

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN103118\  
 Data File : VN052074.D  
 Acq On : 31 Oct 2018 15:25  
 Operator : MD\SY  
 Sample : PB114328ZHE#04  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 10 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Quant Time: Nov 01 01:42:21 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N103018W.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Oct 31 02:45:22 2018  
 Response via : Initial Calibration

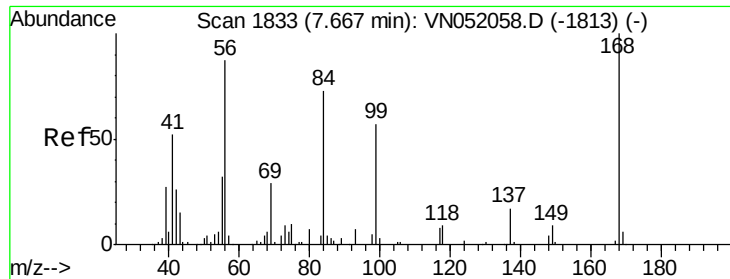
| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.67  | 168  | 284892   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.59  | 114  | 535497   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 512680   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.34 | 152  | 215266   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units   | Dev(Min) |
|-----------------------------|-------|------|----------|-------|---------|----------|
| 33) 1,2-Dichloroethane-d4   | 8.03  | 65   | 246220   | 53.86 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 107.72% |          |
| 35) Dibromofluoromethane    | 7.59  | 113  | 202145   | 60.34 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 120.68% |          |
| 50) Toluene-d8              | 10.09 | 98   | 807355   | 60.30 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 120.60% |          |
| 62) 4-Bromofluorobenzene    | 12.40 | 95   | 280605   | 57.09 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 114.18% |          |

| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 8) Diethyl Ether               | 3.40  | 74   | 417      | 0.208     | ug/l   | 74     |
| 13) Acrolein                   | 3.62  | 56   | 75       | 24.332    | ug/l # | 59     |
| 16) Acetone                    | 3.82  | 43   | 5497     | 5.633     | ug/l   | 90     |
| 18) Methyl Acetate             | 4.33  | 43   | 1867     | 0.601     | ug/l # | 61     |
| 20) Methylene Chloride         | 4.56  | 84   | 11225    | 3.019     | ug/l # | 91     |
| 25) 2-Butanone                 | 6.83  | 43   | 332      | 0.217     | ug/l # | 50     |
| 29) Tetrahydrofuran            | 7.21  | 42   | 548      | 0.537     | ug/l # | 61     |
| 31) Cyclohexane                | 7.67  | 56   | 7764     | Below Cal | #      | 12     |
| 36) 1,1-Dichloropropene        | 7.66  | 75   | 26431    | 4.854     | ug/l # | 47     |
| 38) Carbon Tetrachloride       | 7.67  | 117  | 29557    | 6.296     | ug/l # | 17     |
| 43) Isopropyl Acetate          | 8.17  | 43   | 166063   | 25.619    | ug/l   | 99     |
| 48) Methyl methacrylate        | 9.18  | 41   | 4229     | 1.287     | ug/l # | 17     |
| 49) 1,4-Dioxane                | 9.37  | 88   | 31       | 26.158    | ug/l # | 18     |
| 51) 4-Methyl-2-Pentanone       | 9.99  | 43   | 1119     | 0.318     | ug/l # | 83     |
| 56) Ethyl methacrylate         | 10.23 | 69   | 1688     | 0.348     | ug/l # | 38     |
| 59) 2-Hexanone                 | 10.77 | 43   | 12304    | 4.901     | ug/l # | 54     |
| 71) Bromoform                  | 12.39 | 173  | 1639     | 2.897     | ug/l # | 1      |
| 76) 1,2,3-Trichloropropane     | 12.40 | 75   | 146918   | 37.284    | ug/l # | 100    |
| 81) trans-1,4-Dichloro-2-buten | 12.40 | 75   | 146918   | 123.751   | ug/l # | 9      |
| 92) 1,2-Dibromo-3-Chloropropan | 14.17 | 75   | 32       | 0.968     | ug/l # | 11     |

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





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.67 min Scan# 1833

Delta R.T. 0.00 min

Lab File: VN052074.D

Acq: 31 Oct 2018 15:25

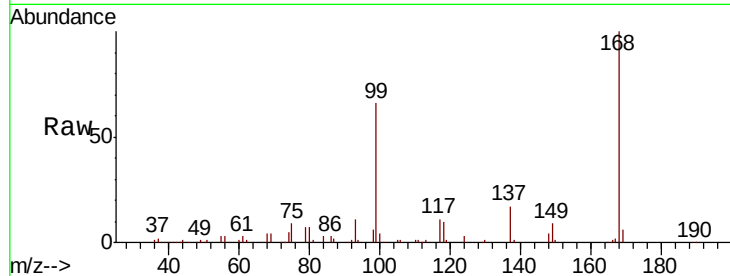
Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion:168 Resp: 284892

Ion Ratio Lower Upper

168 100

99 66.1 56.6 85.0



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VNO

7.67

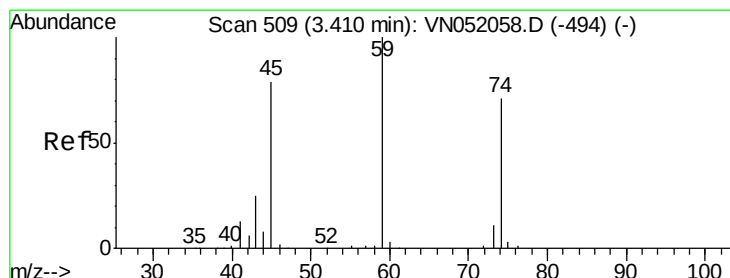
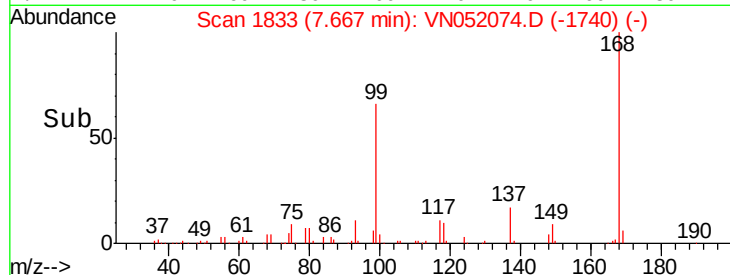
100000

50000

0

7.60 7.70 7.80

Time-->



#8

Diethyl Ether

Concen: 0.208 ug/l

RT: 3.40 min Scan# 507

Delta R.T. -0.01 min

Lab File: VN052074.D

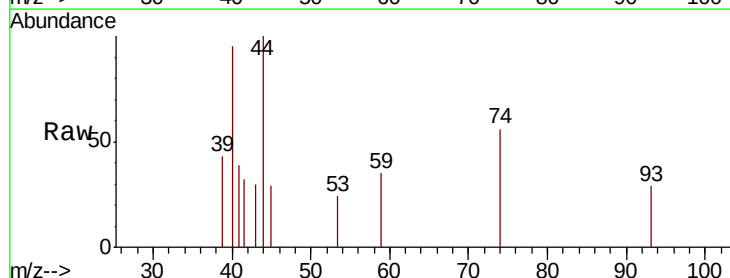
Acq: 31 Oct 2018 15:25

Tgt Ion: 74 Resp: 417

Ion Ratio Lower Upper

74 100

45 138.6 55.6 166.8



Abundance Ion 74.00 (73.70 to 74.70): VNO

Ion 45.00 (44.70 to 45.70): VNO

3.40

600

500

400

300

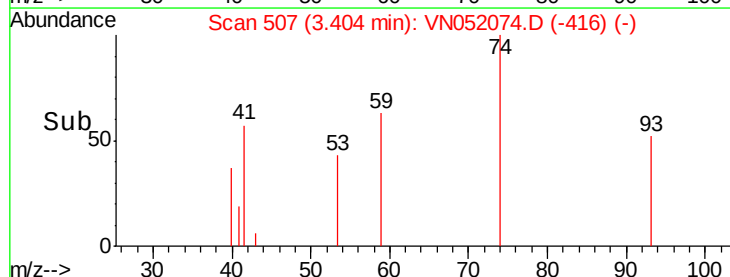
200

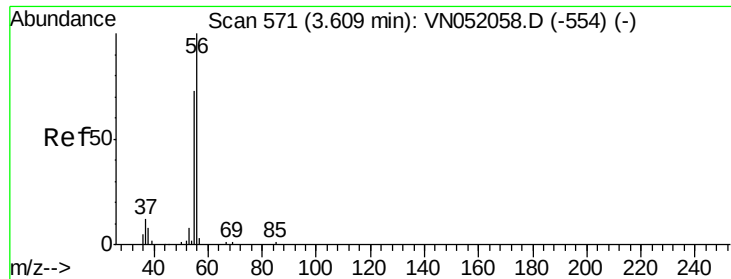
100

0

3.38 3.40 3.42

Time-->





#13

Acrolein

Concen: 24.332 ug/l

RT: 3.62 min Scan# 575

Delta R.T. 0.01 min

Lab File: VN052074.D

Acq: 31 Oct 2018 15:25

Instrument :

MSVOA\_N

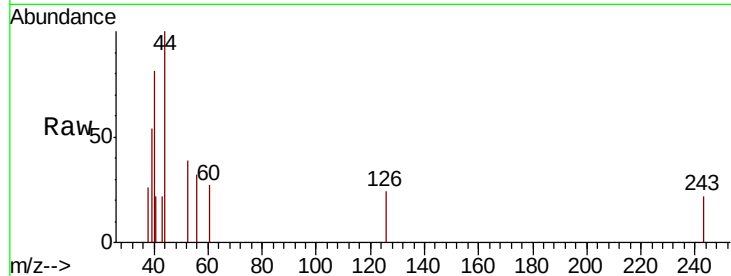
ClientSampled :

