

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN033019\  
 Data File : VN054828.D  
 Acq On : 31 Mar 2019 3:31  
 Operator : JC/SP  
 Sample : K2164-05  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 38 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Quant Time: Mar 31 04:44:34 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N032919W.M  
 Quant Title : SW846 8260  
 QLast Update : Sat Mar 30 00:48:18 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.67  | 168  | 533981   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.59  | 114  | 852691   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 694614   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.35 | 152  | 229825   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-----------------------------|-------|------|----------|-------|--------|----------|
| 33) 1,2-Dichloroethane-d4   | 8.03  | 65   | 344135   | 47.81 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 95.62% |          |
| 35) Dibromofluoromethane    | 7.59  | 113  | 275355   | 48.44 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 96.88% |          |
| 50) Toluene-d8              | 10.09 | 98   | 1010666  | 47.82 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 95.64% |          |
| 62) 4-Bromofluorobenzene    | 12.40 | 95   | 293192   | 41.71 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 83.42% |          |

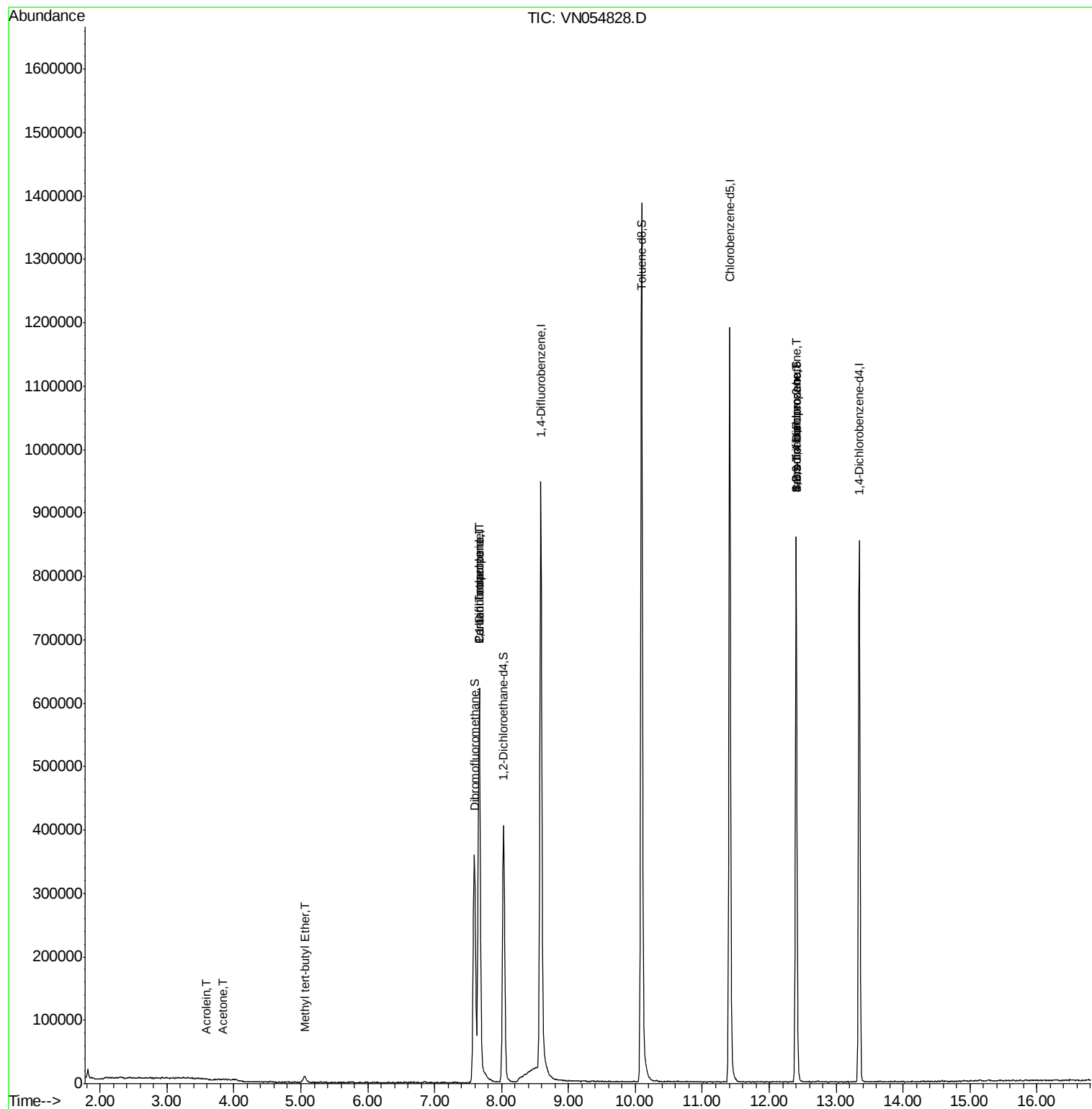
| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 5) Bromomethane                | 2.56  | 94   | 128      | Below Cal | #      | 2      |
| 13) Acrolein                   | 3.60  | 56   | 183      | 0.546     | ug/l # | 11     |
| 16) Acetone                    | 3.83  | 43   | 565      | 0.329     | ug/l # | 59     |
| 18) Methyl Acetate             | 4.33  | 43   | 1158     | Below Cal |        | 98     |
| 19) Methyl tert-butyl Ether    | 5.05  | 73   | 12582    | 0.857     | ug/l   | 99     |
| 31) Cyclohexane                | 7.66  | 56   | 12188    | Below Cal | #      | 31     |
| 36) 1,1-Dichloropropene        | 7.67  | 75   | 40326    | 5.075     | ug/l # | 47     |
| 38) Carbon Tetrachloride       | 7.67  | 117  | 50207    | 6.506     | ug/l # | 16     |
| 71) Bromoform                  | 12.40 | 173  | 1259     | 0.422     | ug/l # | 1      |
| 76) 1,2,3-Trichloropropane     | 12.40 | 75   | 151995   | 38.069    | ug/l # | 100    |
| 81) trans-1,4-Dichloro-2-buten | 12.40 | 75   | 151995   | 148.080   | ug/l # | 11     |
| 83) tert-Butylbenzene          | 13.00 | 119  | 113      | Below Cal | #      | 56     |

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

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Instrument :  
MSVOA\_N  
ClientSampleId :

Quant Time: Mar 31 04:44:34 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_N\METHODS\82N032919W.M  
Quant Title : SW846 8260  
QLast Update : Sat Mar 30 00:48:18 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.67 min Scan# 1833

Delta R.T. -0.00 min

Lab File: VN054828.D

Acq: 31 Mar 2019 3:31

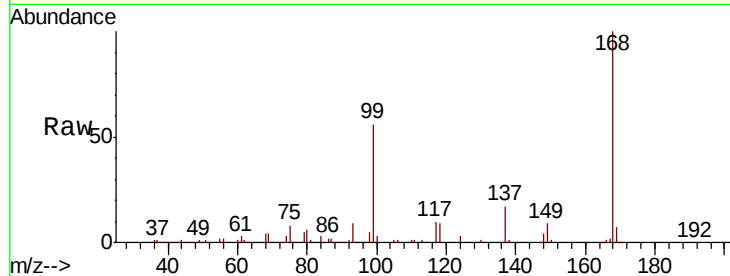
Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion:168 Resp: 533981

