

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN091518\  
 Data File : VN051233.D  
 Acq On : 15 Sep 2018 19:36  
 Operator : MD\SY  
 Sample : PB112879ZHE#14  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 20 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Quant Time: Sep 17 02:17:56 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  | 416229   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.59  | 114  | 665247   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 535167   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.35 | 152  | 154913   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |        |      |
|---------------------------|--------|-----|----------|-------|--------|------|
| 33) 1,2-Dichloroethane-d4 | 8.03   | 65  | 229849   | 49.62 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 99.24% |      |
| 35) Dibromofluoromethane  | 7.59   | 113 | 247572   | 49.53 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 99.06% |      |
| 50) Toluene-d8            | 10.09  | 98  | 844793   | 44.54 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 89.08% |      |
| 62) 4-Bromofluorobenzene  | 12.40  | 95  | 213095   | 33.96 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 67.92% |      |

## Target Compounds

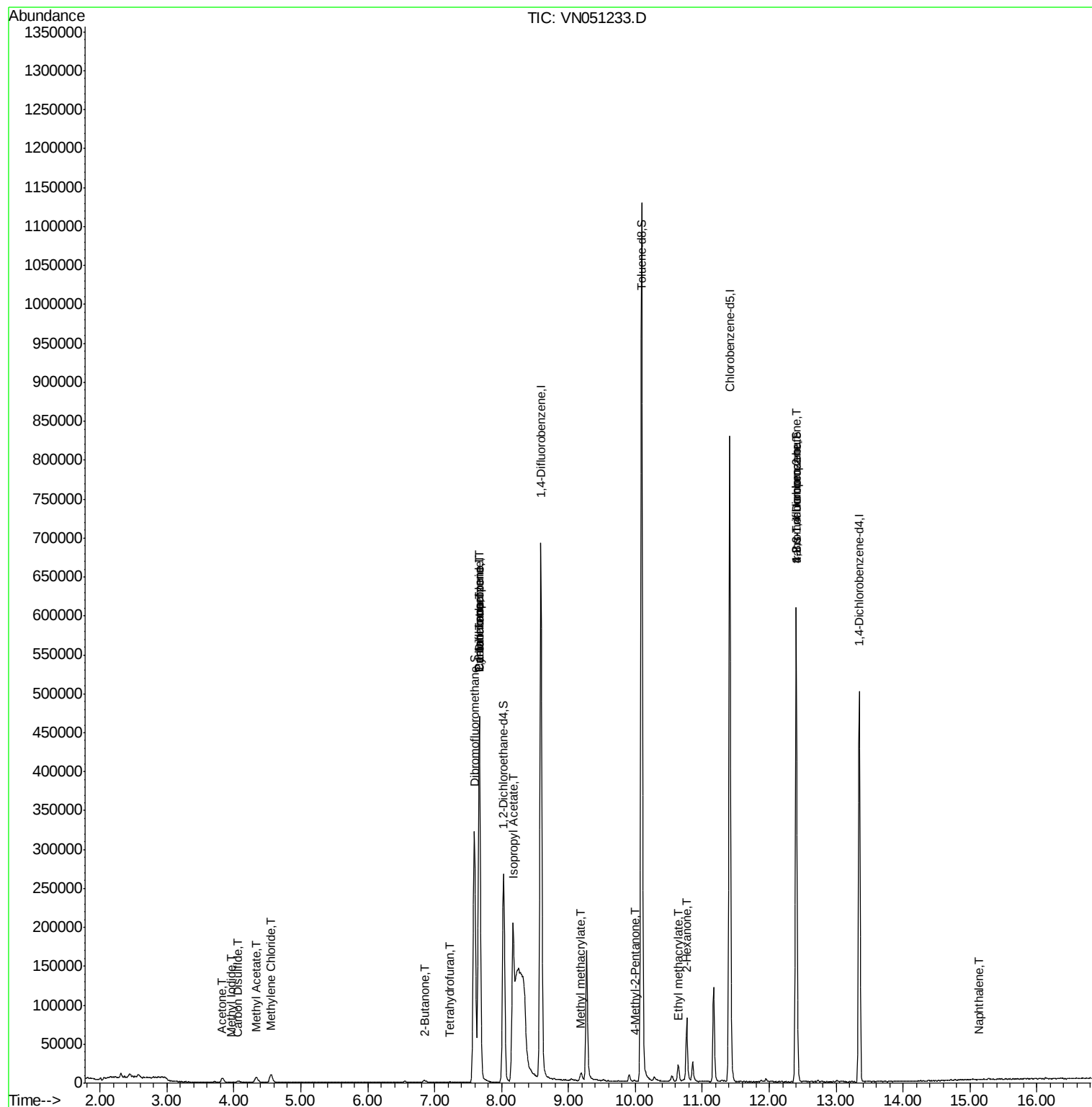
|                                |       |     |        |           |        | Qvalue |
|--------------------------------|-------|-----|--------|-----------|--------|--------|
| 3) Chloromethane               | 2.06  | 50  | 1716   | Below Cal |        | 88     |
| 5) Bromomethane                | 2.57  | 94  | 1980   | Below Cal |        | 98     |
| 10) Methyl Iodide              | 3.96  | 142 | 108    | 5.65      | ug/l # | 44     |
| 16) Acetone                    | 3.82  | 43  | 9416   | 2.44      | ug/l   | 93     |
| 17) Carbon Disulfide           | 4.06  | 76  | 1219   | 0.21      | ug/l # | 76     |
| 18) Methyl Acetate             | 4.34  | 43  | 13577  | 3.66      | ug/l   | 96     |
| 20) Methylene Chloride         | 4.55  | 84  | 7791   | 1.52      | ug/l   | 91     |
| 25) 2-Butanone                 | 6.85  | 43  | 4948   | 2.72      | ug/l # | 87     |
| 29) Tetrahydrofuran            | 7.23  | 42  | 863    | 0.76      | ug/l # | 40     |
| 31) Cyclohexane                | 7.67  | 56  | 6713   | 0.66      | ug/l # | 1      |
| 36) 1,1-Dichloropropene        | 7.67  | 75  | 27722  | 3.80      | ug/l # | 43     |
| 38) Carbon Tetrachloride       | 7.67  | 117 | 35032  | 4.87      | ug/l # | 17     |
| 43) Isopropyl Acetate          | 8.17  | 43  | 246289 | 33.00     | ug/l # | 80     |
| 48) Methyl methacrylate        | 9.18  | 41  | 5882   | 1.62      | ug/l # | 14     |
| 51) 4-Methyl-2-Pentanone       | 9.99  | 43  | 960    | 0.23      | ug/l   | 89     |
| 56) Ethyl methacrylate         | 10.65 | 69  | 470    | 2.52      | ug/l # | 1      |
| 59) 2-Hexanone                 | 10.76 | 43  | 12536  | 4.48      | ug/l # | 59     |
| 76) 1,2,3-Trichloropropane     | 12.40 | 75  | 98256  | 40.63     | ug/l # | 100    |
| 81) trans-1,4-Dichloro-2-buten | 12.40 | 75  | 98256  | 120.46    | ug/l # | 15     |
| 95) Naphthalene                | 15.13 | 128 | 99     | 5.36      | ug/l # | 69     |

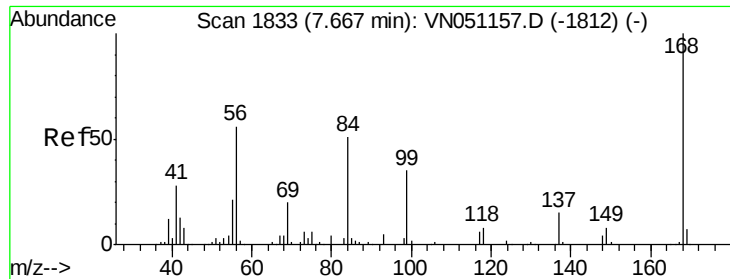
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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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: VN051233.D

Acq: 15 Sep 2018 19:36

Instrument :

MSVOA\_N

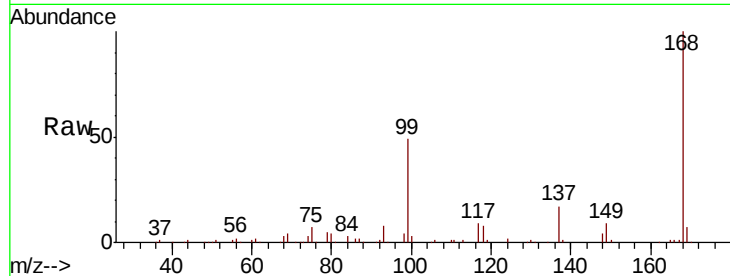
ClientSampled :

Tot Ion:168 Resp: 416229

Ion Ratio Lower Upper

168 100

99 48.8 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) (-)

7.67

150000

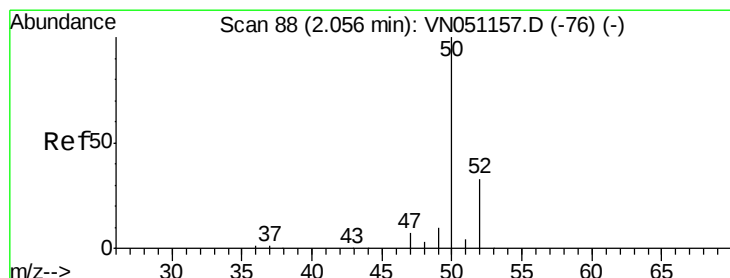
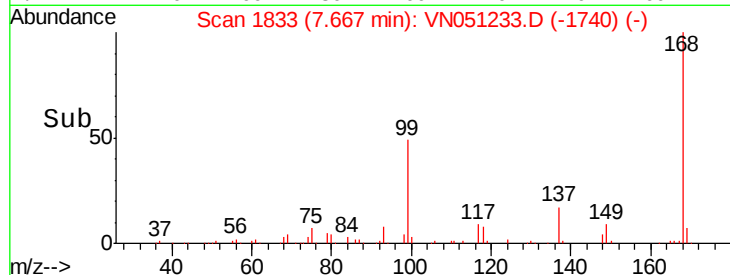
100000

50000

0

7.60 7.70 7.80

Time-->



#3

Chloromethane

Concen: Below Cal

RT: 2.06 min Scan# 88

Delta R.T. 0.00 min

Lab File: VN051233.D

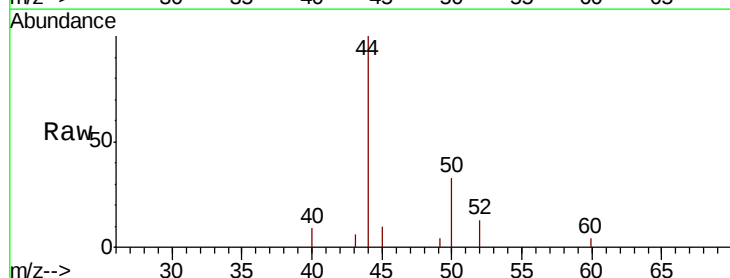
Acq: 15 Sep 2018 19:36

Tgt Ion: 50 Resp: 1716

Ion Ratio Lower Upper

50 100

52 39.0 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) (-)