Tot Ion: 56 Resp: 75

Ion Ratio Lower Upper

56 100

55 40.0 59.9 89.9#



Abundance Ion 56.00 (55.70 to 56.70): VN0

Ion 55.00 (54.70 to 55.70): VN0

3.62

250

200

150

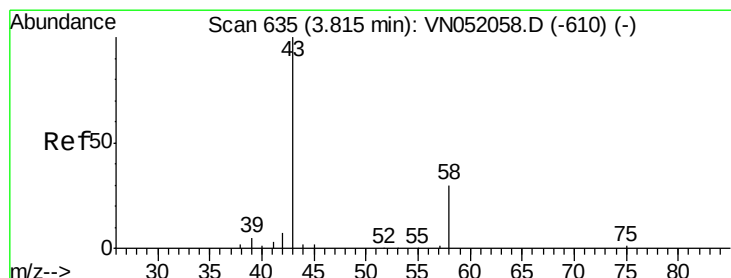
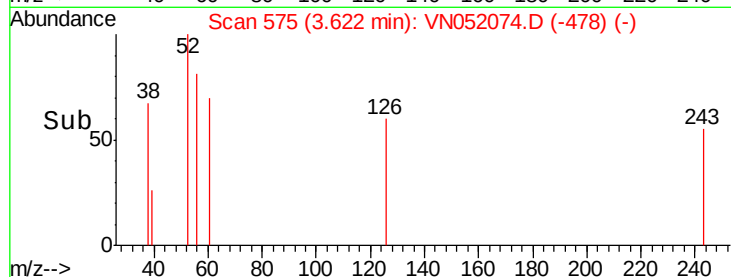
100

50

0

3.61 3.62 3.63

Time-->



#16

Acetone

Concen: 5.633 ug/l

RT: 3.82 min Scan# 636

Delta R.T. 0.00 min

Lab File: VN052074.D

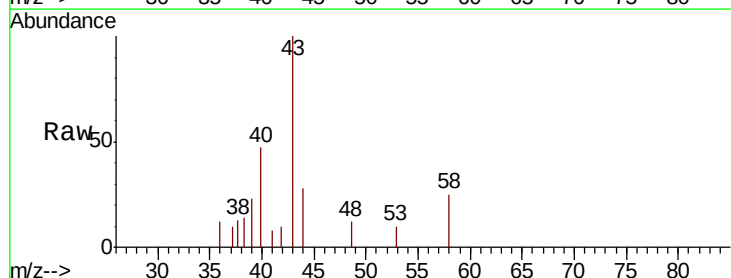
Acq: 31 Oct 2018 15:25

Tgt Ion: 43 Resp: 5497

Ion Ratio Lower Upper

43 100

58 25.0 24.2 36.2



Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 58.00 (57.70 to 58.70): VN0

3.82

2000

1500

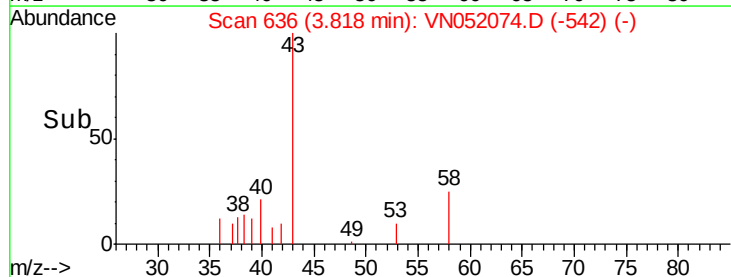
1000

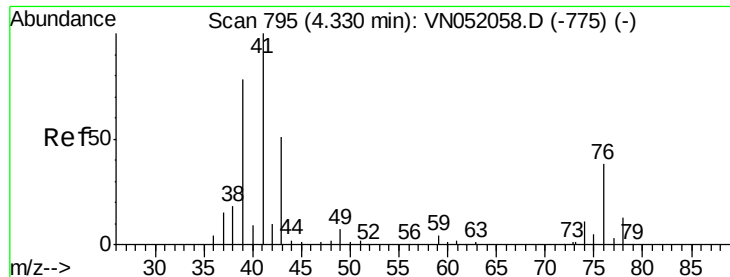
500

0

3.75 3.80 3.85 3.90

Time-->

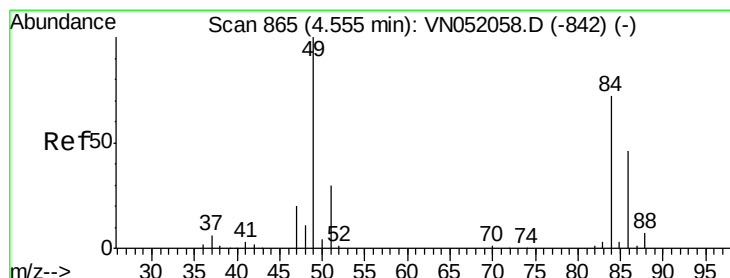
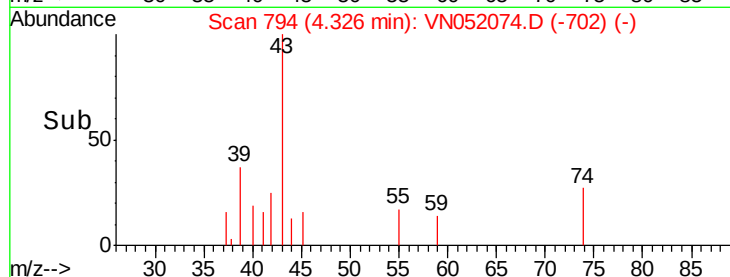
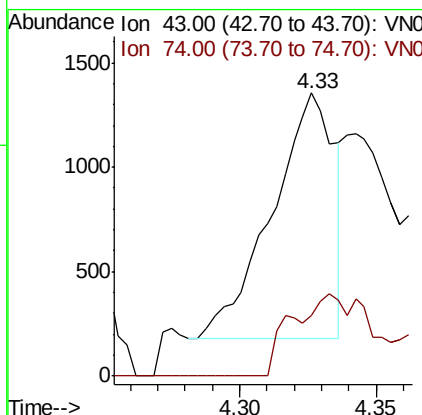
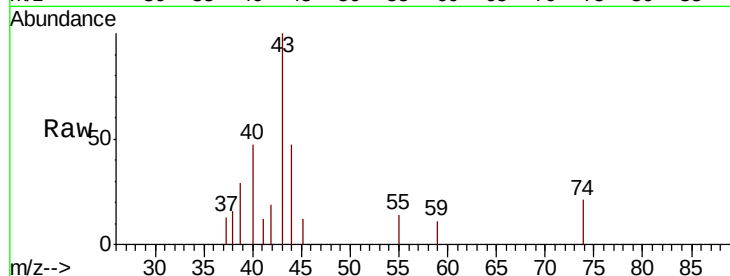




#18  
Methvl Acetate  
Concen: 0.601 ug/l  
RT: 4.33 min Scan# 794  
Delta R.T. -0.00 min  
Lab File: VN052074.D  
Acq: 31 Oct 2018 15:25

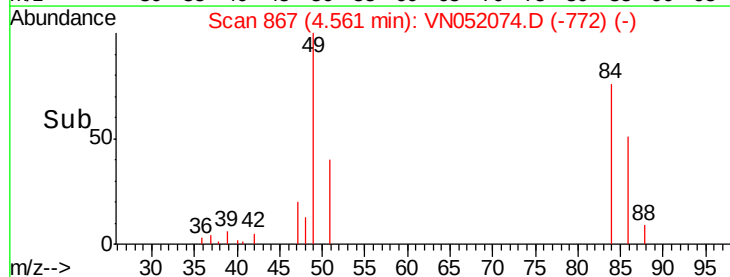
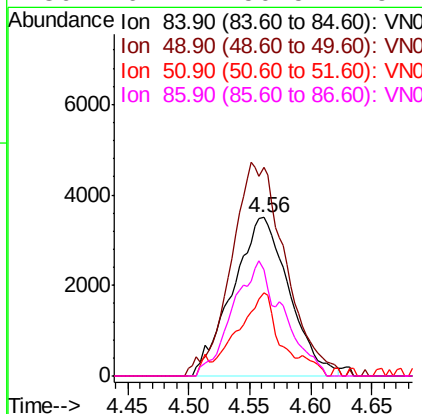
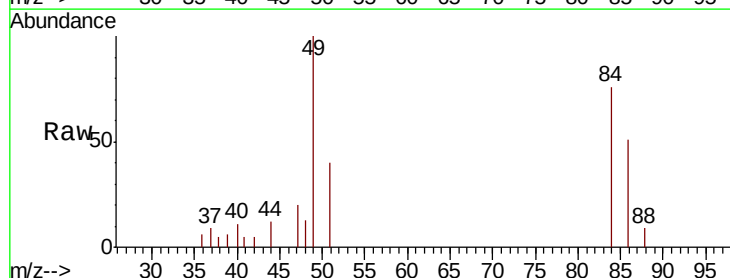
Instrument :  
MSVOA\_N  
ClientSampled :

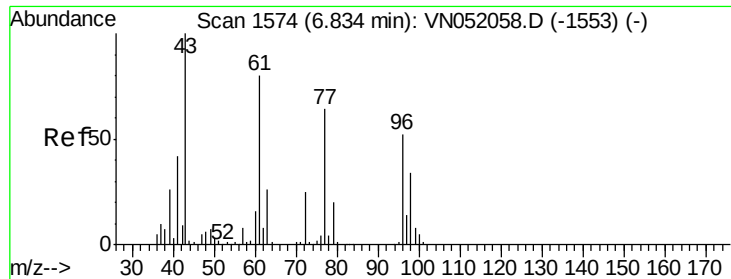
Tot Ion: 43 Resp: 1867  
Ion Ratio Lower Upper  
43 100  
74 41.0 17.9 26.9#



#20  
Methylene Chloride  
Concen: 3.019 ug/l  
RT: 4.56 min Scan# 867  
Delta R.T. 0.01 min  
Lab File: VN052074.D  
Acq: 31 Oct 2018 15:25

Tgt Ion: 84 Resp: 11225  
Ion Ratio Lower Upper  
84 100  
49 126.8 110.6 165.8  
51 52.3 33.7 50.5#  
86 67.1 50.5 75.7





#25

2-Butanone

Concen: 0.217 ug/l

RT: 6.83 min Scan# 1572

Delta R.T. -0.01 min

Lab File: VN052074.D

Acq: 31 Oct 2018 15:25

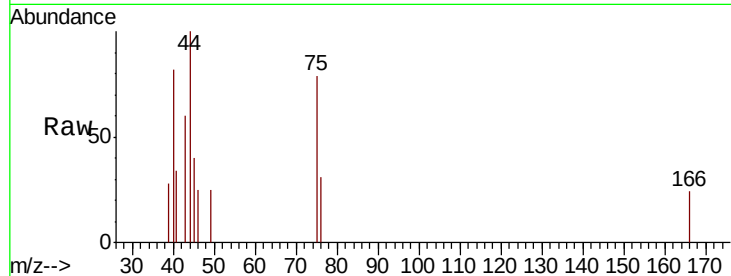
Instrument :  
MSVOA\_N  
ClientSampleId :

