

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN091919\  
 Data File : VN058209.D  
 Acq On : 19 Sep 2019 17:25  
 Operator : JC/SP  
 Sample : K4896-17  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 23 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Quant Time: Sep 20 04:22:55 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N091819W.M  
 Quant Title : SW846 8260  
 QLast Update : Thu Sep 19 09:27:53 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.65  | 168  | 506306   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.57  | 114  | 830864   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 701839   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.35 | 152  | 289735   | 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   | 365340   | 51.81 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 103.62% |          |
| 35) Dibromofluoromethane    | 7.58  | 113  | 252418   | 49.97 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 99.94%  |          |
| 50) Toluene-d8              | 10.08 | 98   | 1037572  | 52.72 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 105.44% |          |
| 62) 4-Bromofluorobenzene    | 12.40 | 95   | 332217   | 45.45 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 90.90%  |          |

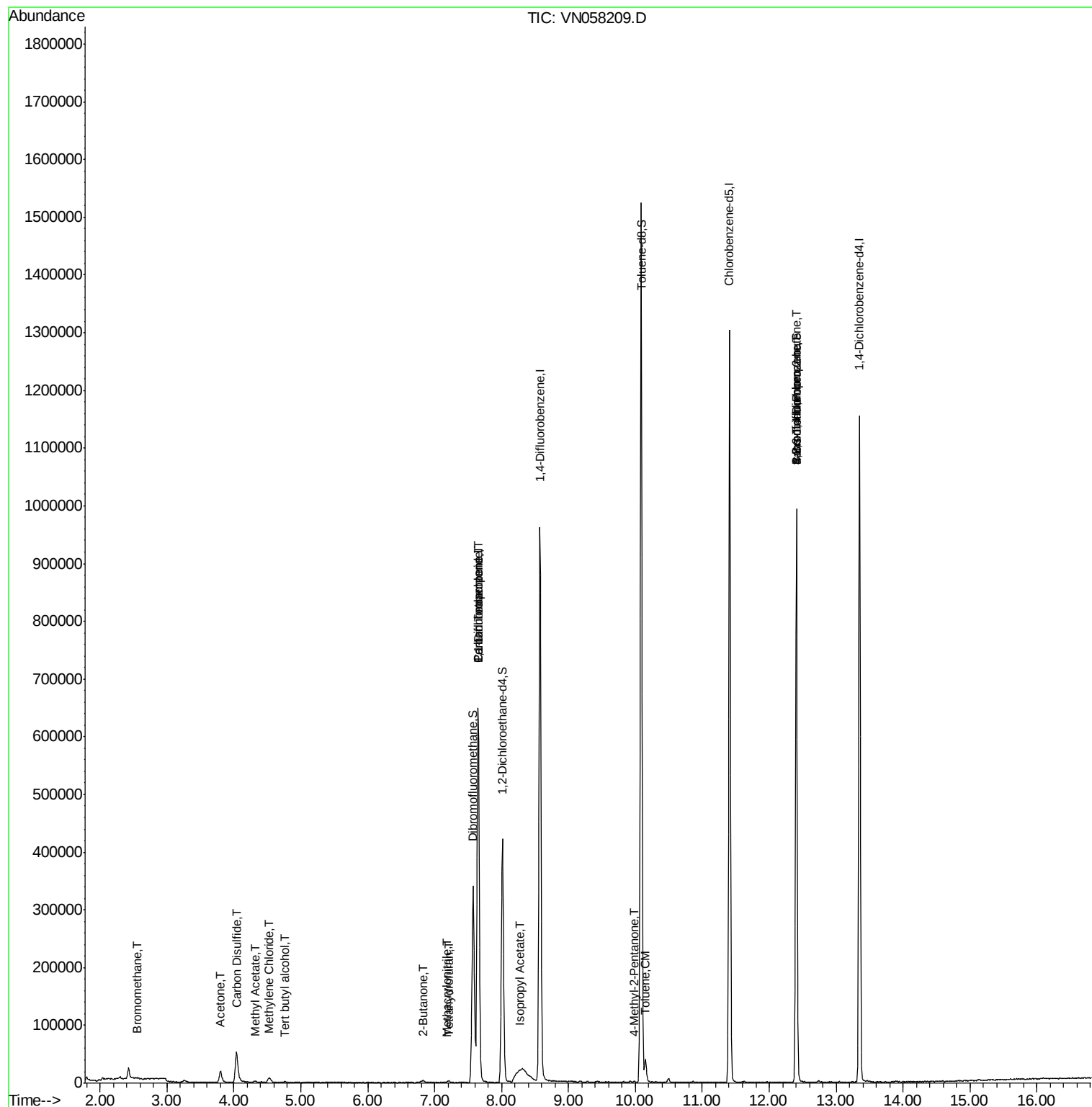
| Target Compounds               | R.T.  | QIon | Response | Conc          | Units | Qvalue |
|--------------------------------|-------|------|----------|---------------|-------|--------|
| 3) Chloromethane               | 2.04  | 50   | 1164     | Below Cal     |       | 89     |
| 5) Bromomethane                | 2.55  | 94   | 192      | 0.824 ug/l #  |       | 4      |
| 6) Chloroethane                | 2.69  | 64   | 29       | Below Cal #   |       | 44     |
| 11) Tert butyl alcohol         | 4.76  | 59   | 1782     | 2.124 ug/l #  |       | 86     |
| 16) Acetone                    | 3.80  | 43   | 34562    | 14.439 ug/l   |       | 92     |
| 17) Carbon Disulfide           | 4.04  | 76   | 217      | 0.320 ug/l #  |       | 74     |
| 18) Methyl Acetate             | 4.32  | 43   | 2660     | 0.422 ug/l #  |       | 62     |
| 20) Methylene Chloride         | 4.52  | 84   | 2670     | 0.417 ug/l    |       | 97     |
| 25) 2-Butanone                 | 6.82  | 43   | 1841     | 0.565 ug/l    |       | 92     |
| 29) Tetrahydrofuran            | 7.20  | 42   | 1502     | 0.748 ug/l #  |       | 61     |
| 31) Cyclohexane                | 7.65  | 56   | 13252    | Below Cal #   |       | 16     |
| 36) 1,1-Dichloropropene        | 7.65  | 75   | 43017    | 7.179 ug/l #  |       | 51     |
| 38) Carbon Tetrachloride       | 7.65  | 117  | 52935    | 8.789 ug/l #  |       | 15     |
| 41) Methacrylonitrile          | 7.18  | 41   | 342      | 1.018 ug/l #  |       | 100    |
| 43) Isopropyl Acetate          | 8.26  | 43   | 31733    | 2.733 ug/l #  |       | 57     |
| 51) 4-Methyl-2-Pentanone       | 9.97  | 43   | 1365     | 0.221 ug/l #  |       | 71     |
| 52) Toluene                    | 10.15 | 92   | 15154    | 1.321 ug/l    |       | 98     |
| 71) Bromoform                  | 12.40 | 173  | 2022     | 4.161 ug/l #  |       | 1      |
| 76) 1,2,3-Trichloropropane     | 12.40 | 75   | 183673   | 35.422 ug/l # |       | 100    |
| 81) trans-1,4-Dichloro-2-buten | 12.40 | 75   | 183673   | 99.017 ug/l # |       | 5      |

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

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ALS Vial : 23 Sample Multiplier: 1

Instrument :  
MSVOA\_N  
ClientSampleId :

Quant Time: Sep 20 04:22:55 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_N\METHODS\82N091819W.M  
Quant Title : SW846 8260  
QLast Update : Thu Sep 19 09:27:53 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.65 min Scan# 1828

Delta R.T. -0.00 min

Lab File: VN058209.D

Acq: 19 Sep 2019 17:25

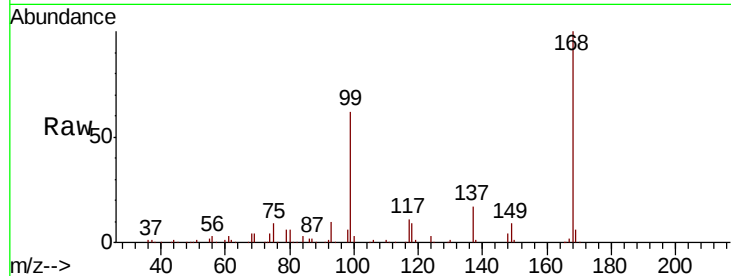
Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion:168 Resp: 506306

Ion Ratio Lower Upper

168 100

99 61.6 47.4 71.2



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VN

7.65

250000

200000

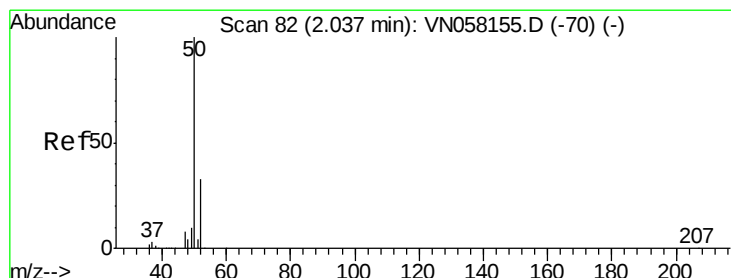
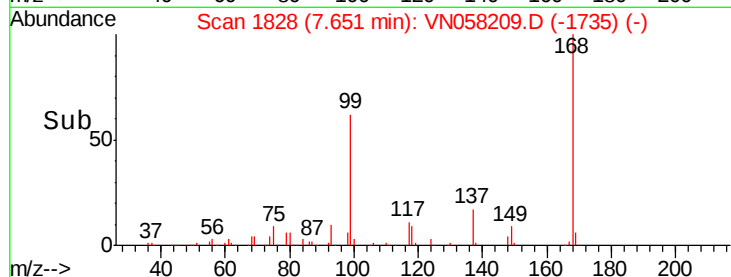
150000