Ion Ratio Lower Upper

168 100

99 56.2 37.1 55.7#



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VNO

7.67

250000

200000

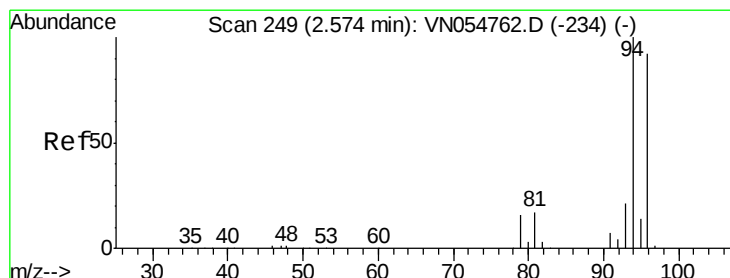
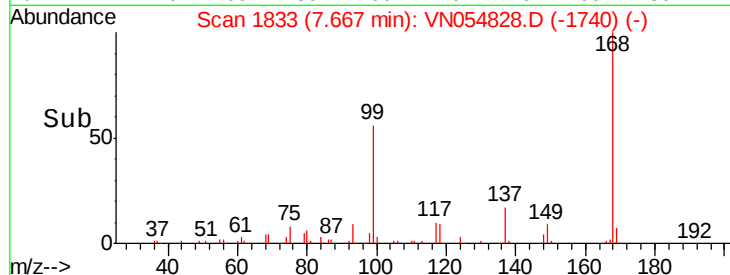
150000

100000

50000

0

Time--> 7.50 7.60 7.70 7.80



#5

Bromomethane

Concen: Below Cal

RT: 2.56 min Scan# 245

Delta R.T. -0.01 min

Lab File: VN054828.D

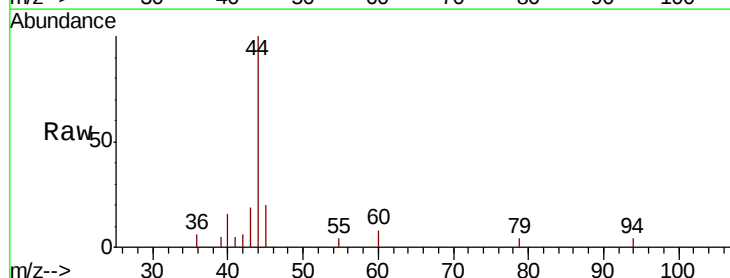
Acq: 31 Mar 2019 3:31

Tgt Ion: 94 Resp: 128

Ion Ratio Lower Upper

94 100

96 0.0 77.0 115.4#



Abundance Ion 93.90 (93.60 to 94.60): VNO

Ion 95.90 (95.60 to 96.60): VNO

250

200

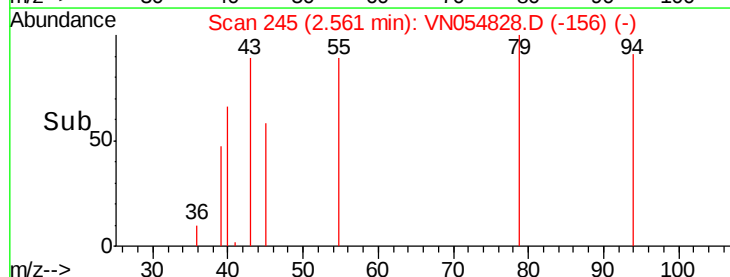
150

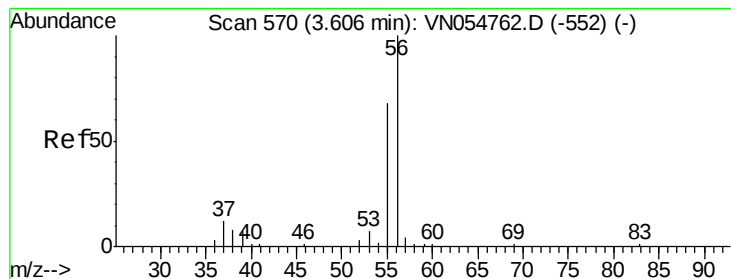
100

50

0

Time--> 2.55 2.56 2.57





#13

Acrolein

Concen: 0.546 ug/l

RT: 3.60 min Scan# 567

Delta R.T. -0.01 min

Lab File: VN054828.D

Acq: 31 Mar 2019 3:31

Instrument :

MSVOA\_N

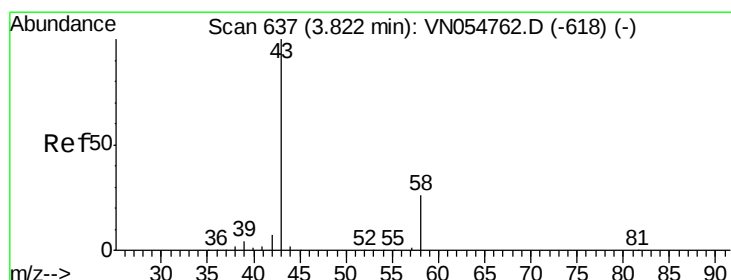
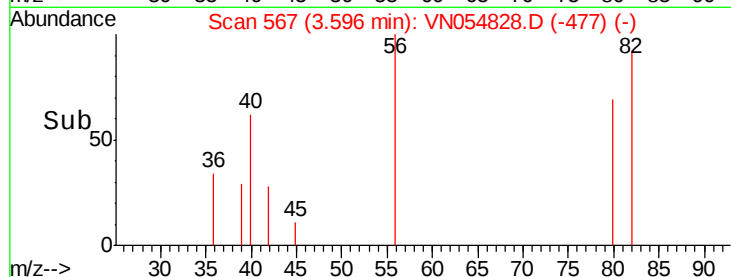
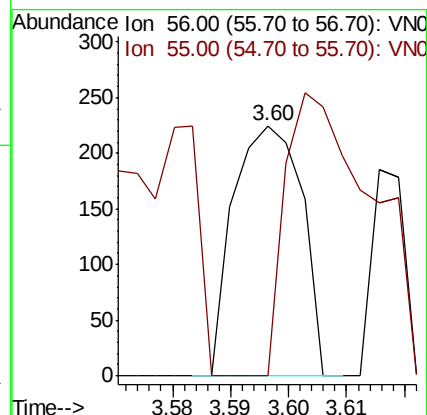
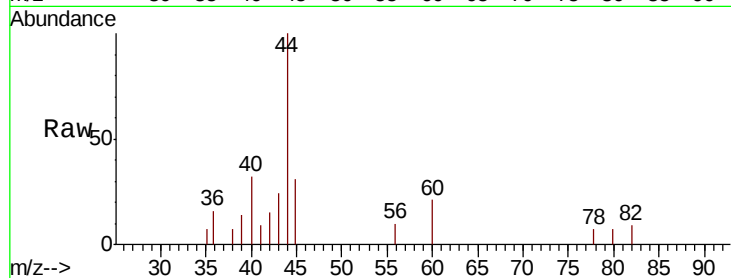
ClientSampleId :

Tot Ion: 56 Resp: 183

Ion Ratio Lower Upper

56 100

55 144.3 56.7 85.1#



#16

Acetone

Concen: 0.329 ug/l

RT: 3.83 min Scan# 641

Delta R.T. 0.01 min

Lab File: VN054828.D

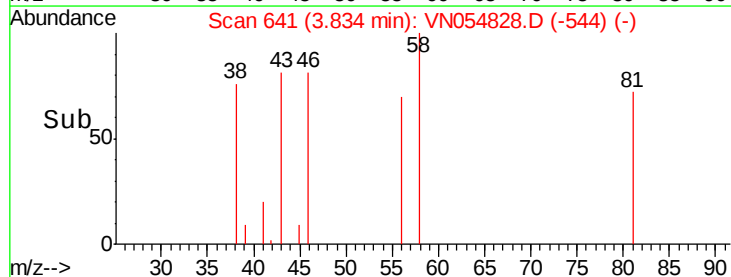
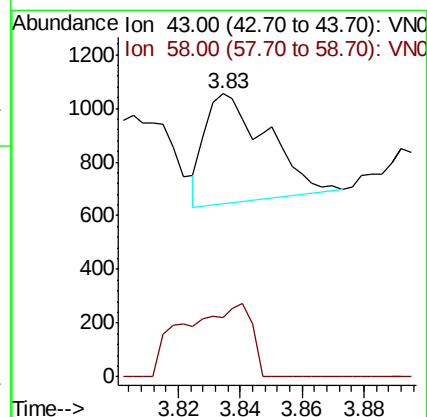
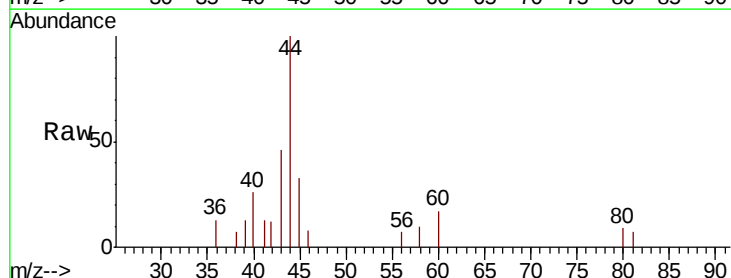
Acq: 31 Mar 2019 3:31