Tot Ion: 43 Resp: 332

Ion Ratio Lower Upper

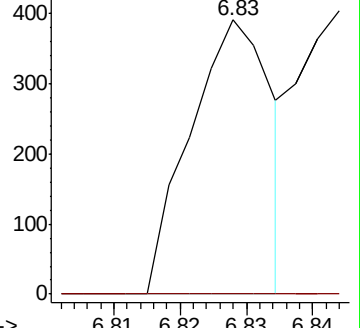
43 100

72 0.0 20.2 30.2#

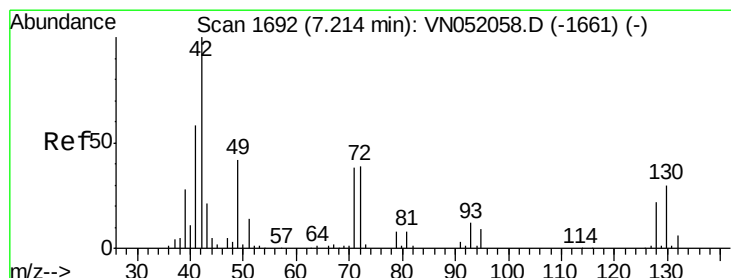
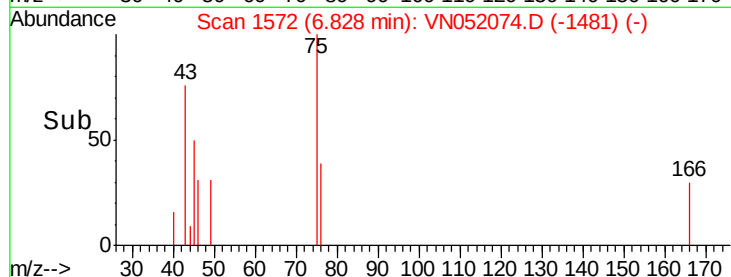


Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 72.00 (71.70 to 72.70): VN0



Time-->



#29

Tetrahydrofuran

Concen: 0.537 ug/l

RT: 7.21 min Scan# 1691

Delta R.T. -0.00 min

Lab File: VN052074.D

Acq: 31 Oct 2018 15:25

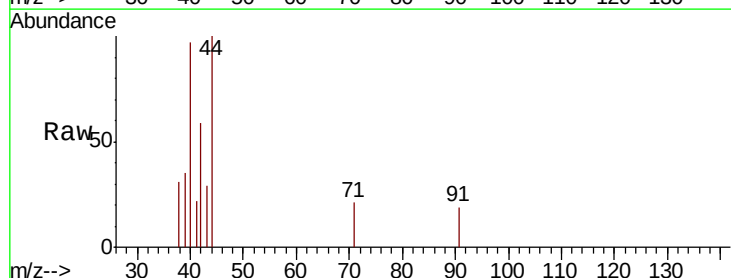
Tgt Ion: 42 Resp: 548

Ion Ratio Lower Upper

42 100

72 0.0 32.5 48.7#

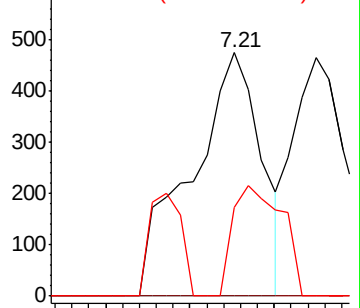
71 32.1 30.6 46.0



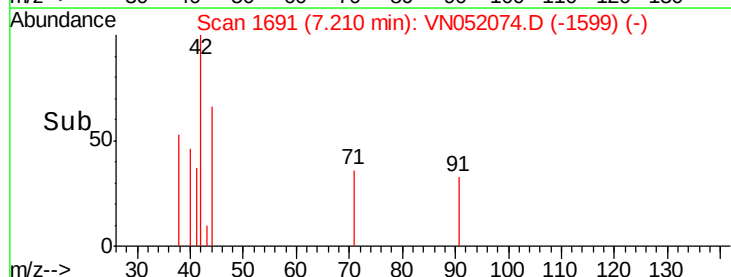
Abundance Ion 42.00 (41.70 to 42.70): VN0

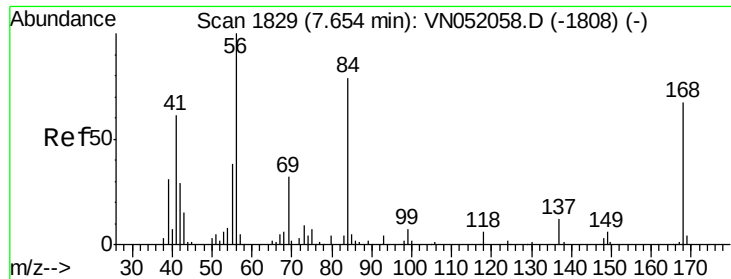
Ion 72.00 (71.70 to 72.70): VN0

Ion 71.00 (70.70 to 71.70): VN0



Time-->

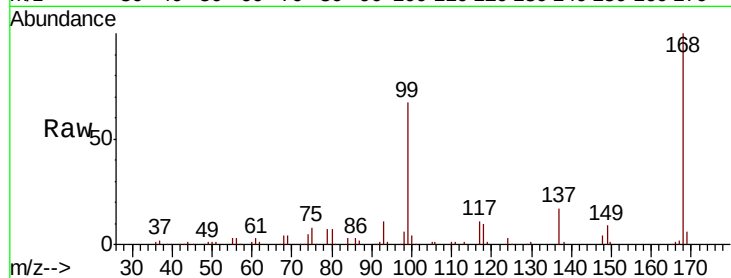




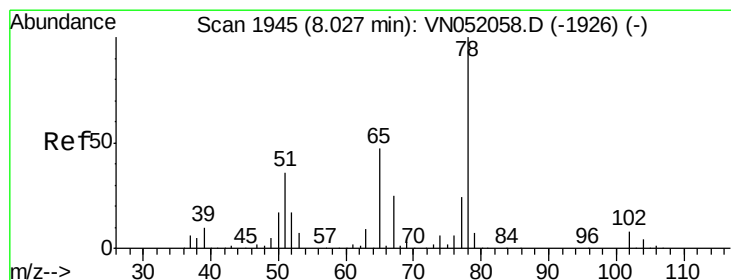
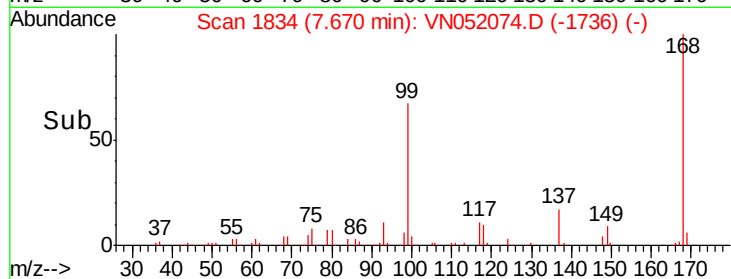
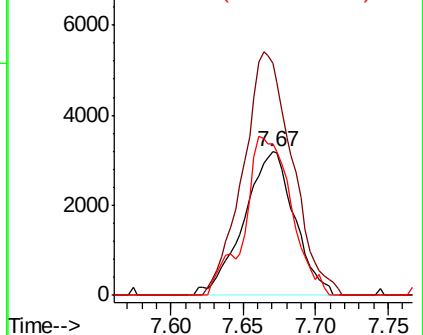
#31  
Cyclohexane  
Concen: Below Cal  
RT: 7.67 min Scan# 1834  
Delta R.T. 0.02 min  
Lab File: VN052074.D  
Acq: 31 Oct 2018 15:25

Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion: 56 Resp: 7764  
Ion Ratio Lower Upper  
56 100  
69 161.2 25.8 38.6#  
84 105.4 63.5 95.3#

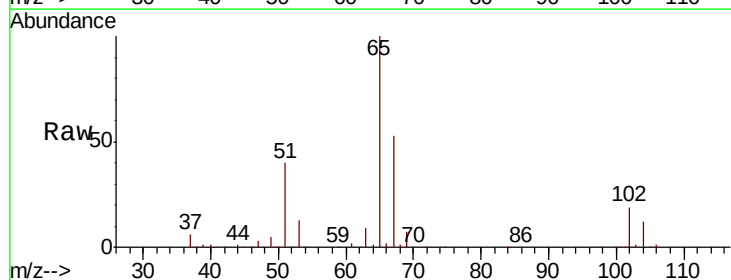


Abundance Ion 56.00 (55.70 to 56.70): VNC  
Ion 69.00 (68.70 to 69.70): VNC  
Ion 84.00 (83.70 to 84.70): VNC

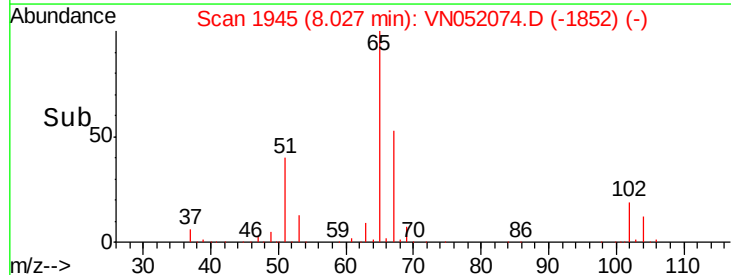
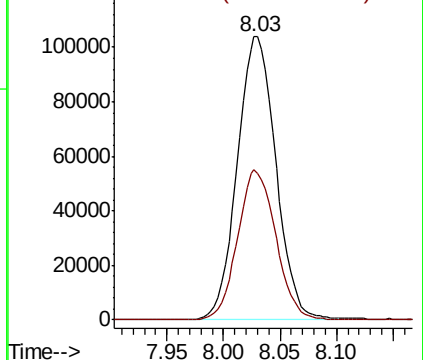


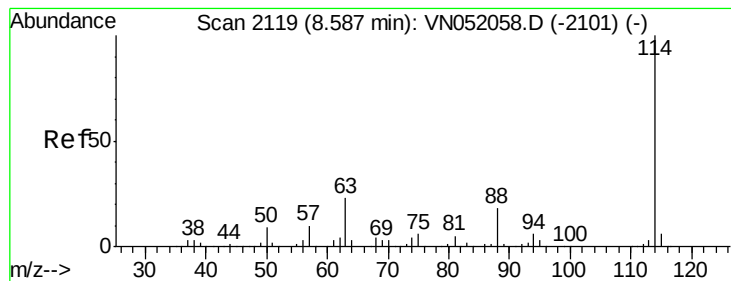
#33  
1,2-Dichloroethane-d4  
Concen: Below ug/l  
RT: 8.03 min Scan# 1945  
Delta R.T. 0.00 min  
Lab File: VN052074.D  
Acq: 31 Oct 2018 15:25

