

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN092319\  
 Data File : VN058304.D  
 Acq On : 23 Sep 2019 19:35  
 Operator : JC/SP  
 Sample : K4939-05ME  
 Misc : 6.23g/10mL/100uL/5.00mL/MSVOA\_N/MEOH  
 ALS Vial : 31 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 984-S-4-(19)ME

Quant Time: Sep 24 01:36:17 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  | 456621   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.57  | 114  | 743644   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 625068   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.35 | 152  | 261140   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.01   | 65  | 339006   | 53.30 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 106.60% |      |
| 35) Dibromofluoromethane  | 7.57   | 113 | 221846   | 49.07 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 98.14%  |      |
| 50) Toluene-d8            | 10.08  | 98  | 937700   | 53.24 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 106.48% |      |
| 62) 4-Bromofluorobenzene  | 12.41  | 95  | 299842   | 45.83 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 91.66%  |      |

## Target Compounds

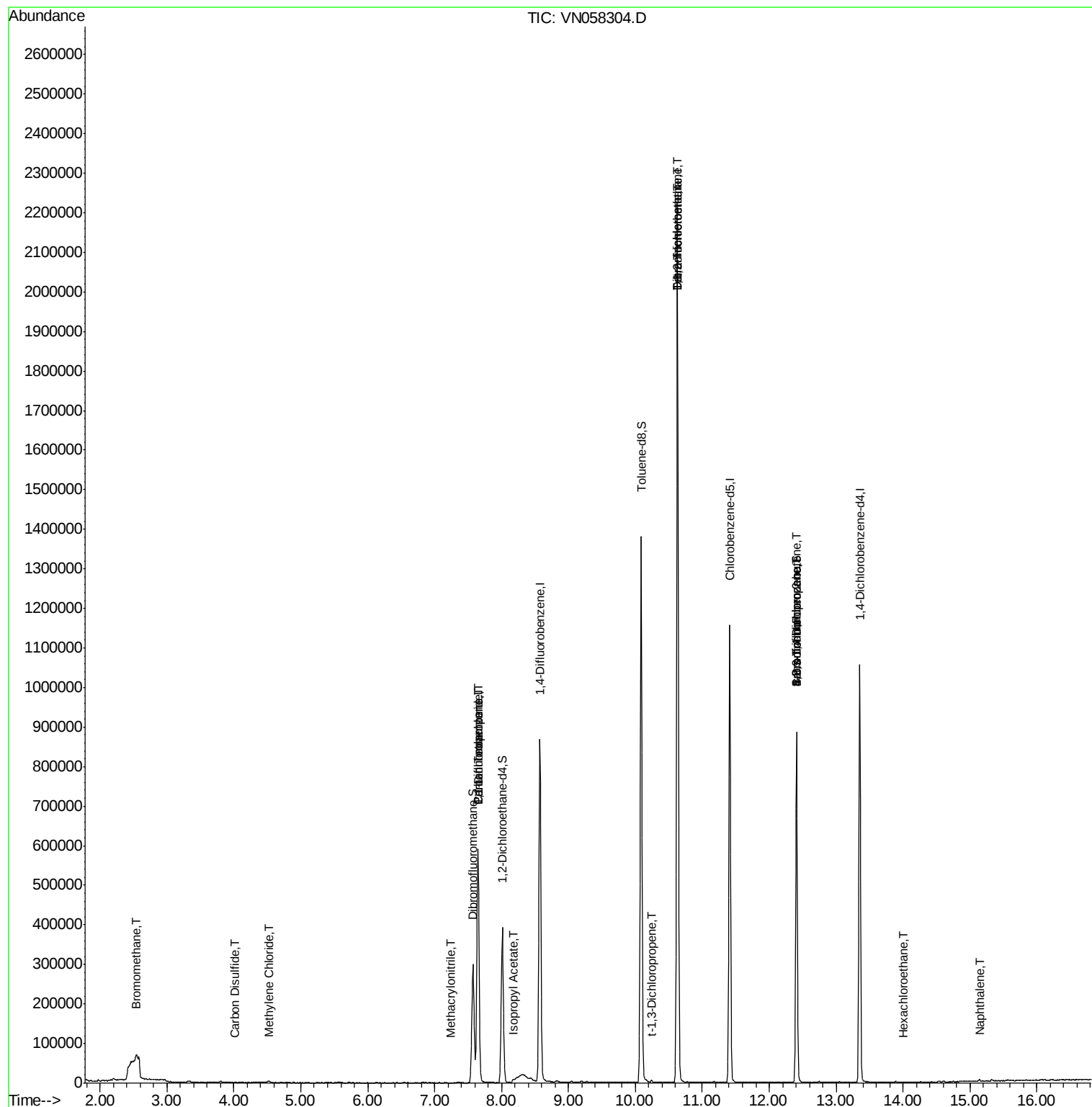
|                                |       |     |        |           | Qvalue |     |
|--------------------------------|-------|-----|--------|-----------|--------|-----|
| 3) Chloromethane               | 2.03  | 50  | 305    | Below Cal | #      | 42  |
| 4) Vinyl Chloride              | 2.37  | 62  | 67     | Below Cal | #      | 43  |
| 5) Bromomethane                | 2.55  | 94  | 188    | 0.833     | ug/l # | 50  |
| 6) Chloroethane                | 2.68  | 64  | 120    | Below Cal | #      | 44  |
| 17) Carbon Disulfide           | 4.01  | 76  | 425    | 0.378     | ug/l # | 74  |
| 20) Methylene Chloride         | 4.52  | 84  | 2205   | 0.363     | ug/l # | 92  |
| 31) Cyclohexane                | 7.65  | 56  | 11696  | Below Cal | #      | 2   |
| 36) 1,1-Dichloropropene        | 7.65  | 75  | 38662  | 7.209     | ug/l # | 50  |
| 38) Carbon Tetrachloride       | 7.65  | 117 | 47986  | 8.901     | ug/l # | 15  |
| 41) Methacrylonitrile          | 7.23  | 41  | 31     | 0.922     | ug/l # | 100 |
| 43) Isopropyl Acetate          | 8.17  | 43  | 3461   | 0.333     | ug/l # | 57  |
| 53) t-1,3-Dichloropropene      | 10.24 | 75  | 1873   | 0.293     | ug/l # | 44  |
| 55) 1,1,2-Trichloroethane      | 10.63 | 97  | 4434   | 0.973     | ug/l # | 1   |
| 60) Dibromochloromethane       | 10.63 | 129 | 443832 | 101.270   | ug/l # | 11  |
| 64) Tetrachloroethene          | 10.63 | 164 | 474953 | 155.873   | ug/l   | 99  |
| 71) Bromoform                  | 12.40 | 173 | 2074   | 4.246     | ug/l # | 1   |
| 76) 1,2,3-Trichloropropane     | 12.41 | 75  | 163235 | 34.927    | ug/l # | 100 |
| 81) trans-1,4-Dichloro-2-buten | 12.41 | 75  | 163235 | 97.716    | ug/l # | 5   |
| 90) Hexachloroethane           | 14.00 | 117 | 68     | 2.848     | ug/l # | 12  |
| 95) Naphthalene                | 15.14 | 128 | 4016   | 0.322     | ug/l # | 85  |

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

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Sample : K4939-05ME  
Misc : 6.23g/10mL/100uL/5.00mL/MSVOA\_N/MEOH  
ALS Vial : 31 Sample Multiplier: 1

Instrument :  
MSVOA\_N  
ClientSampleId :  
984-S-4-(19)ME

Quant Time: Sep 24 01:36:17 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

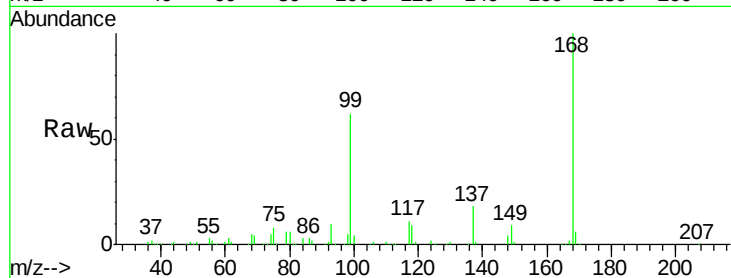




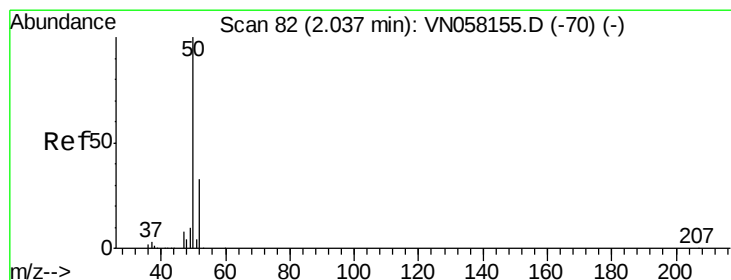
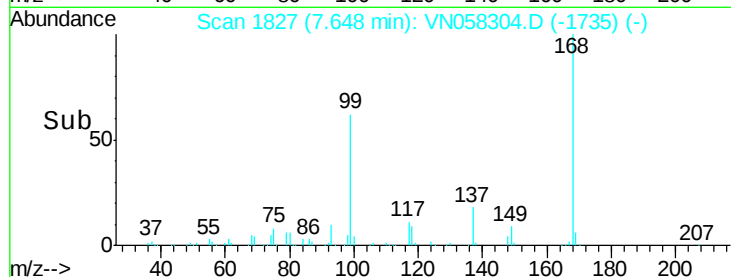
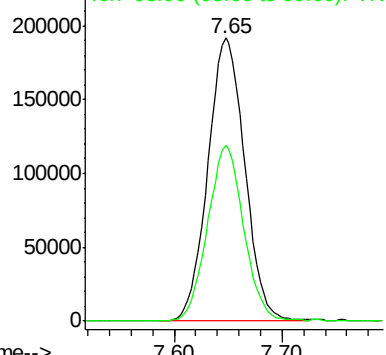
#1  
Pentafluorobenzene  
Concen: 50.000 ug/l  
RT: 7.65 min Scan# 1827  
Delta R.T. -0.00 min  
Lab File: VN058304.D  
Acq: 23 Sep 2019 19:35