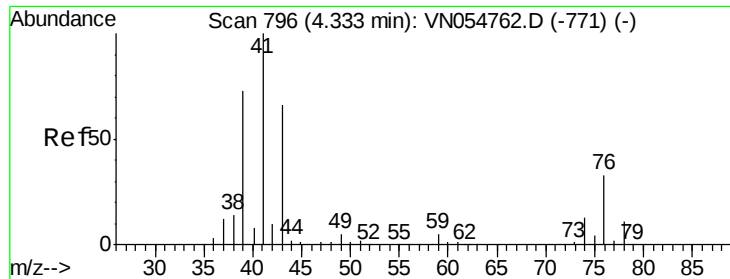
Tgt Ion: 43 Resp: 565

Ion Ratio Lower Upper

43 100

58 61.9 29.9 44.9#

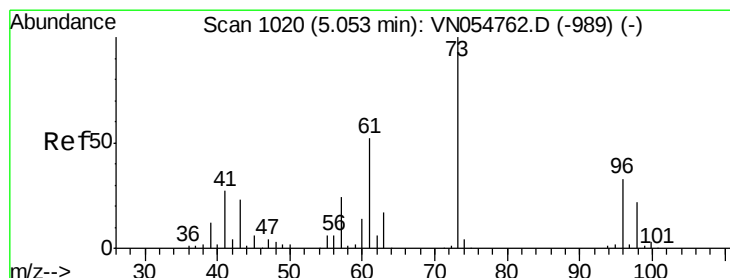
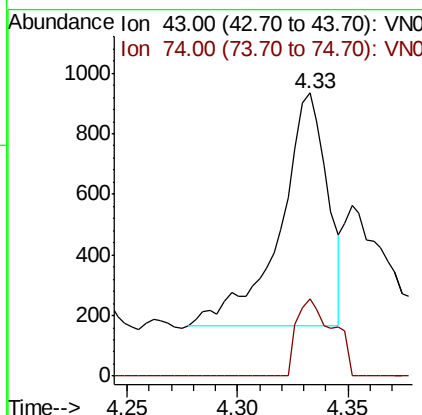
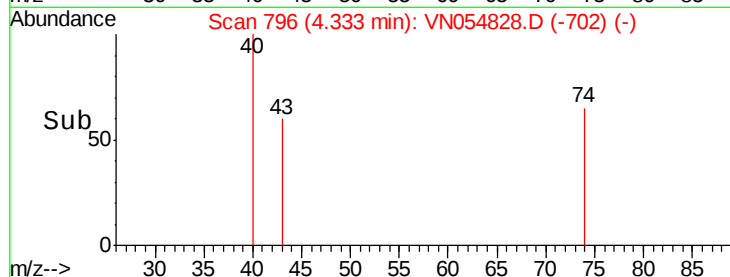
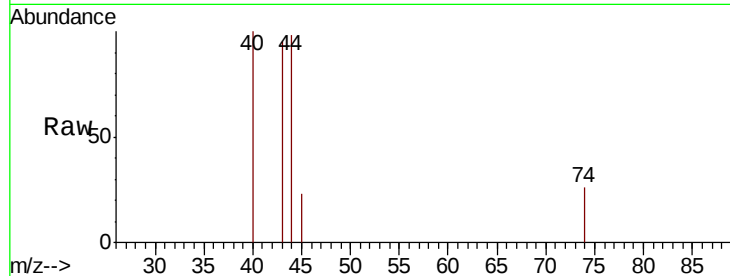




#18  
Methyl Acetate  
Concen: Below Cal  
RT: 4.33 min Scan# 796  
Delta R.T. 0.00 min  
Lab File: VN054828.D  
Acq: 31 Mar 2019 3:31

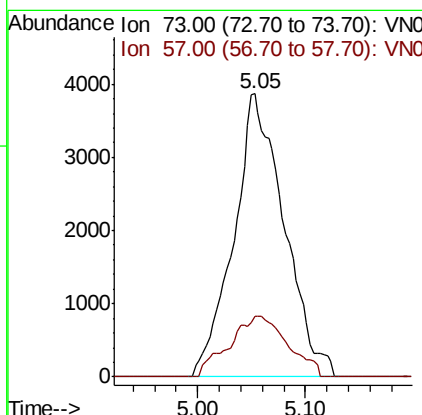
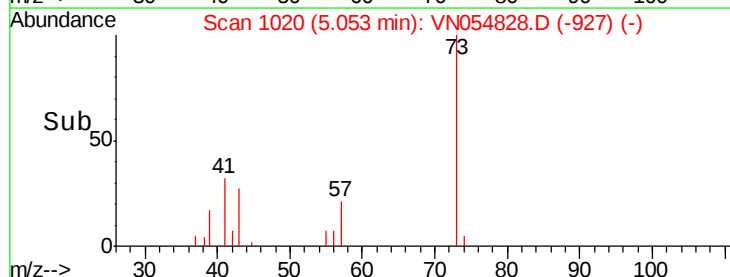
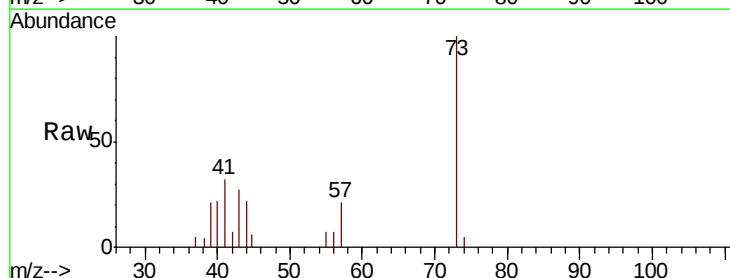
Instrument :  
MSVOA\_N  
ClientSampled :

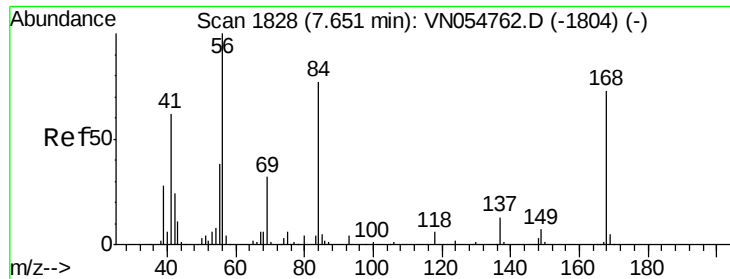
Tot Ion: 43 Resp: 1158  
Ion Ratio Lower Upper  
43 100  
74 25.1 20.8 31.2



#19  
Methyl tert-butyl Ether  
Concen: 0.857 ug/l  
RT: 5.05 min Scan# 1020  
Delta R.T. -0.00 min  
Lab File: VN054828.D  
Acq: 31 Mar 2019 3:31