Tgt Ion: 65 Resp: 246220  
Ion Ratio Lower Upper  
65 100  
67 52.4 0.0 105.2



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





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 8.59 min Scan# 2119

Delta R.T. 0.00 min

Lab File: VN052074.D

Acq: 31 Oct 2018 15:25

Instrument :

MSVOA\_N

ClientSampleId :

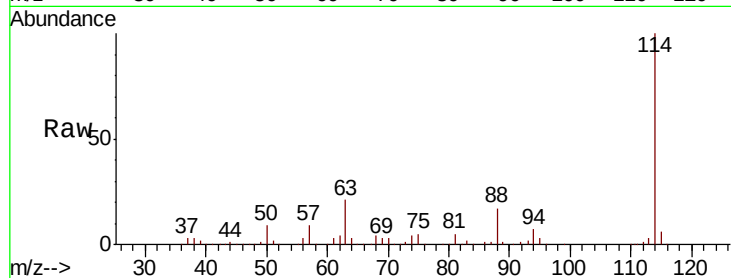
Tot Ion:114 Resp: 535497

Ion Ratio Lower Upper

114 100

63 21.5 0.0 46.0

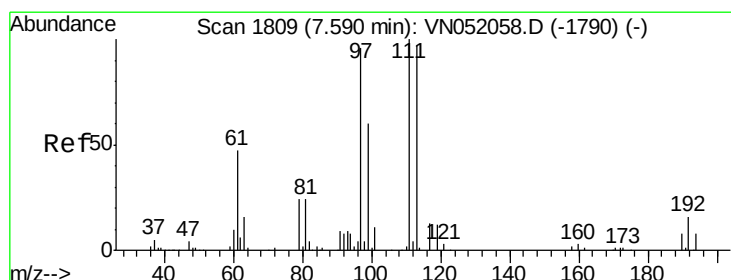
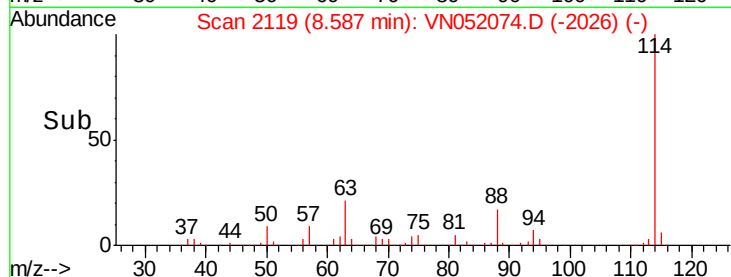
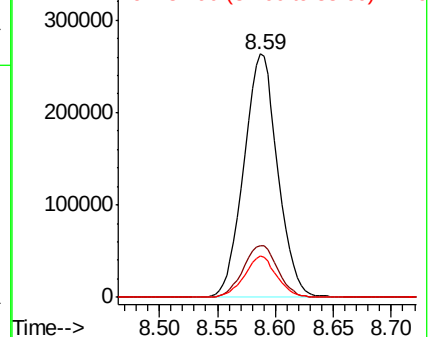
88 16.8 0.0 35.4



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: 50.000 ug/l

RT: 7.59 min Scan# 1810

Delta R.T. 0.00 min

Lab File: VN052074.D

Acq: 31 Oct 2018 15:25

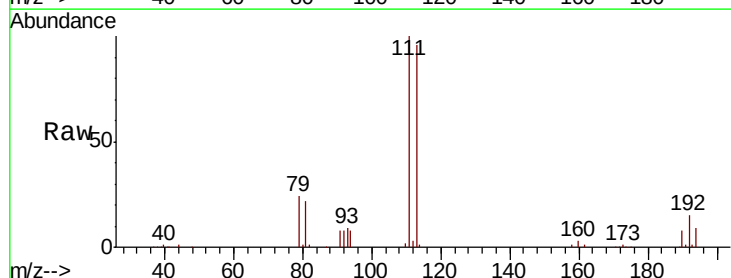
Tgt Ion:113 Resp: 202145

Ion Ratio Lower Upper

113 100

111 102.8 83.1 124.7

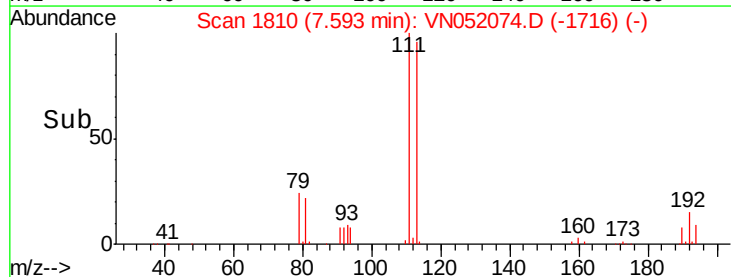
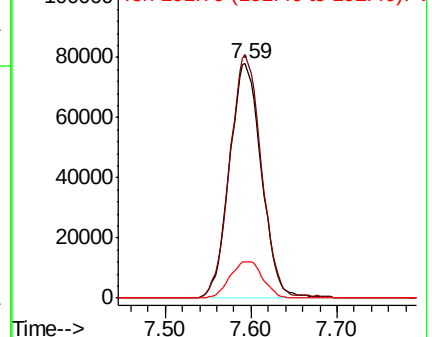
192 15.9 12.7 19.1



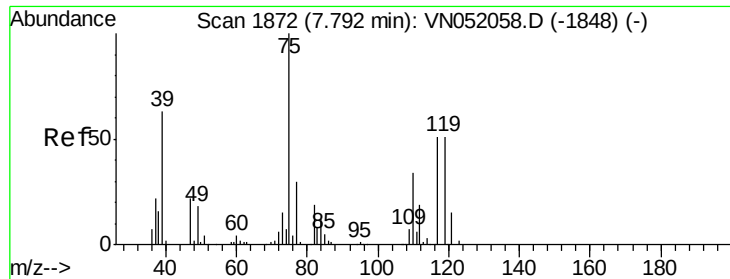
Abundance Ion 112.80 (112.50 to 113.50): V

Ion 110.80 (110.50 to 111.50): V

Ion 191.70 (191.40 to 192.40): V



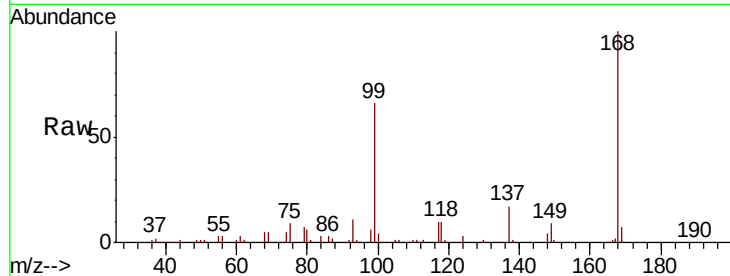




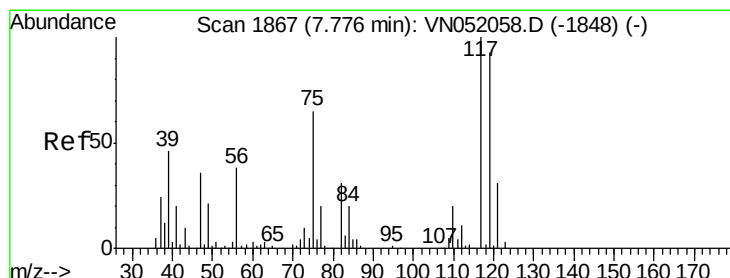
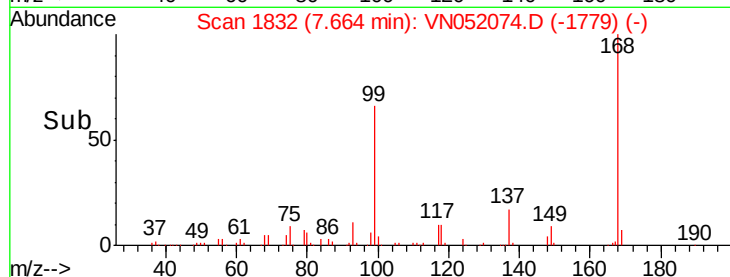
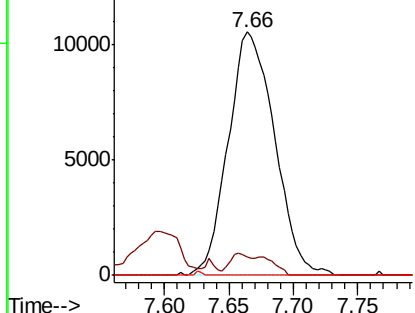
#36  
 1,1-Dichloropropene  
 Concen: 4.854 ug/l  
 RT: 7.66 min Scan# 1832  
 Delta R.T. -0.13 min  
 Lab File: VN052074.D  
 Acq: 31 Oct 2018 15:25

Instrument :  
 MSVOA\_N  
 ClientSampled :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 110     | 3.5   | 16.0  | 48.0# |
| 77      | 0.0   | 24.5  | 36.7# |

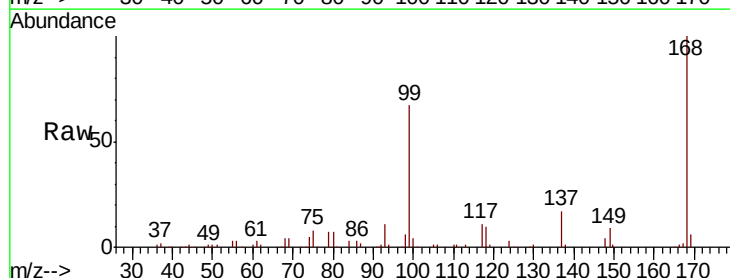


Abundance Ion 74.90 (74.60 to 75.60): VN0  
 Ion 109.90 (109.60 to 110.60): V  
 Ion 76.90 (76.60 to 77.60): VN0

