

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN021720\  
 Data File : VN060121.D  
 Acq On : 17 Feb 2020 15:52  
 Operator : JC/MD  
 Sample : PB126834ZHE#06  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 13 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Quant Time: Feb 17 16:56:56 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N021220W.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Feb 12 14:12:21 2020  
 Response via : Initial Calibration

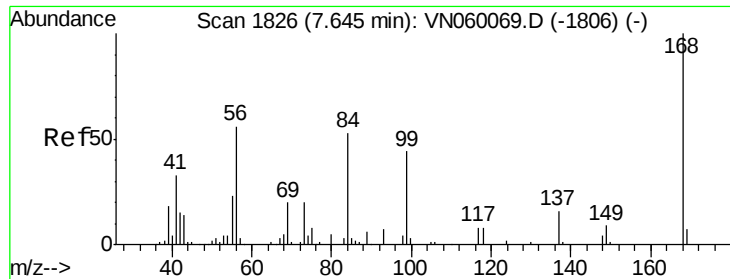
| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.64  | 168  | 189605   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.57  | 114  | 308380   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.40 | 117  | 291653   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.34 | 152  | 129823   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units   | Dev(Min) |
|-----------------------------|-------|------|----------|-------|---------|----------|
| 33) 1,2-Dichloroethane-d4   | 8.00  | 65   | 118096   | 51.19 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 102.38% |          |
| 35) Dibromofluoromethane    | 7.57  | 113  | 92429    | 48.76 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 97.52%  |          |
| 50) Toluene-d8              | 10.08 | 98   | 374762   | 50.20 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 100.40% |          |
| 62) 4-Bromofluorobenzene    | 12.40 | 95   | 137689   | 50.20 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 100.40% |          |

| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 8) Diethyl Ether               | 3.39  | 74   | 353      | 0.320     | ug/l   | 84     |
| 11) Tert butyl alcohol         | 4.74  | 59   | 711      | 2.059     | ug/l # | 72     |
| 16) Acetone                    | 3.79  | 43   | 5968     | 5.930     | ug/l   | 95     |
| 18) Methyl Acetate             | 4.30  | 43   | 1322     | 0.699     | ug/l # | 64     |
| 20) Methylene Chloride         | 4.53  | 84   | 7780     | 3.875     | ug/l   | 95     |
| 25) 2-Butanone                 | 6.81  | 43   | 4442     | 3.510     | ug/l   | 92     |
| 31) Cyclohexane                | 7.64  | 56   | 4148     | 1.271     | ug/l # | 16     |
| 36) 1,1-Dichloropropene        | 7.64  | 75   | 14546    | 5.093     | ug/l # | 48     |
| 37) Ethyl Acetate              | 6.81  | 43   | 4442     | 1.721     | ug/l # | 68     |
| 38) Carbon Tetrachloride       | 7.64  | 117  | 18007    | 5.805     | ug/l # | 16     |
| 43) Isopropyl Acetate          | 8.14  | 43   | 53928    | 12.221    | ug/l # | 89     |
| 45) 1,2-Dichloropropane        | 9.25  | 63   | 1166     | 0.556     | ug/l # | 43     |
| 48) Methyl methacrylate        | 9.16  | 41   | 3927     | 1.983     | ug/l # | 9      |
| 51) 4-Methyl-2-Pentanone       | 9.97  | 43   | 3872     | 1.516     | ug/l   | 92     |
| 54) cis-1,3-Dichloropropene    | 9.89  | 75   | 24480    | 6.834     | ug/l # | 61     |
| 57) 1,3-Dichloropropane        | 10.75 | 76   | 4017     | 1.148     | ug/l # | 43     |
| 59) 2-Hexanone                 | 10.75 | 43   | 57202    | 28.991    | ug/l # | 52     |
| 74) N-amyl acetate             | 12.03 | 43   | 2932     | 0.839     | ug/l # | 43     |
| 76) 1,2,3-Trichloropropane     | 12.40 | 75   | 72156    | 29.051    | ug/l # | 100    |
| 80) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 1889     | 0.234     | ug/l   | 93     |
| 81) trans-1,4-Dichloro-2-buten | 12.40 | 75   | 72156    | 71.131    | ug/l # | 12     |
| 92) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 30       | Below Cal | #      | 1      |

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





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.64 min Scan# 1825

Delta R.T. -0.00 min

Lab File: VN060121.D

Acq: 17 Feb 2020 15:52

Instrument :

MSVOA\_N

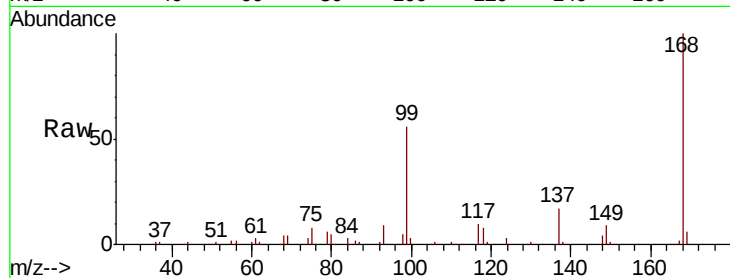
ClientSampled :

Tot Ion:168 Resp: 189605

Ion Ratio Lower Upper

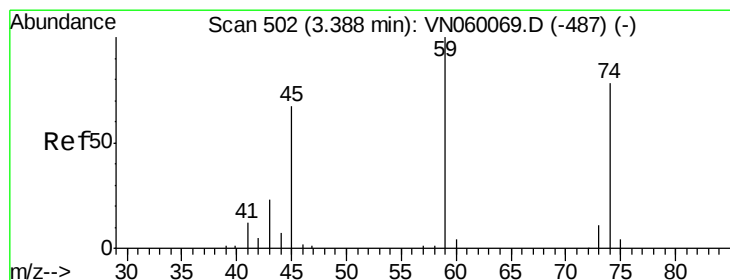
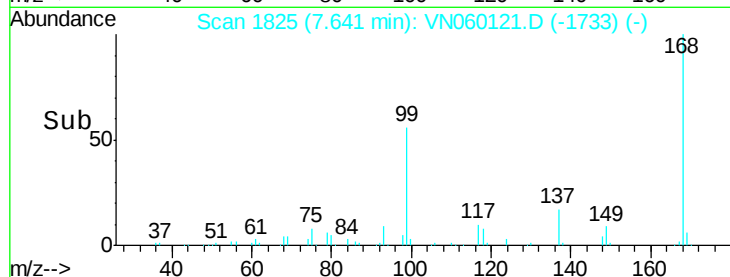
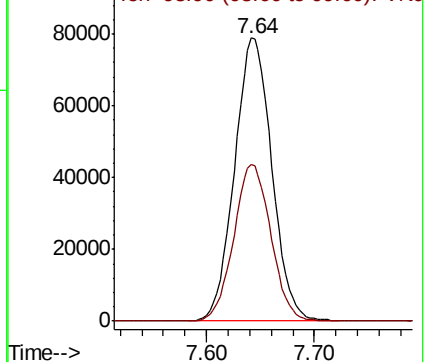
168 100

99 55.5 42.7 64.1



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VN0



#8

Diethyl Ether

Concen: 0.320 ug/l

RT: 3.39 min Scan# 504

Delta R.T. 0.01 min

Lab File: VN060121.D

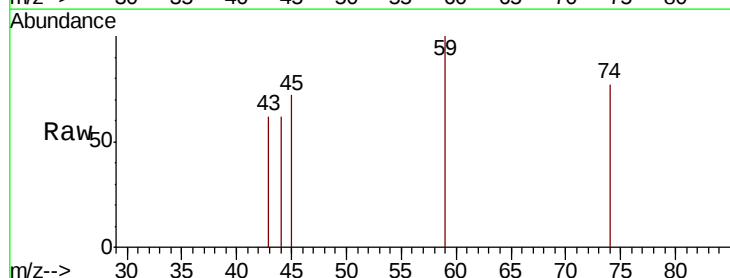
Acq: 17 Feb 2020 15:52

Tgt Ion: 74 Resp: 353

Ion Ratio Lower Upper

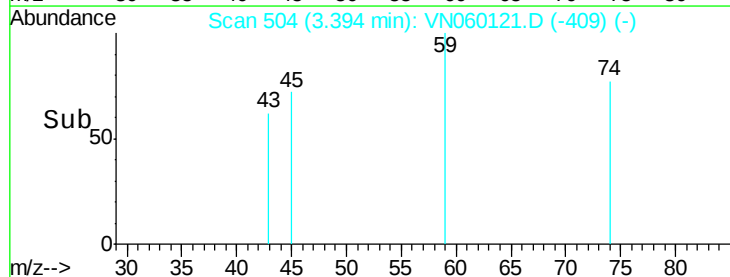
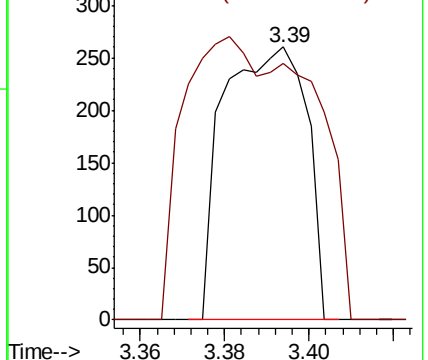
74 100

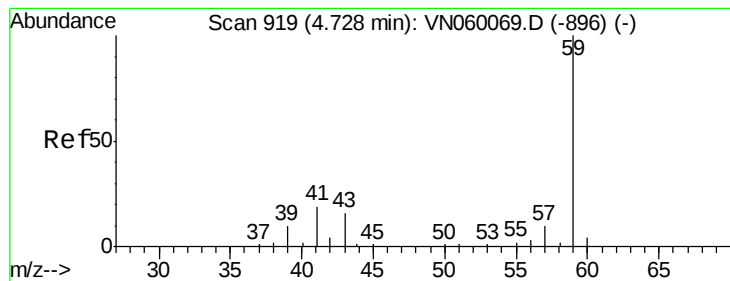
45 104.5 44.7 134.1



Abundance Ion 74.00 (73.70 to 74.70): VN0

Ion 45.00 (44.70 to 45.70): VN0



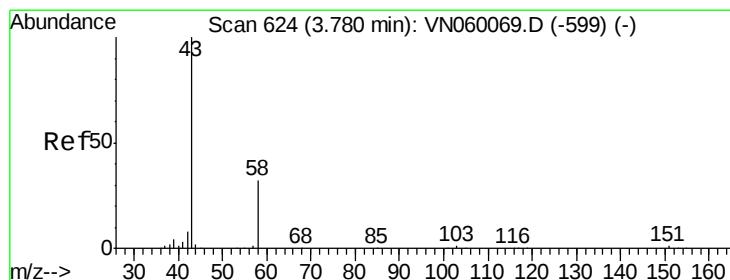
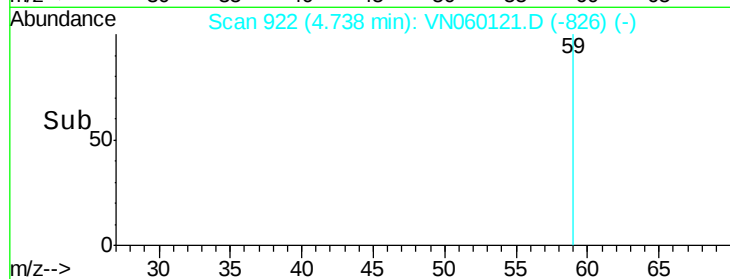
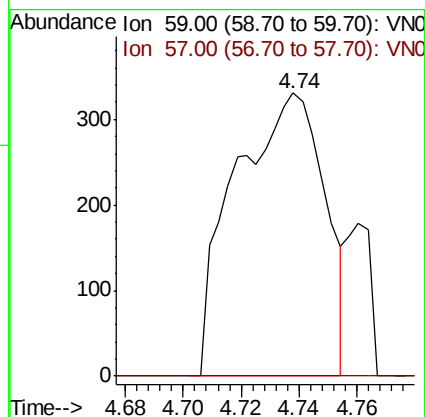
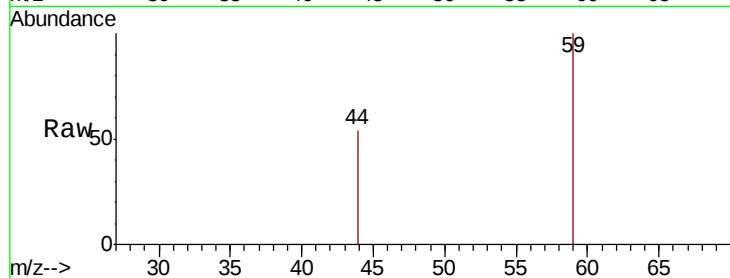


