

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN111219\  
 Data File : VN059180.D  
 Acq On : 12 Nov 2019 11:26  
 Operator : JC/SP  
 Sample : K5769-14  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Quant Time: Nov 13 05:36:46 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N110619W.M  
 Quant Title : SW846 8260  
 QLast Update : Thu Nov 07 04:00:41 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.64  | 168  | 414324   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.57  | 114  | 645757   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.40 | 117  | 563183   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.35 | 152  | 195048   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units   | Dev(Min) |
|-----------------------------|-------|------|----------|-------|---------|----------|
| 33) 1,2-Dichloroethane-d4   | 8.00  | 65   | 273025   | 53.61 | ug/l    | 0.00     |
| Spiked Amount               |       |      |          |       |         |          |
|                             |       |      | Recovery | =     | 107.22% |          |
| 35) Dibromofluoromethane    | 7.57  | 113  | 205572   | 53.32 | ug/l    | 0.00     |
| Spiked Amount               |       |      |          |       |         |          |
|                             |       |      | Recovery | =     | 106.64% |          |
| 50) Toluene-d8              | 10.08 | 98   | 783045   | 51.56 | ug/l    | 0.00     |
| Spiked Amount               |       |      |          |       |         |          |
|                             |       |      | Recovery | =     | 103.12% |          |
| 62) 4-Bromofluorobenzene    | 12.40 | 95   | 237620   | 43.39 | ug/l    | 0.00     |
| Spiked Amount               |       |      |          |       |         |          |
|                             |       |      | Recovery | =     | 86.78%  |          |

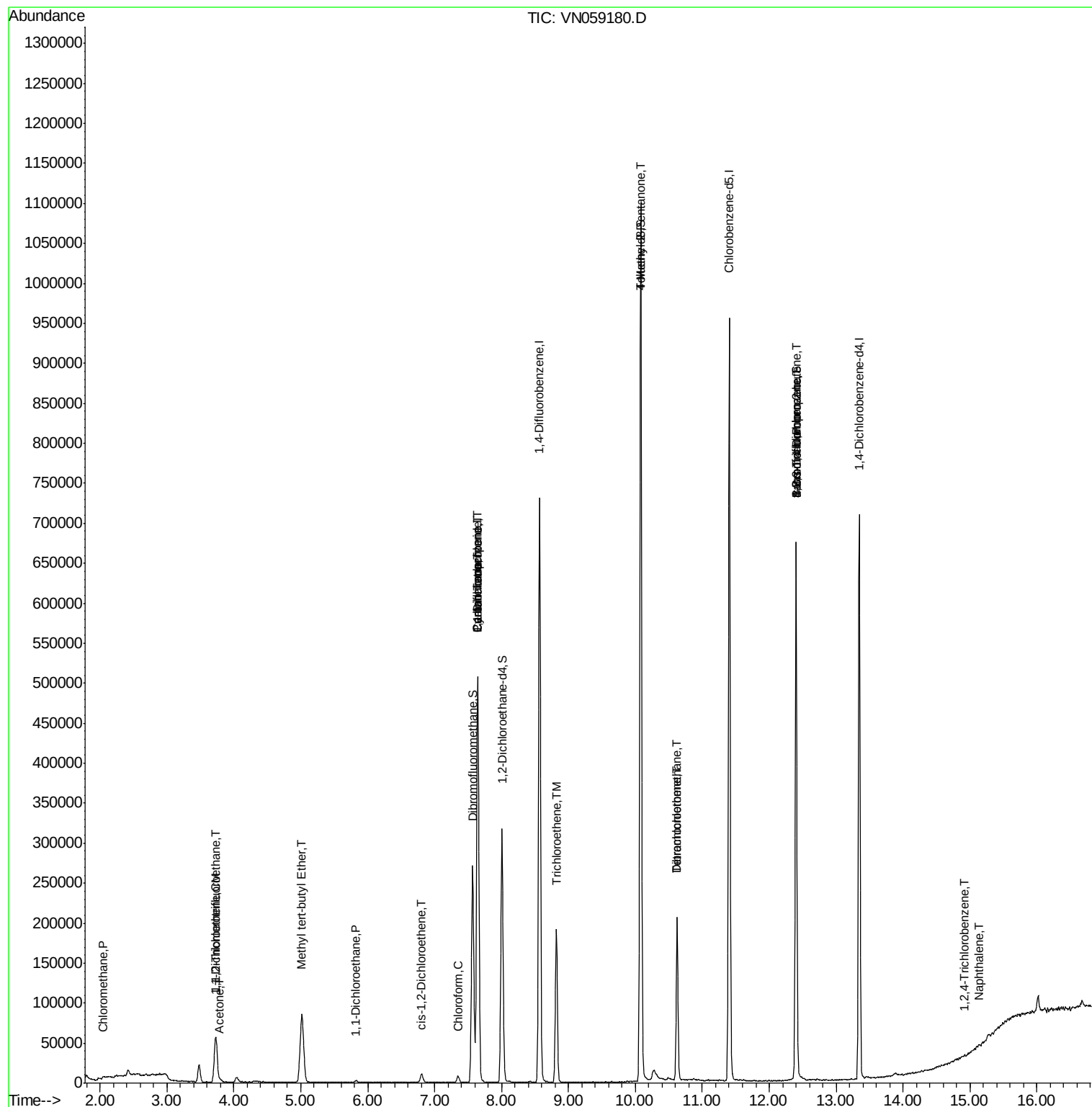
| Target Compounds               | R.T.  | QIon | Response | Conc   | Units  | Qvalue |
|--------------------------------|-------|------|----------|--------|--------|--------|
| 3) Chloromethane               | 2.04  | 50   | 1971     | 0.347  | ug/l # | 71     |
| 9) 1,1,2-Trichlorotrifluoroet  | 3.73  | 101  | 27710    | 6.984  | ug/l   | 99     |
| 12) 1,1-Dichloroethene         | 3.71  | 96   | 11274    | 2.917  | ug/l   | 94     |
| 16) Acetone                    | 3.79  | 43   | 5985     | 2.260  | ug/l   | 90     |
| 19) Methyl tert-butyl Ether    | 5.01  | 73   | 143500   | 10.784 | ug/l   | 100    |
| 24) 1,1-Dichloroethane         | 5.82  | 63   | 2273     | 0.271  | ug/l # | 85     |
| 27) cis-1,2-Dichloroethene     | 6.81  | 96   | 7066     | 1.468  | ug/l   | 85     |
| 30) Chloroform                 | 7.35  | 83   | 8438     | 1.050  | ug/l   | 96     |
| 31) Cyclohexane                | 7.65  | 56   | 9267     | 1.169  | ug/l # | 3      |
| 36) 1,1-Dichloropropene        | 7.64  | 75   | 32314    | 5.354  | ug/l # | 50     |
| 38) Carbon Tetrachloride       | 7.64  | 117  | 39338    | 6.548  | ug/l # | 17     |
| 44) Trichloroethene            | 8.82  | 130  | 71778    | 16.065 | ug/l   | 97     |
| 51) 4-Methyl-2-Pentanone       | 10.08 | 43   | 3625     | 0.598  | ug/l # | 1      |
| 60) Dibromochloromethane       | 10.62 | 129  | 45258    | 9.709  | ug/l # | 11     |
| 64) Tetrachloroethene          | 10.62 | 164  | 48613    | 12.694 | ug/l   | 98     |
| 71) Bromoform                  | 12.40 | 173  | 1412     | 0.441  | ug/l # | 1      |
| 76) 1,2,3-Trichloropropane     | 12.40 | 75   | 120065   | 27.038 | ug/l # | 100    |
| 81) trans-1,4-Dichloro-2-buten | 12.40 | 75   | 120065   | 71.415 | ug/l # | 13     |
| 93) 1,2,4-Trichlorobenzene     | 14.90 | 180  | 30       | 3.054  | ug/l # | 1      |
| 95) Naphthalene                | 15.13 | 128  | 758      | 3.115  | ug/l # | 70     |