100000

50000

0

Time--> 7.50 7.60 7.70 7.80



#3

Chloromethane

Concen: Below Cal

RT: 2.04 min Scan# 82

Delta R.T. 0.00 min

Lab File: VN058209.D

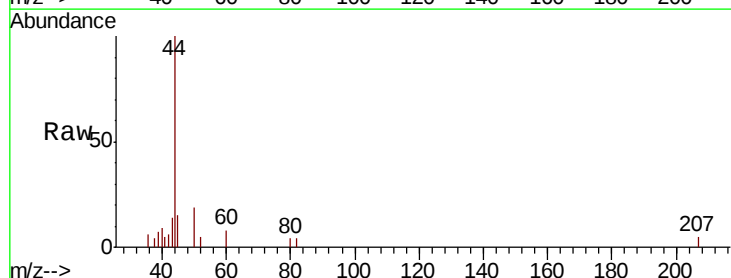
Acq: 19 Sep 2019 17:25

Tgt Ion: 50 Resp: 1164

Ion Ratio Lower Upper

50 100

52 26.6 26.3 39.5



Abundance Ion 49.90 (49.60 to 50.60): VNO

Ion 51.90 (51.60 to 52.60): VNO

2.04

1000

800

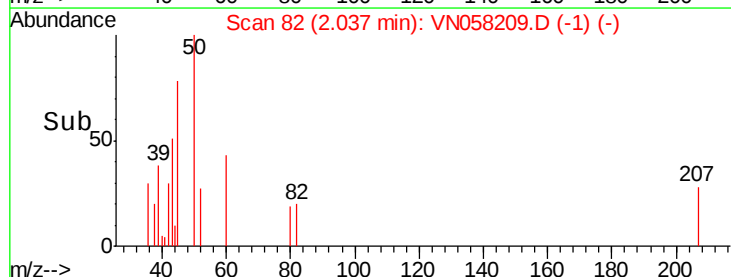
600

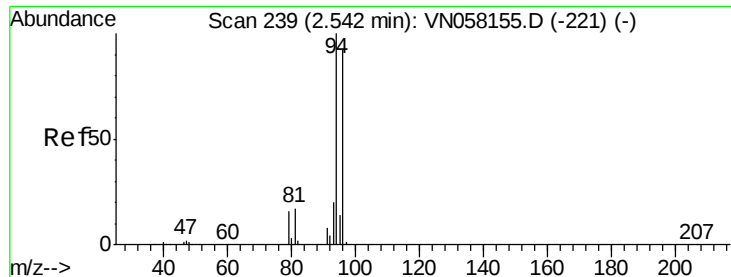
400

200

0

Time--> 2.00 2.02 2.04 2.06 2.08





#5

Bromomethane

Concen: 0.824 ug/l

RT: 2.55 min Scan# 241

Delta R.T. 0.01 min

Lab File: VN058209.D

Acq: 19 Sep 2019 17:25

Instrument :

MSVOA\_N

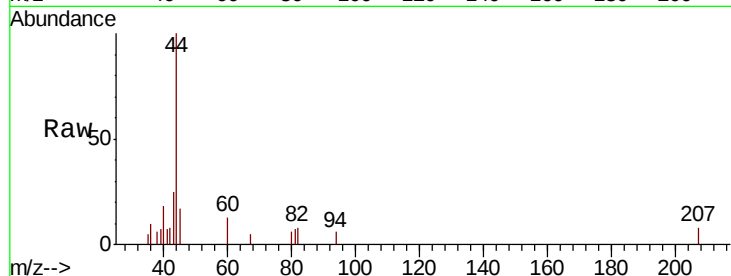
ClientSampled :

Tot Ion: 94 Resp: 192

Ion Ratio Lower Upper

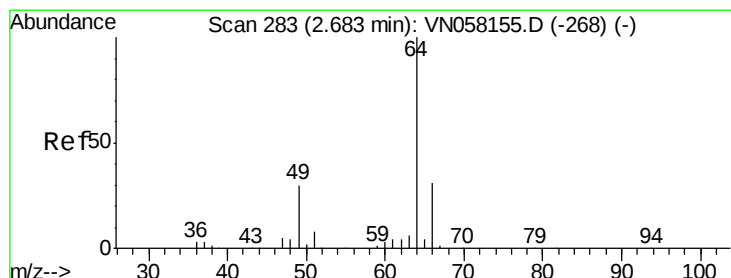
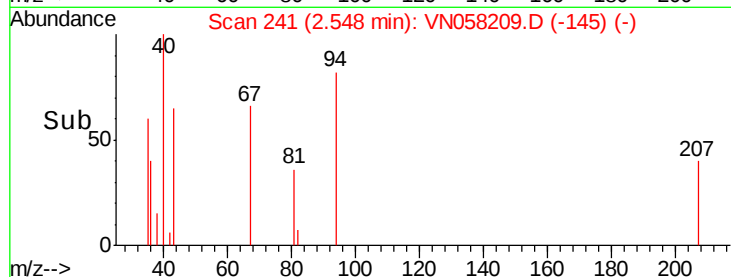
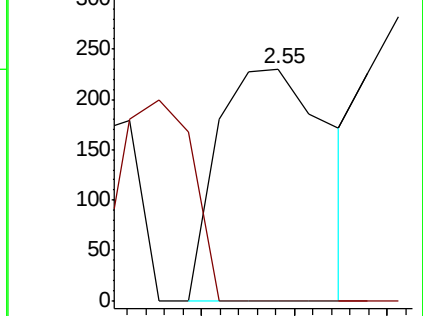
94 100

96 0.0 73.3 109.9#



Abundance Ion 93.90 (93.60 to 94.60): VNO

Ion 95.90 (95.60 to 96.60): VNO



#6

Chloroethane

Concen: Below Cal

RT: 2.69 min Scan# 285

Delta R.T. 0.01 min

Lab File: VN058209.D

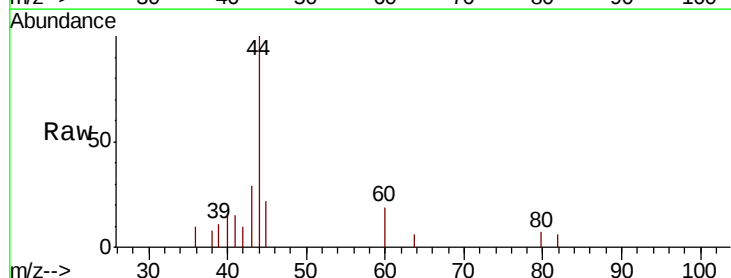
Acq: 19 Sep 2019 17:25

Tgt Ion: 64 Resp: 29

Ion Ratio Lower Upper

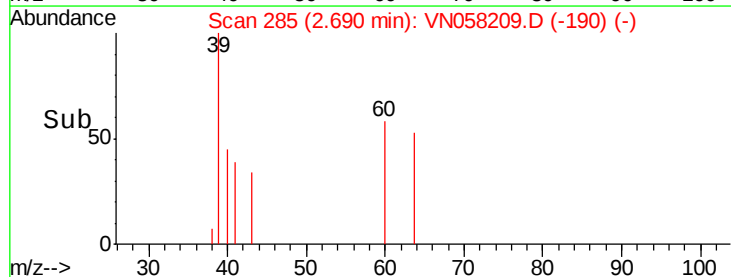
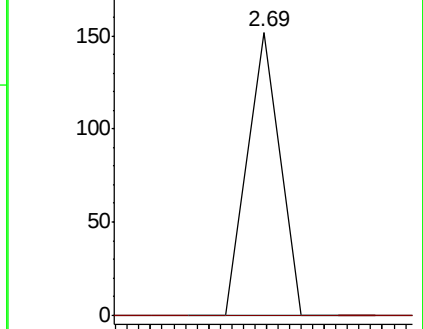
64 100

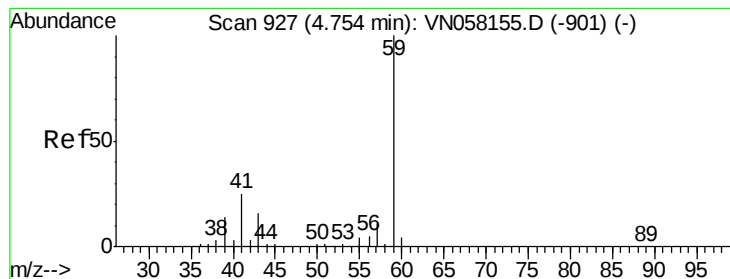
66 0.0 24.6 37.0#



Abundance Ion 63.90 (63.60 to 64.60): VNO

Ion 65.90 (65.60 to 66.60): VNO



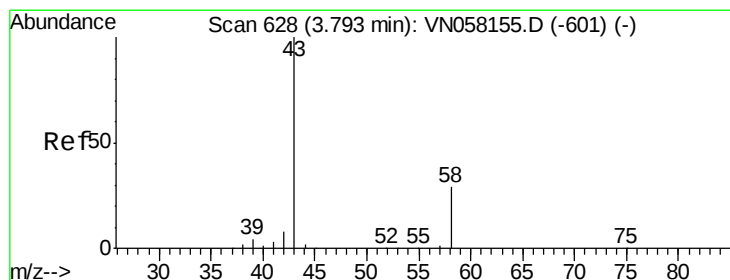
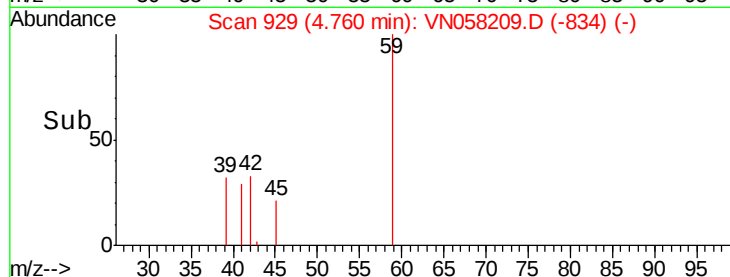
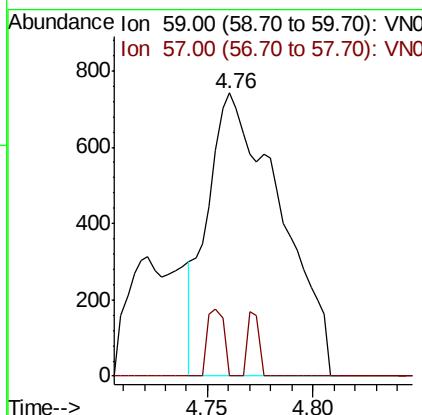
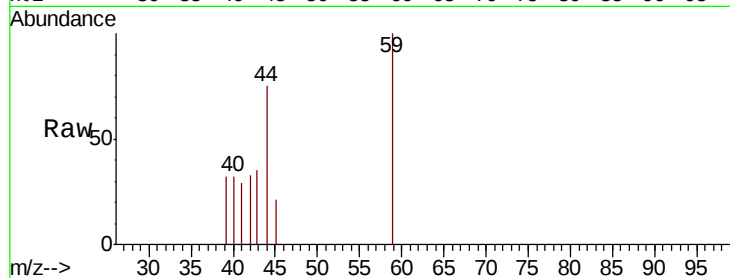


