

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_N\DATA\VN081219\  
 Data File : VN057212.D  
 Acq On : 12 Aug 2019 14:00  
 Operator : JC/SP  
 Sample : VN0812WBL02  
 Misc : 5.00mL/MSVOA\_N/WATER  
 ALS Vial : 12 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VN0812WBL02

Quant Time: Aug 13 01:43:24 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N080719W.M  
 Quant Title : SW846 8260  
 QLast Update : Thu Aug 08 06:49:25 2019  
 Response via : Initial Calibration

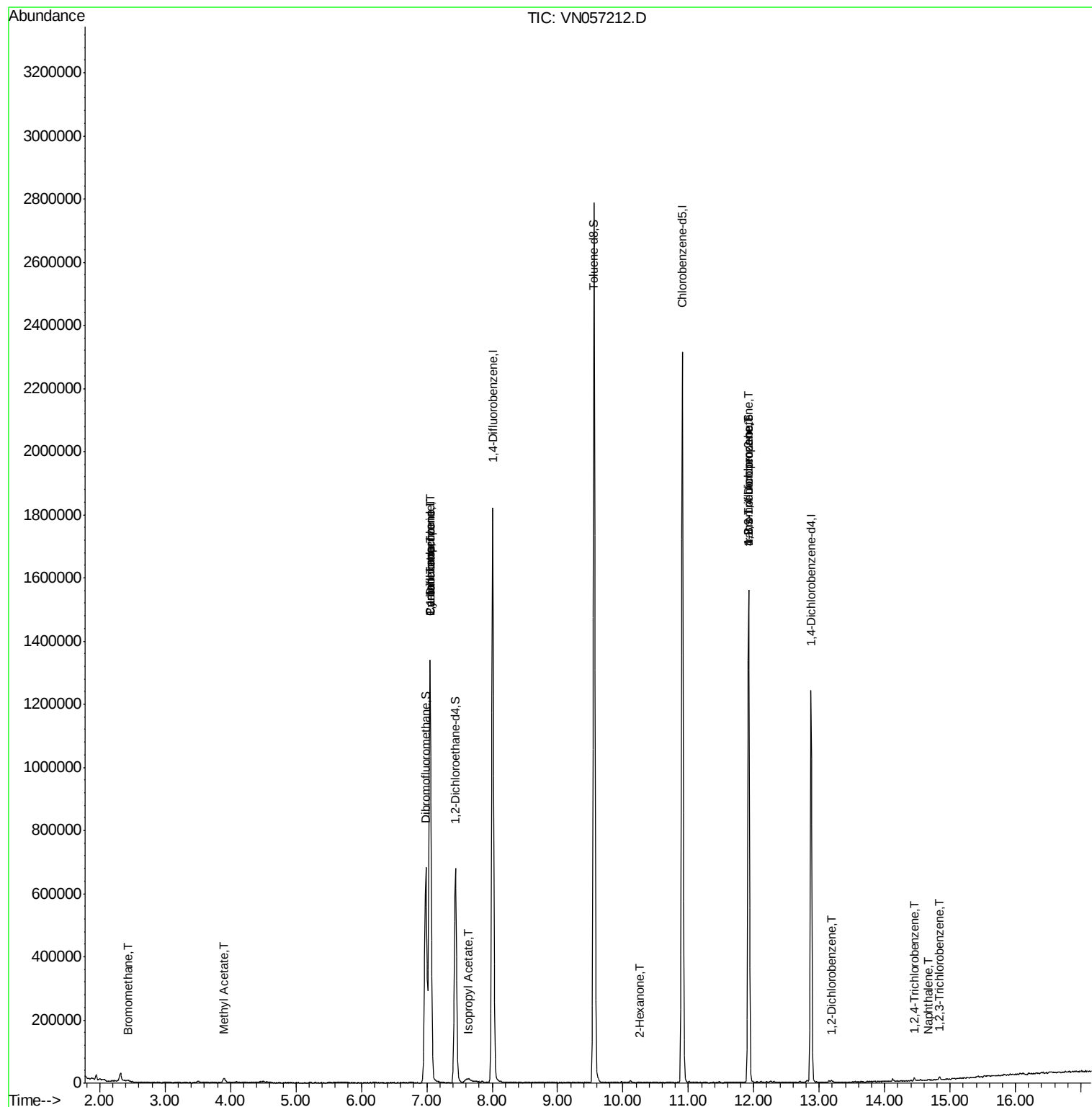
| Internal Standards             | R.T.  | QIon | Response | Conc        | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|-------------|--------|----------|
| 1) Pentafluorobenzene          | 7.05  | 168  | 1303023  | 50.00       | ug/l   | 0.00     |
| 34) 1,4-Difluorobenzene        | 8.01  | 114  | 1814015  | 50.00       | ug/l   | 0.00     |
| 63) Chlorobenzene-d5           | 10.91 | 117  | 1485171  | 50.00       | ug/l   | 0.00     |
| 72) 1,4-Dichlorobenzene-d4     | 12.88 | 152  | 369986   | 50.00       | ug/l   | 0.00     |
| System Monitoring Compounds    |       |      |          |             |        |          |
| 33) 1,2-Dichloroethane-d4      | 7.44  | 65   | 605597   | 45.19       | ug/l   | 0.00     |
| Spiked Amount 50.000           |       |      | Recovery | =           | 90.38% |          |
| 35) Dibromofluoromethane       | 6.99  | 113  | 552141   | 48.50       | ug/l   | 0.00     |
| Spiked Amount 50.000           |       |      | Recovery | =           | 97.00% |          |
| 50) Toluene-d8                 | 9.56  | 98   | 2083836  | 47.85       | ug/l   | 0.00     |
| Spiked Amount 50.000           |       |      | Recovery | =           | 95.70% |          |
| 62) 4-Bromofluorobenzene       | 11.92 | 95   | 543792   | 38.75       | ug/l   | 0.00     |
| Spiked Amount 50.000           |       |      | Recovery | =           | 77.50% |          |
| Target Compounds               |       |      |          |             |        |          |
|                                |       |      |          |             | Qvalue |          |
| 5) Bromomethane                | 2.44  | 94   | 2113     | 0.240       | ug/l # | 60       |
| 18) Methyl Acetate             | 3.90  | 43   | 26110    | 1.528       | ug/l # | 80       |
| 31) Cyclohexane                | 7.05  | 56   | 18876    | 0.971       | ug/l # | 1        |
| 36) 1,1-Dichloropropene        | 7.05  | 75   | 77756    | 5.206       | ug/l # | 47       |
| 38) Carbon Tetrachloride       | 7.05  | 117  | 108774   | 6.988       | ug/l # | 16       |
| 43) Isopropyl Acetate          | 7.64  | 43   | 20777    | 0.989       | ug/l # | 51       |
| 59) 2-Hexanone                 | 10.25 | 43   | 1817     | 0.220       | ug/l # | 43       |
| 73) Isopropylbenzene           | 11.77 | 105  | 1384     | Below Cal   |        | 83       |
| 75) 1,1,2,2-Tetrachloroethane  | 11.93 | 83   | 68       | Below Cal # |        | 1        |
| 76) 1,2,3-Trichloropropane     | 11.92 | 75   | 245432   | 32.978      | ug/l # | 100      |
| 79) 2-Chlorotoluene            | 12.20 | 91   | 1367     | Below Cal   |        | 96       |
| 81) trans-1,4-Dichloro-2-buten | 11.92 | 75   | 245432   | 97.536      | ug/l # | 14       |
| 83) tert-Butylbenzene          | 12.52 | 119  | 1017     | Below Cal   |        | 89       |
| 90) Hexachloroethane           | 13.18 | 117  | 34       | Below Cal # |        | 1        |
| 91) 1,2-Dichlorobenzene        | 13.19 | 146  | 3039     | 0.240       | ug/l   | 91       |
| 93) 1,2,4-Trichlorobenzene     | 14.46 | 180  | 3890     | 6.570       | ug/l   | 85       |
| 94) Hexachlorobutadiene        | 14.55 | 225  | 889      | Below Cal # |        | 50       |
| 95) Naphthalene                | 14.67 | 128  | 3767     | 3.198       | ug/l # | 83       |
| 96) 1,2,3-Trichlorobenzene     | 14.83 | 180  | 3781     | 6.325       | ug/l   | 86       |

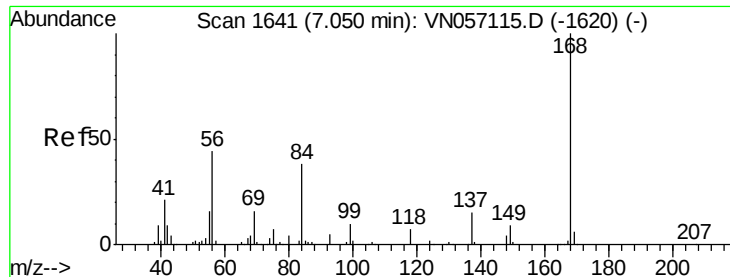
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA\_N\DATA\VN081219\  
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Sample : VN0812WBL02  
Misc : 5.00mL/MSVOA\_N/WATER  
ALS Vial : 12 Sample Multiplier: 1

Instrument :  
MSVOA\_N  
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Quant Title : SW846 8260  
QLast Update : Thu Aug 08 06:49:25 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.05 min Scan# 1641

Delta R.T. -0.00 min

Lab File: VN057212.D

Acq: 12 Aug 2019 14:00

Instrument :

MSVOA\_N

ClientSampleId :

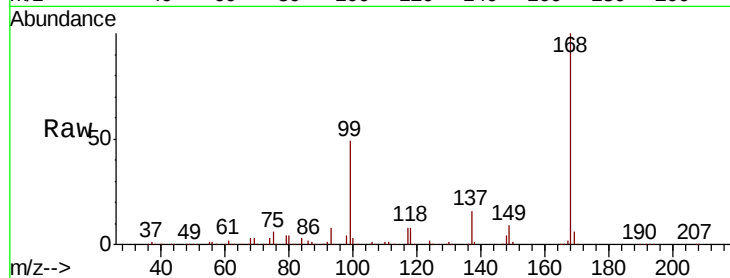
VN0812WBL02

Tgt Ion:168 Resp: 1303023

Ion Ratio Lower Upper

168 100

99 48.7 38.6 57.8



Abundance Ion 167.90 (167.60 to 168.60): VN057212.D (-1548) (-)

Ion 98.90 (98.60 to 99.60): VN057212.D (-1548) (-)