Instrument :  
MSVOA\_N  
ClientSampleId :  
984-S-4-(19)ME

Tot Ion:168 Resp: 456621  
Ion Ratio Lower Upper  
168 100  
99 62.0 47.4 71.2

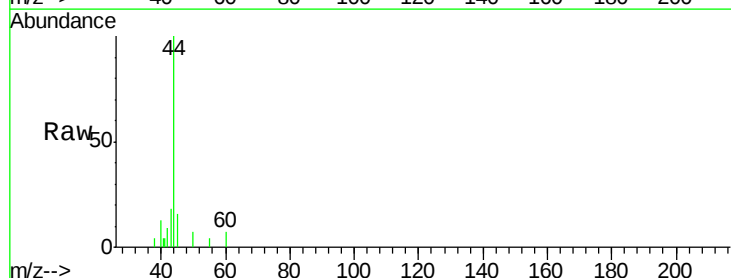


Abundance Ion 167.90 (167.60 to 168.60): V

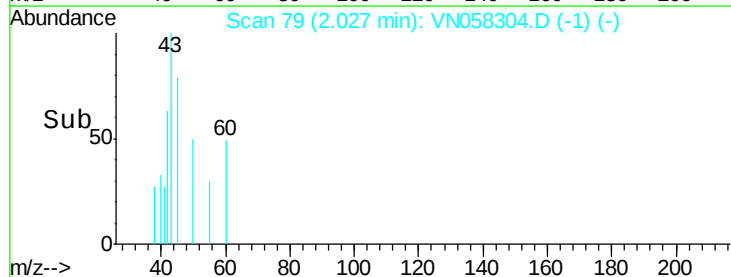
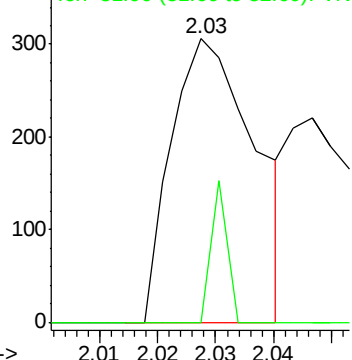


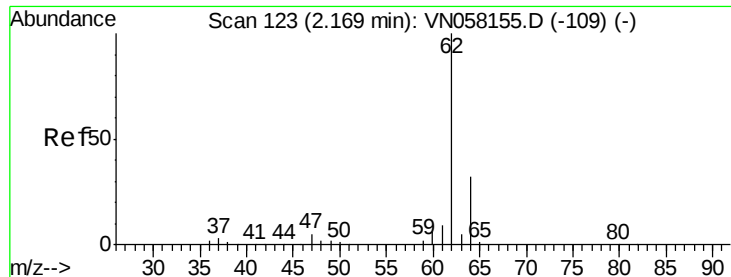
#3  
Chloromethane  
Concen: Below Cal  
RT: 2.03 min Scan# 79  
Delta R.T. -0.01 min  
Lab File: VN058304.D  
Acq: 23 Sep 2019 19:35

Tgt Ion: 50 Resp: 305  
Ion Ratio Lower Upper  
50 100  
52 0.0 26.3 39.5#



Abundance Ion 49.90 (49.60 to 50.60): VNO





#4

Vinyl Chloride

Concen: Below Cal

RT: 2.37 min Scan# 186

Delta R.T. 0.20 min

Lab File: VN058304.D

Acq: 23 Sep 2019 19:35

Instrument :

MSVOA\_N

ClientSampled :

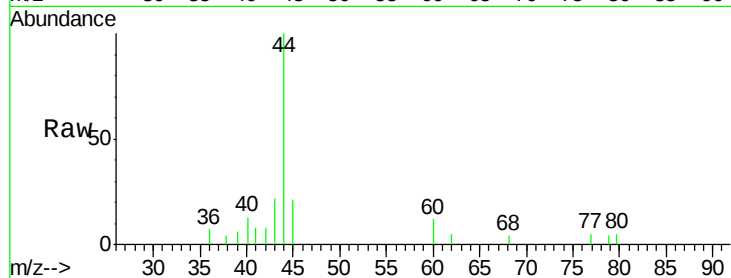
984-S-4-(19)ME

Tot Ion: 62 Resp: 67

Ion Ratio Lower Upper

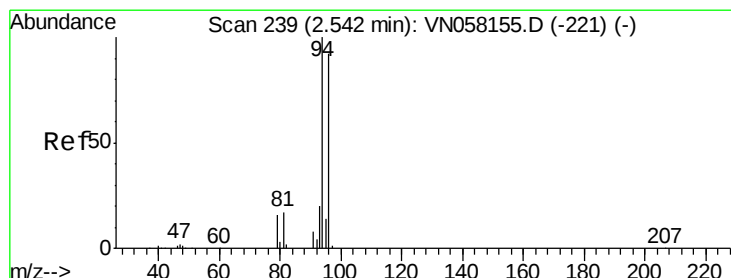
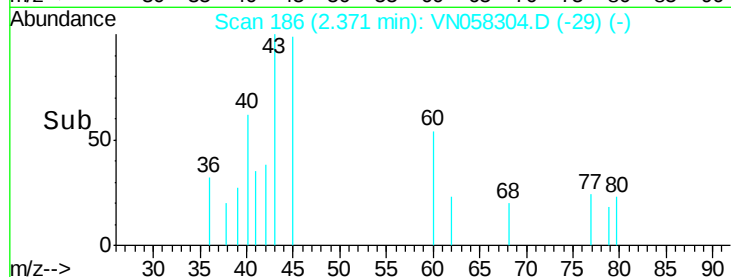
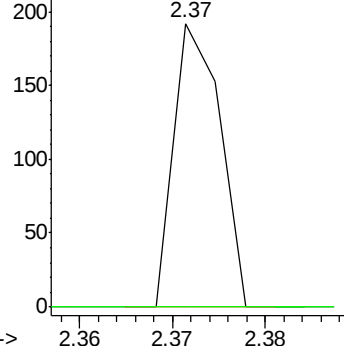
62 100

64 0.0 25.4 38.2#



Abundance Ion 61.90 (61.60 to 62.60): VNC

Ion 63.90 (63.60 to 64.60): VNC



#5

Bromomethane

Concen: 0.833 ug/l

RT: 2.55 min Scan# 241

Delta R.T. 0.01 min

Lab File: VN058304.D

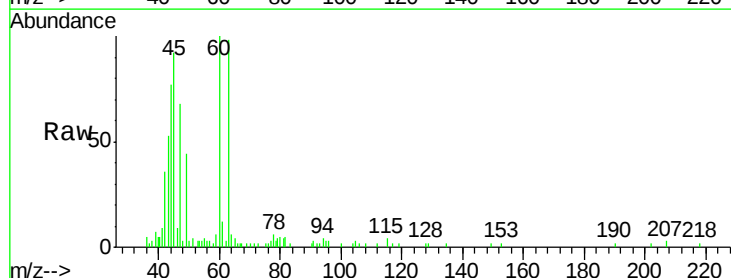
Acq: 23 Sep 2019 19:35

Tgt Ion: 94 Resp: 188

Ion Ratio Lower Upper

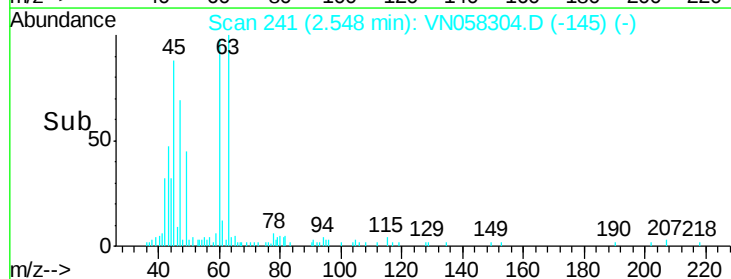
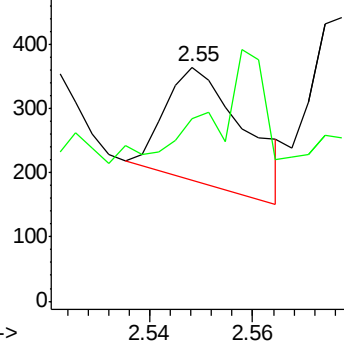
94 100

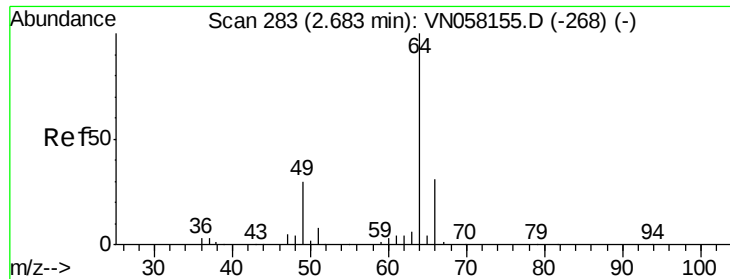
96 44.2 73.3 109.9#



Abundance Ion 93.90 (93.60 to 94.60): VNC

Ion 95.90 (95.60 to 96.60): VNC





#6

Chloroethane

Concen: Below Cal

RT: 2.68 min Scan# 281

Delta R.T. -0.01 min

Lab File: VN058304.D

Acq: 23 Sep 2019 19:35

Instrument :

MSVOA\_N

ClientSampleId :

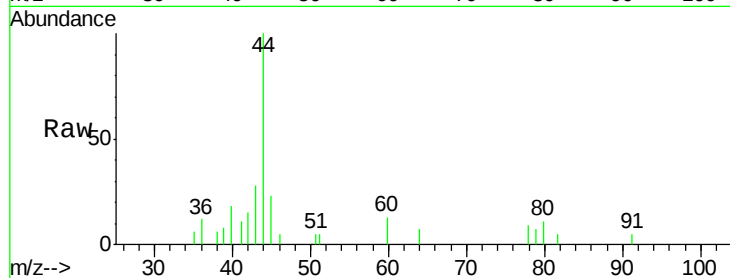
984-S-4-(19)ME

Tot Ion: 64 Resp: 120

Ion Ratio Lower Upper

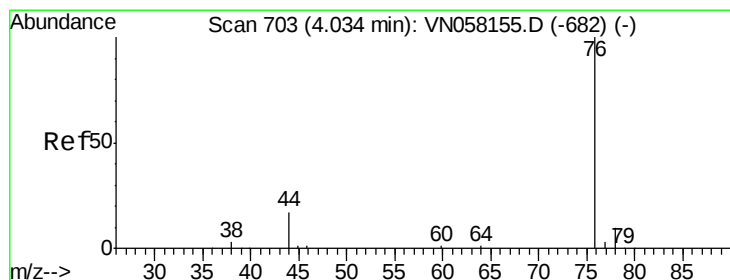
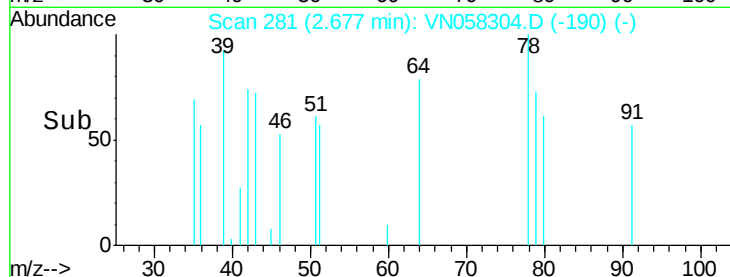
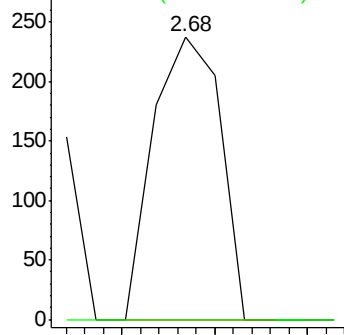
64 100

