

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN091019\  
 Data File : VN057852.D  
 Acq On : 10 Sep 2019 11:18  
 Operator : JC/SP  
 Sample : K4622-33  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 58 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Quant Time: Sep 10 13:04:28 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N091019W.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Sep 10 03:02:13 2019  
 Response via : Initial Calibration

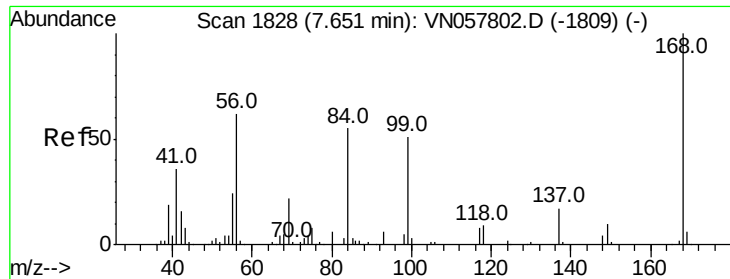
| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.65  | 168  | 294397   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.58  | 114  | 520971   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 486228   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.35 | 152  | 243773   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units   | Dev(Min) |
|-----------------------------|-------|------|----------|-------|---------|----------|
| 33) 1,2-Dichloroethane-d4   | 8.01  | 65   | 334726   | 56.14 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 112.28% |          |
| 35) Dibromofluoromethane    | 7.58  | 113  | 228786   | 47.58 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 95.16%  |          |
| 50) Toluene-d8              | 10.09 | 98   | 945423   | 50.64 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 101.28% |          |
| 62) 4-Bromofluorobenzene    | 12.40 | 95   | 306995   | 43.15 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 86.30%  |          |

| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 5) Bromomethane                | 2.55  | 94   | 137      | Below Cal | #      | 2      |
| 16) Acetone                    | 3.80  | 43   | 9264     | 4.739     | ug/l   | 99     |
| 18) Methyl Acetate             | 4.32  | 43   | 8538     | 1.638     | ug/l   | 96     |
| 20) Methylene Chloride         | 4.53  | 84   | 6979     | 0.661     | ug/l # | 94     |
| 25) 2-Butanone                 | 6.84  | 43   | 718      | 0.254     | ug/l # | 49     |
| 31) Cyclohexane                | 7.65  | 56   | 7808     | Below Cal | #      | 48     |
| 36) 1,1-Dichloropropene        | 7.65  | 75   | 25829    | 4.275     | ug/l # | 51     |
| 38) Carbon Tetrachloride       | 7.65  | 117  | 29889    | 5.418     | ug/l # | 17     |
| 43) Isopropyl Acetate          | 8.16  | 43   | 109662   | 10.446    | ug/l # | 85     |
| 45) 1,2-Dichloropropane        | 9.26  | 63   | 1772     | 0.335     | ug/l # | 44     |
| 48) Methyl methacrylate        | 9.26  | 41   | 154431   | 29.001    | ug/l # | 46     |
| 51) 4-Methyl-2-Pentanone       | 9.98  | 43   | 5817     | 0.936     | ug/l   | 98     |
| 54) cis-1,3-Dichloropropene    | 9.90  | 75   | 36534    | 4.920     | ug/l # | 69     |
| 56) Ethyl methacrylate         | 10.54 | 69   | 1816     | 0.248     | ug/l # | 1      |
| 57) 1,3-Dichloropropane        | 10.76 | 76   | 6438     | 0.770     | ug/l # | 43     |
| 59) 2-Hexanone                 | 10.76 | 43   | 97765    | 20.996    | ug/l # | 55     |
| 71) Bromoform                  | 12.40 | 173  | 2442     | 0.887     | ug/l # | 1      |
| 74) N-amyl acetate             | 12.03 | 43   | 4737     | 0.575     | ug/l # | 47     |
| 76) 1,2,3-Trichloropropane     | 12.40 | 75   | 166168   | 30.133    | ug/l # | 100    |
| 81) trans-1,4-Dichloro-2-buten | 12.40 | 75   | 166168   | 106.037   | ug/l # | 6      |
| 95) Naphthalene                | 15.14 | 128  | 344      | Below Cal | #      | 69     |

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





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.65 min Scan# 1828

Delta R.T. 0.00 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

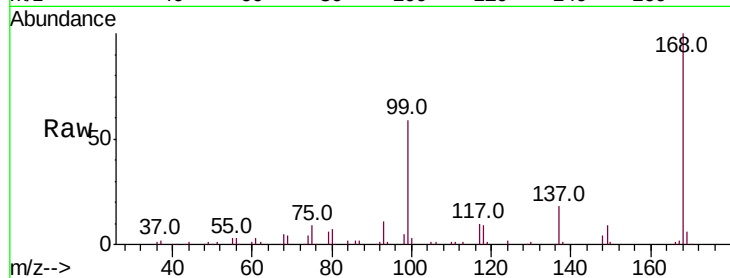
Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion:168 Resp: 294397

Ion Ratio Lower Upper

168 100

99 59.1 48.0 72.0



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VN

7.65

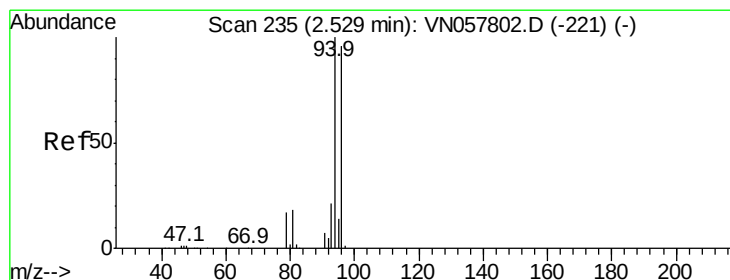
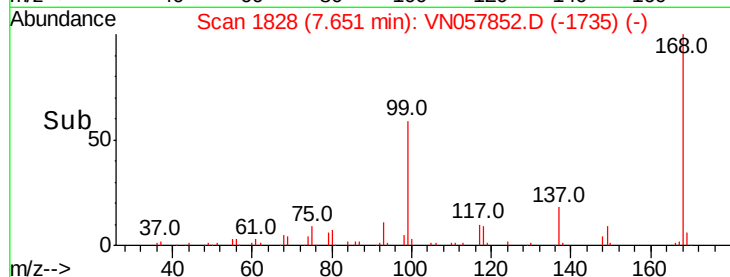
100000

50000

0

Time-->

7.60 7.70



#5

Bromomethane

Concen: Below Cal

RT: 2.55 min Scan# 241

Delta R.T. 0.02 min

Lab File: VN057852.D

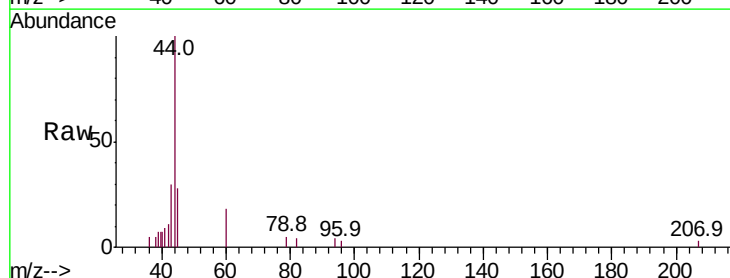
Acq: 10 Sep 2019 11:18

Tgt Ion: 94 Resp: 137

Ion Ratio Lower Upper

94 100

96 0.0 77.0 115.4#



Abundance Ion 93.90 (93.60 to 94.60): VN

Ion 95.90 (95.60 to 96.60): VN

2.55

200

150

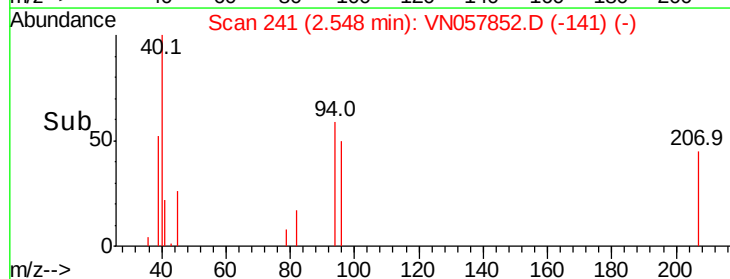
100

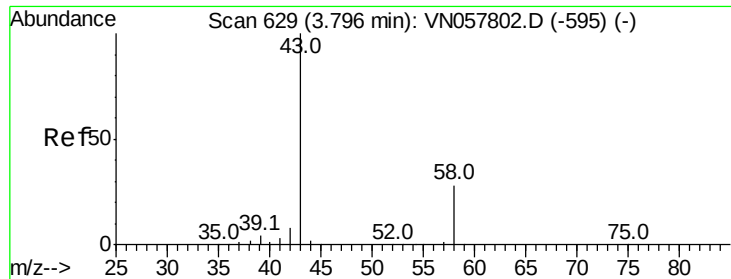
50

0

Time-->

2.53 2.54 2.55 2.56

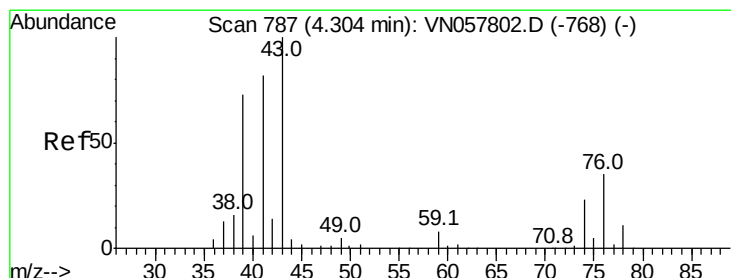
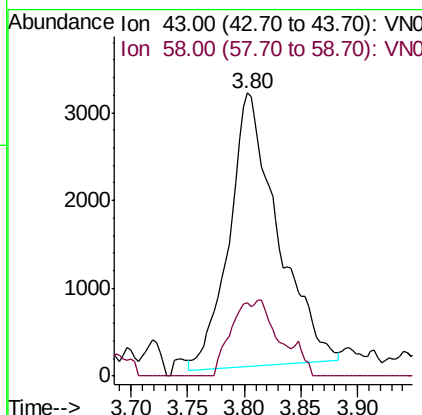
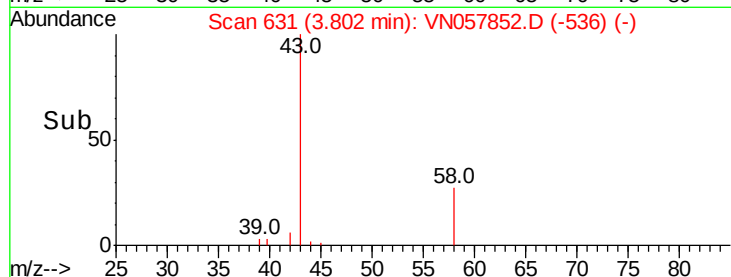
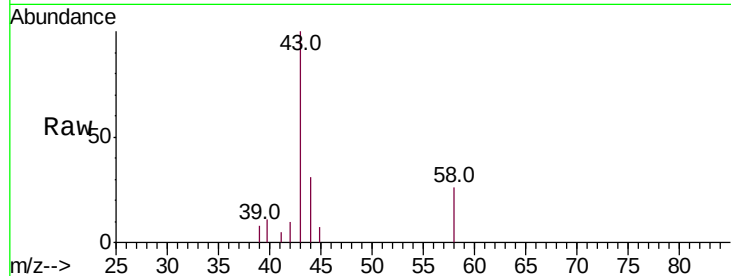