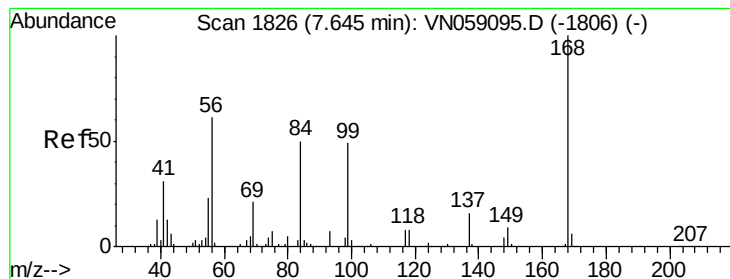
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Nov 13 05:36:46 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_N\METHODS\82N110619W.M  
Quant Title : SW846 8260  
QLast Update : Thu Nov 07 04:00:41 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.64 min Scan# 1826

Delta R.T. 0.00 min

Lab File: VN059180.D

Acq: 12 Nov 2019 11:26

Instrument :

MSVOA\_N

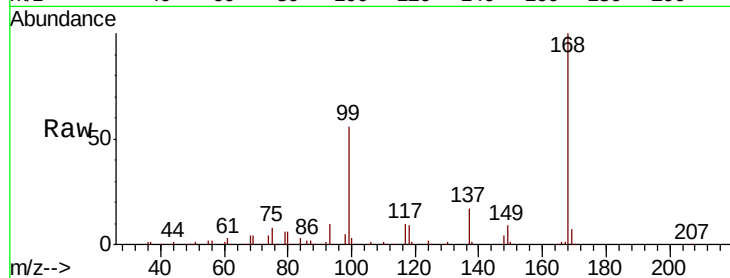
ClientSampleId :

Tot Ion:168 Resp: 414324

Ion Ratio Lower Upper

168 100

99 56.0 45.7 68.5



Abundance Ion 167.90 (167.60 to 168.60): VN059180.D (-1733) (-)