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



#17

Carbon Disulfide

Concen: 0.378 ug/l

RT: 4.01 min Scan# 696

Delta R.T. -0.02 min

Lab File: VN058304.D

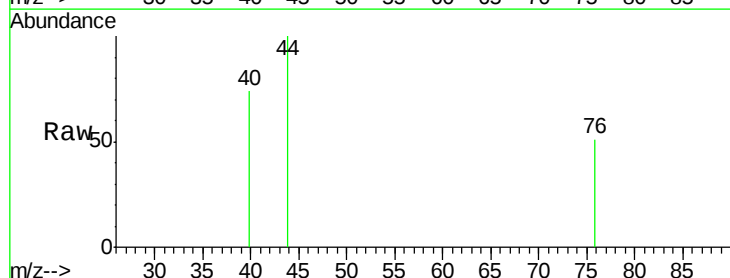
Acq: 23 Sep 2019 19:35

Tgt Ion: 76 Resp: 425

Ion Ratio Lower Upper

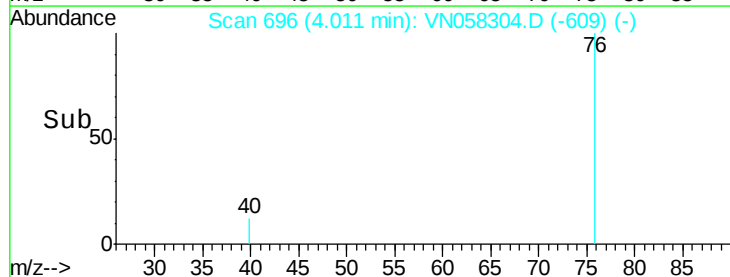
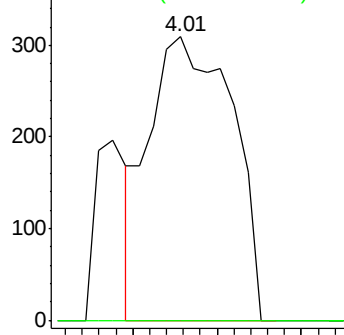
76 100

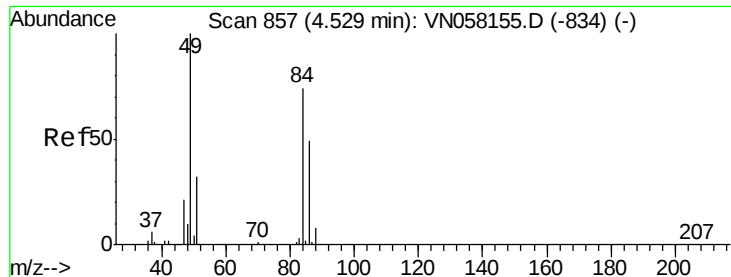
78 0.0 7.7 11.5#



Abundance Ion 75.90 (75.60 to 76.60): VNO

Ion 77.90 (77.60 to 78.60): VNO

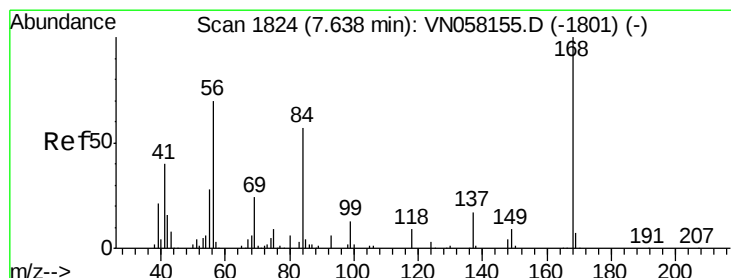
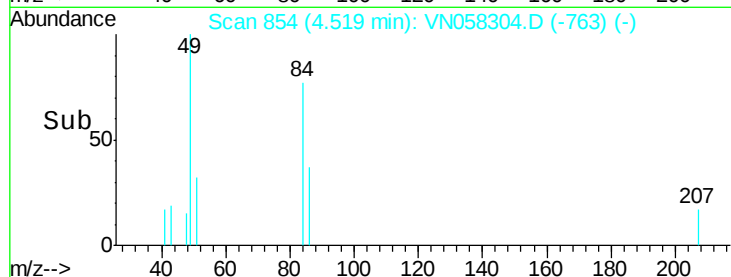
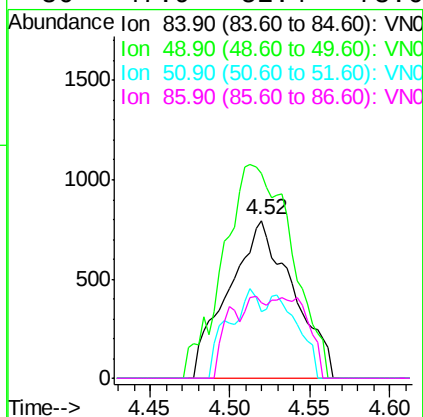
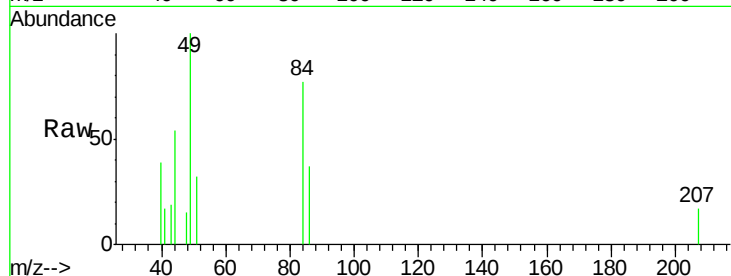




#20  
Methylene Chloride  
Concen: 0.363 ug/l  
RT: 4.52 min Scan# 854  
Delta R.T. -0.01 min  
Lab File: VN058304.D  
Acq: 23 Sep 2019 19:35

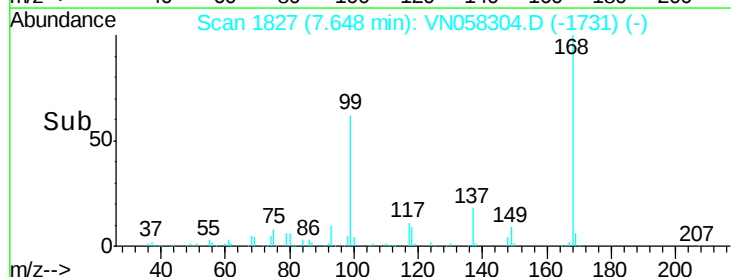
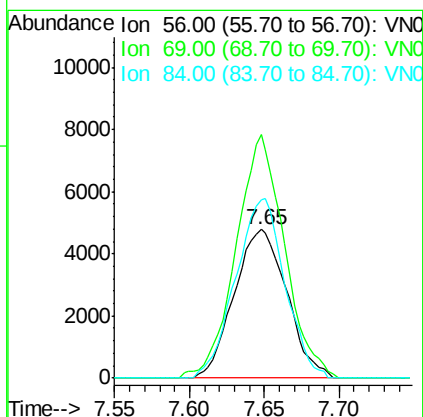
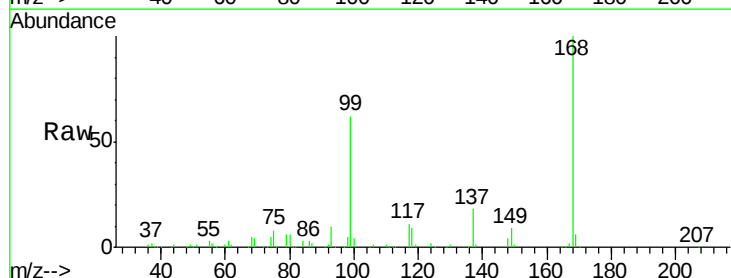
Instrument :  
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ClientSampleId :  
984-S-4-(19)ME

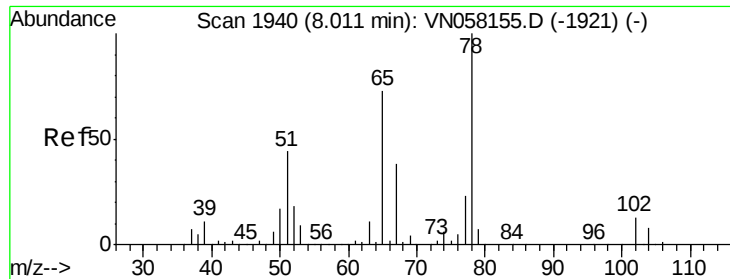
Tot Ion: 84 Resp: 2205  
Ion Ratio Lower Upper  
84 100  
49 129.6 107.5 161.3  
51 42.1 33.9 50.9  
86 47.9 52.4 78.6#



#31  
Cyclohexane  
Concen: Below Cal  
RT: 7.65 min Scan# 1827  
Delta R.T. 0.01 min  
Lab File: VN058304.D  
Acq: 23 Sep 2019 19:35

Tgt Ion: 56 Resp: 11696  
Ion Ratio Lower Upper  
56 100  
69 164.1 27.3 40.9#  
84 119.9 65.0 97.4#

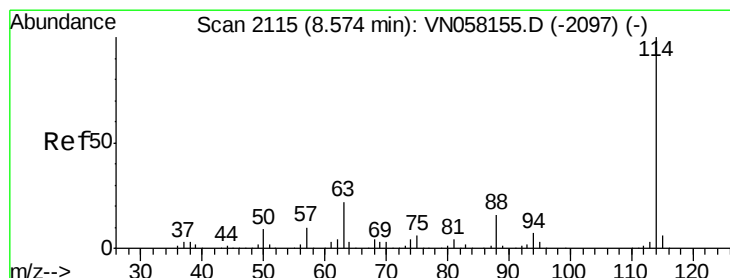
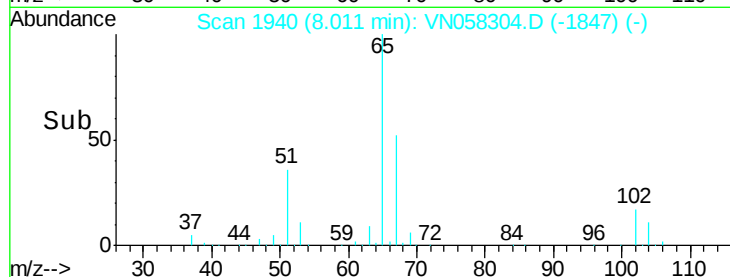
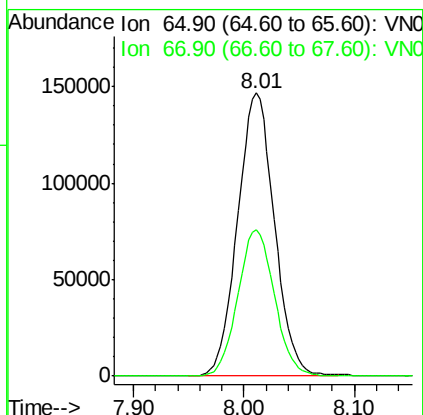
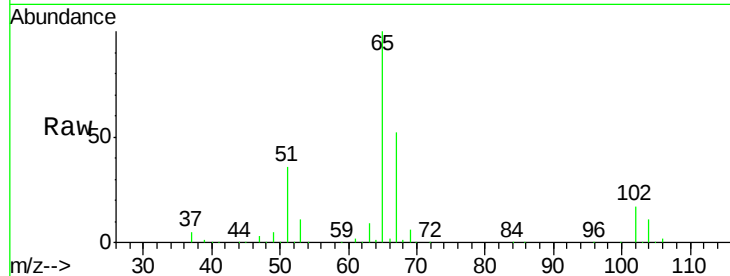