#16  
Acetone  
Concen: 4.739 ug/l  
RT: 3.80 min Scan# 631  
Delta R.T. 0.01 min  
Lab File: VN057852.D  
Acq: 10 Sep 2019 11:18

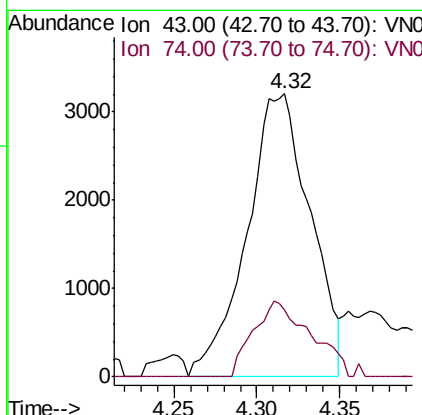
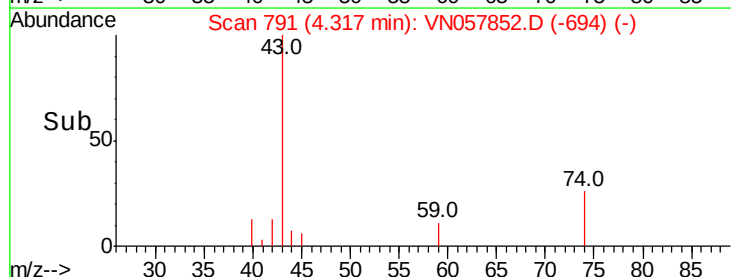
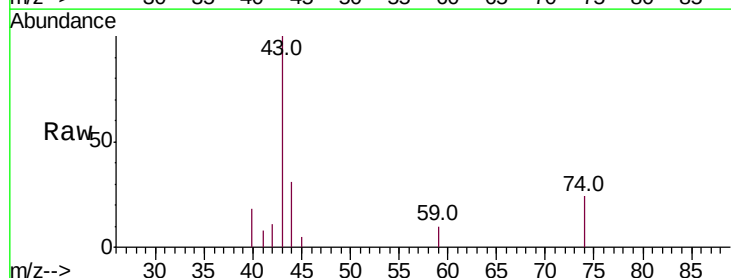
Instrument :  
MSVOA\_N  
ClientSampled :

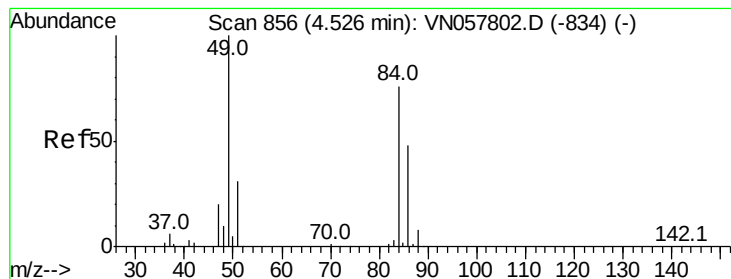
Tot Ion: 43 Resp: 9264  
Ion Ratio Lower Upper  
43 100  
58 27.3 22.2 33.2



#18  
Methyl Acetate  
Concen: 1.638 ug/l  
RT: 4.32 min Scan# 791  
Delta R.T. 0.01 min  
Lab File: VN057852.D  
Acq: 10 Sep 2019 11:18

Tgt Ion: 43 Resp: 8538  
Ion Ratio Lower Upper  
43 100  
74 24.3 17.9 26.9





#20

Methylene Chloride

Concen: 0.661 ug/l

RT: 4.53 min Scan# 858

Delta R.T. 0.01 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

Instrument :

MSVOA\_N

ClientSampled :

Tot Ion: 84 Resp: 6979

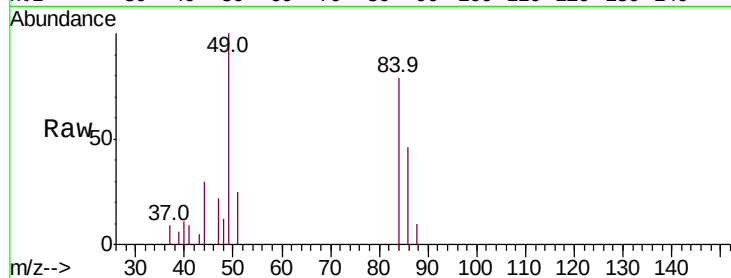
Ion Ratio Lower Upper

84 100

49 127.2 104.8 157.2

51 32.4 33.0 49.4#

86 58.1 50.5 75.7

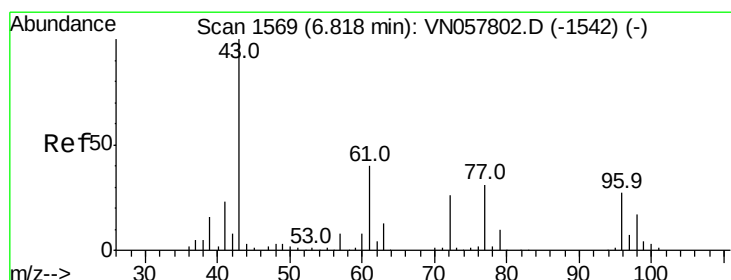
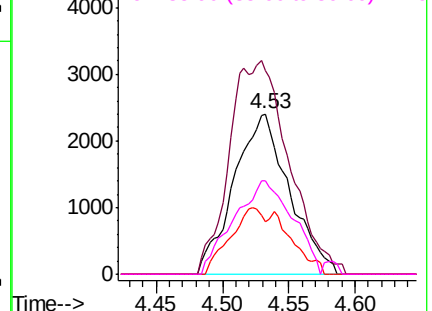
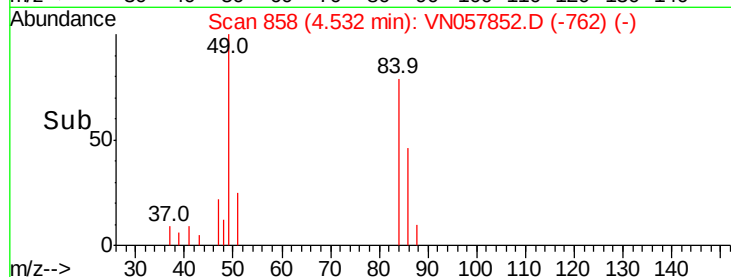


Abundance Ion 83.90 (83.60 to 84.60): VNO

Ion 48.90 (48.60 to 49.60): VNO

Ion 50.90 (50.60 to 51.60): VNO

Ion 85.90 (85.60 to 86.60): VNO



#25

2-Butanone

Concen: 0.254 ug/l

RT: 6.84 min Scan# 1575

Delta R.T. 0.02 min

Lab File: VN057852.D

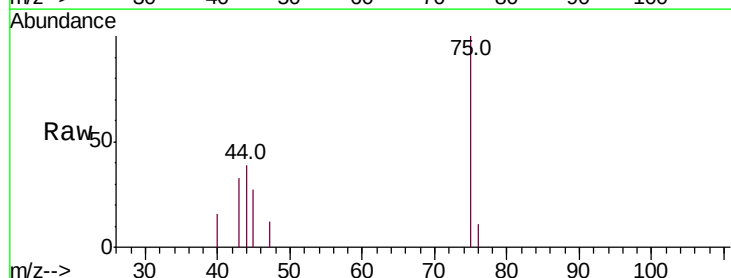
Acq: 10 Sep 2019 11:18

Tgt Ion: 43 Resp: 718

Ion Ratio Lower Upper

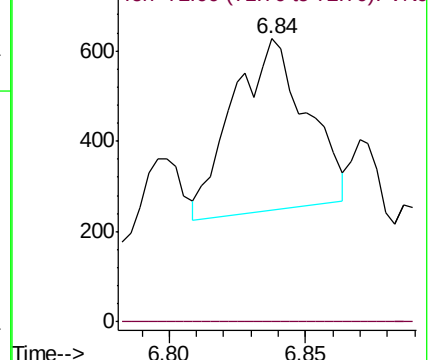
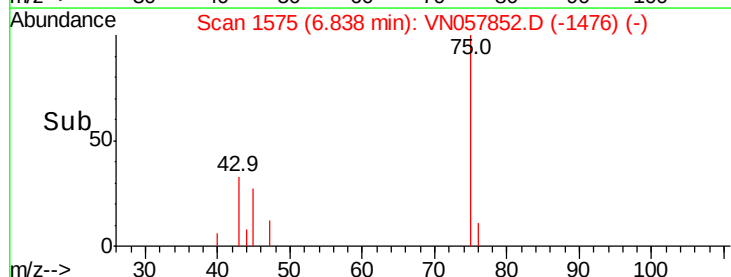
43 100

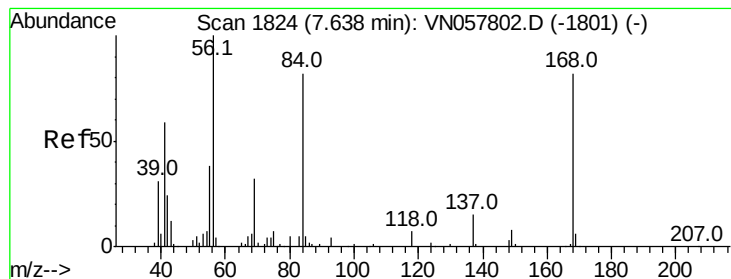
72 0.0 20.6 30.8#



Abundance Ion 43.00 (42.70 to 43.70): VNO

Ion 72.00 (71.70 to 72.70): VNO





#31

Cyclohexane

Concen: Below Cal

RT: 7.65 min Scan# 1827

Delta R.T. 0.01 min

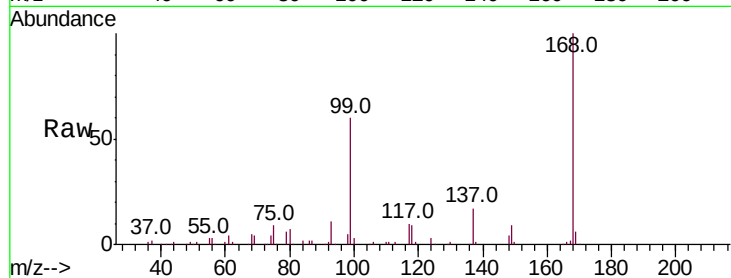
Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

