

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN121018\  
 Data File : VN052787.D  
 Acq On : 11 Dec 2018 7:37  
 Operator : MD\SY  
 Sample : J6316-20  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 51 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Quant Time: Dec 11 10:42:20 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N112718W.M  
 Quant Title : SW846 8260  
 QLast Update : Mon Dec 03 03:24:02 2018  
 Response via : Initial Calibration

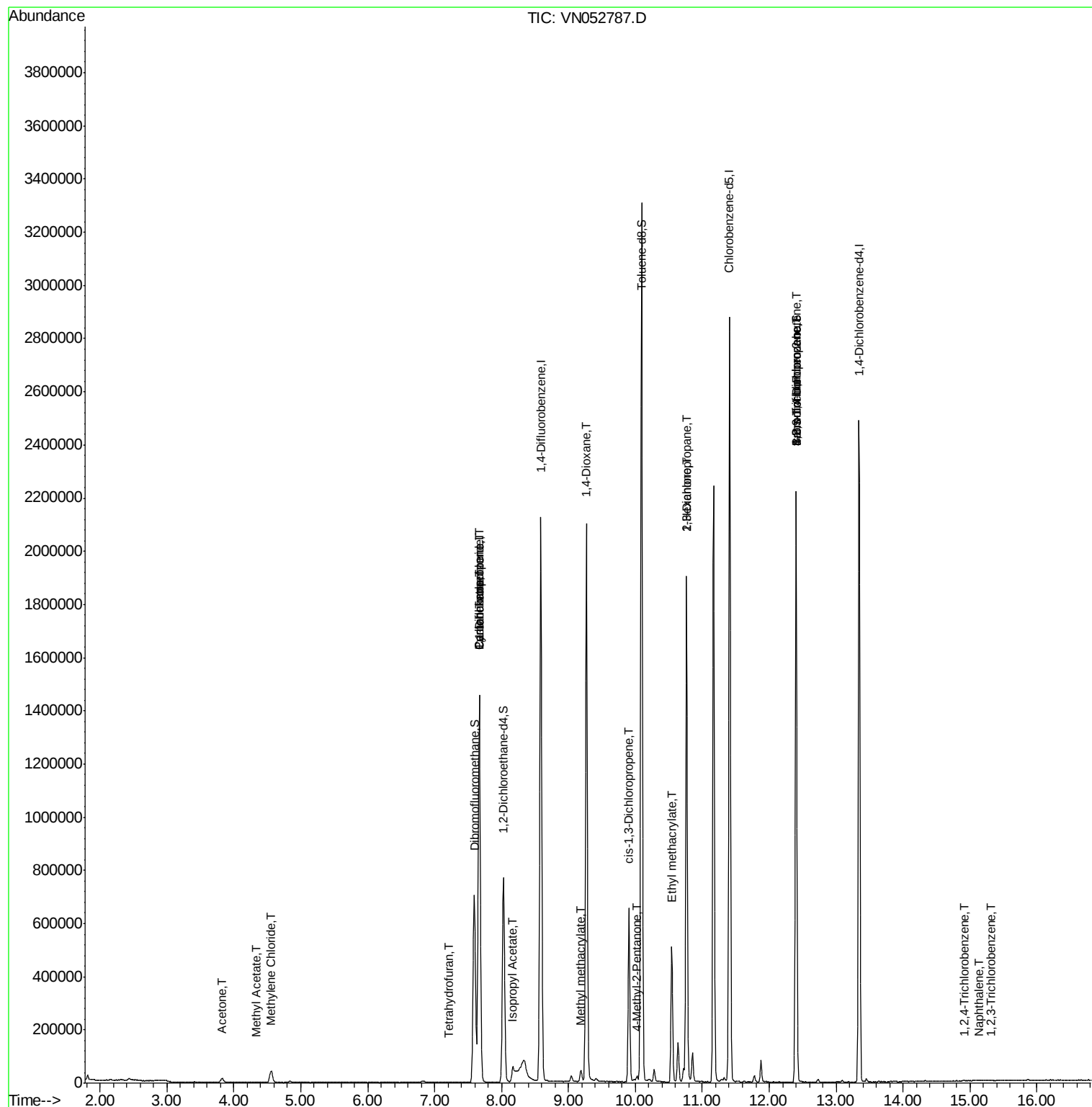
| Internal Standards             | R.T.   | QIon | Response | Conc    | Units   | Dev(Min) |
|--------------------------------|--------|------|----------|---------|---------|----------|
| 1) Pentafluorobenzene          | 7.67   | 168  | 1260785  | 50.00   | ug/l    | 0.00     |
| 34) 1,4-Difluorobenzene        | 8.59   | 114  | 1954841  | 50.00   | ug/l    | 0.00     |
| 63) Chlorobenzene-d5           | 11.41  | 117  | 1728082  | 50.00   | ug/l    | 0.00     |
| 72) 1,4-Dichlorobenzene-d4     | 13.35  | 152  | 695567   | 50.00   | ug/l    | 0.00     |
| System Monitoring Compounds    |        |      |          |         |         |          |
| 33) 1,2-Dichloroethane-d4      | 8.03   | 65   | 647250   | 47.15   | ug/l    | 0.00     |
| Spiked Amount                  | 50.000 |      | Recovery | =       | 94.30%  |          |
| 35) Dibromofluoromethane       | 7.59   | 113  | 548425   | 45.51   | ug/l    | 0.00     |
| Spiked Amount                  | 50.000 |      | Recovery | =       | 91.02%  |          |
| 50) Toluene-d8                 | 10.09  | 98   | 2399729  | 51.15   | ug/l    | 0.00     |
| Spiked Amount                  | 50.000 |      | Recovery | =       | 102.30% |          |
| 62) 4-Bromofluorobenzene       | 12.40  | 95   | 767818   | 48.71   | ug/l    | 0.00     |
| Spiked Amount                  | 50.000 |      | Recovery | =       | 97.42%  |          |
| Target Compounds               |        |      |          |         |         |          |
|                                |        |      |          |         | Qvalue  |          |
| 16) Acetone                    | 3.82   | 43   | 30632    | 8.460   | ug/l    | 94       |
| 18) Methyl Acetate             | 4.33   | 43   | 3536     | 0.340   | ug/l    | 98       |
| 20) Methylene Chloride         | 4.56   | 84   | 35578    | 2.511   | ug/l    | 95       |
| 29) Tetrahydrofuran            | 7.22   | 42   | 1356     | 0.410   | ug/l #  | 68       |
| 31) Cyclohexane                | 7.67   | 56   | 21516    | 0.549   | ug/l #  | 1        |
| 36) 1,1-Dichloropropene        | 7.67   | 75   | 86811    | 4.703   | ug/l #  | 49       |
| 38) Carbon Tetrachloride       | 7.67   | 117  | 109529   | 6.554   | ug/l #  | 16       |
| 43) Isopropyl Acetate          | 8.17   | 43   | 77172    | 4.048   | ug/l #  | 72       |
| 48) Methyl methacrylate        | 9.18   | 41   | 15754    | 1.585   | ug/l #  | 22       |
| 49) 1,4-Dioxane                | 9.26   | 88   | 159      | 1.541   | ug/l #  | 24       |
| 51) 4-Methyl-2-Pentanone       | 10.02  | 43   | 17532    | 1.639   | ug/l #  | 36       |
| 54) cis-1,3-Dichloropropene    | 9.90   | 75   | 121281   | 5.976   | ug/l #  | 61       |
| 56) Ethyl methacrylate         | 10.55  | 69   | 1354     | 2.773   | ug/l #  | 1        |
| 57) 1,3-Dichloropropane        | 10.76  | 76   | 19816    | 0.976   | ug/l #  | 43       |
| 59) 2-Hexanone                 | 10.76  | 43   | 273975   | 38.161  | ug/l #  | 52       |
| 71) Bromoform                  | 12.41  | 173  | 4776     | 0.582   | ug/l #  | 1        |
| 76) 1,2,3-Trichloropropane     | 12.40  | 75   | 364159   | 33.951  | ug/l #  | 100      |
| 81) trans-1,4-Dichloro-2-buten | 12.40  | 75   | 364159   | 113.380 | ug/l #  | 11       |
| 93) 1,2,4-Trichlorobenzene     | 14.91  | 180  | 104      | 2.838   | ug/l #  | 34       |
| 95) Naphthalene                | 15.13  | 128  | 607      | 3.450   | ug/l #  | 69       |
| 96) 1,2,3-Trichlorobenzene     | 15.32  | 180  | 111      | 2.736   | ug/l #  | 81       |

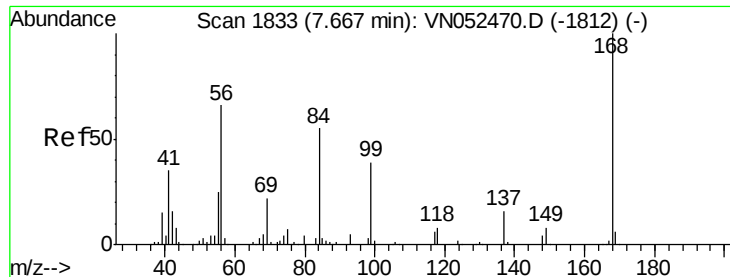
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_N\METHODS\82N112718W.M  
Quant Title : SW846 8260  
QLast Update : Mon Dec 03 03:24:02 2018  
Response via : Initial Calibration

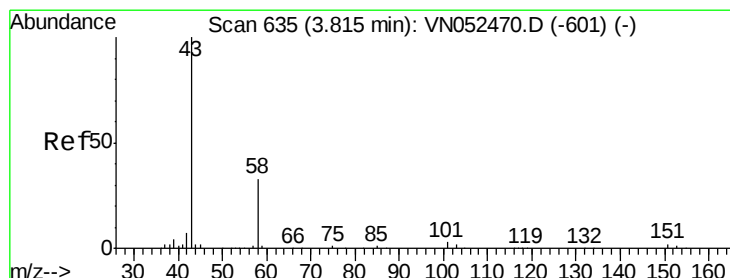
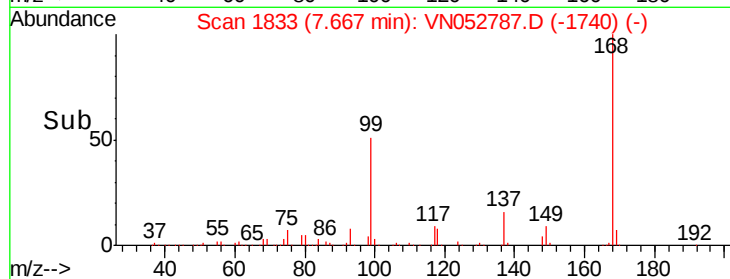
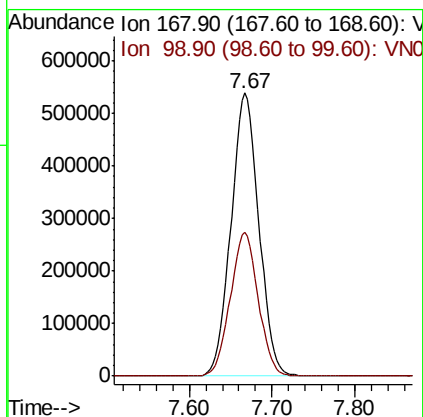
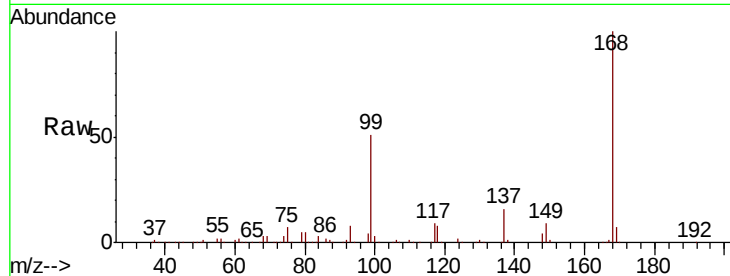