#33  
 1,2-Dichloroethane-d4  
 Concen: 53.304 ug/l  
 RT: 8.01 min Scan# 1940  
 Delta R.T. -0.00 min  
 Lab File: VN058304.D  
 Acq: 23 Sep 2019 19:35

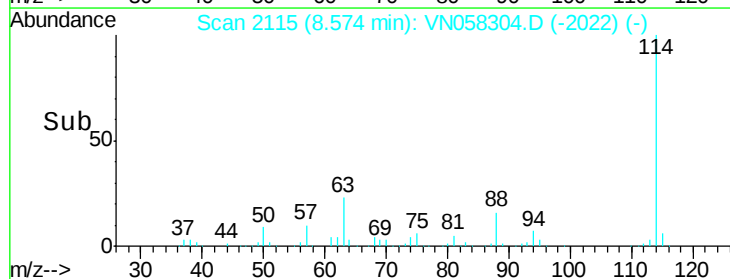
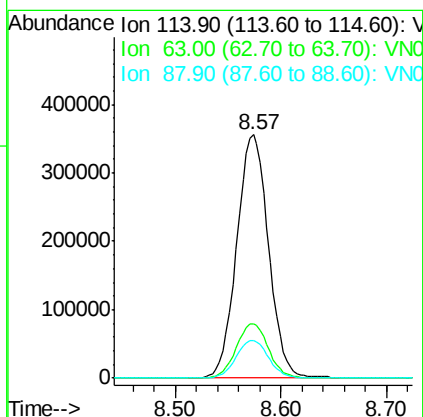
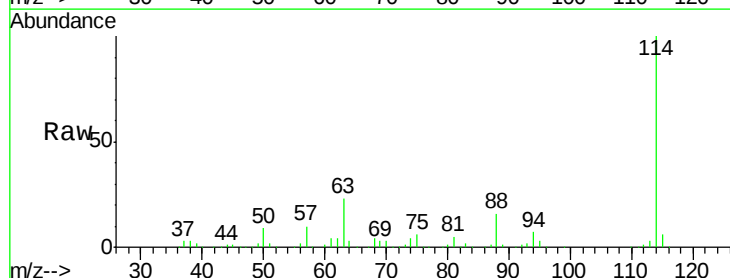
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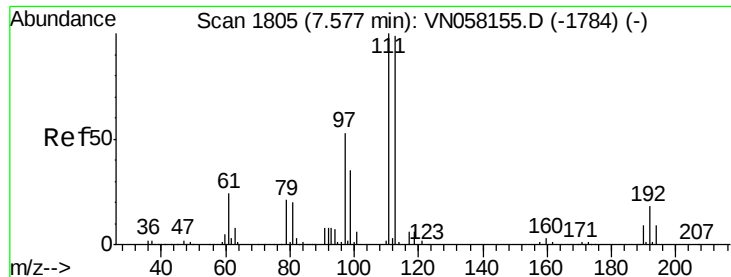
Tot Ion: 65 Resp: 339006  
 Ion Ratio Lower Upper  
 65 100  
 67 51.5 0.0 103.4



#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.57 min Scan# 2115  
 Delta R.T. -0.00 min  
 Lab File: VN058304.D  
 Acq: 23 Sep 2019 19:35

Tgt Ion: 114 Resp: 743644  
 Ion Ratio Lower Upper  
 114 100  
 63 22.5 0.0 44.2  
 88 15.6 0.0 31.6

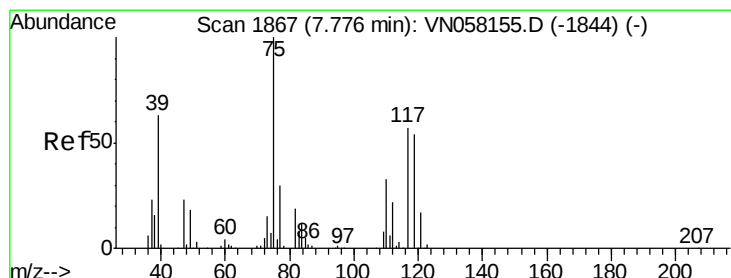
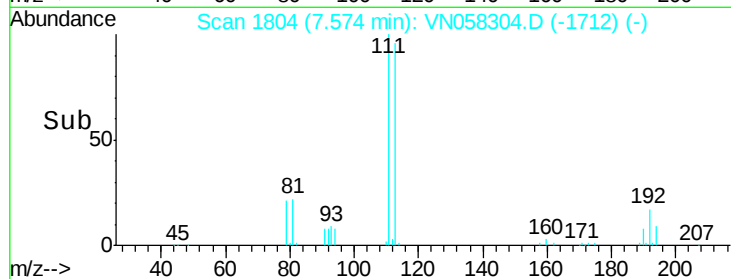
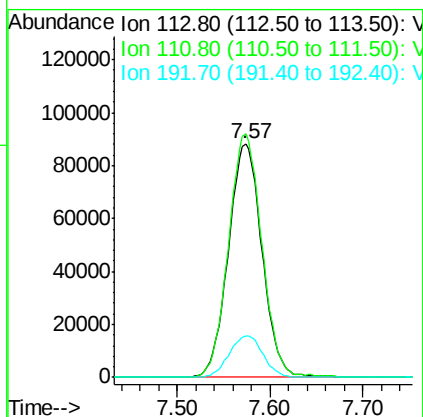
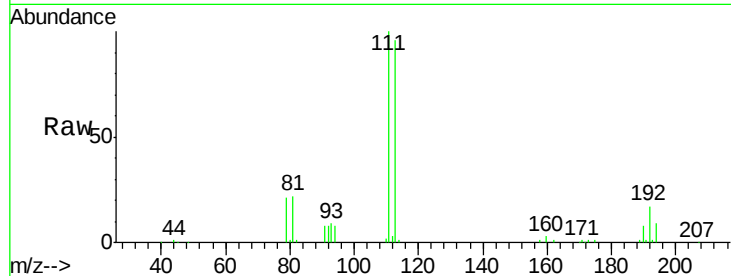




#35  
 Dibromofluoromethane  
 Concen: 49.073 ug/l  
 RT: 7.57 min Scan# 1804  
 Delta R.T. -0.00 min  
 Lab File: VN058304.D  
 Acq: 23 Sep 2019 19:35

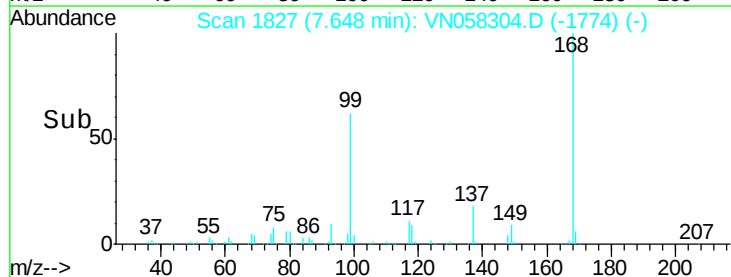
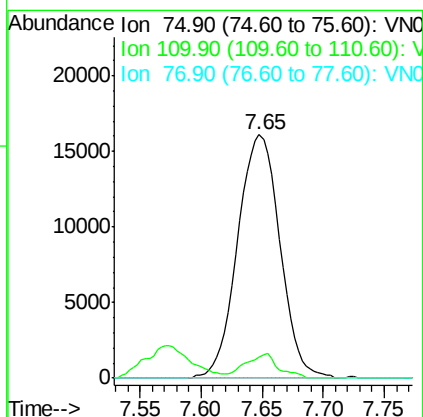
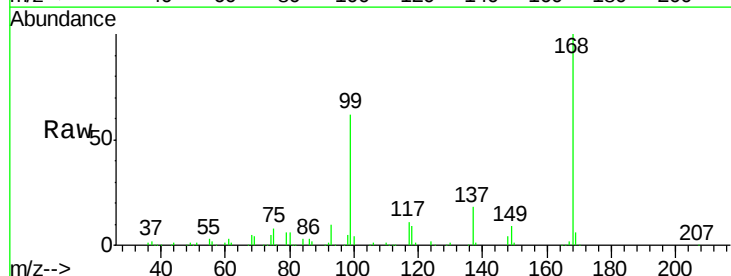
Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 984-S-4-(19)ME

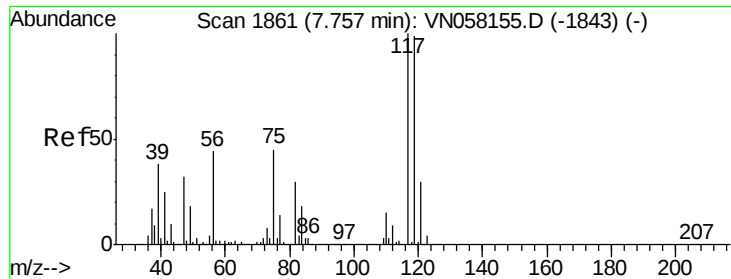
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 113     | 100   |       |       |
| 111     | 103.7 | 81.8  | 122.6 |
| 192     | 18.0  | 14.5  | 21.7  |



#36  
 1,1-Dichloropropene  
 Concen: 7.209 ug/l  
 RT: 7.65 min Scan# 1827  
 Delta R.T. -0.13 min  
 Lab File: VN058304.D  
 Acq: 23 Sep 2019 19:35

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 75      | 100   |       |       |
| 110     | 7.9   | 16.6  | 49.7# |
| 77      | 0.0   | 24.3  | 36.5# |

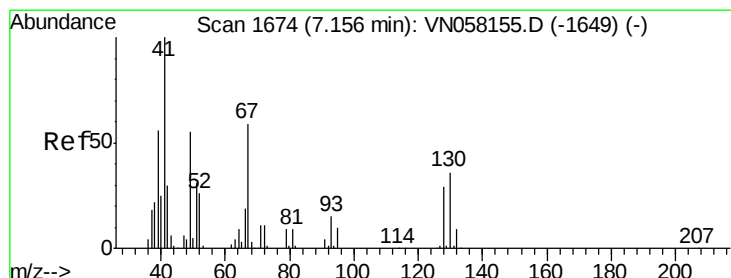
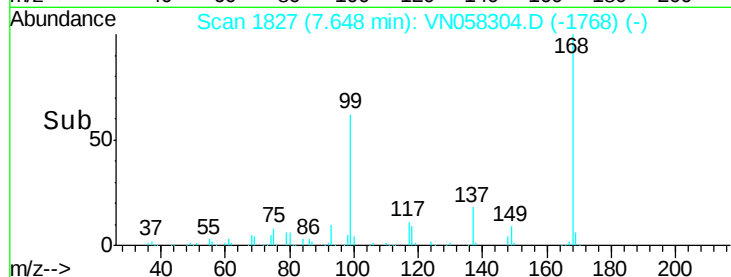
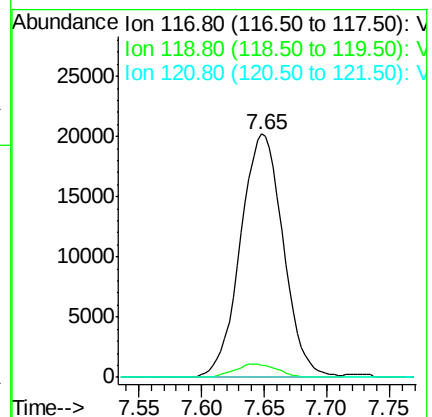
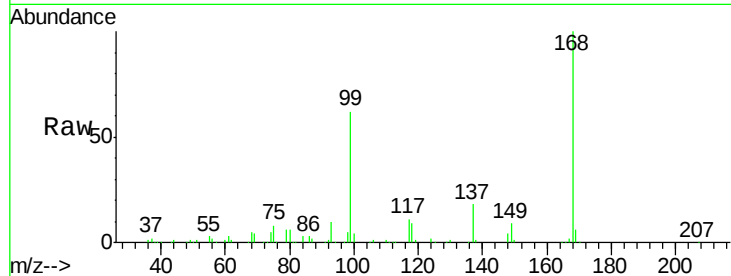




