

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN112118\  
 Data File : VN052434.D  
 Acq On : 21 Nov 2018 13:24  
 Operator : MD\SY  
 Sample : PB114992ZHE#04  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 10 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Quant Time: Nov 21 23:57:05 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N111418W.M  
 Quant Title : SW846 8260  
 QLast Update : Thu Nov 15 03:02:37 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.67  | 168  | 315897   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.59  | 114  | 526927   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 456996   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.35 | 152  | 153789   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

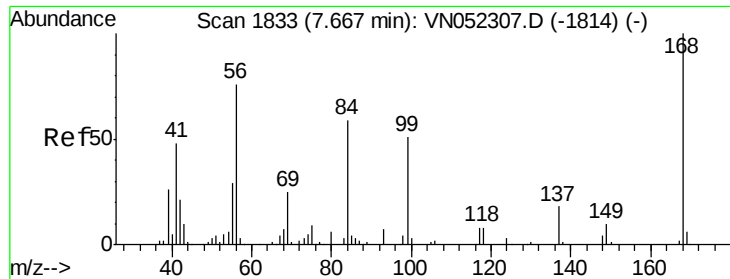
|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.03   | 65  | 241527   | 54.14 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 108.28% |      |
| 35) Dibromofluoromethane  | 7.59   | 113 | 177062   | 52.10 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 104.20% |      |
| 50) Toluene-d8            | 10.09  | 98  | 674774   | 50.47 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 100.94% |      |
| 62) 4-Bromofluorobenzene  | 12.40  | 95  | 198667   | 45.17 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 90.34%  |      |

## Target Compounds

|                                |       |     |        |         |        | Qvalue |
|--------------------------------|-------|-----|--------|---------|--------|--------|
| 13) Acrolein                   | 3.63  | 56  | 30     | 21.847  | ug/l # | 14     |
| 16) Acetone                    | 3.83  | 43  | 6071   | 4.942   | ug/l # | 85     |
| 18) Methyl Acetate             | 4.33  | 43  | 1094   | 0.747   | ug/l # | 84     |
| 20) Methylene Chloride         | 4.56  | 84  | 11183  | 2.324   | ug/l   | 95     |
| 25) 2-Butanone                 | 6.83  | 43  | 464    | 0.268   | ug/l # | 52     |
| 29) Tetrahydrofuran            | 7.20  | 42  | 275    | 0.242   | ug/l # | 40     |
| 31) Cyclohexane                | 7.67  | 56  | 9892   | 0.406   | ug/l # | 38     |
| 36) 1,1-Dichloropropene        | 7.67  | 75  | 30257  | 5.729   | ug/l # | 51     |
| 38) Carbon Tetrachloride       | 7.67  | 117 | 35450  | 7.306   | ug/l # | 16     |
| 41) Methacrylonitrile          | 7.17  | 41  | 161    | 3.765   | ug/l # | 100    |
| 43) Isopropyl Acetate          | 8.17  | 43  | 17929  | 2.424   | ug/l # | 96     |
| 48) Methyl methacrylate        | 9.18  | 41  | 5961   | 1.588   | ug/l # | 16     |
| 51) 4-Methyl-2-Pentanone       | 10.02 | 43  | 5271   | 1.416   | ug/l # | 41     |
| 54) cis-1,3-Dichloropropene    | 9.90  | 75  | 32649  | 5.583   | ug/l # | 78     |
| 57) 1,3-Dichloropropane        | 10.76 | 76  | 6648   | 1.147   | ug/l # | 43     |
| 59) 2-Hexanone                 | 10.77 | 43  | 126595 | 49.435  | ug/l # | 54     |
| 74) N-amyl acetate             | 11.88 | 43  | 15919  | 3.615   | ug/l # | 57     |
| 76) 1,2,3-Trichloropropane     | 12.40 | 75  | 116137 | 44.505  | ug/l # | 100    |
| 80) 1,3,5-Trimethylbenzene     | 12.73 | 105 | 9461   | 0.962   | ug/l   | 98     |
| 81) trans-1,4-Dichloro-2-buten | 12.40 | 75  | 116137 | 144.348 | ug/l # | 5      |
| 95) Naphthalene                | 15.13 | 128 | 196    | 2.639   | ug/l # | 69     |

(#) = 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: VN052434.D

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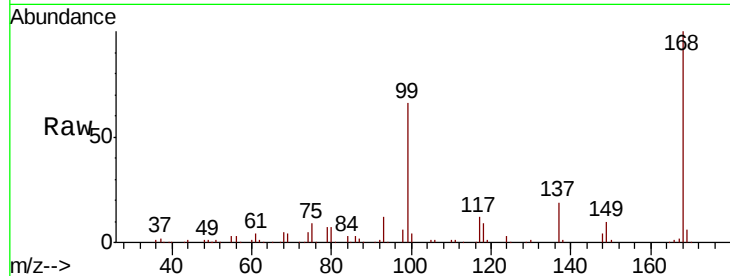
Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion:168 Resp: 315897

Ion Ratio Lower Upper

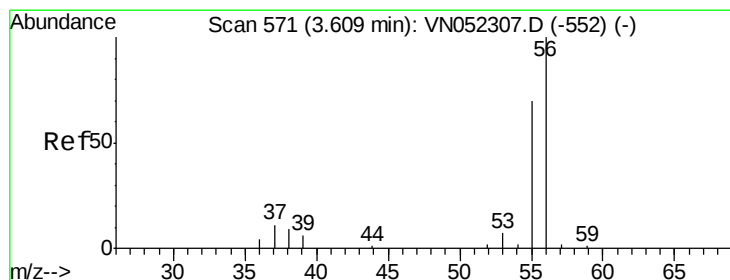
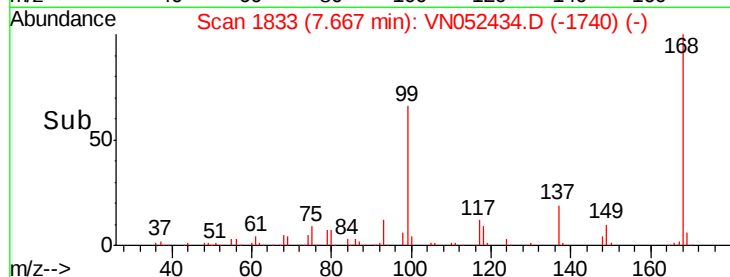
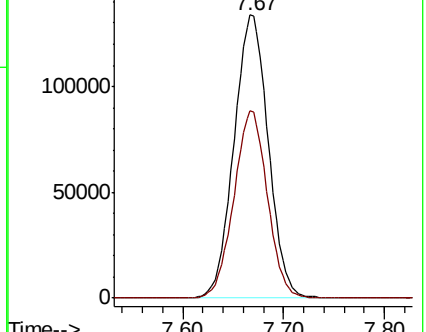
168 100

99 66.1 47.9 71.9



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VNO



#13

Acrolein

Concen: 21.847 ug/l

RT: 3.63 min Scan# 578

Delta R.T. 0.02 min

Lab File: VN052434.D

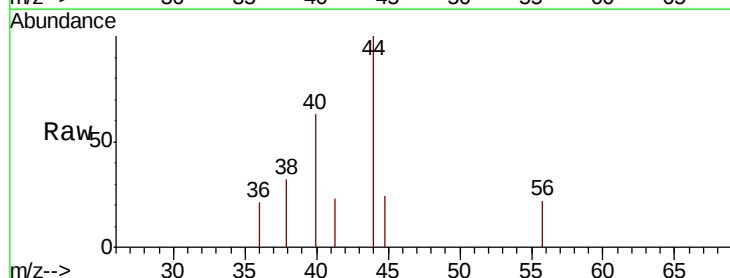
Acq: 21 Nov 2018 13:24

Tgt Ion: 56 Resp: 30

Ion Ratio Lower Upper

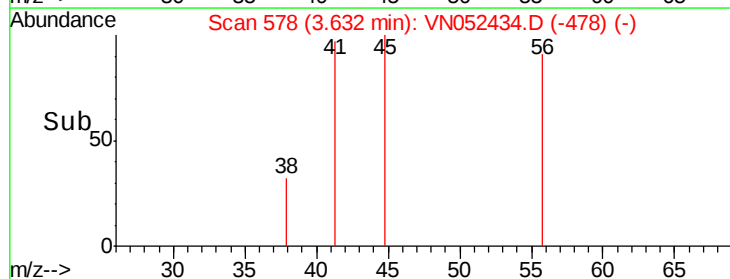
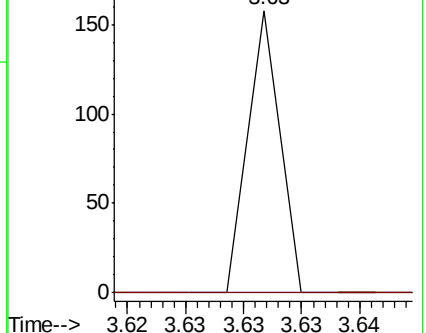
56 100

55 0.0 57.6 86.4#



Abundance Ion 56.00 (55.70 to 56.70): VNO

Ion 55.00 (54.70 to 55.70): VNO





#16

Acetone

Concen: 4.942 ug/l

RT: 3.83 min Scan# 640

Delta R.T. 0.02 min

Lab File: VN052434.D

Acq: 21 Nov 2018 13:24

Instrument :

MSVOA\_N

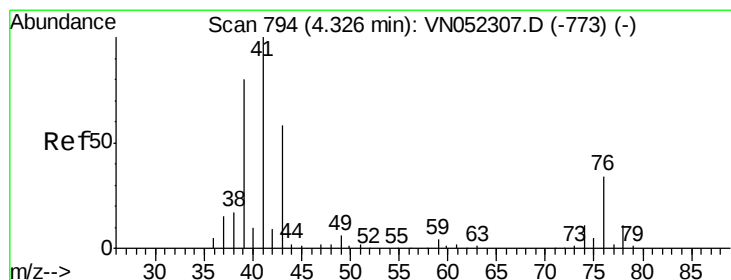
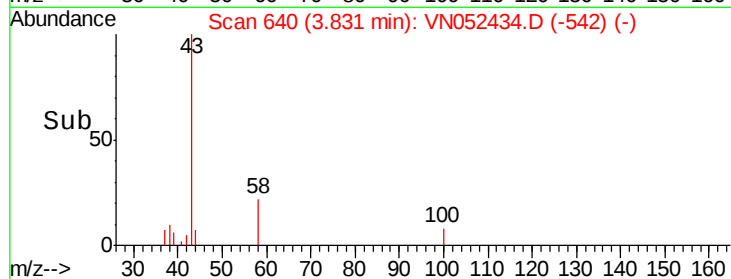
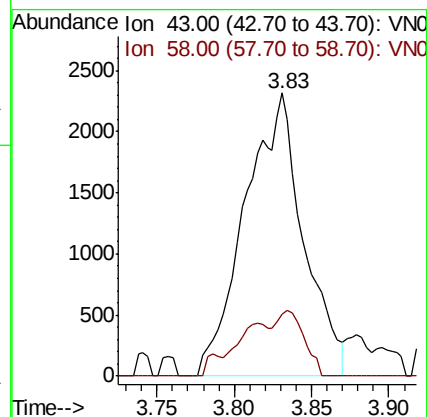
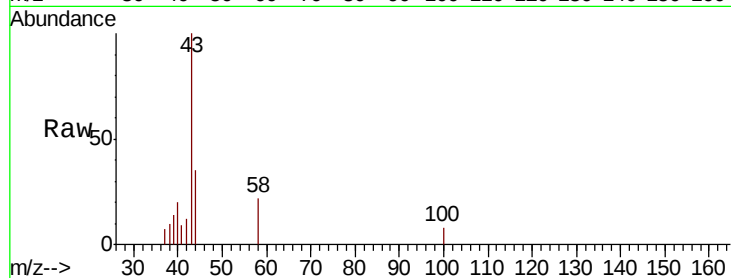
ClientSampled :