Ion 98.90 (98.60 to 99.60): VN059180.D (-1733) (-)

7.64

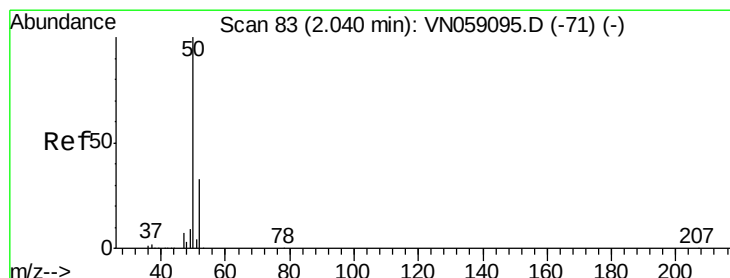
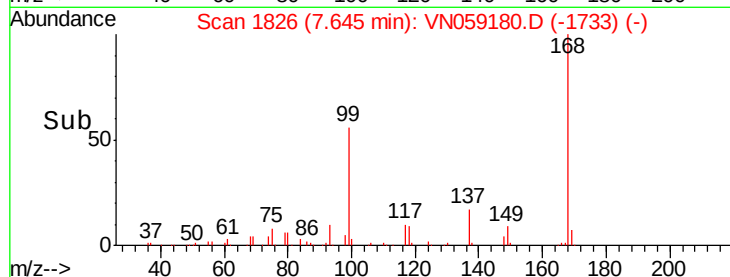
150000

100000

50000

0

Time--> 7.50 7.60 7.70 7.80



#3

Chloromethane

Concen: 0.347 ug/l

RT: 2.04 min Scan# 83

Delta R.T. 0.00 min

Lab File: VN059180.D

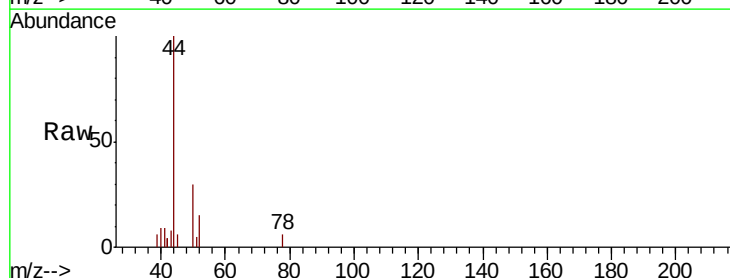
Acq: 12 Nov 2019 11:26

Tgt Ion: 50 Resp: 1971

Ion Ratio Lower Upper

50 100

52 49.0 26.0 39.0#



Abundance Ion 49.90 (49.60 to 50.60): VN059180.D (-1) (-)

Ion 51.90 (51.60 to 52.60): VN059180.D (-1) (-)

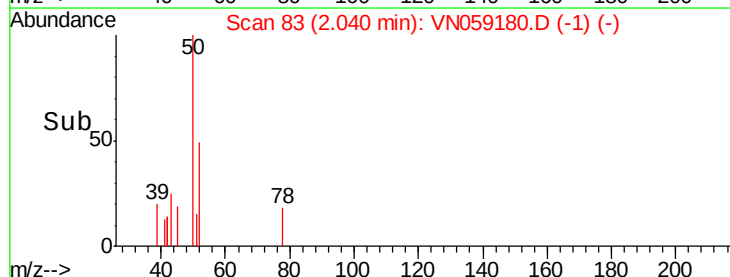
2.04

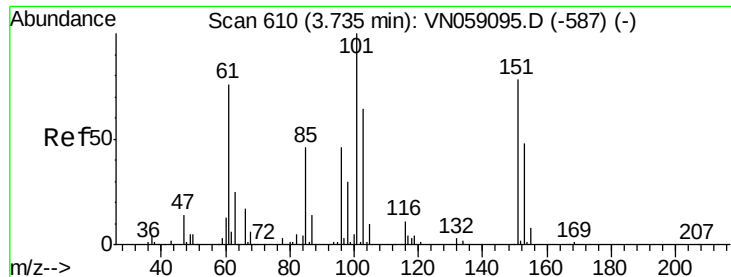
1000

500

0

Time--> 2.00 2.05





#9

1,1,2-Trichlorotrifluoroethane

Concen: 6.984 ug/l

RT: 3.73 min Scan# 610

Delta R.T. 0.00 min

Lab File: VN059180.D

Acq: 12 Nov 2019 11:26

Instrument :

MSVOA\_N

ClientSampled :