Tgt Ion: 73 Resp: 12582  
Ion Ratio Lower Upper  
73 100  
57 21.4 16.8 25.2

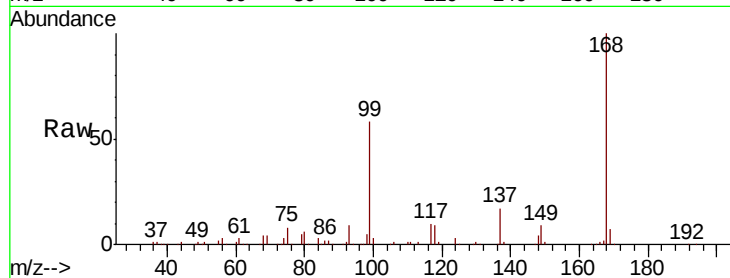




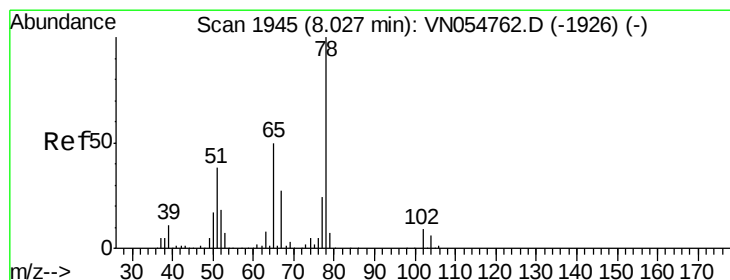
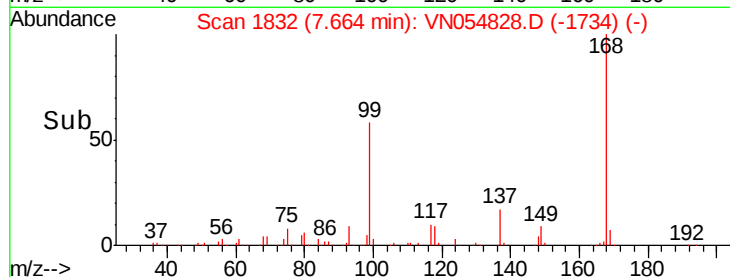
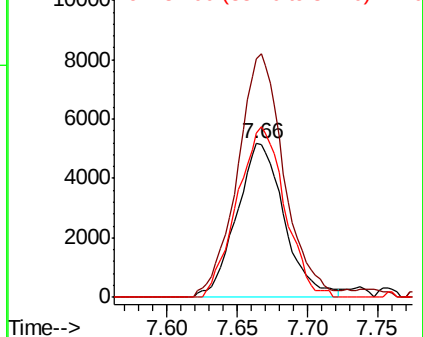
#31  
Cyclohexane  
Concen: Below Cal  
RT: 7.66 min Scan# 1832  
Delta R.T. 0.01 min  
Lab File: VN054828.D  
Acq: 31 Mar 2019 3:31

Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion: 56 Resp: 12188  
Ion Ratio Lower Upper  
56 100  
69 155.7 27.8 41.6#  
84 110.0 74.6 111.8

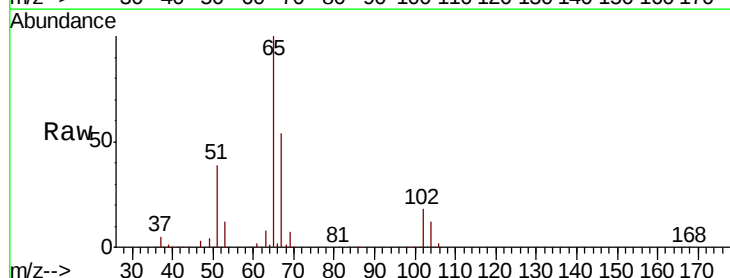


Abundance Ion 56.00 (55.70 to 56.70): VN0  
Ion 69.00 (68.70 to 69.70): VN0  
Ion 84.00 (83.70 to 84.70): VN0

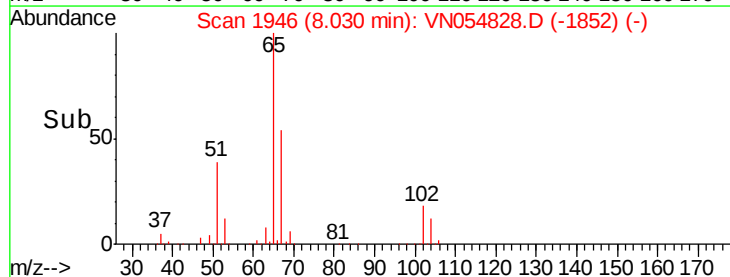
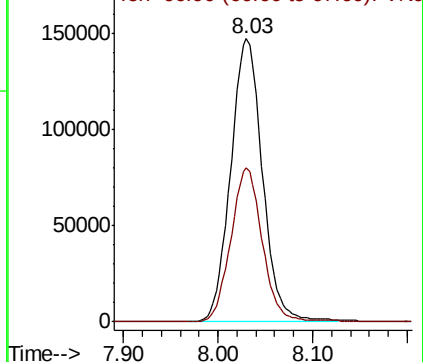


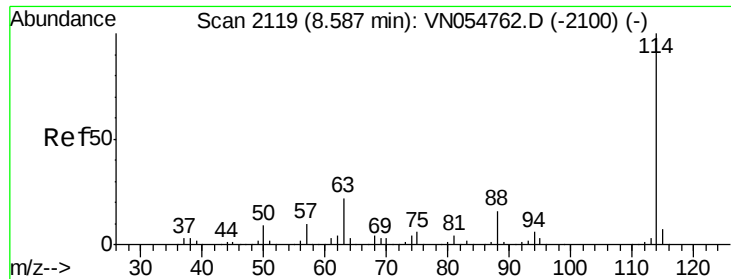
#33  
1,2-Dichloroethane-d4  
Concen: 47.809 ug/l  
RT: 8.03 min Scan# 1946  
Delta R.T. 0.00 min  
Lab File: VN054828.D  
Acq: 31 Mar 2019 3:31

Tgt Ion: 65 Resp: 344135  
Ion Ratio Lower Upper  
65 100  
67 53.4 0.0 104.6



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

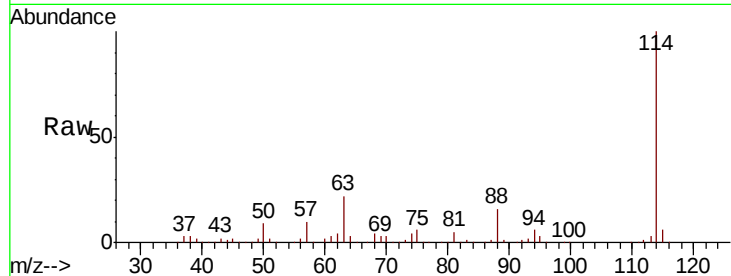




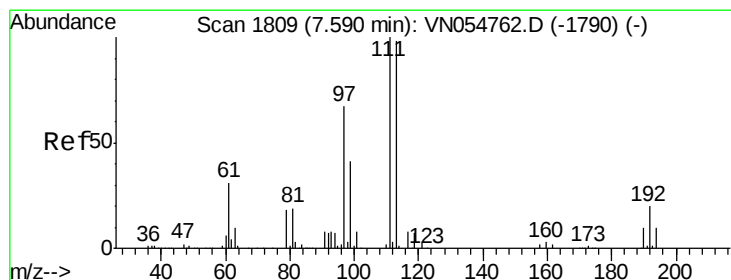
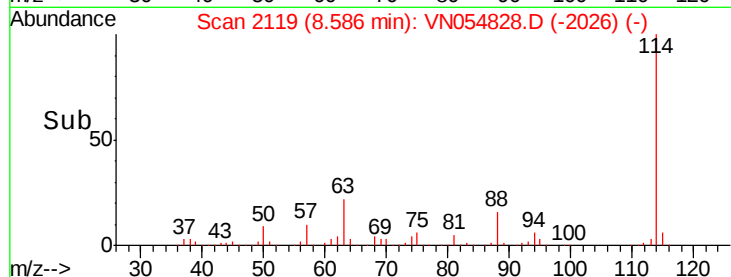
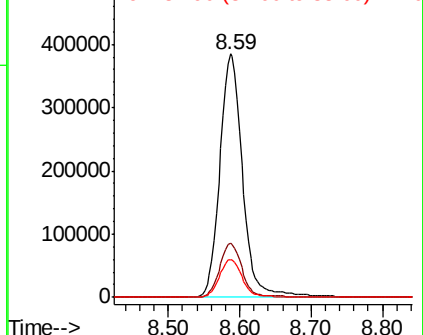
#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.59 min Scan# 2119  
 Delta R.T. -0.00 min  
 Lab File: VN054828.D  
 Acq: 31 Mar 2019 3:31