#11

Tert butyl alcohol  
 Concen: 2.059 ug/l  
 RT: 4.74 min Scan# 922  
 Delta R.T. 0.01 min  
 Lab File: VN060121.D  
 Acq: 17 Feb 2020 15:52

Instrument :  
 MSVOA\_N  
 ClientSampled :

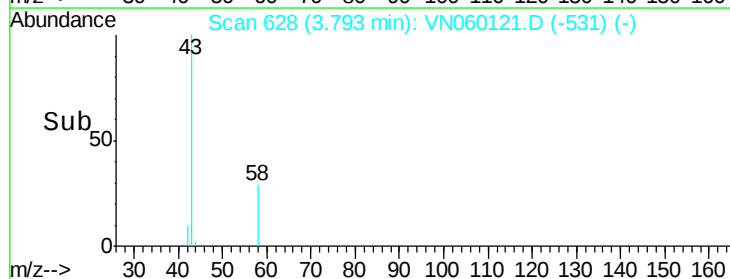
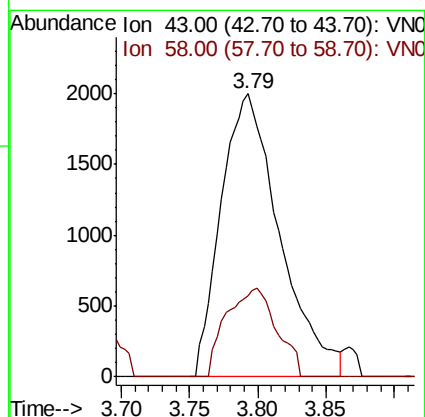
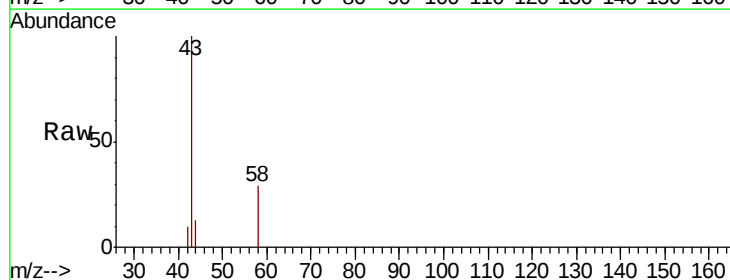
Tot Ion: 59 Resp: 711  
 Ion Ratio Lower Upper  
 59 100  
 57 0.0 8.2 12.4#

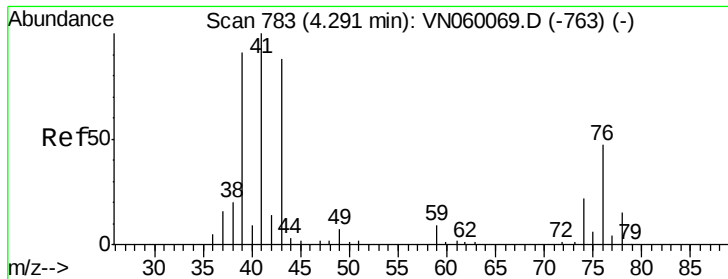


#16

Acetone  
 Concen: 5.930 ug/l  
 RT: 3.79 min Scan# 628  
 Delta R.T. 0.01 min  
 Lab File: VN060121.D  
 Acq: 17 Feb 2020 15:52

Tgt Ion: 43 Resp: 5968  
 Ion Ratio Lower Upper  
 43 100  
 58 28.6 25.2 37.8

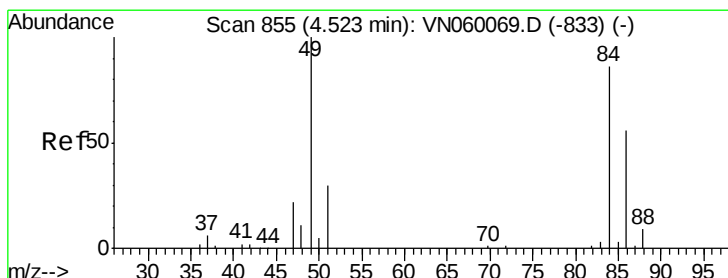
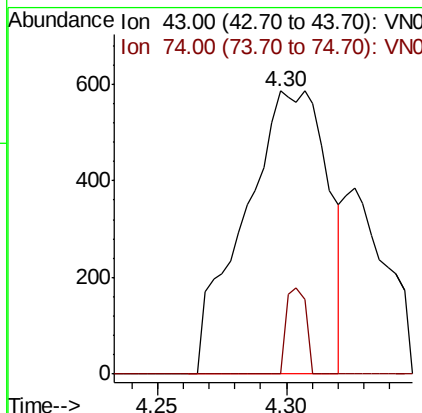
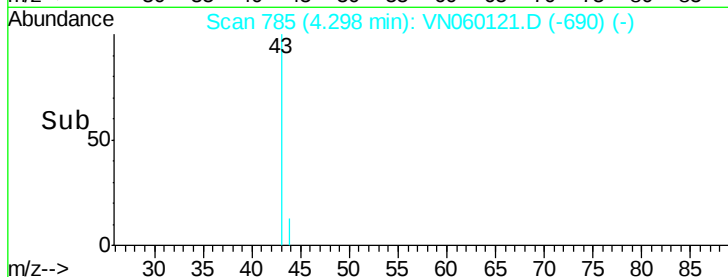
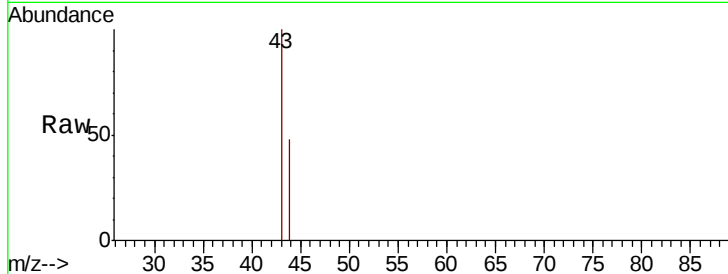




#18  
Methyl Acetate  
Concen: 0.699 ug/l  
RT: 4.30 min Scan# 785  
Delta R.T. 0.01 min  
Lab File: VN060121.D  
Acq: 17 Feb 2020 15:52

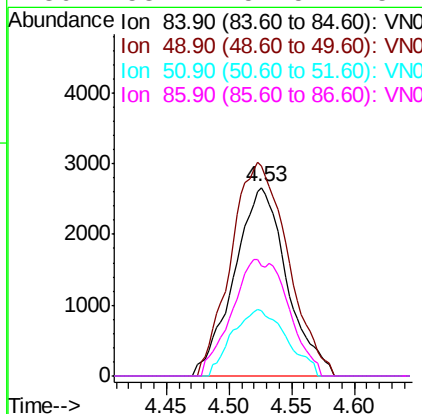
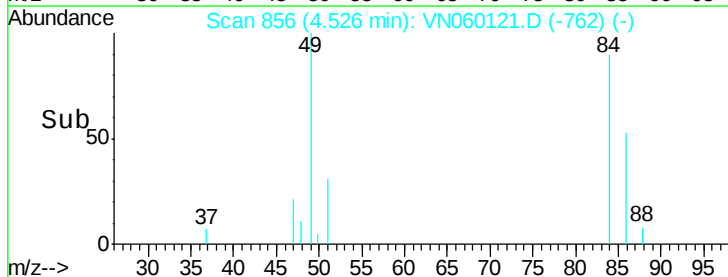
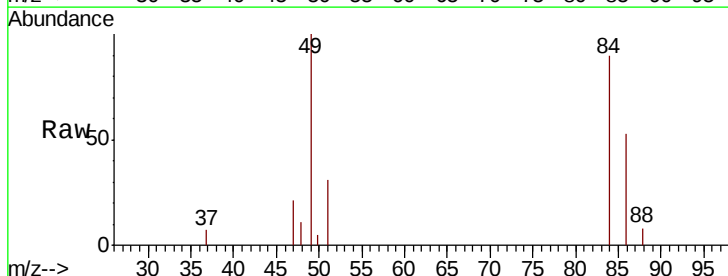
Instrument :  
MSVOA\_N  
ClientSampleId :

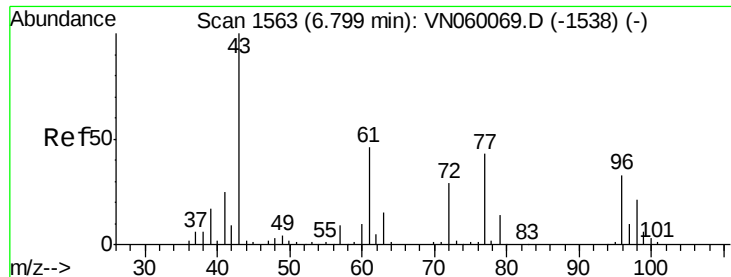
Tot Ion: 43 Resp: 1322  
Ion Ratio Lower Upper  
43 100  
74 7.3 20.3 30.5#



#20  
Methylene Chloride  
Concen: 3.875 ug/l  
RT: 4.53 min Scan# 856  
Delta R.T. 0.00 min  
Lab File: VN060121.D  
Acq: 17 Feb 2020 15:52

Tgt Ion: 84 Resp: 7780  
Ion Ratio Lower Upper  
84 100  
49 111.4 93.4 140.0  
51 34.6 28.4 42.6  
86 58.7 52.5 78.7