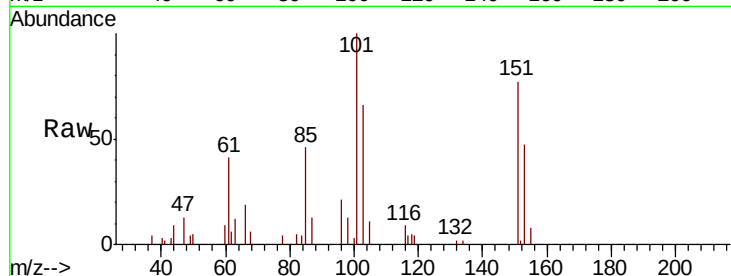
Tot Ion:101 Resp: 27710

Ion Ratio Lower Upper

101 100

85 45.6 35.5 53.3

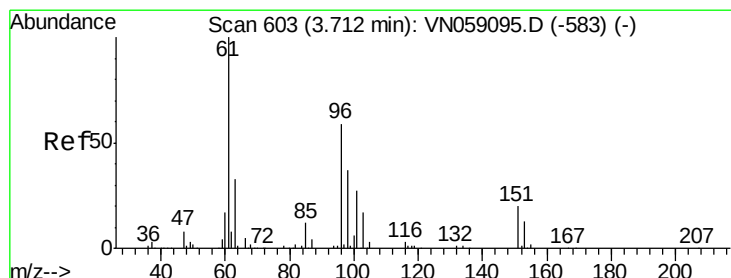
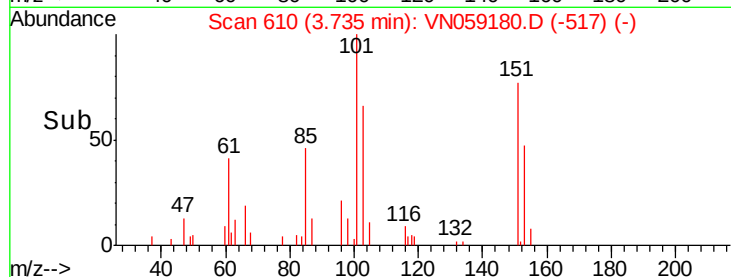
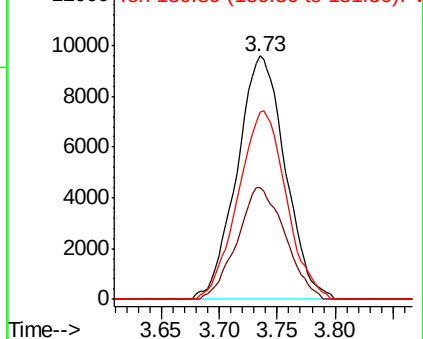
151 77.4 62.2 93.2



Abundance Ion 100.90 (100.60 to 101.60): V

Ion 84.90 (84.60 to 85.60): VN0

Ion 150.80 (150.50 to 151.50): V



#12

1,1-Dichloroethene

Concen: 2.917 ug/l

RT: 3.71 min Scan# 603

Delta R.T. 0.00 min

Lab File: VN059180.D

Acq: 12 Nov 2019 11:26

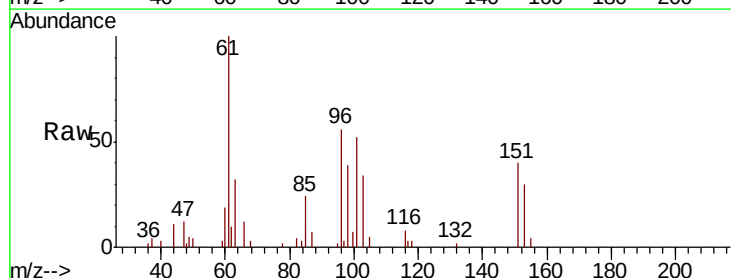
Tgt Ion: 96 Resp: 11274

Ion Ratio Lower Upper

96 100

61 177.9 136.5 204.7

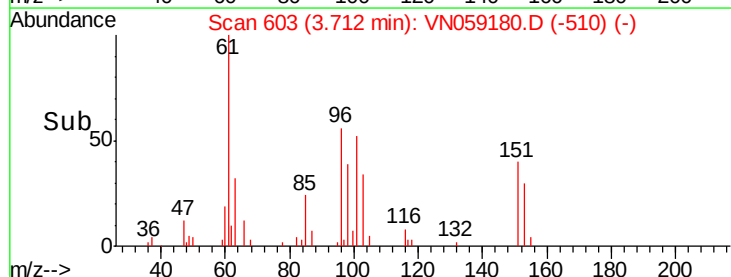
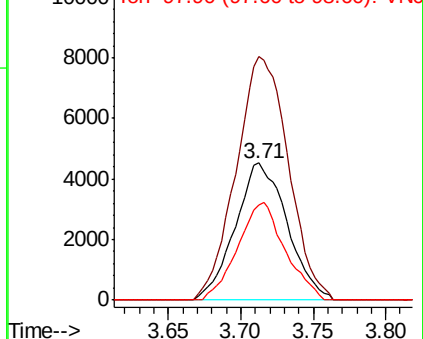
98 69.1 50.2 75.4