600000

500000

400000

300000

200000

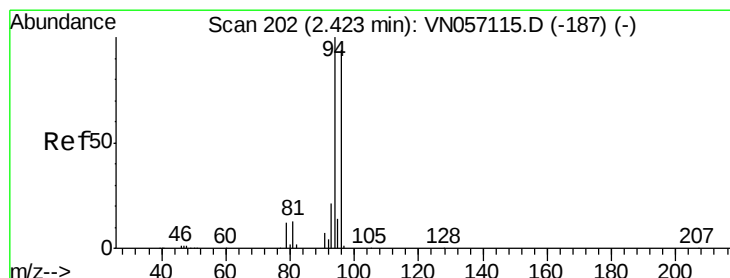
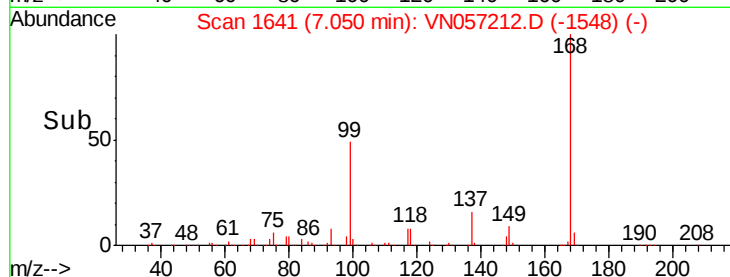
100000

0

7.05

6.90 7.00 7.10

Time-->



#5

Bromomethane

Concen: 0.240 ug/l

RT: 2.44 min Scan# 208

Delta R.T. 0.02 min

Lab File: VN057212.D

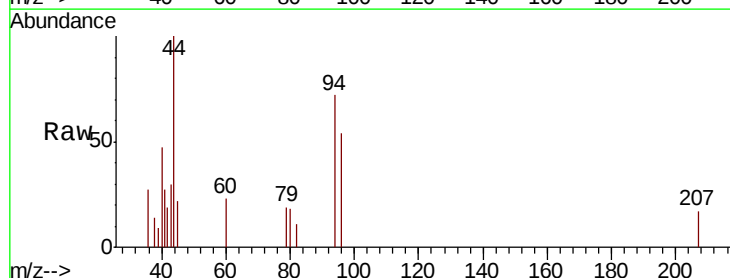
Acq: 12 Aug 2019 14:00

Tgt Ion: 94 Resp: 2113

Ion Ratio Lower Upper

94 100

96 55.6 75.0 112.4#



Abundance Ion 93.90 (93.60 to 94.60): VN057212.D (-108) (-)

Ion 95.90 (95.60 to 96.60): VN057212.D (-108) (-)

1000

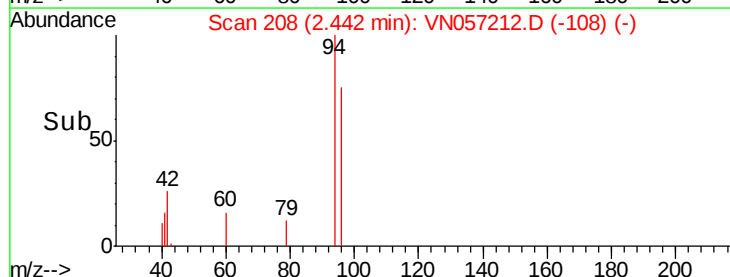
500

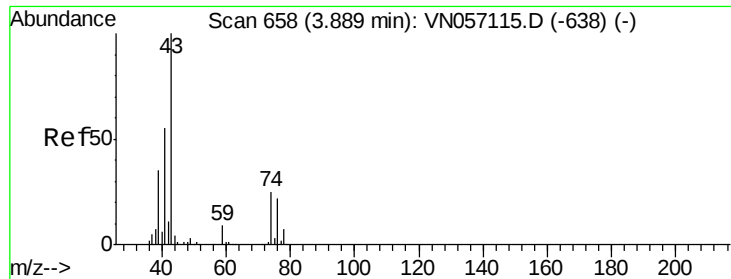
0

2.44

2.40 2.45

Time-->

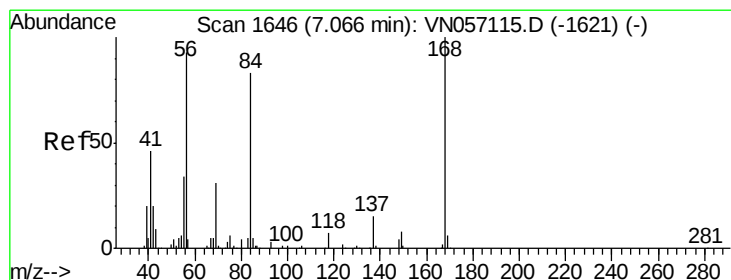
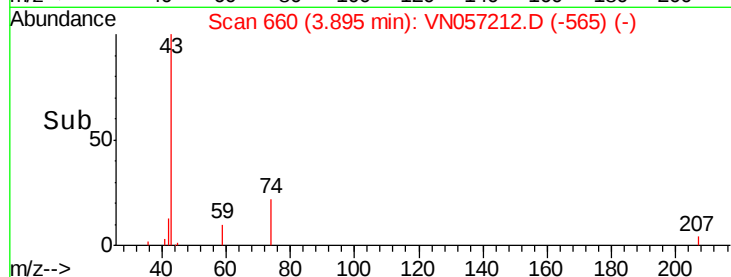
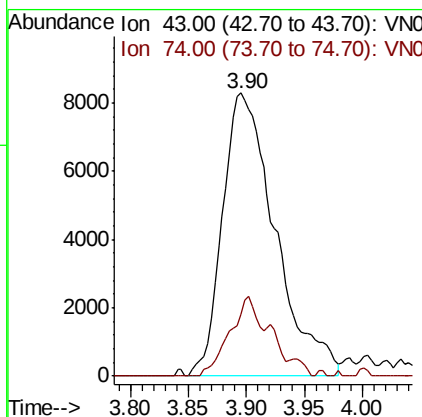
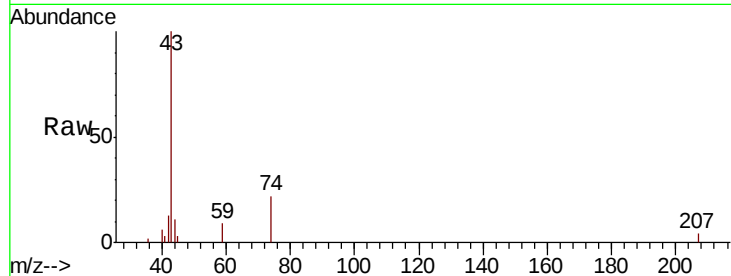




#18  
Methyl Acetate  
Concen: 1.528 ug/l  
RT: 3.90 min Scan# 660  
Delta R.T. 0.01 min  
Lab File: VN057212.D  
Acq: 12 Aug 2019 14:00

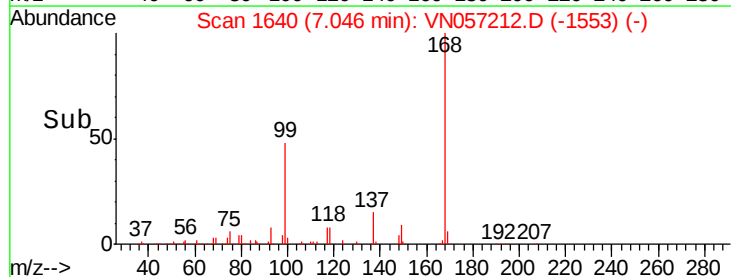
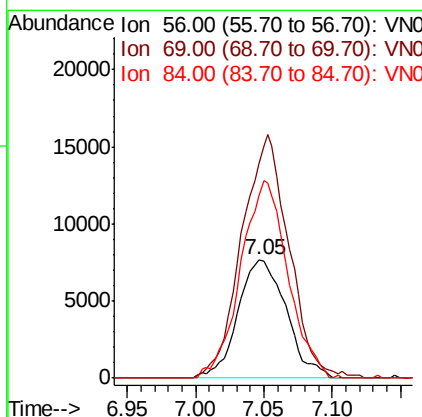
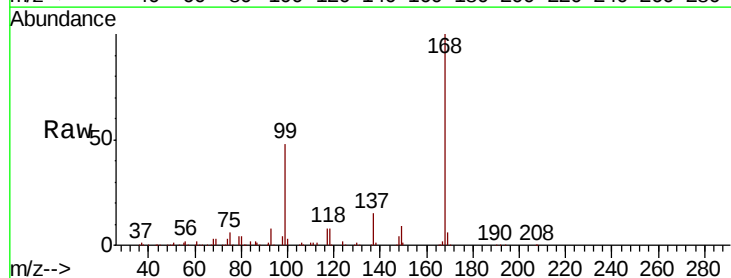
Instrument :  
MSVOA\_N  
ClientSampleId :  
VN0812WBL02

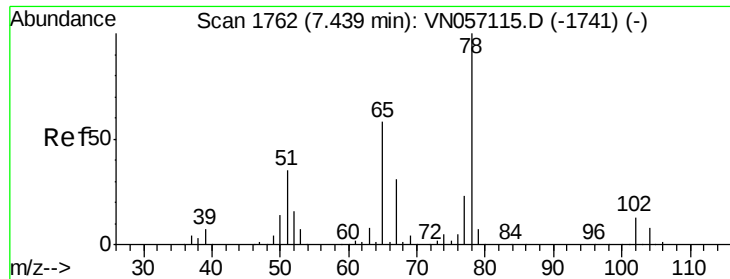
Tgt Ion: 43 Resp: 26110  
Ion Ratio Lower Upper  
43 100  
74 15.5 20.2 30.4#



#31  
Cyclohexane  
Concen: 0.971 ug/l  
RT: 7.05 min Scan# 1640  
Delta R.T. -0.02 min  
Lab File: VN057212.D  
Acq: 12 Aug 2019 14:00

Tgt Ion: 56 Resp: 18876  
Ion Ratio Lower Upper  
56 100  
69 180.9 26.9 40.3#  
84 154.7 71.9 107.9#