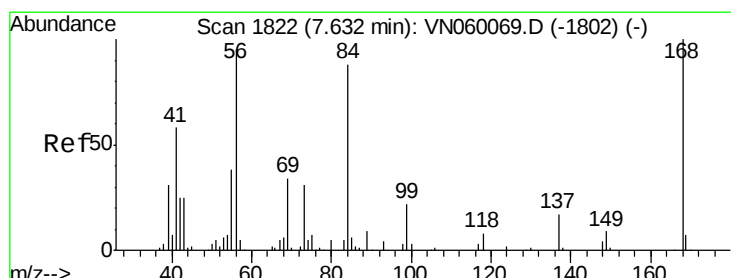
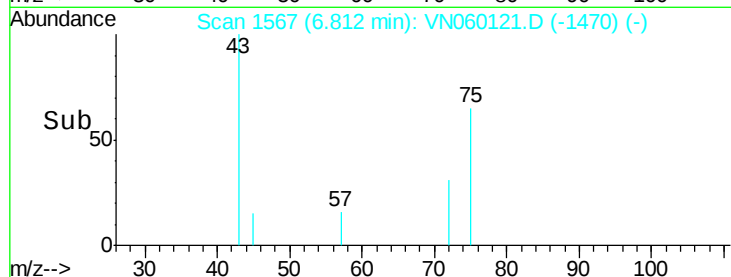
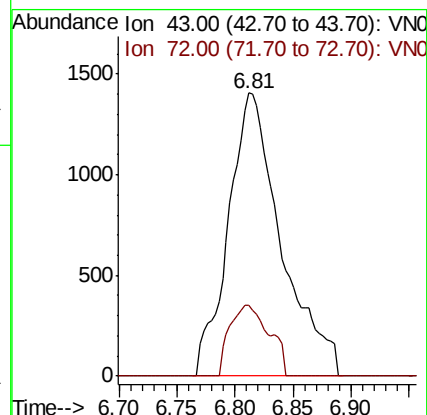
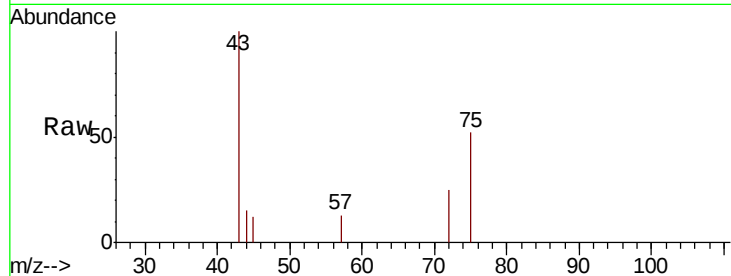




#25  
2-Butanone  
Concen: 3.510 ug/l  
RT: 6.81 min Scan# 1567  
Delta R.T. 0.01 min  
Lab File: VN060121.D  
Acq: 17 Feb 2020 15:52

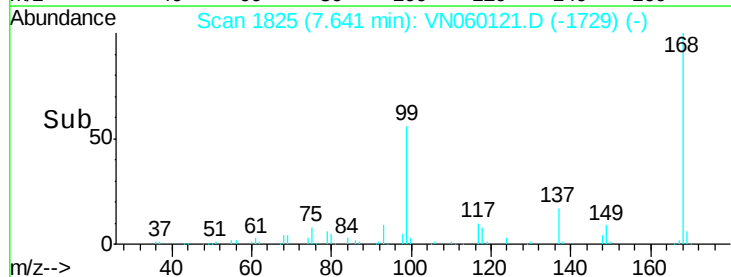
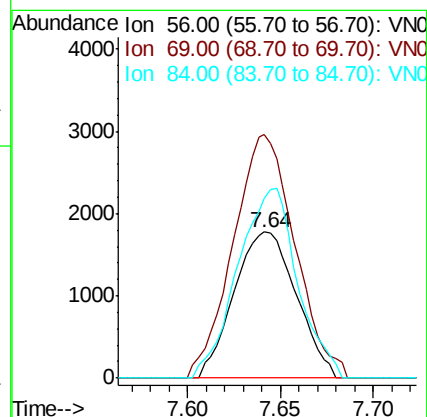
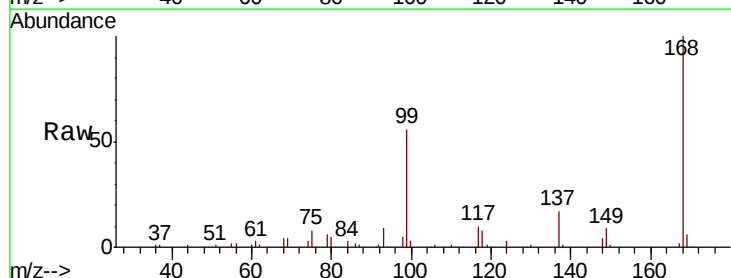
Instrument :  
MSVOA\_N  
ClientSampleId :

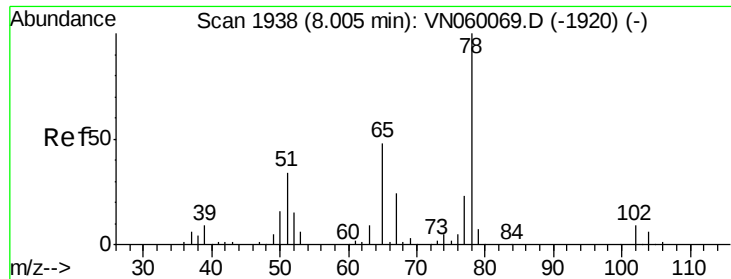
Tot Ion: 43 Resp: 4442  
Ion Ratio Lower Upper  
43 100  
72 25.0 23.3 34.9



#31  
Cyclohexane  
Concen: 1.271 ug/l  
RT: 7.64 min Scan# 1825  
Delta R.T. 0.01 min  
Lab File: VN060121.D  
Acq: 17 Feb 2020 15:52

Tgt Ion: 56 Resp: 4148  
Ion Ratio Lower Upper  
56 100  
69 157.9 28.3 42.5#  
84 123.1 72.6 108.8#

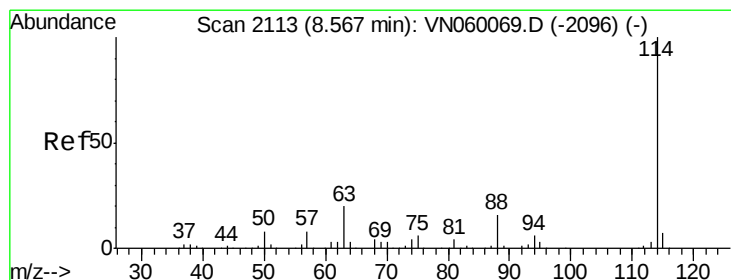
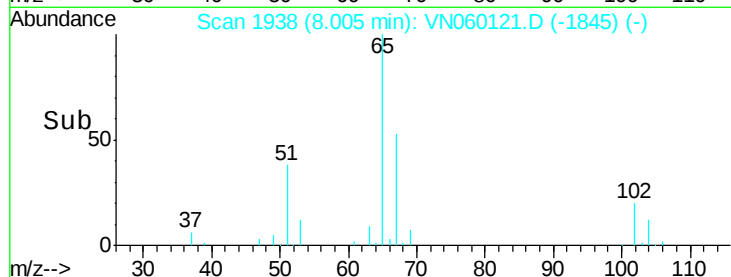
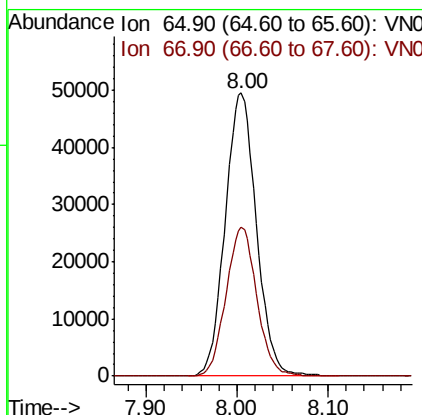
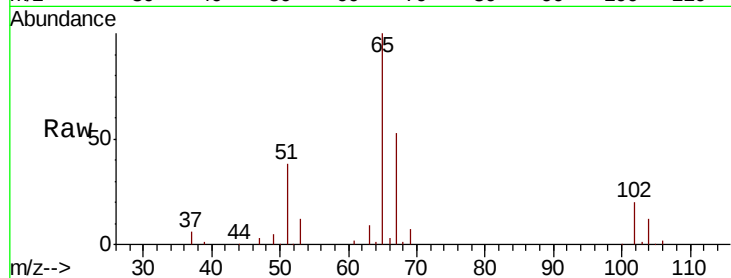




#33  
 1,2-Dichloroethane-d4  
 Concen: 51.187 ug/l  
 RT: 8.00 min Scan# 1938  
 Delta R.T. 0.00 min  
 Lab File: VN060121.D  
 Acq: 17 Feb 2020 15:52

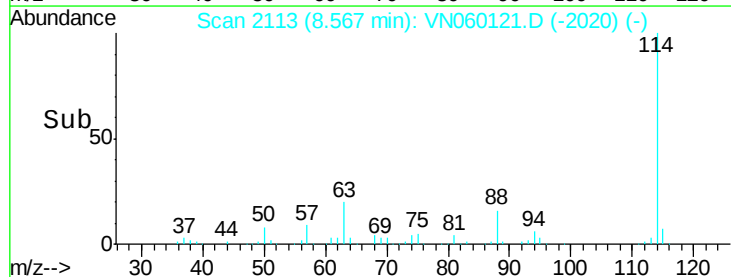
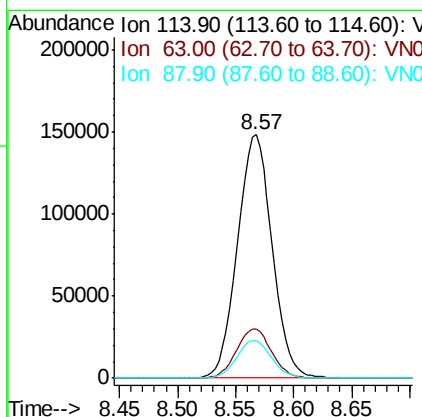
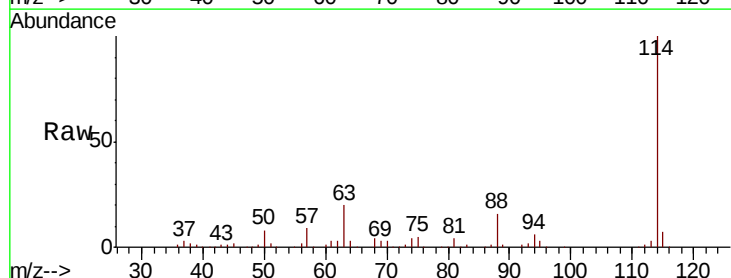
Instrument :  
 MSVOA\_N  
 ClientSampled :

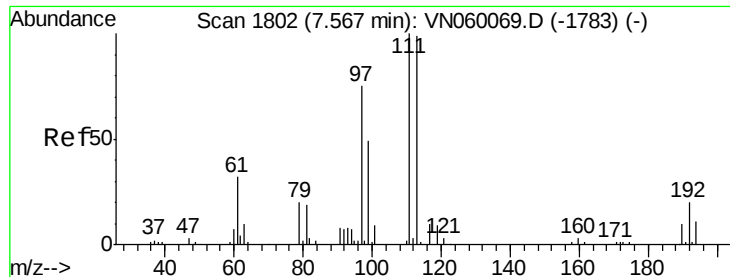
Tot Ion: 65 Resp: 118096  
 Ion Ratio Lower Upper  
 65 100  
 67 51.8 0.0 104.0



#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.57 min Scan# 2113  
 Delta R.T. 0.00 min  
 Lab File: VN060121.D  
 Acq: 17 Feb 2020 15:52

Tgt Ion: 114 Resp: 308380  
 Ion Ratio Lower Upper  
 114 100  
 63 20.4 0.0 40.0  
 88 15.6 0.0 31.6