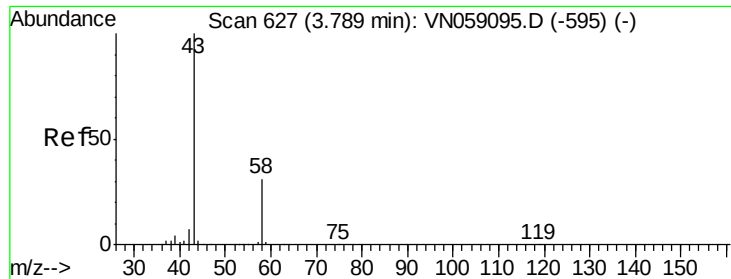


Abundance Ion 95.90 (95.60 to 96.60): VN0

Ion 60.90 (60.60 to 61.60): VN0

Ion 97.90 (97.60 to 98.60): VN0

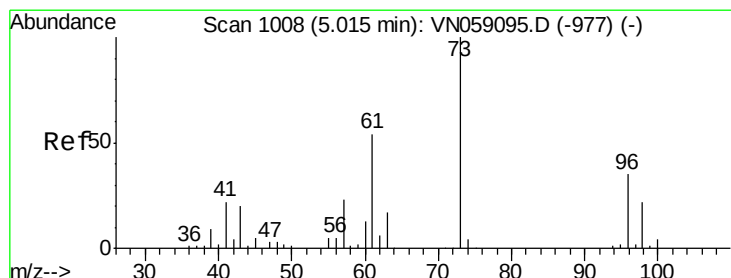
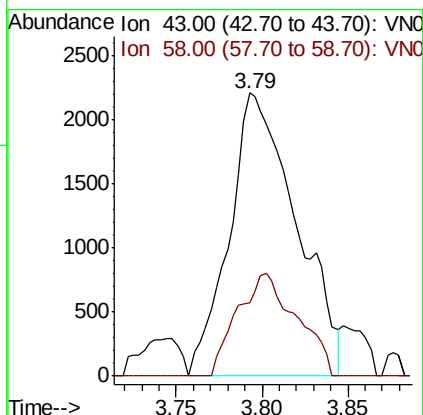
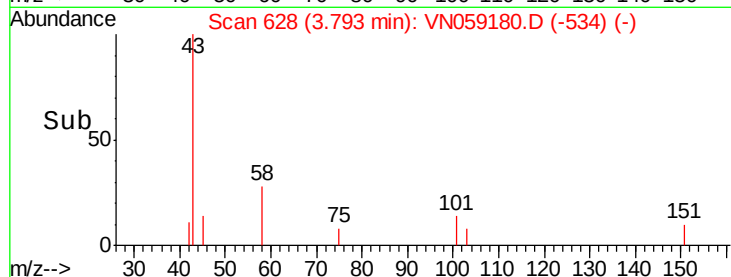
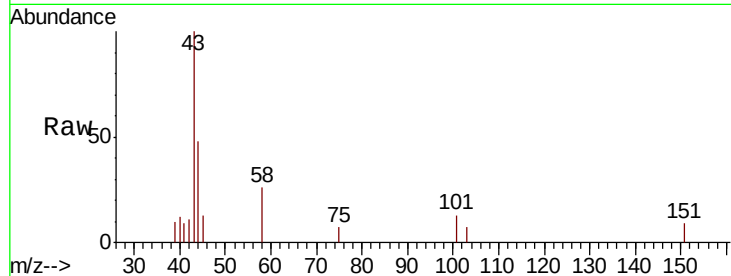




#16  
Acetone  
Concen: 2.260 ug/l  
RT: 3.79 min Scan# 628  
Delta R.T. 0.00 min  
Lab File: VN059180.D  
Acq: 12 Nov 2019 11:26

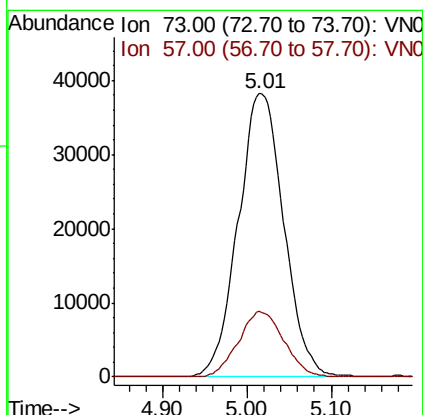
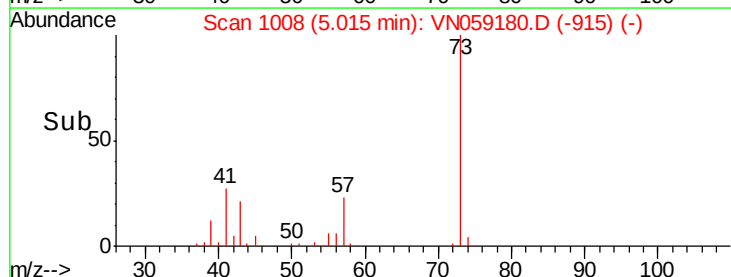
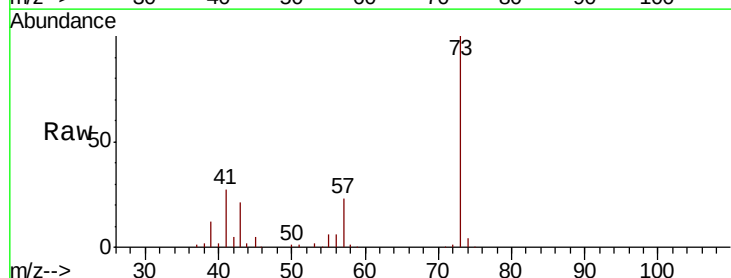
Instrument :  
MSVOA\_N  
ClientSampleId :