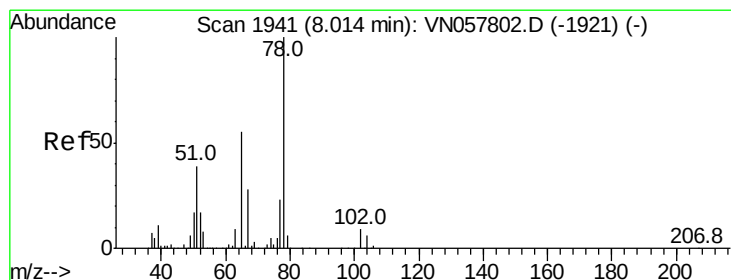
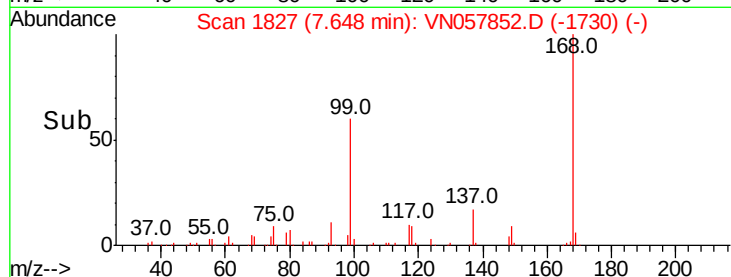
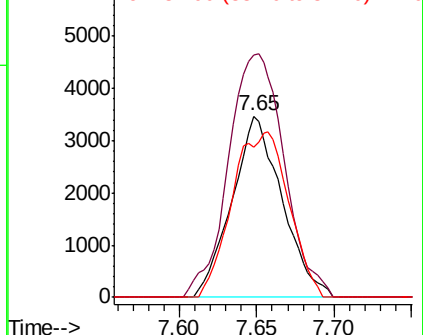
Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion: 56 Resp: 7808

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 56  | 100   |       |       |
| 69  | 134.1 | 25.9  | 38.9# |
| 84  | 82.8  | 65.6  | 98.4  |



Abundance Ion 56.00 (55.70 to 56.70): VN0  
Ion 69.00 (68.70 to 69.70): VN0  
Ion 84.00 (83.70 to 84.70): VN0



#33

1,2-Dichloroethane-d4

Concen: 56.136 ug/l

RT: 8.01 min Scan# 1941

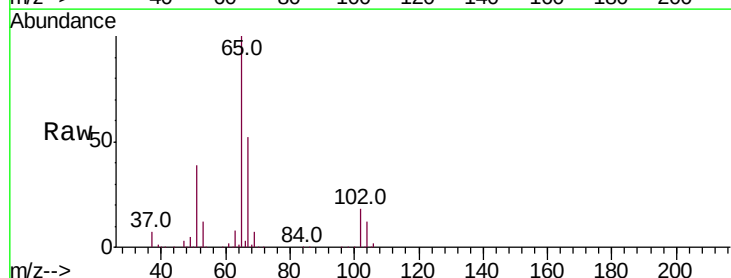
Delta R.T. 0.00 min

Lab File: VN057852.D

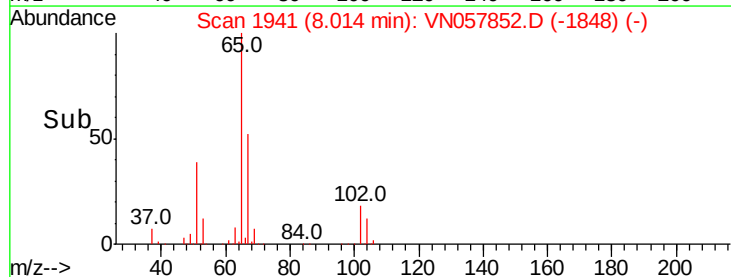
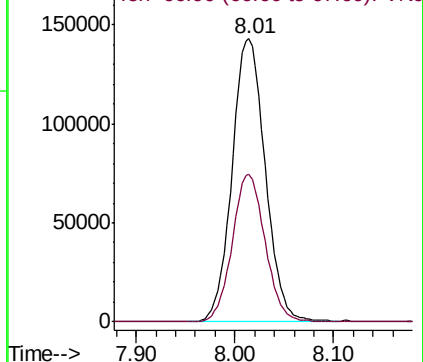
Acq: 10 Sep 2019 11:18

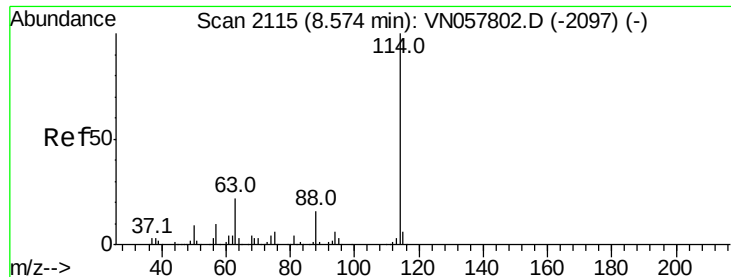
Tgt Ion: 65 Resp: 334726

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 65  | 100   |       |       |
| 67  | 51.5  | 0.0   | 104.0 |



Abundance Ion 64.90 (64.60 to 65.60): VN0  
Ion 66.90 (66.60 to 67.60): VN0

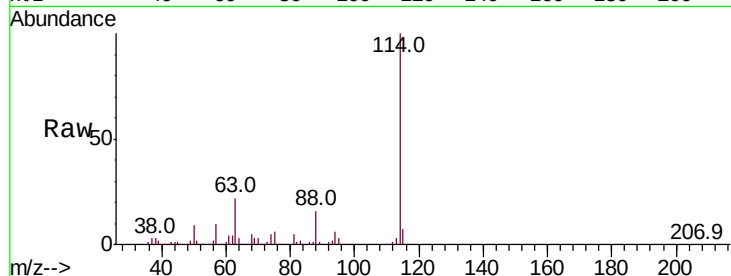




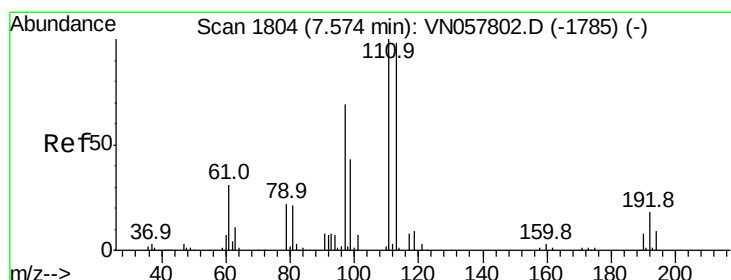
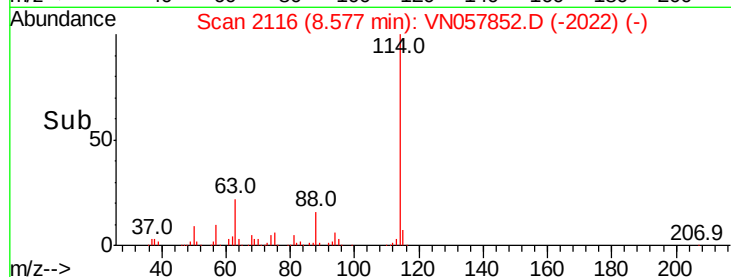
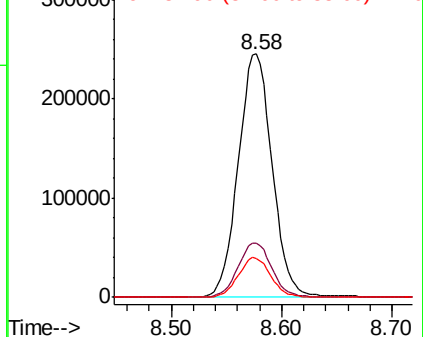
#34  
1,4-Difluorobenzene  
Concen: 50.000 ug/l  
RT: 8.58 min Scan# 2116  
Delta R.T. 0.00 min  
Lab File: VN057852.D  
Acq: 10 Sep 2019 11:18

Instrument :  
MSVOA\_N  
ClientSampleId :

Tot Ion:114 Resp: 520971  
Ion Ratio Lower Upper  
114 100  
63 22.1 0.0 44.0  
88 16.0 0.0 31.4

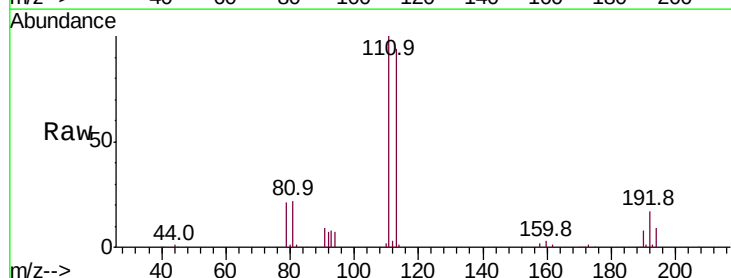


Abundance Ion 113.90 (113.60 to 114.60): V  
Ion 63.00 (62.70 to 63.70): VN  
Ion 87.90 (87.60 to 88.60): VN

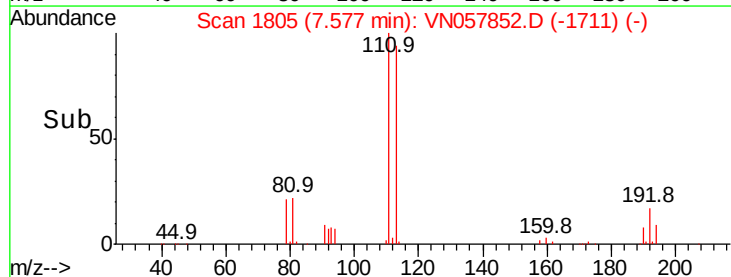
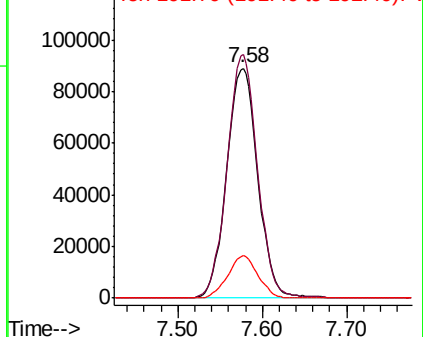


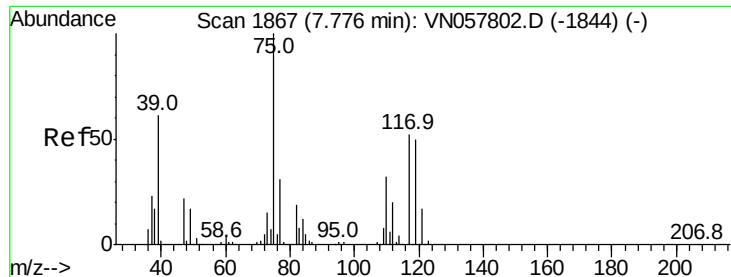
#35  
Dibromofluoromethane  
Concen: 47.581 ug/l  
RT: 7.58 min Scan# 1805  
Delta R.T. 0.00 min  
Lab File: VN057852.D  
Acq: 10 Sep 2019 11:18