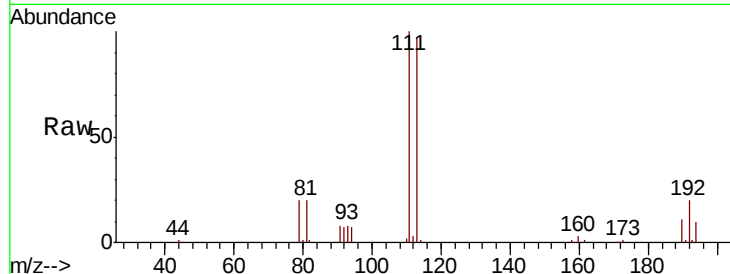




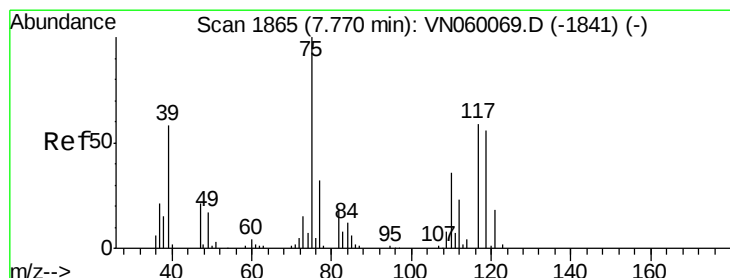
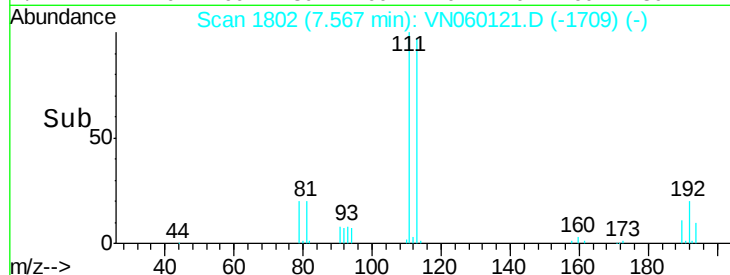
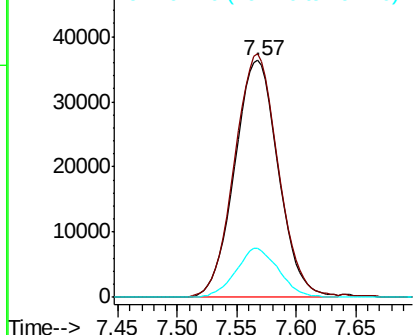
#35  
 Dibromofluoromethane  
 Concen: 48.759 ug/l  
 RT: 7.57 min Scan# 1802  
 Delta R.T. 0.00 min  
 Lab File: VN060121.D  
 Acq: 17 Feb 2020 15:52

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Tot Ion:113 Resp: 92429  
 Ion Ratio Lower Upper  
 113 100  
 111 103.2 81.4 122.2  
 192 20.3 16.2 24.2

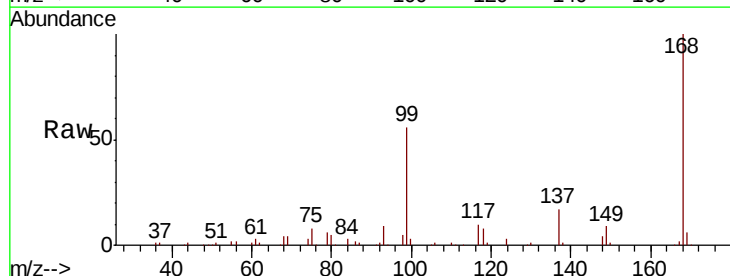


Abundance Ion 112.80 (112.50 to 113.50): V  
 Ion 110.80 (110.50 to 111.50): V  
 Ion 191.70 (191.40 to 192.40): V

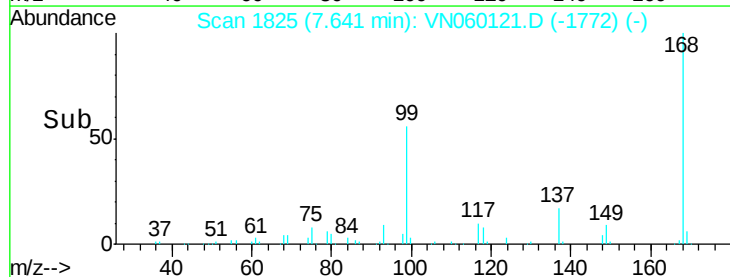
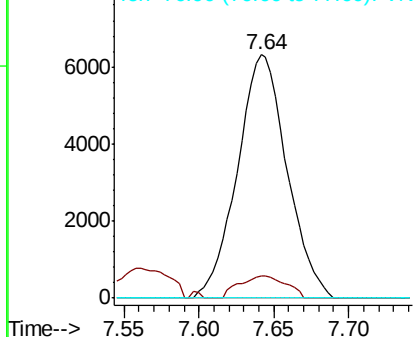


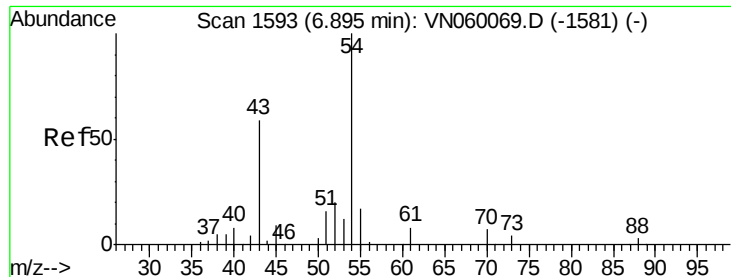
#36  
 1,1-Dichloropropene  
 Concen: 5.093 ug/l  
 RT: 7.64 min Scan# 1825  
 Delta R.T. -0.13 min  
 Lab File: VN060121.D  
 Acq: 17 Feb 2020 15:52

Tgt Ion: 75 Resp: 14546  
 Ion Ratio Lower Upper  
 75 100  
 110 8.5 18.1 54.3#  
 77 0.0 25.1 37.7#



Abundance Ion 74.90 (74.60 to 75.60): VNO  
 Ion 109.90 (109.60 to 110.60): V  
 Ion 76.90 (76.60 to 77.60): VNO

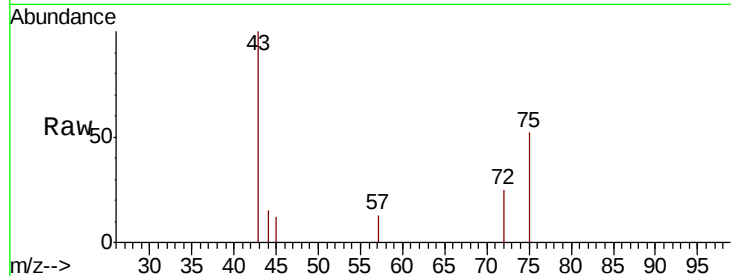




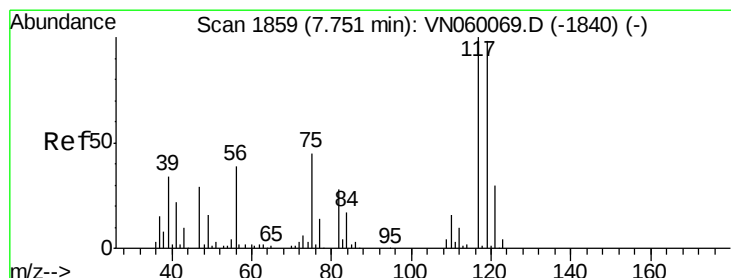
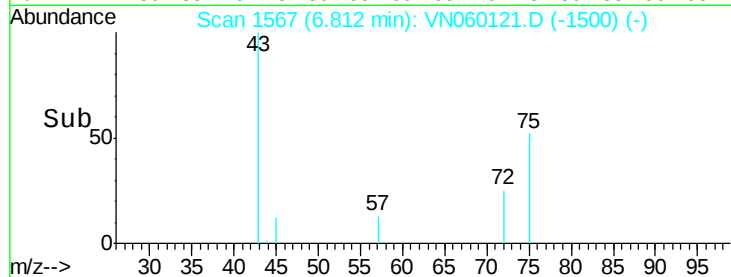
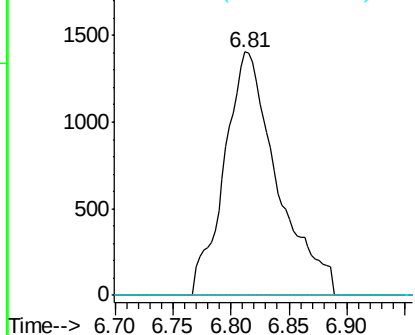
#37  
Ethyl Acetate  
Concen: 1.721 ug/l  
RT: 6.81 min Scan# 1567  
Delta R.T. -0.08 min  
Lab File: VN060121.D  
Acq: 17 Feb 2020 15:52

Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion: 43 Resp: 4442  
Ion Ratio Lower Upper  
43 100  
61 0.0 11.4 17.2#  
70 0.0 8.7 13.1#

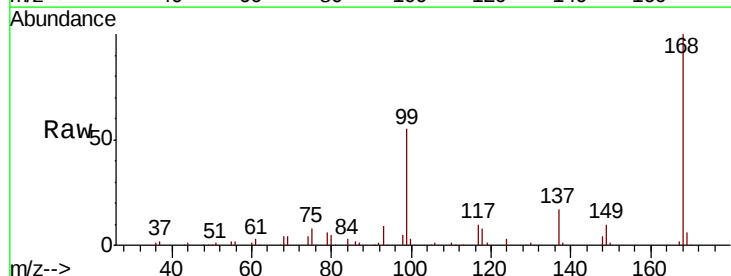


Abundance Ion 43.00 (42.70 to 43.70): VN0  
Ion 60.90 (60.60 to 61.60): VN0  
Ion 70.00 (69.70 to 70.70): VN0

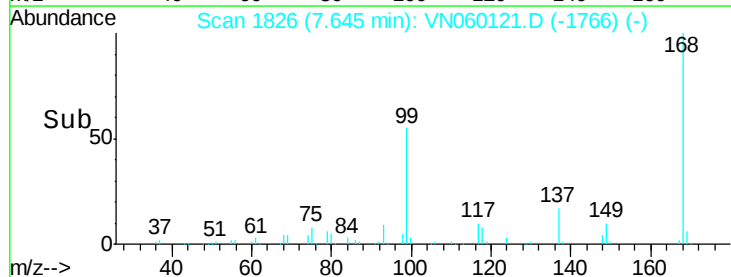
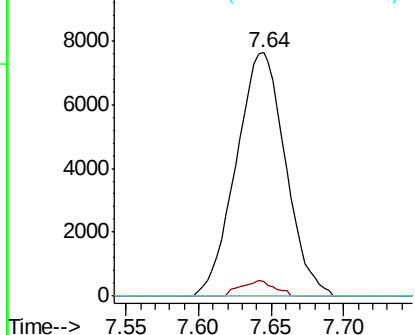