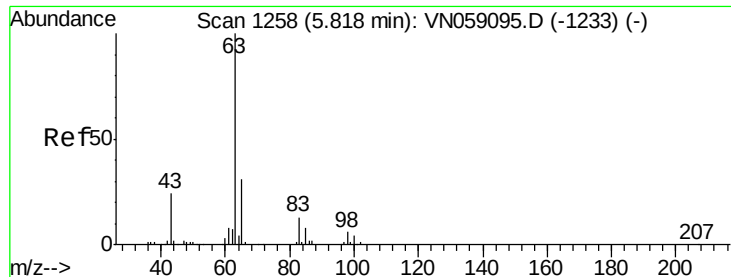
Tot Ion: 43 Resp: 5985  
Ion Ratio Lower Upper  
43 100  
58 25.8 24.9 37.3



#19  
Methyl tert-butyl Ether  
Concen: 10.784 ug/l  
RT: 5.01 min Scan# 1008  
Delta R.T. 0.00 min  
Lab File: VN059180.D  
Acq: 12 Nov 2019 11:26

Tgt Ion: 73 Resp: 143500  
Ion Ratio Lower Upper  
73 100  
57 23.1 18.4 27.6





#24

1,1-Dichloroethane

Concen: 0.271 ug/l

RT: 5.82 min Scan# 1258

Delta R.T. 0.00 min

Lab File: VN059180.D

Acq: 12 Nov 2019 11:26

Instrument :

MSVOA\_N

ClientSampleId :

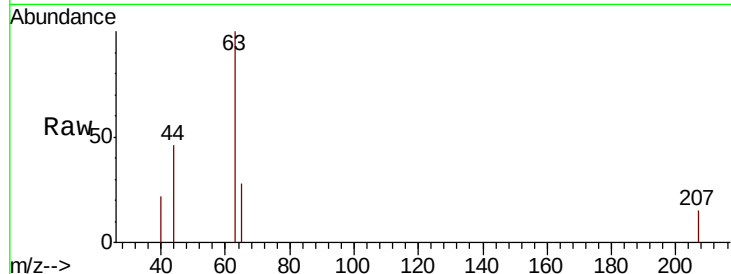
Tot Ion: 63 Resp: 2273

Ion Ratio Lower Upper

63 100

98 0.0 2.8 8.4#

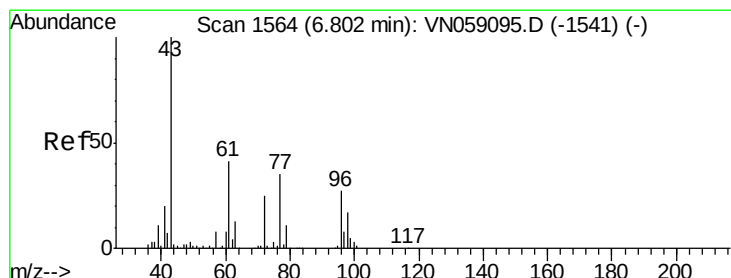
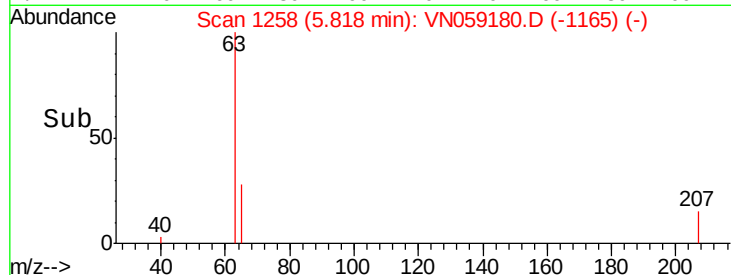
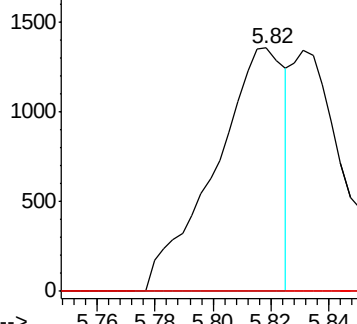
100 0.0 1.9 5.7#



Abundance Ion 62.90 (62.60 to 63.60): VN059180.D (-1165) (-)

Ion 97.90 (97.60 to 98.60): VN059180.D (-1165) (-)

Ion 99.90 (99.60 to 100.60): VN059180.D (-1165) (-)



