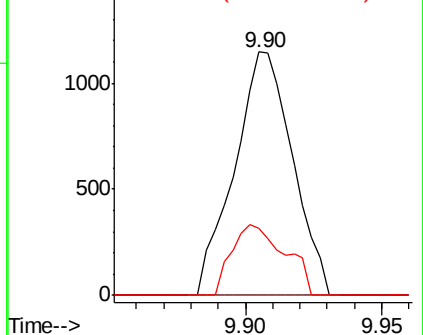
cis-1,3-Dichloropropene  
Concen: 0.20 ug/l  
RT: 9.90 min Scan# 2529  
Delta R.T. 0.06 min  
Lab File: VN051225.D  
Acq: 15 Sep 2018 16:19

Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion: 75 Resp: 1693  
Ion Ratio Lower Upper  
75 100  
77 0.0 25.7 38.5#  
39 27.6 31.9 47.9#



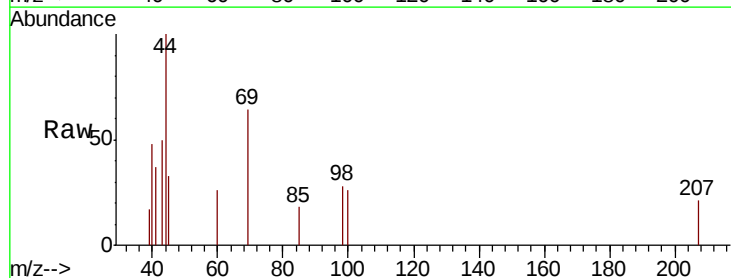
Abundance Ion 74.90 (74.60 to 75.60): VNO  
Ion 76.90 (76.60 to 77.60): VNO  
Ion 39.00 (38.70 to 39.70): VNO



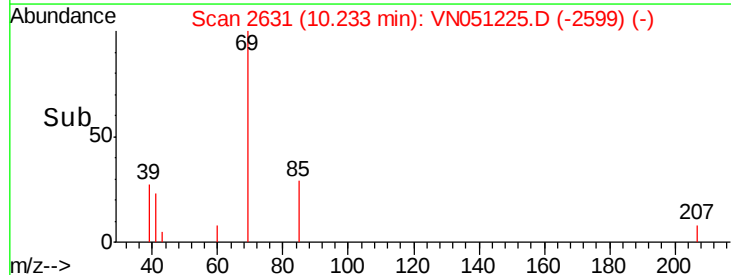
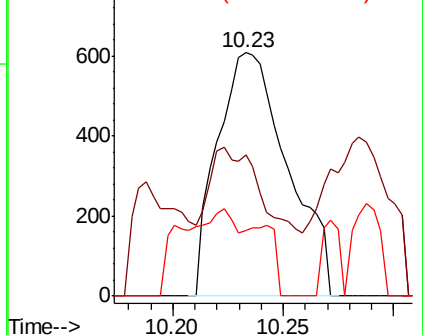
#56

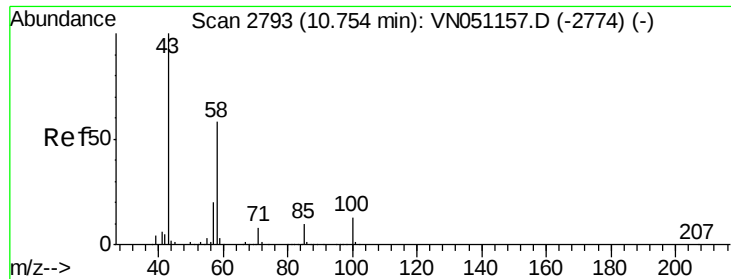
Ethyl methacrylate  
Concen: 2.65 ug/l  
RT: 10.23 min Scan# 2631  
Delta R.T. -0.20 min  
Lab File: VN051225.D  
Acq: 15 Sep 2018 16:19

Tgt Ion: 69 Resp: 1345  
Ion Ratio Lower Upper  
69 100  
41 56.7 47.8 71.8  
39 0.0 23.0 34.4#