2.06

1500

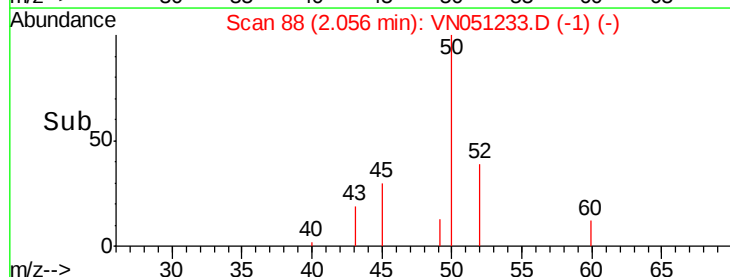
1000

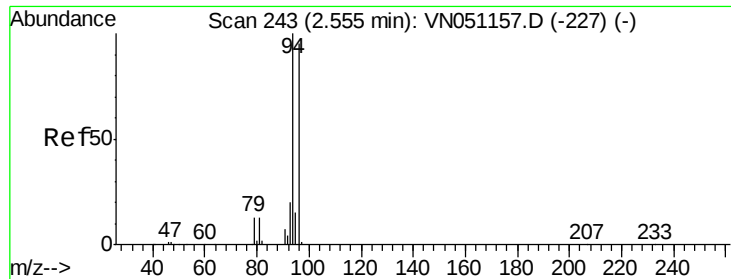
500

0

2.02 2.04 2.06 2.08

Time-->





#5

Bromomethane

Concen: Below Cal

RT: 2.57 min Scan# 249

Delta R.T. 0.01 min

Lab File: VN051233.D

Acq: 15 Sep 2018 19:36

Instrument :

MSVOA\_N

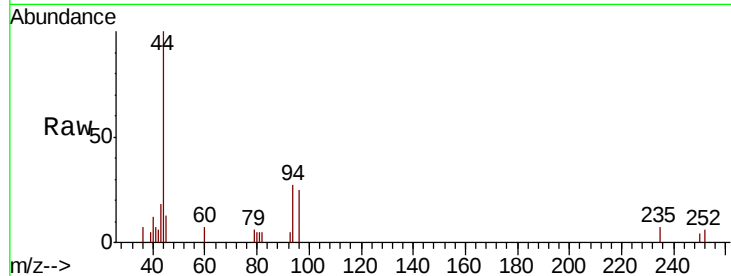
ClientSampleId :

Tot Ion: 94 Resp: 1980

Ion Ratio Lower Upper

94 100

96 93.0 75.9 113.9



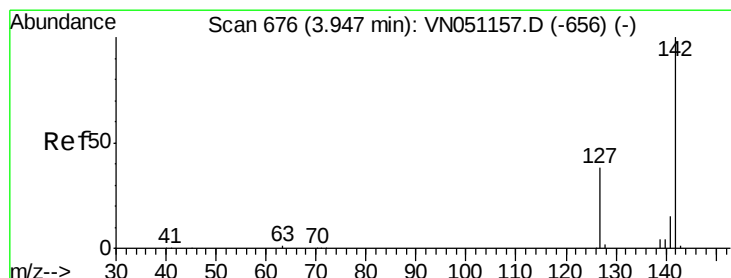
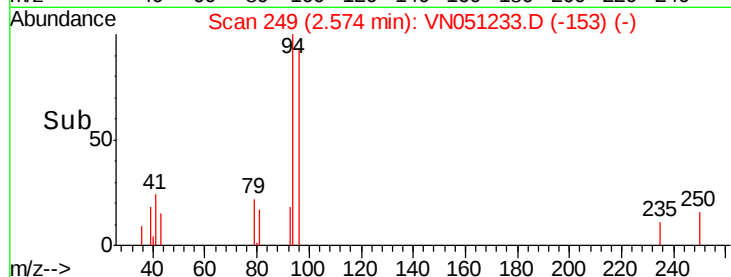
Abundance Ion 93.90 (93.60 to 94.60): VN051157.D (-227) (-)

Ion 95.90 (95.60 to 96.60): VN051157.D (-227) (-)

2.57

2.60

Time-->



#10

Methyl Iodide

Concen: 5.65 ug/l

RT: 3.96 min Scan# 680

Delta R.T. 0.01 min

Lab File: VN051233.D

Acq: 15 Sep 2018 19:36

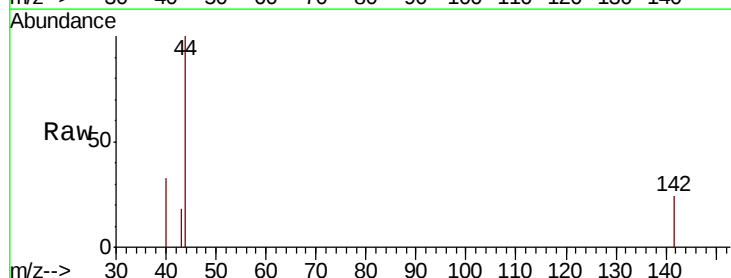
Tgt Ion: 142 Resp: 108

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): VN051157.D (-656) (-)

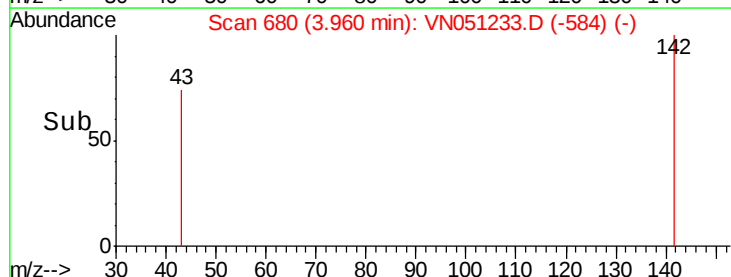
Ion 126.80 (126.50 to 127.50): VN051157.D (-656) (-)

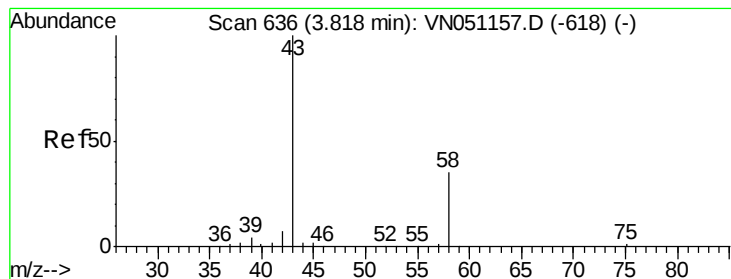
Ion 140.80 (140.50 to 141.50): VN051157.D (-656) (-)

3.96

3.95 3.96 3.97

Time-->





#16

Acetone

Concen: 2.44 ug/l

RT: 3.82 min Scan# 637

Delta R.T. 0.00 min

Lab File: VN051233.D

Acq: 15 Sep 2018 19:36

Instrument :

MSVOA\_N

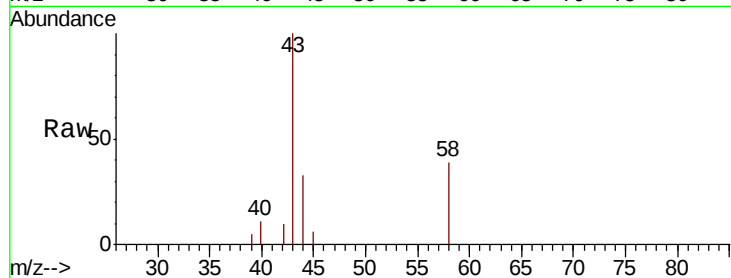
ClientSampled :

Tot Ion: 43 Resp: 9416

Ion Ratio Lower Upper

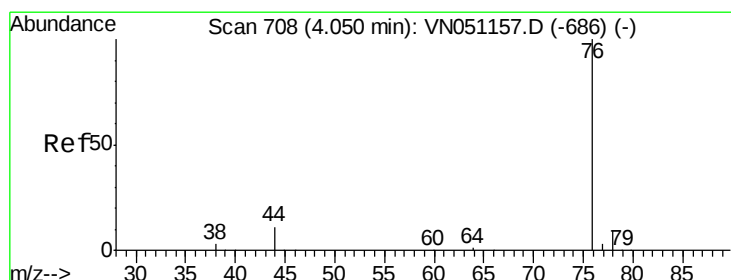
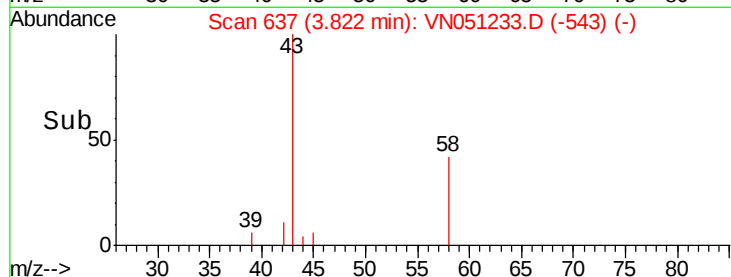
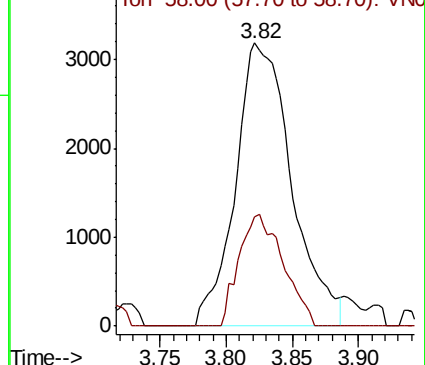
43 100

58 38.7 27.8 41.6



Abundance Ion 43.00 (42.70 to 43.70): VN051157.D (-618) (-)

Ion 58.00 (57.70 to 58.70): VN051157.D (-618) (-)