#1  
Pentafluorobenzene  
Concen: 50.000 ug/l  
RT: 7.67 min Scan# 1833  
Delta R.T. -0.00 min  
Lab File: VN052787.D  
Acq: 11 Dec 2018 7:37

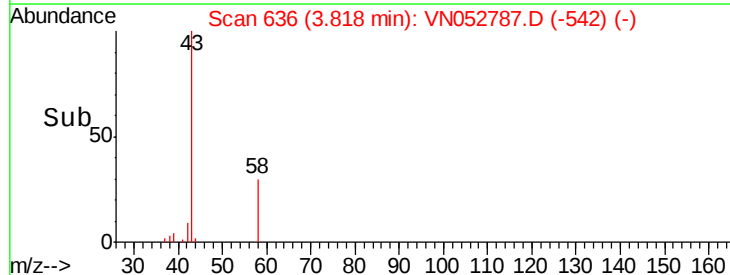
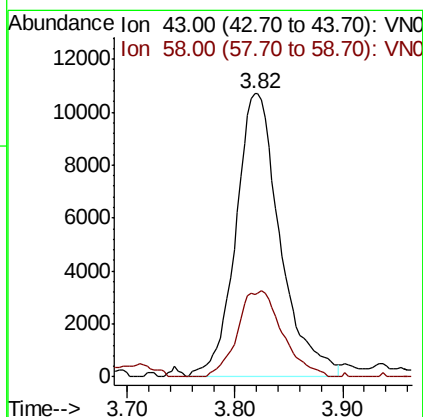
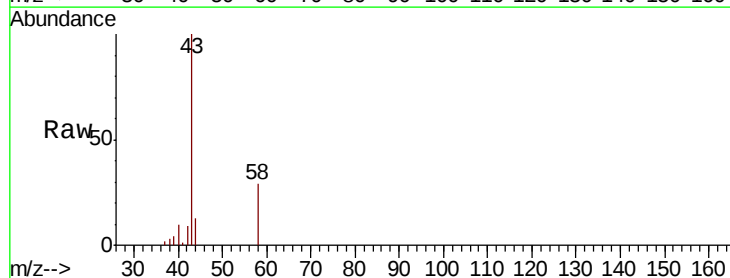
Instrument :  
MSVOA\_N  
ClientSampled :

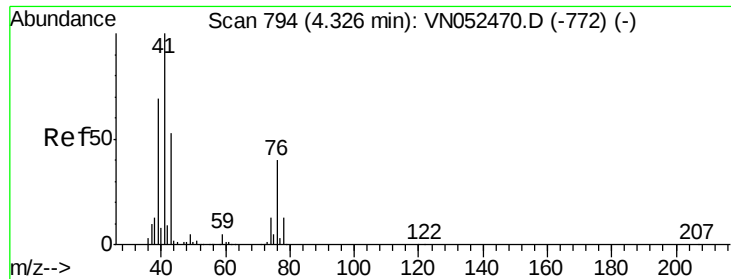
Tot Ion:168 Resp: 1260785  
Ion Ratio Lower Upper  
168 100  
99 50.8 41.7 62.5



#16  
Acetone  
Concen: 8.460 ug/l  
RT: 3.82 min Scan# 636  
Delta R.T. 0.00 min  
Lab File: VN052787.D  
Acq: 11 Dec 2018 7:37

Tgt Ion: 43 Resp: 30632  
Ion Ratio Lower Upper  
43 100  
58 29.3 26.0 39.0

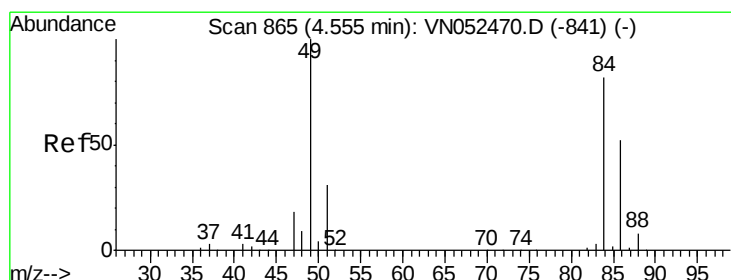
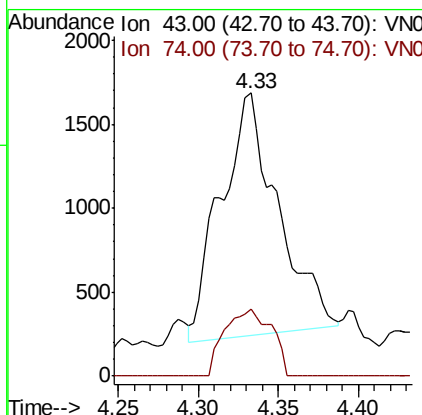
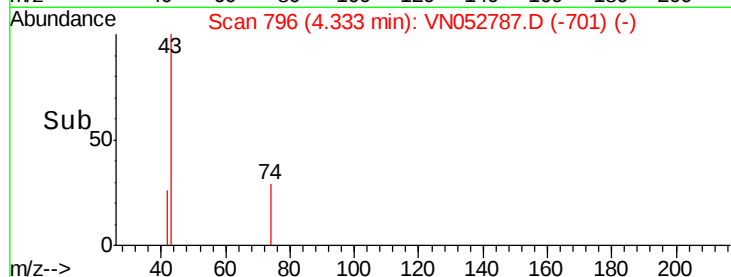
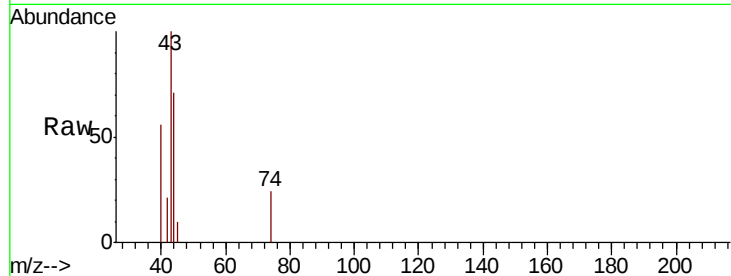




#18  
Methyl Acetate  
Concen: 0.340 ug/l  
RT: 4.33 min Scan# 796  
Delta R.T. 0.01 min  
Lab File: VN052787.D  
Acq: 11 Dec 2018 7:37

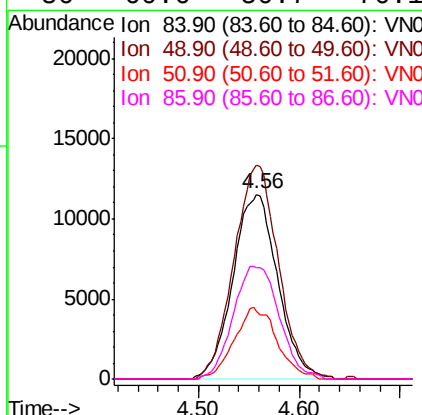
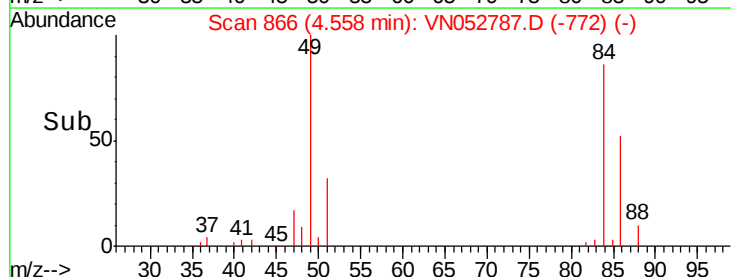
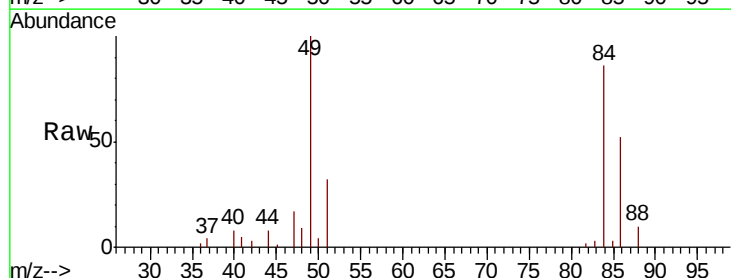
Instrument :  
MSVOA\_N  
ClientSampled :

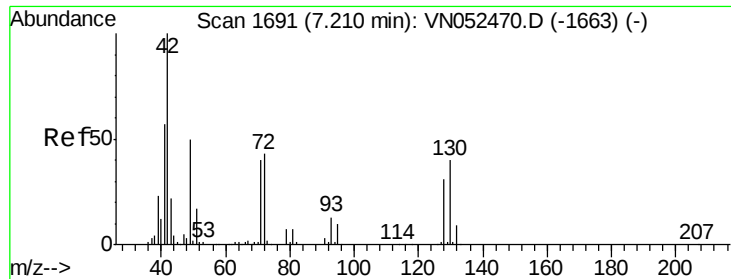
Tot Ion: 43 Resp: 3536  
Ion Ratio Lower Upper  
43 100  
74 22.5 18.6 27.8



#20  
Methylene Chloride  
Concen: 2.511 ug/l  
RT: 4.56 min Scan# 866  
Delta R.T. 0.00 min  
Lab File: VN052787.D  
Acq: 11 Dec 2018 7:37

Tgt Ion: 84 Resp: 35578  
Ion Ratio Lower Upper  
84 100  
49 115.7 98.0 147.0  
51 36.7 30.1 45.1  
86 60.6 50.7 76.1

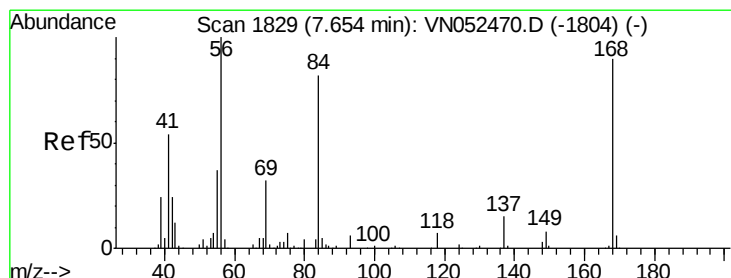
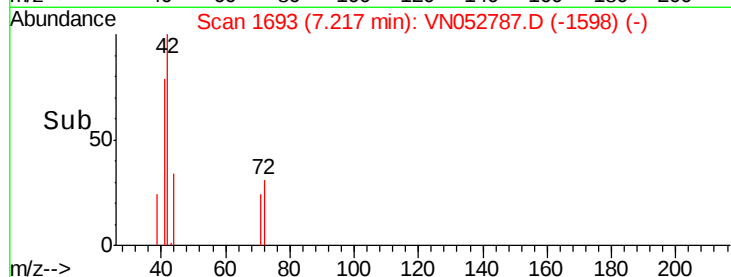
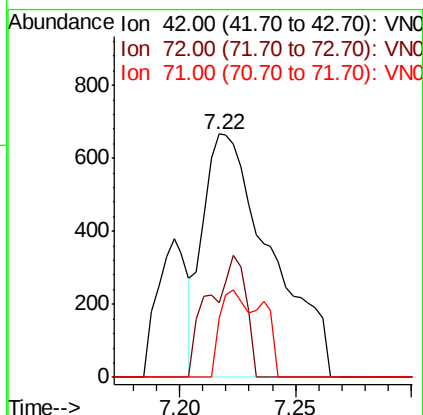
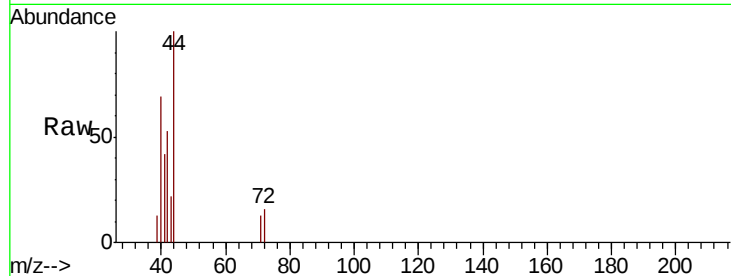