Tgt Ion:113 Resp: 228786  
Ion Ratio Lower Upper  
113 100  
111 103.0 81.3 121.9  
192 17.9 14.6 22.0



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: 4.275 ug/l

RT: 7.65 min Scan# 1828

Delta R.T. -0.13 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

Instrument :

MSVOA\_N

ClientSampled :

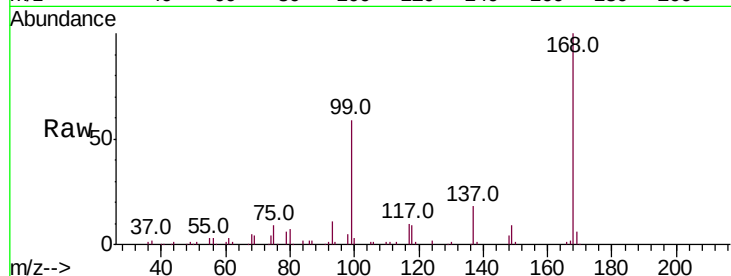
Tot Ion: 75 Resp: 25829

Ion Ratio Lower Upper

75 100

110 8.8 16.3 48.9#

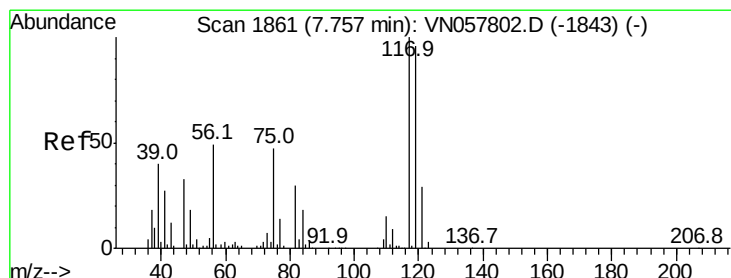
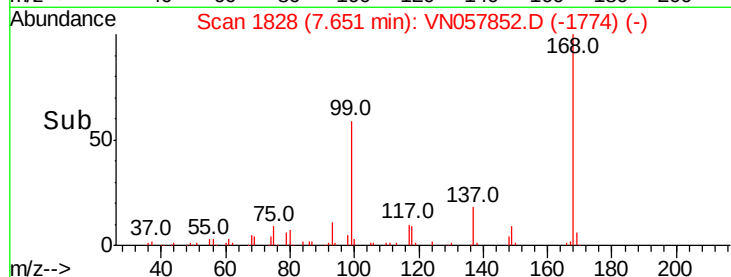
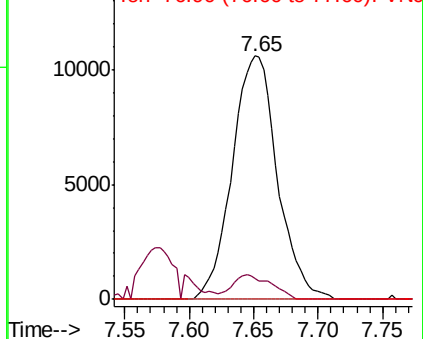
77 0.0 25.0 37.4#



Abundance Ion 74.90 (74.60 to 75.60): VN057852.D (-1774) (-)

Ion 109.90 (109.60 to 110.60): VN057852.D (-1774) (-)

Ion 76.90 (76.60 to 77.60): VN057852.D (-1774) (-)



#38

Carbon Tetrachloride

Concen: 5.418 ug/l

RT: 7.65 min Scan# 1829

Delta R.T. -0.10 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

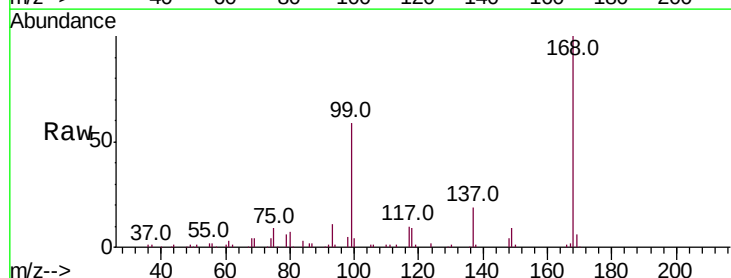
Tgt Ion: 117 Resp: 29889

Ion Ratio Lower Upper

117 100

119 6.5 76.9 115.3#

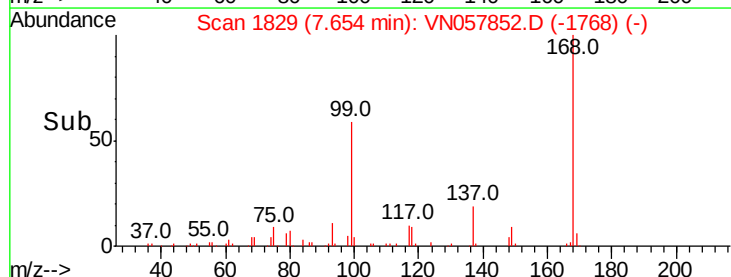
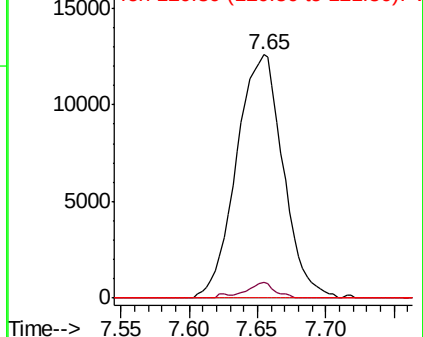
121 0.0 23.4 35.2#



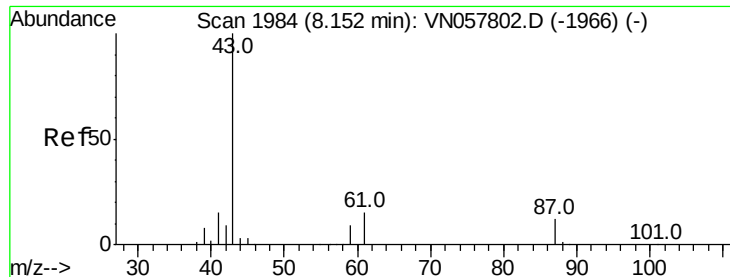
Abundance Ion 116.80 (116.50 to 117.50): VN057852.D (-1768) (-)

Ion 118.80 (118.50 to 119.50): VN057852.D (-1768) (-)

Ion 120.80 (120.50 to 121.50): VN057852.D (-1768) (-)







#43

Isopropyl Acetate

Concen: 10.446 ug/l

RT: 8.16 min Scan# 1986

Delta R.T. 0.01 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

Instrument :

MSVOA\_N

ClientSampleId :

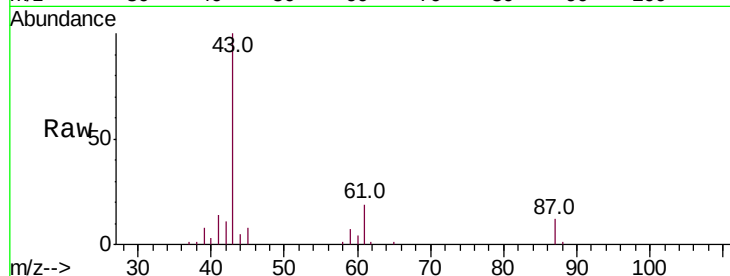
Tot Ion: 43 Resp: 109662

Ion Ratio Lower Upper

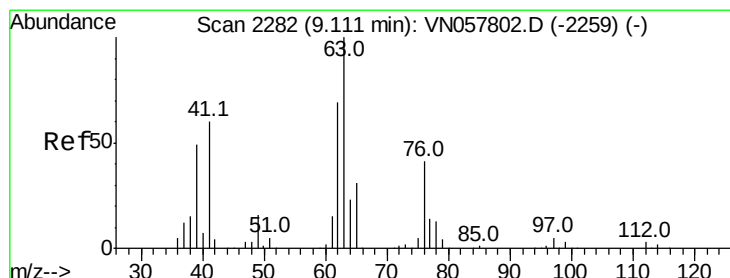
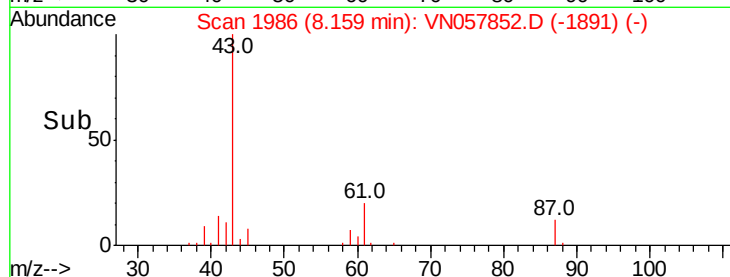
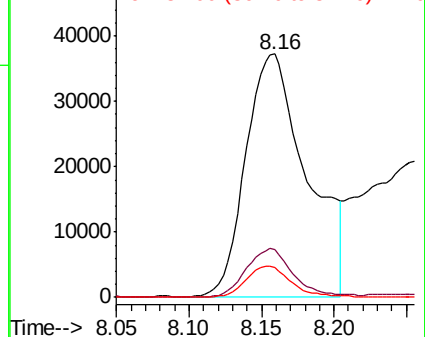
43 100

61 15.5 20.1 30.1#

87 9.5 9.5 14.3#



Abundance Ion 43.00 (42.70 to 43.70): VNO  
Ion 61.00 (60.70 to 61.70): VNO  
Ion 87.00 (86.70 to 87.70): VNO



#45

1,2-Dichloropropane

Concen: 0.335 ug/l

RT: 9.26 min Scan# 2328

Delta R.T. 0.15 min

Lab File: VN057852.D

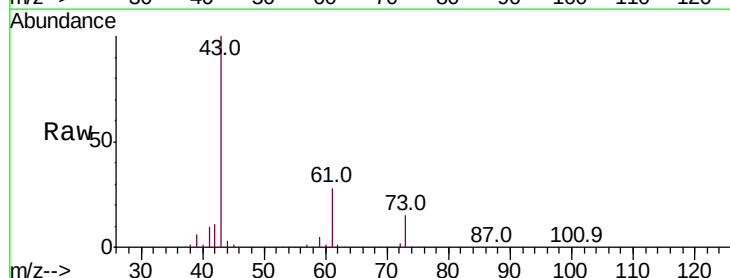
Acq: 10 Sep 2019 11:18

Tgt Ion: 63 Resp: 1772

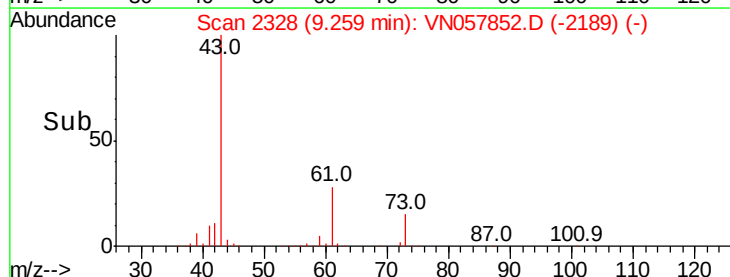
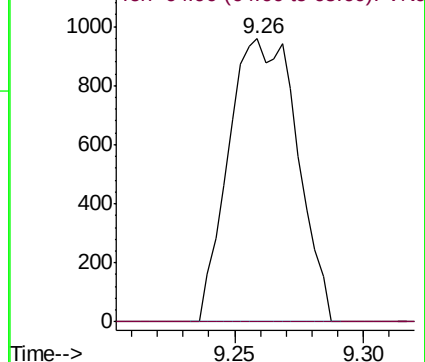
Ion Ratio Lower Upper