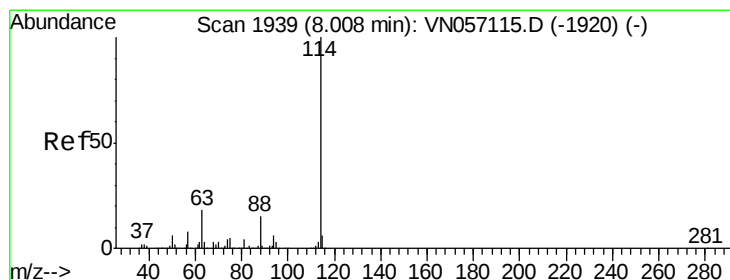
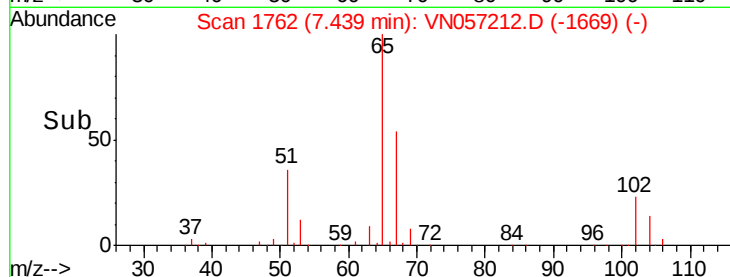
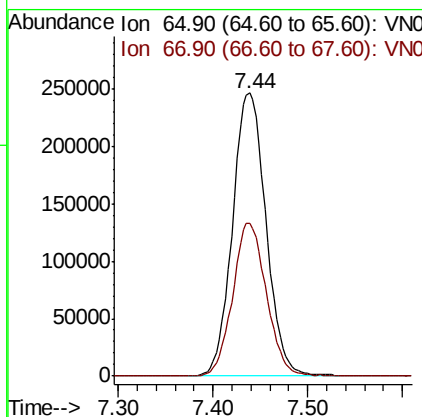
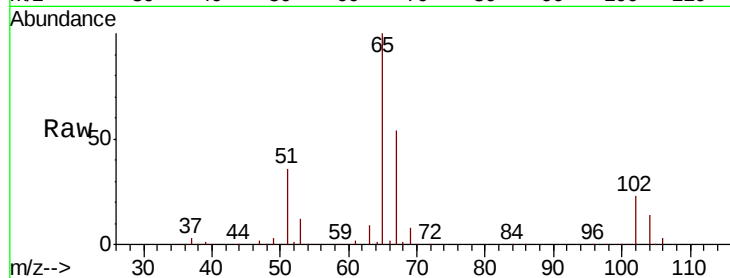




#33  
 1,2-Dichloroethane-d4  
 Concen: 45.192 ug/l  
 RT: 7.44 min Scan# 1762  
 Delta R.T. -0.00 min  
 Lab File: VN057212.D  
 Acq: 12 Aug 2019 14:00

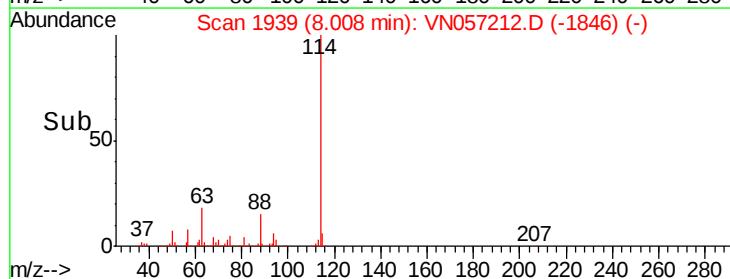
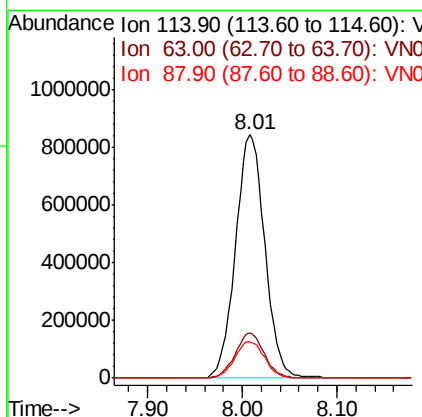
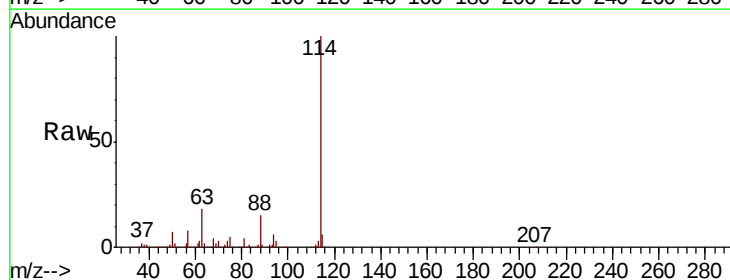
Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VN0812WBL02

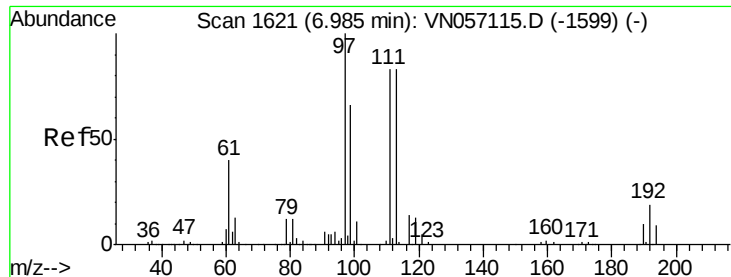
Tgt Ion: 65 Resp: 605597  
 Ion Ratio Lower Upper  
 65 100  
 67 54.3 0.0 108.2



#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.01 min Scan# 1939  
 Delta R.T. -0.00 min  
 Lab File: VN057212.D  
 Acq: 12 Aug 2019 14:00

Tgt Ion: 114 Resp: 1814015  
 Ion Ratio Lower Upper  
 114 100  
 63 18.4 0.0 36.2  
 88 15.0 0.0 30.0





#35

Dibromofluoromethane

Concen: 48.505 ug/l

RT: 6.99 min Scan# 1621

Delta R.T. -0.00 min

Lab File: VN057212.D

Acq: 12 Aug 2019 14:00

Instrument :  
MSVOA\_N  
ClientSampled :  
VN0812WBL02

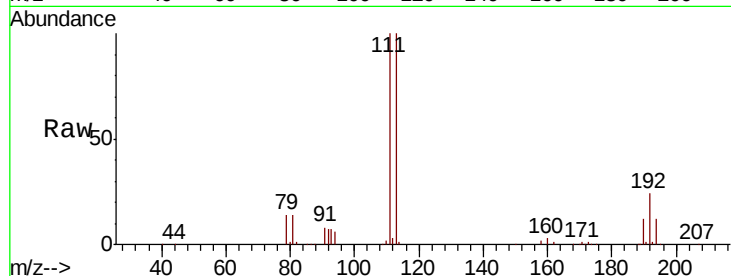
Tgt Ion: 113 Resp: 552141

Ion Ratio Lower Upper

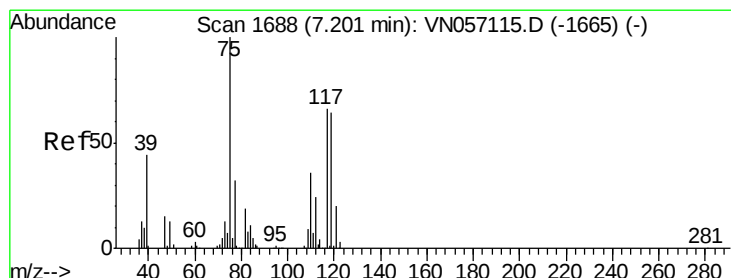
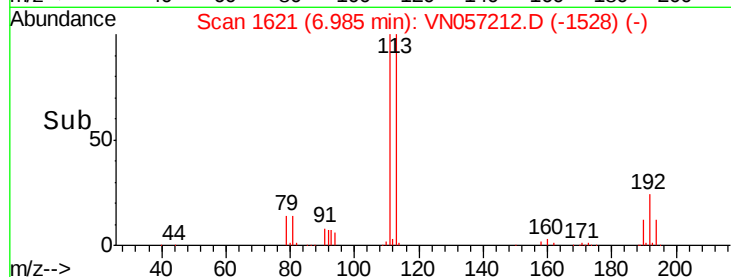
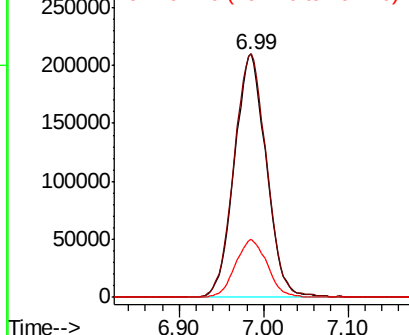
113 100

111 102.2 81.3 121.9

192 23.8 19.0 28.4



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: 5.206 ug/l

RT: 7.05 min Scan# 1641

Delta R.T. -0.15 min

Lab File: VN057212.D

Acq: 12 Aug 2019 14:00

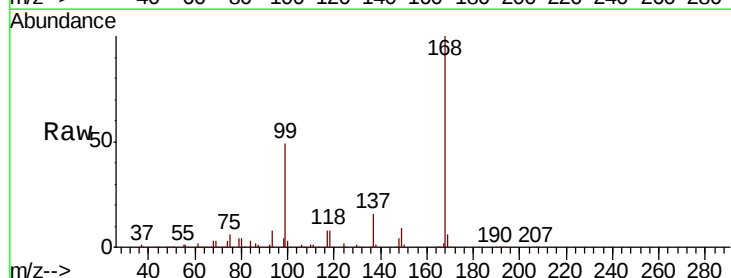
Tgt Ion: 75 Resp: 77756

Ion Ratio Lower Upper

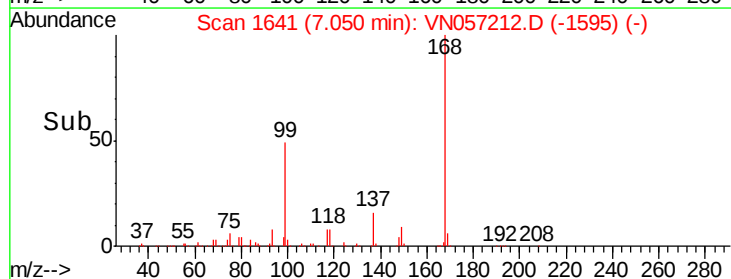
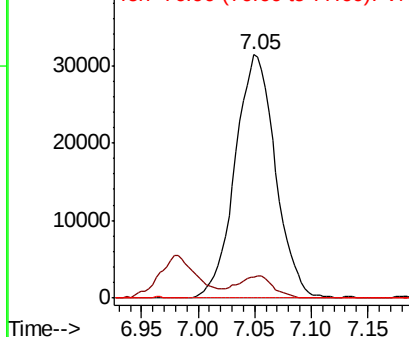
75 100

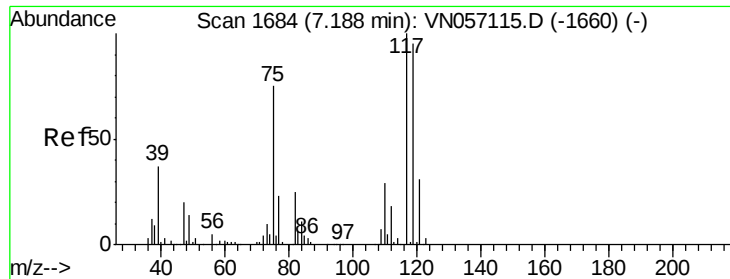
110 8.0 18.7 56.1#

77 0.0 25.0 37.4#



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





#38

Carbon Tetrachloride

Concen: 6.988 ug/l

RT: 7.05 min Scan# 1641

Delta R.T. -0.14 min

Lab File: VN057212.D

Acq: 12 Aug 2019 14:00

Instrument :

MSVOA\_N

ClientSampled :