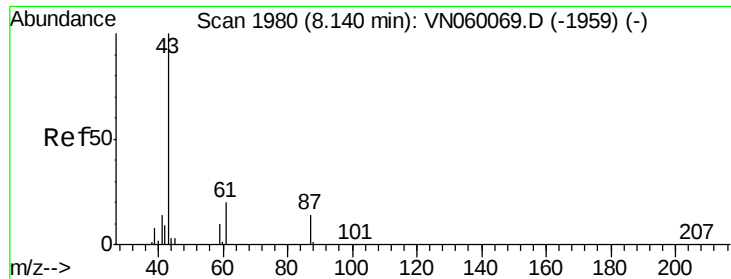
#38  
Carbon Tetrachloride  
Concen: 5.805 ug/l  
RT: 7.64 min Scan# 1826  
Delta R.T. -0.11 min  
Lab File: VN060121.D  
Acq: 17 Feb 2020 15:52

Tgt Ion: 117 Resp: 18007  
Ion Ratio Lower Upper  
117 100  
119 5.7 78.2 117.4#  
121 0.0 24.2 36.2#



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: 12.221 ug/l

RT: 8.14 min Scan# 1980

Delta R.T. 0.00 min

Lab File: VN060121.D

Acq: 17 Feb 2020 15:52

Instrument :

MSVOA\_N

ClientSampleId :

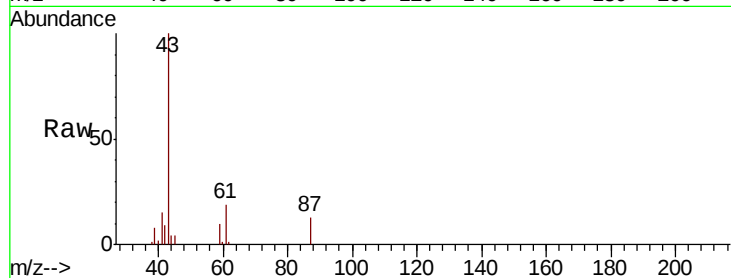
Tot Ion: 43 Resp: 53928

Ion Ratio Lower Upper

43 100

61 19.2 21.8 32.6#

87 13.1 11.4 17.2

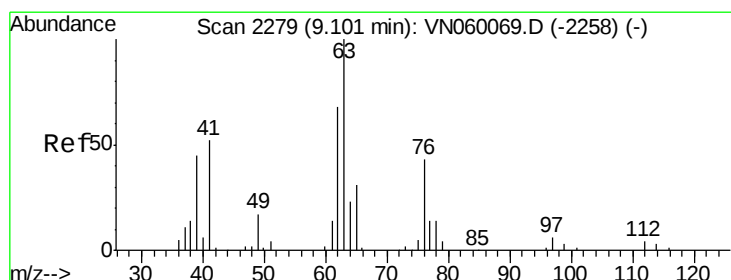
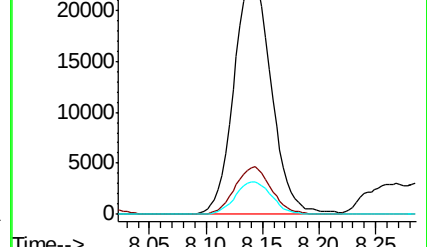
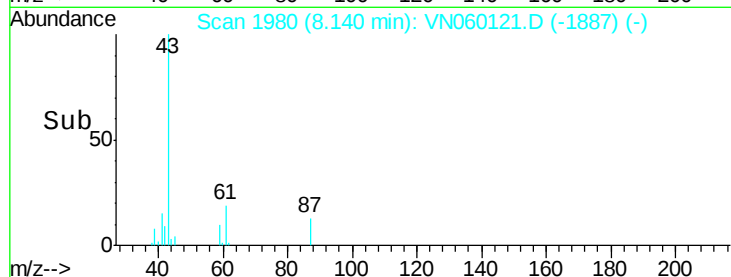


Abundance Ion 43.00 (42.70 to 43.70): VN060121.D (-1887) (-)

Ion 61.00 (60.70 to 61.70): VN060121.D (-1887) (-)

Ion 87.00 (86.70 to 87.70): VN060121.D (-1887) (-)

Time-->



#45

1,2-Dichloropropane

Concen: 0.556 ug/l

RT: 9.25 min Scan# 2326

Delta R.T. 0.15 min

Lab File: VN060121.D

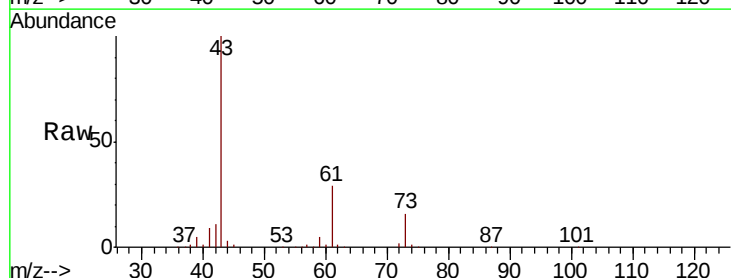
Acq: 17 Feb 2020 15:52

Tgt Ion: 63 Resp: 1166

Ion Ratio Lower Upper

63 100

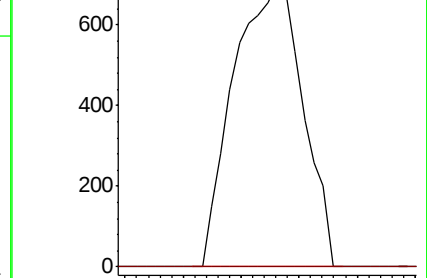
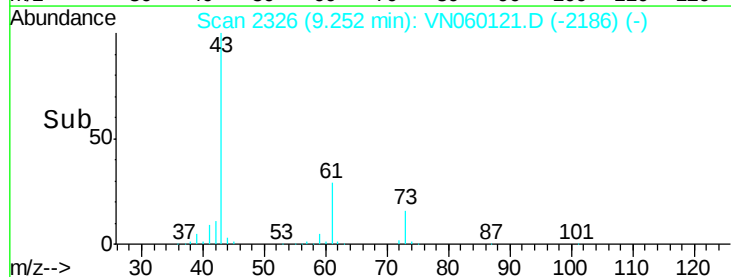
65 0.0 25.0 37.4#

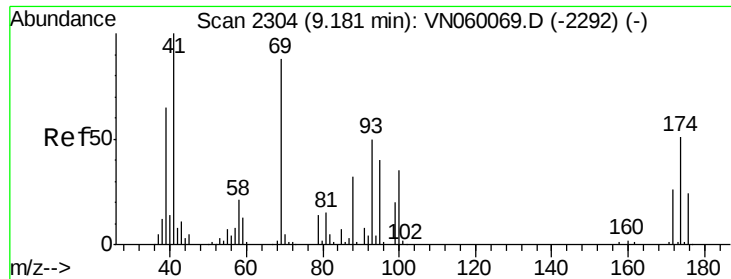


Abundance Ion 62.90 (62.60 to 63.60): VN060121.D (-2186) (-)

Ion 64.90 (64.60 to 65.60): VN060121.D (-2186) (-)

Time-->

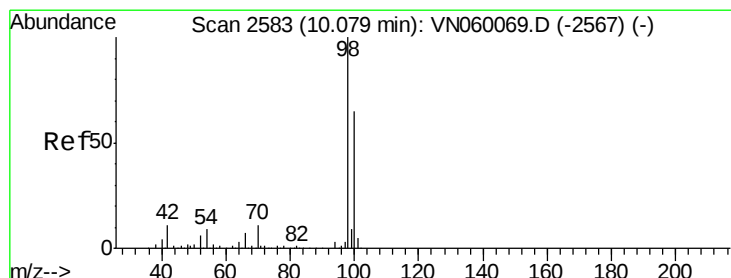
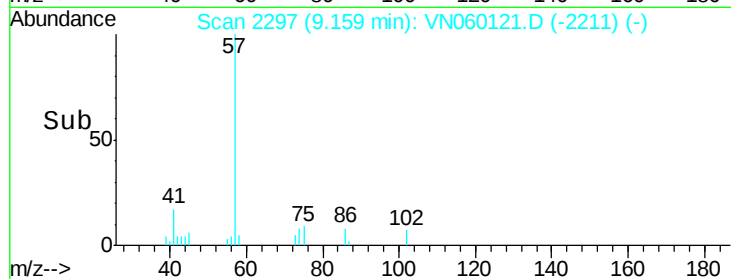
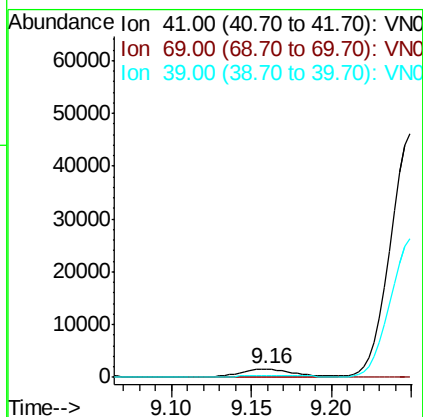
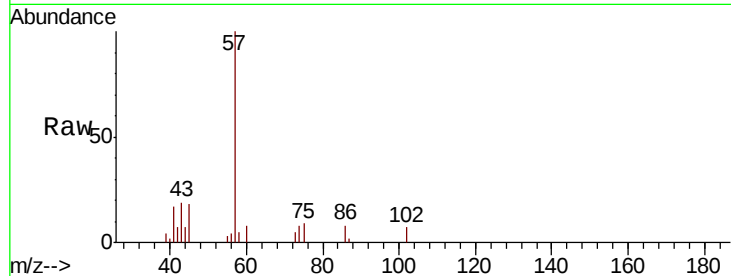




#48  
Methvl methacrylate  
Concen: 1.983 ug/l  
RT: 9.16 min Scan# 2297  
Delta R.T. -0.02 min  
Lab File: VN060121.D  
Acq: 17 Feb 2020 15:52

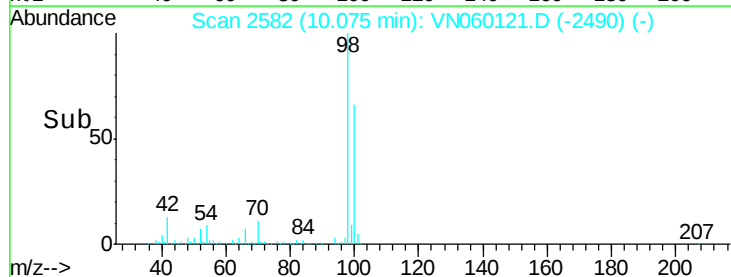
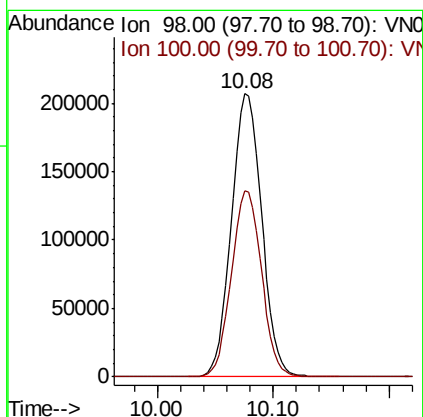
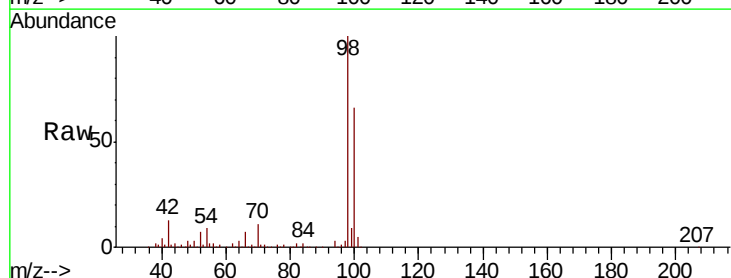
Instrument :  
MSVOA\_N  
ClientSampleId :