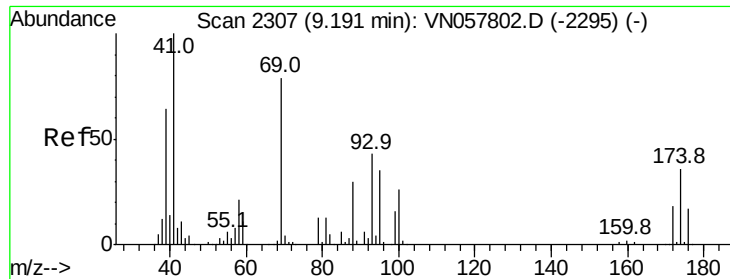
63 100

65 0.0 24.8 37.2#



Abundance Ion 62.90 (62.60 to 63.60): VNO  
Ion 64.90 (64.60 to 65.60): VNO





#48

Methvl methacrylate

Concen: 29.001 ug/l

RT: 9.26 min Scan# 2329

Delta R.T. 0.07 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

Instrument :

MSVOA\_N

ClientSampled :

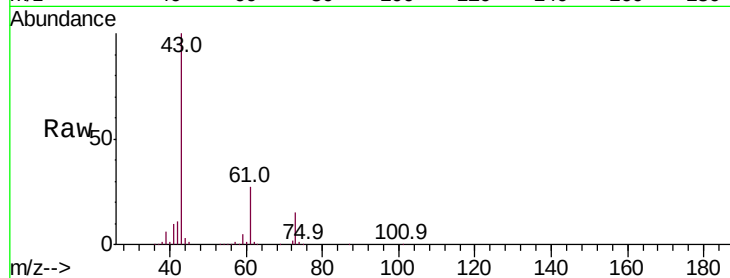
Tot Ion: 41 Resp: 154431

Ion Ratio Lower Upper

41 100

69 0.1 62.7 94.1#

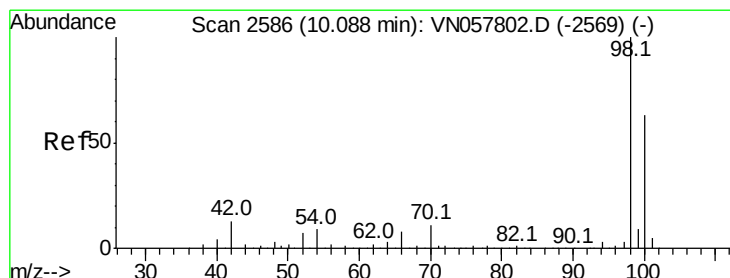
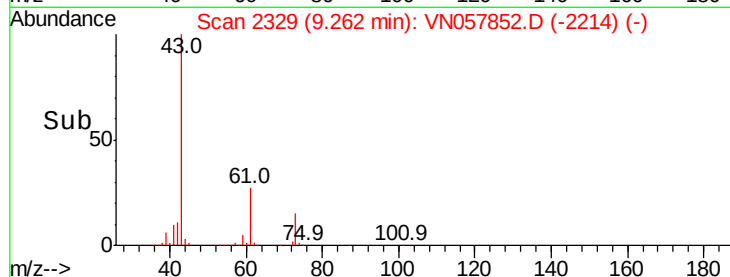
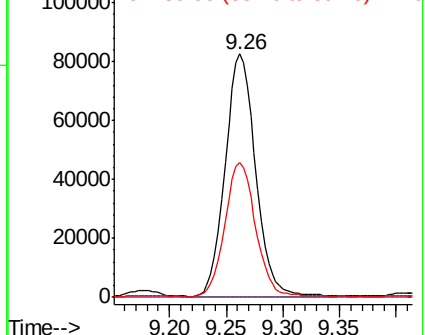
39 56.6 52.7 79.1



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



#50

Toluene-d8

Concen: 50.642 ug/l

RT: 10.09 min Scan# 2585

Delta R.T. -0.00 min

Lab File: VN057852.D

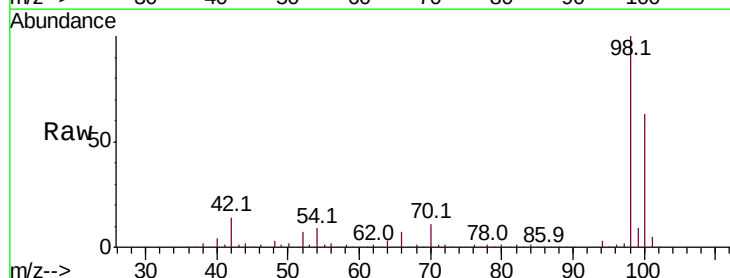
Acq: 10 Sep 2019 11:18

Tgt Ion: 98 Resp: 945423

Ion Ratio Lower Upper

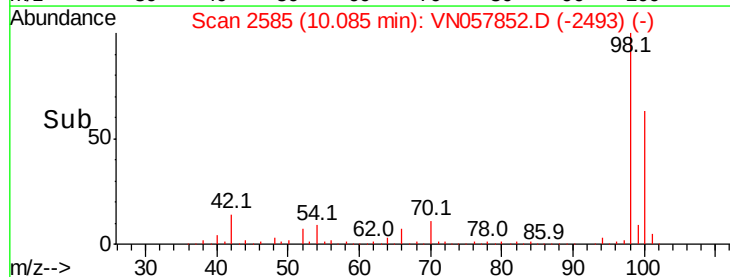
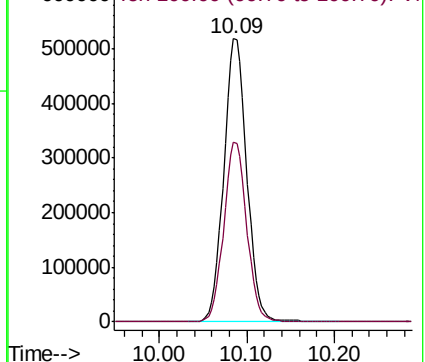
98 100

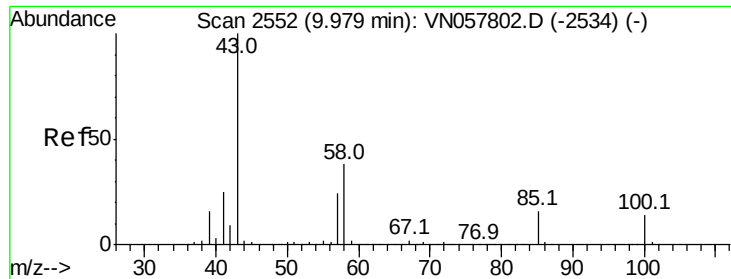
100 63.4 50.3 75.5



Abundance Ion 98.00 (97.70 to 98.70): VN0

Ion 100.00 (99.70 to 100.70): VN0





#51

4-Methyl-2-Pentanone

Concen: 0.936 ug/l

RT: 9.98 min Scan# 2551

Delta R.T. -0.00 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

Instrument :

MSVOA\_N

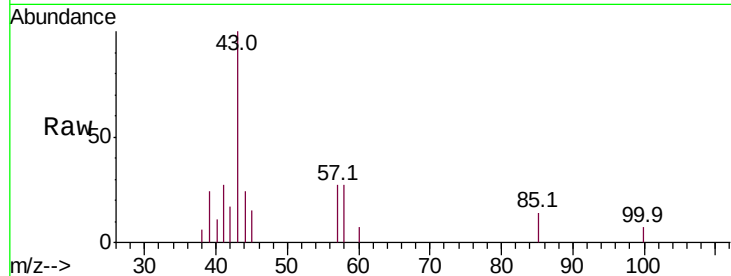
ClientSampled :

Tot Ion: 43 Resp: 5817

Ion Ratio Lower Upper

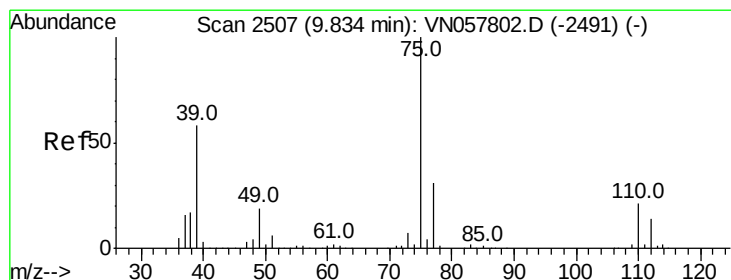
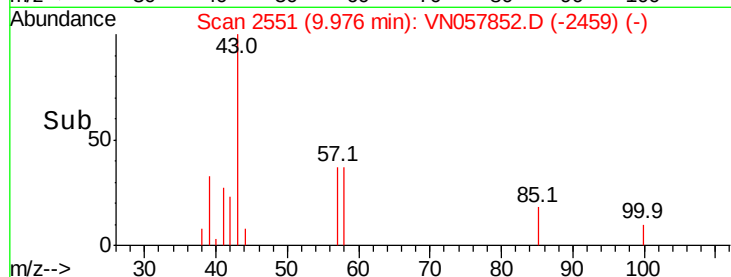
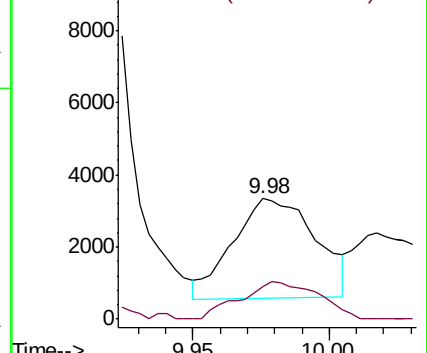
43 100

58 35.9 29.8 44.6



Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 58.00 (57.70 to 58.70): VN0