Abundance Ion 69.00 (68.70 to 69.70): VNO  
Ion 41.00 (40.70 to 41.70): VNO  
Ion 39.00 (38.70 to 39.70): VNO

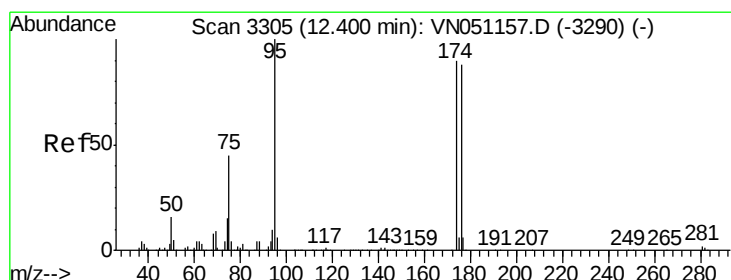
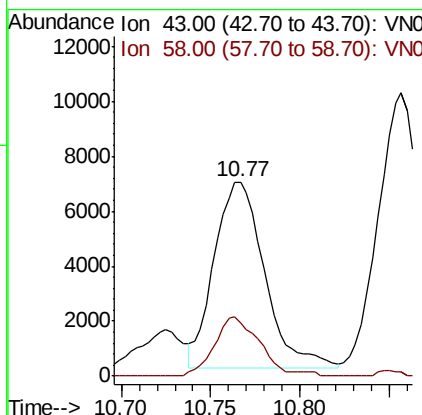
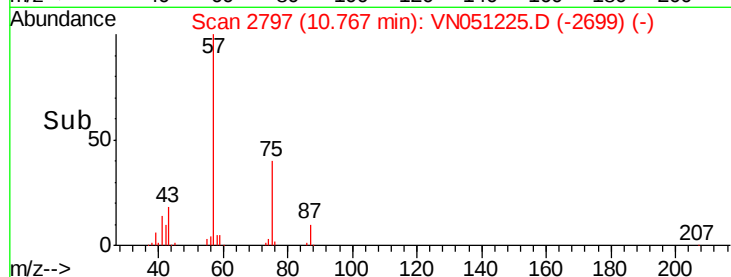
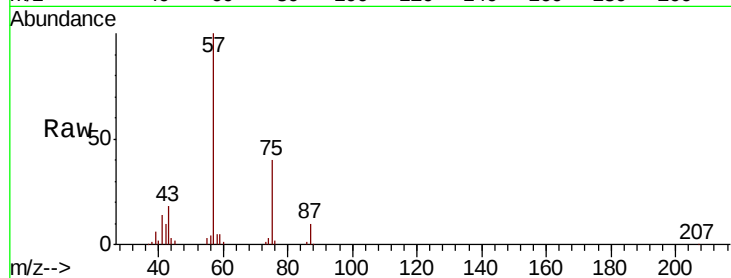




#59  
2-Hexanone  
Concen: 4.67 ug/l  
RT: 10.77 min Scan# 2797  
Delta R.T. 0.02 min  
Lab File: VN051225.D  
Acq: 15 Sep 2018 16:19

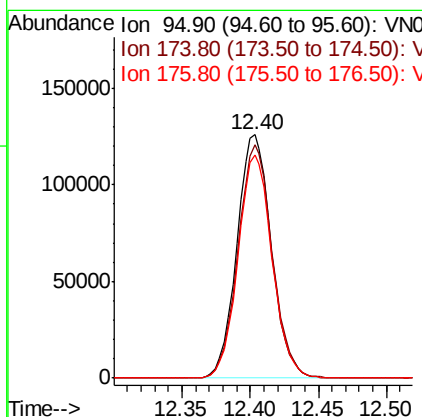
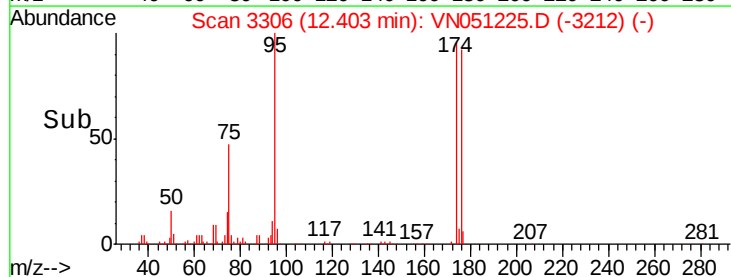
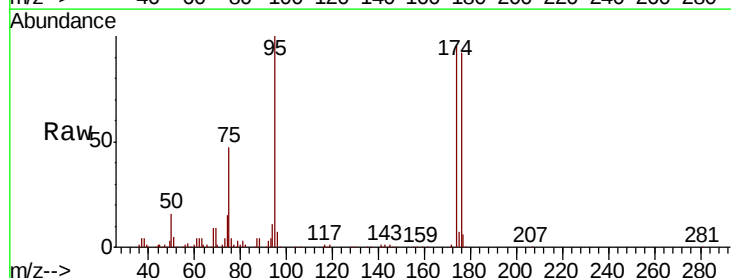
Instrument :  
MSVOA\_N  
ClientSampleId :