Instrument :  
 MSVOA\_N  
 ClientSampled :

Tot Ion:114 Resp: 852691  
 Ion Ratio Lower Upper  
 114 100  
 63 22.5 0.0 35.2  
 88 15.7 0.0 30.2

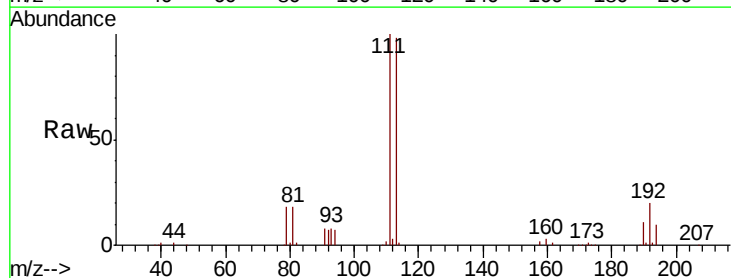


Abundance Ion 113.90 (113.60 to 114.60): V  
 Ion 63.00 (62.70 to 63.70): VN  
 Ion 87.90 (87.60 to 88.60): VN

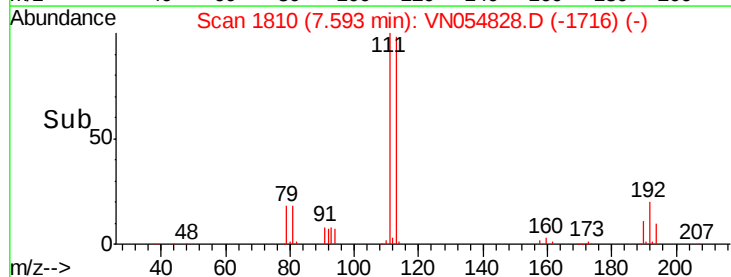
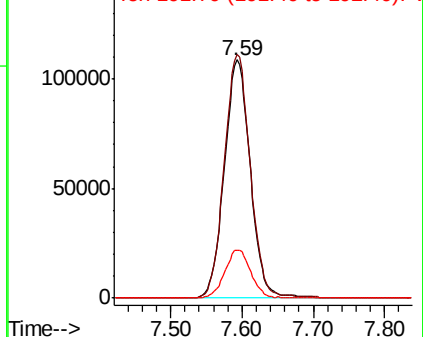


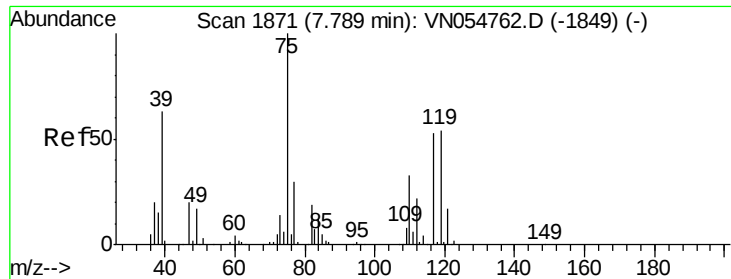
#35  
 Dibromofluoromethane  
 Concen: 48.437 ug/l  
 RT: 7.59 min Scan# 1810  
 Delta R.T. 0.00 min  
 Lab File: VN054828.D  
 Acq: 31 Mar 2019 3:31

Tgt Ion:113 Resp: 275355  
 Ion Ratio Lower Upper  
 113 100  
 111 101.5 82.2 123.4  
 192 20.1 19.2 28.8



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

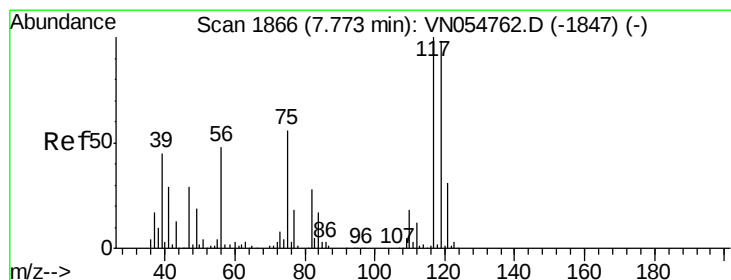
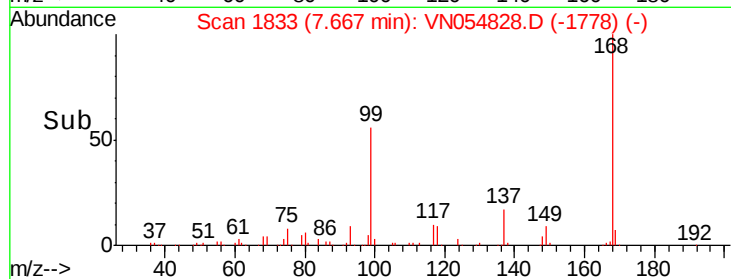
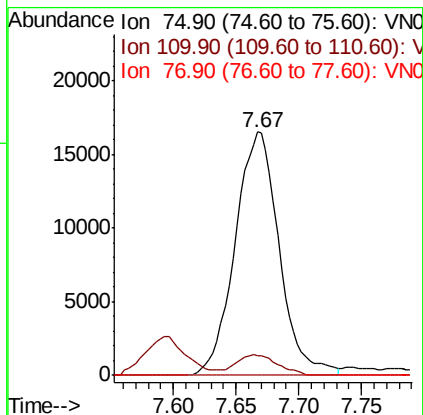
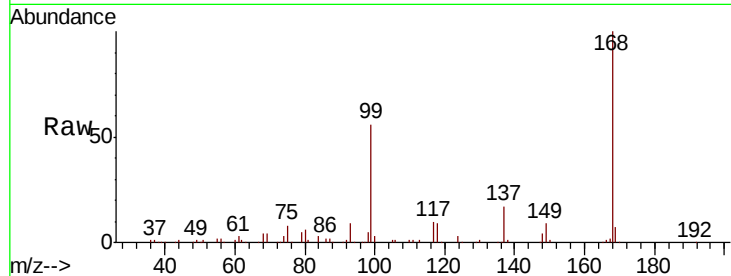




#36  
 1,1-Dichloropropene  
 Concen: 5.075 ug/l  
 RT: 7.67 min Scan# 1833  
 Delta R.T. -0.12 min  
 Lab File: VN054828.D  
 Acq: 31 Mar 2019 3:31