#54

cis-1,3-Dichloropropene

Concen: 4.920 ug/l

RT: 9.90 min Scan# 2528

Delta R.T. 0.07 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

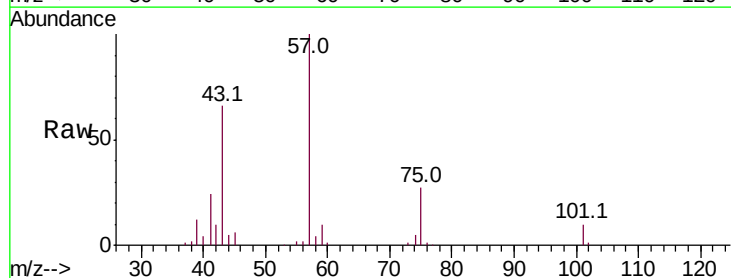
Tgt Ion: 75 Resp: 36534

Ion Ratio Lower Upper

75 100

77 1.3 24.8 37.2#

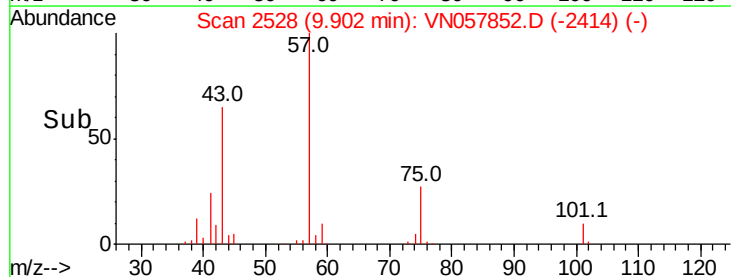
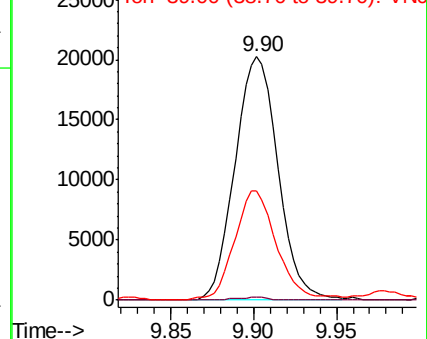
39 43.9 46.2 69.4#

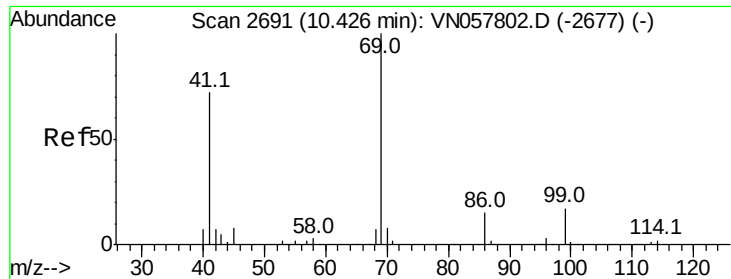


Abundance Ion 74.90 (74.60 to 75.60): VN0

Ion 76.90 (76.60 to 77.60): VN0

Ion 39.00 (38.70 to 39.70): VN0





#56

Ethyl methacrylate

Concen: 0.248 ug/l

RT: 10.54 min Scan# 2726

Delta R.T. 0.11 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

Instrument :

MSVOA\_N

ClientSampleId :

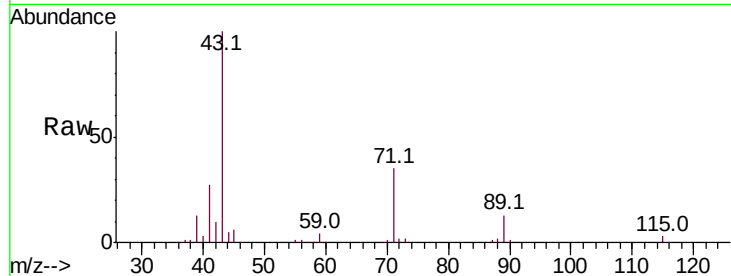
Tot Ion: 69 Resp: 1816

Ion Ratio Lower Upper

69 100

41 5432.9 56.7 85.1#

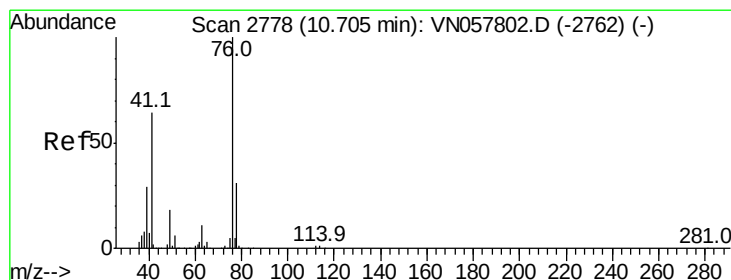
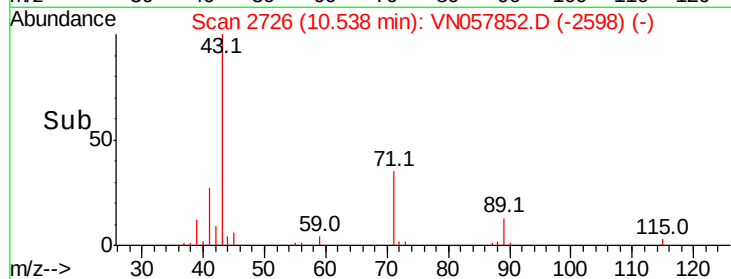
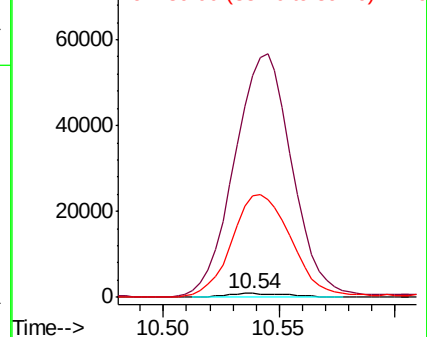
39 2374.7 36.3 54.5#



Abundance Ion 69.00 (68.70 to 69.70): VN0

Ion 41.00 (40.70 to 41.70): VN0

Ion 39.00 (38.70 to 39.70): VN0



#57

1,3-Dichloropropane

Concen: 0.770 ug/l

RT: 10.76 min Scan# 2796

Delta R.T. 0.06 min

Lab File: VN057852.D

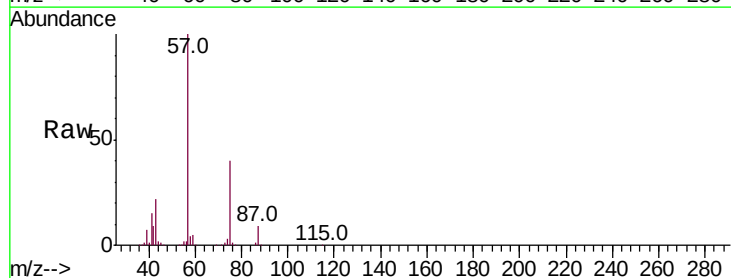
Acq: 10 Sep 2019 11:18

Tgt Ion: 76 Resp: 6438

Ion Ratio Lower Upper

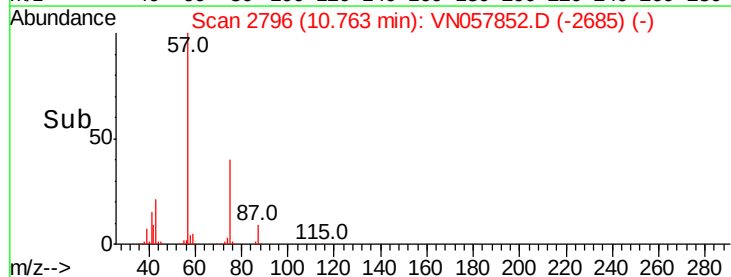
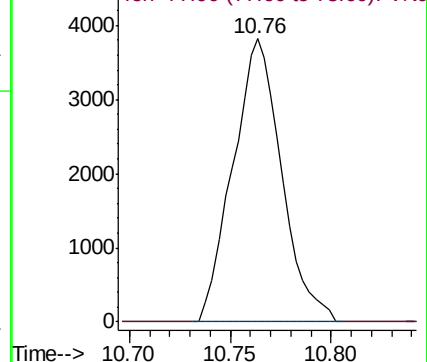
76 100

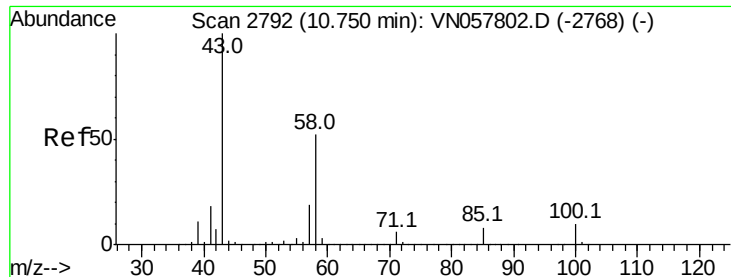
78 0.0 25.4 38.2#



Abundance Ion 75.90 (75.60 to 76.60): VN0

Ion 77.90 (77.60 to 78.60): VN0

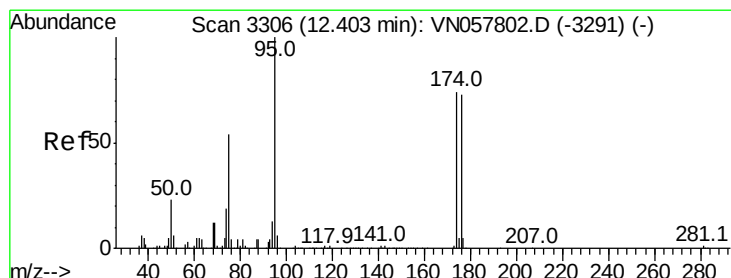
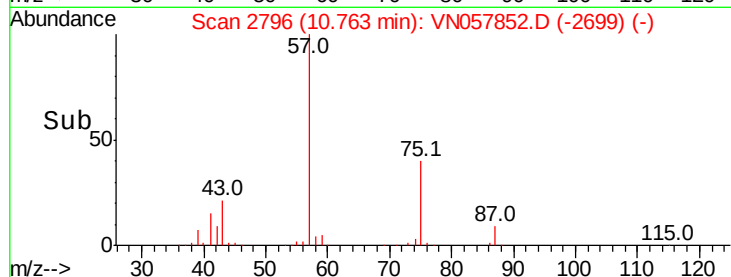
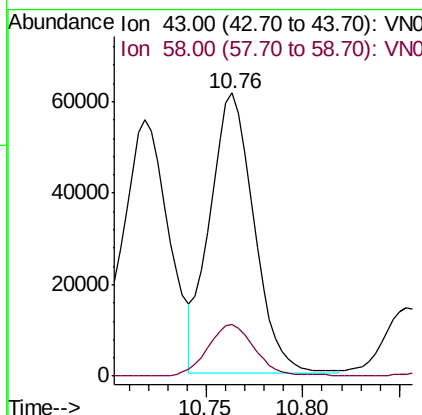
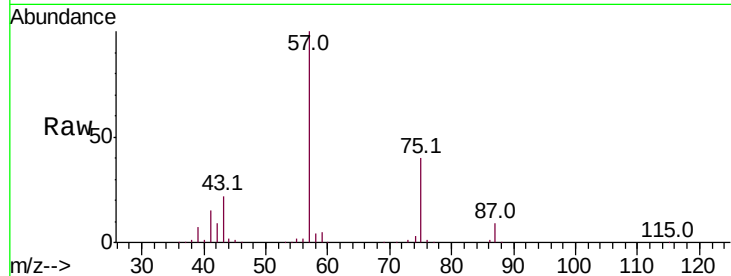