#38  
Carbon Tetrachloride  
Concen: 8.901 ug/l  
RT: 7.65 min Scan# 1827  
Delta R.T. -0.11 min  
Lab File: VN058304.D  
Acq: 23 Sep 2019 19:35

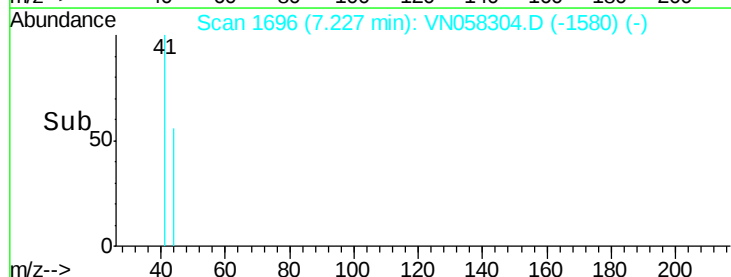
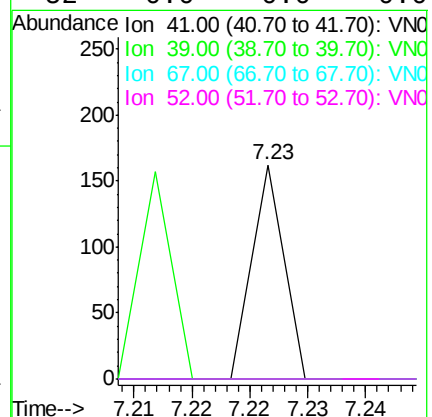
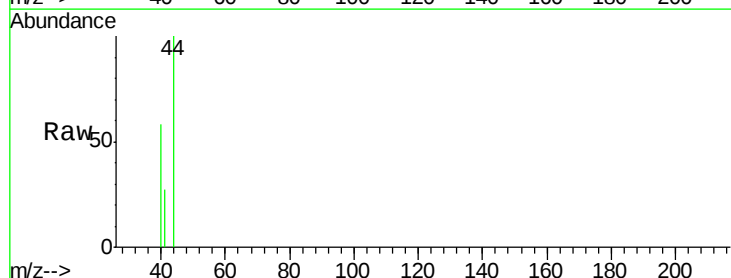
Instrument :  
MSVOA\_N  
ClientSampleId :  
984-S-4-(19)ME

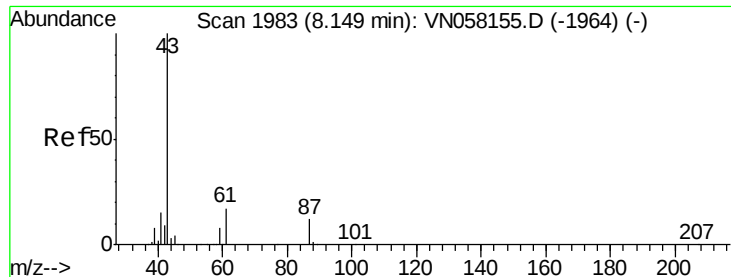
Tot Ion:117 Resp: 47986  
Ion Ratio Lower Upper  
117 100  
119 5.2 78.6 117.8#  
121 0.0 24.1 36.1#



#41  
Methacrylonitrile  
Concen: 0.922 ug/l  
RT: 7.23 min Scan# 1696  
Delta R.T. 0.07 min  
Lab File: VN058304.D  
Acq: 23 Sep 2019 19:35

Tgt Ion: 41 Resp: 31  
Ion Ratio Lower Upper  
41 100  
39 96.8 0.0 0.0#  
67 0.0 0.0 0.0  
52 0.0 0.0 0.0





#43

Isopropyl Acetate

Concen: 0.333 ug/l

RT: 8.17 min Scan# 1990

Delta R.T. 0.02 min

Lab File: VN058304.D

Acq: 23 Sep 2019 19:35

Instrument :

MSVOA\_N

ClientSampleId :

984-S-4-(19)ME

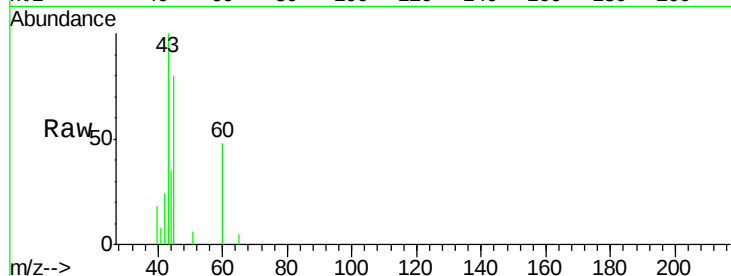
Tot Ion: 43 Resp: 3461

Ion Ratio Lower Upper

43 100

61 0.0 19.7 29.5#

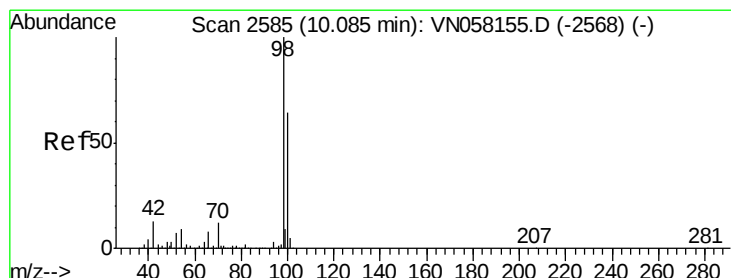
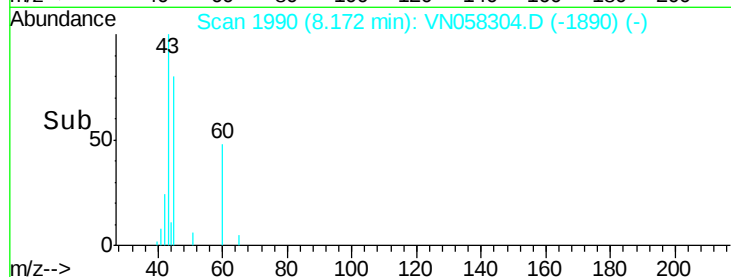
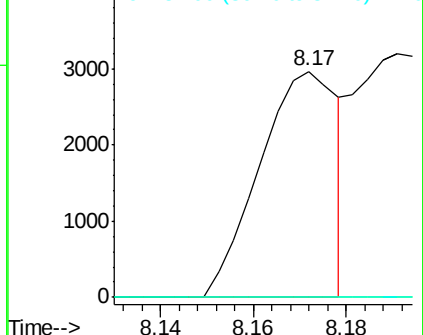
87 0.0 9.4 14.2#



Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 61.00 (60.70 to 61.70): VN0

Ion 87.00 (86.70 to 87.70): VN0



#50

Toluene-d8

Concen: 53.237 ug/l

RT: 10.08 min Scan# 2585

Delta R.T. -0.00 min

Lab File: VN058304.D

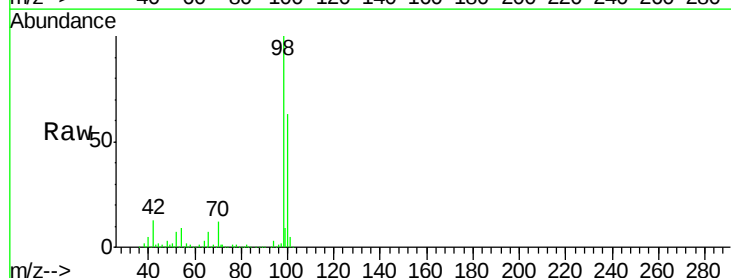
Acq: 23 Sep 2019 19:35

Tgt Ion: 98 Resp: 937700

Ion Ratio Lower Upper

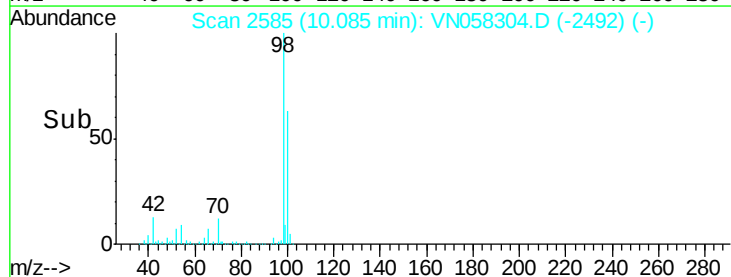
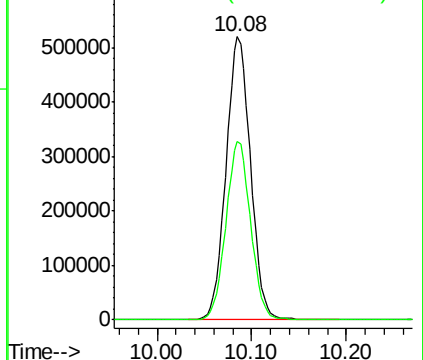
98 100