#27

cis-1,2-Dichloroethene

Concen: 1.468 ug/l

RT: 6.81 min Scan# 1565

Delta R.T. 0.00 min

Lab File: VN059180.D

Acq: 12 Nov 2019 11:26

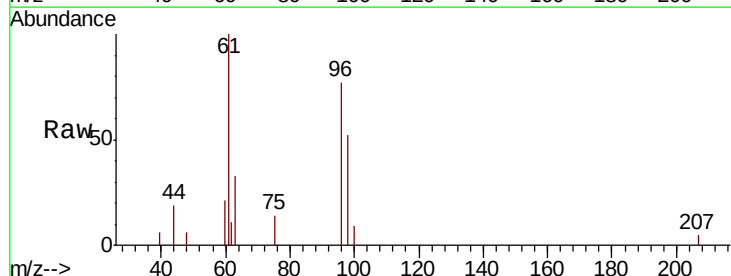
Tgt Ion: 96 Resp: 7066

Ion Ratio Lower Upper

96 100

61 132.6 0.0 311.6

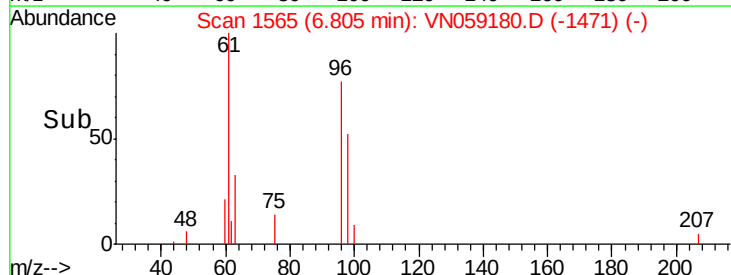
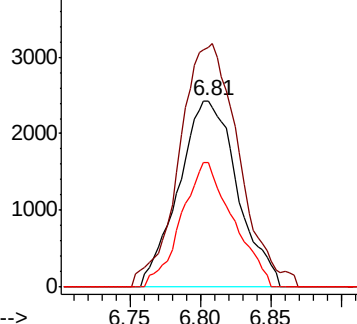
98 58.8 0.0 129.8

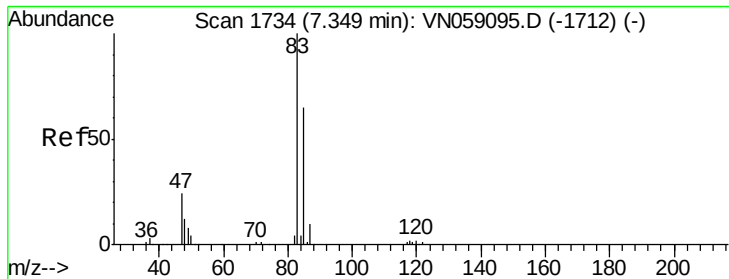


Abundance Ion 95.90 (95.60 to 96.60): VN059180.D (-1471) (-)

Ion 60.90 (60.60 to 61.60): VN059180.D (-1471) (-)

Ion 97.90 (97.60 to 98.60): VN059180.D (-1471) (-)

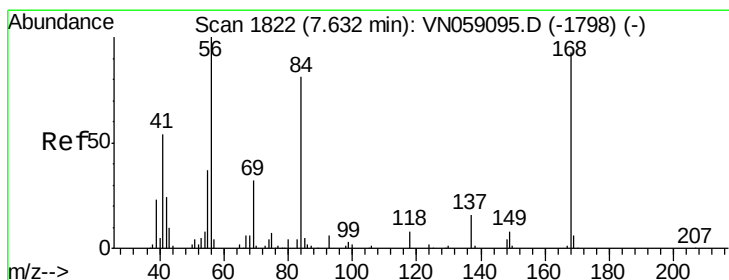
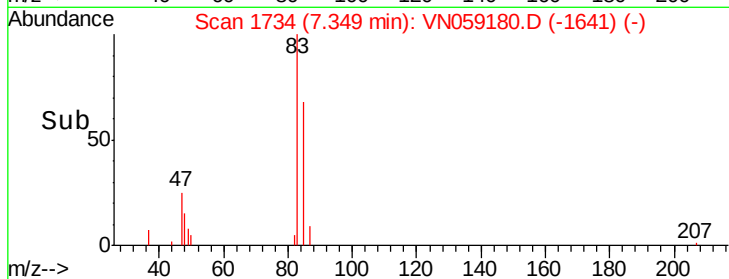
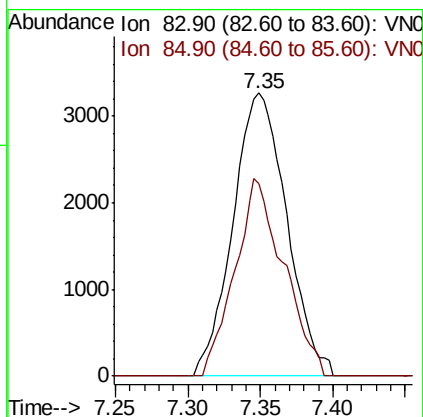
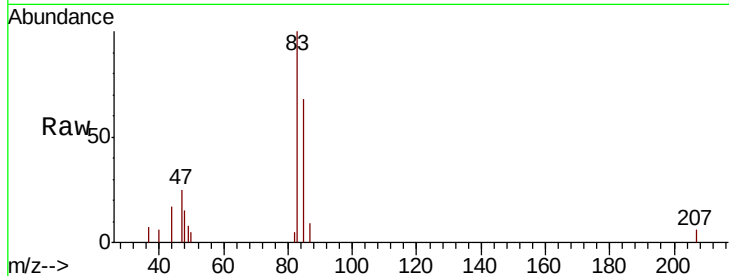