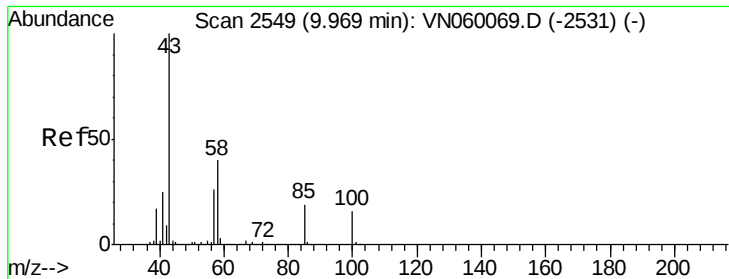
Tot Ion: 41 Resp: 3927  
Ion Ratio Lower Upper  
41 100  
69 0.0 72.0 108.0#  
39 0.0 54.1 81.1#



#50  
Toluene-d8  
Concen: 50.204 ug/l  
RT: 10.08 min Scan# 2582  
Delta R.T. -0.00 min  
Lab File: VN060121.D  
Acq: 17 Feb 2020 15:52

Tgt Ion: 98 Resp: 374762  
Ion Ratio Lower Upper  
98 100  
100 65.2 51.7 77.5





#51

4-Methyl-2-Pentanone

Concen: 1.516 ug/l

RT: 9.97 min Scan# 2549

Delta R.T. 0.00 min

Lab File: VN060121.D

Acq: 17 Feb 2020 15:52

Instrument :

MSVOA\_N

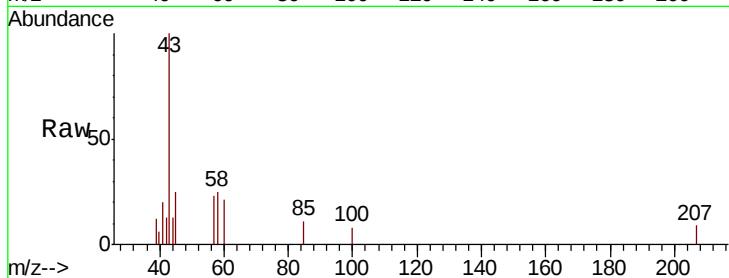
ClientSampled :

Tot Ion: 43 Resp: 3872

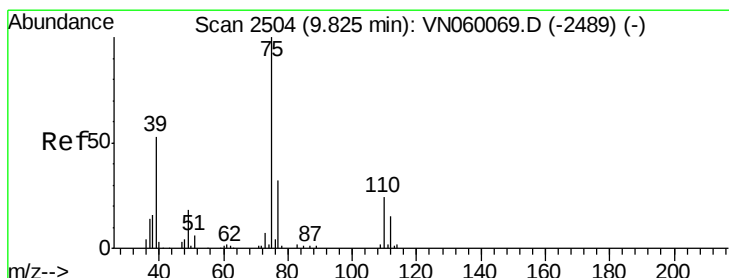
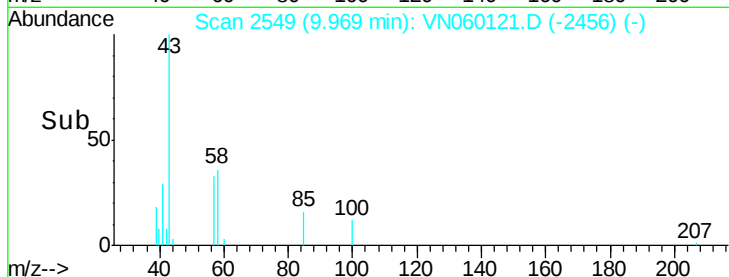
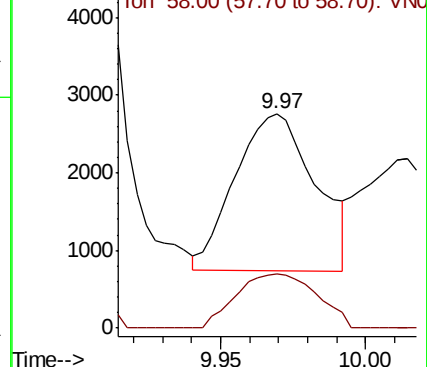
Ion Ratio Lower Upper

43 100

58 34.9 31.8 47.8



Abundance Ion 43.00 (42.70 to 43.70): VN060121.D (-2456) (-)



#54

cis-1,3-Dichloropropene

Concen: 6.834 ug/l

RT: 9.89 min Scan# 2524

Delta R.T. 0.06 min

Lab File: VN060121.D

Acq: 17 Feb 2020 15:52

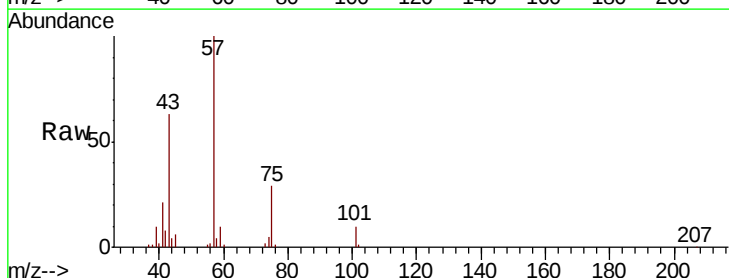
Tgt Ion: 75 Resp: 24480

Ion Ratio Lower Upper

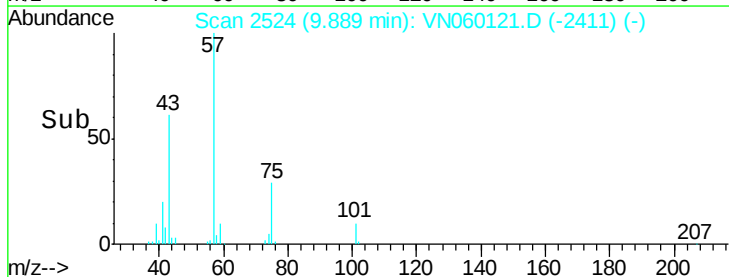
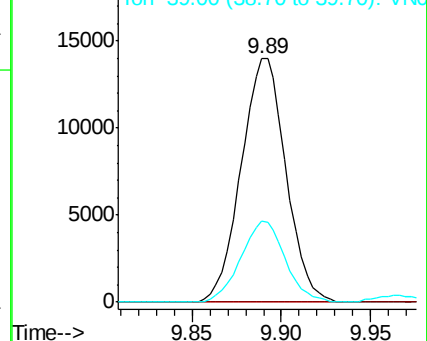
75 100

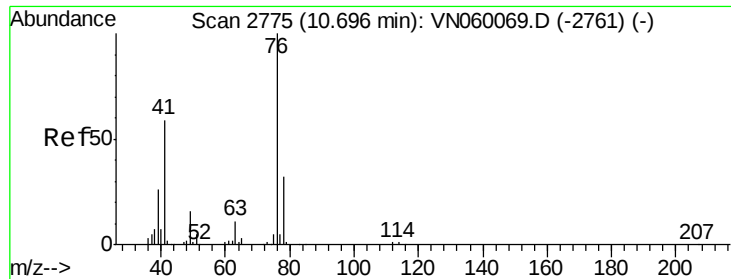
77 0.0 25.6 38.4#

39 33.1 42.2 63.4#



Abundance Ion 74.90 (74.60 to 75.60): VN060121.D (-2411) (-)

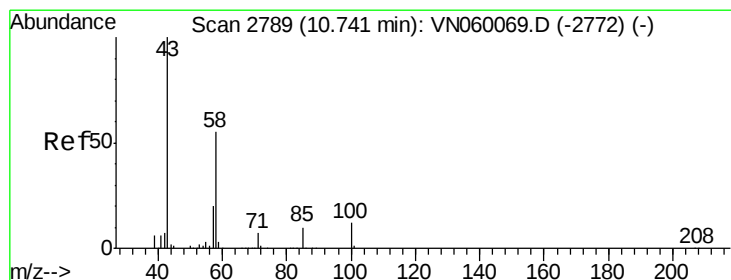
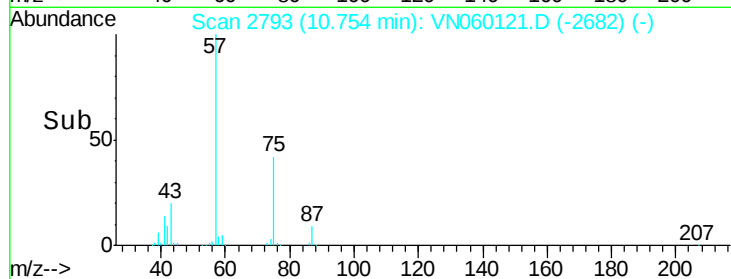
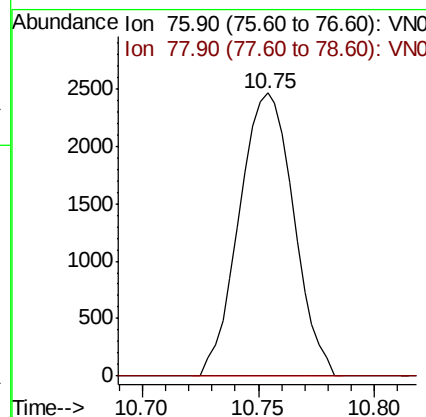
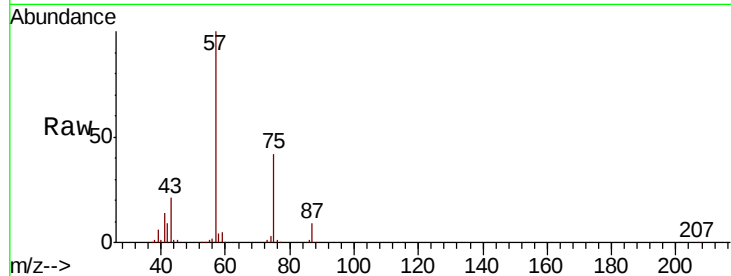




#57  
 1,3-Dichloropropane  
 Concen: 1.148 ug/l  
 RT: 10.75 min Scan# 2793  
 Delta R.T. 0.06 min  
 Lab File: VN060121.D  
 Acq: 17 Feb 2020 15:52

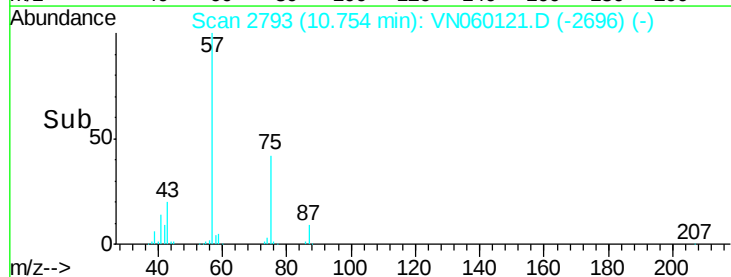
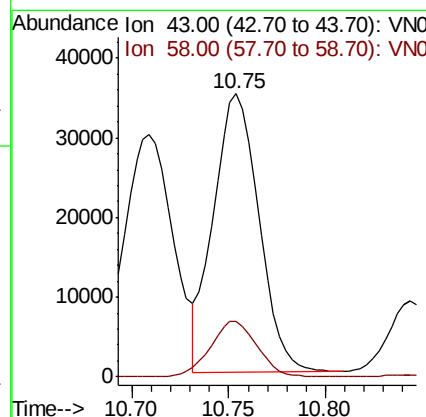
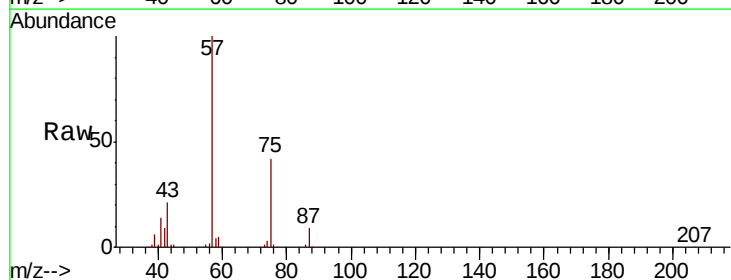
Instrument :  
 MSVOA\_N  
 ClientSampled :