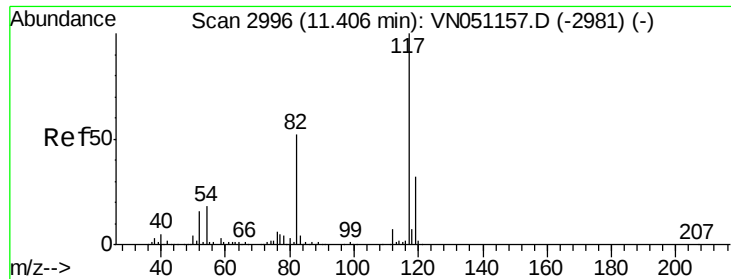
Tot Ion: 43 Resp: 13304  
Ion Ratio Lower Upper  
43 100  
58 27.9 29.3 88.0#



#62  
4-Bromofluorobenzene  
Concen: 34.47 ug/l  
RT: 12.40 min Scan# 3306  
Delta R.T. 0.00 min  
Lab File: VN051225.D  
Acq: 15 Sep 2018 16:19

Tgt Ion: 95 Resp: 220074  
Ion Ratio Lower Upper  
95 100  
174 95.5 0.0 184.8  
176 90.9 0.0 178.6





#63

Chlorobenzene-d5

Concen: 50.00 ug/l

RT: 11.41 min Scan# 2997

Delta R.T. 0.00 min

Lab File: VN051225.D

Acq: 15 Sep 2018 16:19

Instrument :

MSVOA\_N

ClientSampled :

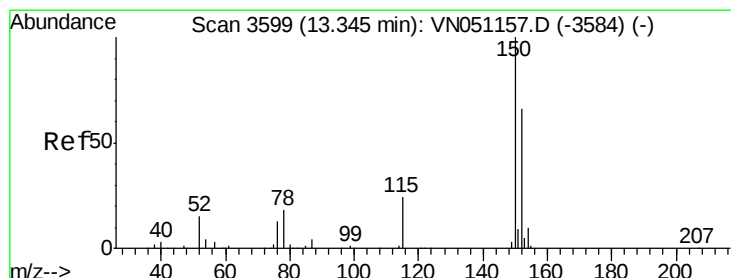
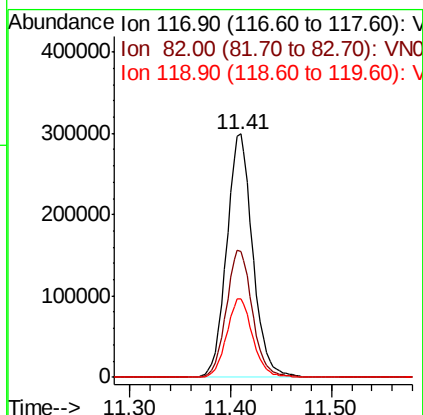
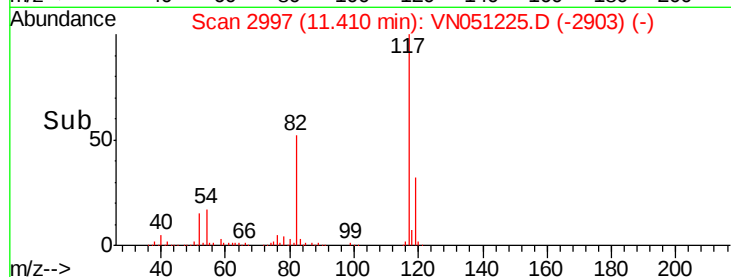
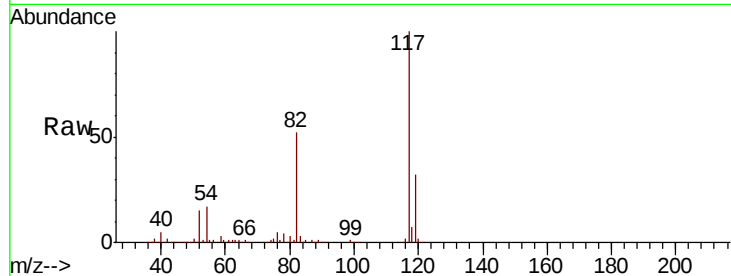
Tot Ion:117 Resp: 537640