#17

Carbon Disulfide

Concen: 0.21 ug/l

RT: 4.06 min Scan# 710

Delta R.T. 0.01 min

Lab File: VN051233.D

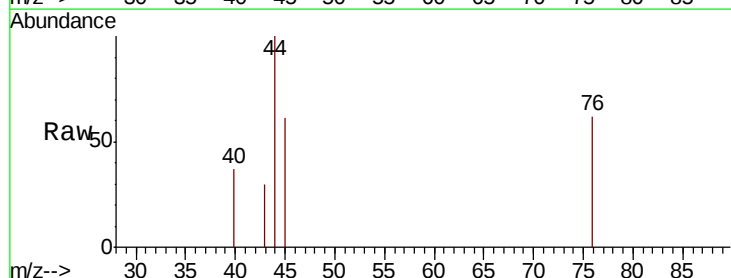
Acq: 15 Sep 2018 19:36

Tgt Ion: 76 Resp: 1219

Ion Ratio Lower Upper

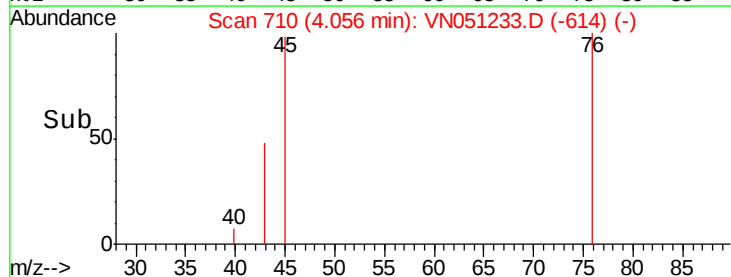
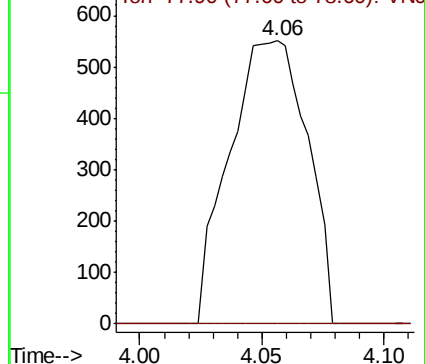
76 100

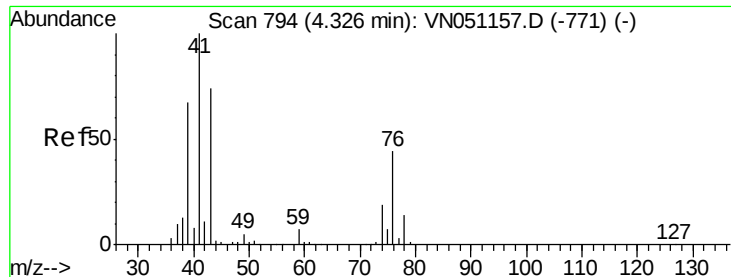
78 0.0 7.0 10.6#



Abundance Ion 75.90 (75.60 to 76.60): VN051157.D (-686) (-)

Ion 77.90 (77.60 to 78.60): VN051157.D (-686) (-)

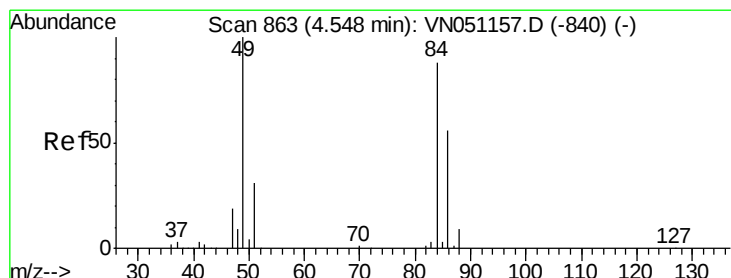
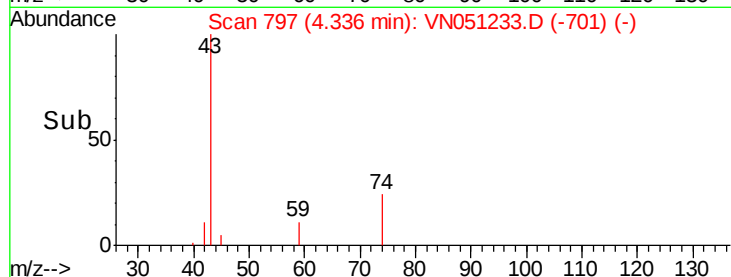
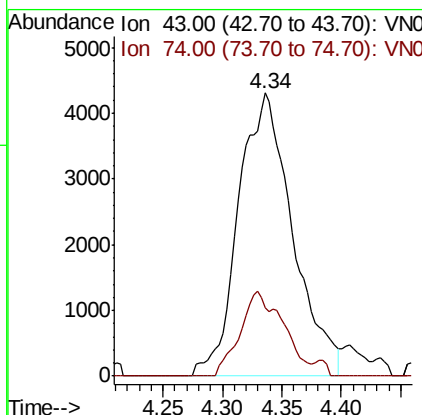
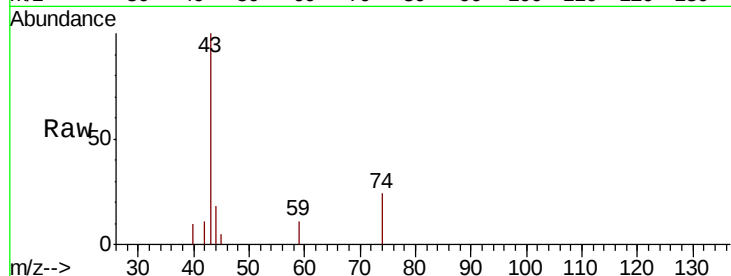




#18  
Methyl Acetate  
Concen: 3.66 ug/l  
RT: 4.34 min Scan# 797  
Delta R.T. 0.01 min  
Lab File: VN051233.D  
Acq: 15 Sep 2018 19:36

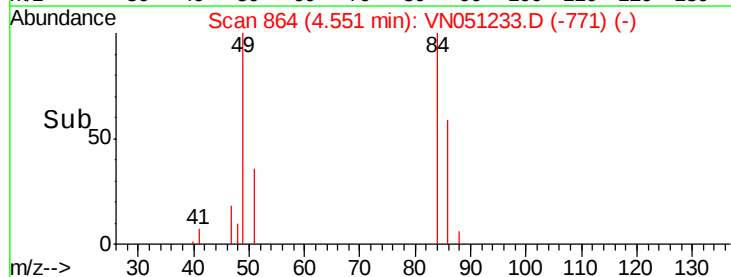
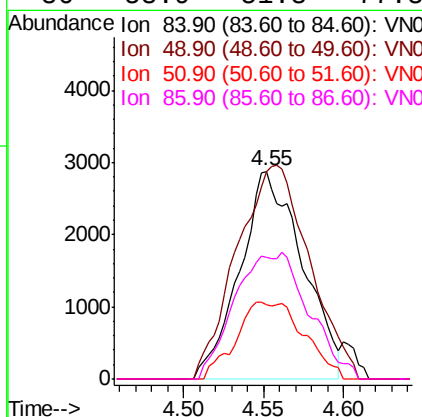
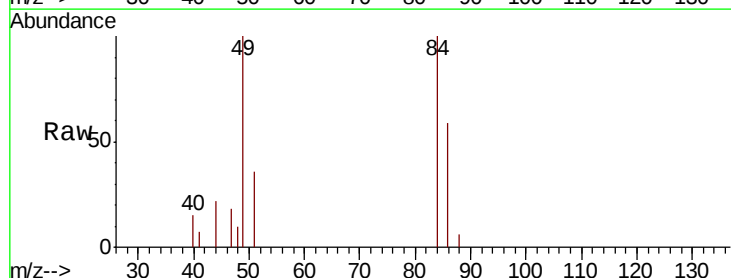
Instrument :  
MSVOA\_N  
ClientSampled :

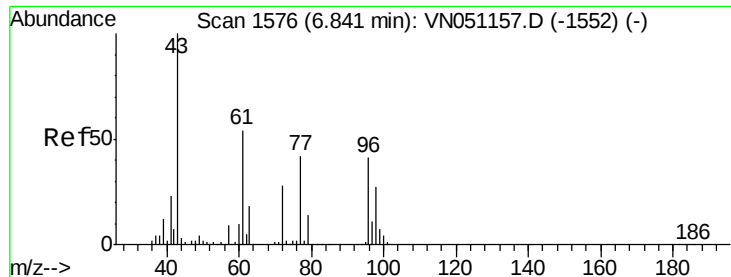
Tot Ion: 43 Resp: 13577  
Ion Ratio Lower Upper  
43 100  
74 24.0 20.7 31.1



#20  
Methylene Chloride  
Concen: 1.52 ug/l  
RT: 4.55 min Scan# 864  
Delta R.T. -0.00 min  
Lab File: VN051233.D  
Acq: 15 Sep 2018 19:36

Tgt Ion: 84 Resp: 7791  
Ion Ratio Lower Upper  
84 100  
49 99.7 90.2 135.2  
51 35.6 28.4 42.6  
86 58.9 51.8 77.8

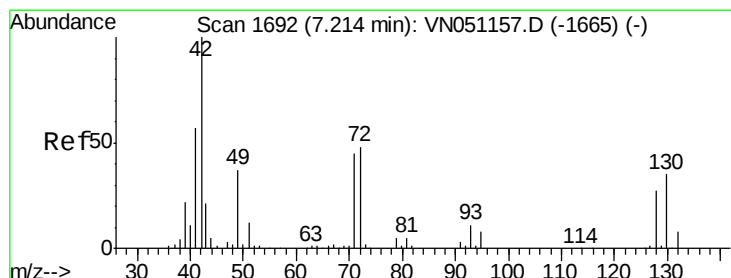
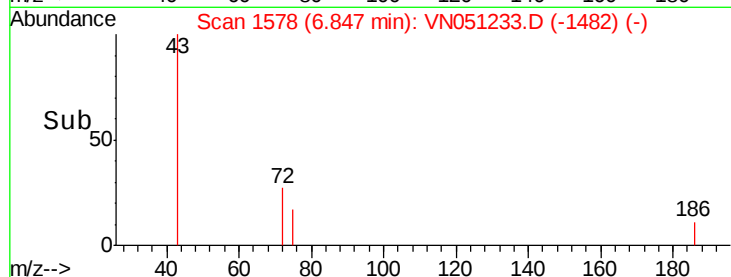
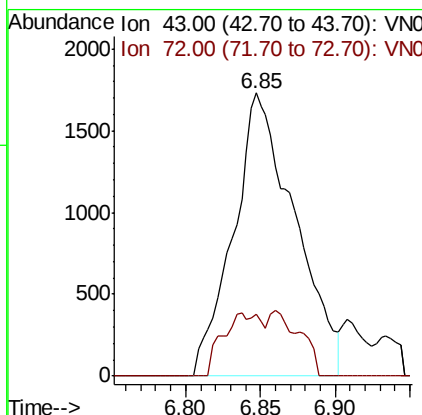
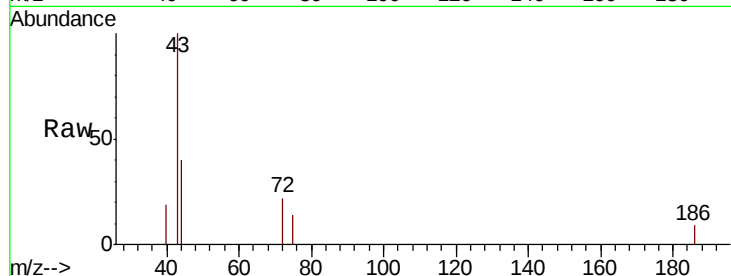




#25  
2-Butanone  
Concen: 2.72 ug/l  
RT: 6.85 min Scan# 1578  
Delta R.T. 0.01 min  
Lab File: VN051233.D  
Acq: 15 Sep 2018 19:36