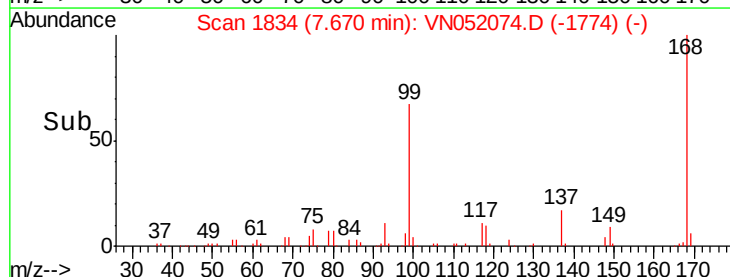
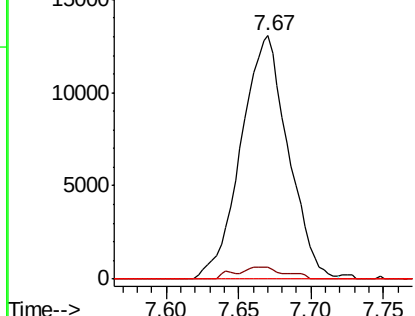


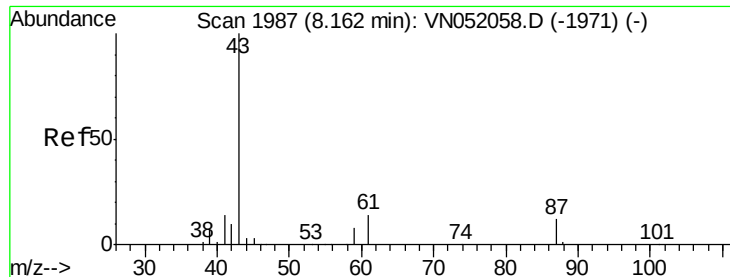
#38  
 Carbon Tetrachloride  
 Concen: 6.296 ug/l  
 RT: 7.67 min Scan# 1834  
 Delta R.T. -0.11 min  
 Lab File: VN052074.D  
 Acq: 31 Oct 2018 15:25

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 117     | 100   |       |        |
| 119     | 4.9   | 74.8  | 112.2# |
| 121     | 0.0   | 25.1  | 37.7#  |



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: 25.619 ug/l

RT: 8.17 min Scan# 1988

Delta R.T. 0.00 min

Lab File: VN052074.D

Acq: 31 Oct 2018 15:25

Instrument :

MSVOA\_N

ClientSampled :

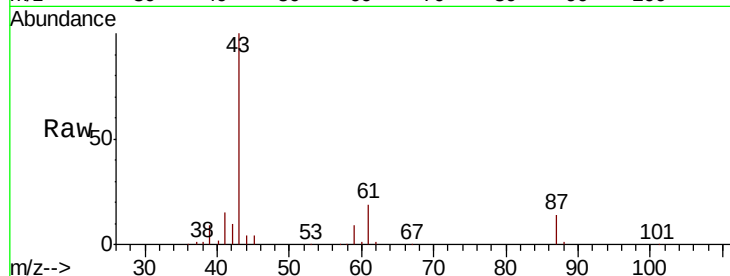
Tot Ion: 43 Resp: 166063

Ion Ratio Lower Upper

43 100

61 18.6 15.4 23.0

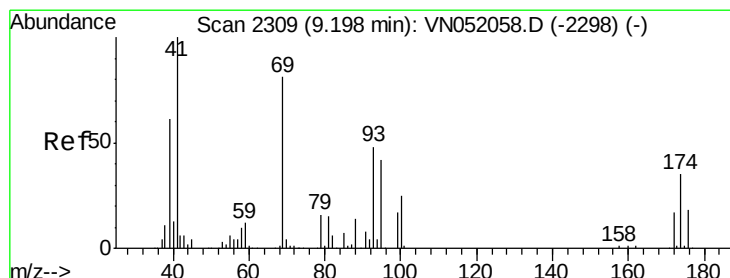
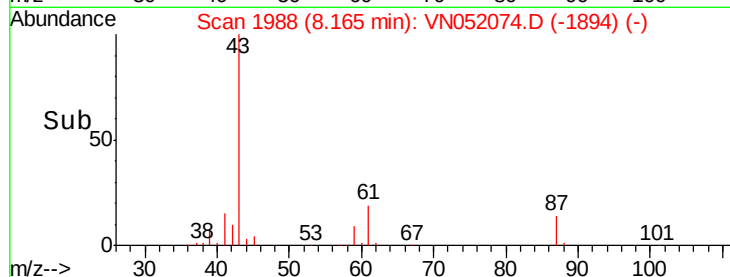
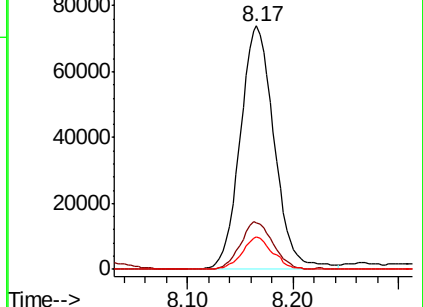
87 12.0 9.8 14.8



Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 61.00 (60.70 to 61.70): VN0

Ion 87.00 (86.70 to 87.70): VN0



#48

Methyl methacrylate

Concen: 1.287 ug/l

RT: 9.18 min Scan# 2304

Delta R.T. -0.02 min

Lab File: VN052074.D

Acq: 31 Oct 2018 15:25

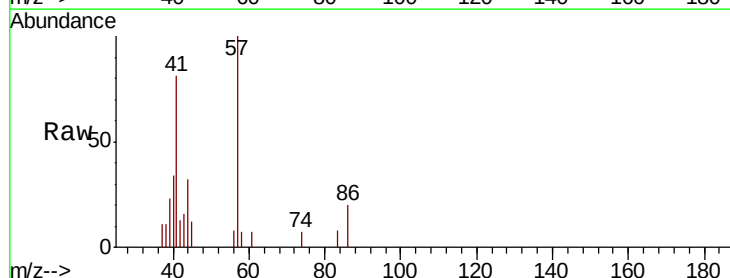
Tgt Ion: 41 Resp: 4229

Ion Ratio Lower Upper

41 100

69 0.0 67.1 100.7#

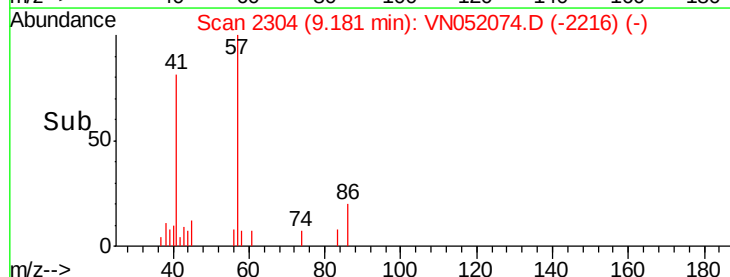
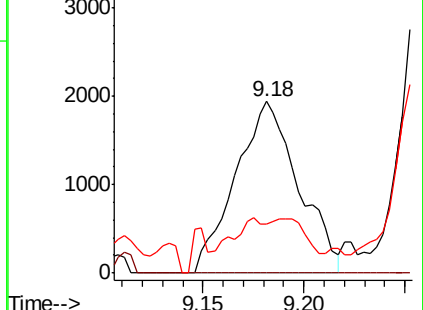
39 8.6 50.5 75.7#

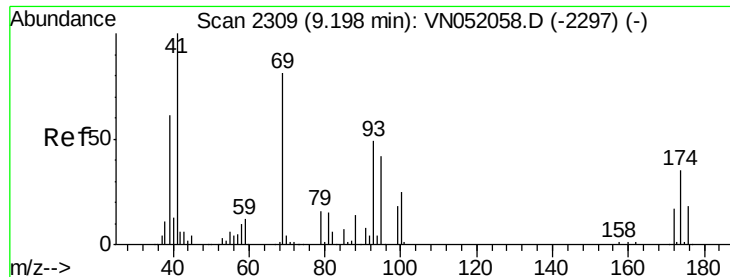


Abundance Ion 41.00 (40.70 to 41.70): VN0

Ion 69.00 (68.70 to 69.70): VN0

Ion 39.00 (38.70 to 39.70): VN0

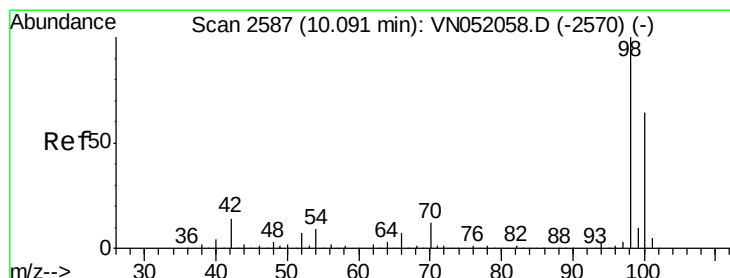
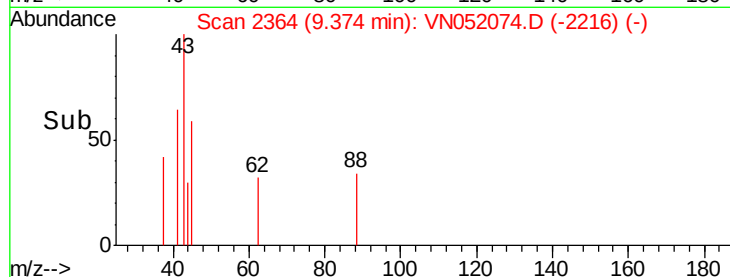
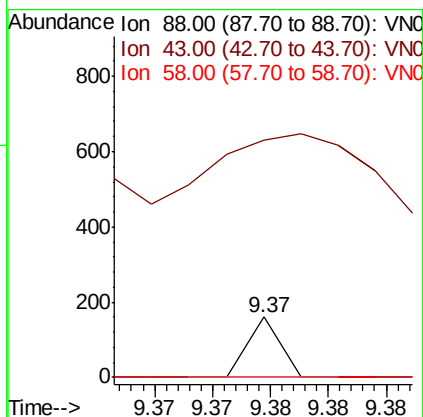
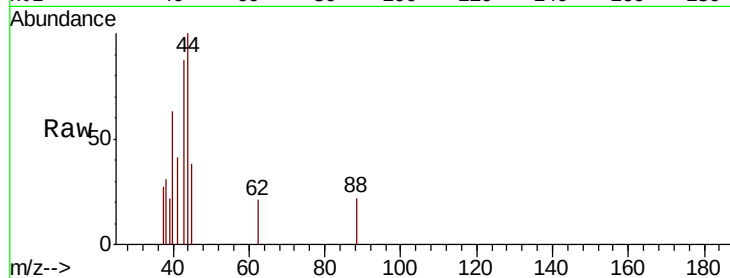