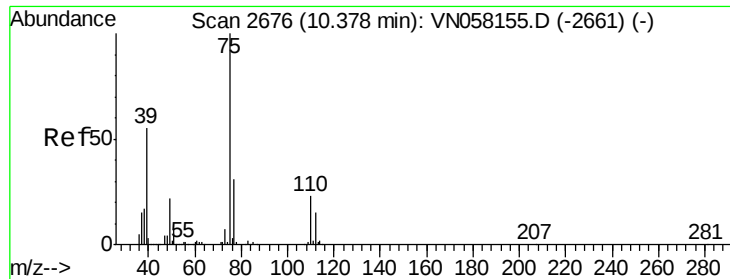
100 63.5 51.1 76.7



Abundance Ion 98.00 (97.70 to 98.70): VN0

Ion 100.00 (99.70 to 100.70): VN0

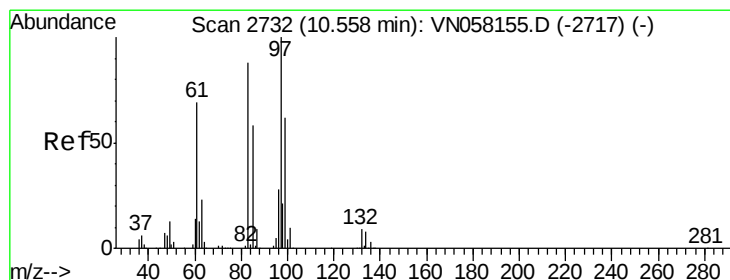
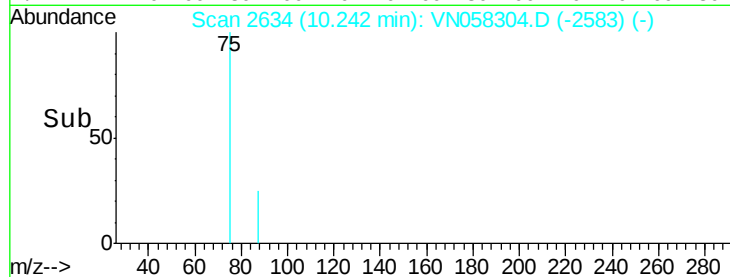
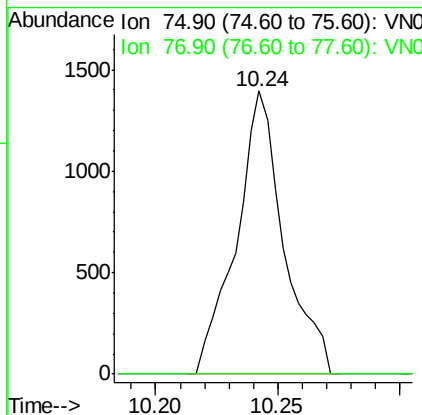
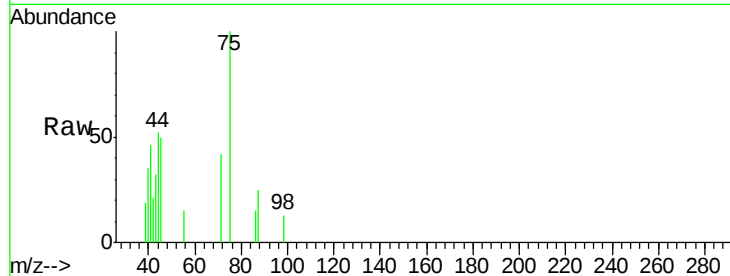




#53  
t-1,3-Dichloropropene  
Concen: 0.293 ug/l  
RT: 10.24 min Scan# 2634  
Delta R.T. -0.14 min  
Lab File: VN058304.D  
Acq: 23 Sep 2019 19:35

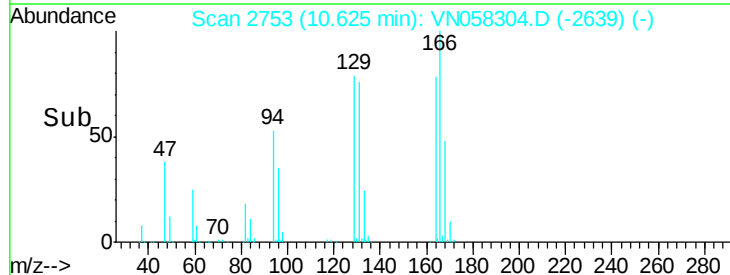
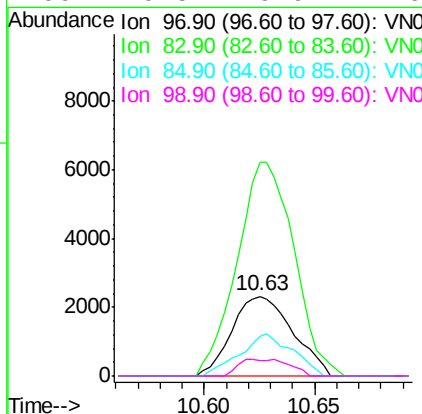
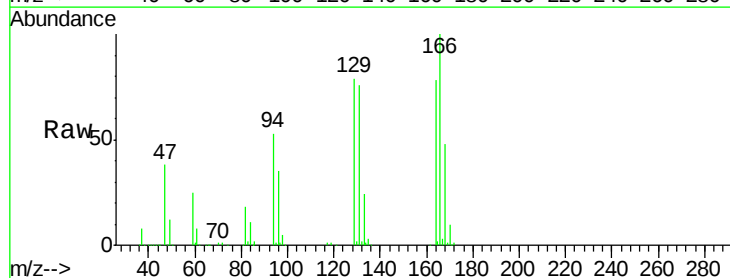
Instrument :  
MSVOA\_N  
ClientSampleId :  
984-S-4-(19)ME

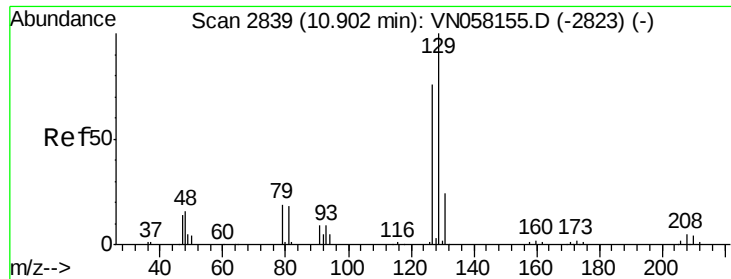
Tot Ion: 75 Resp: 1873  
Ion Ratio Lower Upper  
75 100  
77 0.0 24.9 37.3#



#55  
1,1,2-Trichloroethane  
Concen: 0.973 ug/l  
RT: 10.63 min Scan# 2753  
Delta R.T. 0.07 min  
Lab File: VN058304.D  
Acq: 23 Sep 2019 19:35

Tgt Ion: 97 Resp: 4434  
Ion Ratio Lower Upper  
97 100  
83 268.2 70.4 105.6#  
85 50.4 46.8 70.2  
99 19.5 49.9 74.9#





#60

Dibromochloromethane

Concen: 101.270 ug/l

RT: 10.63 min Scan# 2754

Delta R.T. -0.27 min

Lab File: VN058304.D

Acq: 23 Sep 2019 19:35

Instrument :

MSVOA\_N

ClientSampleId :

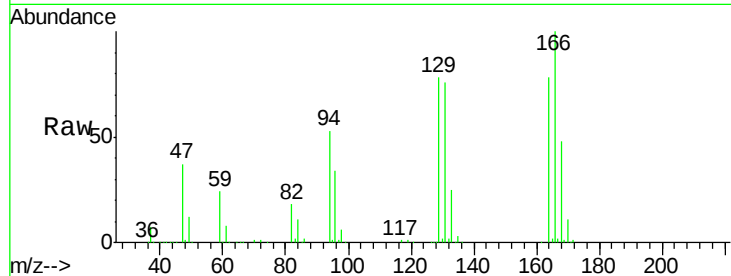
984-S-4-(19)ME

Tot Ion:129 Resp: 443832

Ion Ratio Lower Upper

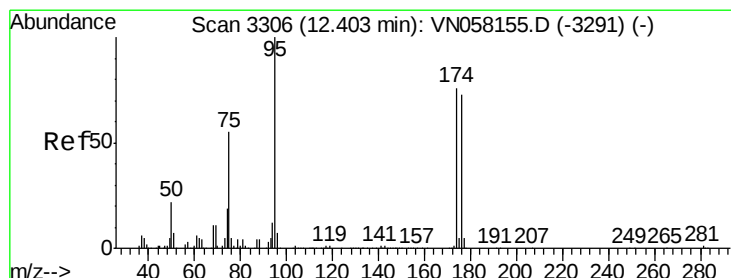
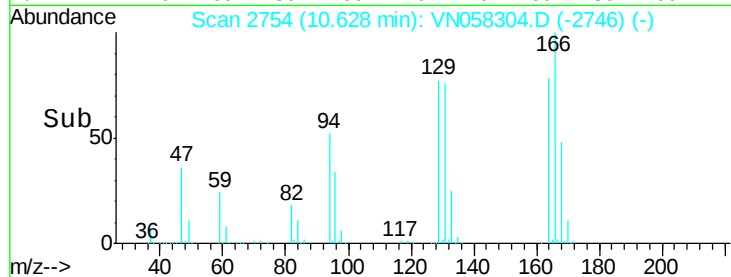
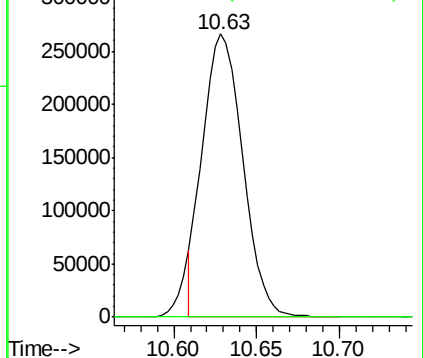
129 100

127 0.0 38.7 116.1#



Abundance Ion 128.80 (128.50 to 129.50): V

Ion 126.80 (126.50 to 127.50): V



#62

4-Bromofluorobenzene

Concen: 45.828 ug/l

RT: 12.41 min Scan# 3307

Delta R.T. 0.00 min

Lab File: VN058304.D

Acq: 23 Sep 2019 19:35

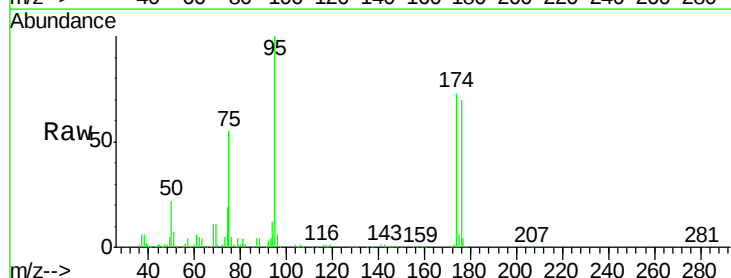
Tgt Ion: 95 Resp: 299842

Ion Ratio Lower Upper

95 100

174 74.3 0.0 152.2

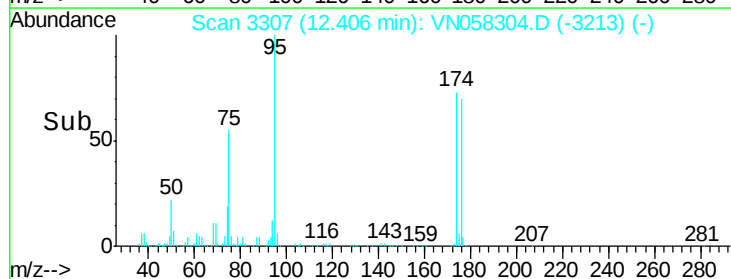
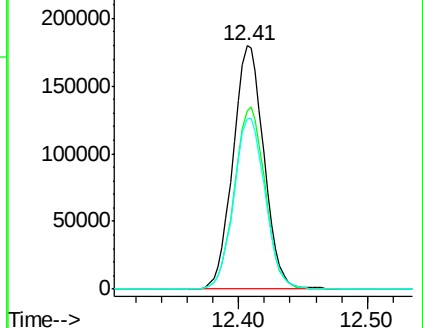
176 71.1 0.0 148.0