Tot Ion: 43 Resp: 6071

Ion Ratio Lower Upper

43 100

58 21.9 24.2 36.4#



#18

Methyl Acetate

Concen: 0.747 ug/l

RT: 4.33 min Scan# 795

Delta R.T. 0.00 min

Lab File: VN052434.D

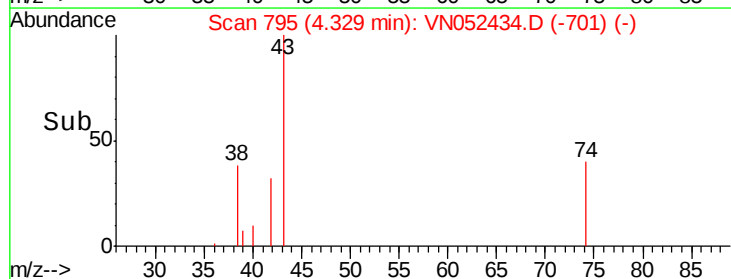
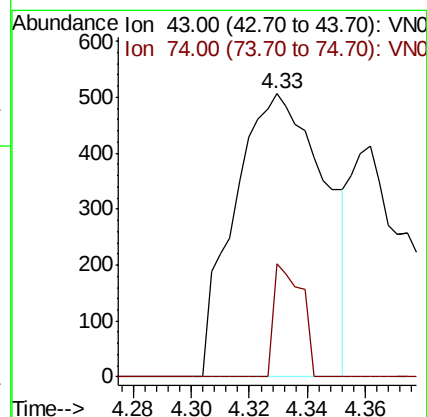
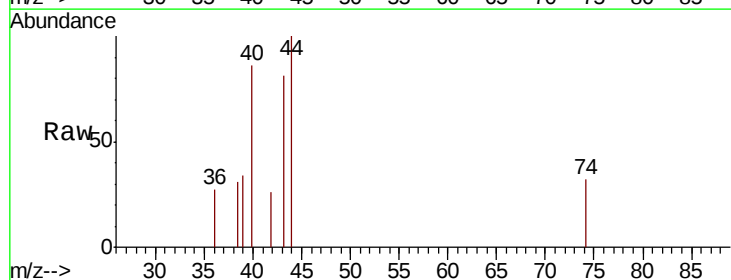
Acq: 21 Nov 2018 13:24

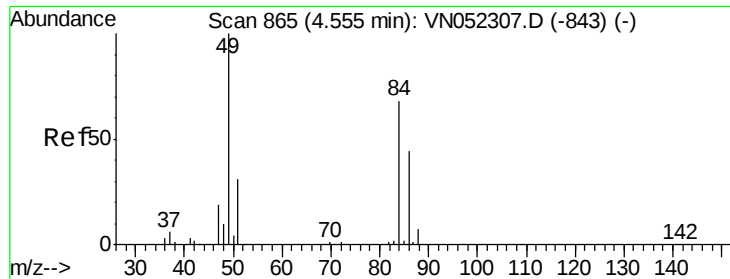
Tgt Ion: 43 Resp: 1094

Ion Ratio Lower Upper

43 100

74 12.4 15.9 23.9#

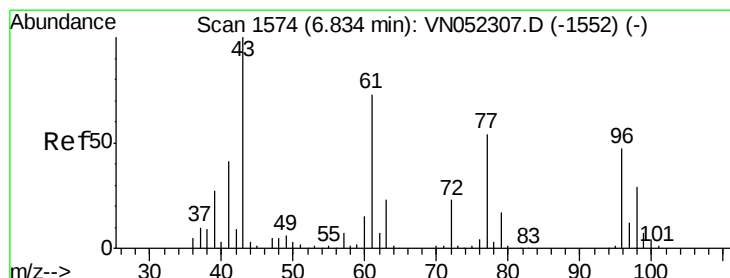
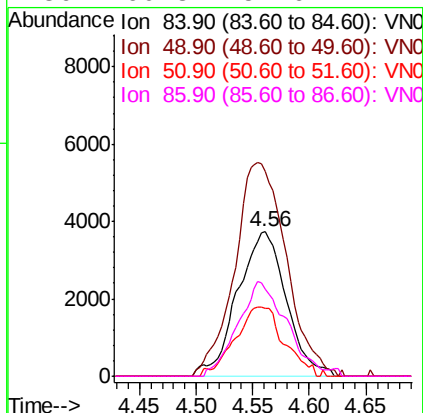
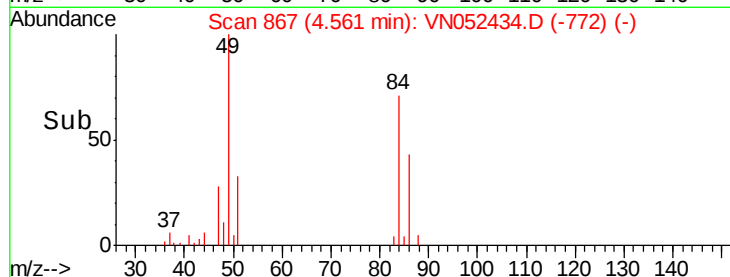
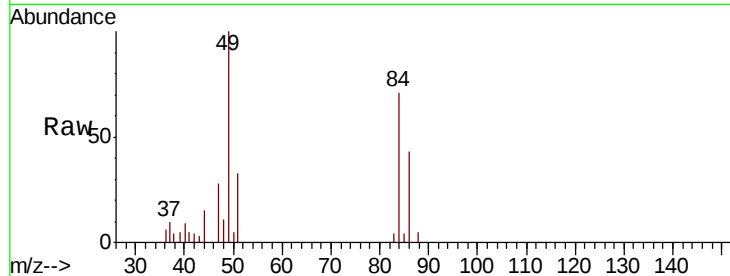




#20  
Methvlene Chloride  
Concen: 2.324 ug/l  
RT: 4.56 min Scan# 867  
Delta R.T. 0.01 min  
Lab File: VN052434.D  
Acq: 21 Nov 2018 13:24

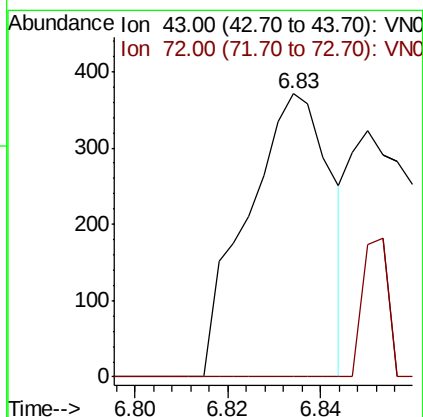
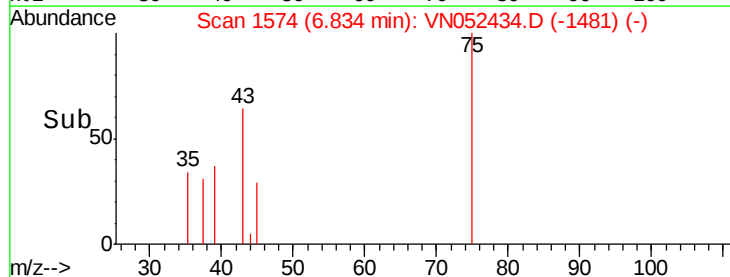
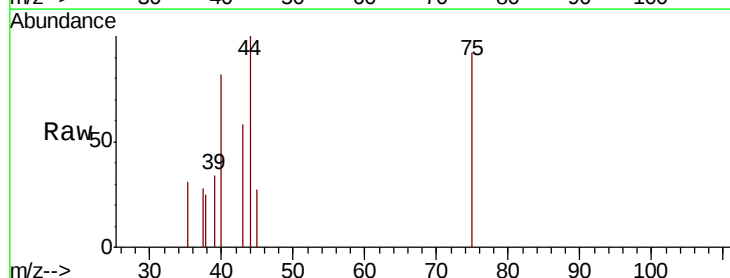
Instrument :  
MSVOA\_N  
ClientSampled :

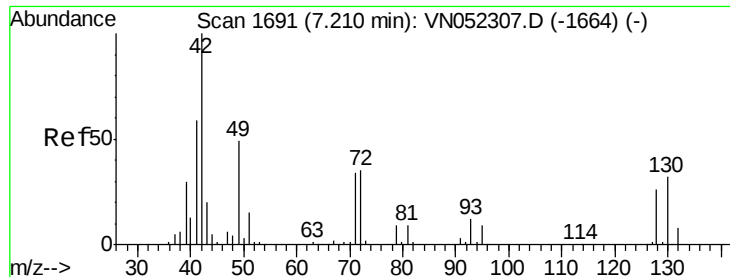
Tot Ion: 84 Resp: 11183  
Ion Ratio Lower Upper  
84 100  
49 141.5 118.2 177.2  
51 47.3 36.1 54.1  
86 60.3 51.6 77.4



#25  
2-Butanone  
Concen: 0.268 ug/l  
RT: 6.83 min Scan# 1574  
Delta R.T. -0.00 min  
Lab File: VN052434.D  
Acq: 21 Nov 2018 13:24

Tgt Ion: 43 Resp: 464  
Ion Ratio Lower Upper  
43 100  
72 0.0 18.6 27.8#





#29

Tetrahydrofuran

Concen: 0.242 ug/l

RT: 7.20 min Scan# 1688

Delta R.T. -0.01 min

Lab File: VN052434.D

Acq: 21 Nov 2018 13:24

Instrument :

MSVOA\_N

ClientSampleId :