#49  
1,4-Dioxane  
Concen: 26.158 ug/l  
RT: 9.37 min Scan# 2364  
Delta R.T. 0.18 min  
Lab File: VN052074.D  
Acq: 31 Oct 2018 15:25

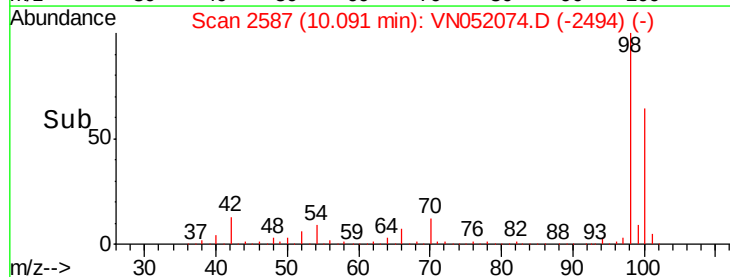
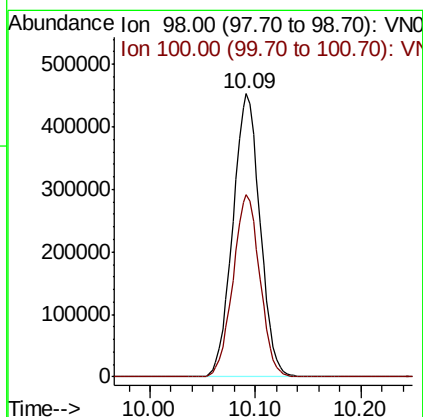
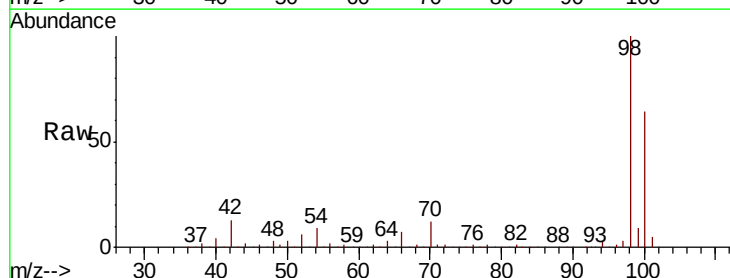
Instrument :  
MSVOA\_N  
ClientSampleId :

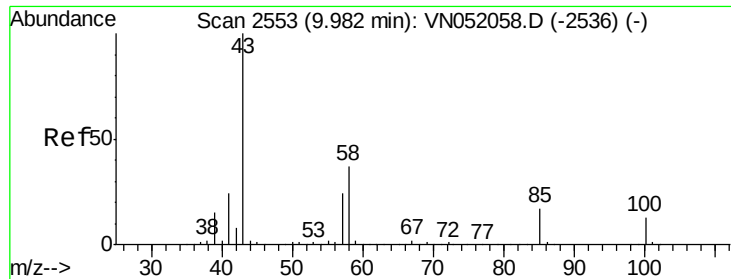
Tot Ion: 88 Resp: 31  
Ion Ratio Lower Upper  
88 100  
43 0.0 34.1 51.1#  
58 0.0 62.8 94.2#



#50  
Toluene-d8  
Concen: 26.158 ug/l  
RT: 10.09 min Scan# 2587  
Delta R.T. 0.00 min  
Lab File: VN052074.D  
Acq: 31 Oct 2018 15:25

Tgt Ion: 98 Resp: 807355  
Ion Ratio Lower Upper  
98 100  
100 63.5 51.4 77.2





#51

4-Methyl-2-Pentanone

Concen: 0.318 ug/l

RT: 9.99 min Scan# 2556

Delta R.T. 0.01 min

Lab File: VN052074.D

Acq: 31 Oct 2018 15:25

Instrument :

MSVOA\_N

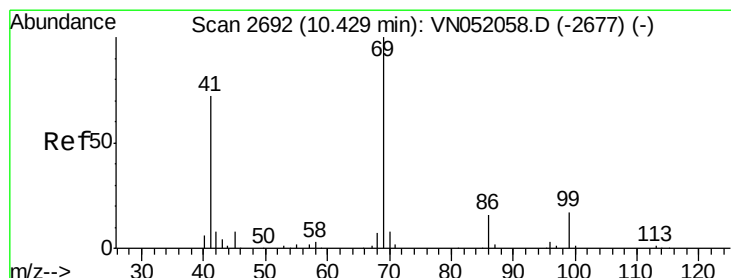
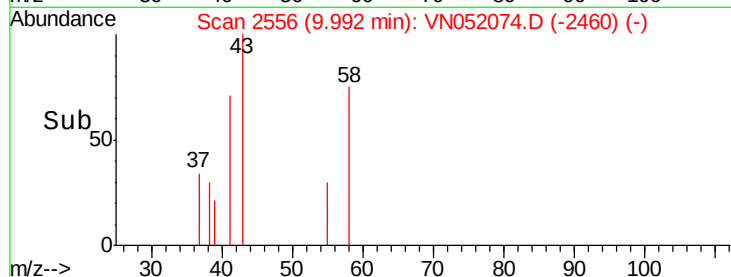
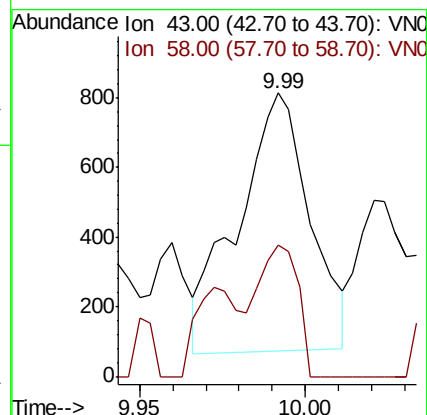
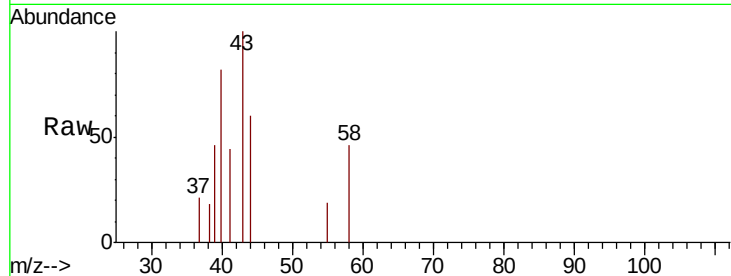
ClientSampled :

Tot Ion: 43 Resp: 1119

Ion Ratio Lower Upper

43 100

58 27.3 29.7 44.5#



#56

Ethyl methacrylate

Concen: 0.348 ug/l

RT: 10.23 min Scan# 2631

Delta R.T. -0.20 min

Lab File: VN052074.D

Acq: 31 Oct 2018 15:25

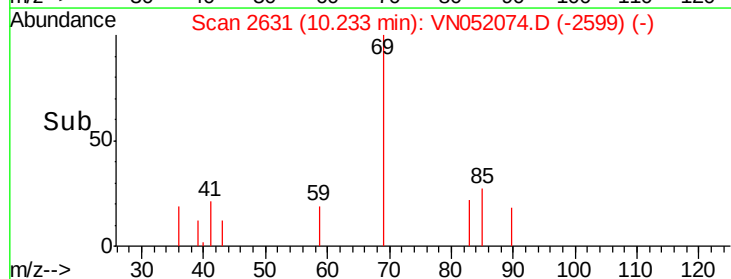
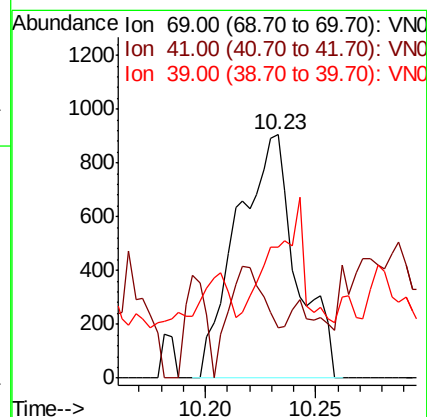
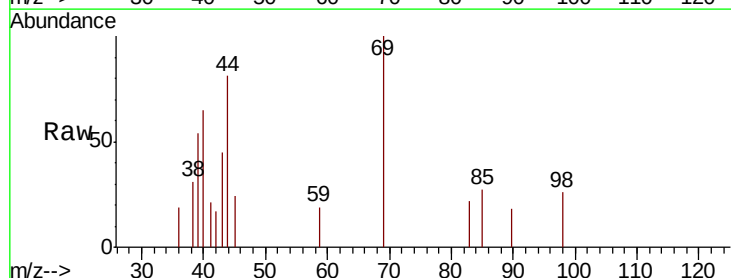
Tgt Ion: 69 Resp: 1688