#59  
2-Hexanone  
Concen: 20.996 ug/l  
RT: 10.76 min Scan# 2796  
Delta R.T. 0.01 min  
Lab File: VN057852.D  
Acq: 10 Sep 2019 11:18

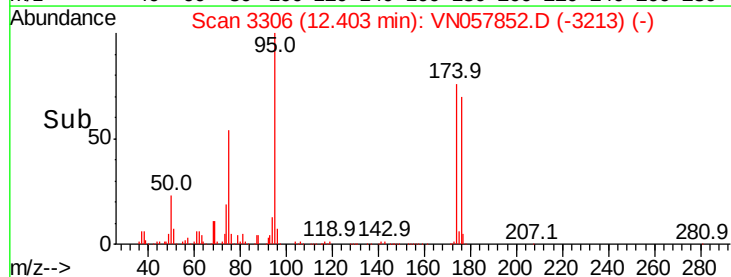
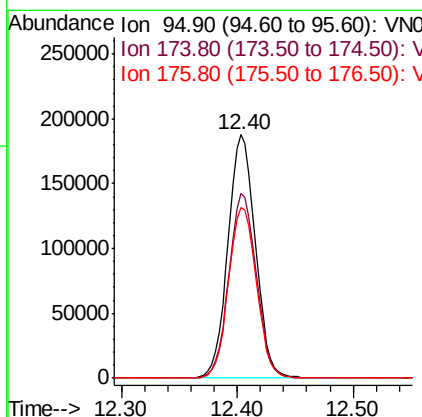
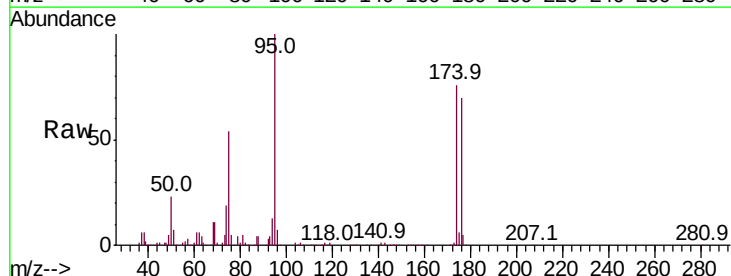
Instrument :  
MSVOA\_N  
ClientSampled :

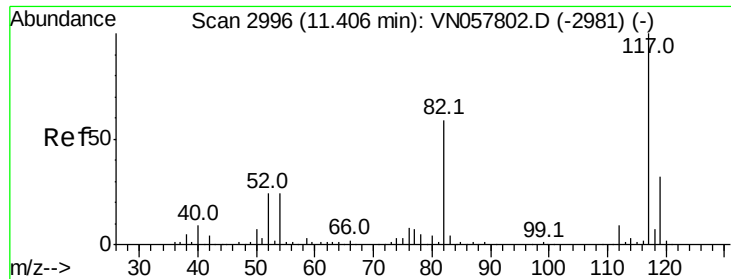
Tot Ion: 43 Resp: 97765  
Ion Ratio Lower Upper  
43 100  
58 19.6 25.6 76.8#



#62  
4-Bromofluorobenzene  
Concen: 43.151 ug/l  
RT: 12.40 min Scan# 3306  
Delta R.T. 0.00 min  
Lab File: VN057852.D  
Acq: 10 Sep 2019 11:18

Tgt Ion: 95 Resp: 306995  
Ion Ratio Lower Upper  
95 100  
174 76.0 0.0 150.2  
176 71.4 0.0 146.0

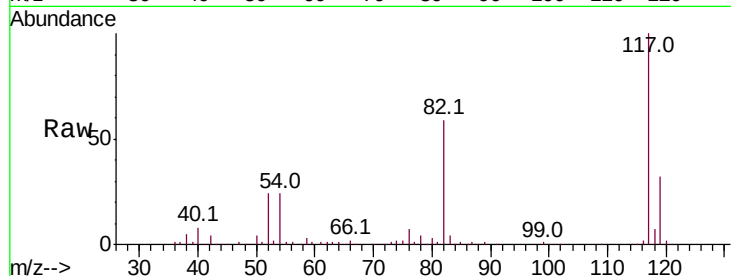




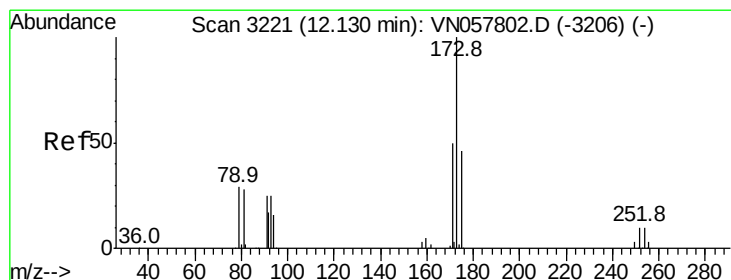
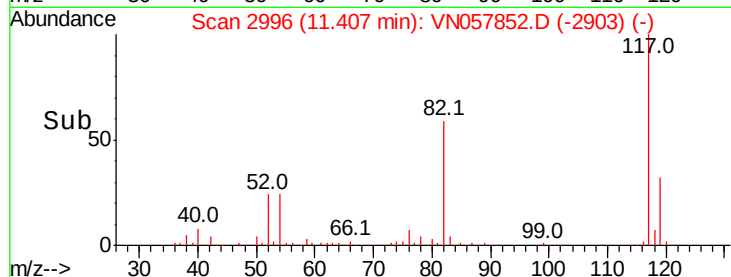
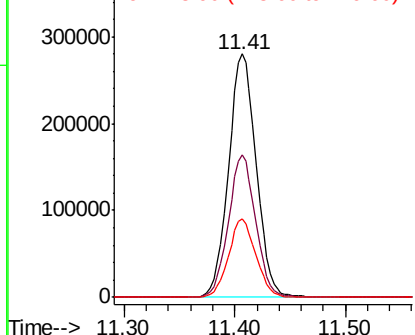
#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.41 min Scan# 2996  
Delta R.T. 0.00 min  
Lab File: VN057852.D  
Acq: 10 Sep 2019 11:18

Instrument :  
MSVOA\_N  
ClientSampleId :

Tot Ion:117 Resp: 486228  
Ion Ratio Lower Upper  
117 100  
82 58.5 47.2 70.8  
119 32.2 25.3 37.9

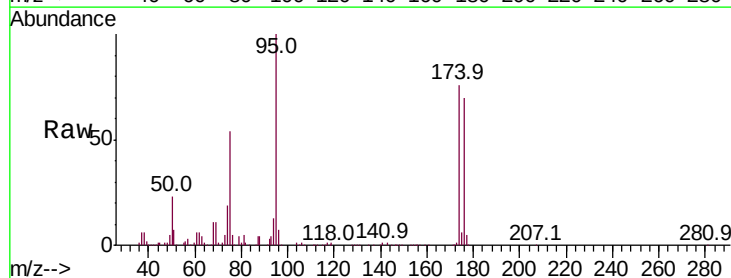


Abundance Ion 116.90 (116.60 to 117.60): V  
Ion 82.00 (81.70 to 82.70): V  
Ion 118.90 (118.60 to 119.60): V

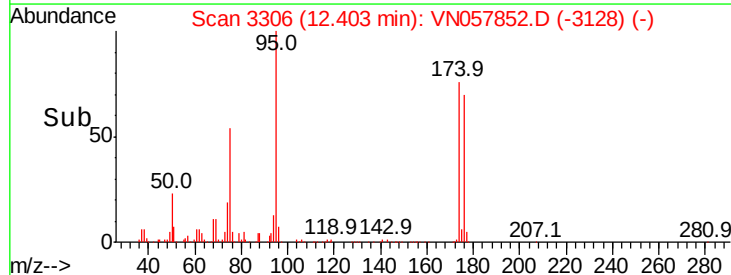
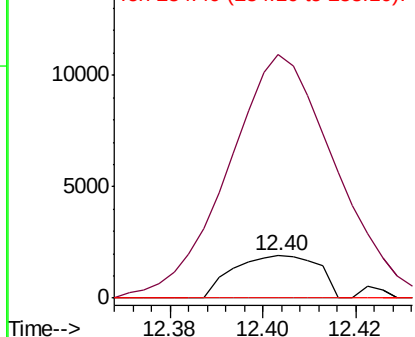


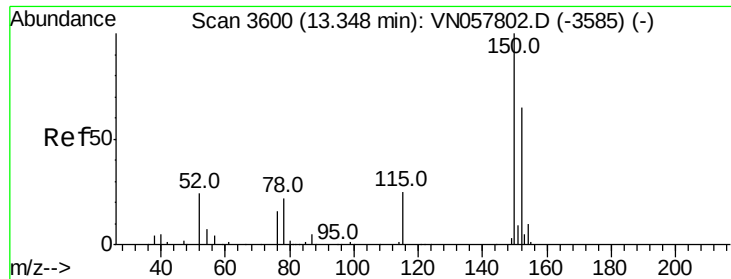
#71  
Bromoform  
Concen: 0.887 ug/l  
RT: 12.40 min Scan# 3306  
Delta R.T. 0.27 min  
Lab File: VN057852.D  
Acq: 10 Sep 2019 11:18

Tgt Ion:173 Resp: 2442  
Ion Ratio Lower Upper  
173 100  
175 639.0 23.5 70.6#  
254 0.0 0.1 0.1#



Abundance Ion 172.70 (172.40 to 173.40): V  
Ion 174.70 (174.40 to 175.40): V  
Ion 254.40 (254.10 to 255.10): V





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 13.35 min Scan# 3600

Delta R.T. 0.00 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

Instrument :

MSVOA\_N

ClientSampleId :