Ion Ratio Lower Upper

117 100

82 51.5 41.8 62.6

119 32.2 26.2 39.2



#72

1,4-Dichlorobenzene-d4

Concen: 50.00 ug/l

RT: 13.35 min Scan# 3599

Delta R.T. 0.00 min

Lab File: VN051225.D

Acq: 15 Sep 2018 16:19

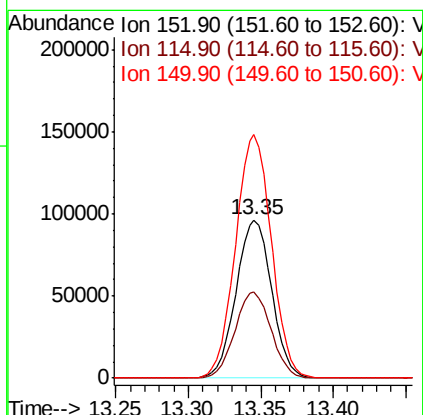
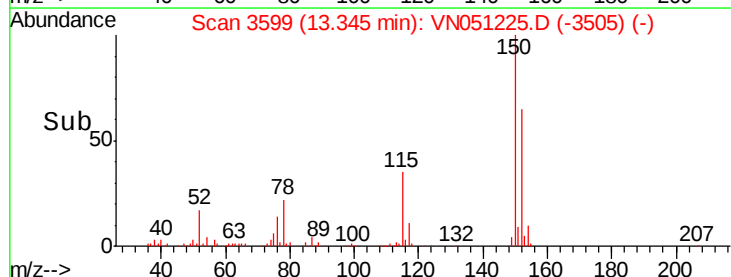
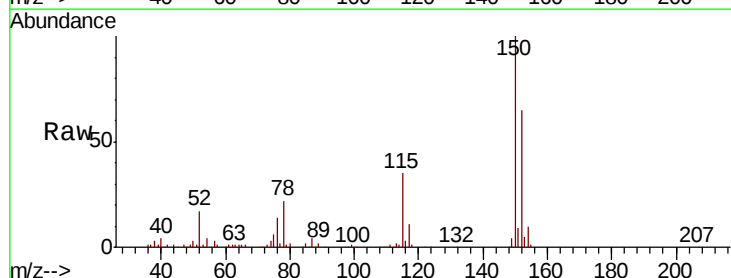
Tgt Ion:152 Resp: 164313

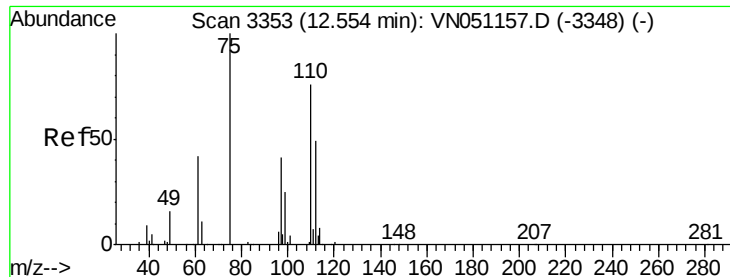
Ion Ratio Lower Upper

152 100

115 55.0 28.2 84.7

150 154.7 0.0 349.0





#76

1,2,3-Trichloropropane

Concen: 39.83 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. -0.15 min

Lab File: VN051225.D

Acq: 15 Sep 2018 16:19

Instrument :