#29  
Tetrahydrofuran  
Concen: 0.410 ug/l  
RT: 7.22 min Scan# 1693  
Delta R.T. 0.01 min  
Lab File: VN052787.D  
Acq: 11 Dec 2018 7:37

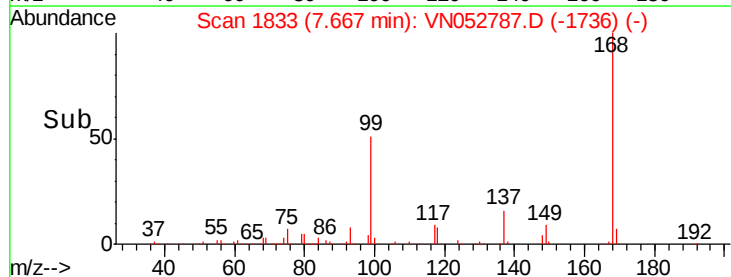
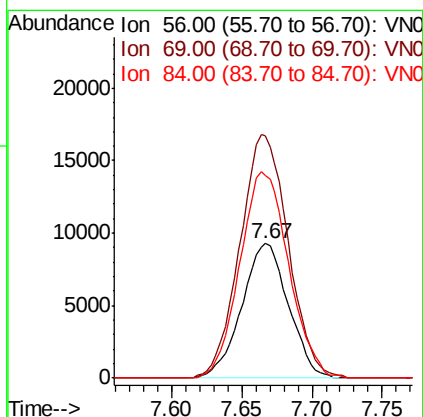
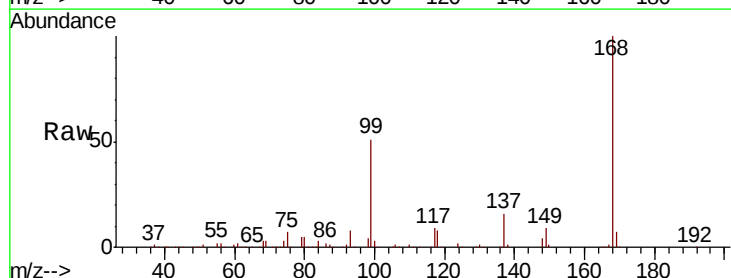
Instrument :  
MSVOA\_N  
ClientSampleId :

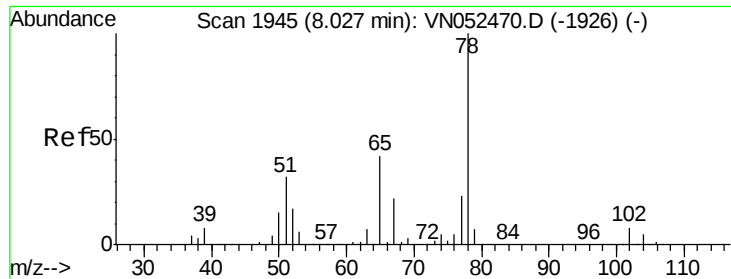
Tot Ion: 42 Resp: 1356  
Ion Ratio Lower Upper  
42 100  
72 26.9 33.3 49.9#  
71 14.4 32.0 48.0#



#31  
Cyclohexane  
Concen: 0.549 ug/l  
RT: 7.67 min Scan# 1833  
Delta R.T. 0.01 min  
Lab File: VN052787.D  
Acq: 11 Dec 2018 7:37

Tgt Ion: 56 Resp: 21516  
Ion Ratio Lower Upper  
56 100  
69 180.0 25.8 38.6#  
84 150.9 65.3 97.9#

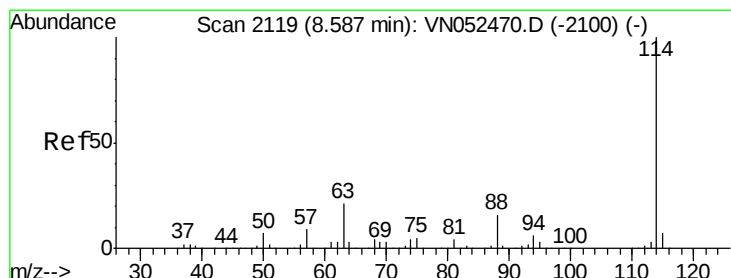
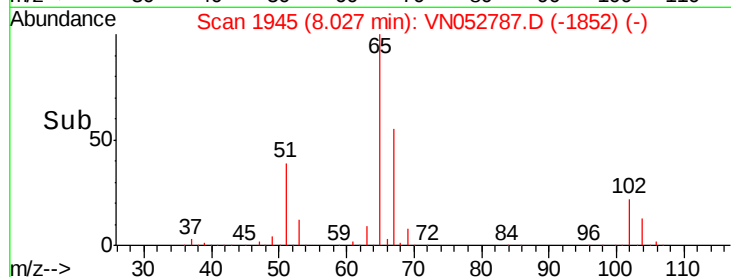
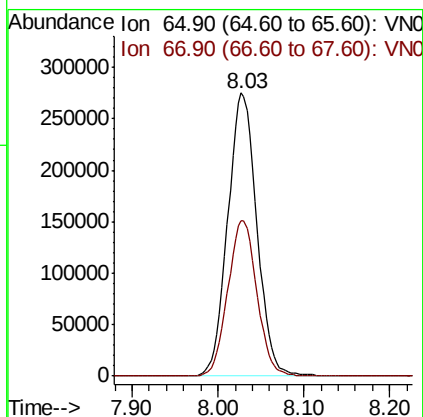
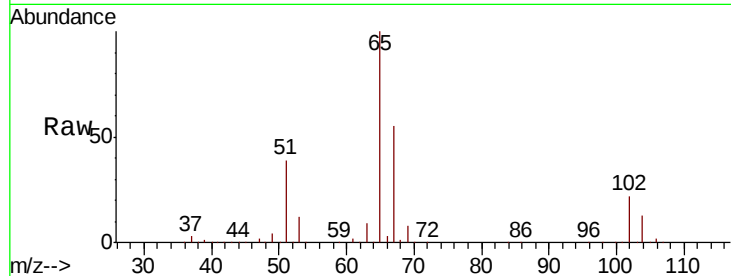




#33  
 1,2-Dichloroethane-d4  
 Concen: Below ug/l  
 RT: 8.03 min Scan# 1945  
 Delta R.T. -0.00 min  
 Lab File: VN052787.D  
 Acq: 11 Dec 2018 7:37

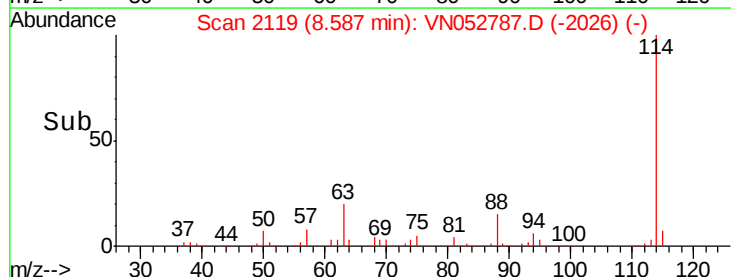
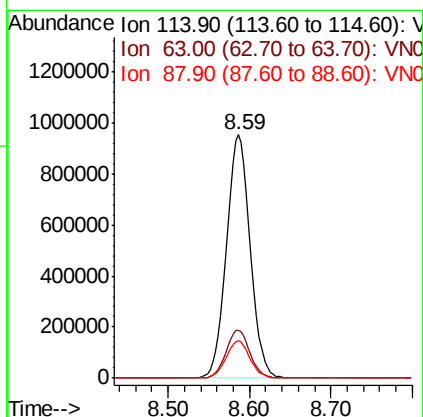
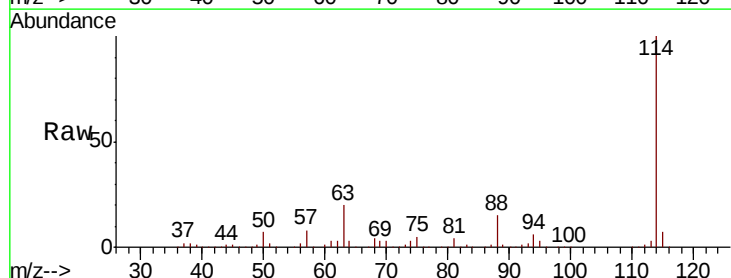
Instrument :  
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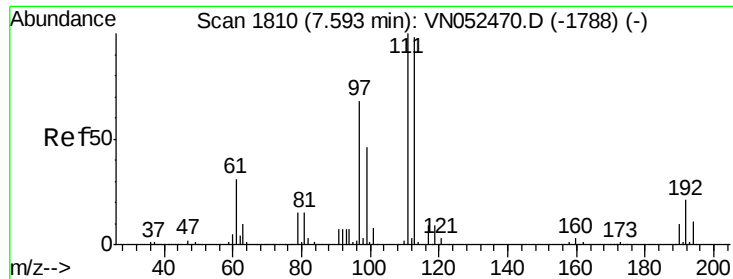
Tot Ion: 65 Resp: 647250  
 Ion Ratio Lower Upper  
 65 100  
 67 55.0 0.0 109.8



#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.59 min Scan# 2119  
 Delta R.T. -0.00 min  
 Lab File: VN052787.D  
 Acq: 11 Dec 2018 7:37

Tgt Ion: 114 Resp: 1954841  
 Ion Ratio Lower Upper  
 114 100  
 63 19.7 0.0 41.8  
 88 15.4 0.0 31.6

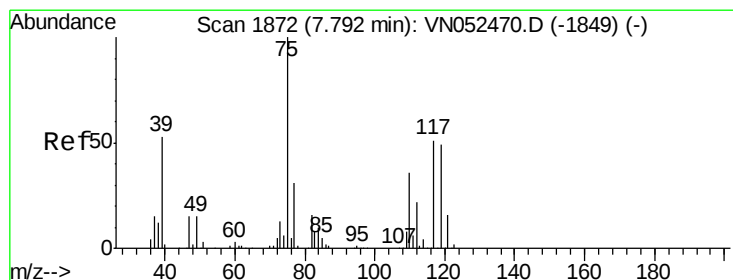
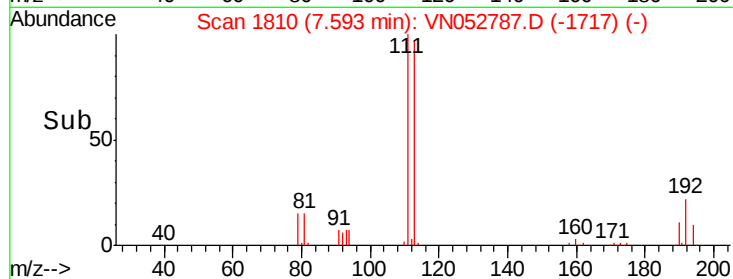
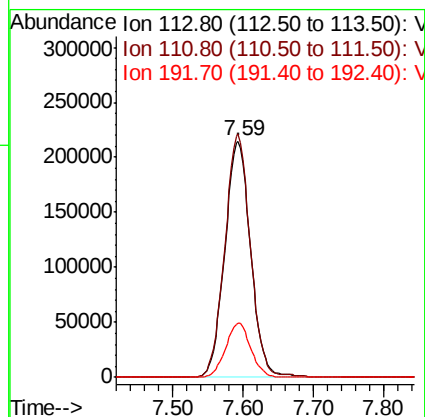
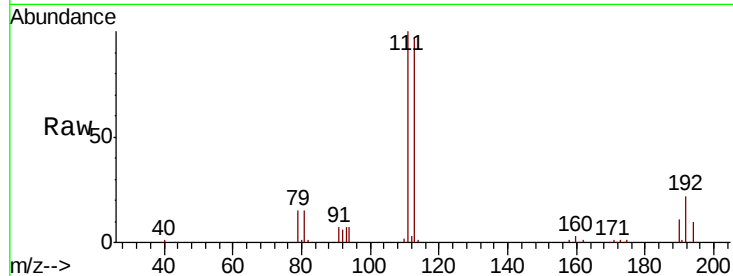