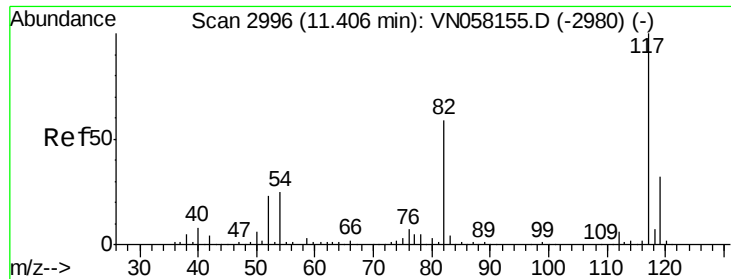


Abundance Ion 94.90 (94.60 to 95.60): V

Ion 173.80 (173.50 to 174.50): V

Ion 175.80 (175.50 to 176.50): V

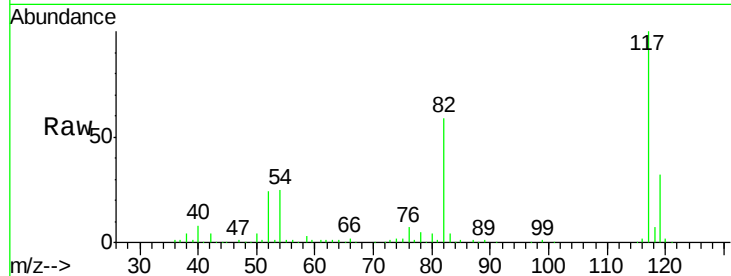




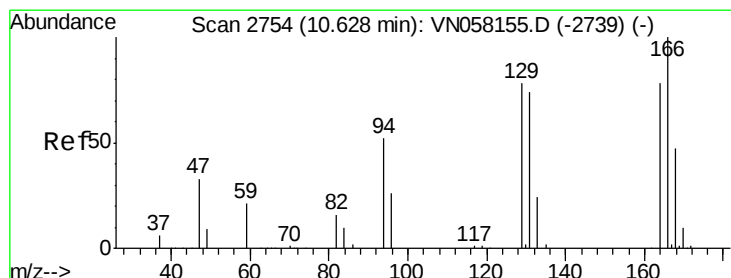
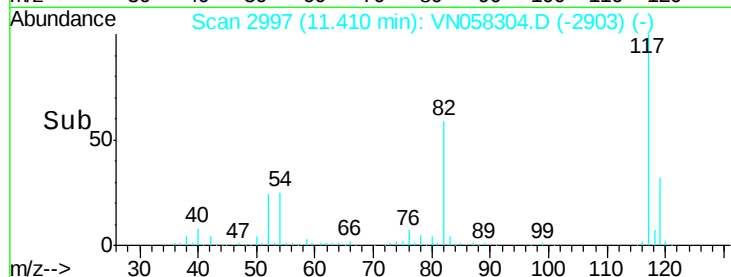
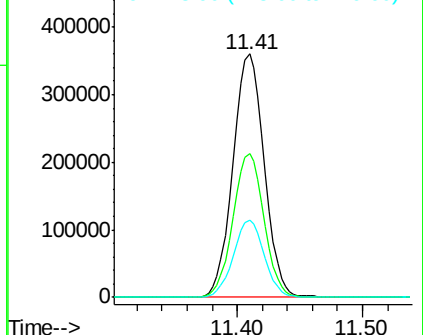
#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.41 min Scan# 2997  
Delta R.T. 0.00 min  
Lab File: VN058304.D  
Acq: 23 Sep 2019 19:35

Instrument :  
MSVOA\_N  
ClientSampleId :  
984-S-4-(19)ME

Tot Ion:117 Resp: 625068  
Ion Ratio Lower Upper  
117 100  
82 59.2 46.9 70.3  
119 31.7 25.3 37.9

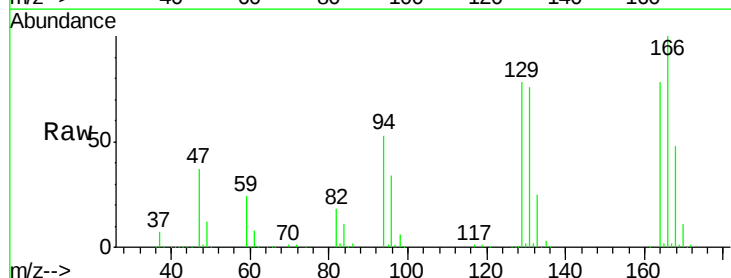


Abundance Ion 116.90 (116.60 to 117.60): V  
Ion 82.00 (81.70 to 82.70): V  
Ion 118.90 (118.60 to 119.60): V

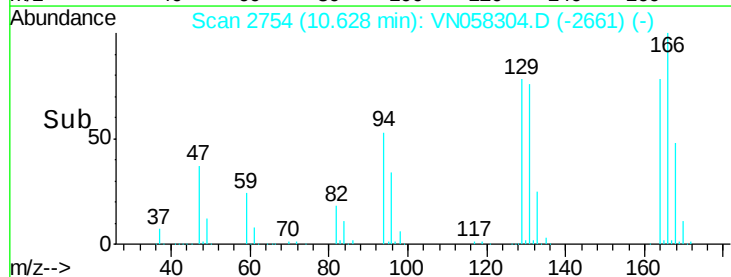
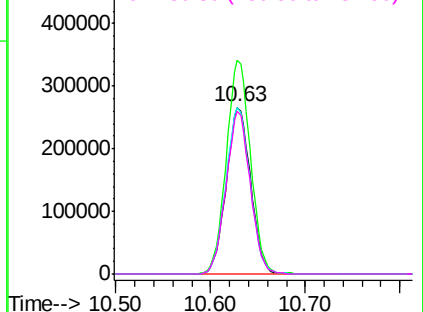


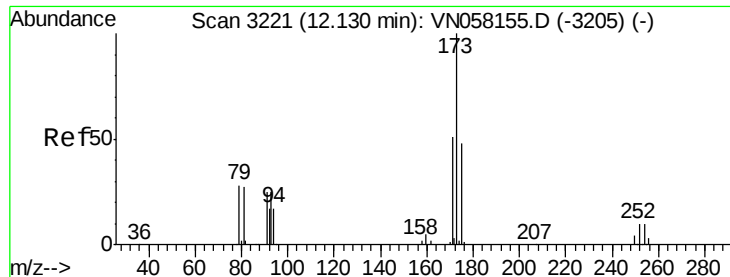
#64  
Tetrachloroethene  
Concen: 155.873 ug/l  
RT: 10.63 min Scan# 2754  
Delta R.T. -0.00 min  
Lab File: VN058304.D  
Acq: 23 Sep 2019 19:35

Tgt Ion:164 Resp: 474953  
Ion Ratio Lower Upper  
164 100  
166 128.2 102.2 153.4  
129 100.0 79.6 119.4  
131 97.7 76.0 114.0



Abundance Ion 163.80 (163.50 to 164.50): V  
Ion 165.80 (165.50 to 166.50): V  
Ion 128.80 (128.50 to 129.50): V  
Ion 130.80 (130.50 to 131.50): V





#71

Bromoform

Concen: 4.246 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. 0.27 min

Lab File: VN058304.D

Acq: 23 Sep 2019 19:35

Instrument :

MSVOA\_N

ClientSampled :

984-S-4-(19)ME

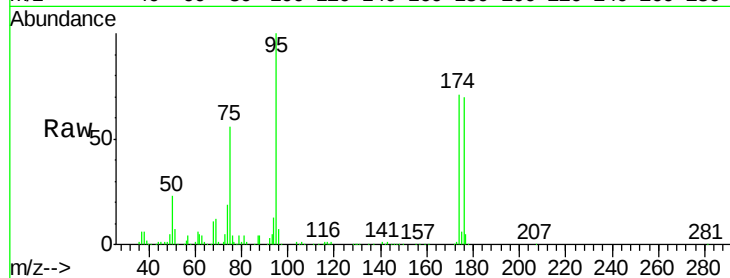
Tot Ion:173 Resp: 2074

Ion Ratio Lower Upper

173 100

175 657.6 24.2 72.6#

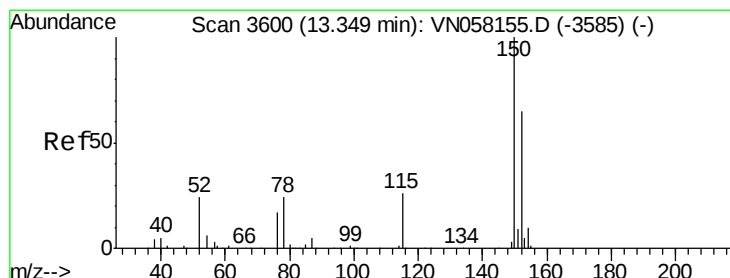
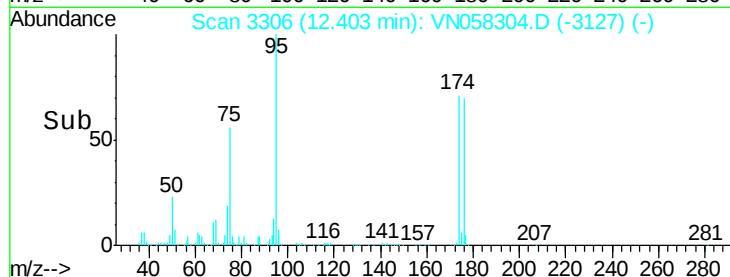
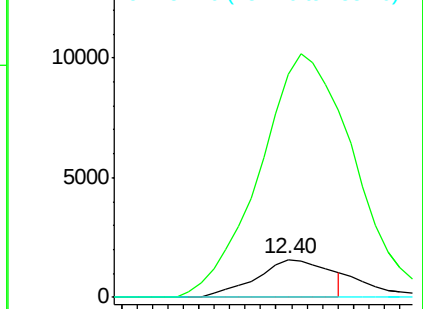
254 0.0 0.1 0.1#



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# 3601

Delta R.T. 0.00 min

Lab File: VN058304.D

Acq: 23 Sep 2019 19:35

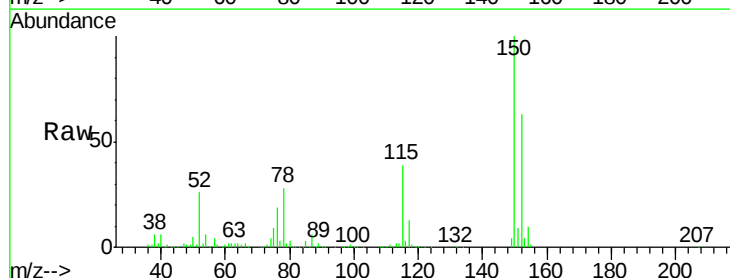
Tgt Ion:152 Resp: 261140

Ion Ratio Lower Upper

152 100

115 61.6 30.1 90.3

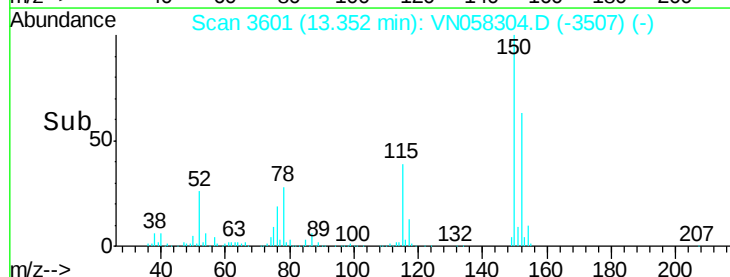
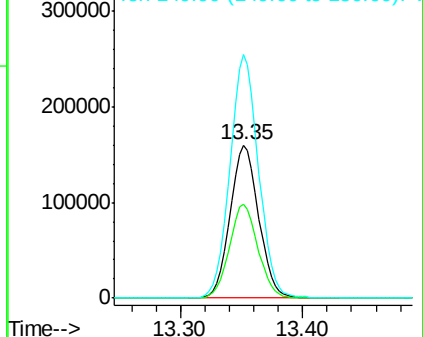
150 158.7 0.0 346.4