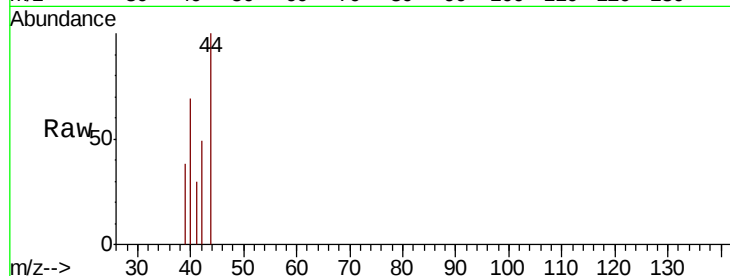
Tot Ion: 42 Resp: 275

Ion Ratio Lower Upper

42 100

72 0.0 28.6 42.8#

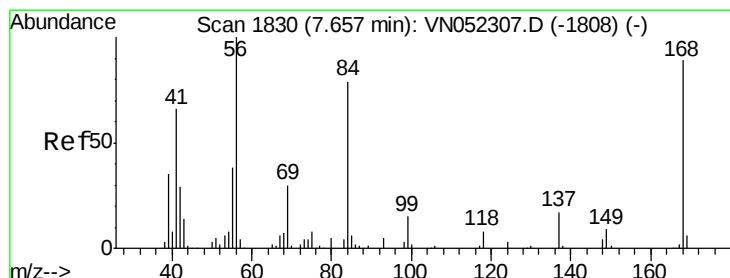
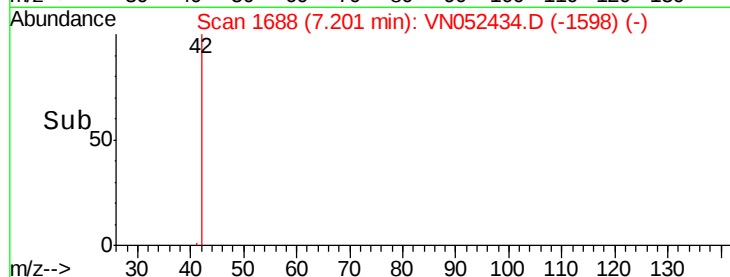
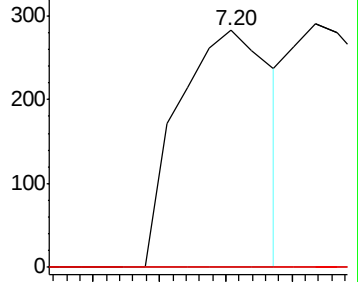
71 0.0 26.7 40.1#



Abundance Ion 42.00 (41.70 to 42.70): VN052307.D (-1664) (-)

Ion 72.00 (71.70 to 72.70): VN052307.D (-1664) (-)

Ion 71.00 (70.70 to 71.70): VN052307.D (-1664) (-)



#31

Cyclohexane

Concen: 0.406 ug/l

RT: 7.67 min Scan# 1833

Delta R.T. 0.01 min

Lab File: VN052434.D

Acq: 21 Nov 2018 13:24

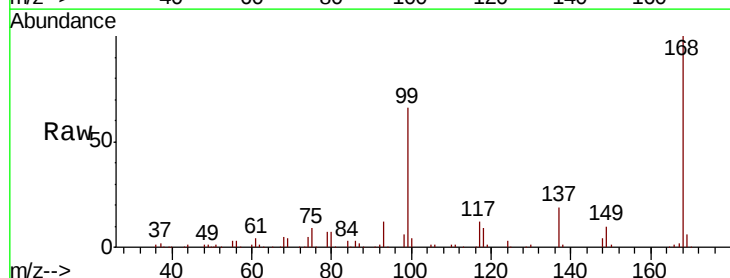
Tgt Ion: 56 Resp: 9892

Ion Ratio Lower Upper

56 100

69 141.3 23.8 35.8#

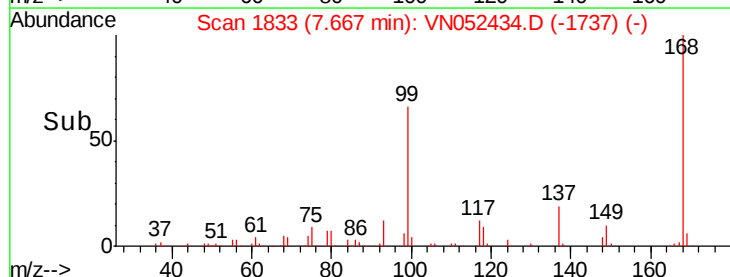
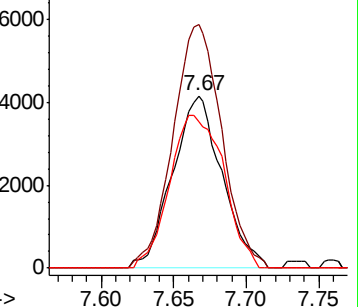
84 84.9 63.0 94.6

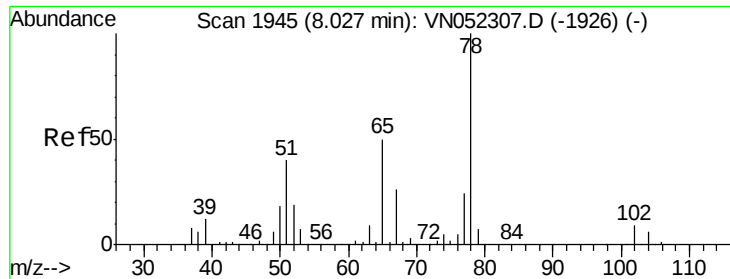


Abundance Ion 56.00 (55.70 to 56.70): VN052307.D (-1808) (-)

Ion 69.00 (68.70 to 69.70): VN052307.D (-1808) (-)

Ion 84.00 (83.70 to 84.70): VN052307.D (-1808) (-)

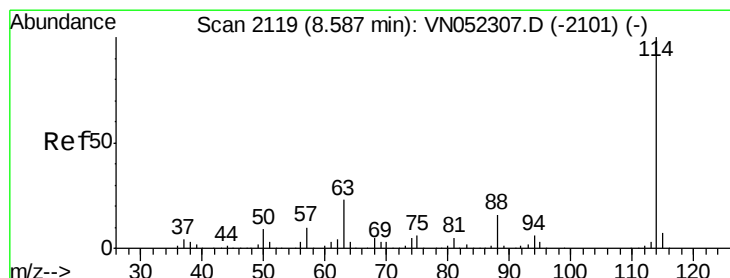
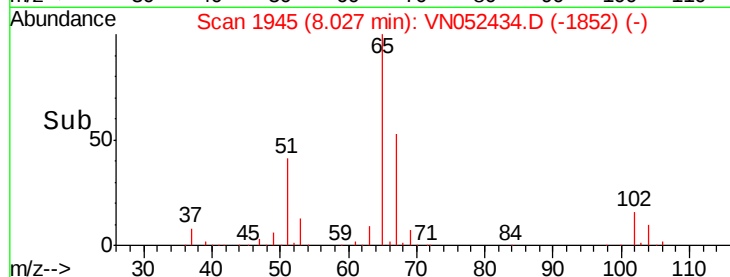
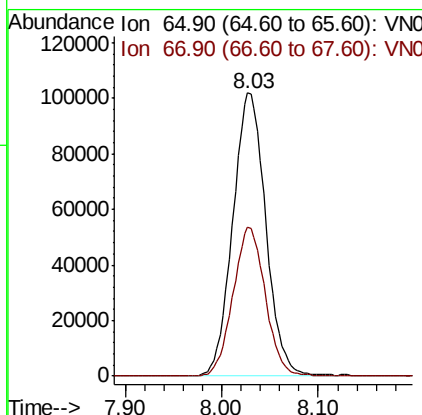
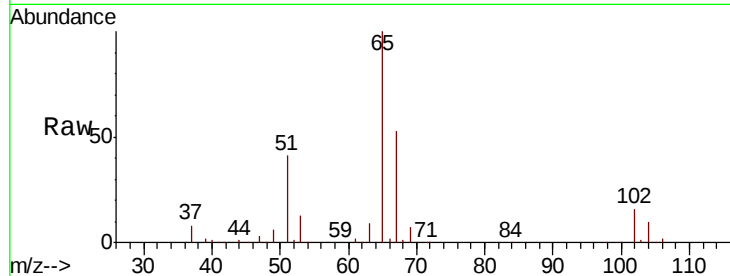




#33  
 1,2-Dichloroethane-d4  
 Concen: Below ug/l  
 RT: 8.03 min Scan# 1945  
 Delta R.T. -0.00 min  
 Lab File: VN052434.D  
 Acq: 21 Nov 2018 13:24

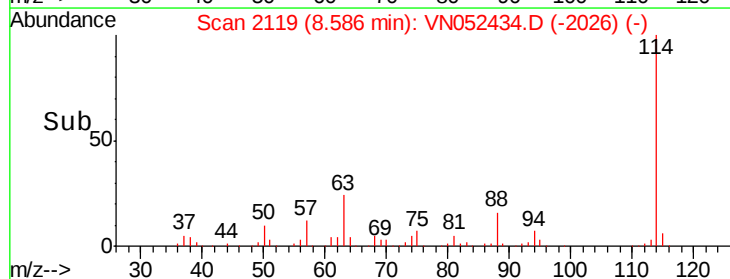
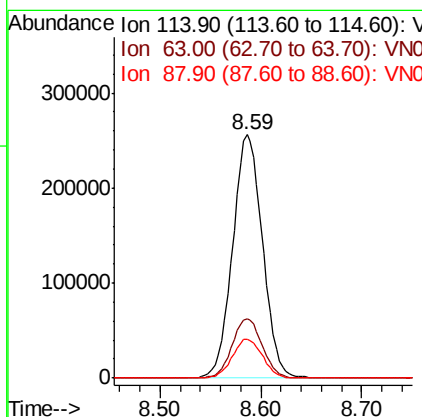
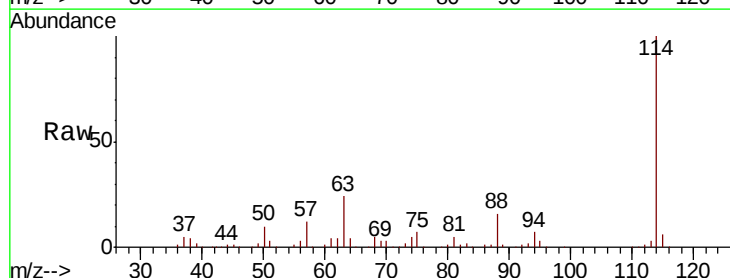
Instrument :  
 MSVOA\_N  
 ClientSampleId :

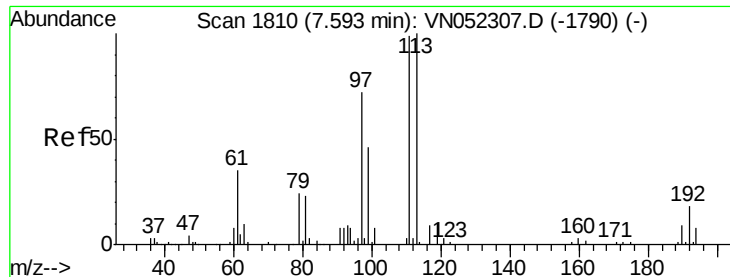
Tot Ion: 65 Resp: 241527  
 Ion Ratio Lower Upper  
 65 100  
 67 51.5 0.0 105.2