VN0812WBL02

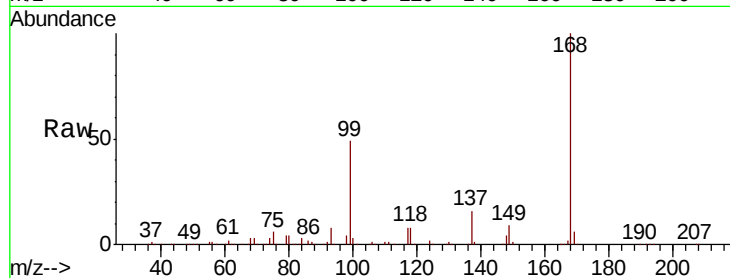
Tgt Ion:117 Resp: 108774

Ion Ratio Lower Upper

117 100

119 4.3 75.8 113.6#

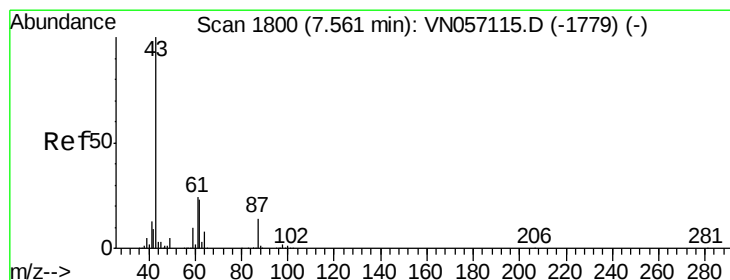
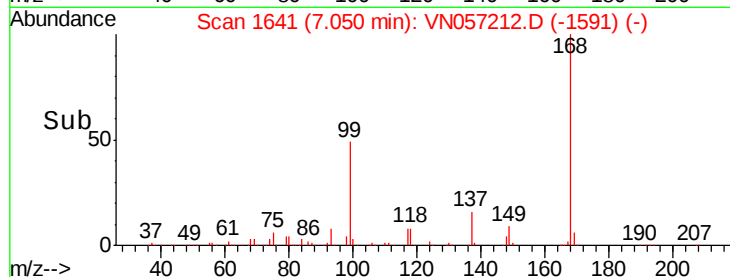
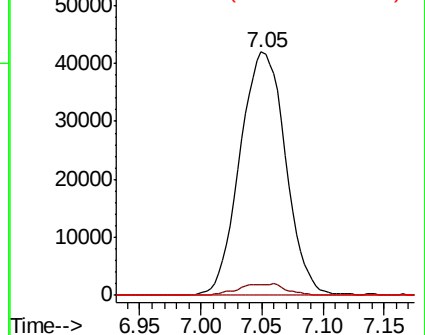
121 0.0 24.4 36.6#



Abundance Ion 116.80 (116.50 to 117.50): V

Ion 118.80 (118.50 to 119.50): V

Ion 120.80 (120.50 to 121.50): V



#43

Isopropyl Acetate

Concen: 0.989 ug/l

RT: 7.64 min Scan# 1825

Delta R.T. 0.08 min

Lab File: VN057212.D

Acq: 12 Aug 2019 14:00

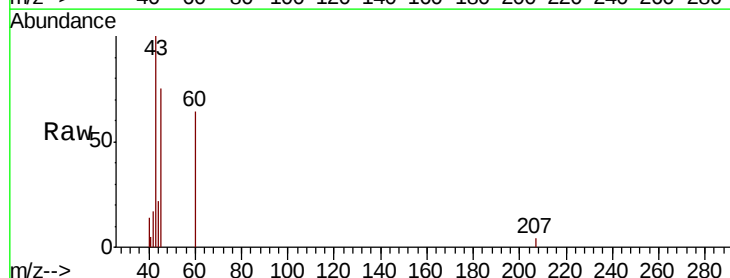
Tgt Ion: 43 Resp: 20777

Ion Ratio Lower Upper

43 100

61 0.0 24.2 36.2#

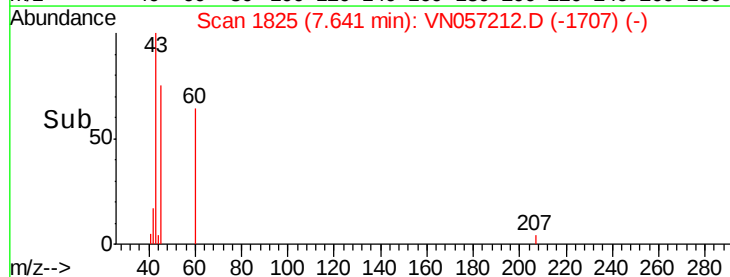
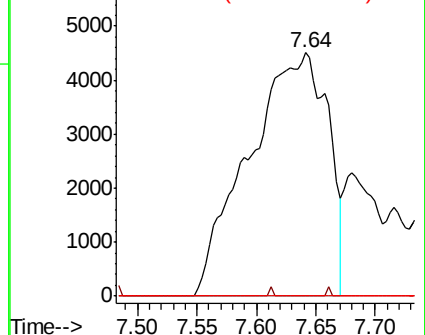
87 0.0 11.8 17.8#

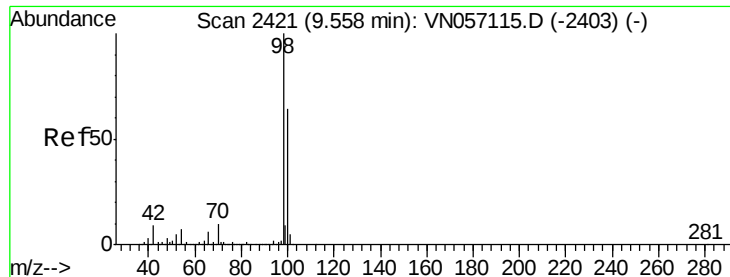


Abundance Ion 43.00 (42.70 to 43.70): V

Ion 61.00 (60.70 to 61.70): V

Ion 87.00 (86.70 to 87.70): V

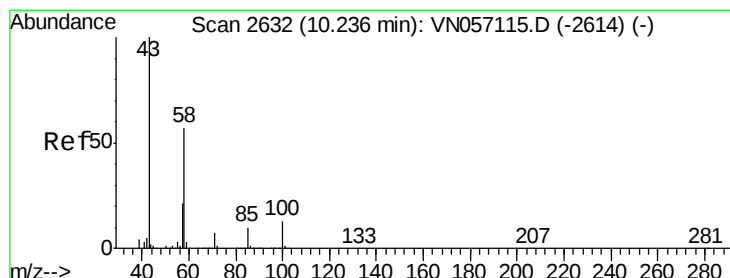
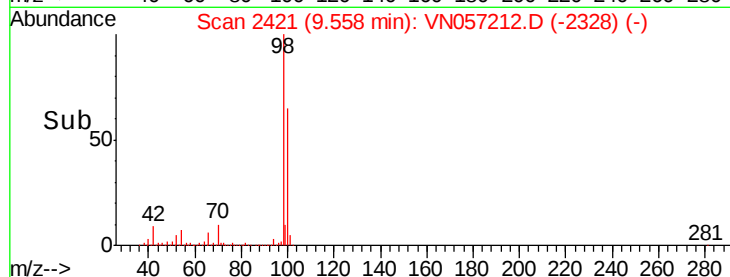
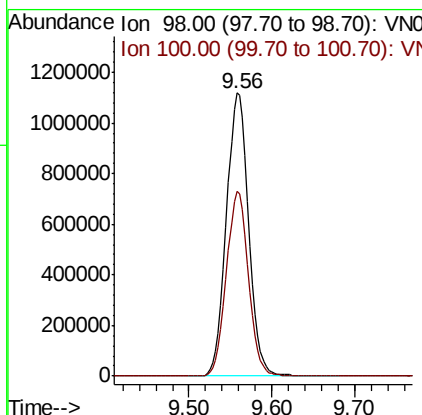
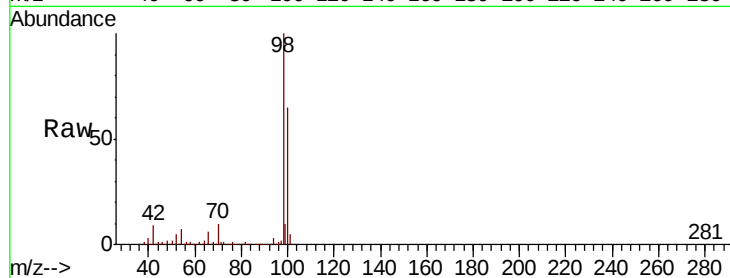




#50  
Toluene-d8  
Concen: 47.849 ug/l  
RT: 9.56 min Scan# 2421  
Delta R.T. -0.00 min  
Lab File: VN057212.D  
Acq: 12 Aug 2019 14:00

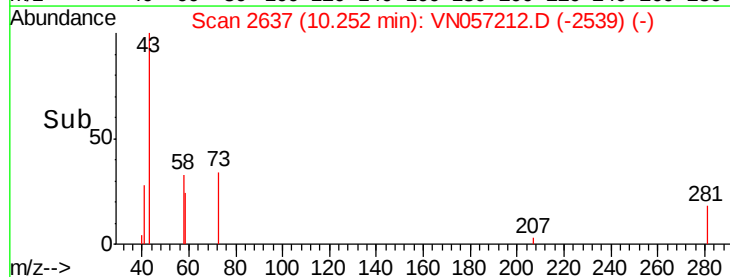
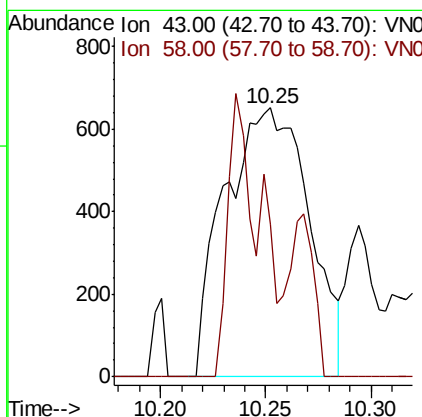
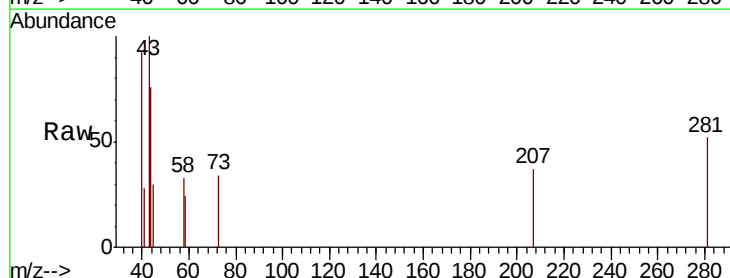
Instrument :  
MSVOA\_N  
ClientSampleId :  
VN0812WBL02