#11

Tert butyl alcohol  
 Concen: 2.124 ug/l  
 RT: 4.76 min Scan# 929  
 Delta R.T. 0.01 min  
 Lab File: VN058209.D  
 Acq: 19 Sep 2019 17:25

Instrument :  
 MSVOA\_N  
 ClientSampled :

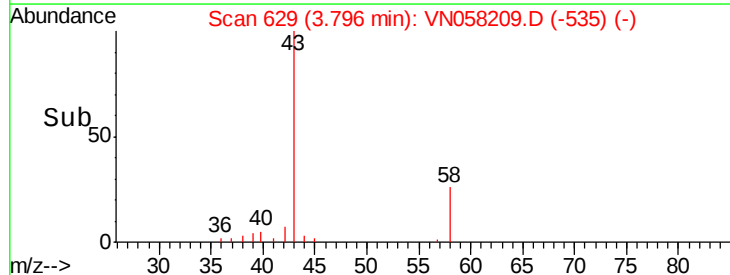
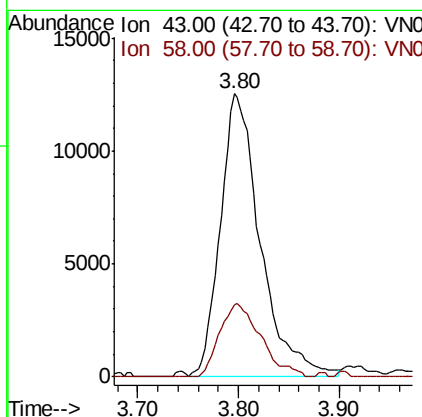
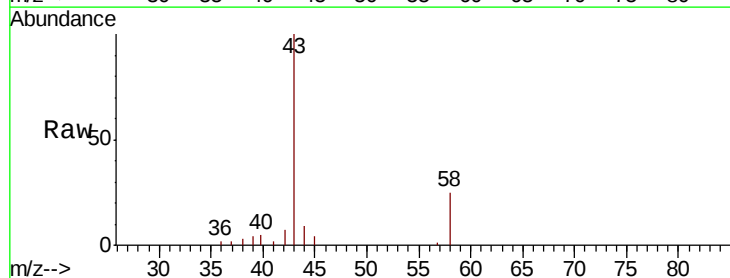
Tot Ion: 59 Resp: 1782  
 Ion Ratio Lower Upper  
 59 100  
 57 5.3 8.6 13.0#

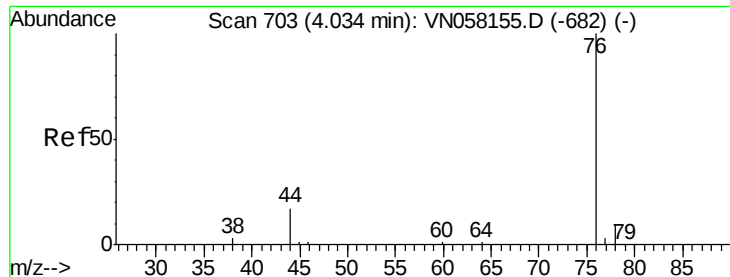


#16

Acetone  
 Concen: 14.439 ug/l  
 RT: 3.80 min Scan# 629  
 Delta R.T. 0.00 min  
 Lab File: VN058209.D  
 Acq: 19 Sep 2019 17:25

Tgt Ion: 43 Resp: 34562  
 Ion Ratio Lower Upper  
 43 100  
 58 25.3 23.4 35.2

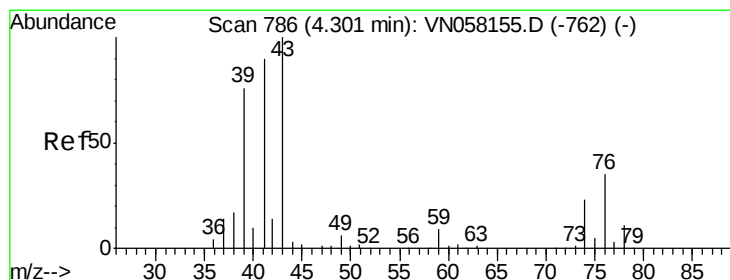
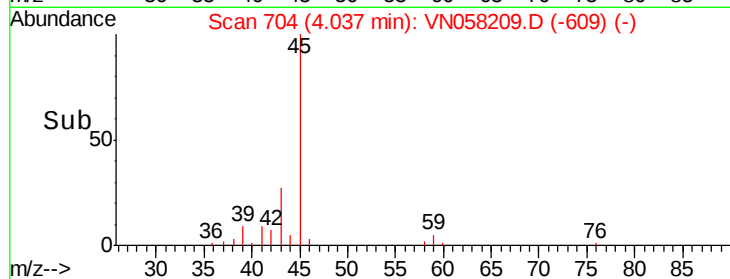
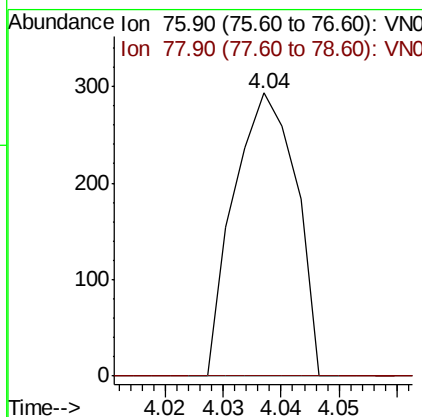
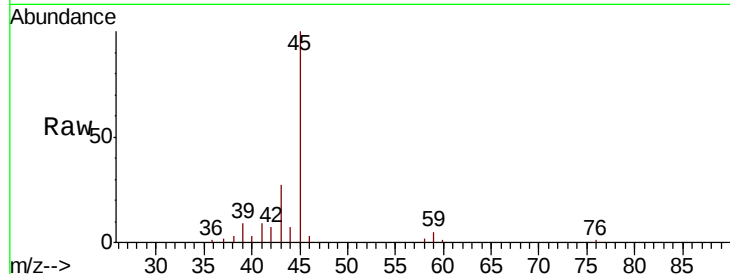




#17  
Carbon Disulfide  
Concen: 0.320 ug/l  
RT: 4.04 min Scan# 704  
Delta R.T. 0.00 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

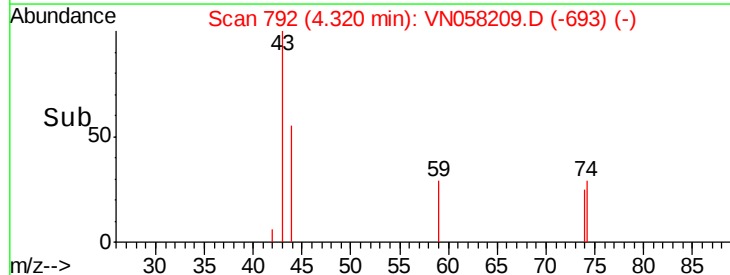
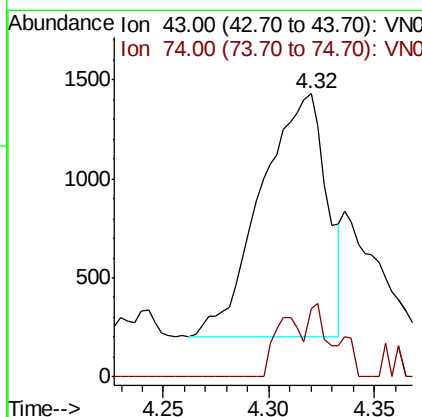
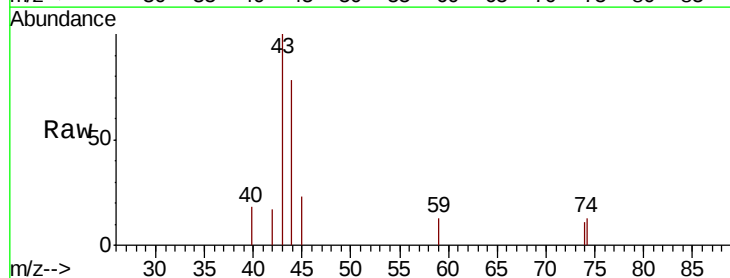
Instrument :  
MSVOA\_N  
ClientSampleId :

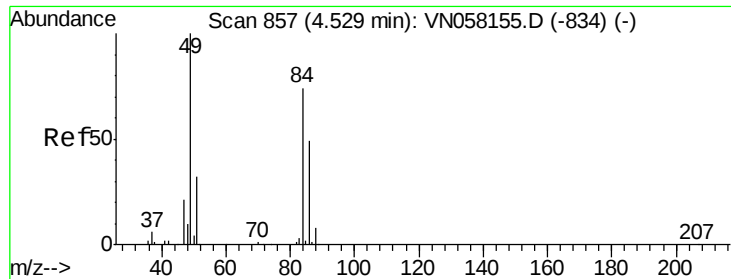
Tot Ion: 76 Resp: 217  
Ion Ratio Lower Upper  
76 100  
78 0.0 7.7 11.5#



#18  
Methyl Acetate  
Concen: 0.422 ug/l  
RT: 4.32 min Scan# 792  
Delta R.T. 0.02 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