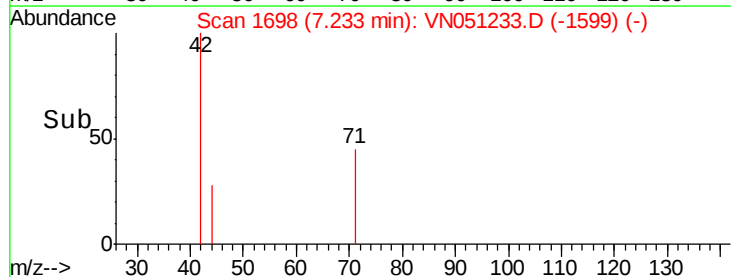
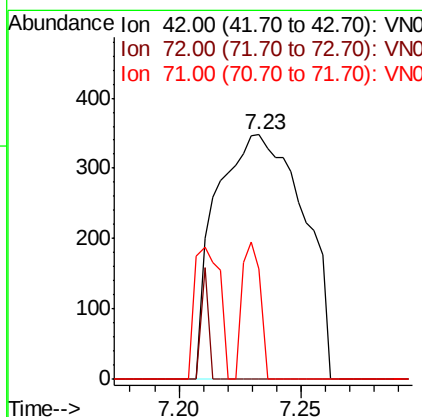
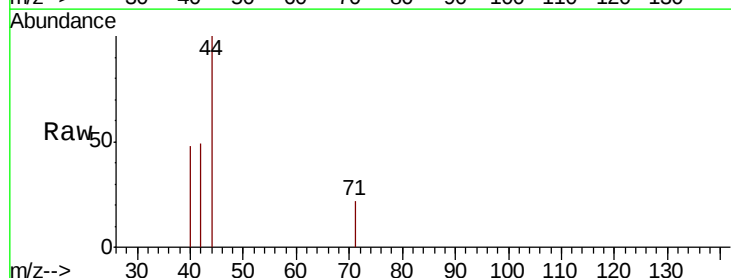
Instrument :  
MSVOA\_N  
ClientSampled :

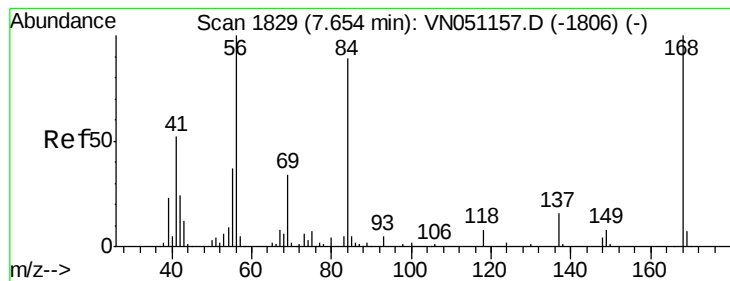
Tot Ion: 43 Resp: 4948  
Ion Ratio Lower Upper  
43 100  
72 21.7 23.0 34.6#



#29  
Tetrahydrofuran  
Concen: 0.76 ug/l  
RT: 7.23 min Scan# 1698  
Delta R.T. 0.02 min  
Lab File: VN051233.D  
Acq: 15 Sep 2018 19:36

Tgt Ion: 42 Resp: 863  
Ion Ratio Lower Upper  
42 100  
72 0.0 37.4 56.0#  
71 11.6 34.7 52.1#





#31

Cyclohexane

Concen: 0.66 ug/l

RT: 7.67 min Scan# 1833

Delta R.T. 0.01 min

Lab File: VN051233.D

Acq: 15 Sep 2018 19:36

Instrument :

MSVOA\_N

ClientSampled :

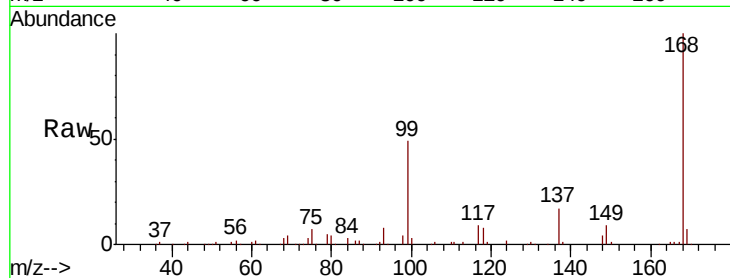
Tot Ion: 56 Resp: 6713

Ion Ratio Lower Upper

56 100

69 208.2 26.3 39.5#

84 151.4 69.4 104.0#

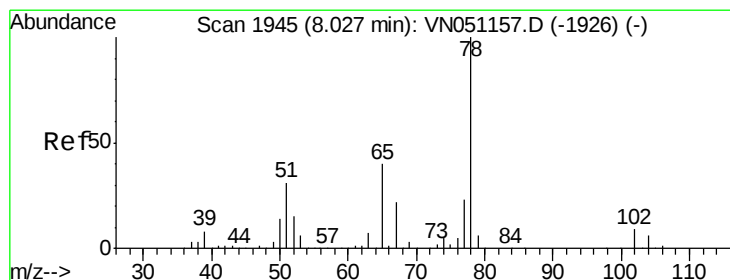
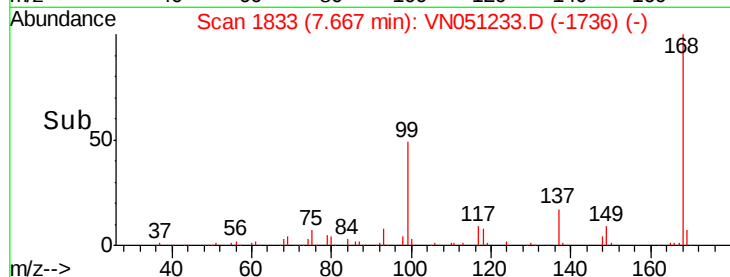
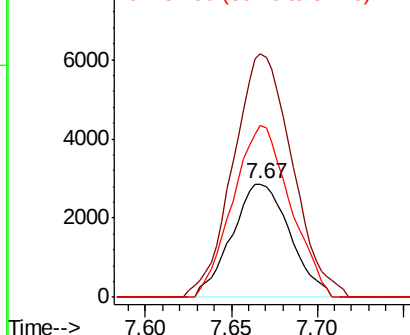


Abundance

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: 49.62 ug/l

RT: 8.03 min Scan# 1946

Delta R.T. 0.00 min

Lab File: VN051233.D

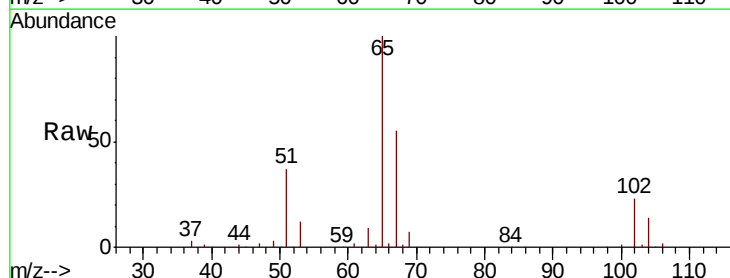
Acq: 15 Sep 2018 19:36

Tgt Ion: 65 Resp: 229849

Ion Ratio Lower Upper

65 100

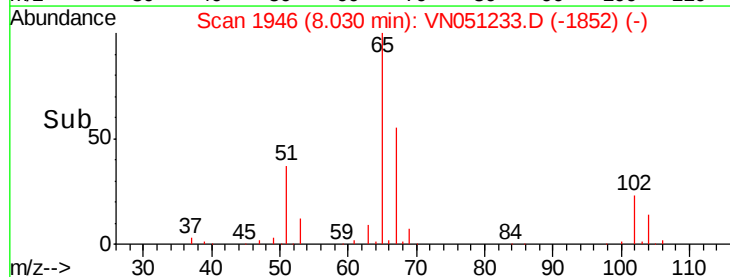
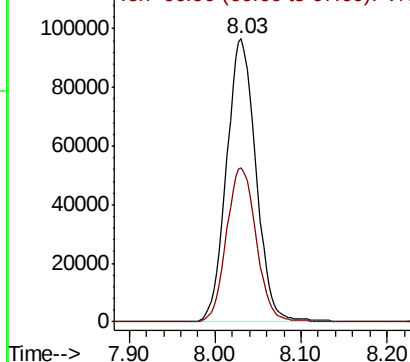
67 55.1 0.0 112.0

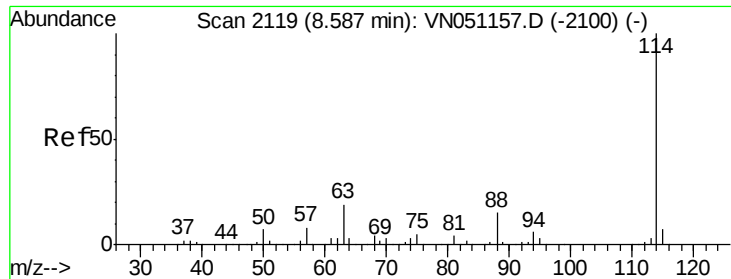


Abundance

Ion 64.90 (64.60 to 65.60): VN0

Ion 66.90 (66.60 to 67.60): VN0

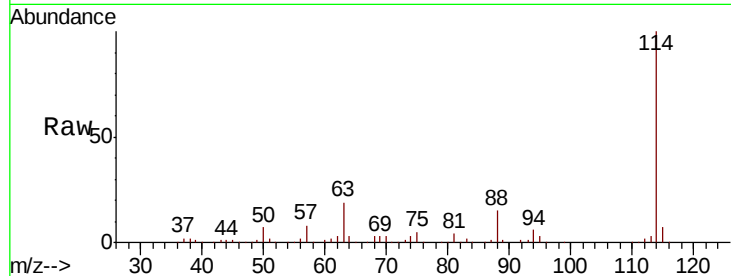




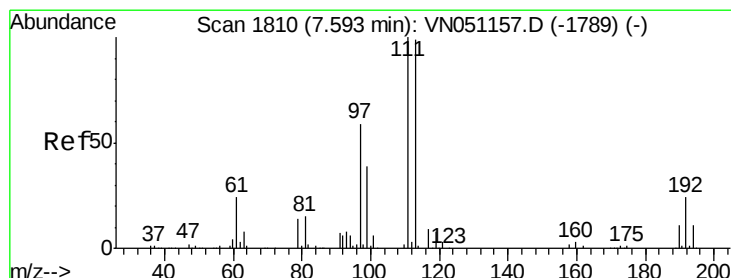
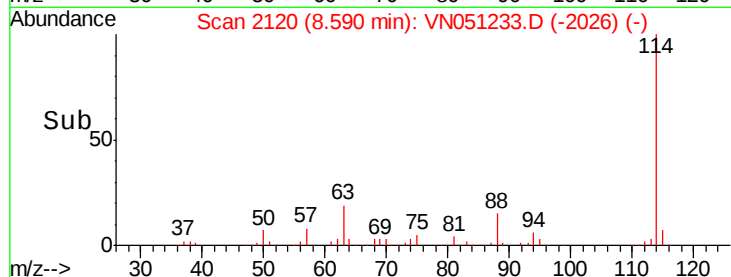
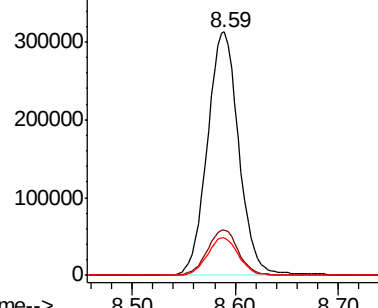
#34  
1,4-Difluorobenzene  
Concen: 50.00 ug/l  
RT: 8.59 min Scan# 2120  
Delta R.T. 0.00 min  
Lab File: VN051233.D  
Acq: 15 Sep 2018 19:36