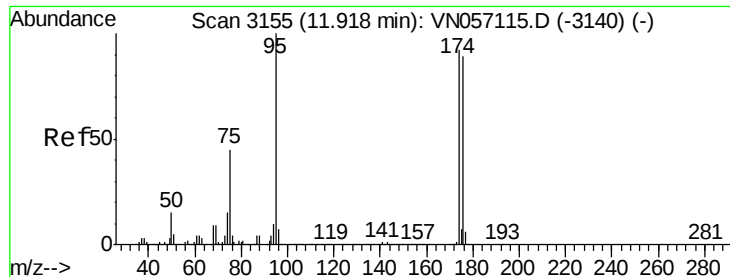
Tgt Ion: 98 Resp: 2083836  
Ion Ratio Lower Upper  
98 100  
100 64.9 51.2 76.8



#59  
2-Hexanone  
Concen: 0.220 ug/l  
RT: 10.25 min Scan# 2637  
Delta R.T. 0.02 min  
Lab File: VN057212.D  
Acq: 12 Aug 2019 14:00

Tgt Ion: 43 Resp: 1817  
Ion Ratio Lower Upper  
43 100  
58 16.1 29.2 87.6#





#62

4-Bromofluorobenzene

Concen: 38.753 ug/l

RT: 11.92 min Scan# 3156

Delta R.T. 0.00 min

Lab File: VN057212.D

Acq: 12 Aug 2019 14:00

Instrument :

MSVOA\_N

ClientSampleId :

VN0812WBL02

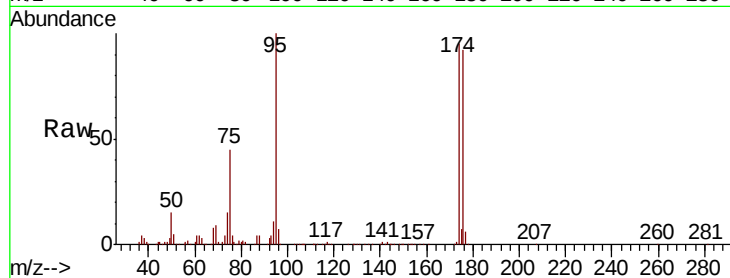
Tgt Ion: 95 Resp: 543792

Ion Ratio Lower Upper

95 100

174 94.3 0.0 185.0

176 92.7 0.0 181.2



Abundance Ion 94.90 (94.60 to 95.60): VN057115.D (-3140) (-)

Ion 173.80 (173.50 to 174.50): VN057115.D (-3140) (-)

Ion 175.80 (175.50 to 176.50): VN057115.D (-3140) (-)

11.92

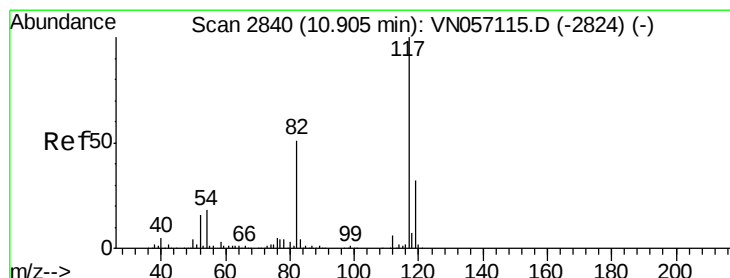
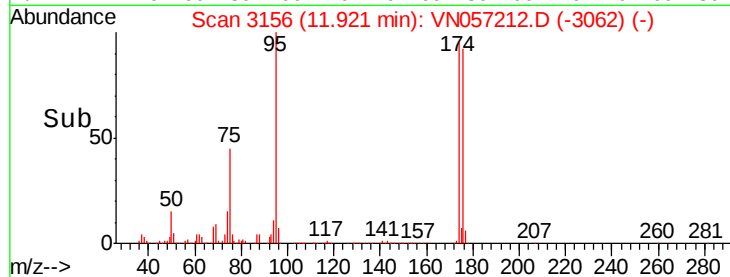
300000

200000

100000

0

Time-->



#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 10.91 min Scan# 2841

Delta R.T. 0.00 min

Lab File: VN057212.D

Acq: 12 Aug 2019 14:00

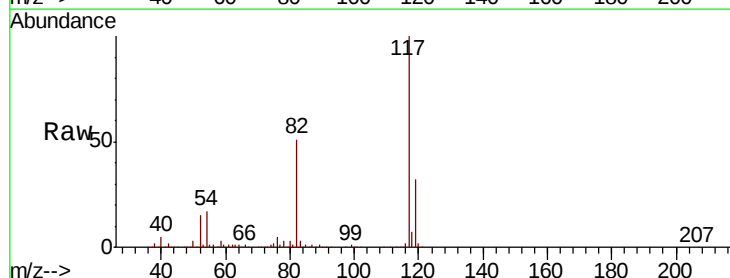
Tgt Ion: 117 Resp: 1485171

Ion Ratio Lower Upper

117 100

82 51.2 40.8 61.2

119 32.1 25.7 38.5



Abundance Ion 116.90 (116.60 to 117.60): VN057115.D (-2824) (-)

Ion 82.00 (81.70 to 82.70): VN057115.D (-2824) (-)

Ion 118.90 (118.60 to 119.60): VN057115.D (-2824) (-)

10.91

1000000

800000

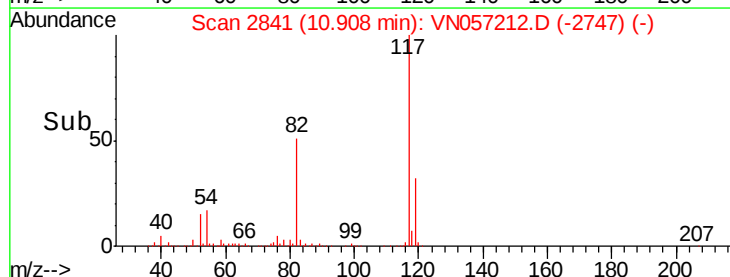
600000

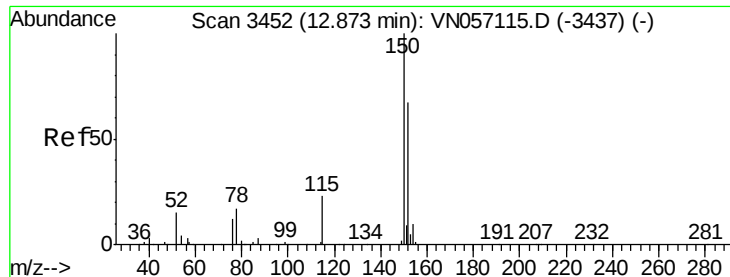
400000

200000

0

Time-->





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 12.88 min Scan# 3453

Delta R.T. 0.00 min

Lab File: VN057212.D

Acq: 12 Aug 2019 14:00

Instrument :

MSVOA\_N

ClientSampleId :

VN0812WBL02

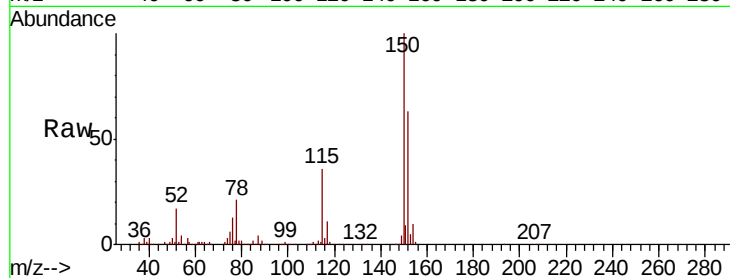
Tgt Ion:152 Resp: 369986

Ion Ratio Lower Upper

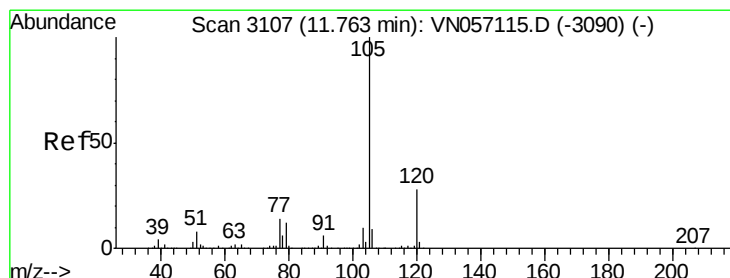
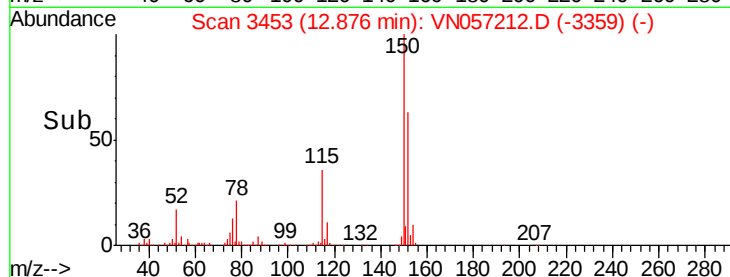
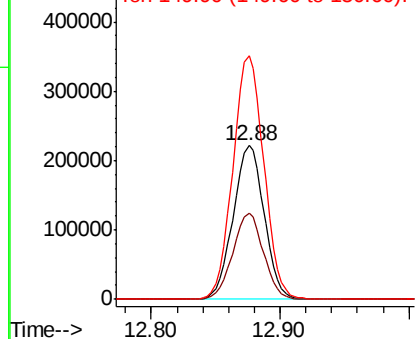
152 100

115 55.2 27.5 82.5

150 158.0 0.0 341.6



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



#73

Isopropylbenzene

Concen: Below Cal

RT: 11.77 min Scan# 3109

Delta R.T. 0.01 min

Lab File: VN057212.D

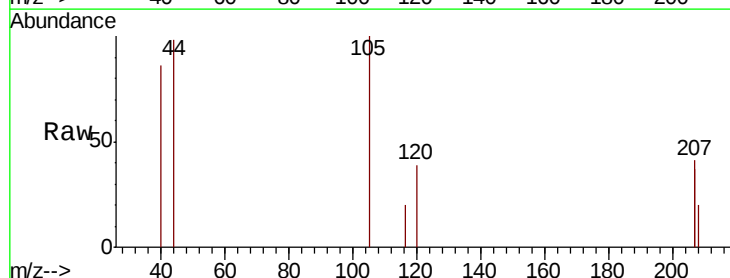
Acq: 12 Aug 2019 14:00

Tgt Ion:105 Resp: 1384

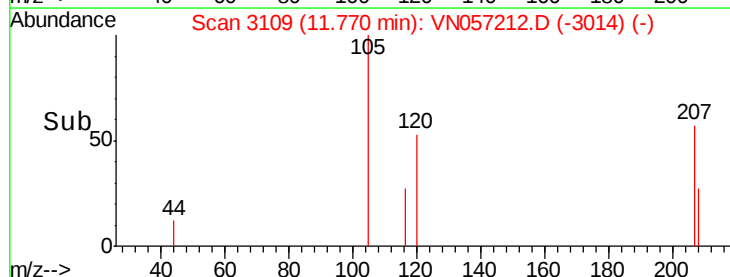
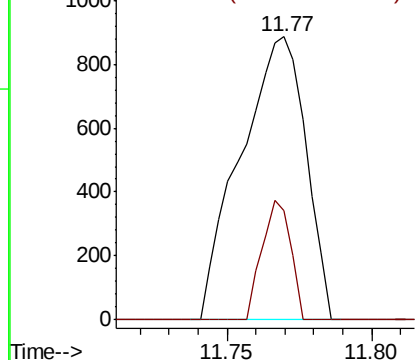
Ion Ratio Lower Upper