#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.59 min Scan# 2119  
 Delta R.T. -0.00 min  
 Lab File: VN052434.D  
 Acq: 21 Nov 2018 13:24

Tgt Ion: 114 Resp: 526927  
 Ion Ratio Lower Upper  
 114 100  
 63 24.1 0.0 45.4  
 88 16.0 0.0 31.2

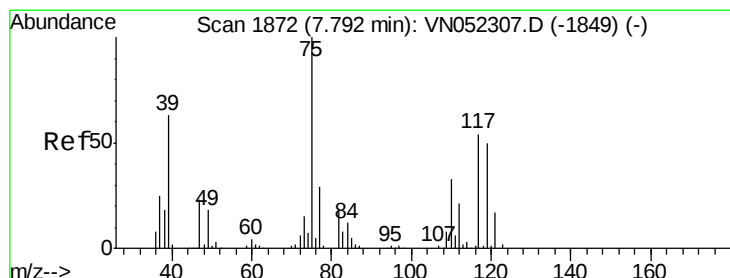
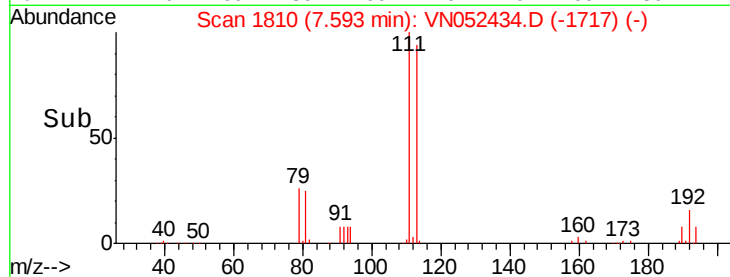
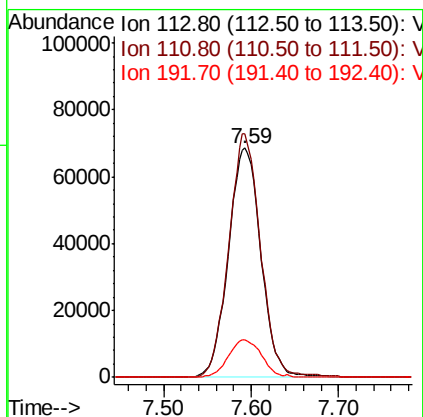
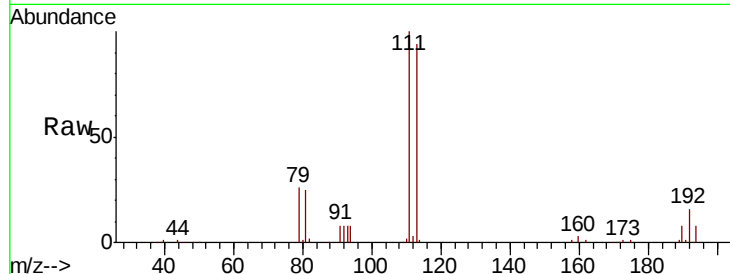




#35  
 Dibromofluoromethane  
 Concen: 50.000 ug/l  
 RT: 7.59 min Scan# 1810  
 Delta R.T. -0.00 min  
 Lab File: VN052434.D  
 Acq: 21 Nov 2018 13:24

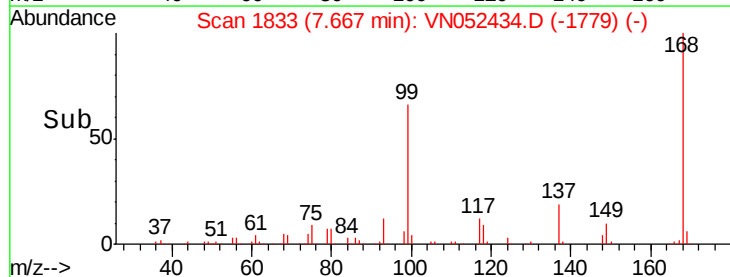
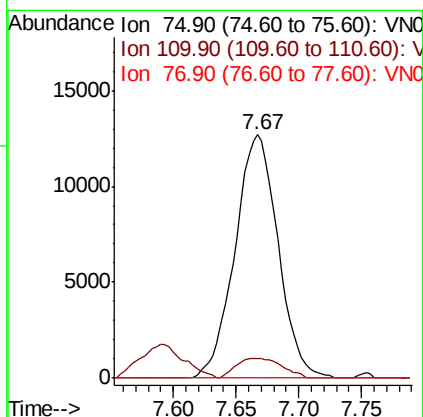
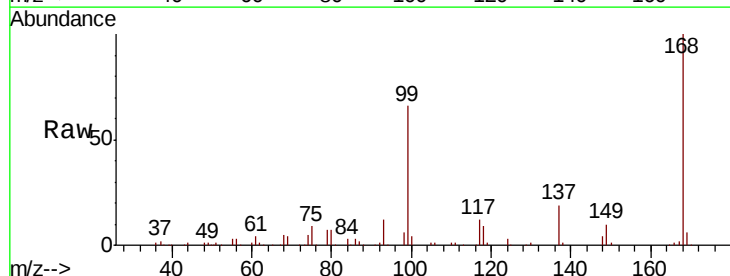
Instrument :  
 MSVOA\_N  
 ClientSampleId :

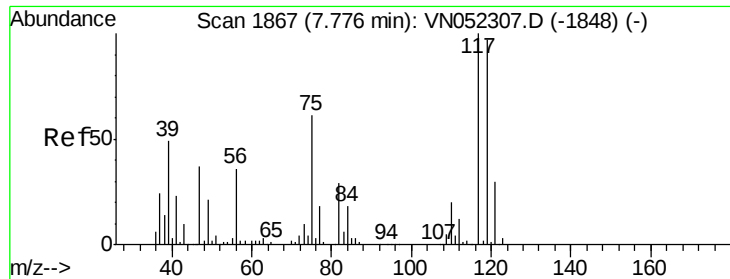
Tot Ion:113 Resp: 177062  
 Ion Ratio Lower Upper  
 113 100  
 111 102.8 81.0 121.6  
 192 16.8 13.8 20.6



#36  
 1,1-Dichloropropene  
 Concen: 5.729 ug/l  
 RT: 7.67 min Scan# 1833  
 Delta R.T. -0.13 min  
 Lab File: VN052434.D  
 Acq: 21 Nov 2018 13:24

Tgt Ion: 75 Resp: 30257  
 Ion Ratio Lower Upper  
 75 100  
 110 8.7 16.5 49.5#  
 77 0.0 24.2 36.2#

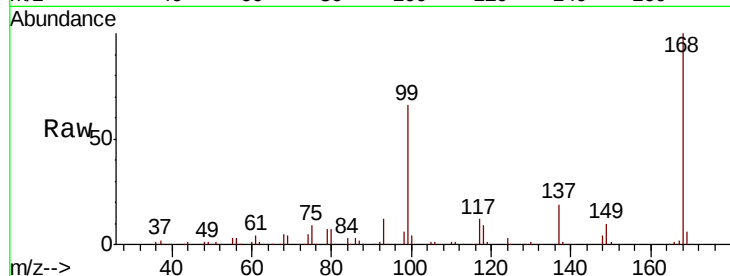




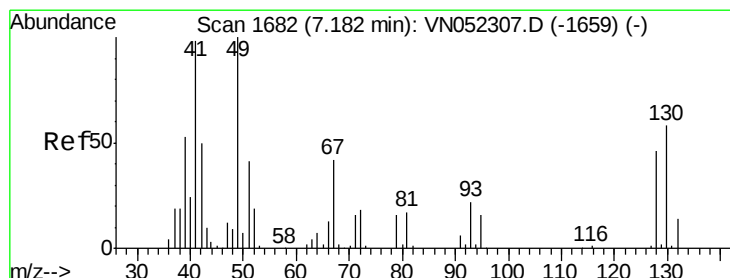
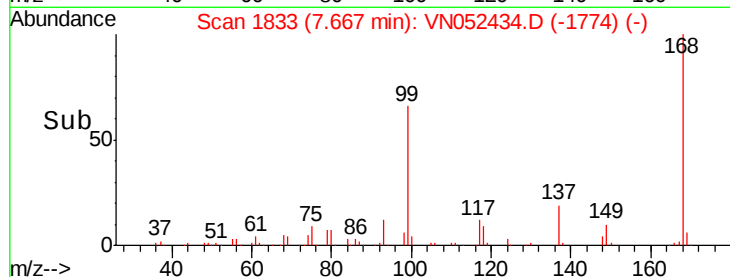
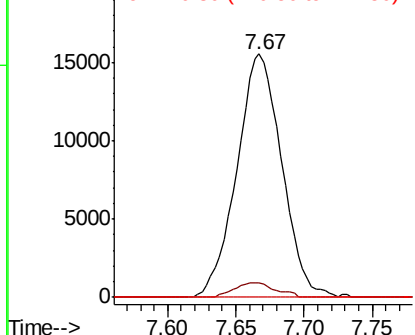
#38  
Carbon Tetrachloride  
Concen: 7.306 ug/l  
RT: 7.67 min Scan# 1833  
Delta R.T. -0.11 min  
Lab File: VN052434.D  
Acq: 21 Nov 2018 13:24

Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion:117 Resp: 35450  
Ion Ratio Lower Upper  
117 100  
119 5.9 77.4 116.0#  
121 0.0 24.0 36.0#

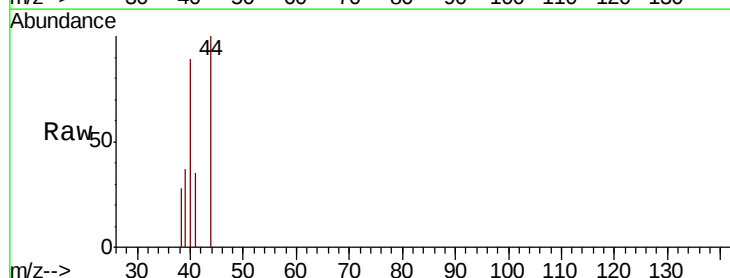


Abundance Ion 116.80 (116.50 to 117.50): V  
Ion 118.80 (118.50 to 119.50): V  
Ion 120.80 (120.50 to 121.50): V

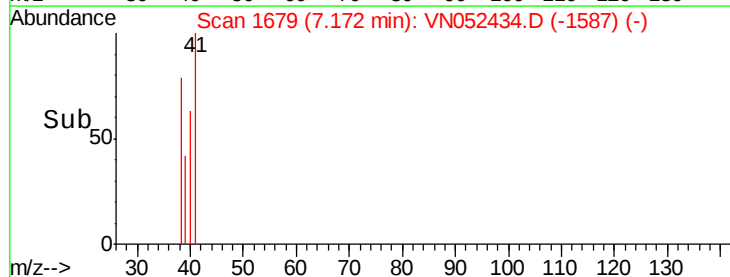
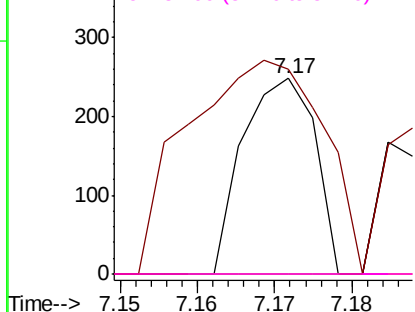