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  |

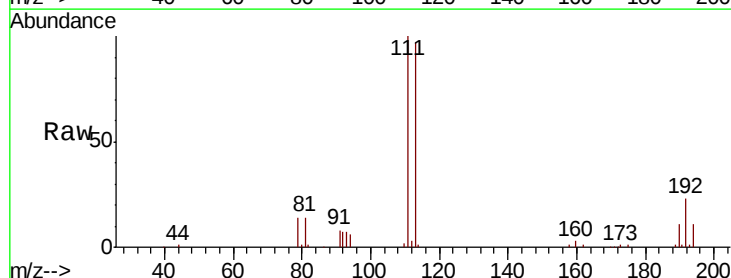


Abundance Ion 113.90 (113.60 to 114.60): V  
Ion 63.00 (62.70 to 63.70): VN  
Ion 87.90 (87.60 to 88.60): VN

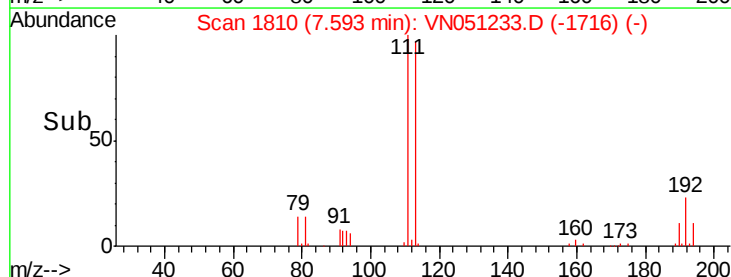
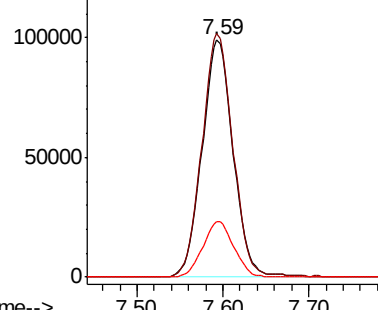


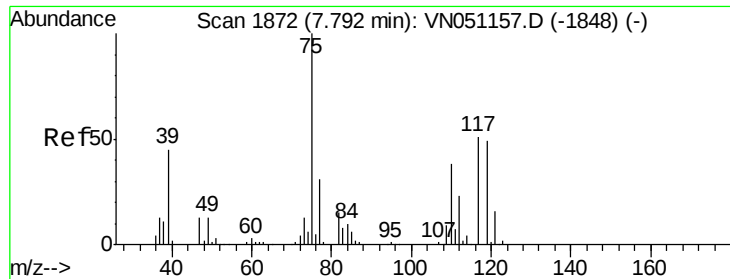
#35  
Dibromofluoromethane  
Concen: 49.53 ug/l  
RT: 7.59 min Scan# 1810  
Delta R.T. 0.00 min  
Lab File: VN051233.D  
Acq: 15 Sep 2018 19:36

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 113     | 100   |       |       |
| 111     | 102.7 | 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

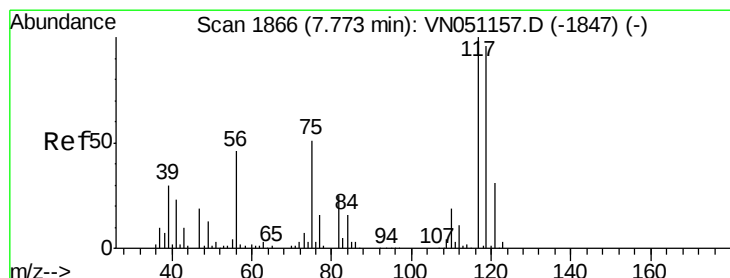
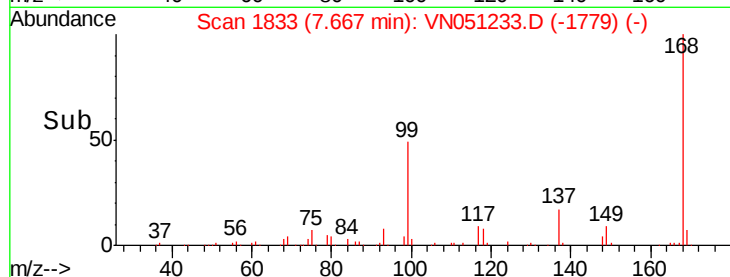
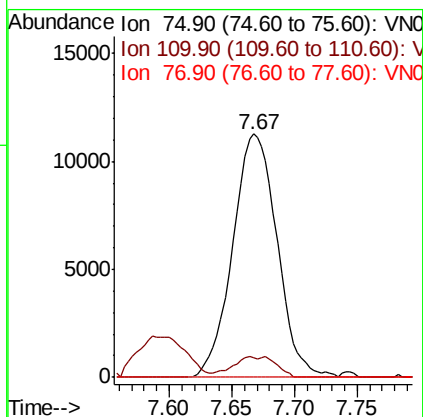
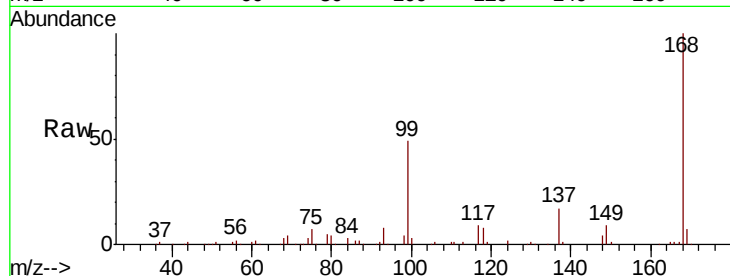




#36  
 1,1-Dichloropropene  
 Concen: 3.80 ug/l  
 RT: 7.67 min Scan# 1833  
 Delta R.T. -0.13 min  
 Lab File: VN051233.D  
 Acq: 15 Sep 2018 19:36

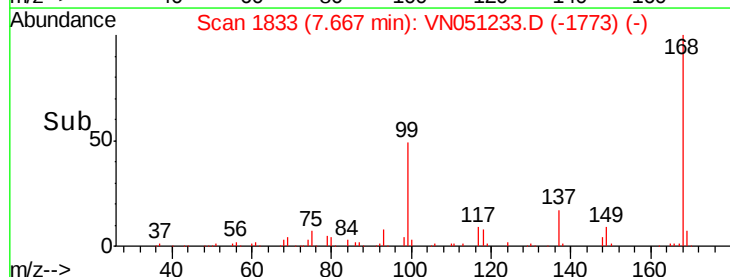
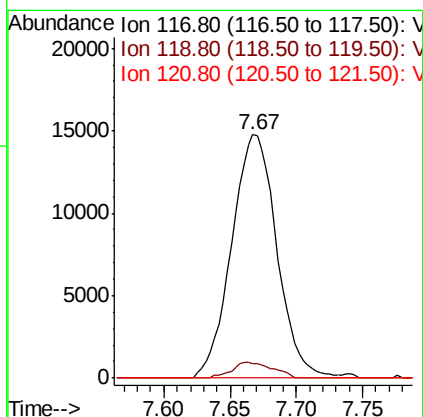
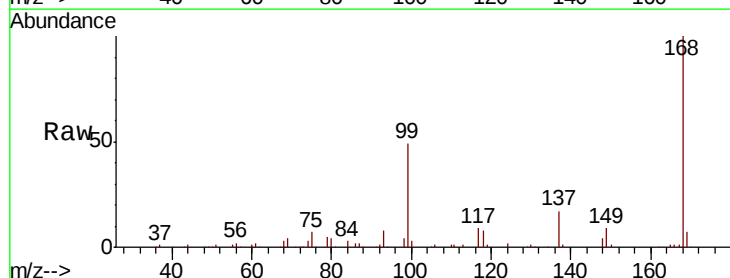
Instrument :  
 MSVOA\_N  
 ClientSampled :

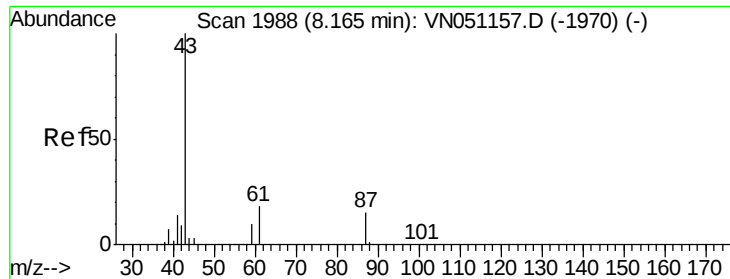
Tot Ion: 75 Resp: 27722  
 Ion Ratio Lower Upper  
 75 100  
 110 3.1 18.6 55.8#  
 77 0.0 25.2 37.8#



#38  
 Carbon Tetrachloride  
 Concen: 4.87 ug/l  
 RT: 7.67 min Scan# 1833  
 Delta R.T. -0.11 min  
 Lab File: VN051233.D  
 Acq: 15 Sep 2018 19:36

Tgt Ion: 117 Resp: 35032  
 Ion Ratio Lower Upper  
 117 100  
 119 6.0 76.8 115.2#  
 121 0.0 24.6 36.8#