MSVOA\_N

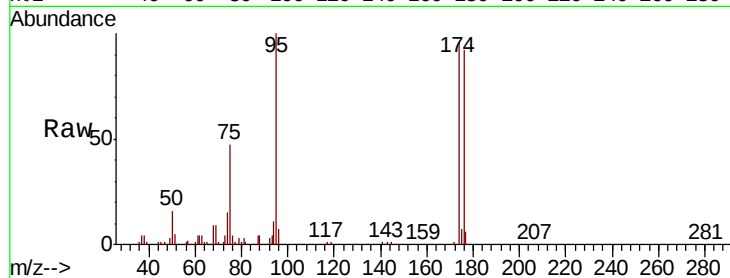
ClientSampled :

Tot Ion: 75 Resp: 102237

Ion Ratio Lower Upper

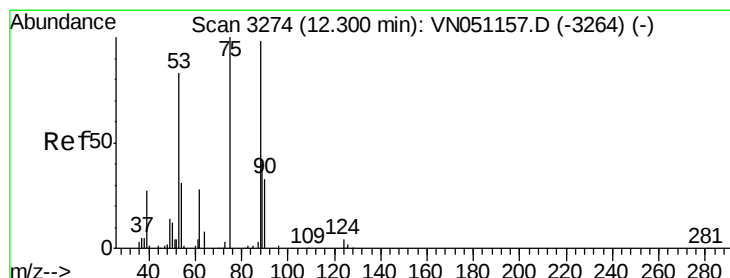
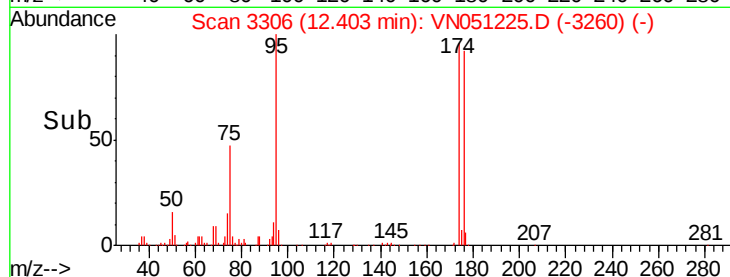
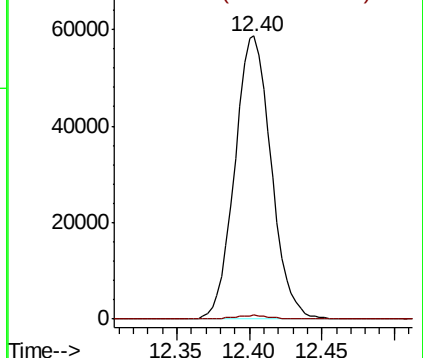
75 100