Tgt Ion: 43 Resp: 2660  
Ion Ratio Lower Upper  
43 100  
74 4.0 18.0 27.0#

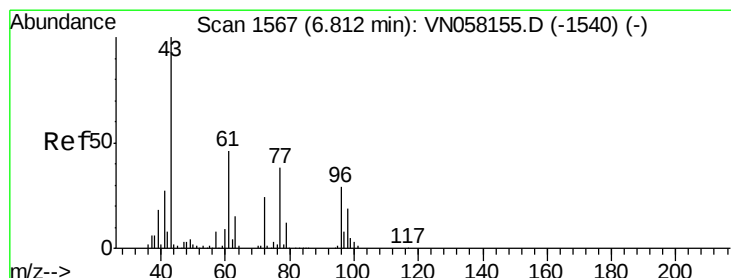
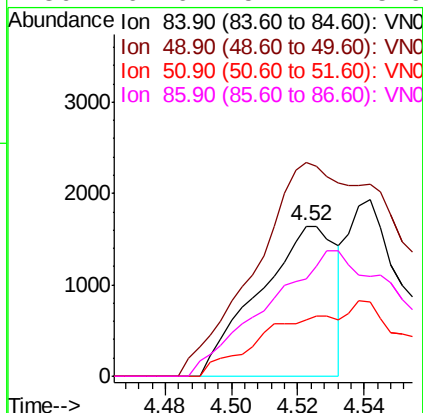
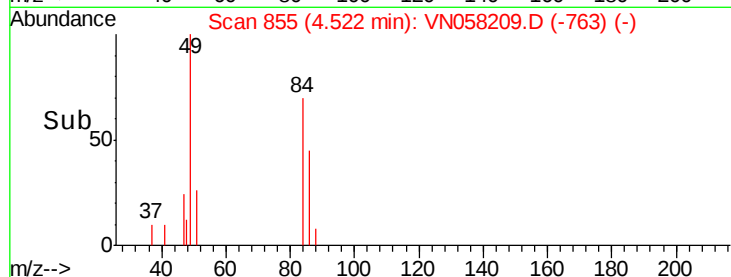
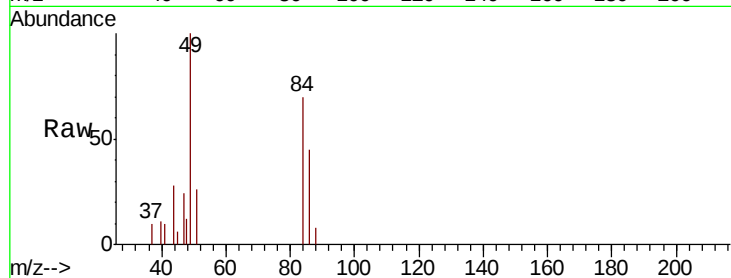




#20  
Methylene Chloride  
Concen: 0.417 ug/l  
RT: 4.52 min Scan# 855  
Delta R.T. -0.01 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

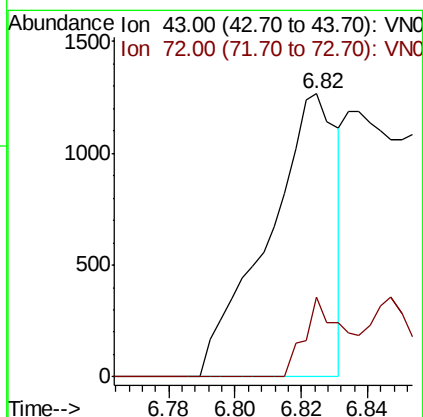
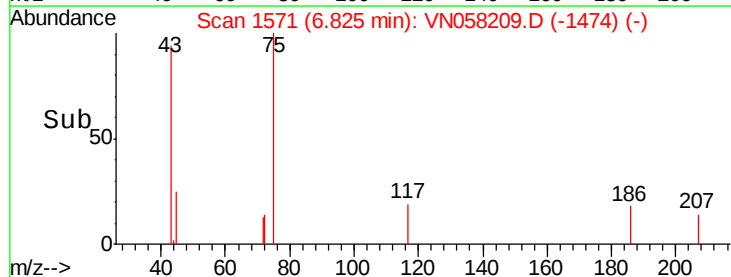
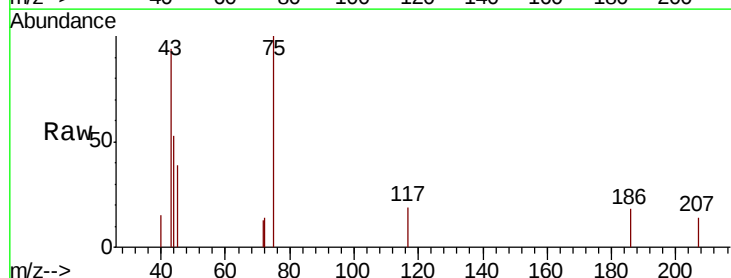
Instrument :  
MSVOA\_N  
ClientSampled :

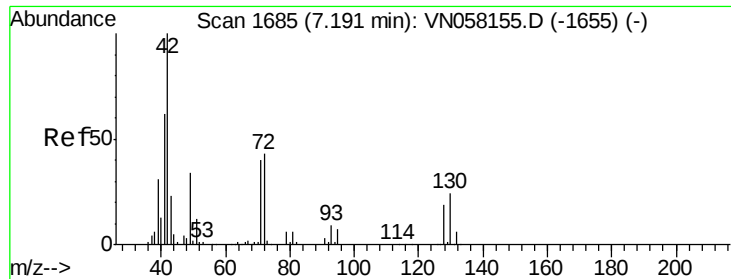
|             |             |
|-------------|-------------|
| Tot Ion: 84 | Resp: 2670  |
| Ion Ratio   | Lower Upper |
| 84 100      |             |
| 49 130.6    | 107.5 161.3 |
| 51 37.6     | 33.9 50.9   |
| 86 64.6     | 52.4 78.6   |



#25  
2-Butanone  
Concen: 0.565 ug/l  
RT: 6.82 min Scan# 1571  
Delta R.T. 0.01 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

|             |             |
|-------------|-------------|
| Tgt Ion: 43 | Resp: 1841  |
| Ion Ratio   | Lower Upper |
| 43 100      |             |
| 72 28.4     | 19.5 29.3   |

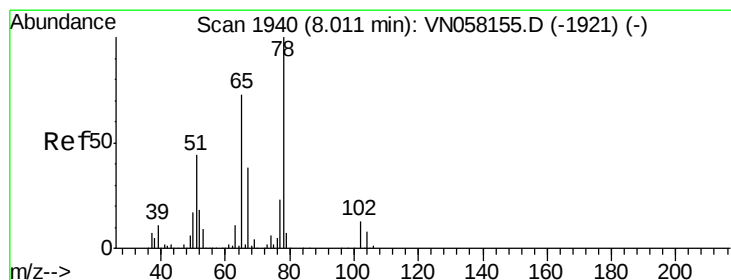
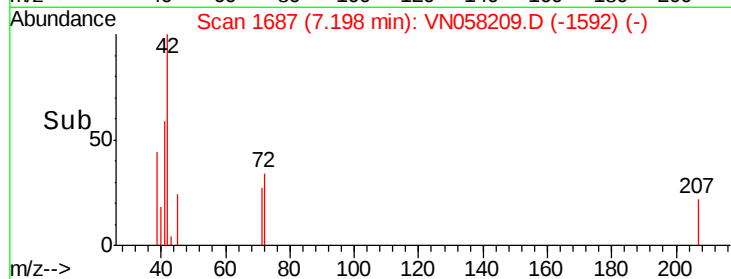
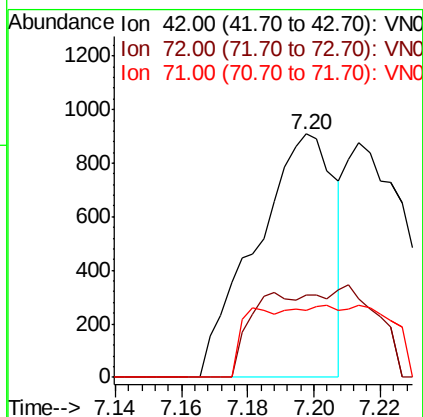
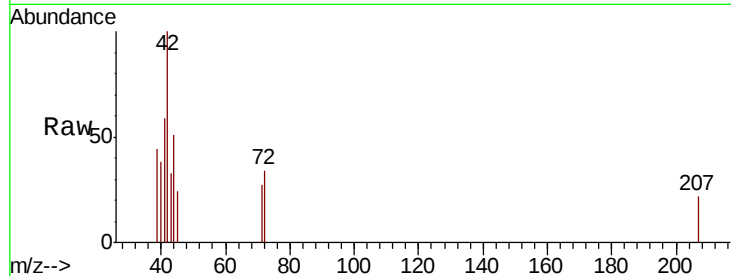




#29  
Tetrahydrofuran  
Concen: 0.748 ug/l  
RT: 7.20 min Scan# 1687  
Delta R.T. 0.01 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

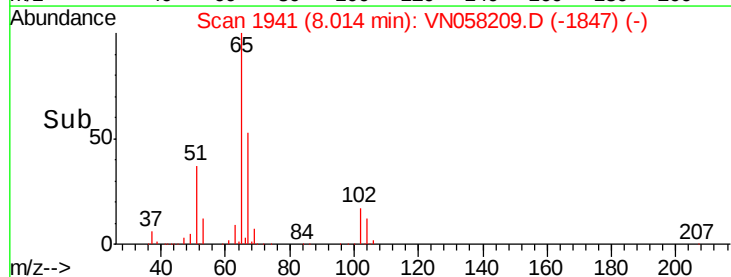
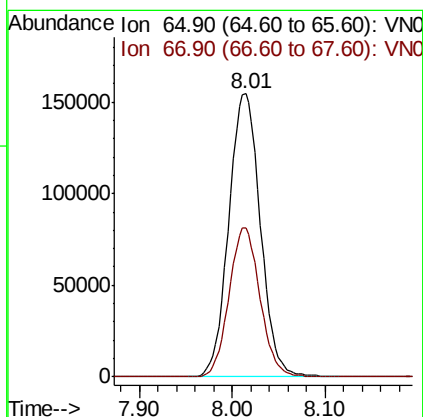
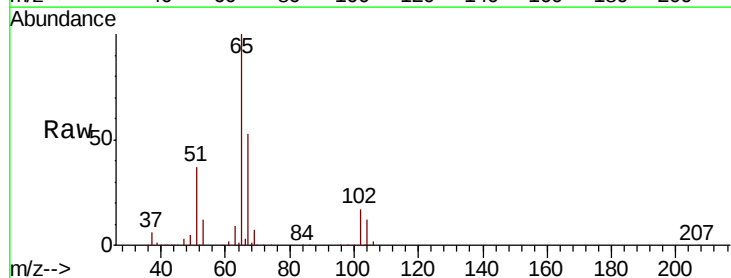
Instrument :  
MSVOA\_N  
ClientSampled :

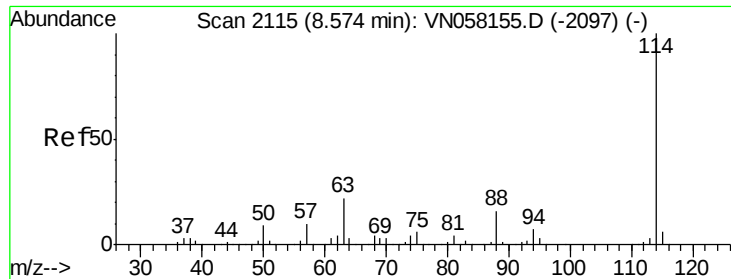
Tot Ion: 42 Resp: 1502  
Ion Ratio Lower Upper  
42 100  
72 20.6 33.8 50.6#  
71 12.4 31.4 47.0#