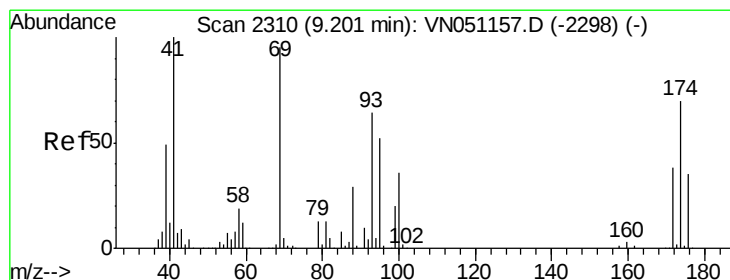
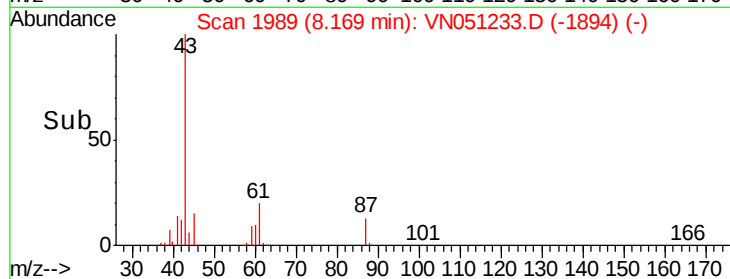
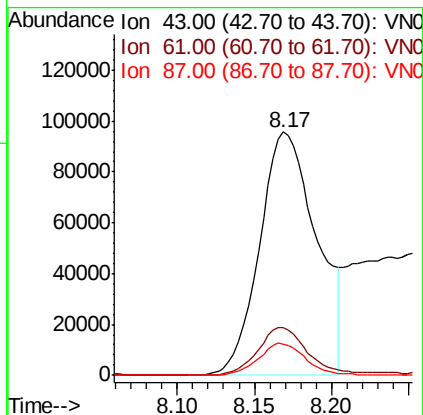
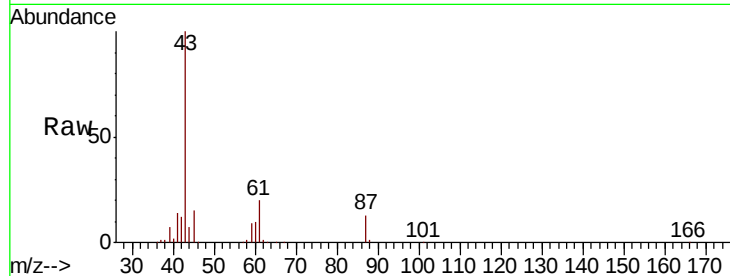


#43

Isopropyl Acetate  
 Concen: 33.00 ug/l  
 RT: 8.17 min Scan# 1989  
 Delta R.T. 0.01 min  
 Lab File: VN051233.D  
 Acq: 15 Sep 2018 19:36

Instrument :  
 MSVOA\_N  
 ClientSampled :

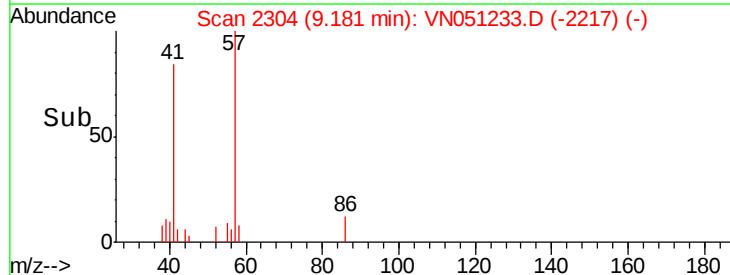
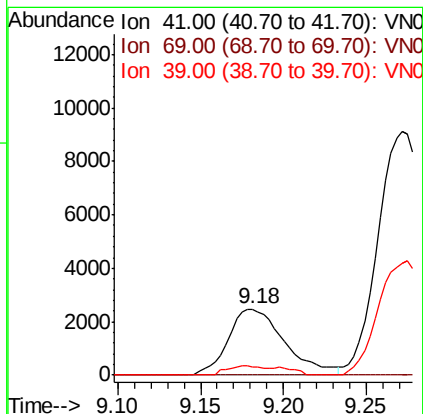
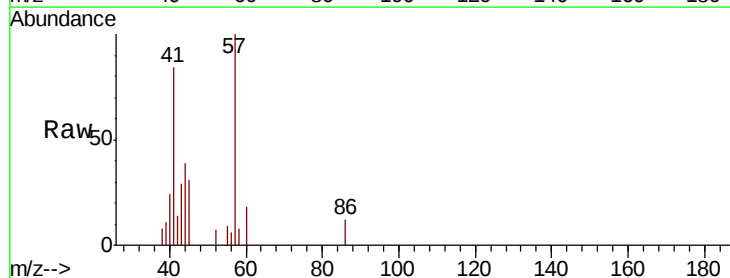
Tot Ion: 43 Resp: 246289  
 Ion Ratio Lower Upper  
 43 100  
 61 17.4 25.0 37.6#  
 87 10.9 11.8 17.8#

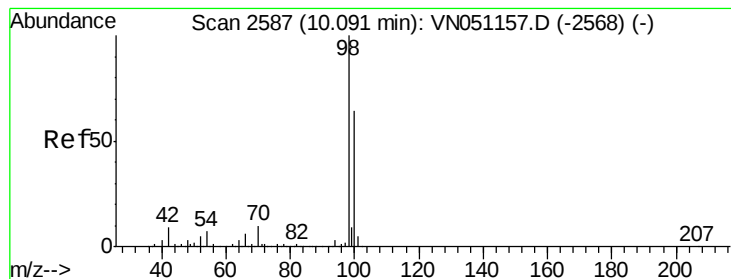


#48

Methyl methacrylate  
 Concen: 1.62 ug/l  
 RT: 9.18 min Scan# 2304  
 Delta R.T. -0.02 min  
 Lab File: VN051233.D  
 Acq: 15 Sep 2018 19:36

Tgt Ion: 41 Resp: 5882  
 Ion Ratio Lower Upper  
 41 100  
 69 0.0 77.7 116.5#  
 39 8.9 41.6 62.4#





#50

Toluene-d8

Concen: 44.54 ug/l

RT: 10.09 min Scan# 2587

Delta R.T. -0.00 min

Lab File: VN051233.D

Acq: 15 Sep 2018 19:36

Instrument :

MSVOA\_N

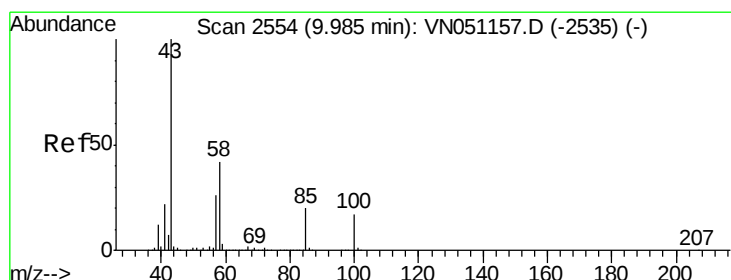
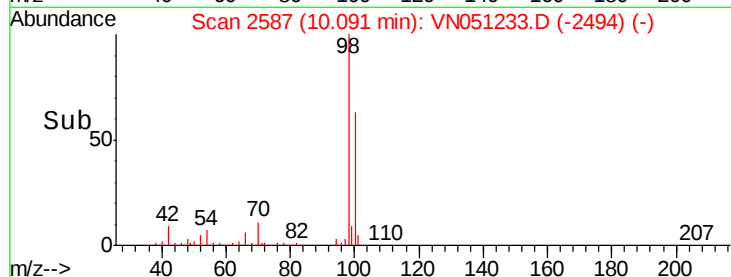
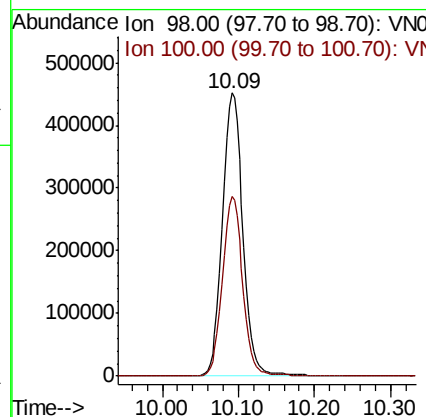
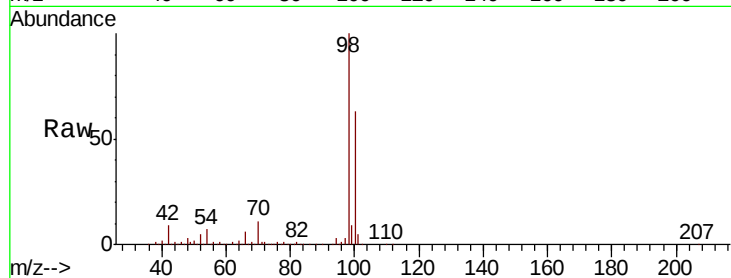
ClientSampled :

Tot Ion: 98 Resp: 844793

Ion Ratio Lower Upper

98 100

100 62.4 52.0 78.0



#51

4-Methyl-2-Pentanone

Concen: 0.23 ug/l

RT: 9.99 min Scan# 2555

Delta R.T. 0.00 min

Lab File: VN051233.D

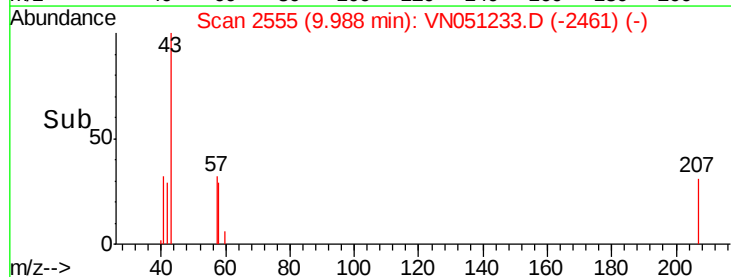
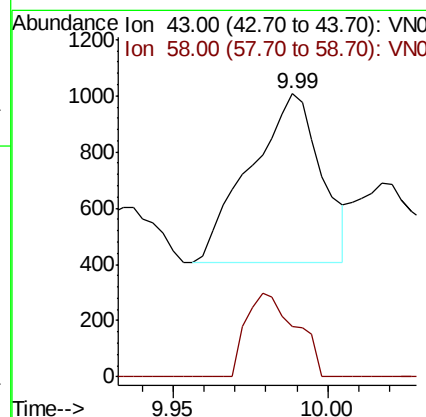
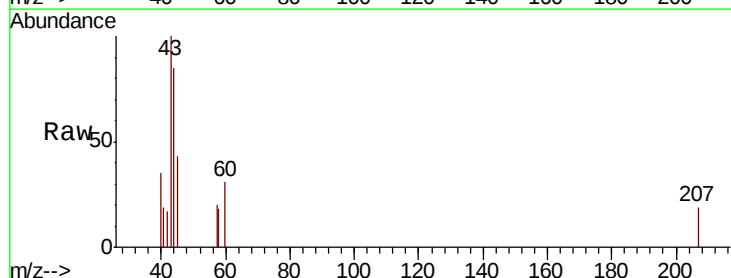
Acq: 15 Sep 2018 19:36

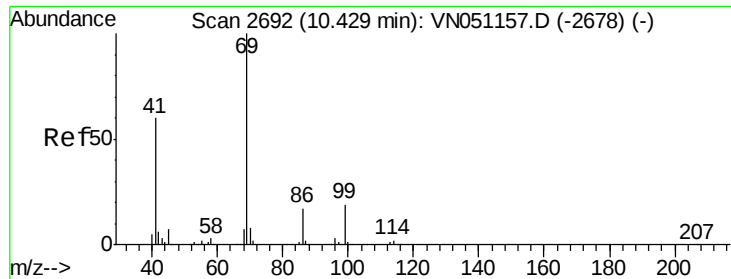
Tgt Ion: 43 Resp: 960

Ion Ratio Lower Upper

43 100

58 34.8 33.5 50.3





#56

Ethyl methacrylate

Concen: 2.52 ug/l

RT: 10.65 min Scan# 2760

Delta R.T. 0.22 min

Lab File: VN051233.D

Acq: 15 Sep 2018 19:36

Instrument :