#35  
Dibromofluoromethane  
Concen: 50.000 ug/l  
RT: 7.59 min Scan# 1810  
Delta R.T. -0.00 min  
Lab File: VN052787.D  
Acq: 11 Dec 2018 7:37

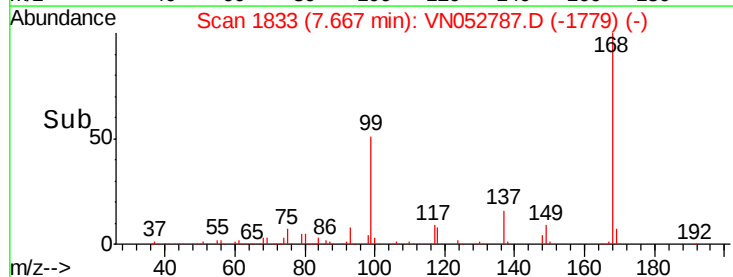
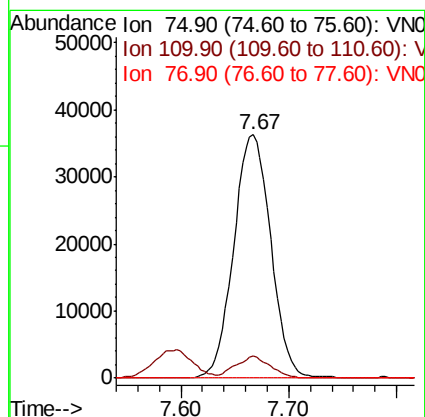
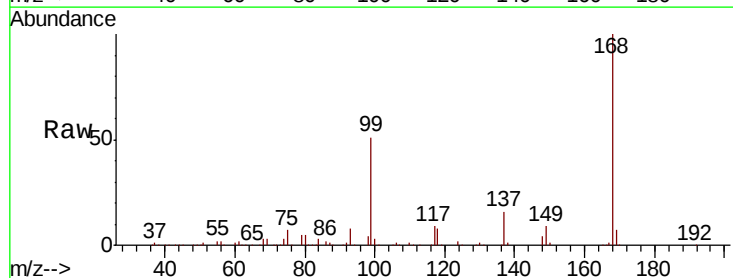
Instrument :  
MSVOA\_N  
ClientSampled :

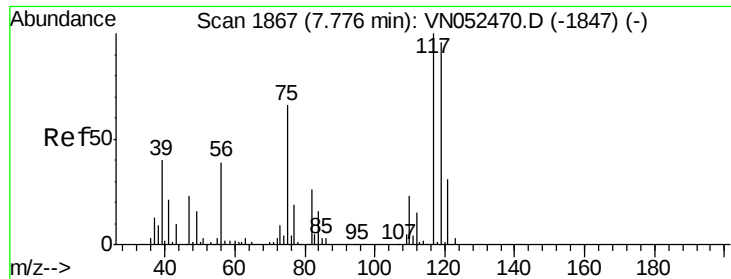
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 113     | 100   |       |       |
| 111     | 102.2 | 82.0  | 123.0 |
| 192     | 22.4  | 17.0  | 25.6  |



#36  
1,1-Dichloropropene  
Concen: 4.703 ug/l  
RT: 7.67 min Scan# 1833  
Delta R.T. -0.13 min  
Lab File: VN052787.D  
Acq: 11 Dec 2018 7:37

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 110     | 8.4   | 17.5  | 52.6# |
| 77      | 0.0   | 24.5  | 36.7# |





#38

Carbon Tetrachloride

Concen: 6.554 ug/l

RT: 7.67 min Scan# 1833

Delta R.T. -0.11 min

Lab File: VN052787.D

Acq: 11 Dec 2018 7:37

Instrument :

MSVOA\_N

ClientSampled :

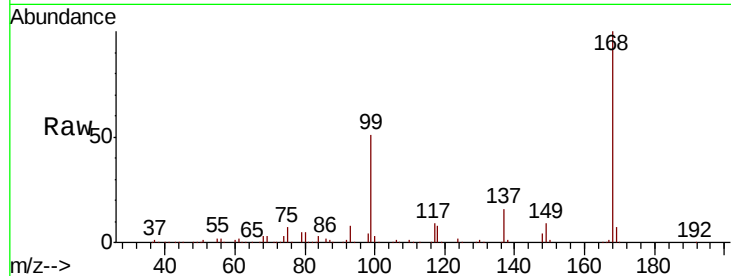
Tot Ion:117 Resp: 109529

Ion Ratio Lower Upper

117 100

119 5.2 76.8 115.2#

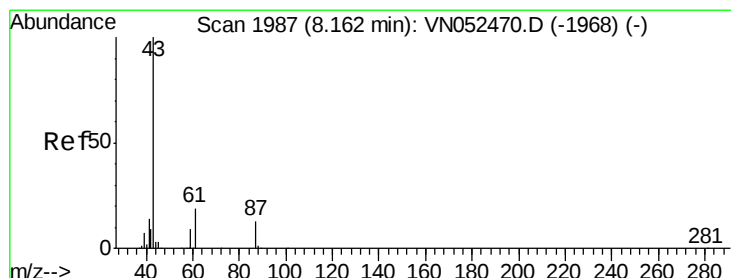
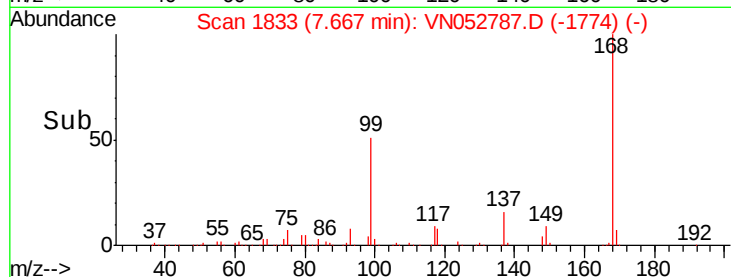
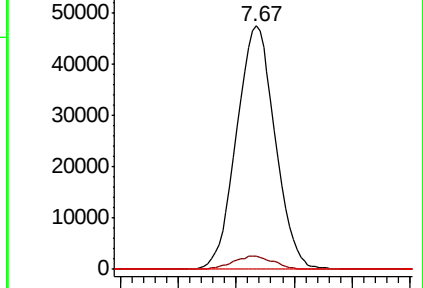
121 0.0 24.9 37.3#



Abundance Ion 116.80 (116.50 to 117.50): V

Ion 118.80 (118.50 to 119.50): V

Ion 120.80 (120.50 to 121.50): V



#43

Isopropyl Acetate

Concen: 4.048 ug/l

RT: 8.17 min Scan# 1989

Delta R.T. 0.01 min

Lab File: VN052787.D

Acq: 11 Dec 2018 7:37

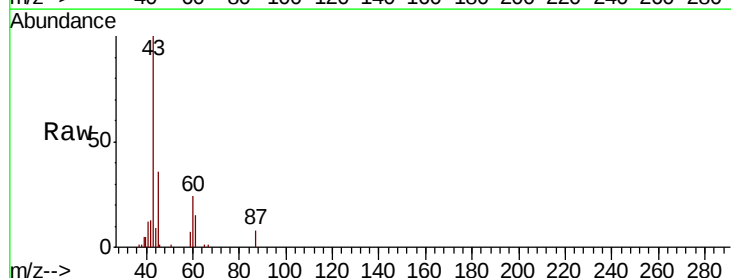
Tgt Ion: 43 Resp: 77172

Ion Ratio Lower Upper

43 100

61 11.8 24.1 36.1#

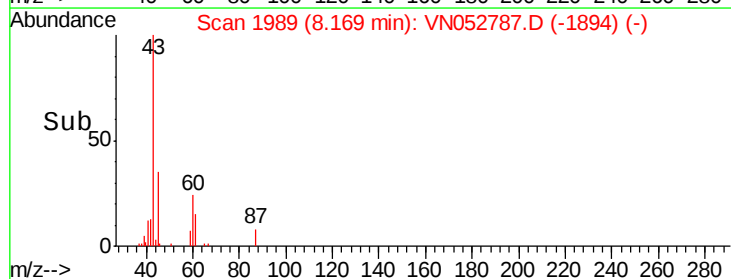
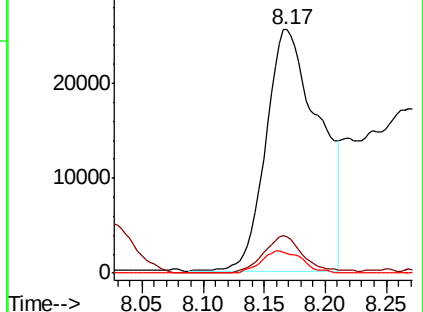
87 7.0 10.6 15.8#

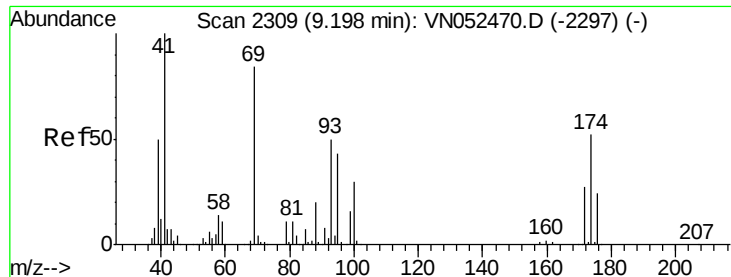


Abundance Ion 43.00 (42.70 to 43.70): V

Ion 61.00 (60.70 to 61.70): V

Ion 87.00 (86.70 to 87.70): V

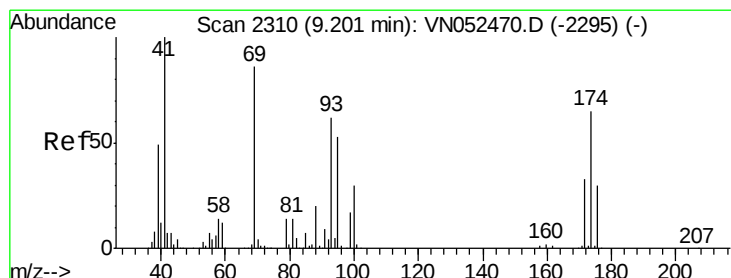
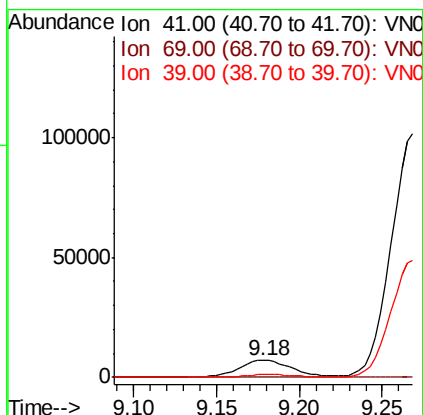
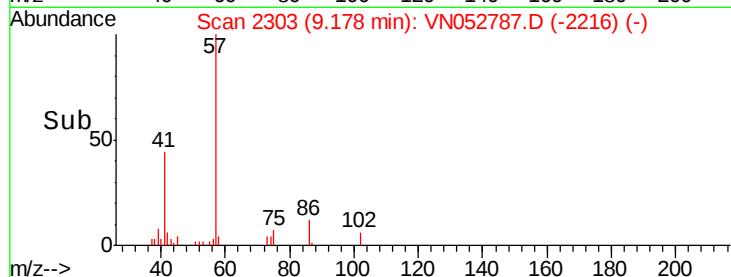
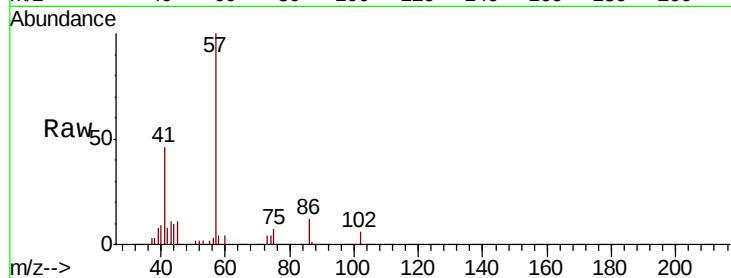