#33  
1,2-Dichloroethane-d4  
Concen: 51.808 ug/l  
RT: 8.01 min Scan# 1941  
Delta R.T. 0.00 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

Tgt Ion: 65 Resp: 365340  
Ion Ratio Lower Upper  
65 100  
67 51.6 0.0 103.4

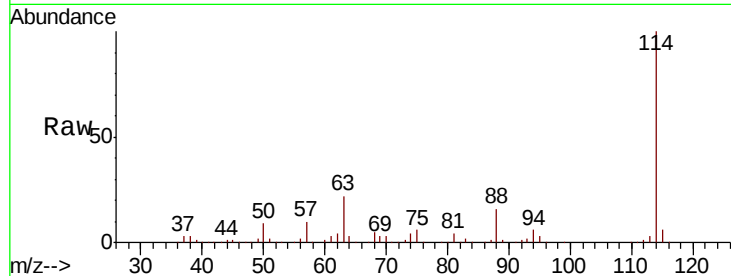




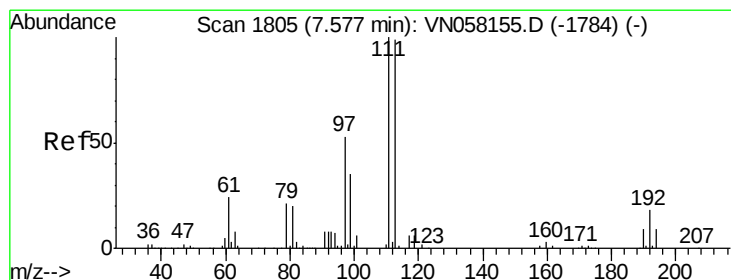
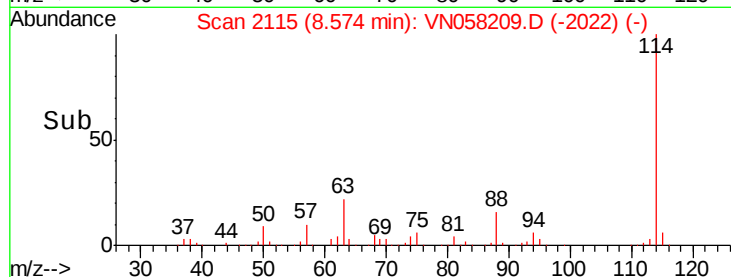
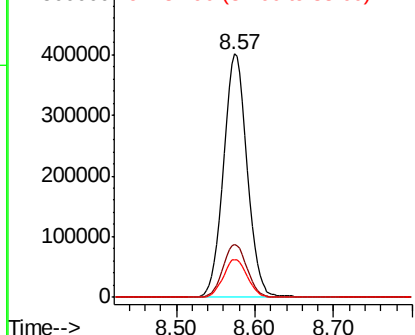
#34  
1,4-Difluorobenzene  
Concen: 50.000 ug/l  
RT: 8.57 min Scan# 2115  
Delta R.T. -0.00 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

Instrument :  
MSVOA\_N  
ClientSampleId :

Tot Ion:114 Resp: 830864  
Ion Ratio Lower Upper  
114 100  
63 21.6 0.0 44.2  
88 15.6 0.0 31.6

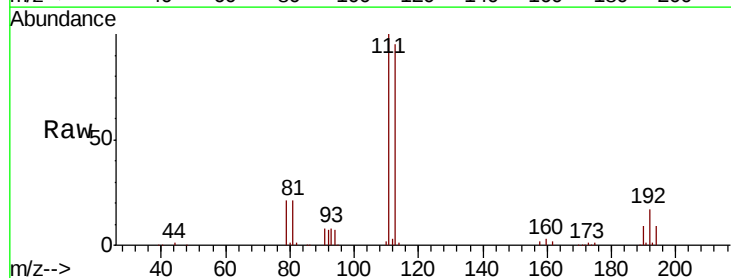


Abundance Ion 113.90 (113.60 to 114.60): V  
Ion 63.00 (62.70 to 63.70): VN  
Ion 87.90 (87.60 to 88.60): VN

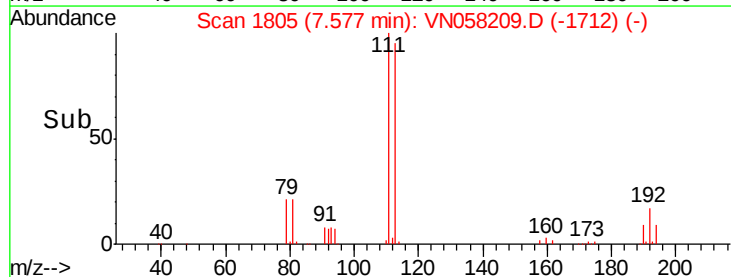
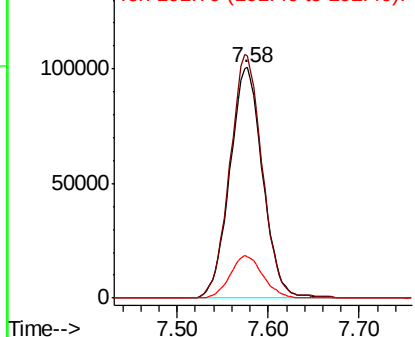


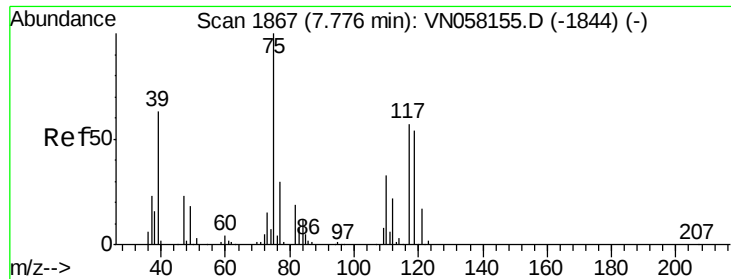
#35  
Dibromofluoromethane  
Concen: 49.974 ug/l  
RT: 7.58 min Scan# 1805  
Delta R.T. -0.00 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

Tgt Ion:113 Resp: 252418  
Ion Ratio Lower Upper  
113 100  
111 104.3 81.8 122.6  
192 18.3 14.5 21.7



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

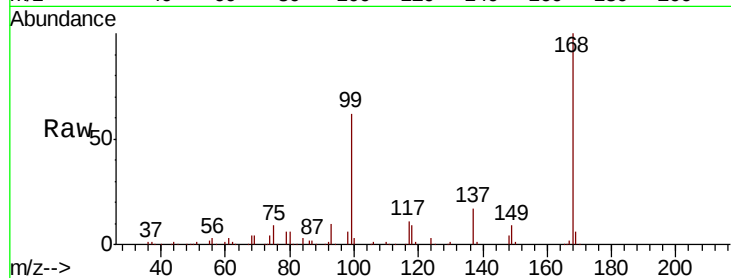




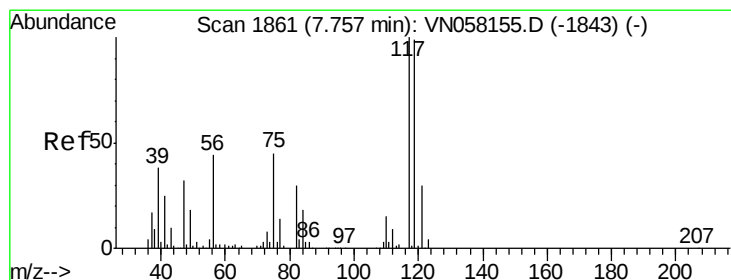
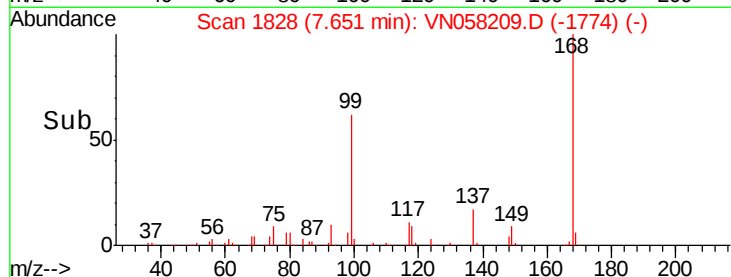
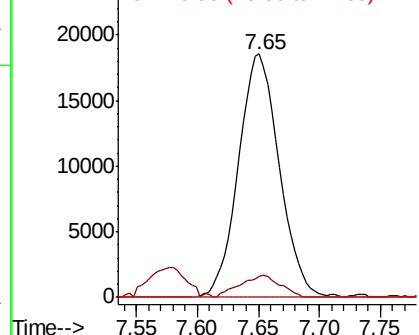
#36  
 1,1-Dichloropropene  
 Concen: 7.179 ug/l  
 RT: 7.65 min Scan# 1828  
 Delta R.T. -0.13 min  
 Lab File: VN058209.D  
 Acq: 19 Sep 2019 17:25

Instrument :  
 MSVOA\_N  
 ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 110     | 9.0   | 16.6  | 49.7# |
| 77      | 0.0   | 24.3  | 36.5# |

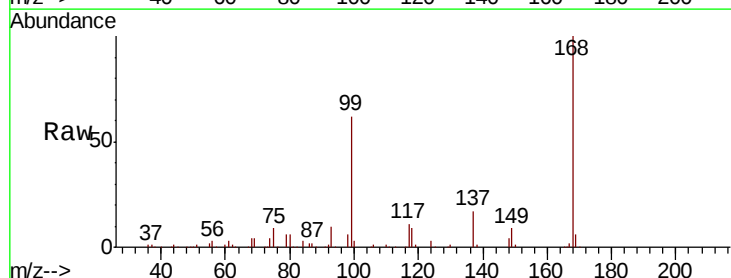


Abundance Ion 74.90 (74.60 to 75.60): VN058155.D (-1844) (-)  
 Ion 109.90 (109.60 to 110.60): VN058155.D (-1844) (-)  
 Ion 76.90 (76.60 to 77.60): VN058155.D (-1844) (-)