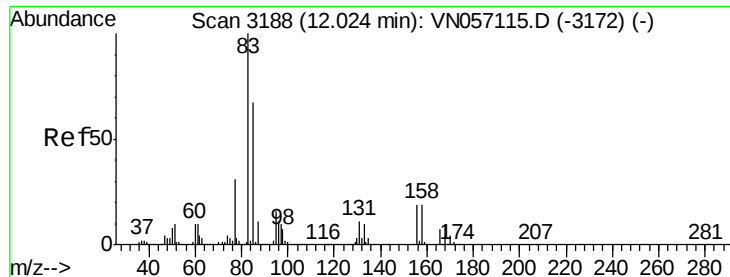
105 100

120 18.6 13.7 41.0



Abundance Ion 105.00 (104.70 to 105.70): V  
Ion 120.00 (119.70 to 120.70): V





#75

1,1,2,2-Tetrachloroethane

Concen: Below Cal

RT: 11.93 min Scan# 3159

Delta R.T. -0.09 min

Lab File: VN057212.D

Acq: 12 Aug 2019 14:00

Instrument :

MSVOA\_N

ClientSampleId :

VN0812WBL02

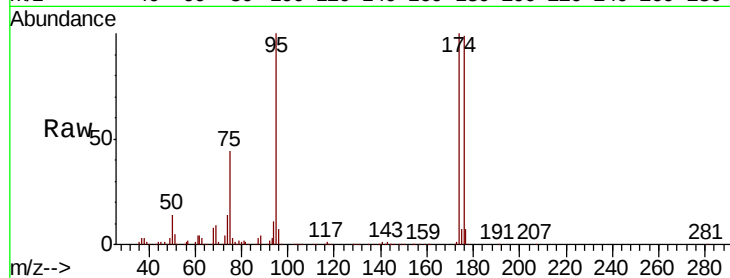
Tgt Ion: 83 Resp: 68

Ion Ratio Lower Upper

83 100

131 1001.5 5.5 16.4#

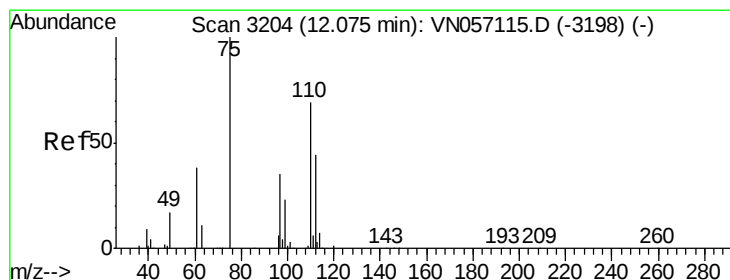
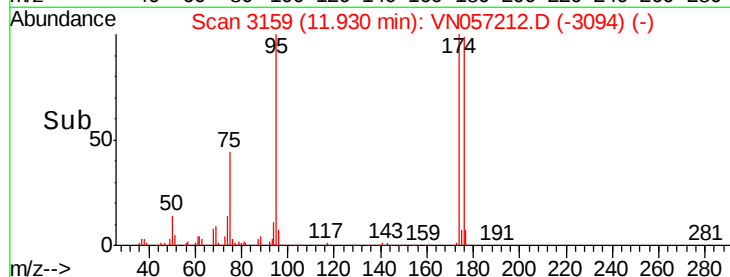
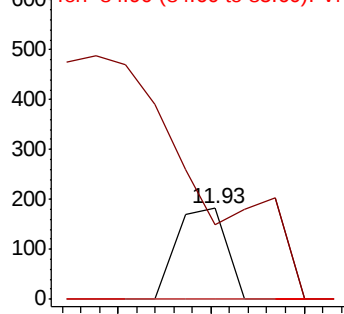
85 0.0 32.4 97.0#



Abundance Ion 82.90 (82.60 to 83.60): VNO

Ion 130.80 (130.50 to 131.50): VNO

Ion 84.90 (84.60 to 85.60): VNO



#76

1,2,3-Trichloropropane

Concen: 32.978 ug/l

RT: 11.92 min Scan# 3156

Delta R.T. -0.15 min

Lab File: VN057212.D

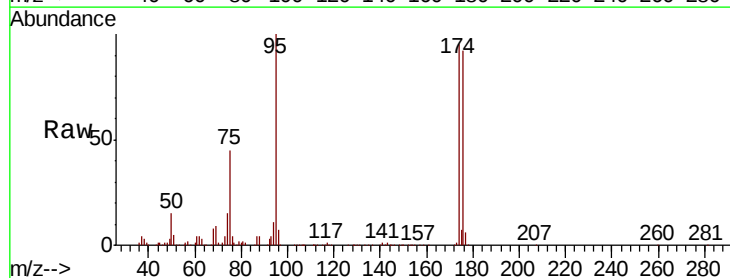
Acq: 12 Aug 2019 14:00

Tgt Ion: 75 Resp: 245432

Ion Ratio Lower Upper

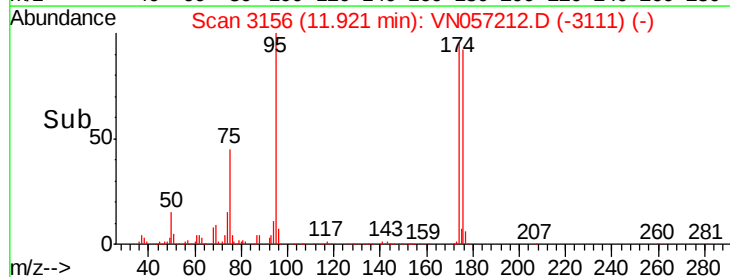
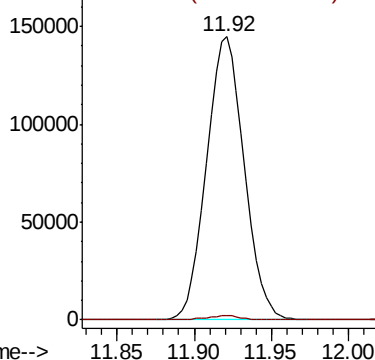
75 100

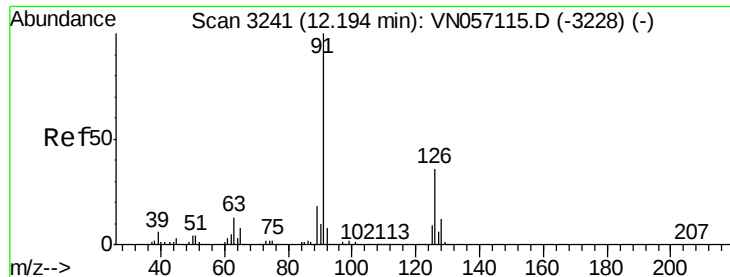
77 1.4 0.0 0.0#



Abundance Ion 74.90 (74.60 to 75.60): VNO

Ion 77.00 (76.70 to 77.70): VNO





#79

2-Chlorotoluene

Concen: Below Cal

RT: 12.20 min Scan# 3242

Delta R.T. 0.00 min

Lab File: VN057212.D

Acq: 12 Aug 2019 14:00

Instrument :

MSVOA\_N

ClientSampled :

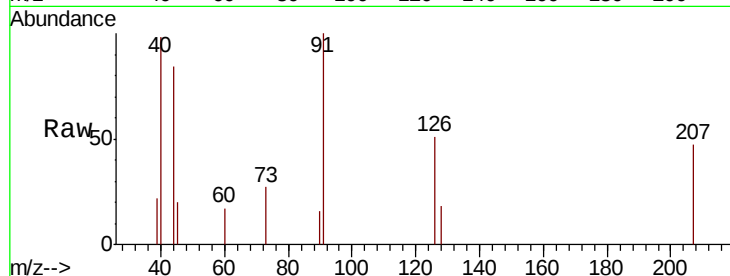
VN0812WBL02

Tgt Ion: 91 Resp: 1367

Ion Ratio Lower Upper

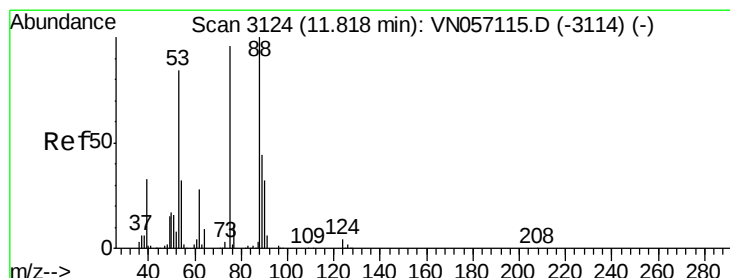
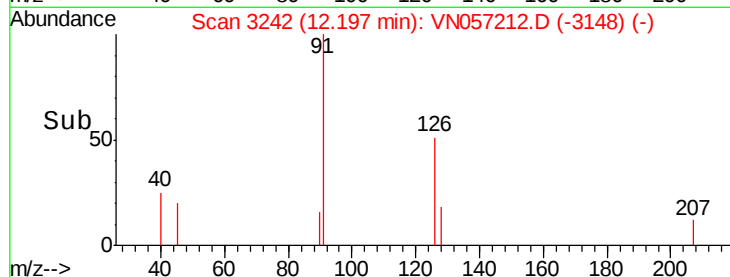
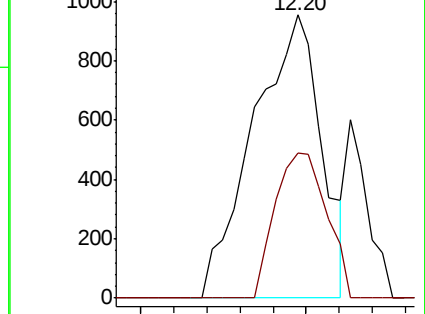
91 100