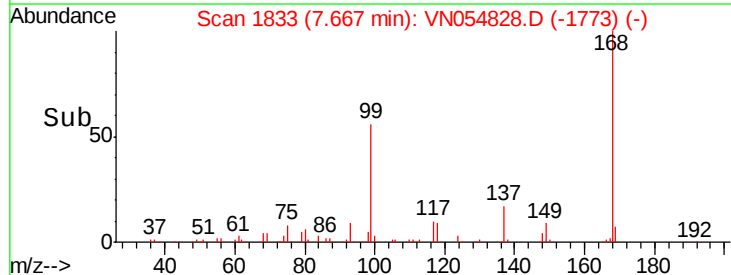
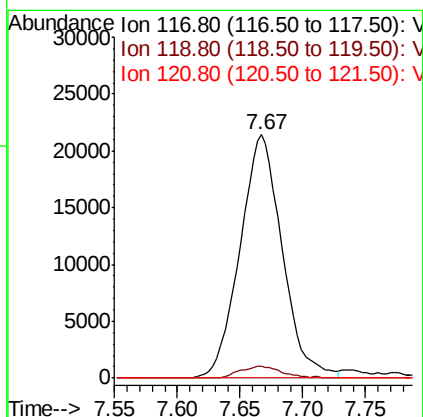
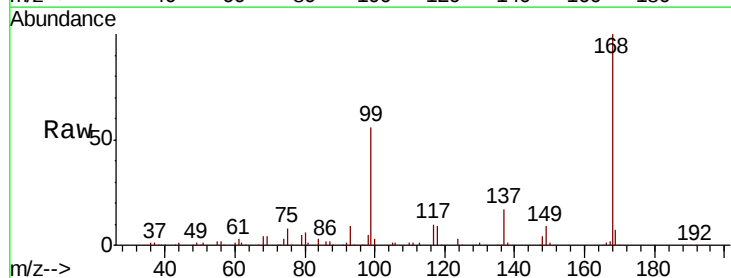
Instrument :  
 MSVOA\_N  
 ClientSampleId :

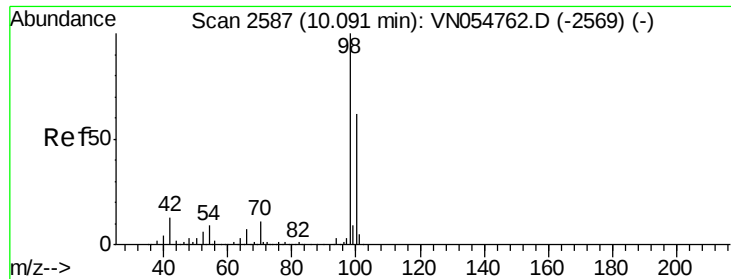
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 110     | 8.2   | 19.1  | 57.5# |
| 77      | 0.0   | 25.0  | 37.4# |



#38  
 Carbon Tetrachloride  
 Concen: 6.506 ug/l  
 RT: 7.67 min Scan# 1833  
 Delta R.T. -0.11 min  
 Lab File: VN054828.D  
 Acq: 31 Mar 2019 3:31

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 117     | 100   |       |        |
| 119     | 4.9   | 76.3  | 114.5# |
| 121     | 0.0   | 24.6  | 36.8#  |





#50

Toluene-d8

Concen: 47.820 ug/l

RT: 10.09 min Scan# 2587

Delta R.T. -0.00 min

Lab File: VN054828.D

Acq: 31 Mar 2019 3:31

Instrument :

MSVOA\_N

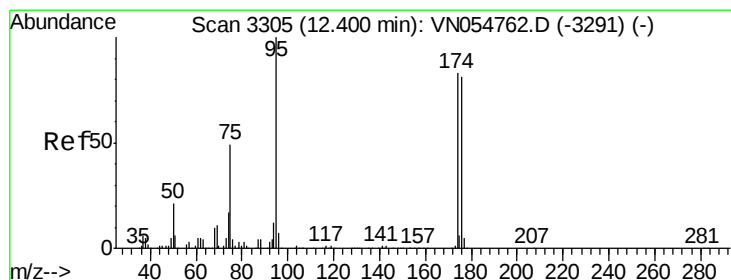
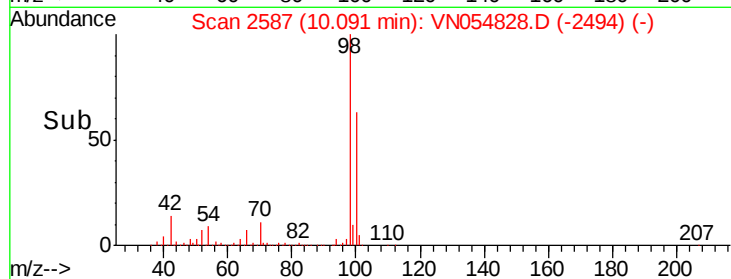
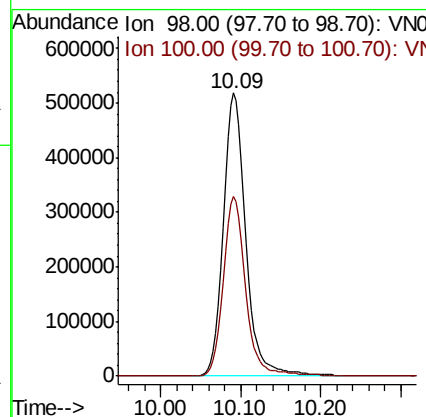
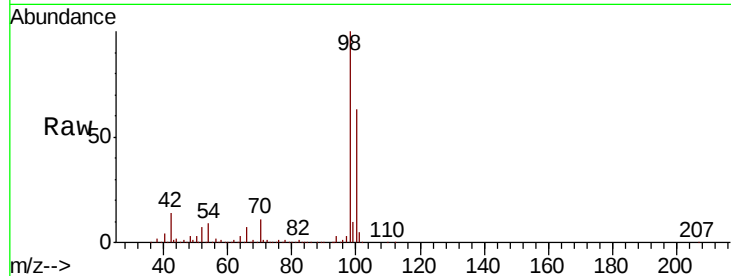
ClientSampled :

Tot Ion: 98 Resp: 1010666

Ion Ratio Lower Upper

98 100

100 62.8 51.2 76.8



#62

4-Bromofluorobenzene

Concen: 41.712 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. 0.00 min

Lab File: VN054828.D

Acq: 31 Mar 2019 3:31

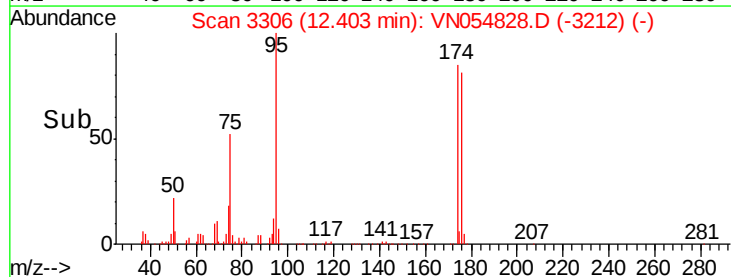
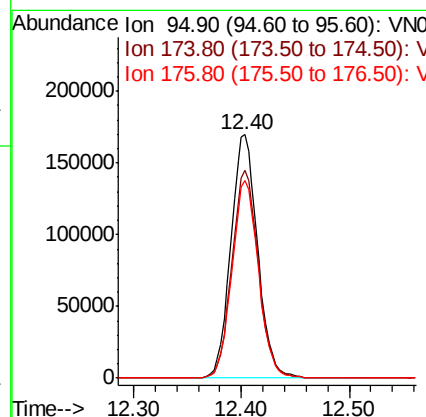
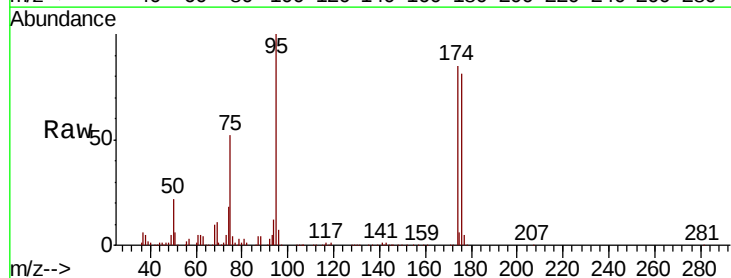
Tgt Ion: 95 Resp: 293192