#48  
Methvl methacrylate  
Concen: 1.585 ug/l  
RT: 9.18 min Scan# 2303  
Delta R.T. -0.02 min  
Lab File: VN052787.D  
Acq: 11 Dec 2018 7:37

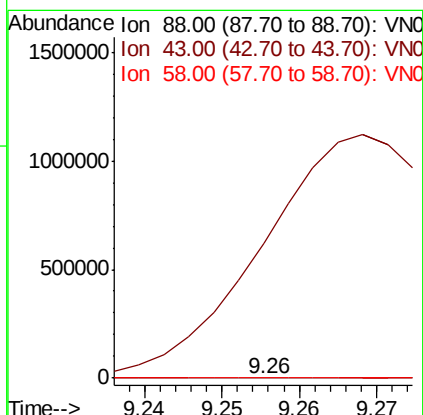
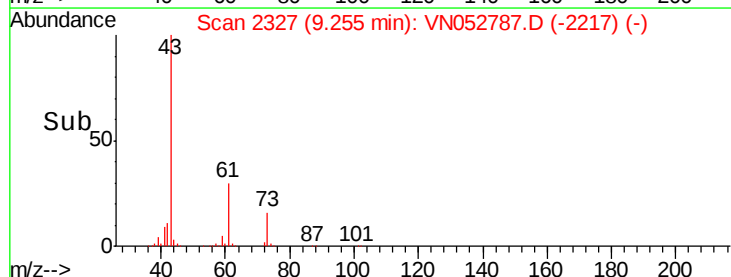
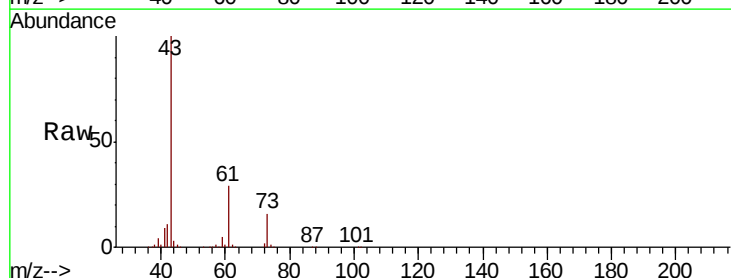
Instrument :  
MSVOA\_N  
ClientSampled :

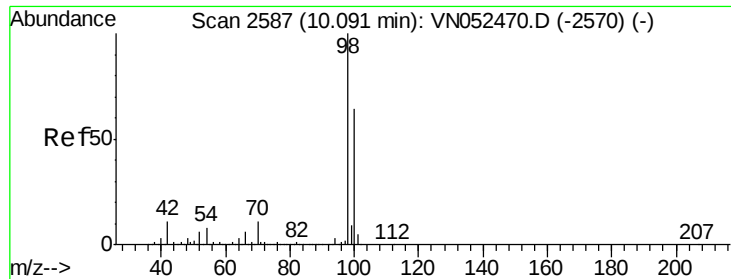
Tot Ion: 41 Resp: 15754  
Ion Ratio Lower Upper  
41 100  
69 0.0 70.0 105.0#  
39 17.5 42.6 64.0#



#49  
1,4-Dioxane  
Concen: 1.541 ug/l  
RT: 9.26 min Scan# 2327  
Delta R.T. 0.05 min  
Lab File: VN052787.D  
Acq: 11 Dec 2018 7:37

Tgt Ion: 88 Resp: 159  
Ion Ratio Lower Upper  
88 100  
43 0.0 26.4 39.6#  
58 0.0 55.4 83.0#





#50

Toluene-d8

Concen: 1.541 ug/l

RT: 10.09 min Scan# 2587

Delta R.T. -0.00 min

Lab File: VN052787.D

Acq: 11 Dec 2018 7:37

Instrument :

MSVOA\_N

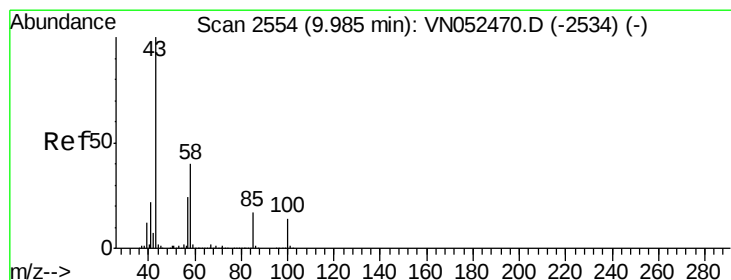
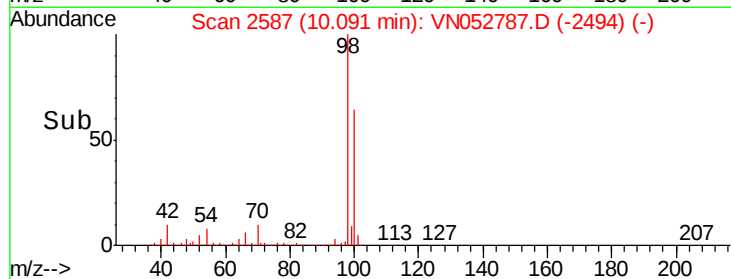
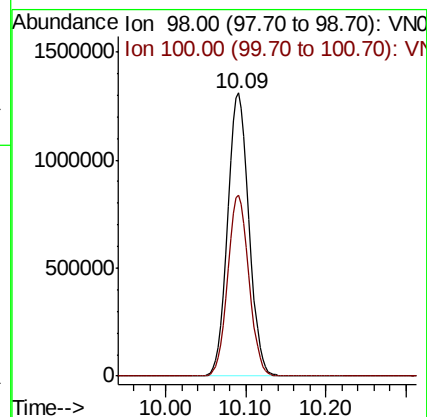
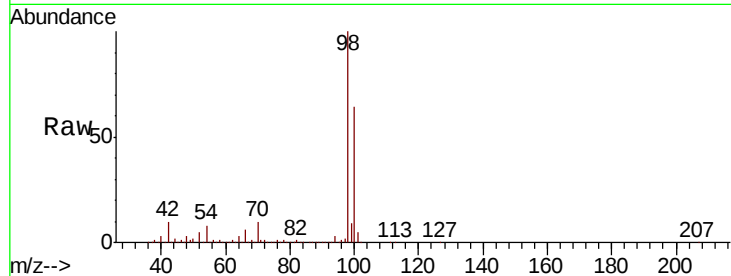
ClientSampleId :

Tot Ion: 98 Resp: 2399729

Ion Ratio Lower Upper

98 100

100 63.7 51.3 76.9



#51

4-Methyl-2-Pentanone

Concen: 1.639 ug/l

RT: 10.02 min Scan# 2566

Delta R.T. 0.04 min

Lab File: VN052787.D

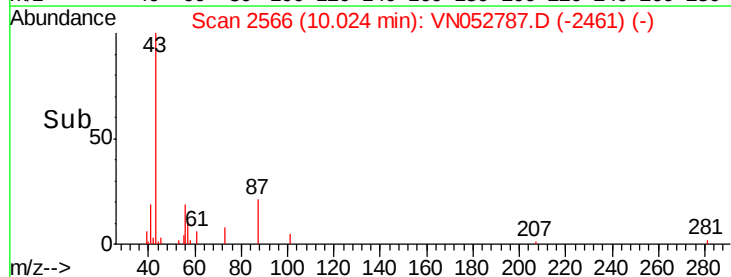
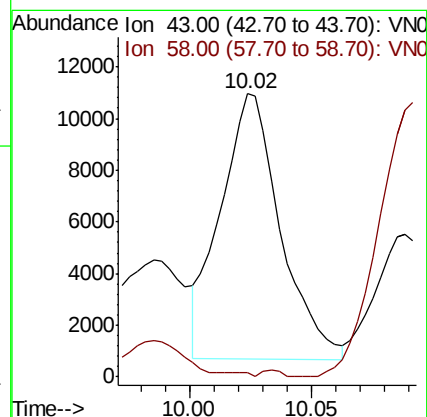
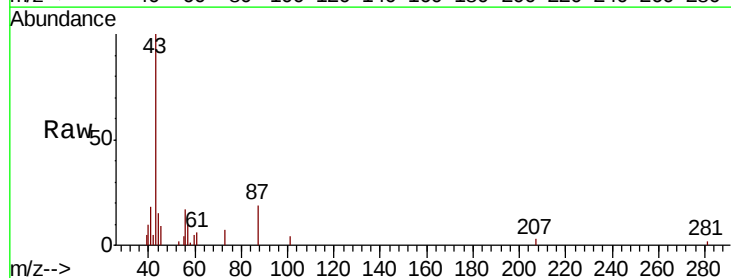
Acq: 11 Dec 2018 7:37

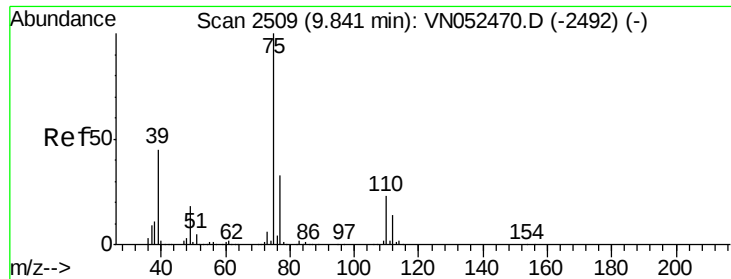
Tgt Ion: 43 Resp: 17532

Ion Ratio Lower Upper

43 100

58 0.0 31.5 47.3#



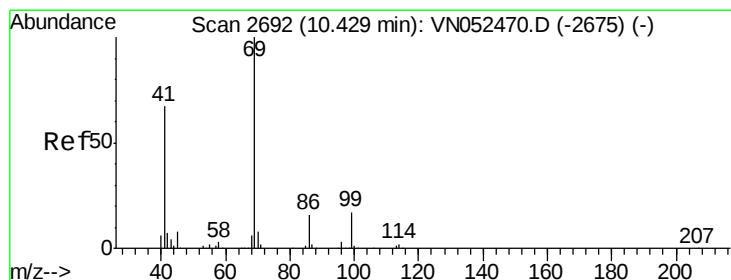
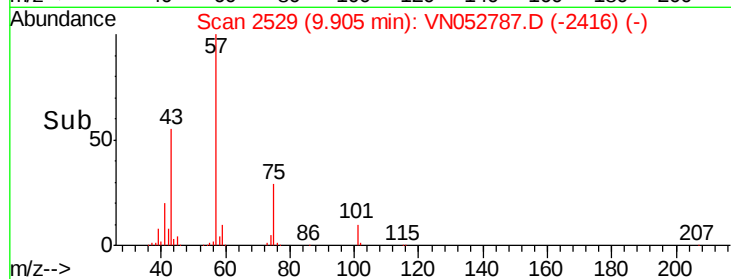
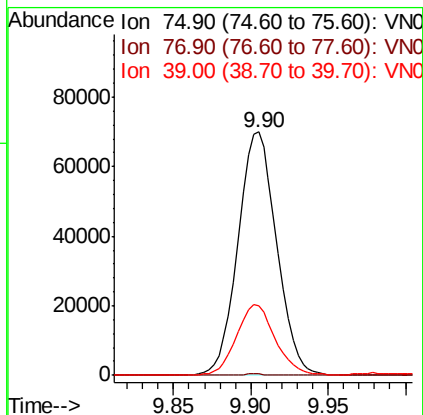
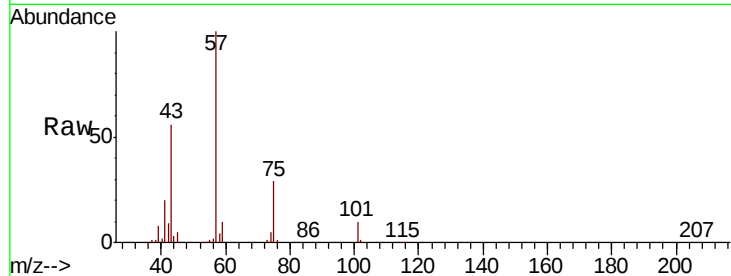