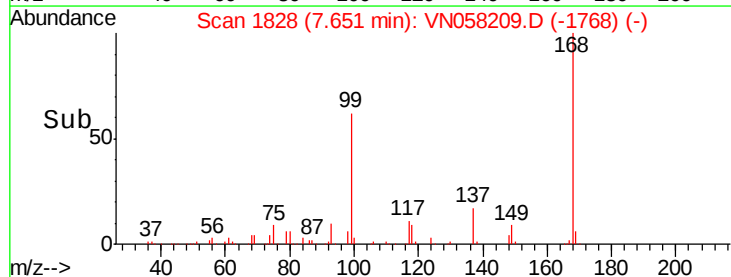
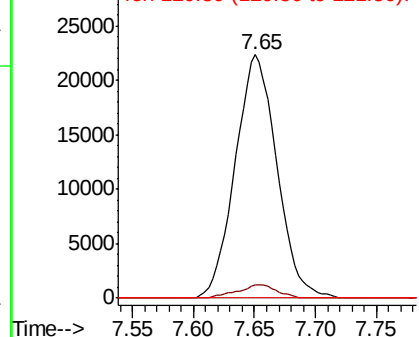


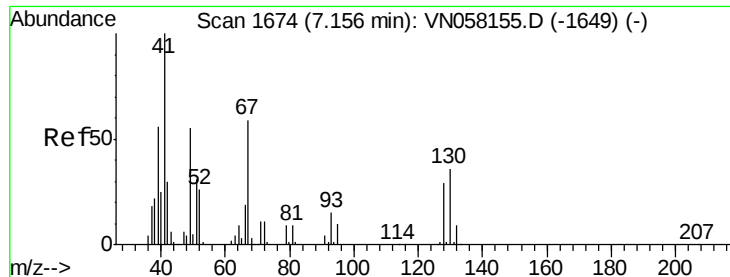
#38  
 Carbon Tetrachloride  
 Concen: 8.789 ug/l  
 RT: 7.65 min Scan# 1828  
 Delta R.T. -0.11 min  
 Lab File: VN058209.D  
 Acq: 19 Sep 2019 17:25

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 117     | 100   |       |        |
| 119     | 5.4   | 78.6  | 117.8# |
| 121     | 0.0   | 24.1  | 36.1#  |



Abundance Ion 116.80 (116.50 to 117.50): VN058155.D (-1843) (-)  
 Ion 118.80 (118.50 to 119.50): VN058155.D (-1843) (-)  
 Ion 120.80 (120.50 to 121.50): VN058155.D (-1843) (-)

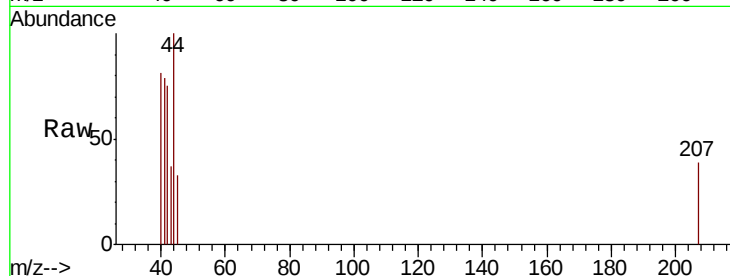




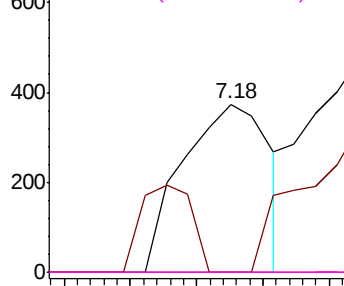
#41  
Methacrylonitrile  
Concen: 1.018 ug/l  
RT: 7.18 min Scan# 1680  
Delta R.T. 0.02 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

Instrument :  
MSVOA\_N  
ClientSampleId :

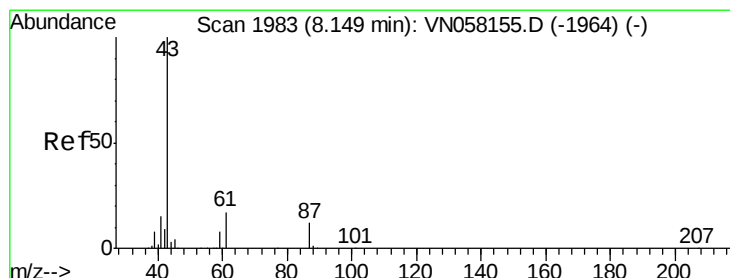
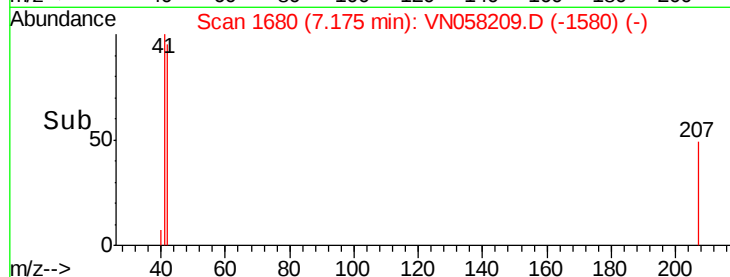
|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 41    | Resp: | 342   |
| Ion      | Ratio | Lower | Upper |
| 41       | 100   |       |       |
| 39       | 30.4  | 0.0   | 0.0#  |
| 67       | 0.0   | 0.0   | 0.0   |
| 52       | 0.0   | 0.0   | 0.0   |



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

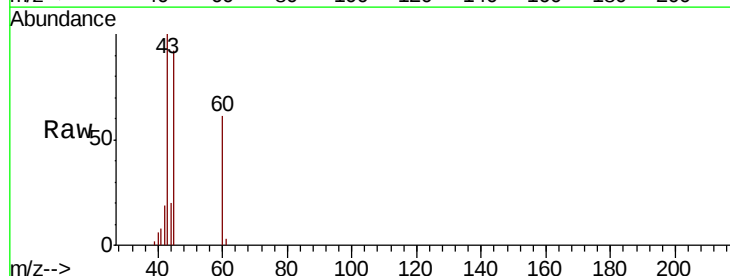


Time--> 7.15 7.16 7.17 7.18

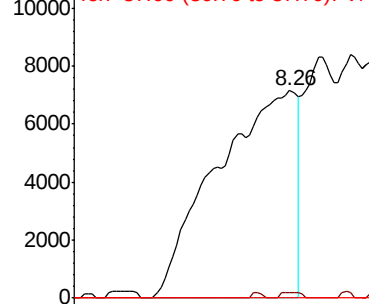


#43  
Isopropyl Acetate  
Concen: 2.733 ug/l  
RT: 8.26 min Scan# 2018  
Delta R.T. 0.11 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

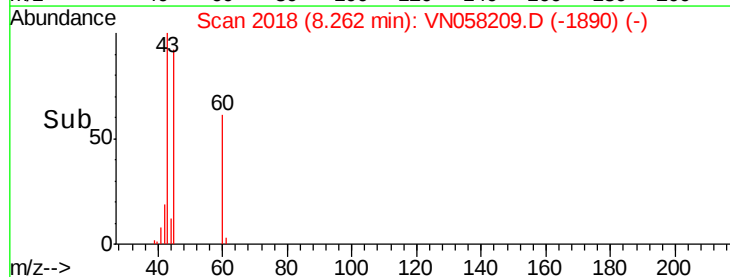
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 31733 |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 61       | 0.0   | 19.7  | 29.5# |
| 87       | 0.0   | 9.4   | 14.2# |

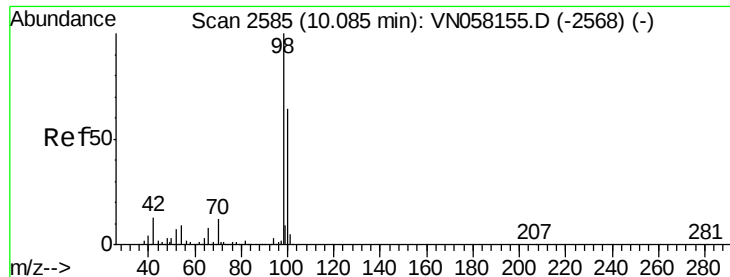


Abundance Ion 43.00 (42.70 to 43.70): VNC  
Ion 61.00 (60.70 to 61.70): VNC  
Ion 87.00 (86.70 to 87.70): VNC



Time--> 8.10 8.15 8.20 8.25 8.30

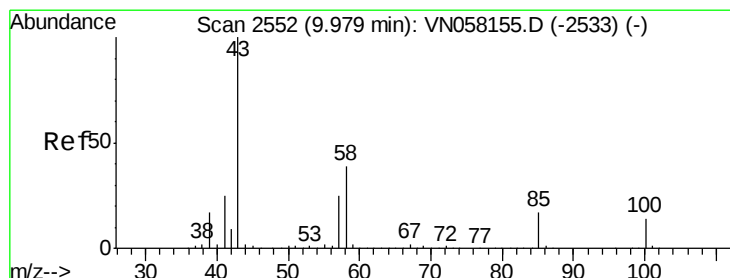
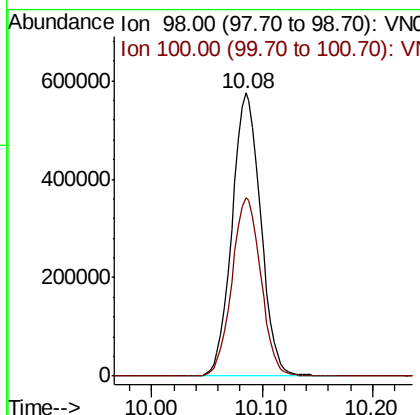
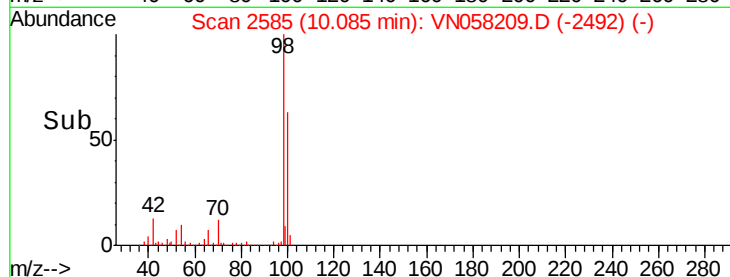
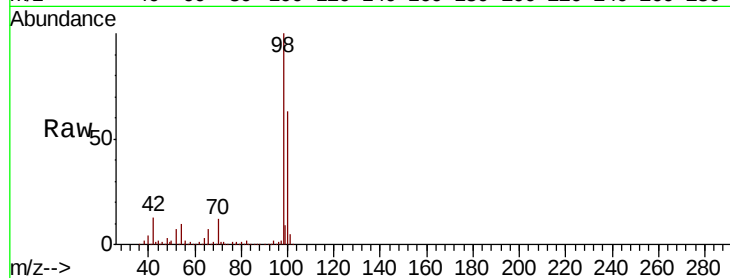