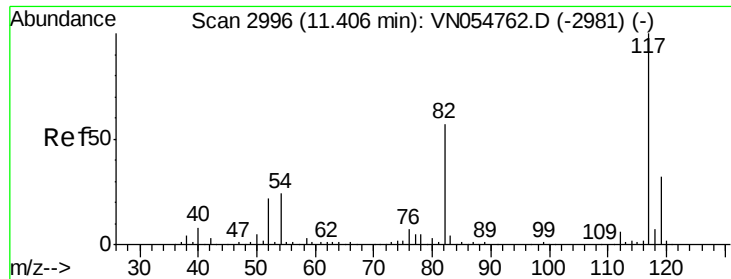
Ion Ratio Lower Upper

95 100

174 84.8 0.0 191.0

176 80.8 0.0 187.4

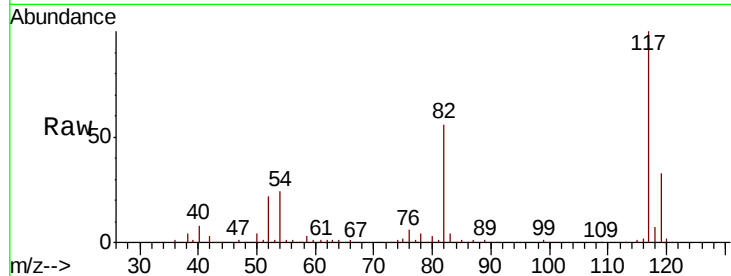




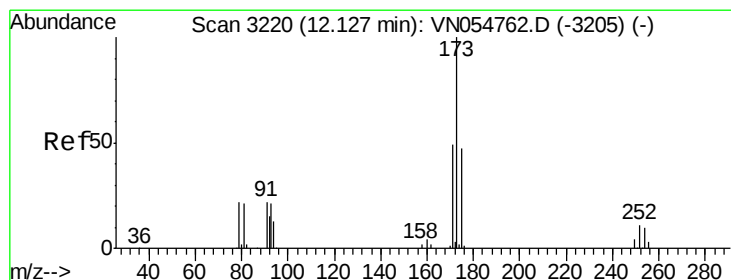
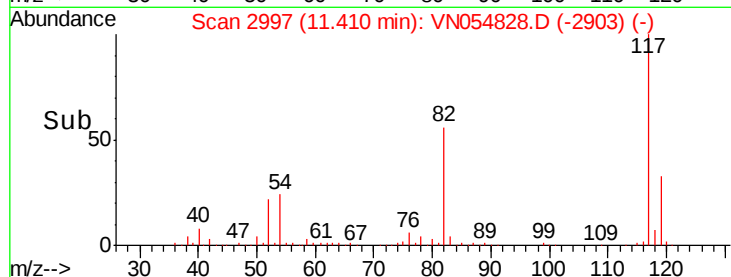
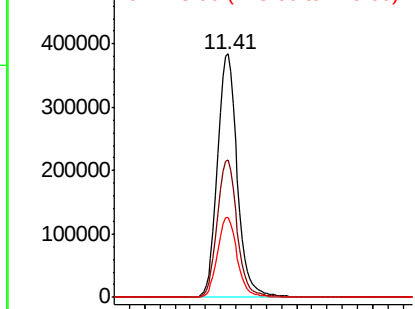
#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.41 min Scan# 2997  
Delta R.T. 0.00 min  
Lab File: VN054828.D  
Acq: 31 Mar 2019 3:31

Instrument :  
MSVOA\_N  
ClientSampled :

Tot Ion:117 Resp: 694614  
Ion Ratio Lower Upper  
117 100  
82 56.2 40.0 60.0  
119 32.6 25.8 38.6

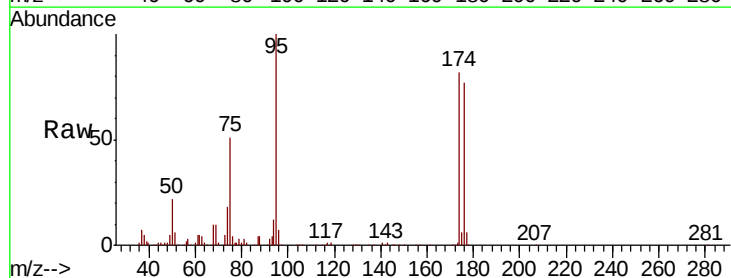


Abundance Ion 116.90 (116.60 to 117.60): V  
Ion 82.00 (81.70 to 82.70): V  
Ion 118.90 (118.60 to 119.60): V

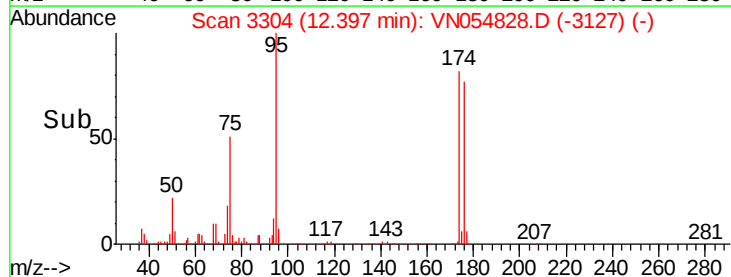
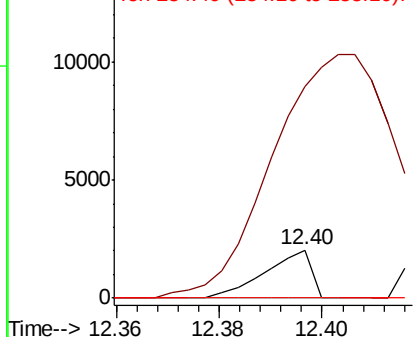


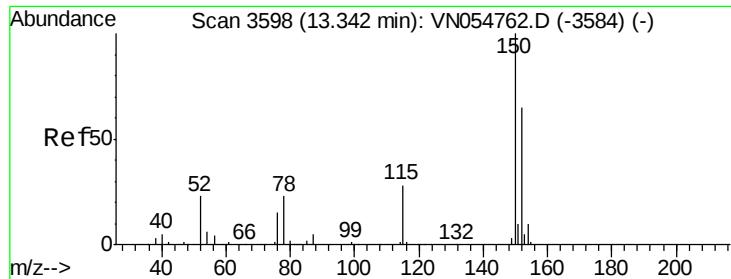
#71  
Bromoform  
Concen: 0.422 ug/l  
RT: 12.40 min Scan# 3304  
Delta R.T. 0.27 min  
Lab File: VN054828.D  
Acq: 31 Mar 2019 3:31

Tgt Ion:173 Resp: 1259  
Ion Ratio Lower Upper  
173 100  
175 1199.6 24.4 73.2#  
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



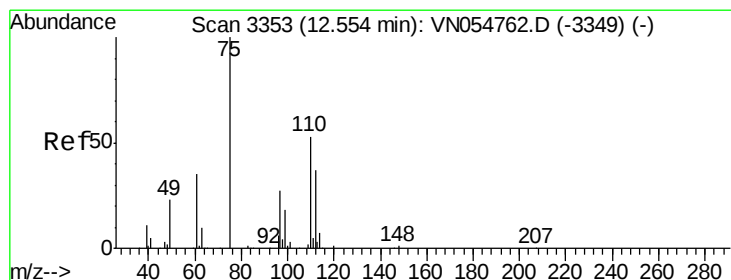
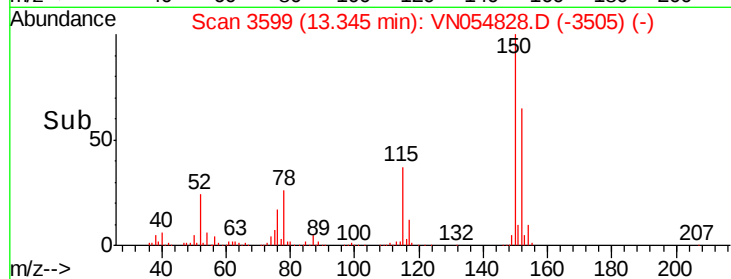
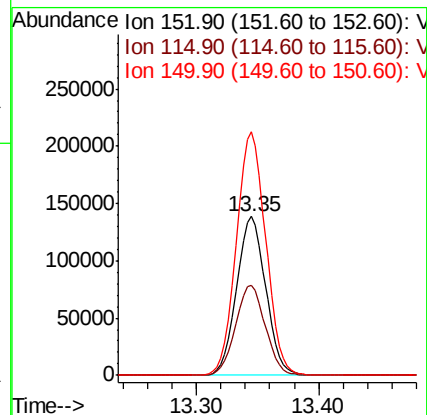
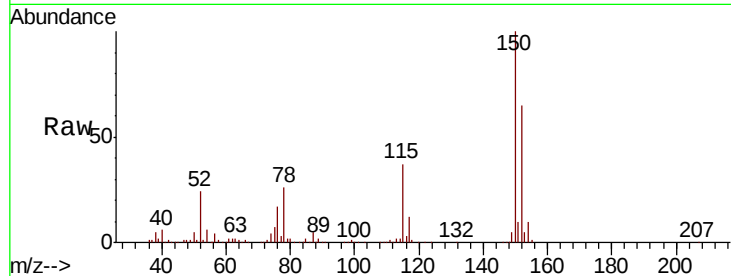