#54

cis-1,3-Dichloropropene  
 Concen: 5.976 ug/l  
 RT: 9.90 min Scan# 2529  
 Delta R.T. 0.06 min  
 Lab File: VN052787.D  
 Acq: 11 Dec 2018 7:37

Instrument :  
 MSVOA\_N  
 ClientSampled :

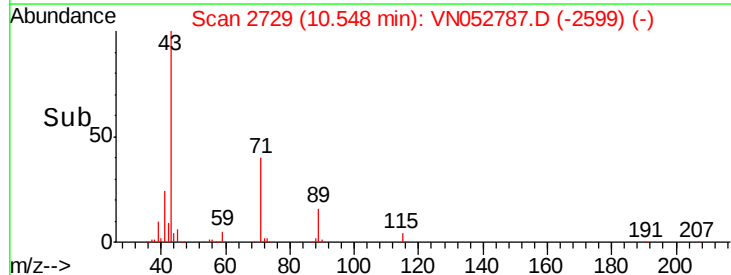
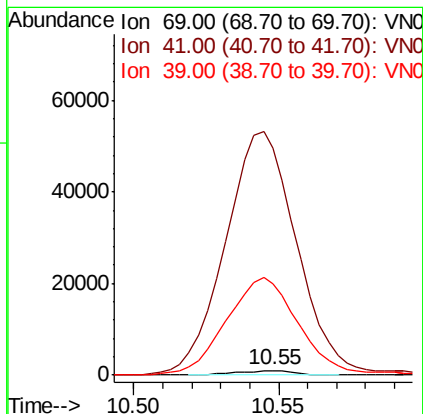
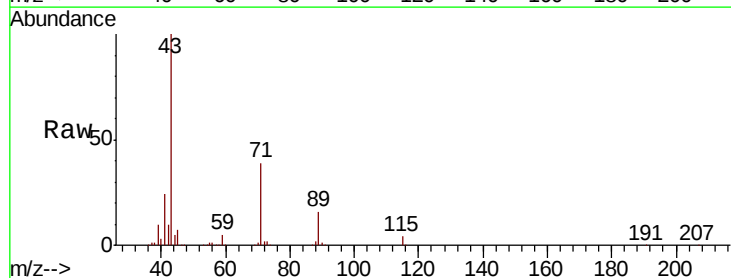
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 77      | 0.5   | 26.2  | 39.2# |
| 39      | 28.5  | 36.0  | 54.0# |

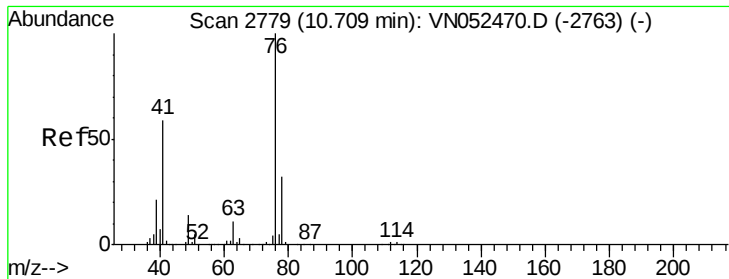


#56

Ethyl methacrylate  
 Concen: 2.773 ug/l  
 RT: 10.55 min Scan# 2729  
 Delta R.T. 0.12 min  
 Lab File: VN052787.D  
 Acq: 11 Dec 2018 7:37

| Tgt Ion | Ratio  | Lower | Upper |
|---------|--------|-------|-------|
| 69      | 100    |       |       |
| 41      | 6767.9 | 52.6  | 79.0# |
| 39      | 2735.7 | 25.9  | 38.9# |





#57

1,3-Dichloropropane

Concen: 0.976 ug/l

RT: 10.76 min Scan# 2796

Delta R.T. 0.05 min

Lab File: VN052787.D

Acq: 11 Dec 2018 7:37

Instrument :

MSVOA\_N

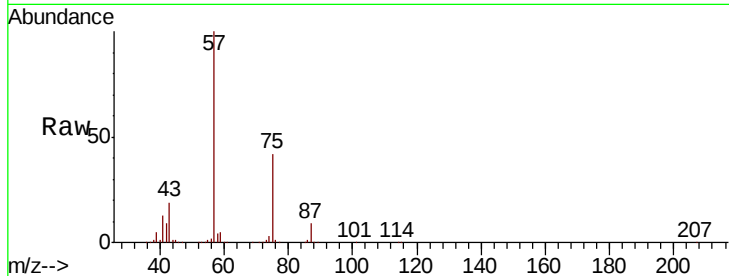
ClientSampled :

Tot Ion: 76 Resp: 19816

Ion Ratio Lower Upper

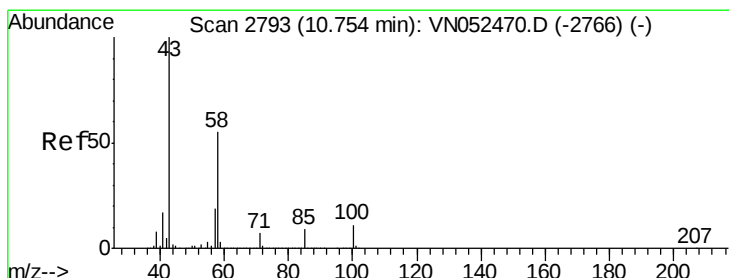
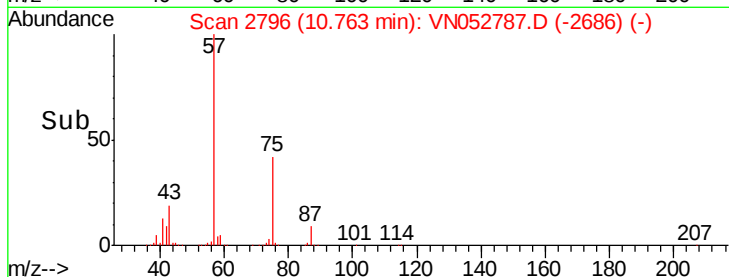
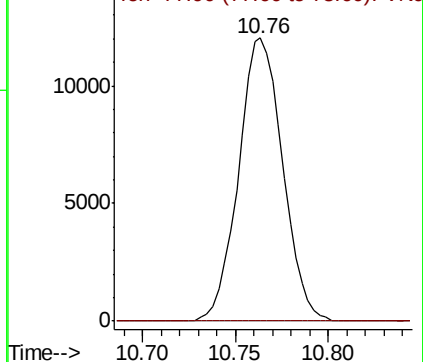
76 100

78 0.0 25.6 38.4#



Abundance Ion 75.90 (75.60 to 76.60): VN0

Ion 77.90 (77.60 to 78.60): VN0



#59

2-Hexanone

Concen: 38.161 ug/l

RT: 10.76 min Scan# 2796

Delta R.T. 0.01 min

Lab File: VN052787.D

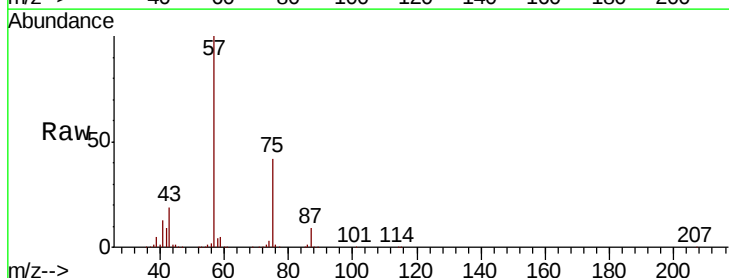
Acq: 11 Dec 2018 7:37

Tgt Ion: 43 Resp: 273975

Ion Ratio Lower Upper

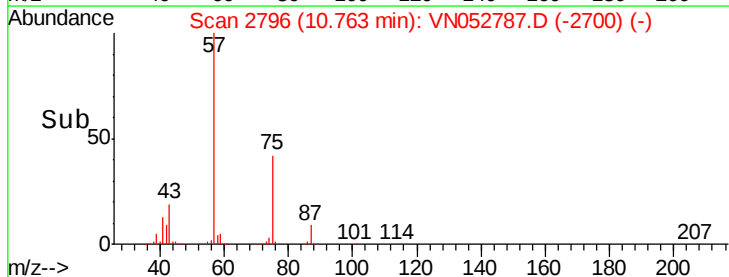
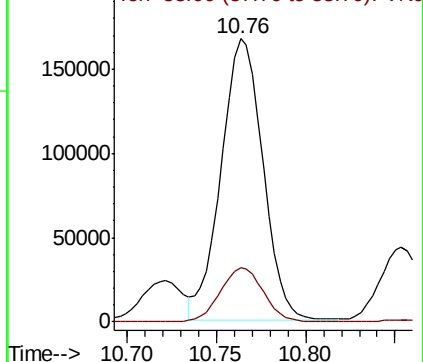
43 100

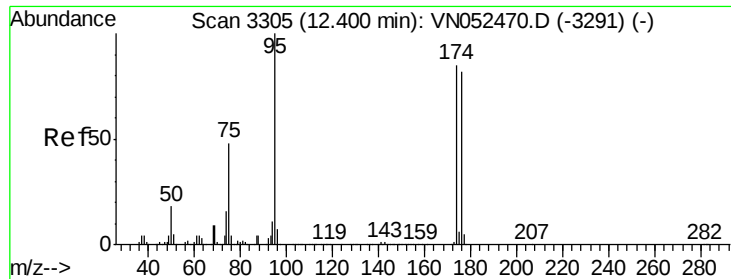
58 19.8 27.4 82.0#



Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 58.00 (57.70 to 58.70): VN0