77 1.2 0.0 0.0#



Abundance Ion 74.90 (74.60 to 75.60): VNO

Ion 77.00 (76.70 to 77.70): VNO



#81

trans-1,4-Dichloro-2-butene

Concen: 118.17 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. 0.10 min

Lab File: VN051225.D

Acq: 15 Sep 2018 16:19

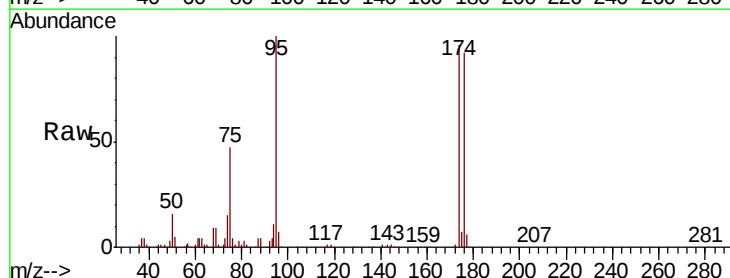
Tgt Ion: 75 Resp: 102237

Ion Ratio Lower Upper

75 100

53 0.0 67.8 101.8#

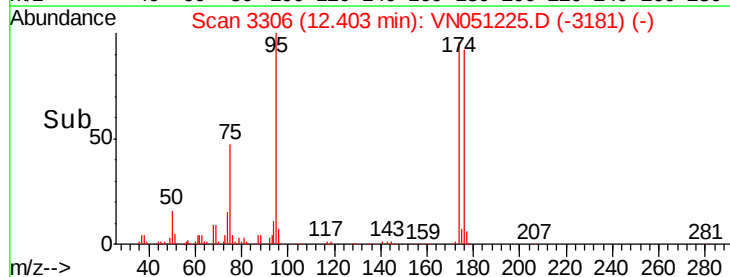
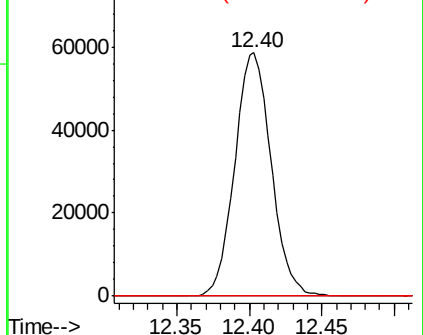
89 0.0 36.0 54.0#

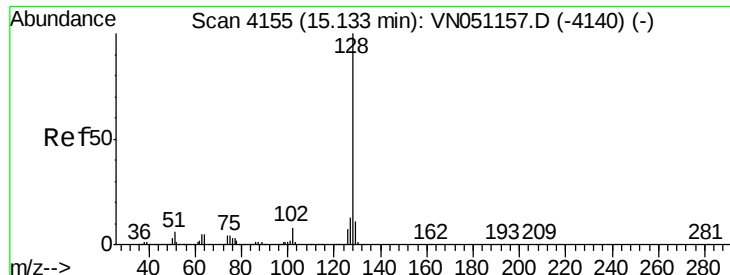


Abundance Ion 74.90 (74.60 to 75.60): VNO

Ion 53.00 (52.70 to 53.70): VNO

Ion 88.90 (88.60 to 89.60): VNO





#95

Naphthalene

Concen: 5.35 ug/l

RT: 15.15 min Scan# 4159

Delta R.T. 0.01 min

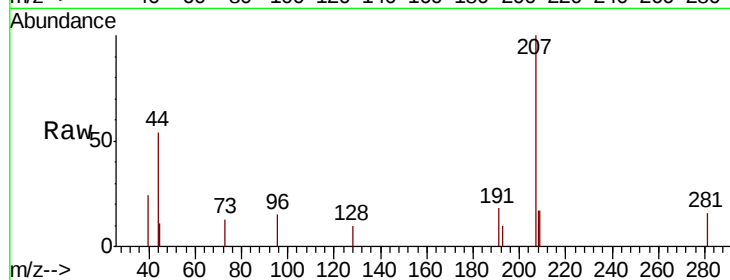
Lab File: VN051225.D

Acq: 15 Sep 2018 16:19

Instrument :

MSVOA\_N

ClientSampleId :



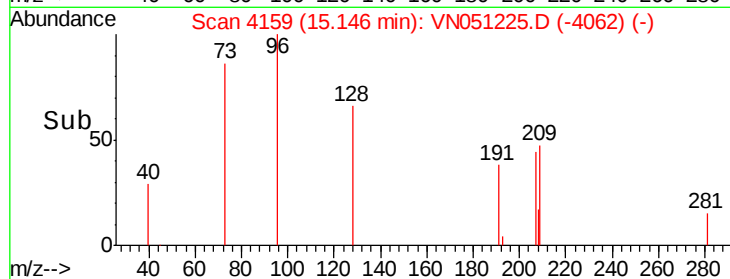
Tot Ion:128 Resp: 89

Ion Ratio Lower Upper

128 100

127 0.0 10.6 15.8#

129 0.0 8.6 12.8#



Abundance Ion 128.00 (127.70 to 128.70): V

Ion 127.00 (126.70 to 127.70): V

Ion 129.00 (128.70 to 129.70): V