MSVOA\_N

ClientSampleId :

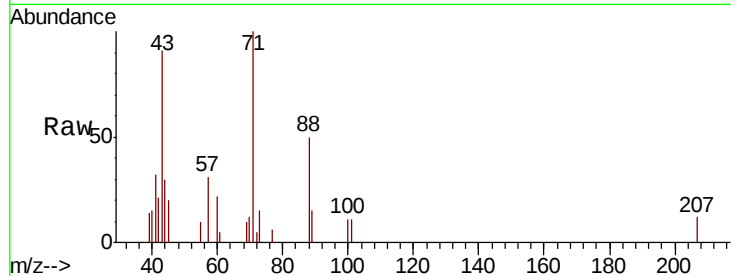
Tot Ion: 69 Resp: 470

Ion Ratio Lower Upper

69 100

41 628.5 47.8 71.8#

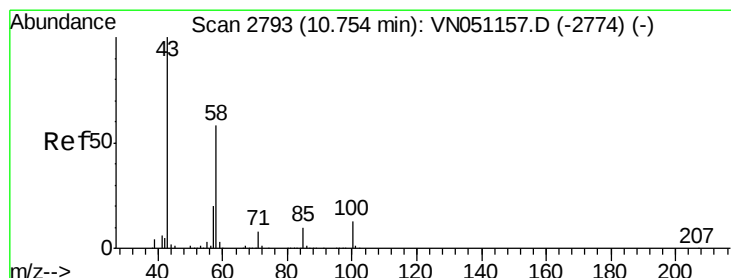
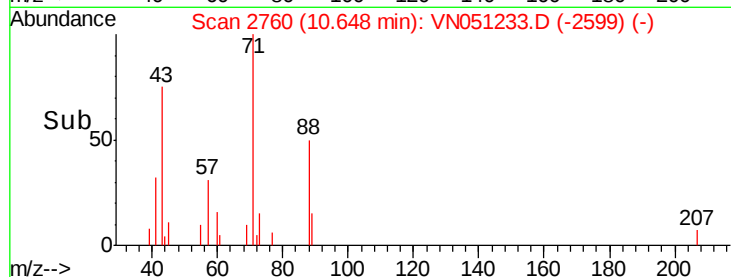
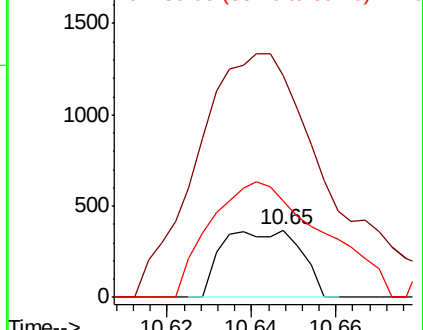
39 248.9 23.0 34.4#



Abundance Ion 69.00 (68.70 to 69.70): VN0

Ion 41.00 (40.70 to 41.70): VN0

Ion 39.00 (38.70 to 39.70): VN0



#59

2-Hexanone

Concen: 4.48 ug/l

RT: 10.76 min Scan# 2796

Delta R.T. 0.01 min

Lab File: VN051233.D

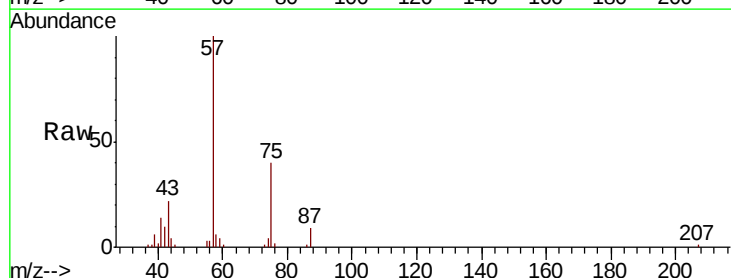
Acq: 15 Sep 2018 19:36

Tgt Ion: 43 Resp: 12536

Ion Ratio Lower Upper

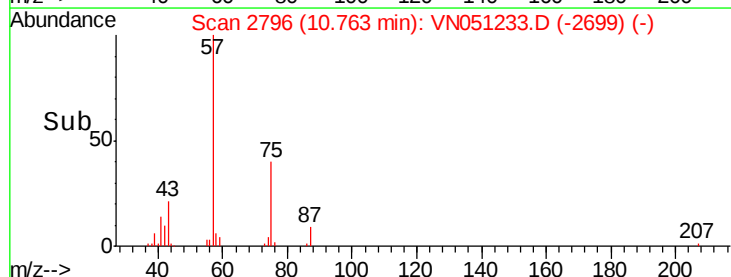
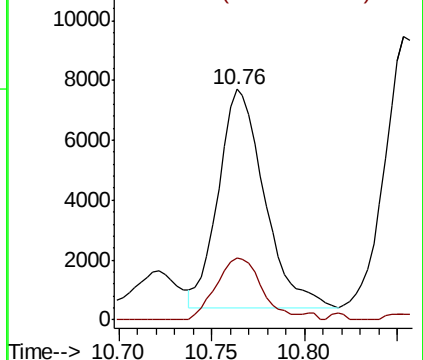
43 100

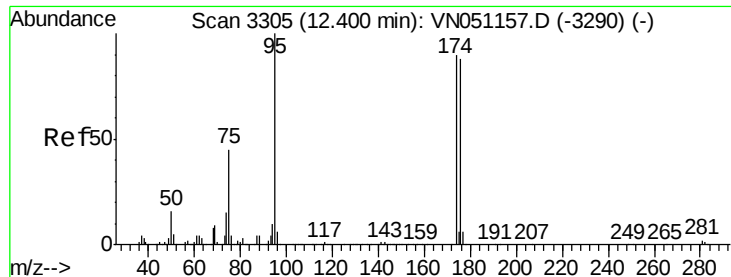
58 28.0 29.3 88.0#



Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 58.00 (57.70 to 58.70): VN0

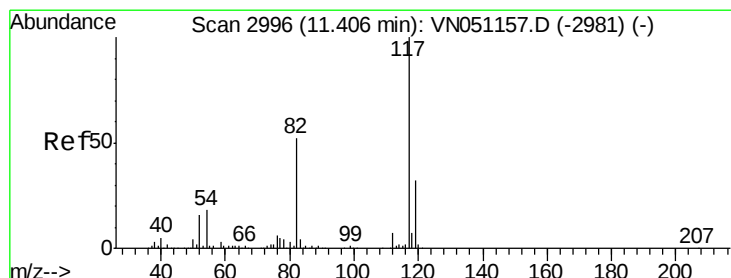
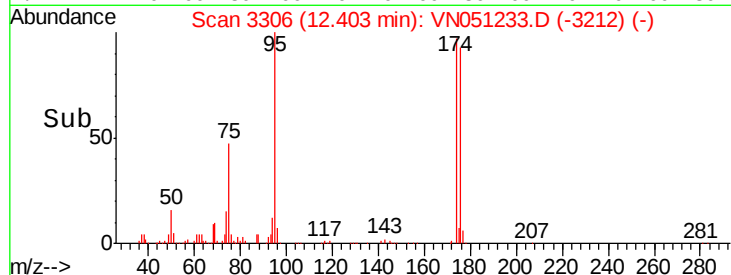
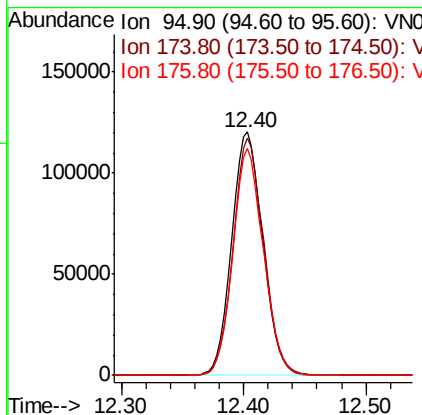
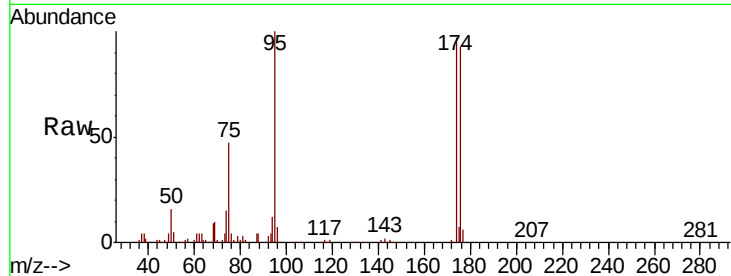




#62  
4-Bromofluorobenzene  
Concen: 33.96 ug/l  
RT: 12.40 min Scan# 3306  
Delta R.T. 0.00 min  
Lab File: VN051233.D  
Acq: 15 Sep 2018 19:36

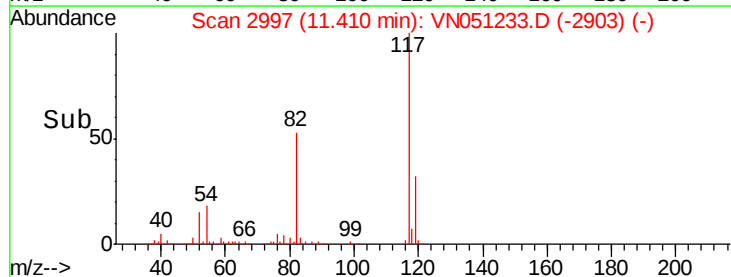
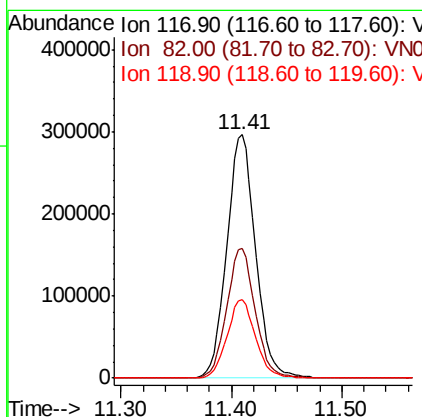
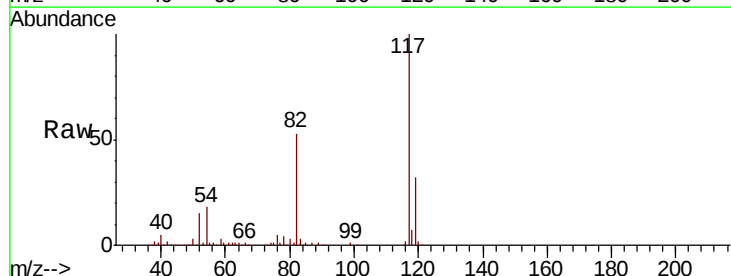
Instrument :  
MSVOA\_N  
ClientSampleId :