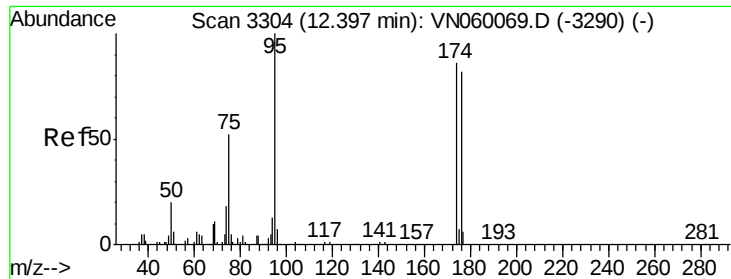
Tot Ion: 76 Resp: 4017  
 Ion Ratio Lower Upper  
 76 100  
 78 0.0 25.7 38.5#



#59  
 2-Hexanone  
 Concen: 28.991 ug/l  
 RT: 10.75 min Scan# 2793  
 Delta R.T. 0.01 min  
 Lab File: VN060121.D  
 Acq: 17 Feb 2020 15:52

Tgt Ion: 43 Resp: 57202  
 Ion Ratio Lower Upper  
 43 100  
 58 20.4 27.5 82.4#

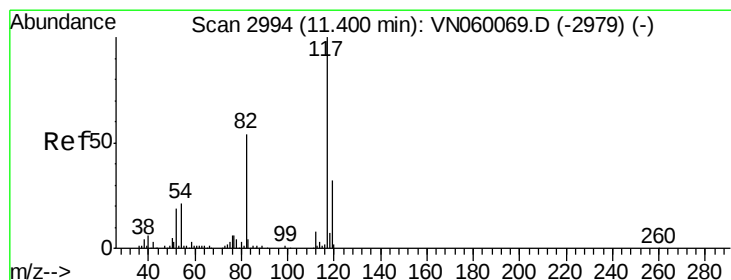
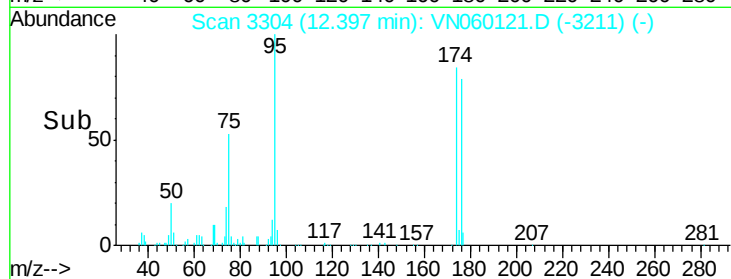
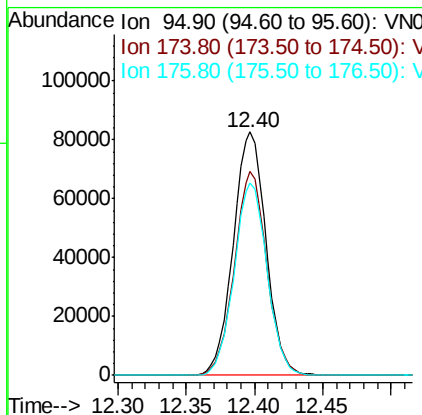
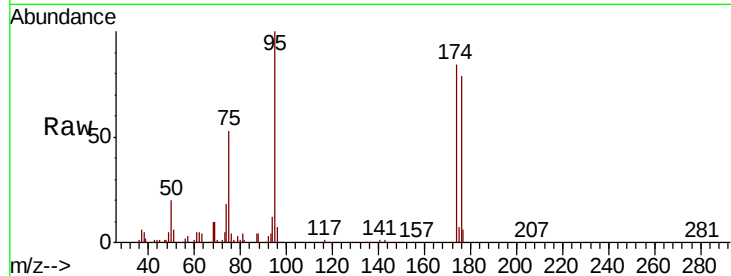




#62  
4-Bromofluorobenzene  
Concen: 50.197 ug/l  
RT: 12.40 min Scan# 3304  
Delta R.T. 0.00 min  
Lab File: VN060121.D  
Acq: 17 Feb 2020 15:52

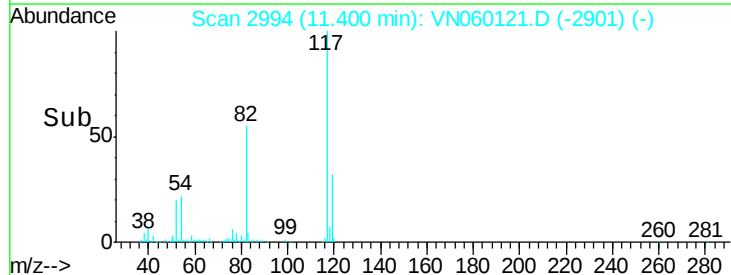
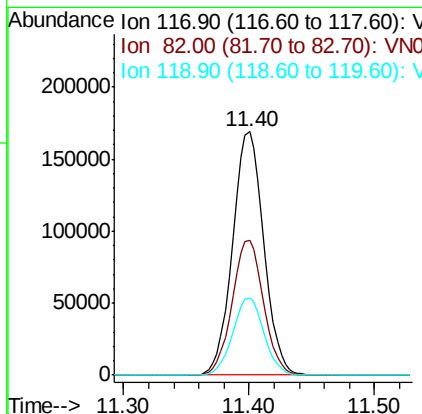
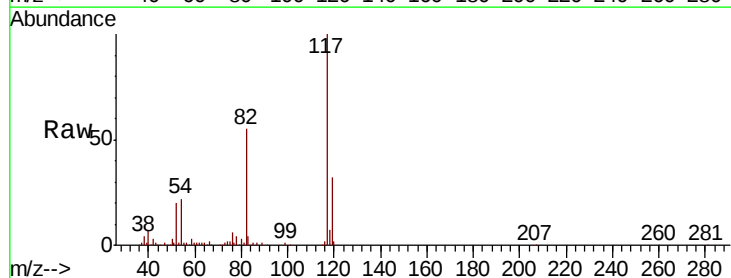
Instrument :  
MSVOA\_N  
ClientSampled :

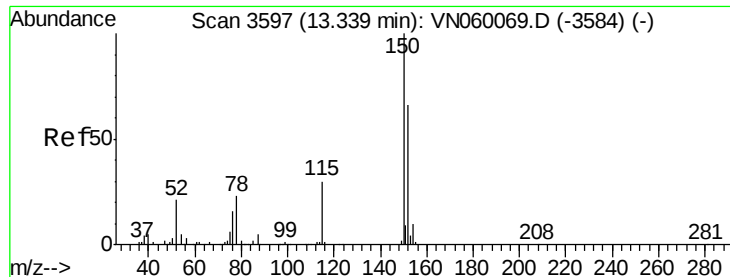
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 95      | 100   |       |       |
| 174     | 82.7  | 0.0   | 169.8 |
| 176     | 79.5  | 0.0   | 164.8 |



#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.40 min Scan# 2994  
Delta R.T. 0.00 min  
Lab File: VN060121.D  
Acq: 17 Feb 2020 15:52

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 55.4  | 43.4  | 65.0  |
| 119     | 31.9  | 25.8  | 38.6  |





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 13.34 min Scan# 3597

Delta R.T. 0.00 min

Lab File: VN060121.D

Acq: 17 Feb 2020 15:52

Instrument :

MSVOA\_N

ClientSampleId :

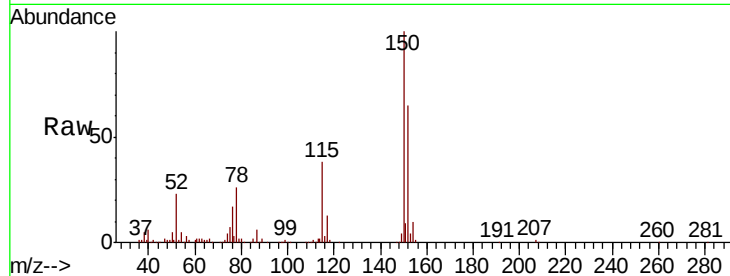
Tot Ion:152 Resp: 129823

Ion Ratio Lower Upper

152 100

115 58.0 28.9 86.8

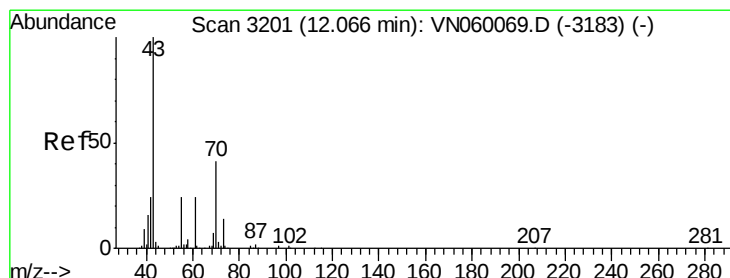
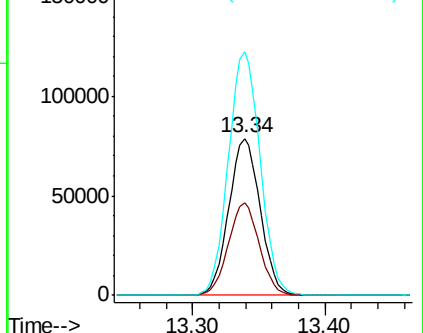
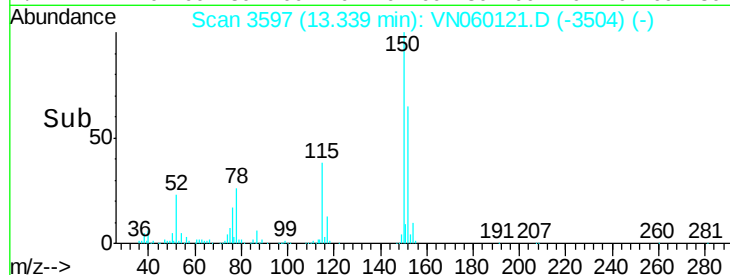
150 157.5 0.0 342.4