#50  
Toluene-d8  
Concen: 52.723 ug/l  
RT: 10.08 min Scan# 2585  
Delta R.T. -0.00 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

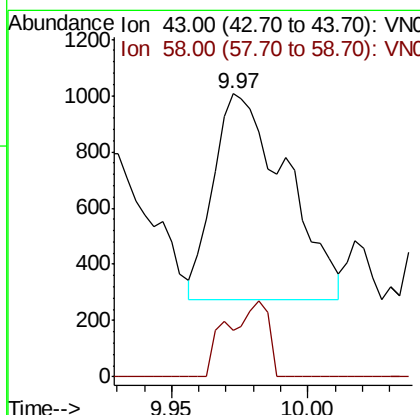
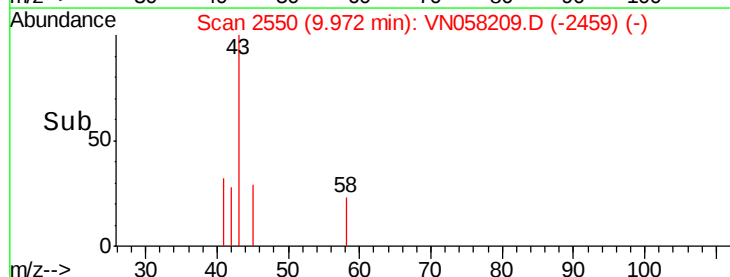
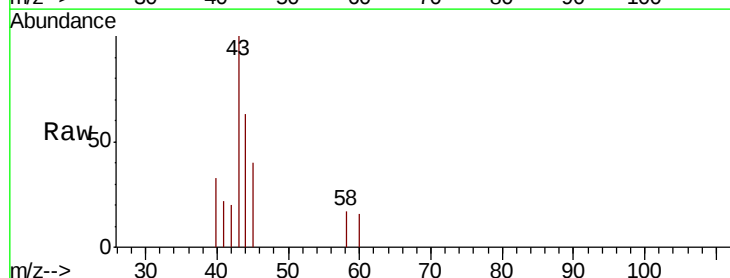
Instrument :  
MSVOA\_N  
ClientSampleId :

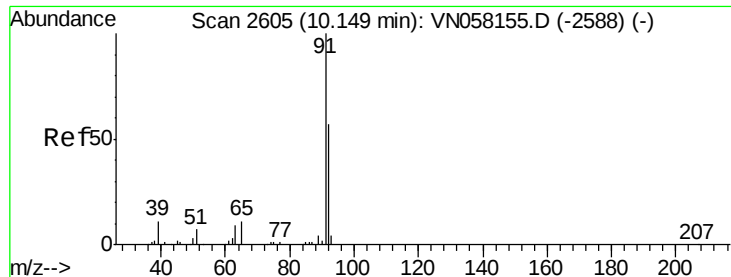
Tot Ion: 98 Resp: 1037572  
Ion Ratio Lower Upper  
98 100  
100 63.7 51.1 76.7



#51  
4-Methyl-2-Pentanone  
Concen: 0.221 ug/l  
RT: 9.97 min Scan# 2550  
Delta R.T. -0.01 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

Tgt Ion: 43 Resp: 1365  
Ion Ratio Lower Upper  
43 100  
58 20.4 30.2 45.4#





#52

Toluene

Concen: 1.321 ug/l

RT: 10.15 min Scan# 2606

Delta R.T. 0.00 min

Lab File: VN058209.D

Acq: 19 Sep 2019 17:25

Instrument :

MSVOA\_N

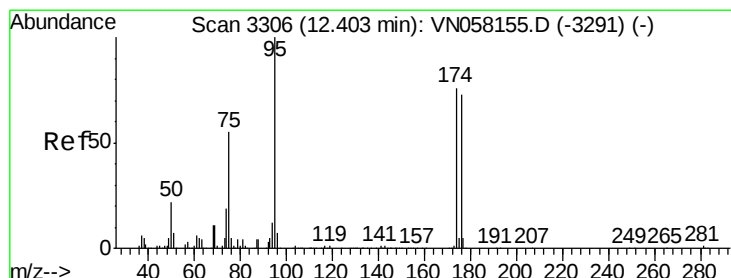
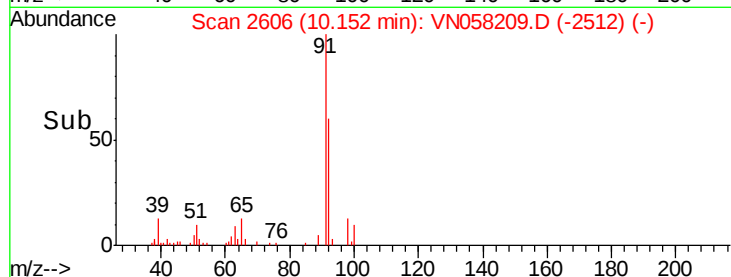
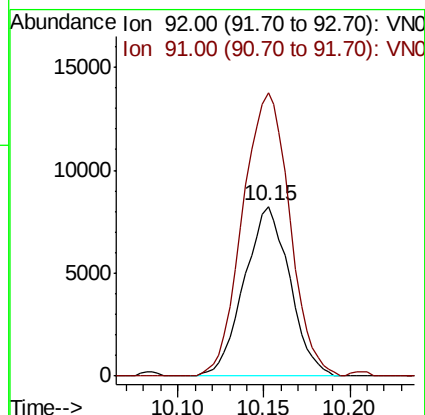
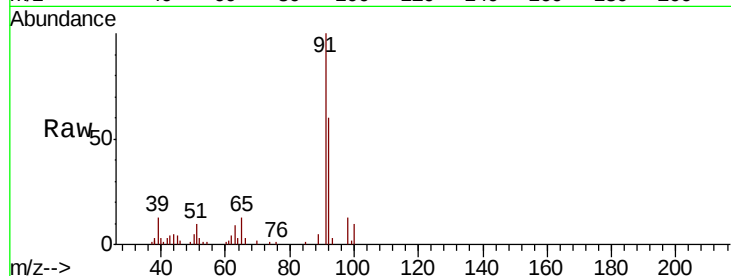
ClientSampled :

Tot Ion: 92 Resp: 15154

Ion Ratio Lower Upper

92 100

91 173.1 140.2 210.2



#62

4-Bromofluorobenzene

Concen: 45.446 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. -0.00 min

Lab File: VN058209.D

Acq: 19 Sep 2019 17:25

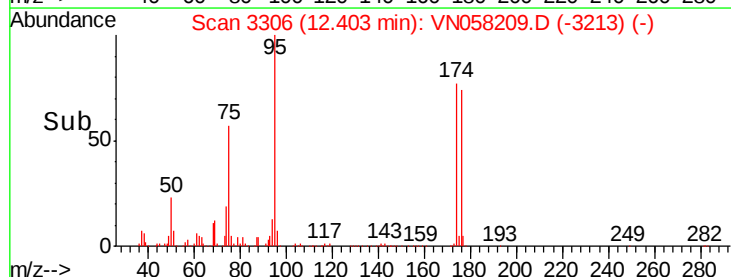
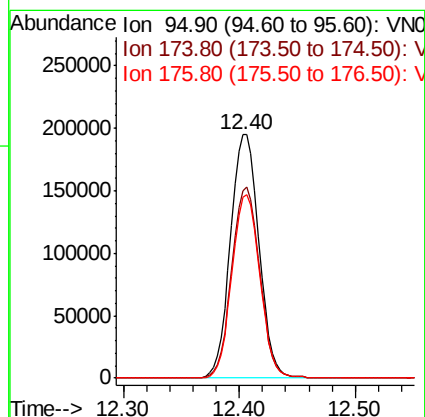
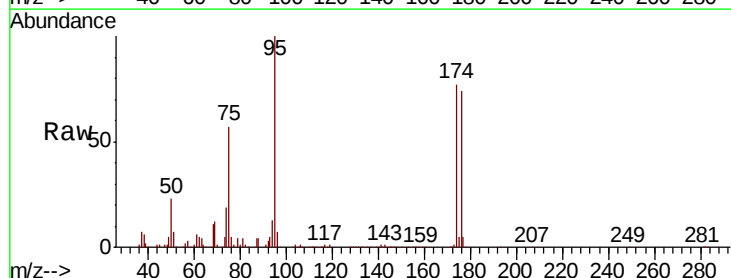
Tgt Ion: 95 Resp: 332217

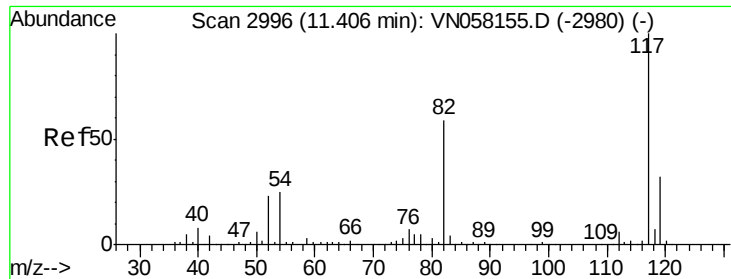
Ion Ratio Lower Upper

95 100

174 77.2 0.0 152.2

176 74.0 0.0 148.0

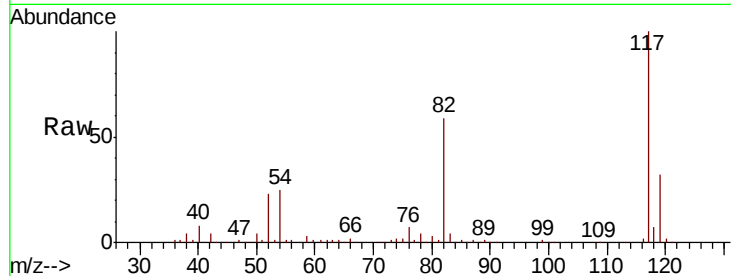




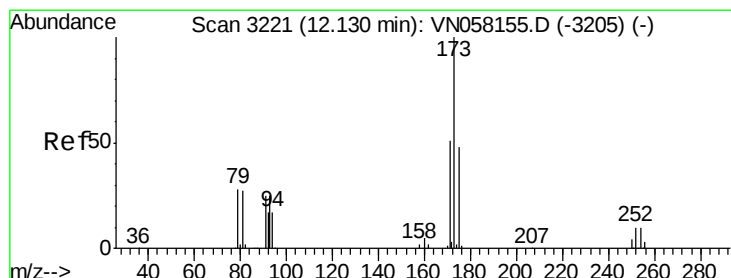
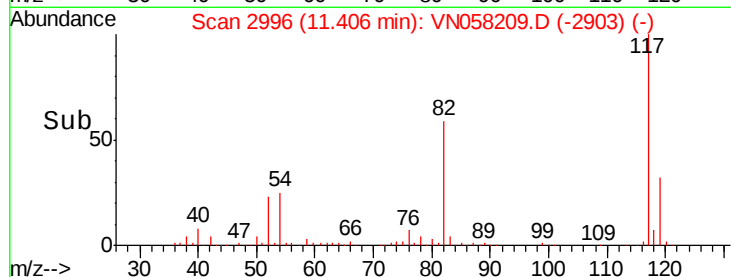
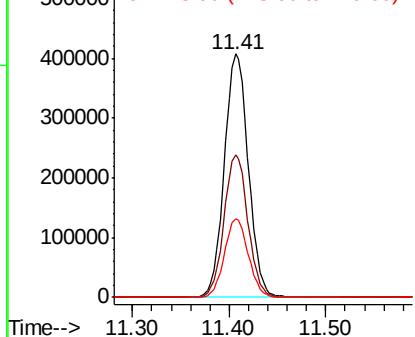
#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.41 min Scan# 2996  
Delta R.T. -0.00 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