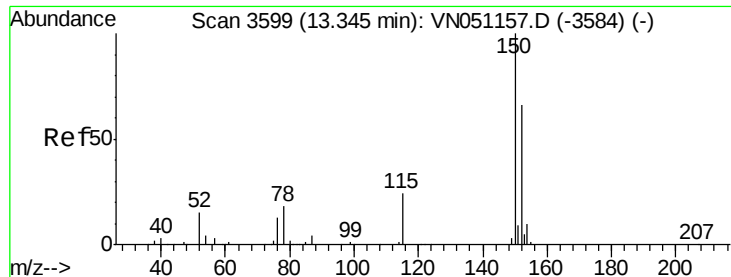
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 95      | 100   |       |       |
| 174     | 95.9  | 0.0   | 184.8 |
| 176     | 91.2  | 0.0   | 178.6 |



#63  
Chlorobenzene-d5  
Concen: 50.00 ug/l  
RT: 11.41 min Scan# 2997  
Delta R.T. 0.00 min  
Lab File: VN051233.D  
Acq: 15 Sep 2018 19:36

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 53.2  | 41.8  | 62.6  |
| 119     | 32.3  | 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: VN051233.D

Acq: 15 Sep 2018 19:36

Instrument :

MSVOA\_N

ClientSampleId :

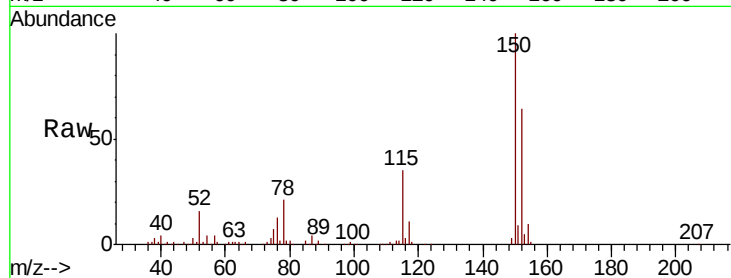
Tot Ion:152 Resp: 154913

Ion Ratio Lower Upper

152 100

115 54.5 28.2 84.7

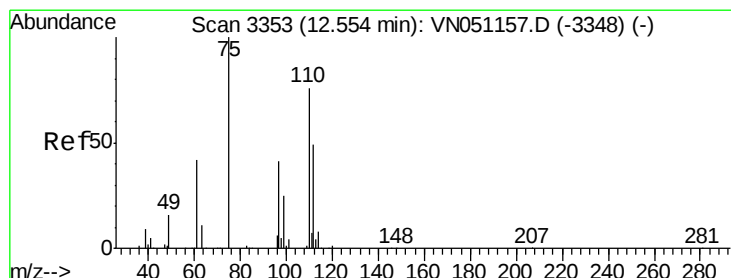
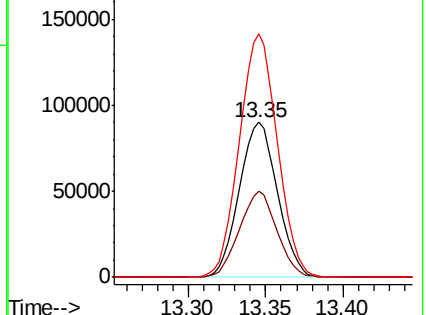
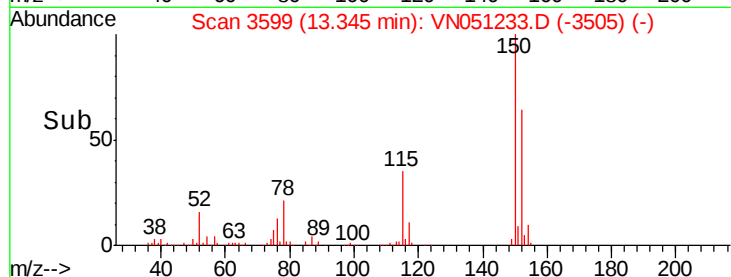
150 156.3 0.0 349.0



Abundance Ion 151.90 (151.60 to 152.60): V

Ion 114.90 (114.60 to 115.60): V

Ion 149.90 (149.60 to 150.60): V



#76

1,2,3-Trichloropropane

Concen: 40.63 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. -0.15 min

Lab File: VN051233.D

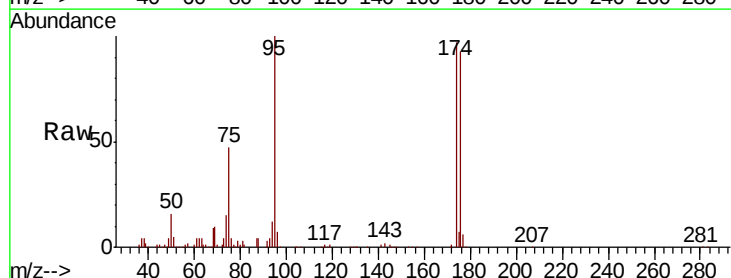
Acq: 15 Sep 2018 19:36

Tgt Ion: 75 Resp: 98256

Ion Ratio Lower Upper

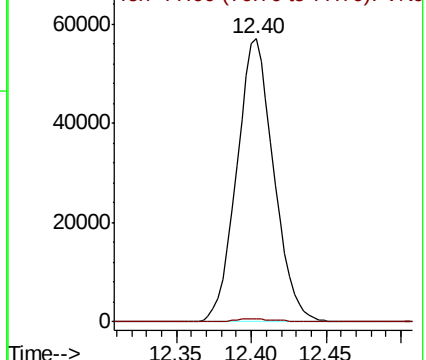
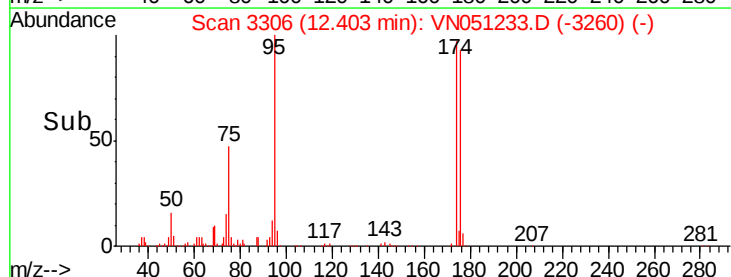
75 100

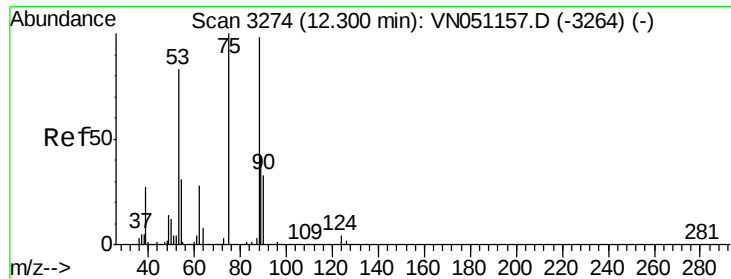
77 1.3 0.0 0.0#



Abundance Ion 74.90 (74.60 to 75.60): V

Ion 77.00 (76.70 to 77.70): V

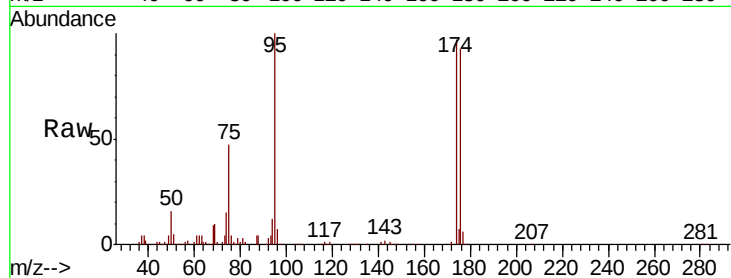




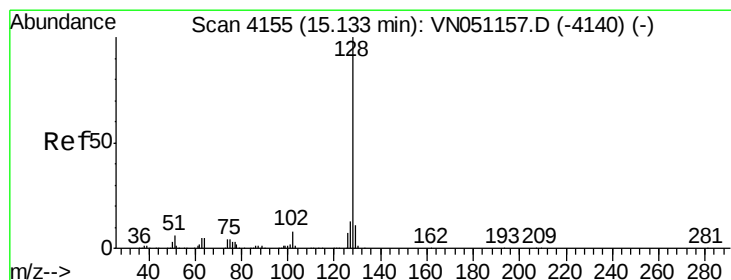
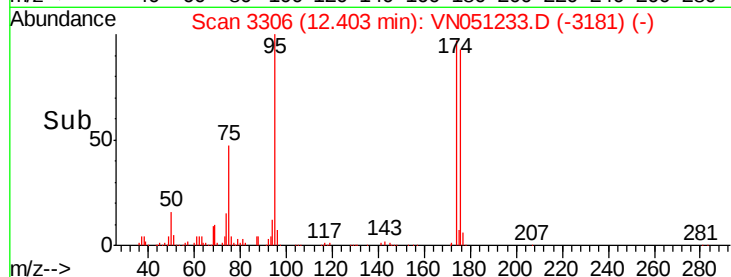
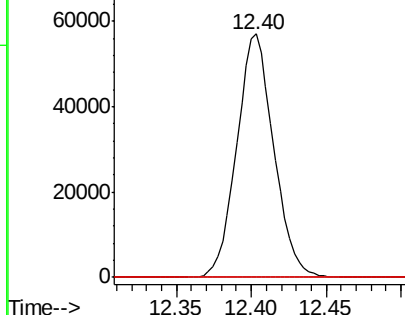
#81  
trans-1,4-Dichloro-2-butene  
Concen: 120.46 ug/l  
RT: 12.40 min Scan# 3306  
Delta R.T. 0.10 min  
Lab File: VN051233.D  
Acq: 15 Sep 2018 19:36

Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion: 75 Resp: 98256  
Ion Ratio Lower Upper  
75 100  
53 0.1 67.8 101.8#  
89 0.0 36.0 54.0#

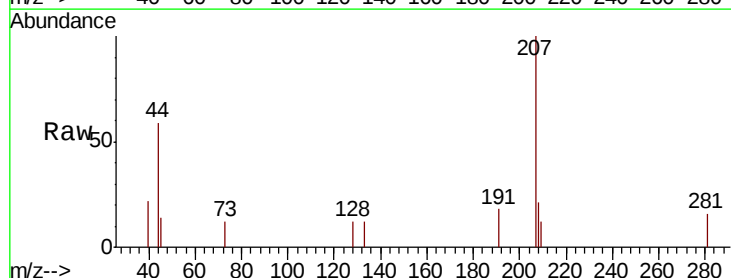


Abundance Ion 74.90 (74.60 to 75.60): VNO  
Ion 53.00 (52.70 to 53.70): VNO  
Ion 88.90 (88.60 to 89.60): VNO



#95  
Naphthalene  
Concen: 5.36 ug/l  
RT: 15.13 min Scan# 4155  
Delta R.T. -0.00 min  
Lab File: VN051233.D  
Acq: 15 Sep 2018 19:36

Tgt Ion: 128 Resp: 99  
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