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



#74

N-ethyl acetate

Concen: 0.839 ug/l

RT: 12.03 min Scan# 3189

Delta R.T. -0.04 min

Lab File: VN060121.D

Acq: 17 Feb 2020 15:52

Tgt Ion: 43 Resp: 2932

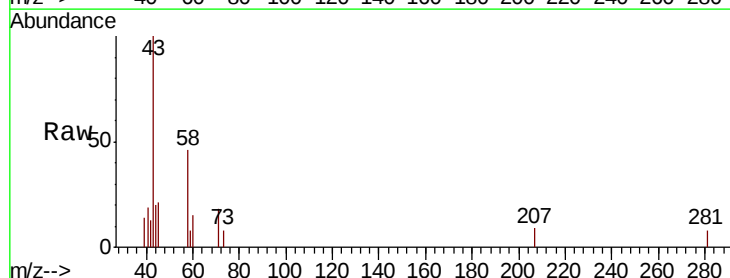
Ion Ratio Lower Upper

43 100

70 0.0 33.4 50.0#

55 0.0 18.8 28.2#

61 0.0 19.2 28.8#

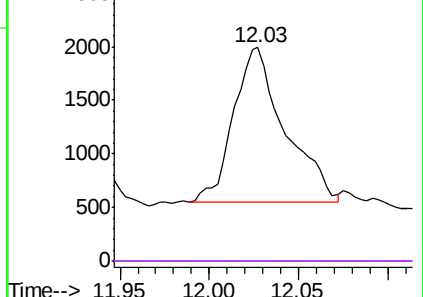
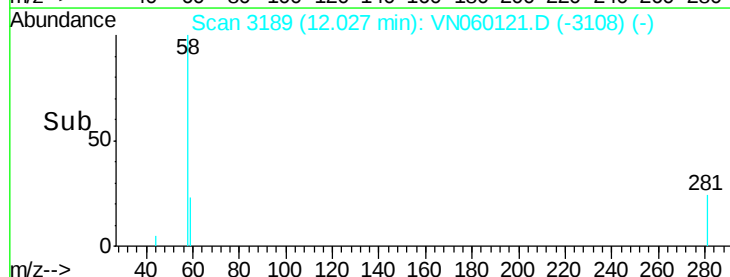


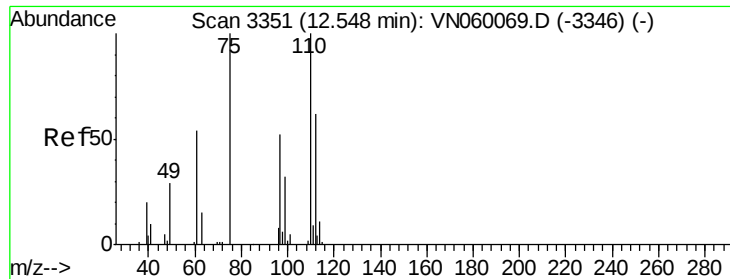
Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 70.00 (69.70 to 70.70): VN0

Ion 55.00 (54.70 to 55.70): VN0

Ion 61.00 (60.70 to 61.70): VN0





#76

1,2,3-Trichloropropane

Concen: 29.051 ug/l

RT: 12.40 min Scan# 3304

Delta R.T. -0.15 min

Lab File: VN060121.D

Acq: 17 Feb 2020 15:52

Instrument :

MSVOA\_N

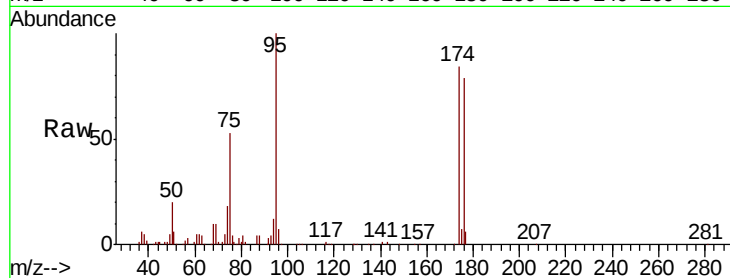
ClientSampleId :

Tot Ion: 75 Resp: 72156

Ion Ratio Lower Upper

75 100

77 1.1 0.0 0.0#



Abundance Ion 74.90 (74.60 to 75.60): VN060121.D (-3304) (-)

Ion 77.00 (76.70 to 77.70): VN060121.D (-3304) (-)

12.40

50000

40000

30000

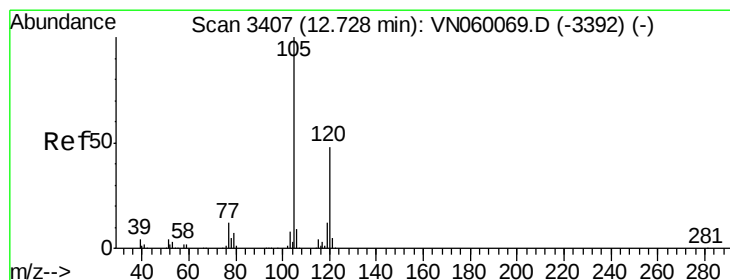
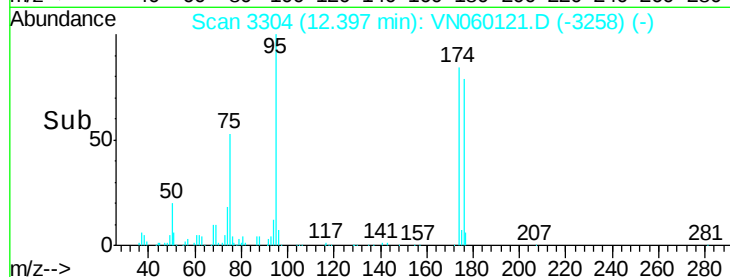
20000

10000

0

12.35 12.40 12.45

Time-->



#80

1,3,5-Trimethylbenzene

Concen: 0.234 ug/l

RT: 12.73 min Scan# 3408

Delta R.T. 0.00 min

Lab File: VN060121.D

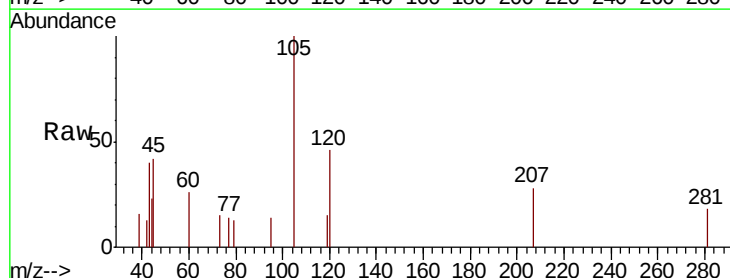
Acq: 17 Feb 2020 15:52

Tgt Ion: 105 Resp: 1889

Ion Ratio Lower Upper

105 100

120 43.7 24.3 72.9



Abundance Ion 105.00 (104.70 to 105.70): VN060121.D (-3407) (-)

Ion 120.00 (119.70 to 120.70): VN060121.D (-3407) (-)

12.73

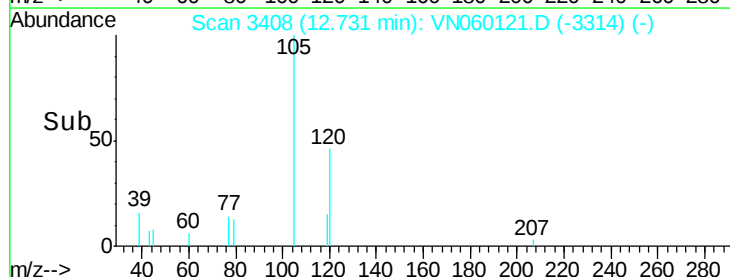
1000

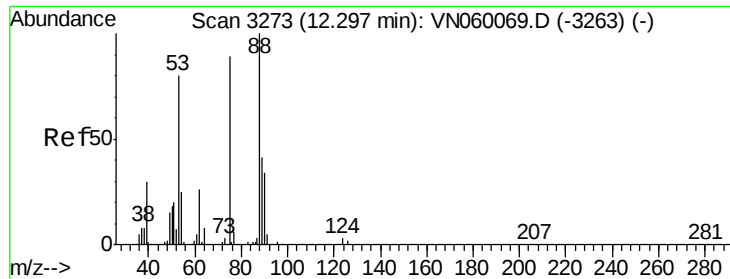
500

0

12.70 12.75

Time-->

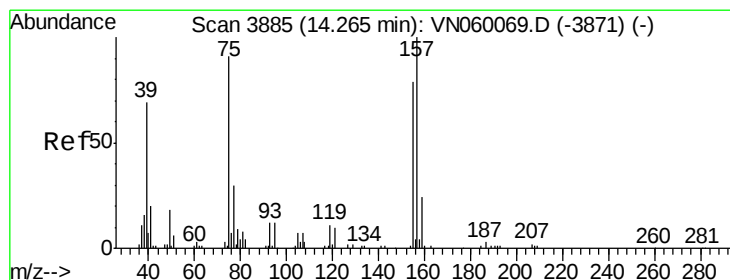
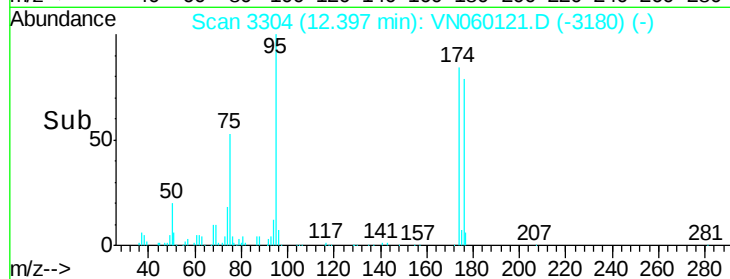
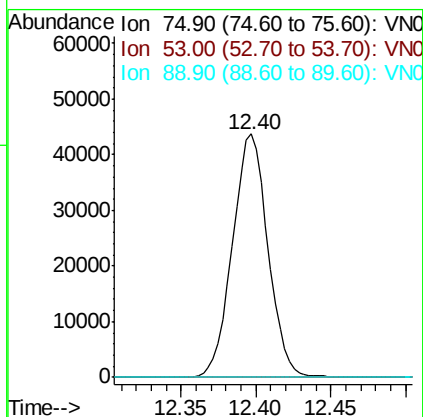
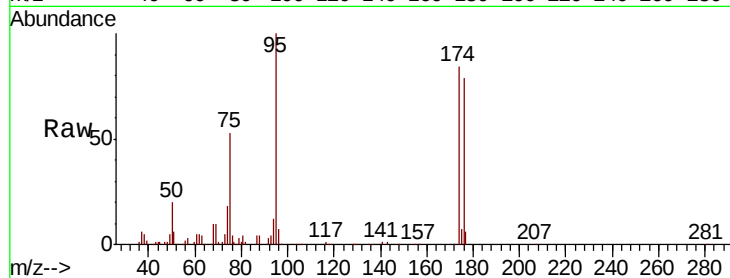




#81  
trans-1,4-Dichloro-2-butene  
Concen: 71.131 ug/l  
RT: 12.40 min Scan# 3304  
Delta R.T. 0.10 min  
Lab File: VN060121.D  
Acq: 17 Feb 2020 15:52

Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion: 75 Resp: 72156  
Ion Ratio Lower Upper  
75 100  
53 0.0 73.9 110.9#  
89 0.0 37.0 55.4#



#92  
1,2-Dibromo-3-Chloropropane  
Concen: Below Cal  
RT: 14.27 min Scan# 3886  
Delta R.T. 0.00 min  
Lab File: VN060121.D  
Acq: 17 Feb 2020 15:52

Tgt Ion: 75 Resp: 30  
Ion Ratio Lower Upper  
75 100  
155 0.0 43.0 129.0#  
157 0.0 54.9 164.5#