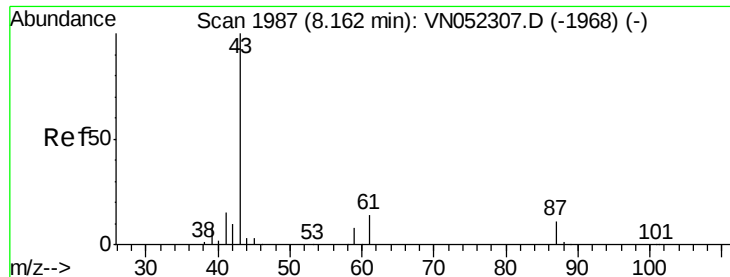
#41  
Methacrylonitrile  
Concen: 3.765 ug/l  
RT: 7.17 min Scan# 1679  
Delta R.T. -0.00 min  
Lab File: VN052434.D  
Acq: 21 Nov 2018 13:24

Tgt Ion: 41 Resp: 161  
Ion Ratio Lower Upper  
41 100  
39 206.2 0.0 0.0#  
67 0.0 0.0 0.0  
52 0.0 0.0 0.0



Abundance Ion 41.00 (40.70 to 41.70): VNC  
Ion 39.00 (38.70 to 39.70): VNC  
Ion 67.00 (66.70 to 67.70): VNC  
Ion 52.00 (51.70 to 52.70): VNC





#43

Isopropyl Acetate

Concen: 2.424 ug/l

RT: 8.17 min Scan# 1988

Delta R.T. 0.00 min

Lab File: VN052434.D

Acq: 21 Nov 2018 13:24

Instrument :

MSVOA\_N

ClientSampleId :

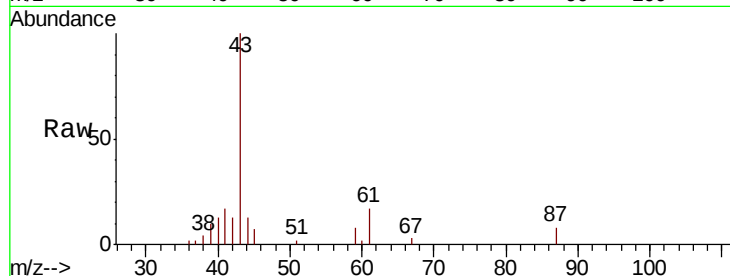
Tot Ion: 43 Resp: 17929

Ion Ratio Lower Upper

43 100

61 14.2 12.0 18.0

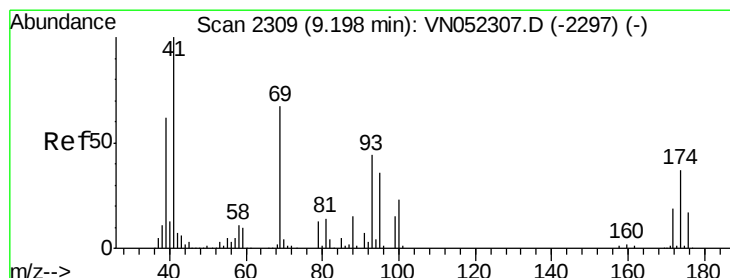
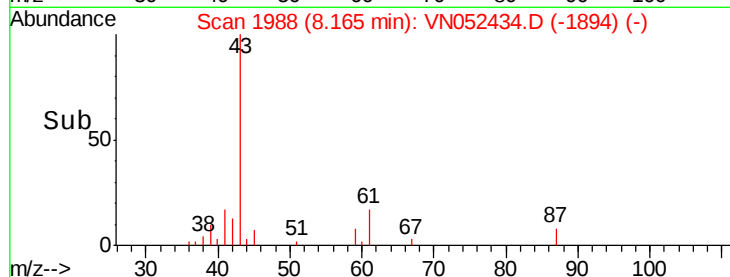
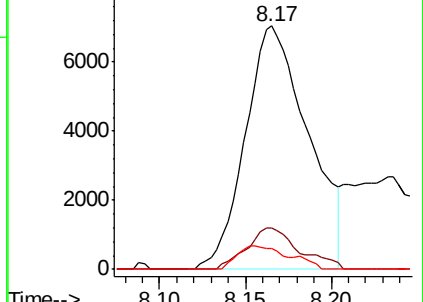
87 8.0 8.3 12.5#



Abundance Ion 43.00 (42.70 to 43.70): VN052307.D (-1968) (-)

Ion 61.00 (60.70 to 61.70): VN052307.D (-1968) (-)

Ion 87.00 (86.70 to 87.70): VN052307.D (-1968) (-)



#48

Methyl methacrylate

Concen: 1.588 ug/l

RT: 9.18 min Scan# 2304

Delta R.T. -0.02 min

Lab File: VN052434.D

Acq: 21 Nov 2018 13:24

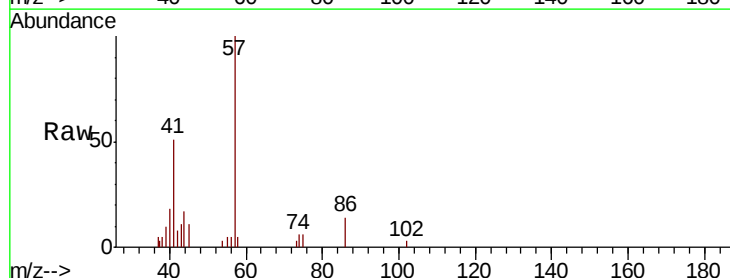
Tgt Ion: 41 Resp: 5961

Ion Ratio Lower Upper

41 100

69 0.0 57.1 85.7#

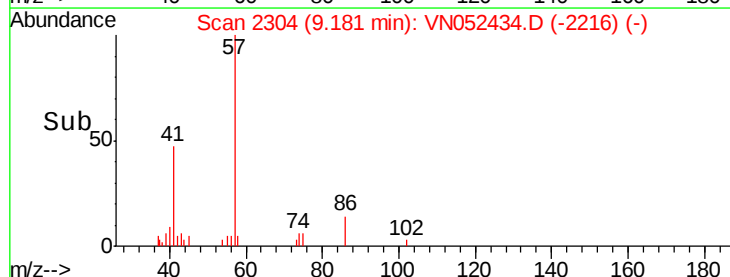
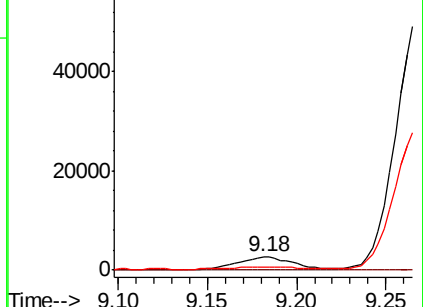
39 0.0 52.5 78.7#

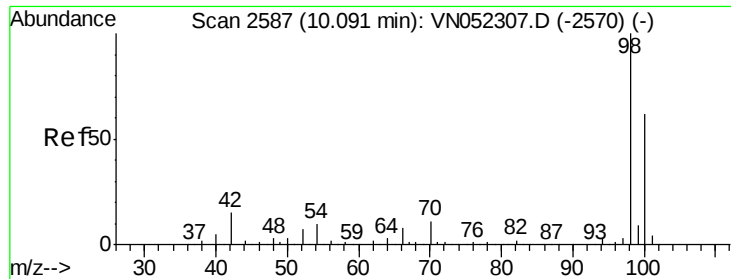


Abundance Ion 41.00 (40.70 to 41.70): VN052307.D (-2297) (-)

Ion 69.00 (68.70 to 69.70): VN052307.D (-2297) (-)

Ion 39.00 (38.70 to 39.70): VN052307.D (-2297) (-)





#50

Toluene-d8

Concen: N.D. ug/l

RT: 10.09 min Scan# 2587

Delta R.T. -0.00 min

Lab File: VN052434.D

Acq: 21 Nov 2018 13:24

Instrument :

MSVOA\_N

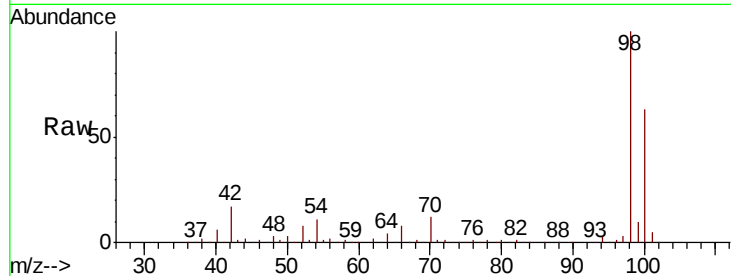
ClientSampleId :

Tot Ion: 98 Resp: 674774

Ion Ratio Lower Upper

98 100

100 62.7 49.5 74.3



Abundance Ion 98.00 (97.70 to 98.70): VN0

Ion 100.00 (99.70 to 100.70): VN

10.09

400000

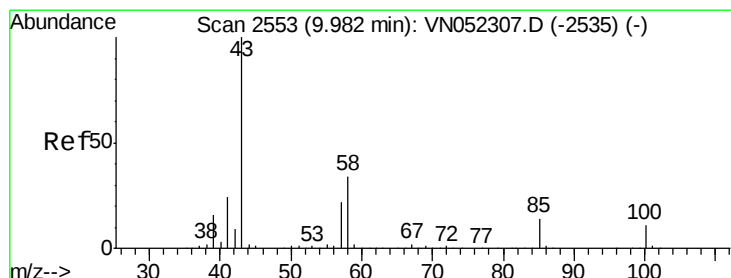
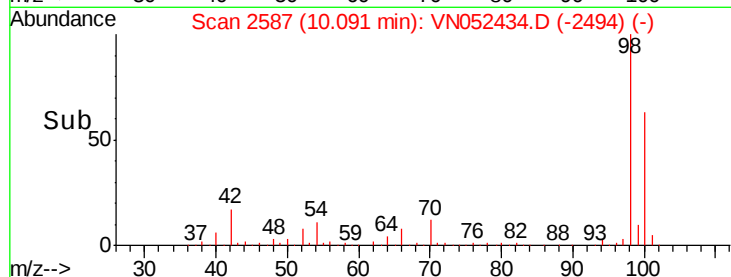
300000