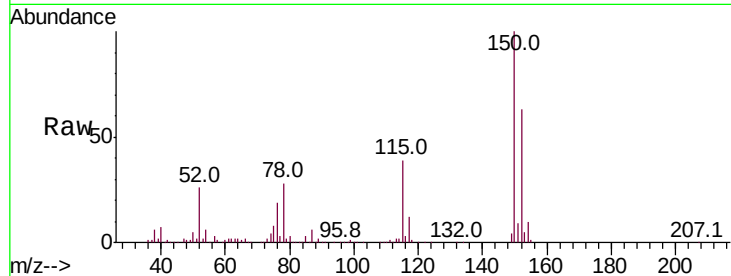
Tot Ion:152 Resp: 243773

Ion Ratio Lower Upper

152 100

115 60.8 30.3 91.0

150 157.7 0.0 352.4

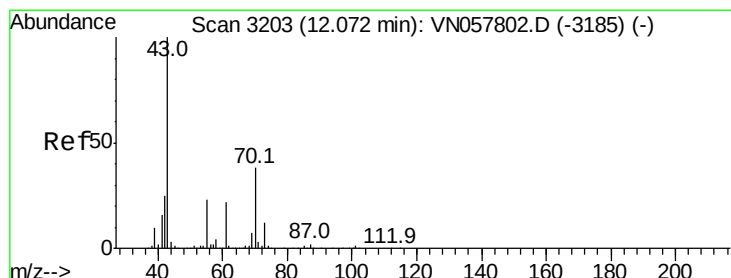
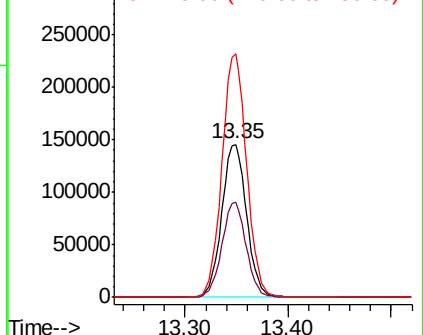
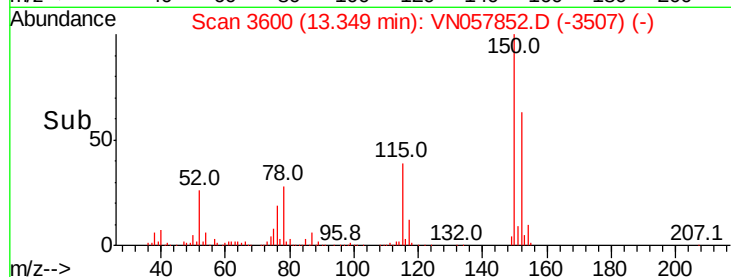


Abundance

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: 0.575 ug/l

RT: 12.03 min Scan# 3191

Delta R.T. -0.04 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

Tgt Ion: 43 Resp: 4737

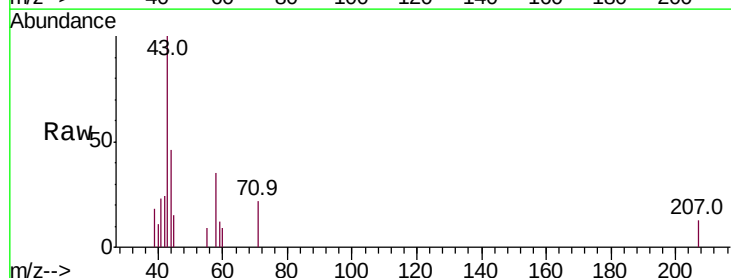
Ion Ratio Lower Upper

43 100

70 0.0 30.6 45.8#

55 2.4 18.6 27.8#

61 0.0 17.4 26.2#



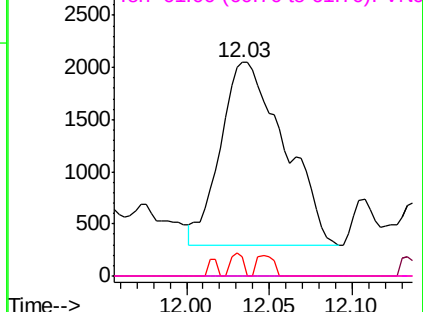
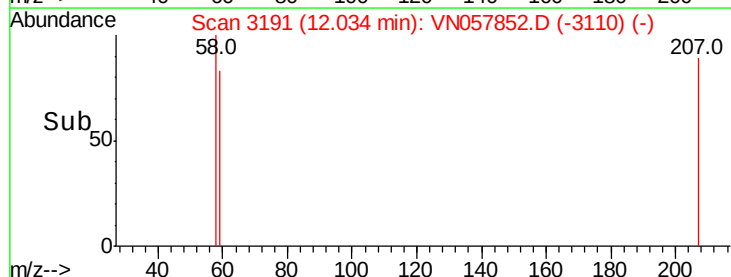
Abundance

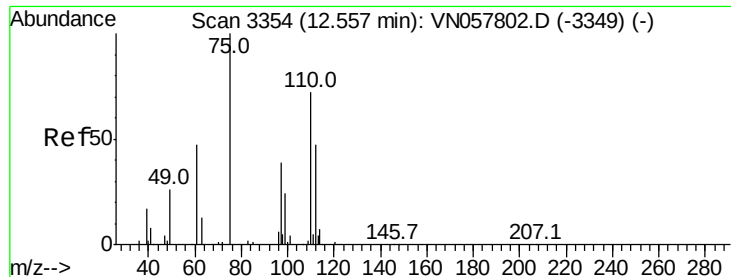
Ion 43.00 (42.70 to 43.70): V

Ion 70.00 (69.70 to 70.70): V

Ion 55.00 (54.70 to 55.70): V

Ion 61.00 (60.70 to 61.70): V





#76

1,2,3-Trichloropropane

Concen: 30.133 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. -0.15 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

Instrument :

MSVOA\_N

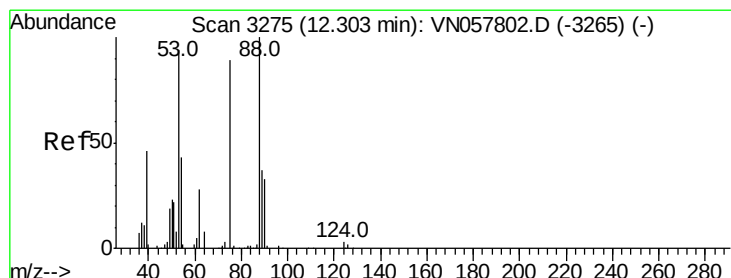
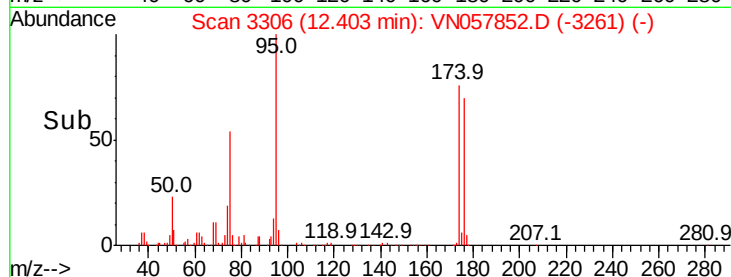
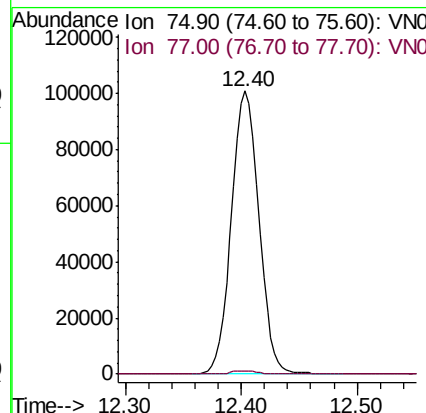
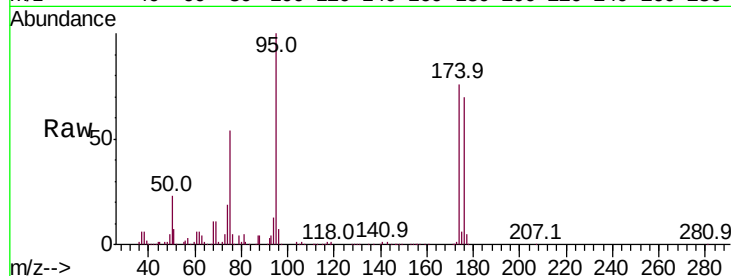
ClientSampleId :

Tot Ion: 75 Resp: 166168

Ion Ratio Lower Upper

75 100

77 1.1 0.0 0.0#



#81

trans-1,4-Dichloro-2-butene

Concen: 106.037 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. 0.10 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

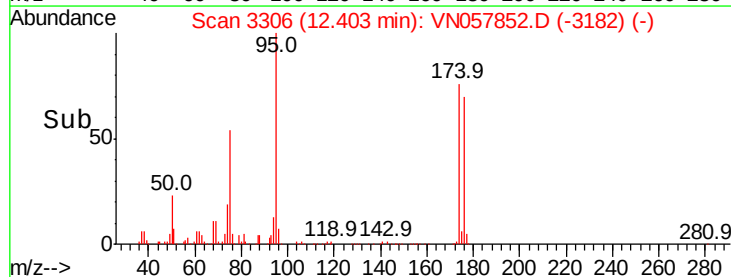
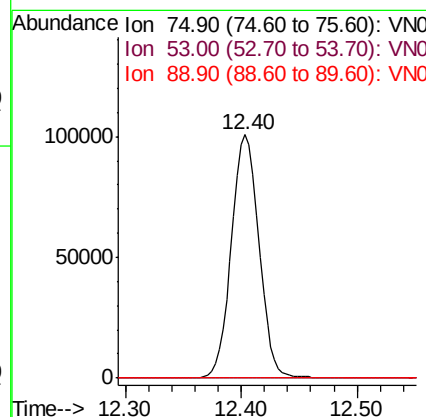
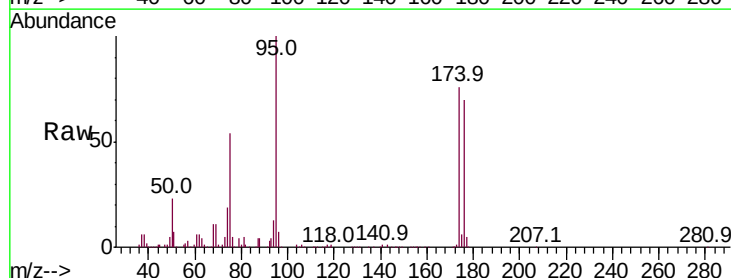
Tgt Ion: 75 Resp: 166168

Ion Ratio Lower Upper

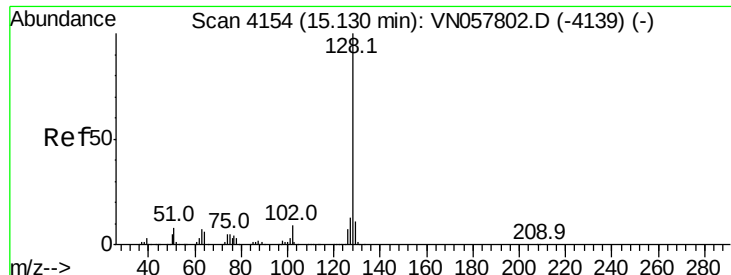
75 100

53 0.0 88.4 132.6#

89 0.0 35.3 52.9#







#95

Naphthalene

Concen: Below Cal

RT: 15.14 min Scan# 4157

Delta R.T. 0.01 min

Lab File: VN057852.D

Acq: 10 Sep 2019 11:18

Instrument :

MSVOA\_N

ClientSampleId :

Tot Ion:128 Resp: 344

Ion Ratio Lower Upper

128 100

127 0.0 10.3 15.5#

129 0.0 8.6 12.8#