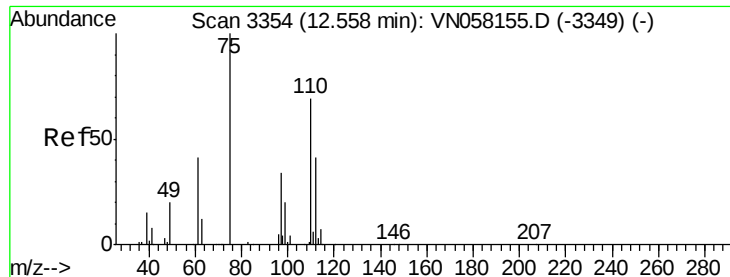


Abundance Ion 151.90 (151.60 to 152.60): V

Ion 114.90 (114.60 to 115.60): V

Ion 149.90 (149.60 to 150.60): V





#76

1,2,3-Trichloropropane

Concen: 34.927 ug/l

RT: 12.41 min Scan# 3307

Delta R.T. -0.15 min

Lab File: VN058304.D

Acq: 23 Sep 2019 19:35

Instrument :

MSVOA\_N

ClientSampleId :

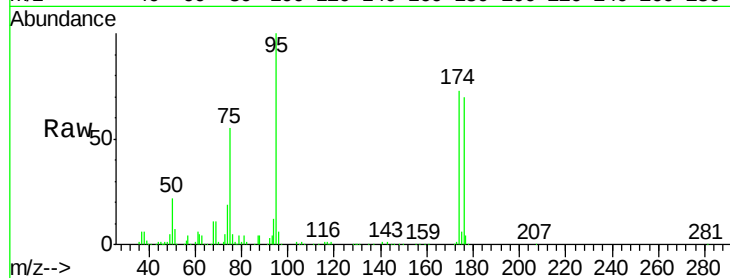
984-S-4-(19)ME

Tot Ion: 75 Resp: 163235

Ion Ratio Lower Upper

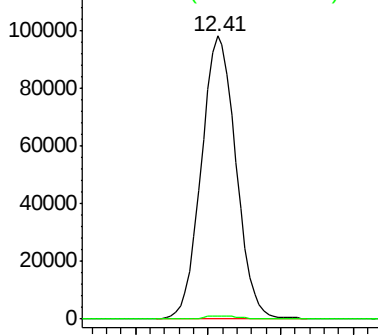
75 100

77 1.2 0.0 0.0#

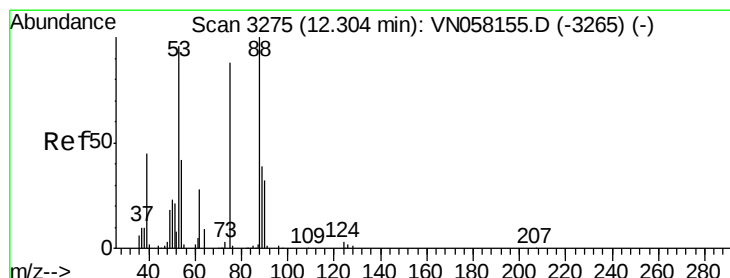
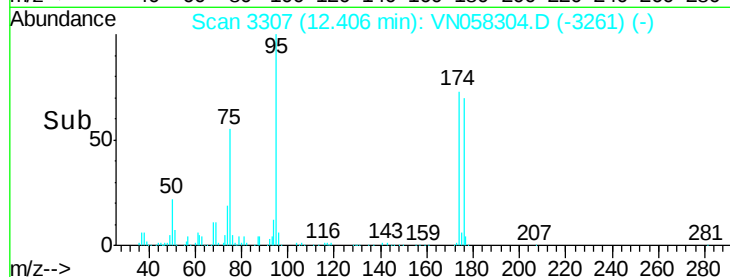


Abundance Ion 74.90 (74.60 to 75.60): VN0

Ion 77.00 (76.70 to 77.70): VN0



Time-->



#81

trans-1,4-Dichloro-2-butene

Concen: 97.716 ug/l

RT: 12.41 min Scan# 3307

Delta R.T. 0.10 min

Lab File: VN058304.D

Acq: 23 Sep 2019 19:35

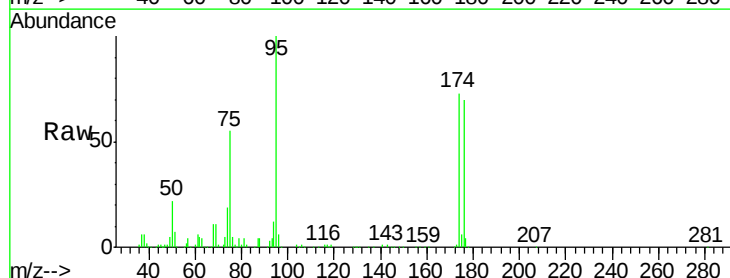
Tgt Ion: 75 Resp: 163235

Ion Ratio Lower Upper

75 100

53 0.0 90.1 135.1#

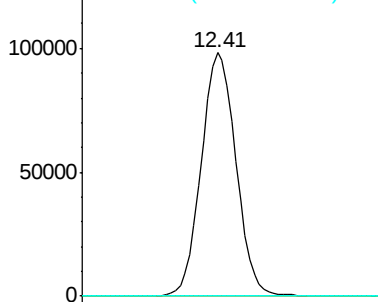
89 0.0 36.2 54.2#



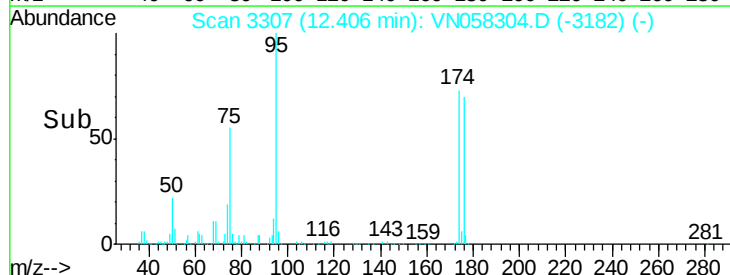
Abundance Ion 74.90 (74.60 to 75.60): VN0

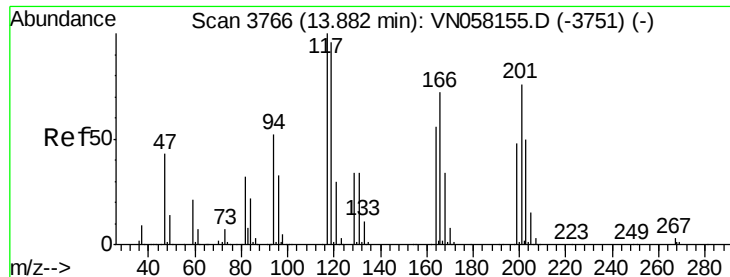
Ion 53.00 (52.70 to 53.70): VN0

Ion 88.90 (88.60 to 89.60): VN0



Time-->





#90

Hexachloroethane

Concen: 2.848 ug/l

RT: 14.00 min Scan# 3803

Delta R.T. 0.12 min

Lab File: VN058304.D

Acq: 23 Sep 2019 19:35

Instrument :

MSVOA\_N

ClientSampleId :

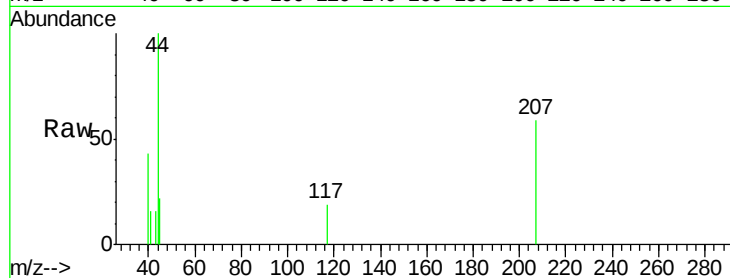
984-S-4-(19)ME

Tot Ion:117 Resp: 68

Ion Ratio Lower Upper

117 100

201 0.0 37.5 112.5#



Abundance Ion 116.80 (116.50 to 117.50): V

Ion 200.70 (200.40 to 201.40): V

14.00

200

150

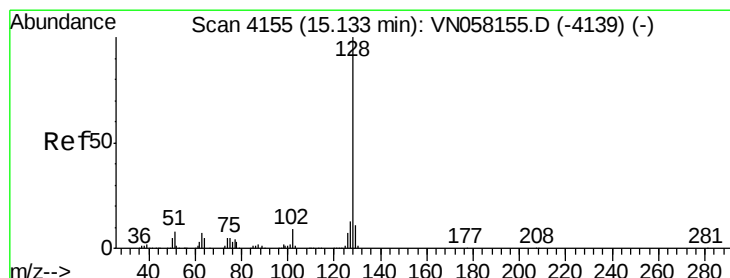
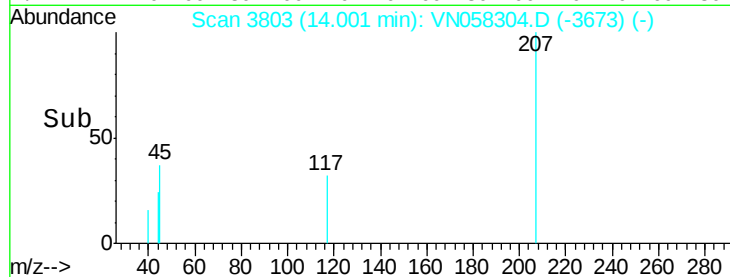
100

50

0

Time-->

13.99 14.00 14.01



#95

Naphthalene

Concen: 0.322 ug/l

RT: 15.14 min Scan# 4157

Delta R.T. 0.01 min

Lab File: VN058304.D

Acq: 23 Sep 2019 19:35

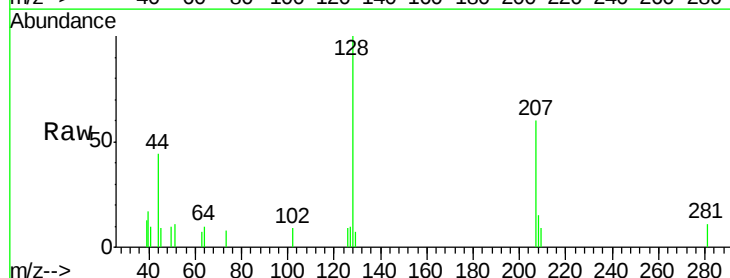
Tgt Ion:128 Resp: 4016

Ion Ratio Lower Upper

128 100

127 6.9 10.2 15.2#

129 4.5 8.6 12.8#



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

3000

2500

2000

1500

1000

500

0

Time-->

15.10 15.15