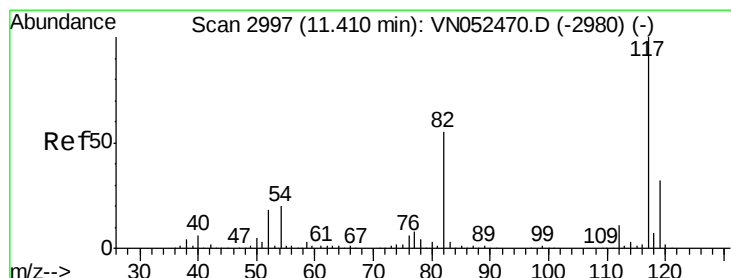
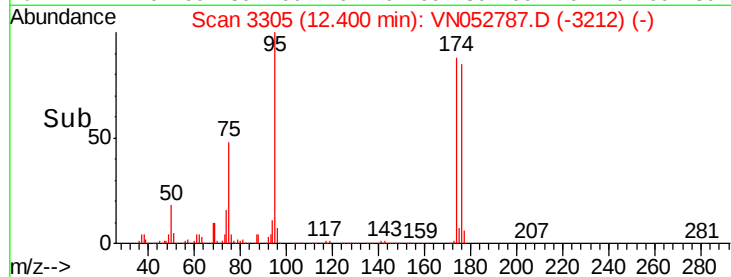
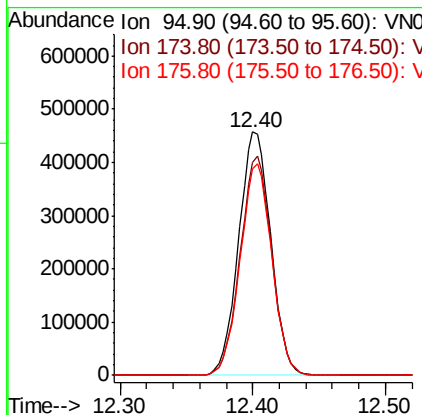
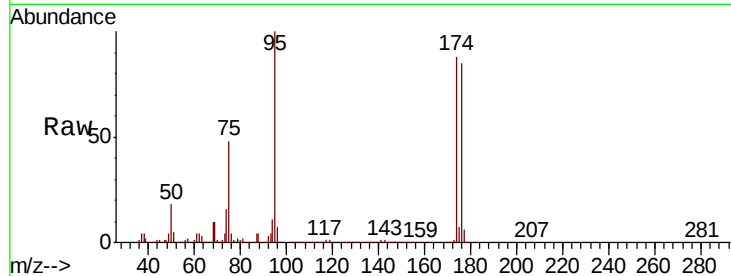




#62  
4-Bromofluorobenzene  
Concen: N.D. ug/l  
RT: 12.40 min Scan# 3305  
Delta R.T. -0.00 min  
Lab File: VN052787.D  
Acq: 11 Dec 2018 7:37

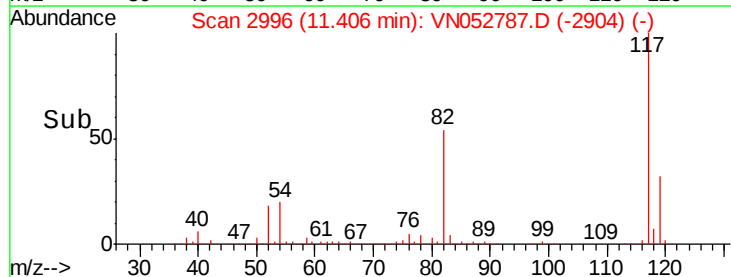
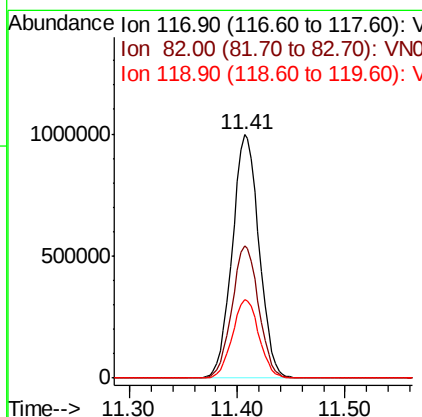
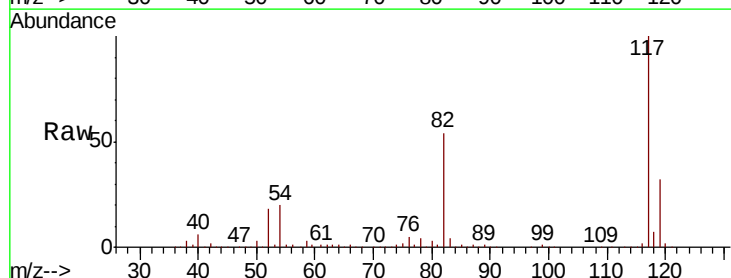
Instrument :  
MSVOA\_N  
ClientSampleId :

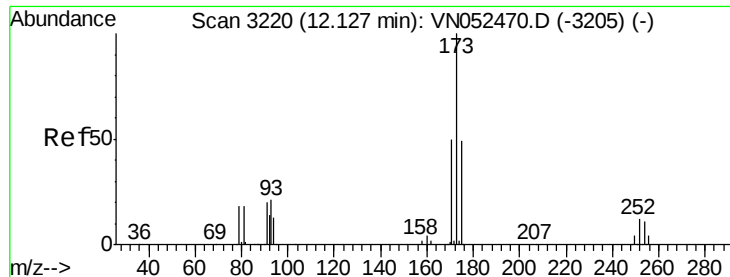
| Tot Ion   | 95    | Resp  | 767818 |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 95        | 100   |       |        |
| 174       | 88.5  | 0.0   | 173.0  |
| 176       | 85.7  | 0.0   | 166.2  |



#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.41 min Scan# 2996  
Delta R.T. -0.00 min  
Lab File: VN052787.D  
Acq: 11 Dec 2018 7:37

| Tgt Ion   | 117   | Resp  | 1728082 |
|-----------|-------|-------|---------|
| Ion Ratio | Lower | Upper |         |
| 117       | 100   |       |         |
| 82        | 54.5  | 43.6  | 65.4    |
| 119       | 32.2  | 25.4  | 38.2    |





#71

Bromoform

Concen: 0.582 ug/l

RT: 12.41 min Scan# 3307

Delta R.T. 0.28 min

Lab File: VN052787.D

Acq: 11 Dec 2018 7:37

Instrument :

MSVOA\_N

ClientSampleId :

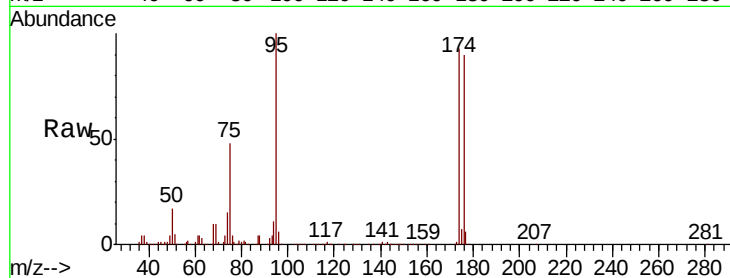
Tot Ion:173 Resp: 4776

Ion Ratio Lower Upper

173 100

175 910.8 24.4 73.2#

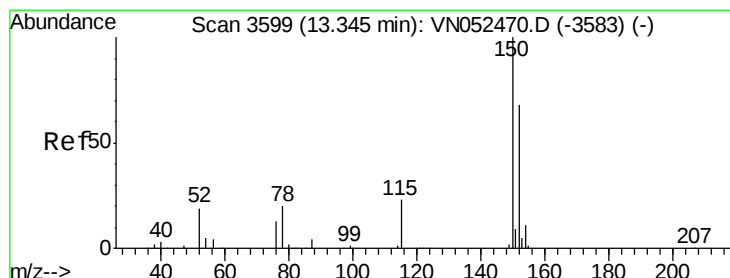
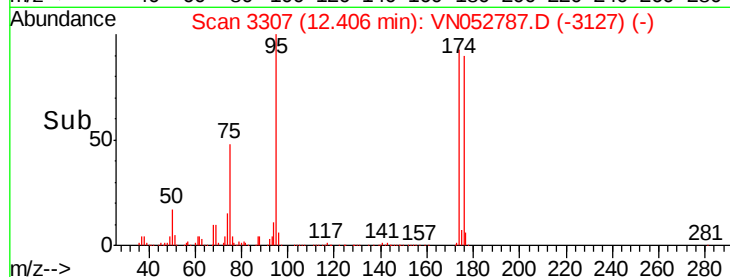
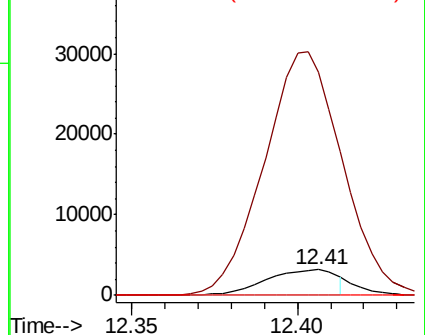
254 0.0 0.1 0.1#



Abundance Ion 172.70 (172.40 to 173.40): V

Ion 174.70 (174.40 to 175.40): V

Ion 254.40 (254.10 to 255.10): V



#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 13.35 min Scan# 3599

Delta R.T. -0.00 min

Lab File: VN052787.D

Acq: 11 Dec 2018 7:37

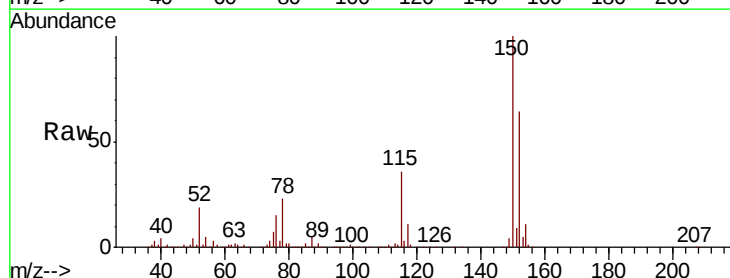
Tgt Ion:152 Resp: 695567

Ion Ratio Lower Upper

152 100

115 56.8 28.4 85.2

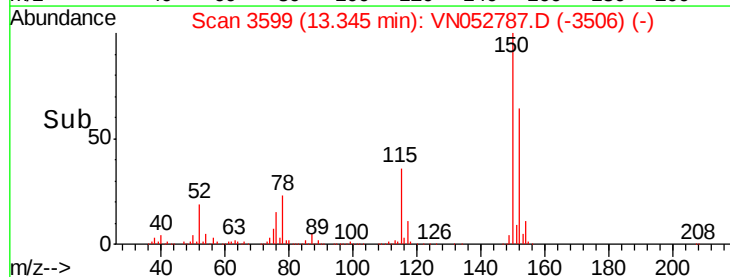
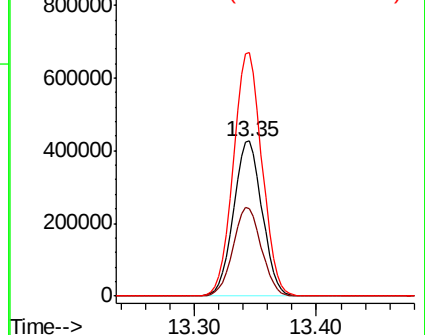
150 157.2 0.0 346.0

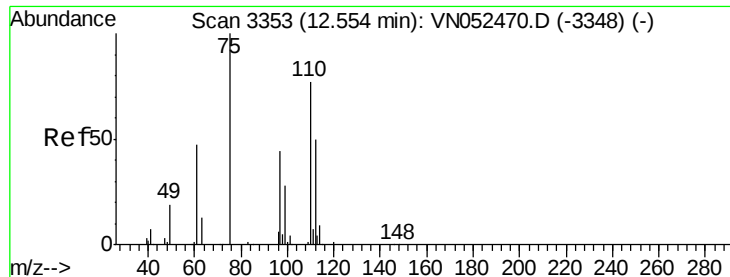


Abundance Ion 151.90 (151.60 to 152.60): V

Ion 114.90 (114.60 to 115.60): V

Ion 149.90 (149.60 to 150.60): V





#76

1,2,3-Trichloropropane

Concen: 33.951 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. -0.15 min

Lab File: VN052787.D

Acq: 11 Dec 2018 7:37

Instrument :

MSVOA\_N

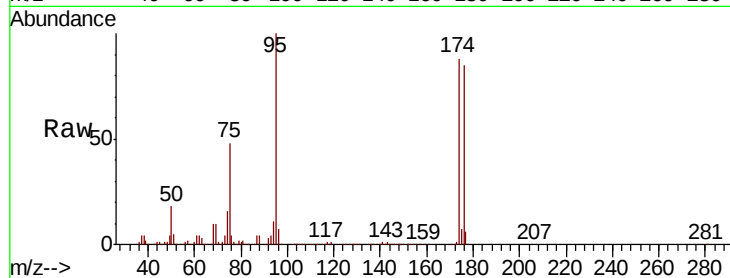
ClientSampleId :