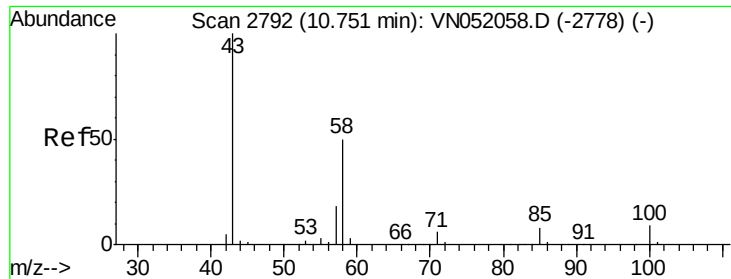
Ion Ratio Lower Upper

69 100

41 0.0 55.5 83.3#

39 25.8 33.0 49.4#

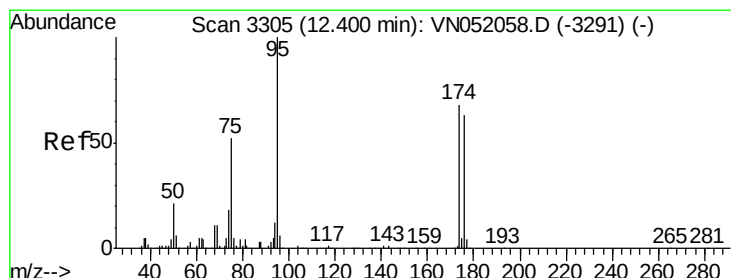
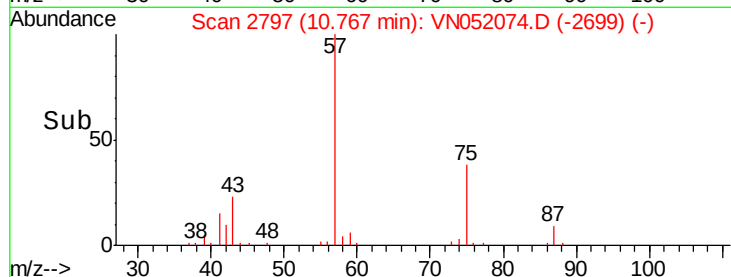
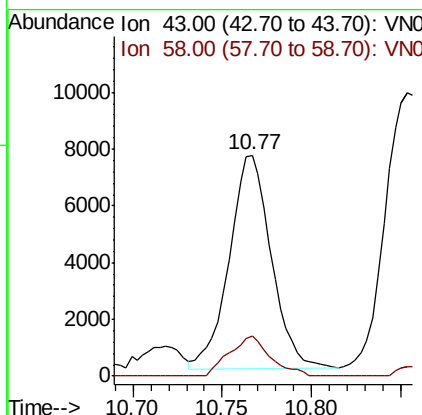
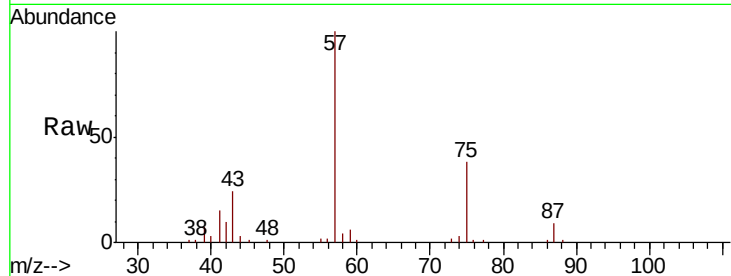




#59  
2-Hexanone  
Concen: 4.901 ug/l  
RT: 10.77 min Scan# 2797  
Delta R.T. 0.02 min  
Lab File: VN052074.D  
Acq: 31 Oct 2018 15:25

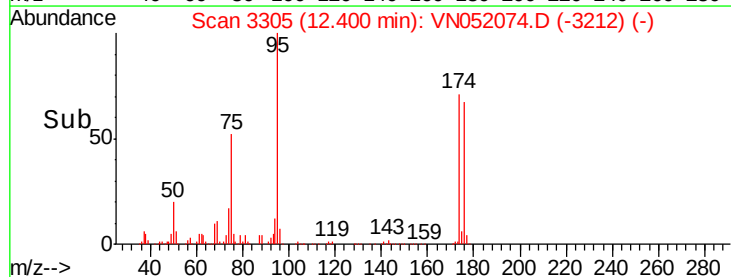
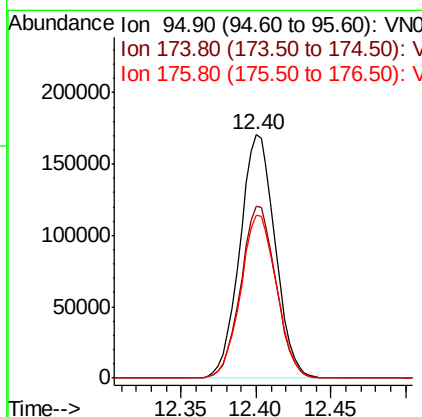
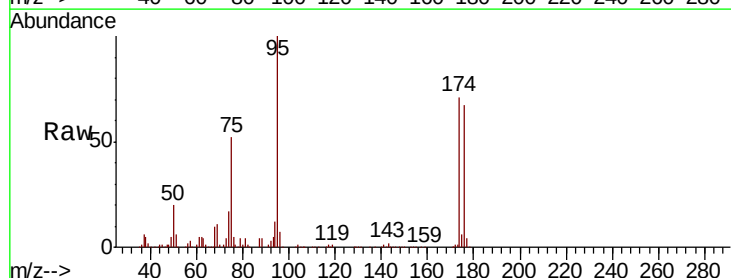
Instrument :  
MSVOA\_N  
ClientSampled :

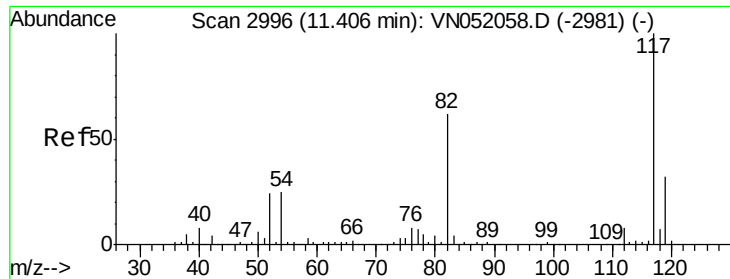
Tot Ion: 43 Resp: 12304  
Ion Ratio Lower Upper  
43 100  
58 18.3 25.2 75.6#



#62  
4-Bromofluorobenzene  
Concen: Below ug/l  
RT: 12.40 min Scan# 3305  
Delta R.T. 0.00 min  
Lab File: VN052074.D  
Acq: 31 Oct 2018 15:25

Tgt Ion: 95 Resp: 280605  
Ion Ratio Lower Upper  
95 100  
174 70.4 0.0 131.8  
176 68.0 0.0 126.0

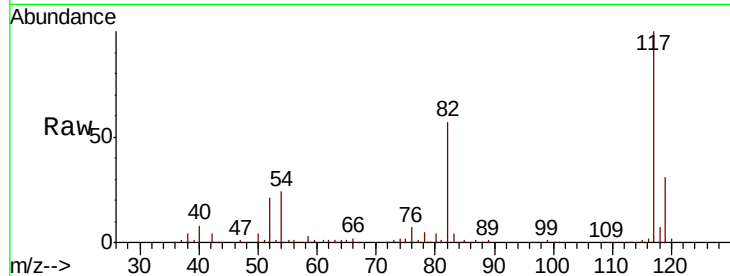




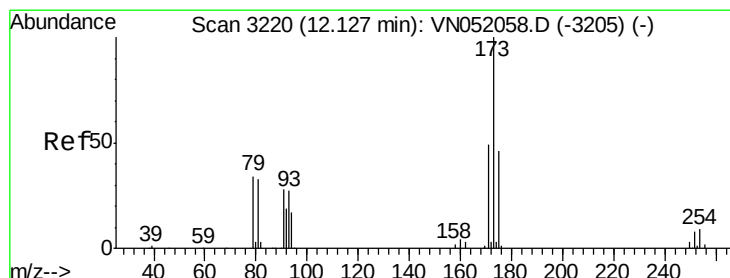
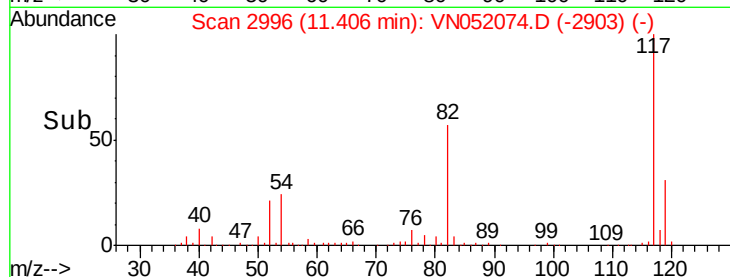
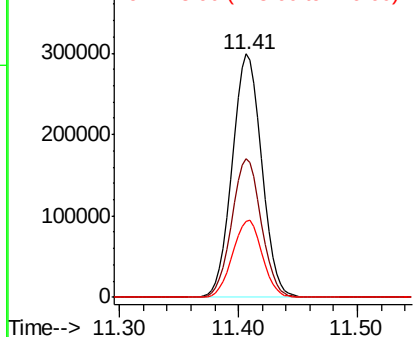
#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.41 min Scan# 2996  
Delta R.T. 0.00 min  
Lab File: VN052074.D  
Acq: 31 Oct 2018 15:25

Instrument :  
MSVOA\_N  
ClientSampleId :

Tot Ion:117 Resp: 512680  
Ion Ratio Lower Upper  
117 100  
82 57.1 49.9 74.9  
119 31.3 25.7 38.5

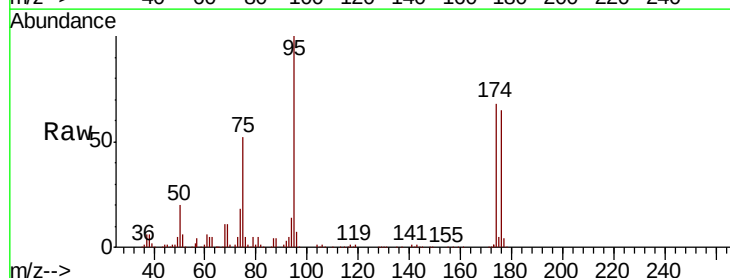


Abundance Ion 116.90 (116.60 to 117.60): V  
Ion 82.00 (81.70 to 82.70): V  
Ion 118.90 (118.60 to 119.60): V

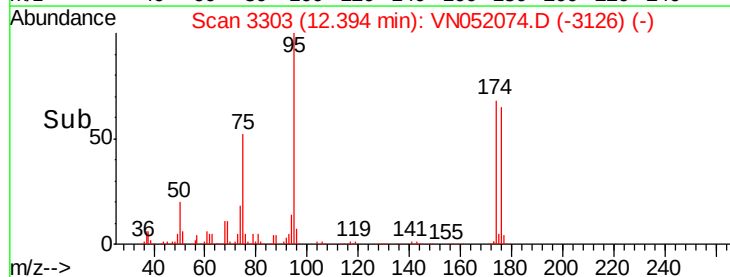
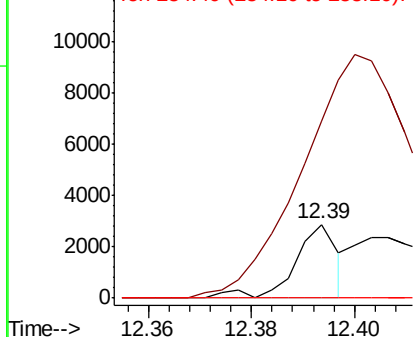