126 38.8 18.1 54.3



Abundance Ion 91.00 (90.70 to 91.70): VN0

Ion 125.90 (125.60 to 126.60): V



#81

trans-1,4-Dichloro-2-butene

Concen: 97.536 ug/l

RT: 11.92 min Scan# 3156

Delta R.T. 0.10 min

Lab File: VN057212.D

Acq: 12 Aug 2019 14:00

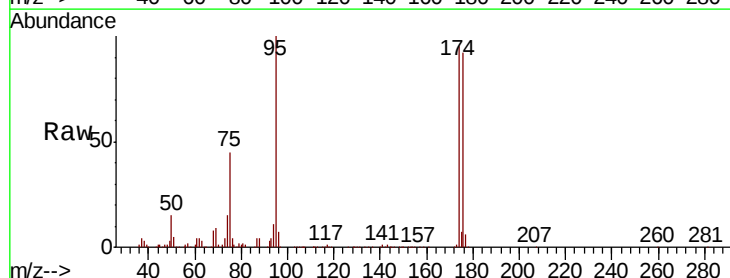
Tgt Ion: 75 Resp: 245432

Ion Ratio Lower Upper

75 100

53 0.0 70.6 106.0#

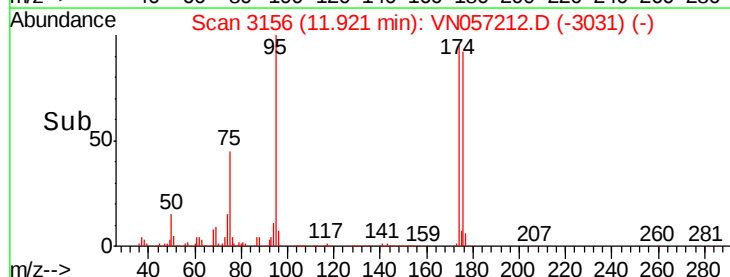
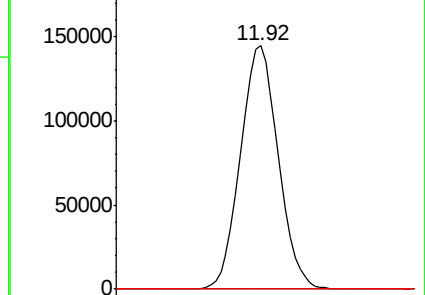
89 0.0 36.4 54.6#

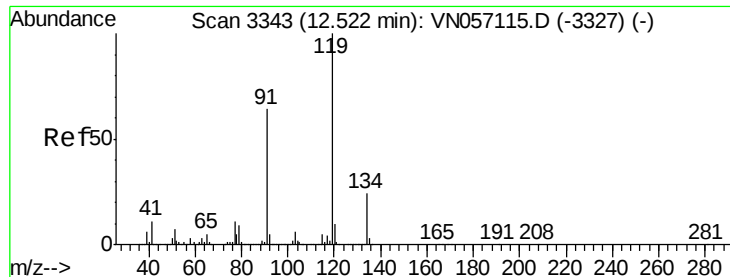


Abundance Ion 74.90 (74.60 to 75.60): VN0

Ion 53.00 (52.70 to 53.70): VN0

Ion 88.90 (88.60 to 89.60): VN0

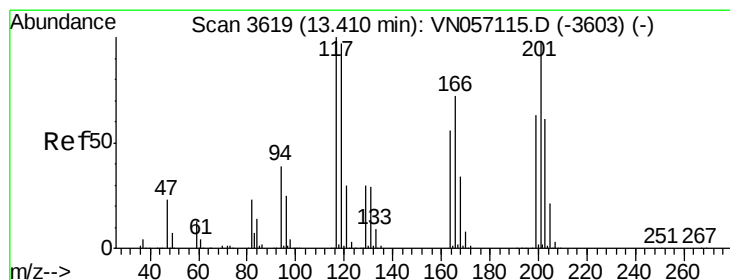
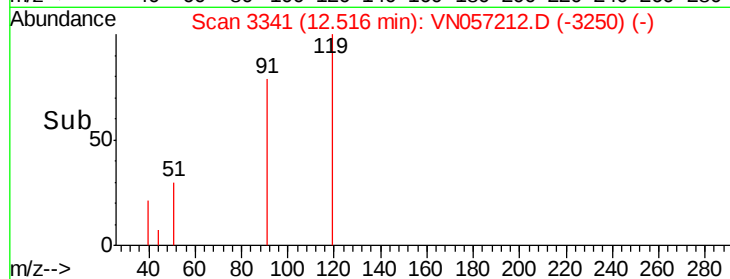
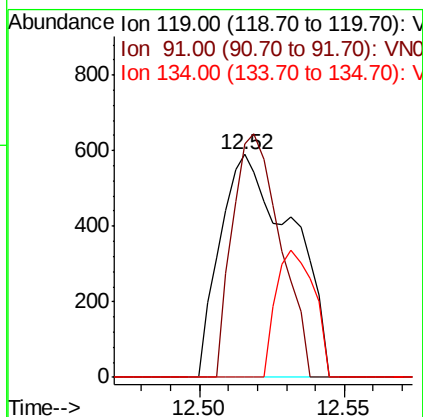
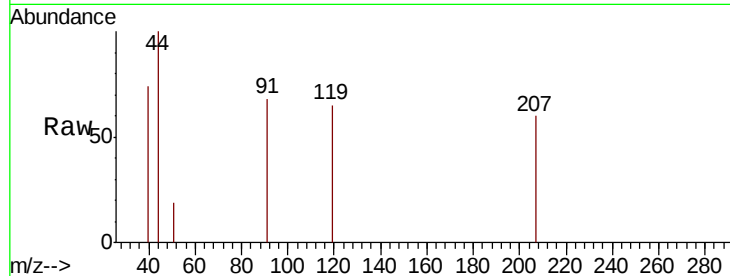




#83  
 tert-Butylbenzene  
 Concen: Below Cal  
 RT: 12.52 min Scan# 3341  
 Delta R.T. -0.01 min  
 Lab File: VN057212.D  
 Acq: 12 Aug 2019 14:00

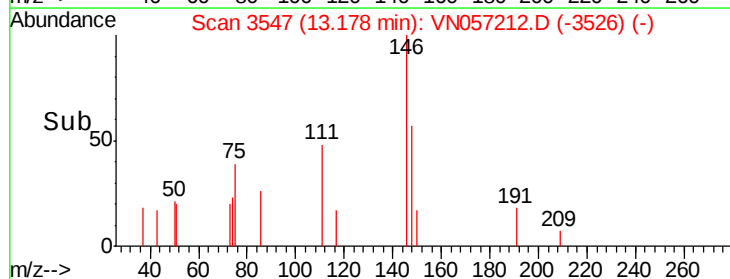
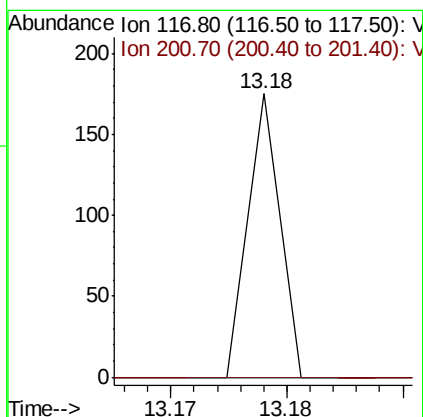
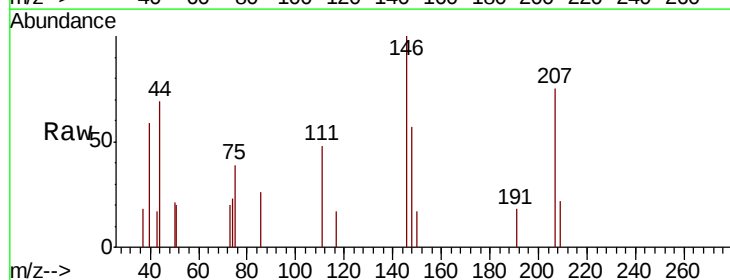
Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VN0812WBL02

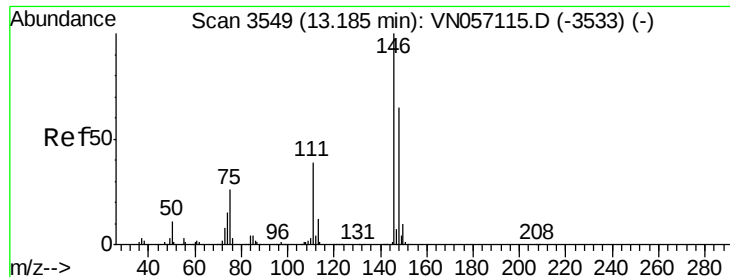
Tgt Ion:119 Resp: 1017  
 Ion Ratio Lower Upper  
 119 100  
 91 72.1 31.4 94.2  
 134 30.2 13.2 39.6



#90  
 Hexachloroethane  
 Concen: Below Cal  
 RT: 13.18 min Scan# 3547  
 Delta R.T. -0.23 min  
 Lab File: VN057212.D  
 Acq: 12 Aug 2019 14:00

Tgt Ion:117 Resp: 34  
 Ion Ratio Lower Upper  
 117 100  
 201 0.0 49.3 147.8#

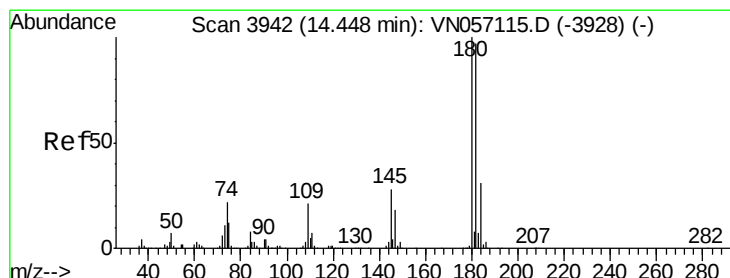
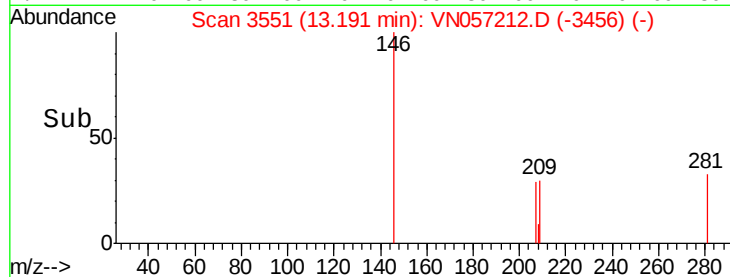
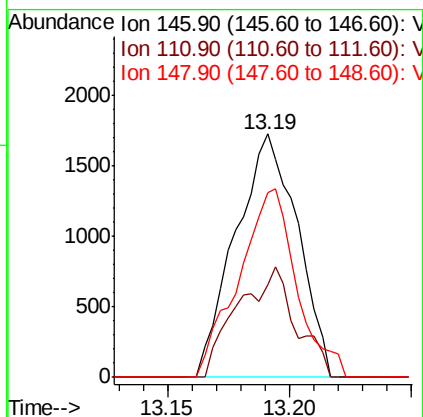
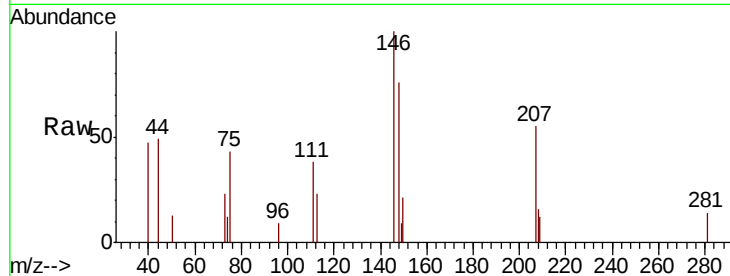