#72

1,4-Dichlorobenzene-d4  
Concen: 50.000 ug/l  
RT: 13.35 min Scan# 3599  
Delta R.T. 0.00 min  
Lab File: VN054828.D  
Acq: 31 Mar 2019 3:31

Instrument :  
MSVOA\_N  
ClientSampled :

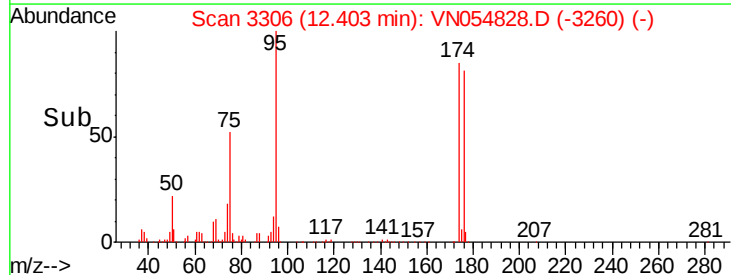
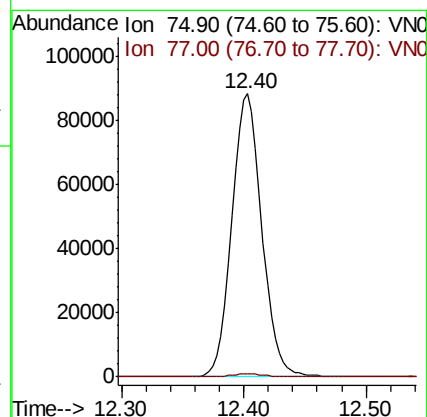
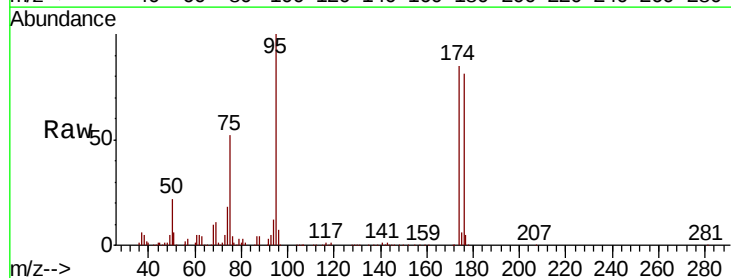
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 115     | 58.0  | 27.2  | 81.6  |
| 150     | 154.7 | 0.0   | 349.2 |

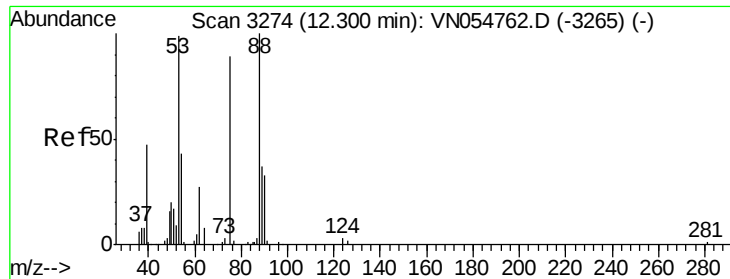


#76

1,2,3-Trichloropropane  
Concen: 38.069 ug/l  
RT: 12.40 min Scan# 3306  
Delta R.T. -0.15 min  
Lab File: VN054828.D  
Acq: 31 Mar 2019 3:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 77      | 1.1   | 0.0   | 0.0#  |

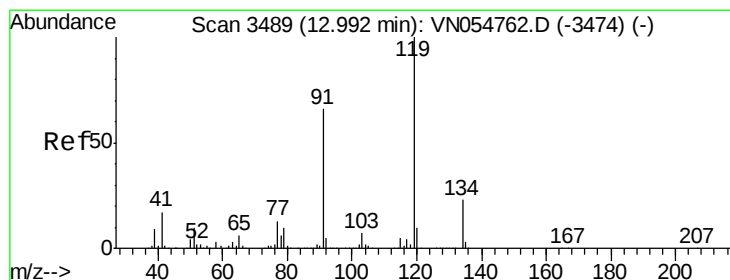
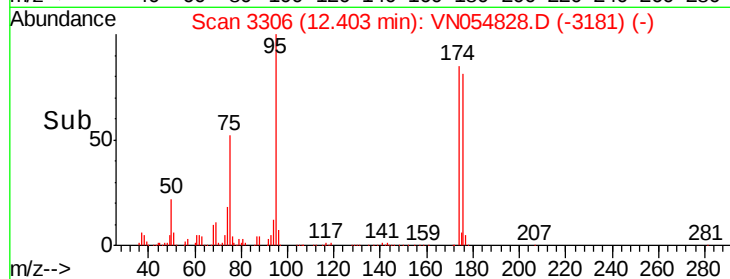
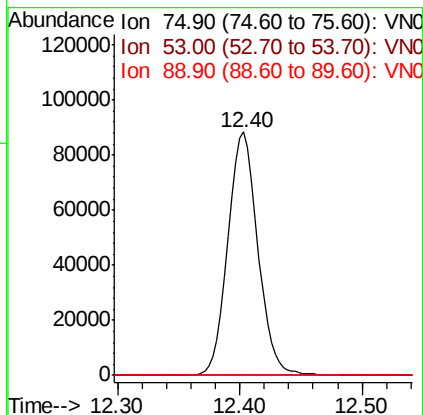
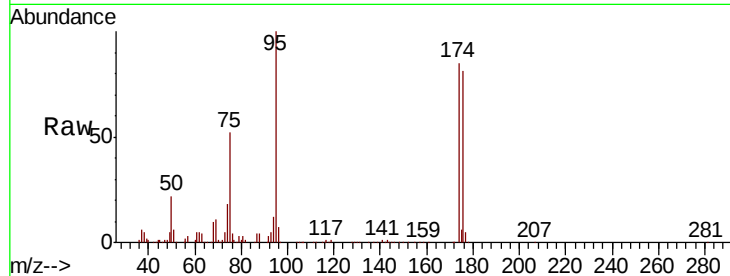




#81  
 trans-1,4-Dichloro-2-butene  
 Concen: 148.080 ug/l  
 RT: 12.40 min Scan# 3306  
 Delta R.T. 0.10 min  
 Lab File: VN054828.D  
 Acq: 31 Mar 2019 3:31

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Tot Ion: 75 Resp: 151995  
 Ion Ratio Lower Upper  
 75 100  
 53 0.0 76.2 114.2#  
 89 0.0 39.2 58.8#



#83  
 tert-Butylbenzene  
 Concen: Below Cal  
 RT: 13.00 min Scan# 3492  
 Delta R.T. 0.01 min  
 Lab File: VN054828.D  
 Acq: 31 Mar 2019 3:31

Tgt Ion: 119 Resp: 113  
 Ion Ratio Lower Upper  
 119 100  
 91 30.1 30.9 92.8#  
 134 0.0 13.2 39.6#