200000

100000

0

Time-->



#51

4-Methyl-2-Pentanone

Concen: 1.416 ug/l

RT: 10.02 min Scan# 2566

Delta R.T. 0.04 min

Lab File: VN052434.D

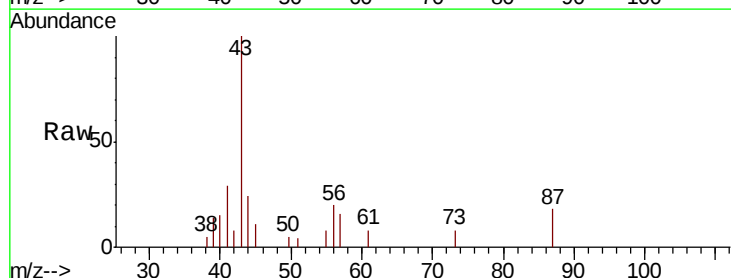
Acq: 21 Nov 2018 13:24

Tgt Ion: 43 Resp: 5271

Ion Ratio Lower Upper

43 100

58 0.0 27.0 40.6#



Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 58.00 (57.70 to 58.70): VN0

10.02

4000

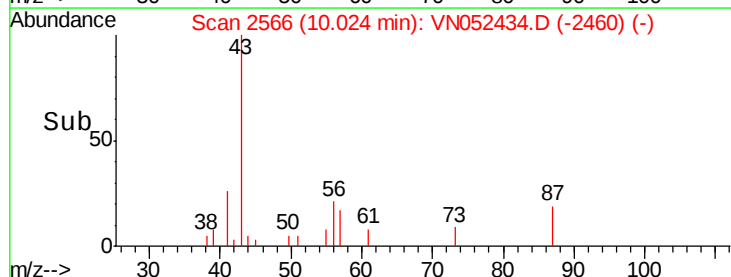
3000

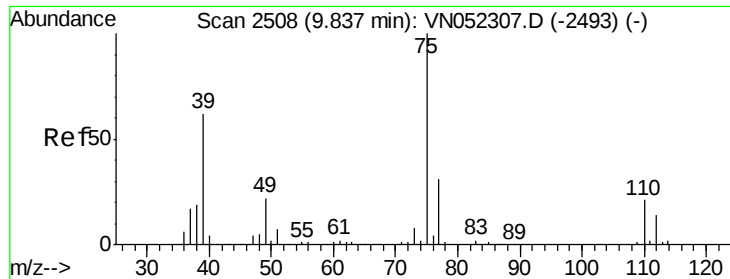
2000

1000

0

Time-->





#54

cis-1,3-Dichloropropene

Concen: 5.583 ug/l

RT: 9.90 min Scan# 2529

Delta R.T. 0.07 min

Lab File: VN052434.D

Acq: 21 Nov 2018 13:24

Instrument :

MSVOA\_N

ClientSampled :

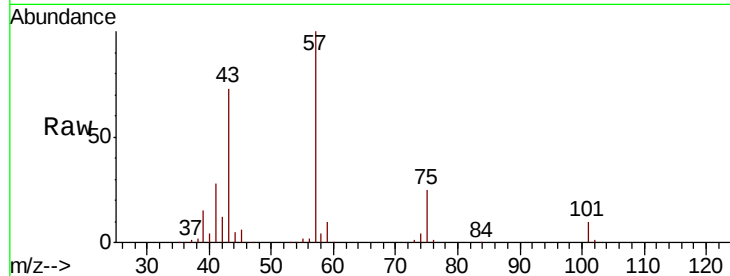
Tot Ion: 75 Resp: 32649

Ion Ratio Lower Upper

75 100

77 0.0 24.6 36.8#

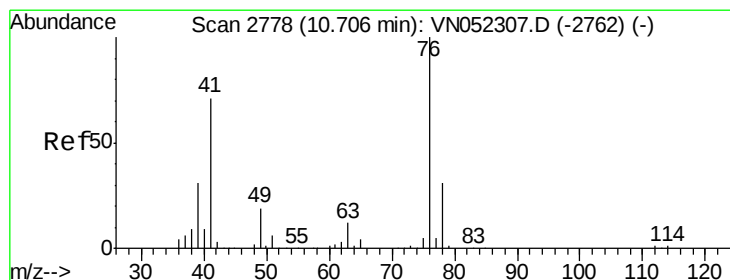
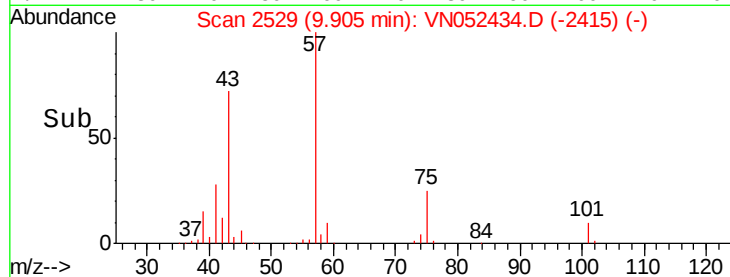
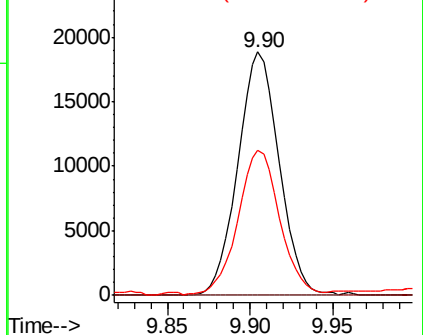
39 58.9 49.9 74.9



Abundance Ion 74.90 (74.60 to 75.60): VN0

Ion 76.90 (76.60 to 77.60): VN0

Ion 39.00 (38.70 to 39.70): VN0



#57

1,3-Dichloropropane

Concen: 1.147 ug/l

RT: 10.76 min Scan# 2796

Delta R.T. 0.06 min

Lab File: VN052434.D

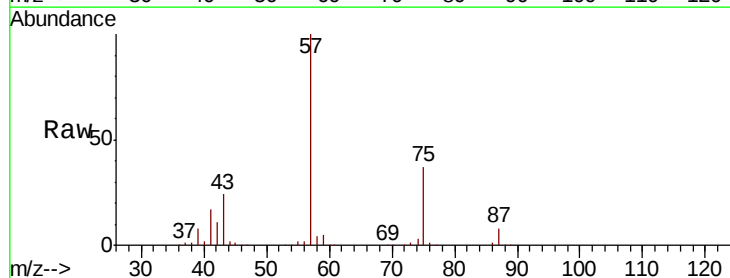
Acq: 21 Nov 2018 13:24

Tgt Ion: 76 Resp: 6648

Ion Ratio Lower Upper

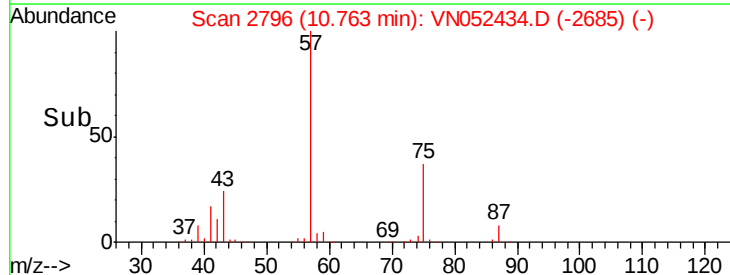
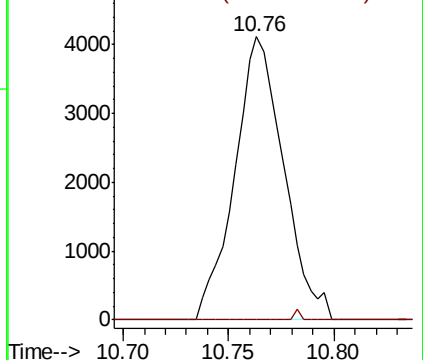
76 100

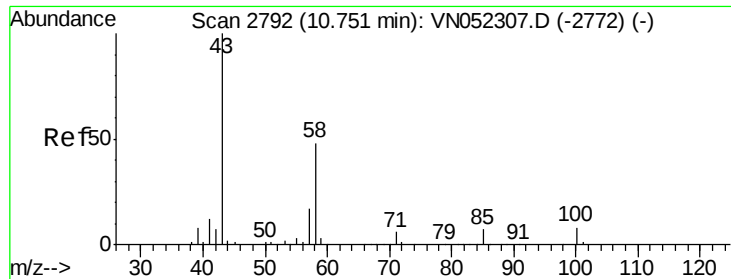
78 0.5 25.7 38.5#



Abundance Ion 75.90 (75.60 to 76.60): VN0

Ion 77.90 (77.60 to 78.60): VN0

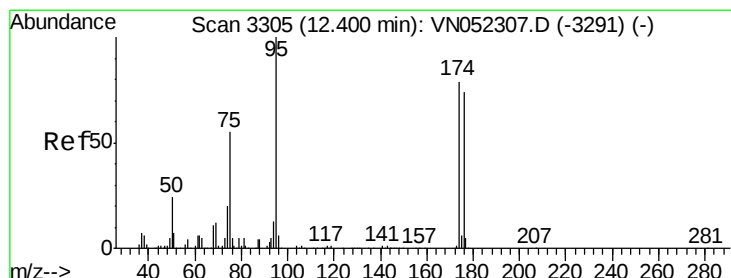
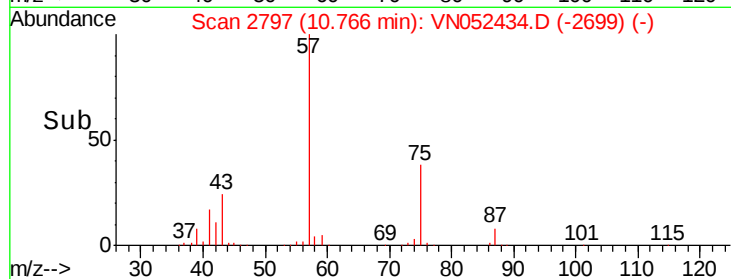
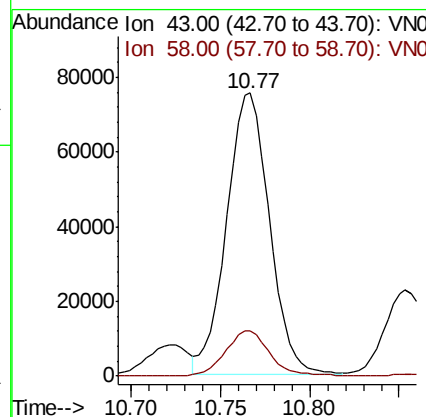
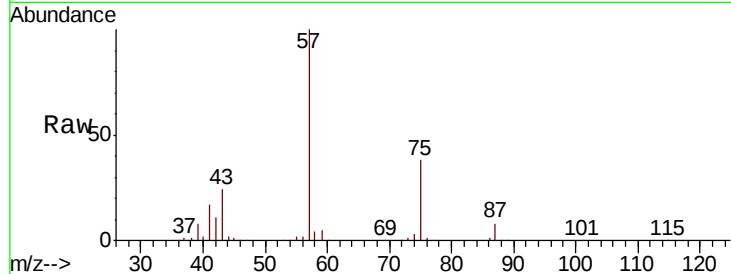