Instrument :  
MSVOA\_N  
ClientSampleId :

Tot Ion:117 Resp: 701839  
Ion Ratio Lower Upper  
117 100  
82 58.6 46.9 70.3  
119 32.3 25.3 37.9

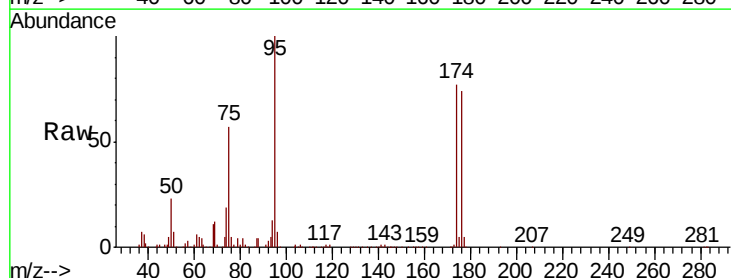


Abundance Ion 116.90 (116.60 to 117.60): V  
Ion 82.00 (81.70 to 82.70): VN0  
Ion 118.90 (118.60 to 119.60): V

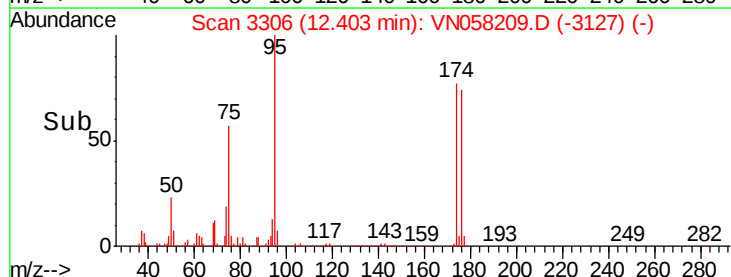
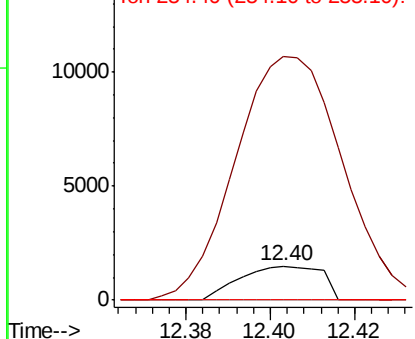


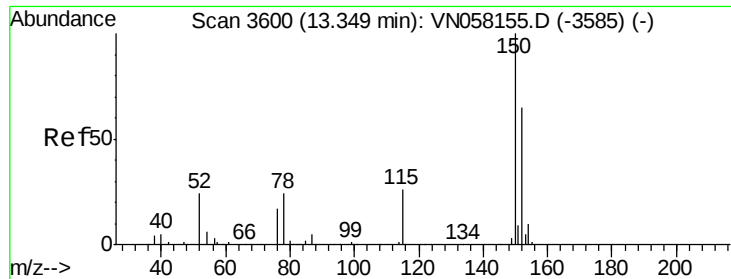
#71  
Bromoform  
Concen: 4.161 ug/l  
RT: 12.40 min Scan# 3306  
Delta R.T. 0.27 min  
Lab File: VN058209.D  
Acq: 19 Sep 2019 17:25

Tgt Ion:173 Resp: 2022  
Ion Ratio Lower Upper  
173 100  
175 817.1 24.2 72.6#  
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: VN058209.D

Acq: 19 Sep 2019 17:25

Instrument :

MSVOA\_N

ClientSampleId :

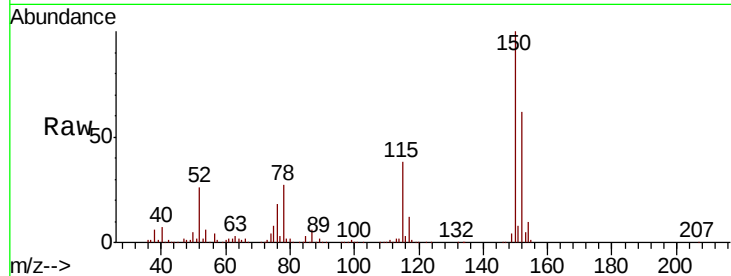
Tot Ion:152 Resp: 289735

Ion Ratio Lower Upper

152 100

115 60.8 30.1 90.3

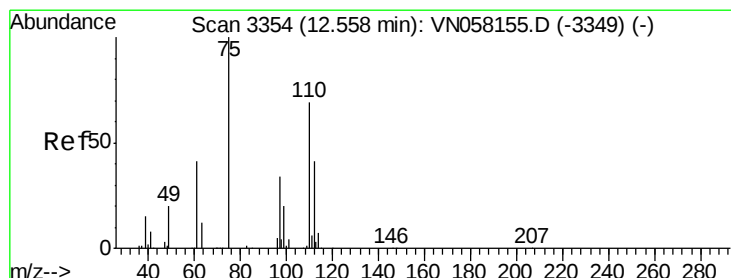
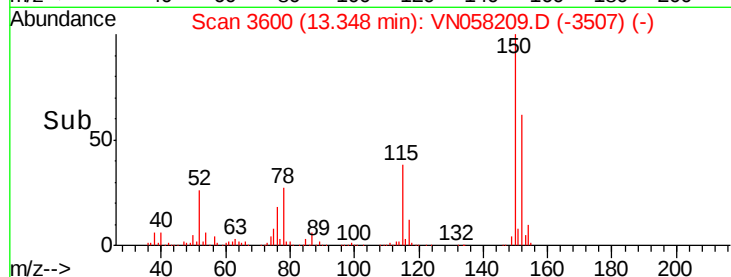
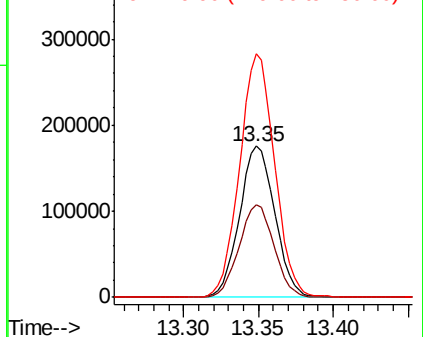
150 159.4 0.0 346.4



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



#76

1,2,3-Trichloropropane

Concen: 35.422 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. -0.15 min

Lab File: VN058209.D

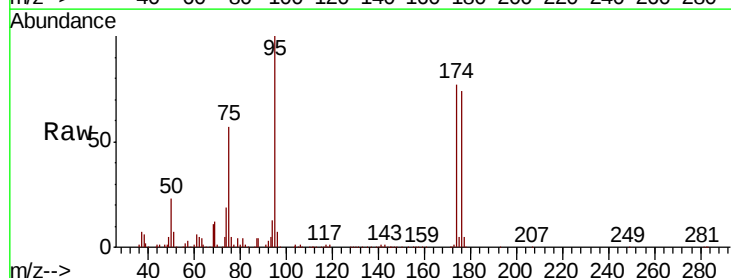
Acq: 19 Sep 2019 17:25

Tgt Ion: 75 Resp: 183673

Ion Ratio Lower Upper

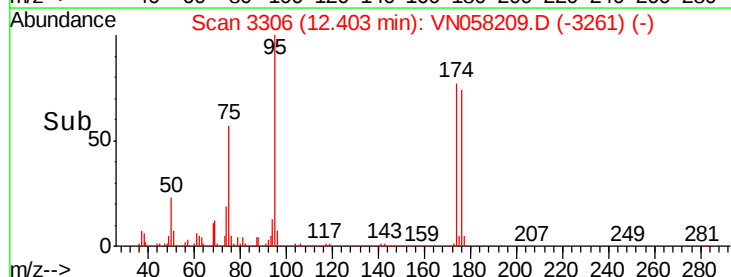
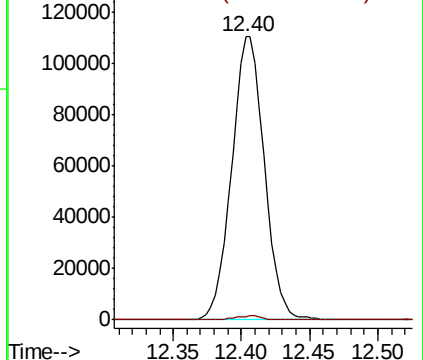
75 100

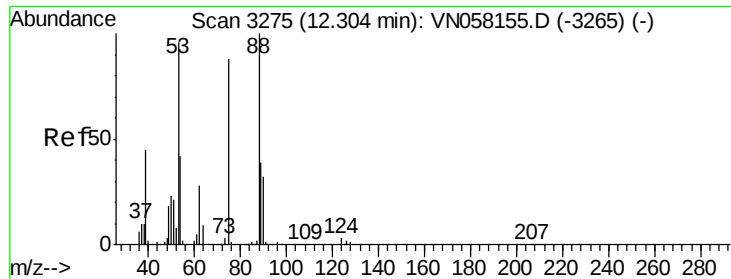
77 1.2 0.0 0.0#



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: 99.017 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. 0.10 min

Lab File: VN058209.D

Acq: 19 Sep 2019 17:25

Instrument :

MSVOA\_N

ClientSampleId :

Tot Ion: 75 Resp: 183673

Ion Ratio Lower Upper

75 100

53 0.0 90.1 135.1#

89 0.1 36.2 54.2#