Tot Ion: 75 Resp: 364159

Ion Ratio Lower Upper

75 100

77 1.2 0.0 0.0#



Abundance Ion 74.90 (74.60 to 75.60): VN0

Ion 77.00 (76.70 to 77.70): VN0

250000

200000

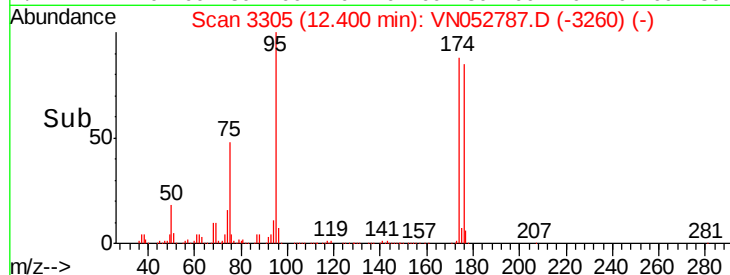
150000

100000

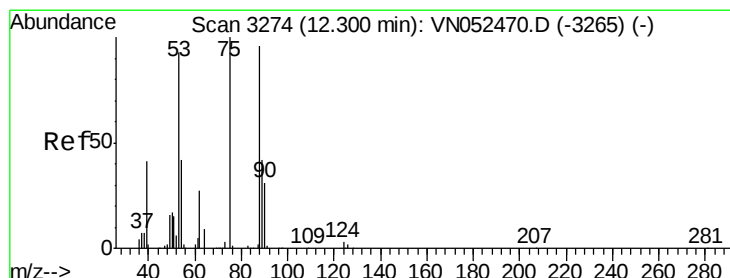
50000

0

12.30 12.35 12.40 12.45



Time--> 12.30 12.35 12.40 12.45



#81

trans-1,4-Dichloro-2-butene

Concen: 113.380 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. 0.10 min

Lab File: VN052787.D

Acq: 11 Dec 2018 7:37

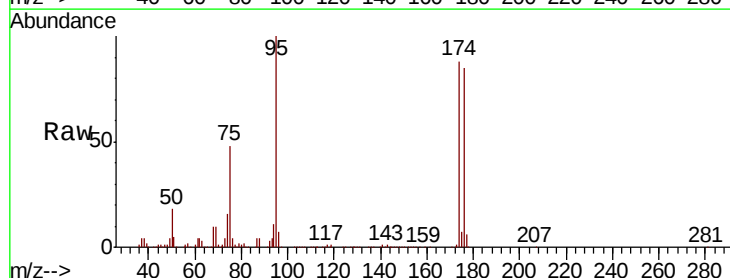
Tgt Ion: 75 Resp: 364159

Ion Ratio Lower Upper

75 100

53 0.0 77.4 116.0#

89 0.0 35.4 53.2#



Abundance Ion 74.90 (74.60 to 75.60): VN0

Ion 53.00 (52.70 to 53.70): VN0

Ion 88.90 (88.60 to 89.60): VN0

300000

250000

200000

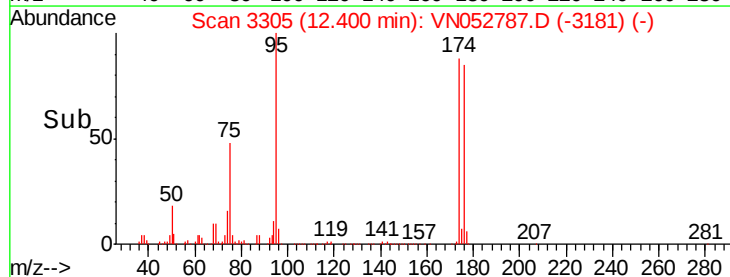
150000

100000

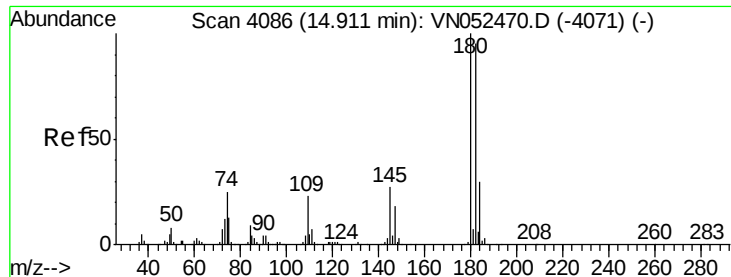
50000

0

12.30 12.35 12.40 12.45



Time--> 12.30 12.35 12.40 12.45



#93

1,2,4-Trichlorobenzene

Concen: 2.838 ug/l

RT: 14.91 min Scan# 4086

Delta R.T. 0.00 min

Lab File: VN052787.D

Acq: 11 Dec 2018 7:37

Instrument :

MSVOA\_N

ClientSampled :

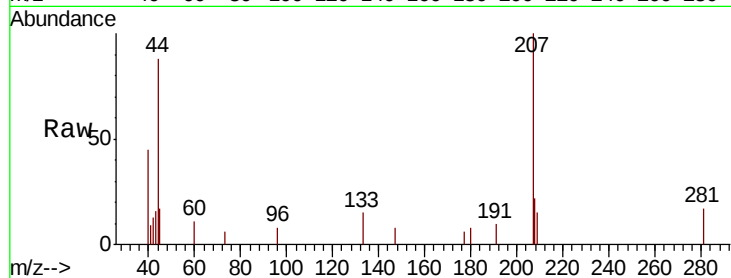
Tot Ion:180 Resp: 104

Ion Ratio Lower Upper

180 100

182 27.9 47.8 143.4#

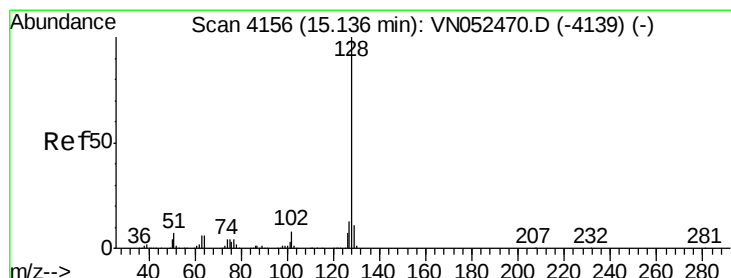
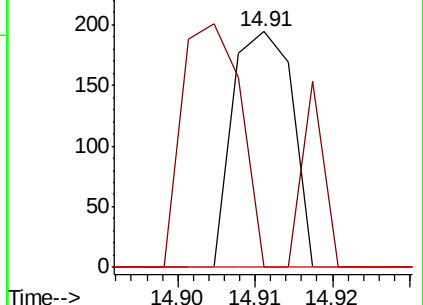
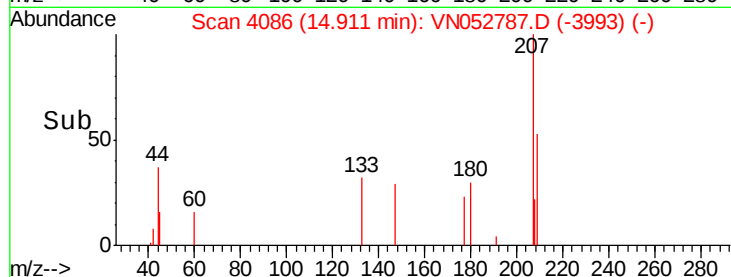
145 0.0 14.1 42.3#



Abundance Ion 179.80 (179.50 to 180.50): V

Ion 181.80 (181.50 to 182.50): V

Ion 144.80 (144.50 to 145.50): V



#95

Naphthalene

Concen: 3.450 ug/l

RT: 15.13 min Scan# 4154

Delta R.T. -0.01 min

Lab File: VN052787.D

Acq: 11 Dec 2018 7:37

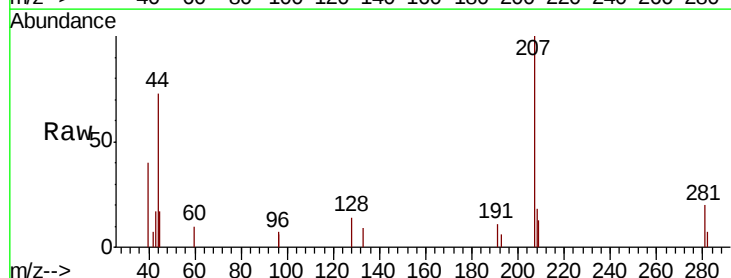
Tgt Ion:128 Resp: 607

Ion Ratio Lower Upper

128 100

127 0.0 10.2 15.2#

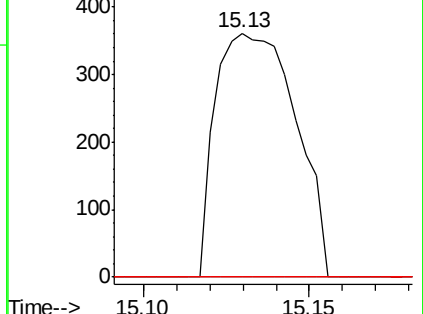
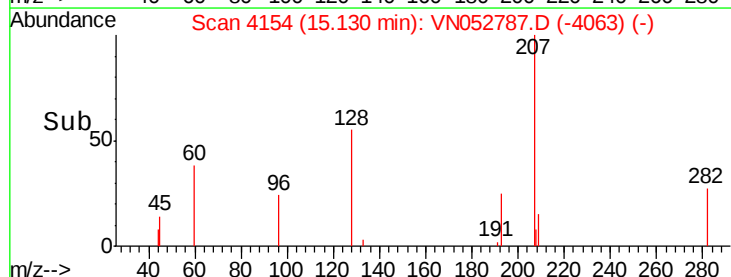
129 0.0 8.7 13.1#

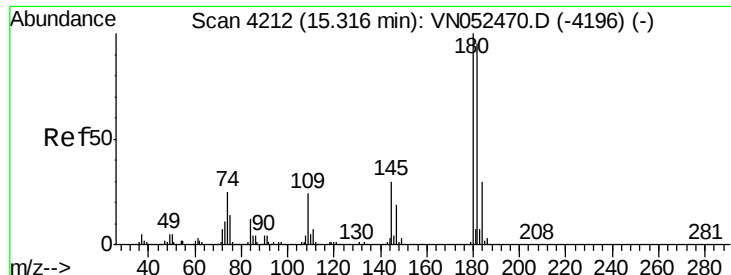


Abundance Ion 128.00 (127.70 to 128.70): V

Ion 127.00 (126.70 to 127.70): V

Ion 129.00 (128.70 to 129.70): V

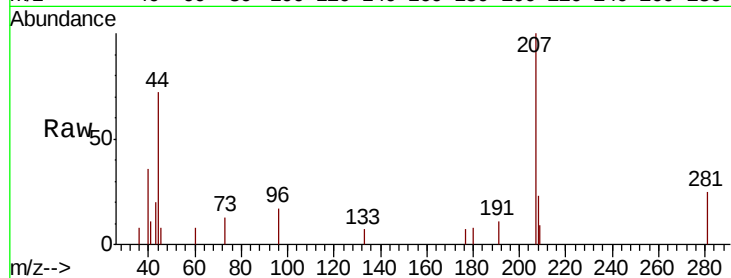




#96  
 1,2,3-Trichlorobenzene  
 Concen: 2.736 ug/l  
 RT: 15.32 min Scan# 4212  
 Delta R.T. 0.00 min  
 Lab File: VN052787.D  
 Acq: 11 Dec 2018 7:37

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Tot Ion:180 Resp: 111  
 Ion Ratio Lower Upper  
 180 100  
 182 88.3 47.8 143.3  
 145 0.0 15.2 45.5#



Abundance Ion 179.80 (179.50 to 180.50): V  
 Ion 181.80 (181.50 to 182.50): V  
 Ion 144.90 (144.60 to 145.60): V