#59  
2-Hexanone  
Concen: 49.435 ug/l  
RT: 10.77 min Scan# 2797  
Delta R.T. 0.02 min  
Lab File: VN052434.D  
Acq: 21 Nov 2018 13:24

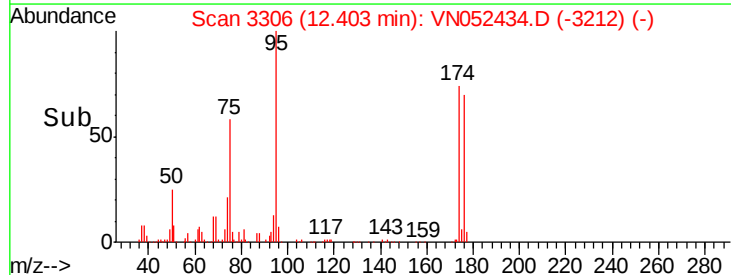
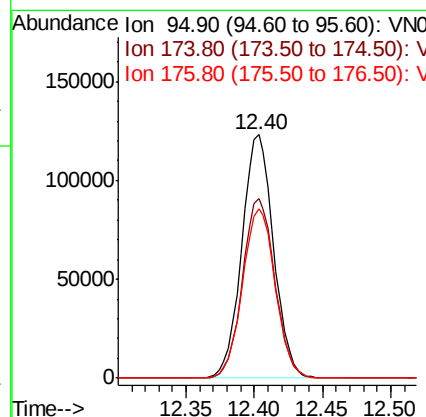
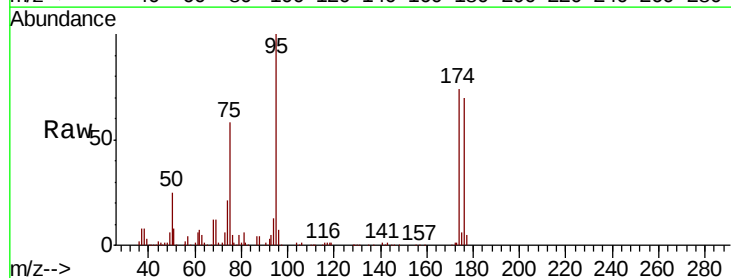
Instrument :  
MSVOA\_N  
ClientSampled :

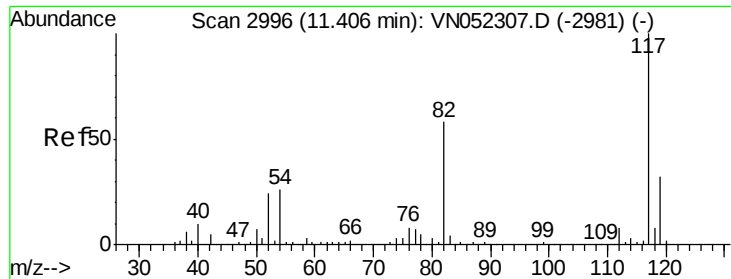
Tot Ion: 43 Resp: 126595  
Ion Ratio Lower Upper  
43 100  
58 16.6 23.5 70.6#



#62  
4-Bromofluorobenzene  
Concen: N.D. ug/l  
RT: 12.40 min Scan# 3306  
Delta R.T. 0.00 min  
Lab File: VN052434.D  
Acq: 21 Nov 2018 13:24

Tgt Ion: 95 Resp: 198667  
Ion Ratio Lower Upper  
95 100  
174 75.2 0.0 156.0  
176 71.8 0.0 148.4





#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 11.41 min Scan# 2997

Delta R.T. 0.00 min

Lab File: VN052434.D

Acq: 21 Nov 2018 13:24

Instrument :

MSVOA\_N

ClientSampleId :

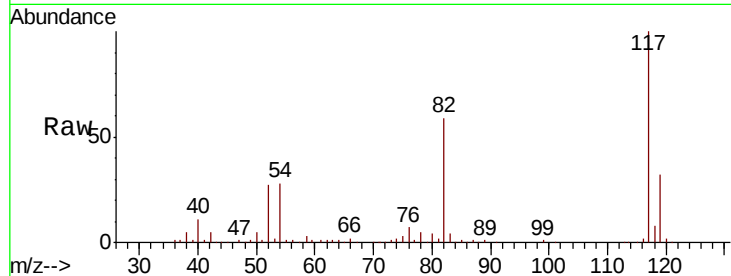
Tot Ion:117 Resp: 456996

Ion Ratio Lower Upper

117 100

82 58.9 46.5 69.7

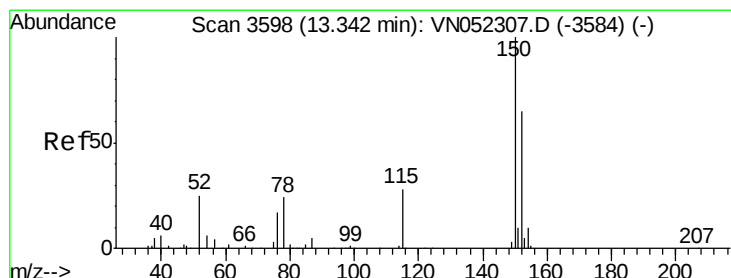
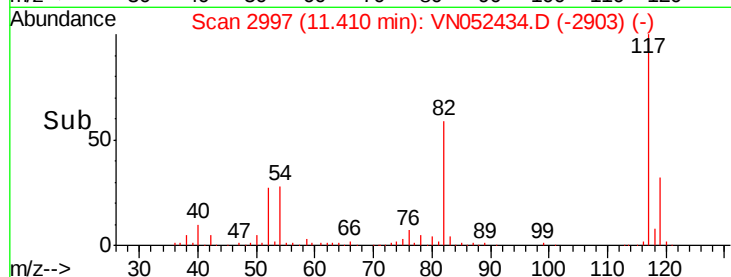
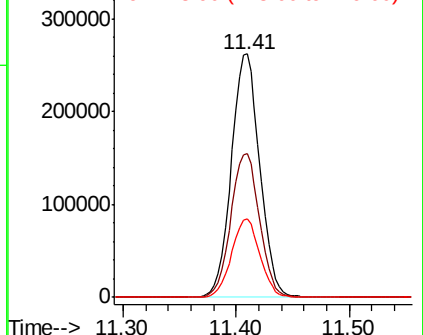
119 32.2 25.7 38.5



Abundance Ion 116.90 (116.60 to 117.60): V

Ion 82.00 (81.70 to 82.70): VN0

Ion 118.90 (118.60 to 119.60): 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: VN052434.D

Acq: 21 Nov 2018 13:24

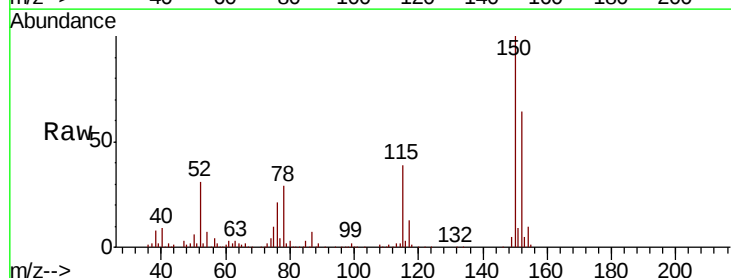
Tgt Ion:152 Resp: 153789

Ion Ratio Lower Upper

152 100

115 60.4 30.3 91.0

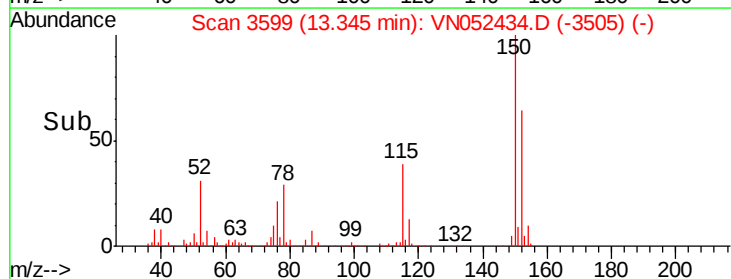
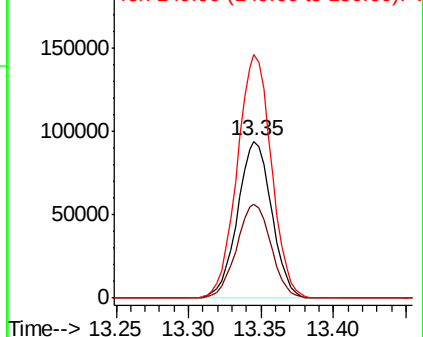
150 155.3 0.0 348.2

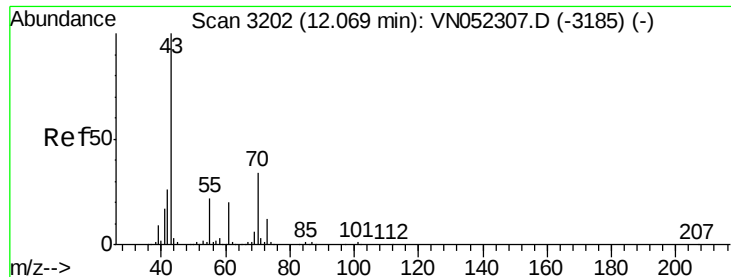


Abundance Ion 151.90 (151.60 to 152.60): V

Ion 114.90 (114.60 to 115.60): V

Ion 149.90 (149.60 to 150.60): V





#74

N-amvl acetate

Concen: 3.615 ug/l

RT: 11.88 min Scan# 3143

Delta R.T. -0.19 min

Lab File: VN052434.D

Acq: 21 Nov 2018 13:24

Instrument :

MSVOA\_N

ClientSampled :