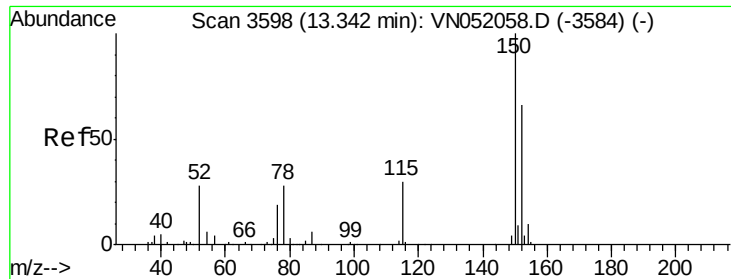
#71  
Bromoform  
Concen: 2.897 ug/l  
RT: 12.39 min Scan# 3303  
Delta R.T. 0.27 min  
Lab File: VN052074.D  
Acq: 31 Oct 2018 15:25

Tgt Ion:173 Resp: 1639  
Ion Ratio Lower Upper  
173 100  
175 797.5 23.9 71.7#  
254 0.0 0.0 0.0



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: 13.34 min Scan# 3598

Delta R.T. 0.00 min

Lab File: VN052074.D

Acq: 31 Oct 2018 15:25

Instrument :

MSVOA\_N

ClientSampled :

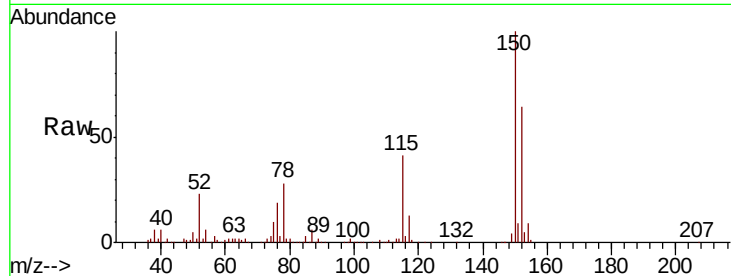
Tot Ion:152 Resp: 215266

Ion Ratio Lower Upper

152 100

115 62.1 31.6 95.0

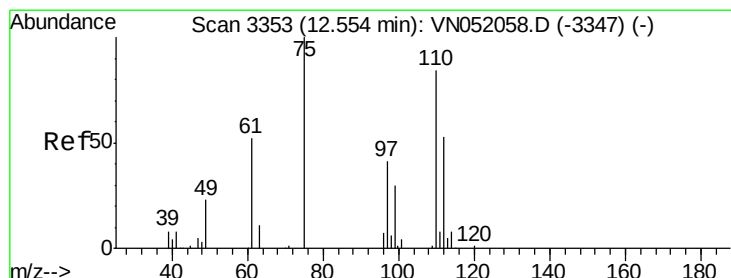
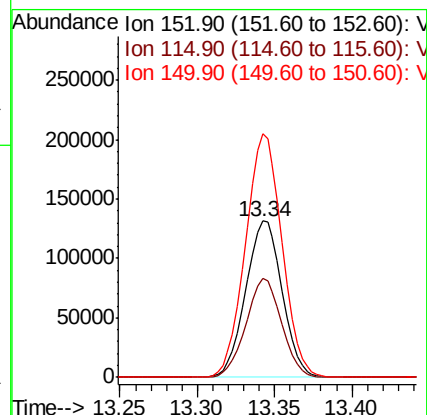
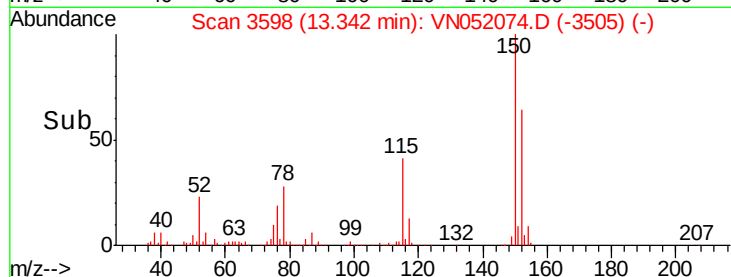
150 156.2 0.0 345.0



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: 37.284 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. -0.15 min

Lab File: VN052074.D

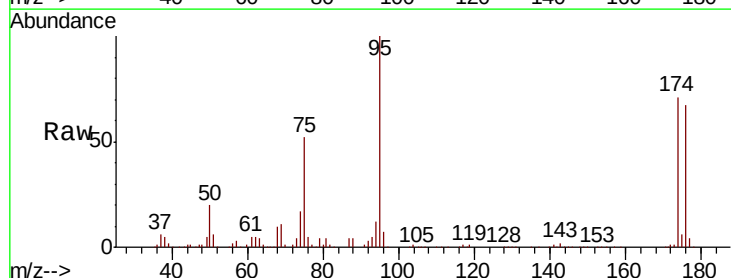
Acq: 31 Oct 2018 15:25

Tgt Ion: 75 Resp: 146918

Ion Ratio Lower Upper

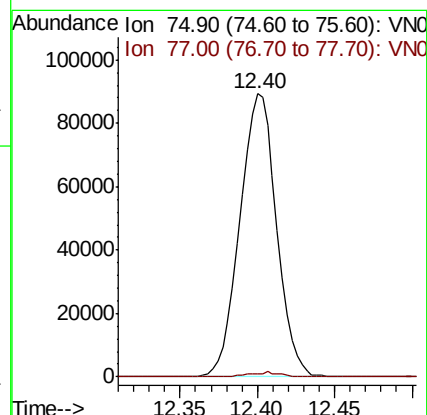
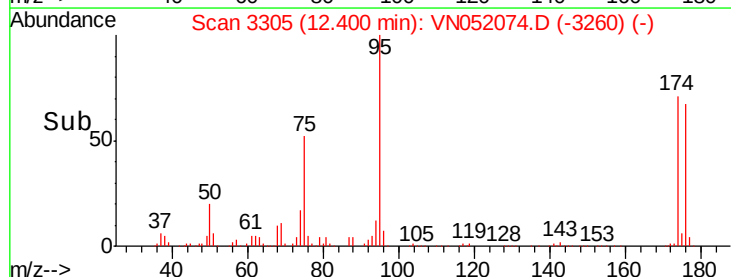
75 100

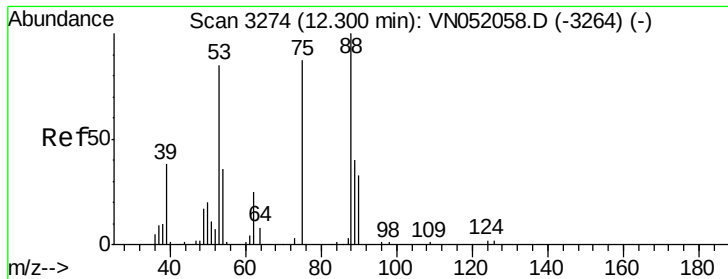
77 1.4 0.0 0.0#



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: 123.751 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. 0.10 min

Lab File: VN052074.D

Acq: 31 Oct 2018 15:25

Instrument :

MSVOA\_N

ClientSampled :

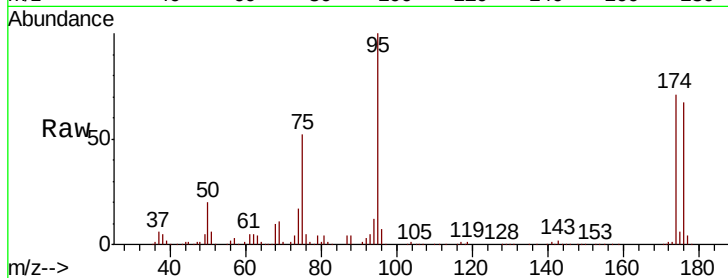
Tot Ion: 75 Resp: 146918

Ion Ratio Lower Upper

75 100

53 0.0 81.8 122.6#

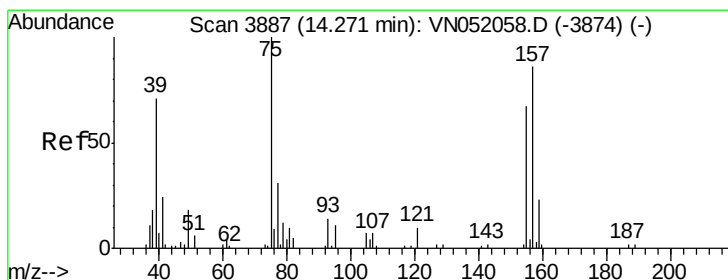
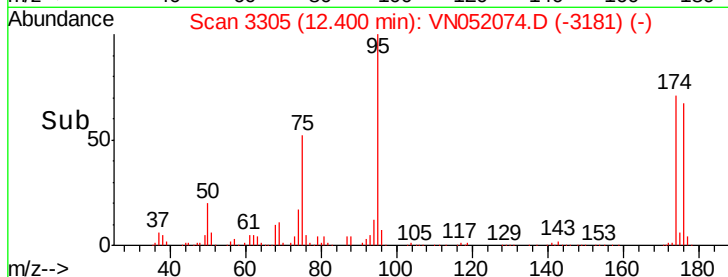
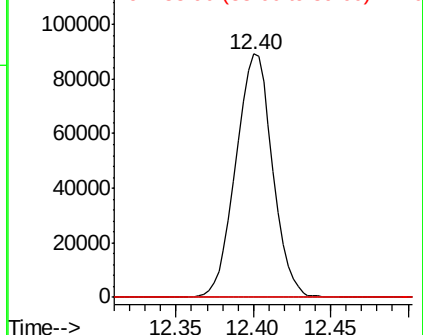
89 0.0 36.6 54.8#



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



#92

1,2-Dibromo-3-Chloropropane

Concen: 0.968 ug/l

RT: 14.17 min Scan# 3856

Delta R.T. -0.10 min

Lab File: VN052074.D

Acq: 31 Oct 2018 15:25

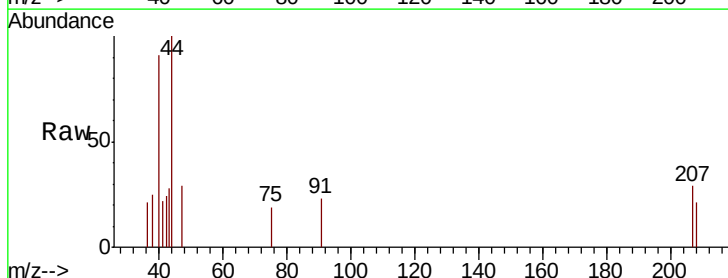
Tgt Ion: 75 Resp: 32

Ion Ratio Lower Upper

75 100

155 0.0 34.0 102.0#

157 0.0 42.1 126.4#



Abundance Ion 74.90 (74.60 to 75.60): VN0

Ion 154.80 (154.50 to 155.50): V

Ion 156.80 (156.50 to 157.50): V