#91  
 1,2-Dichlorobenzene  
 Concen: 0.240 ug/l  
 RT: 13.19 min Scan# 3551  
 Delta R.T. 0.01 min  
 Lab File: VN057212.D  
 Acq: 12 Aug 2019 14:00

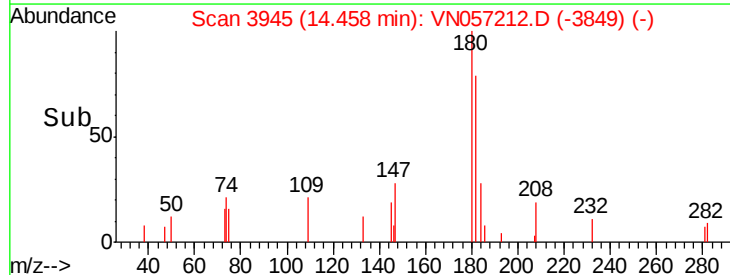
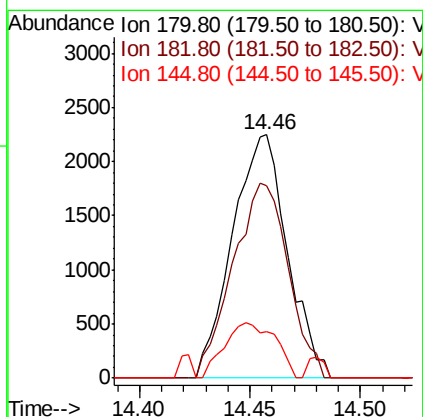
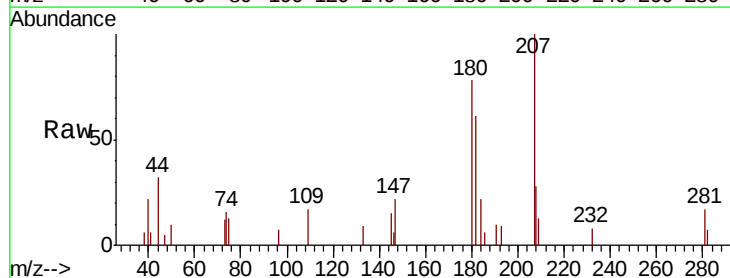
Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VN0812WBL02

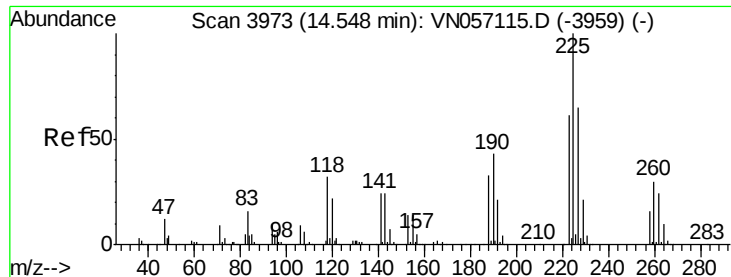
Tgt Ion:146 Resp: 3039  
 Ion Ratio Lower Upper  
 146 100  
 111 42.8 19.2 57.6  
 148 72.5 32.4 97.0



#93  
 1,2,4-Trichlorobenzene  
 Concen: 6.570 ug/l  
 RT: 14.46 min Scan# 3945  
 Delta R.T. 0.01 min  
 Lab File: VN057212.D  
 Acq: 12 Aug 2019 14:00

Tgt Ion:180 Resp: 3890  
 Ion Ratio Lower Upper  
 180 100  
 182 80.3 47.5 142.6  
 145 21.1 14.1 42.2





#94

Hexachlorobutadiene

Concen: Below Cal

RT: 14.55 min Scan# 3975

Delta R.T. 0.01 min

Lab File: VN057212.D

Acq: 12 Aug 2019 14:00

Instrument :

MSVOA\_N

ClientSampled :

VN0812WBL02

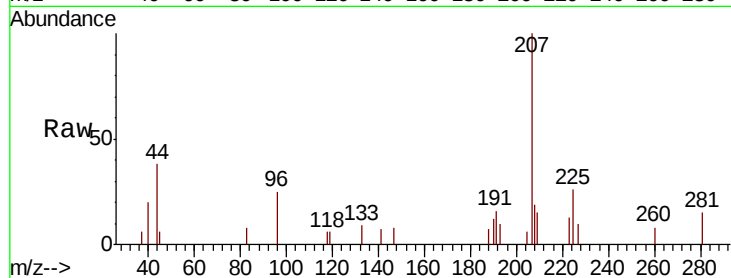
Tgt Ion: 225 Resp: 889

Ion Ratio Lower Upper

225 100

223 49.8 30.9 92.8

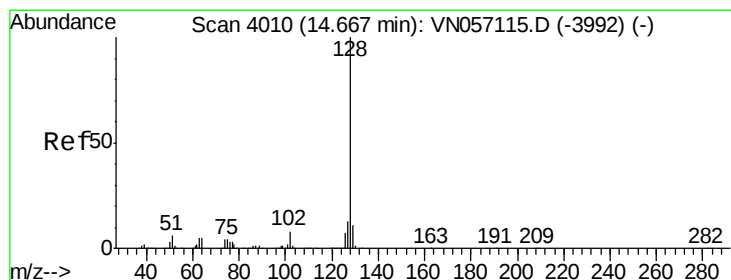
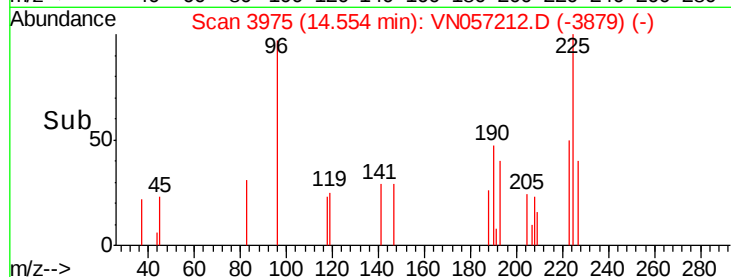
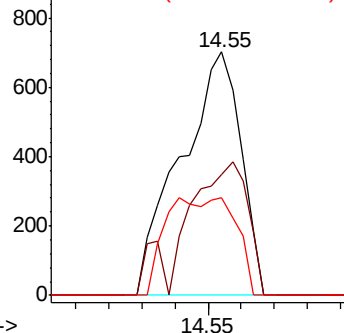
227 0.0 32.4 97.0#



Abundance Ion 224.70 (224.40 to 225.40): V

Ion 222.70 (222.40 to 223.40): V

Ion 226.70 (226.40 to 227.40): V



#95

Naphthalene

Concen: 3.198 ug/l

RT: 14.67 min Scan# 4011

Delta R.T. 0.00 min

Lab File: VN057212.D

Acq: 12 Aug 2019 14:00

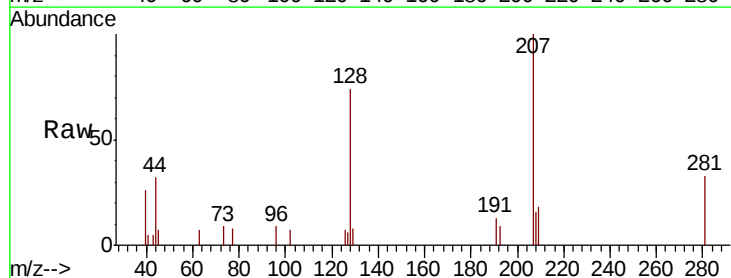
Tgt Ion: 128 Resp: 3767

Ion Ratio Lower Upper

128 100

127 5.2 10.3 15.5#

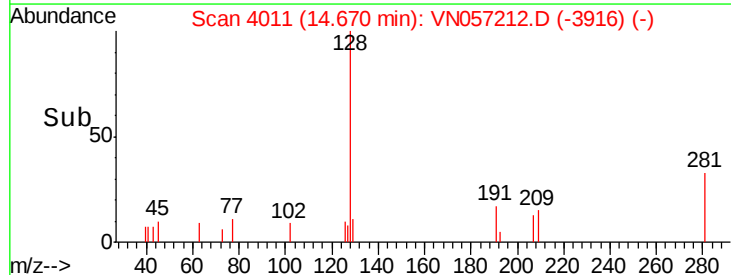
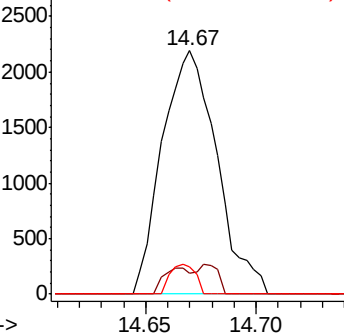
129 5.8 8.8 13.2#

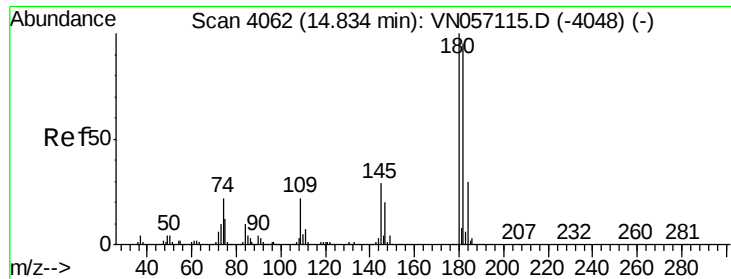


Abundance Ion 128.00 (127.70 to 128.70): V

Ion 127.00 (126.70 to 127.70): V

Ion 129.00 (128.70 to 129.70): V

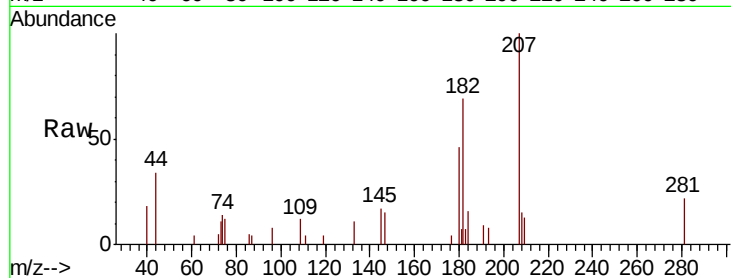




#96  
 1,2,3-Trichlorobenzene  
 Concen: 6.325 ug/l  
 RT: 14.83 min Scan# 4062  
 Delta R.T. -0.00 min  
 Lab File: VN057212.D  
 Acq: 12 Aug 2019 14:00

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VN0812WBL02

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 114.5 | 48.3  | 144.8 |
| 145     | 30.1  | 14.9  | 44.5  |



Abundance

Ion 179.80 (179.50 to 180.50): V

Ion 181.80 (181.50 to 182.50): V

Ion 144.90 (144.60 to 145.60): V