Tot Ion: 43 Resp: 15919

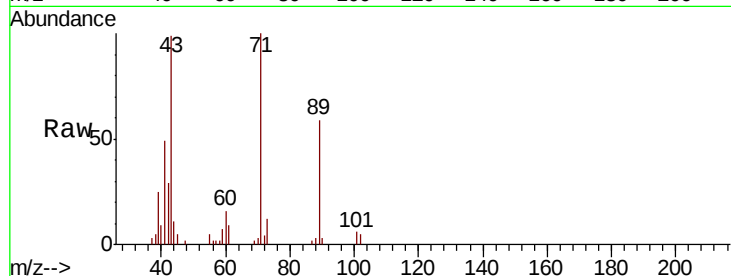
Ion Ratio Lower Upper

43 100

70 1.4 27.1 40.7#

55 4.1 17.4 26.0#

61 8.1 16.1 24.1#

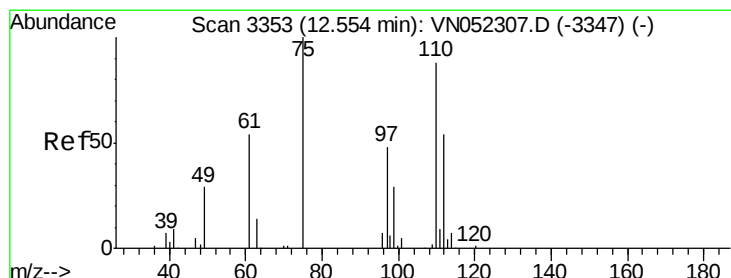
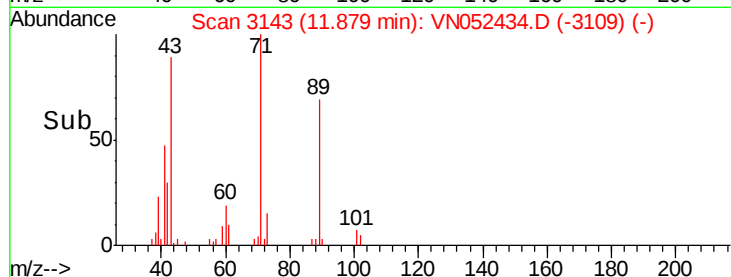
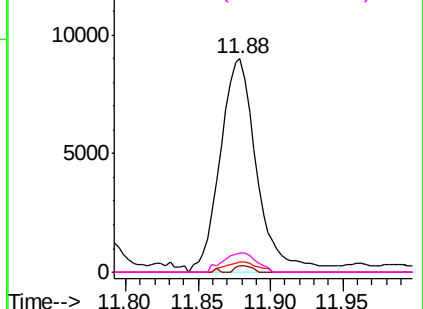


Abundance Ion 43.00 (42.70 to 43.70): VN0

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: 44.505 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. -0.15 min

Lab File: VN052434.D

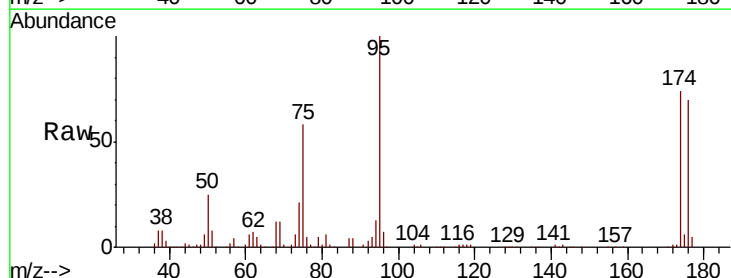
Acq: 21 Nov 2018 13:24

Tgt Ion: 75 Resp: 116137

Ion Ratio Lower Upper

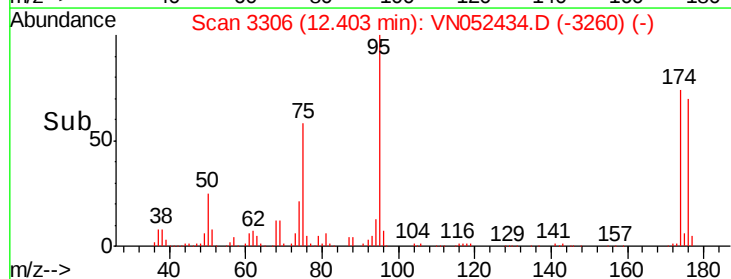
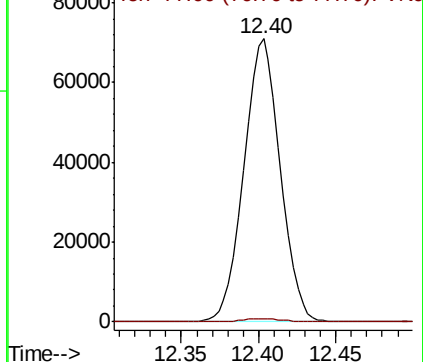
75 100

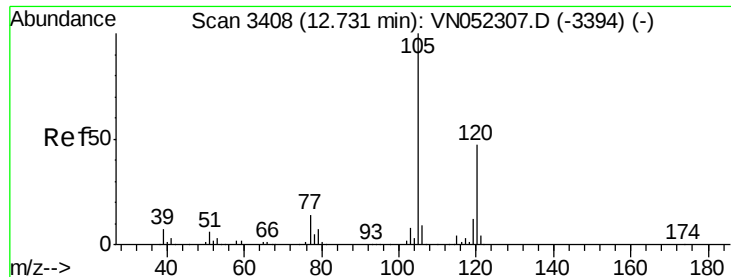
77 1.3 0.0 0.0#



Abundance Ion 74.90 (74.60 to 75.60): VN0

Ion 77.00 (76.70 to 77.70): VN0





#80

1,3,5-Trimethylbenzene

Concen: 0.962 ug/l

RT: 12.73 min Scan# 3409

Delta R.T. 0.00 min

Lab File: VN052434.D

Acq: 21 Nov 2018 13:24

Instrument :

MSVOA\_N

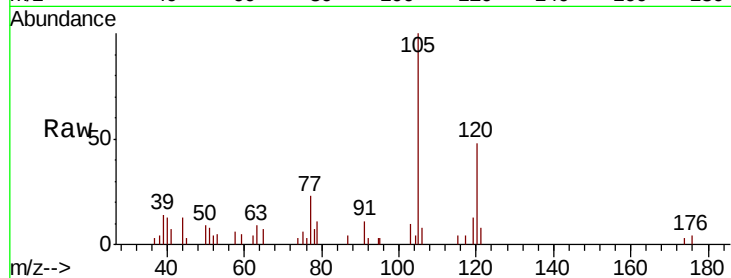
ClientSampleId :

Tot Ion:105 Resp: 9461

Ion Ratio Lower Upper

105 100

120 48.6 23.7 71.1



Abundance Ion 105.00 (104.70 to 105.70): V

Ion 120.00 (119.70 to 120.70): V

12.73

6000

5000

4000

3000

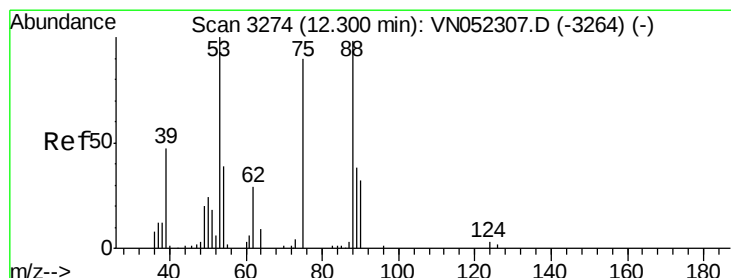
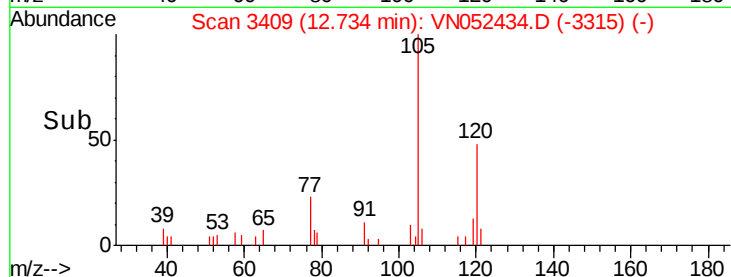
2000

1000

0

Time-->

12.70 12.75



#81

trans-1,4-Dichloro-2-butene

Concen: 144.348 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. 0.10 min

Lab File: VN052434.D

Acq: 21 Nov 2018 13:24

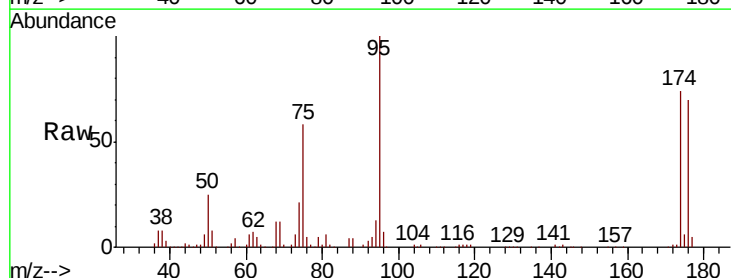
Tgt Ion: 75 Resp: 116137

Ion Ratio Lower Upper

75 100

53 0.1 90.2 135.2#

89 0.0 35.4 53.0#



Abundance Ion 74.90 (74.60 to 75.60): VNO

Ion 53.00 (52.70 to 53.70): VNO

Ion 88.90 (88.60 to 89.60): VNO

12.40

80000

60000

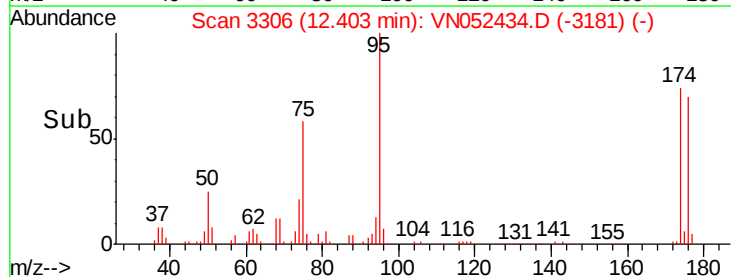
40000

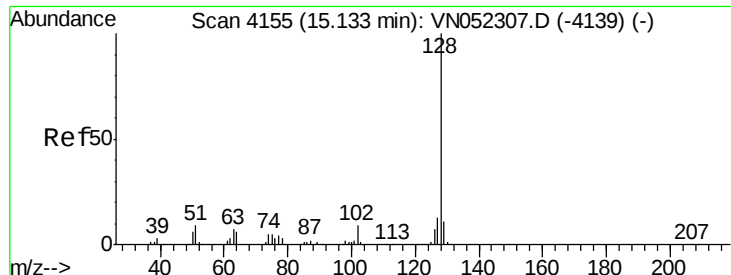
20000

0

Time-->

12.35 12.40 12.45





#95

Naphthalene

Concen: 2.639 ug/l

RT: 15.13 min Scan# 4154

Delta R.T. -0.00 min

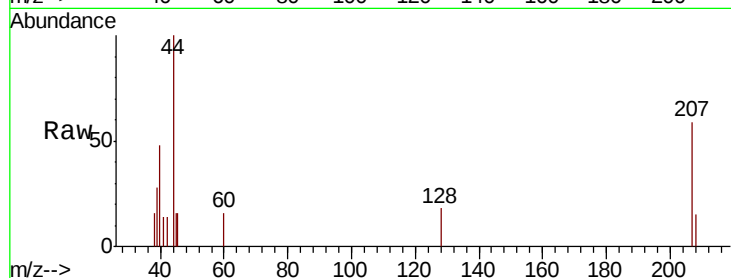
Lab File: VN052434.D

Acq: 21 Nov 2018 13:24

Instrument :

MSVOA\_N

ClientSampleId :



|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 128   | Resp: | 196   |
| Ion      | Ratio | Lower | Upper |
| 128      | 100   |       |       |
| 127      | 0.0   | 10.4  | 15.6# |
| 129      | 0.0   | 8.6   | 13.0# |