#30  
Chloroform  
Concen: 1.050 ug/l  
RT: 7.35 min Scan# 1734  
Delta R.T. 0.00 min  
Lab File: VN059180.D  
Acq: 12 Nov 2019 11:26

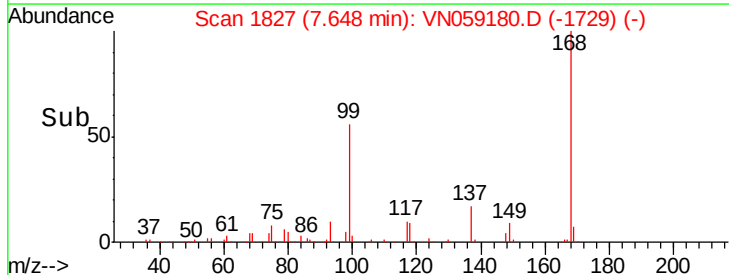
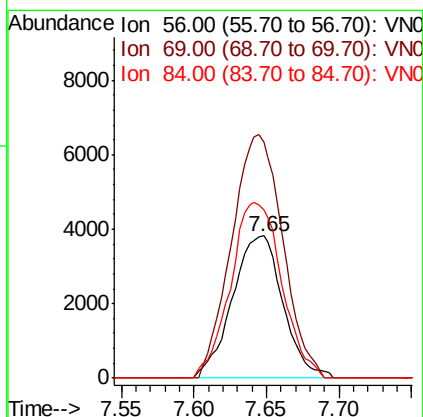
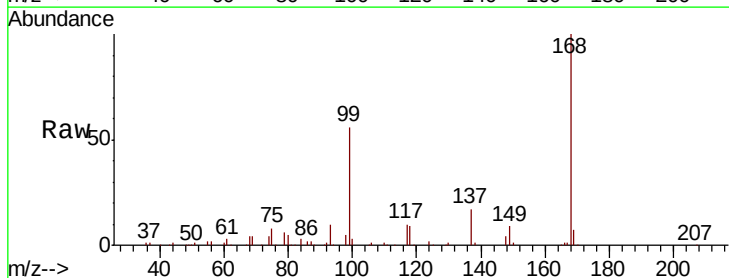
Instrument :  
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ClientSampleId :

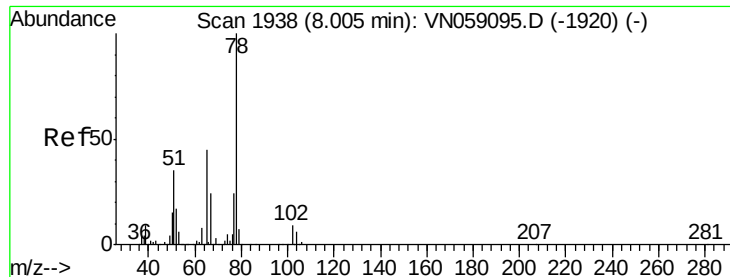
Tot Ion: 83 Resp: 8438  
Ion Ratio Lower Upper  
83 100  
85 68.1 51.8 77.8



#31  
Cyclohexane  
Concen: 1.169 ug/l  
RT: 7.65 min Scan# 1827  
Delta R.T. 0.02 min  
Lab File: VN059180.D  
Acq: 12 Nov 2019 11:26

Tgt Ion: 56 Resp: 9267  
Ion Ratio Lower Upper  
56 100  
69 165.3 25.8 38.8#  
84 118.1 65.0 97.4#

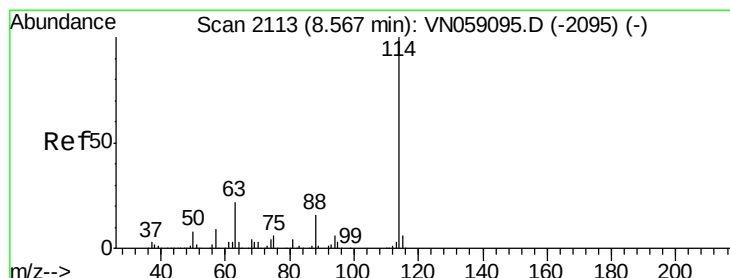
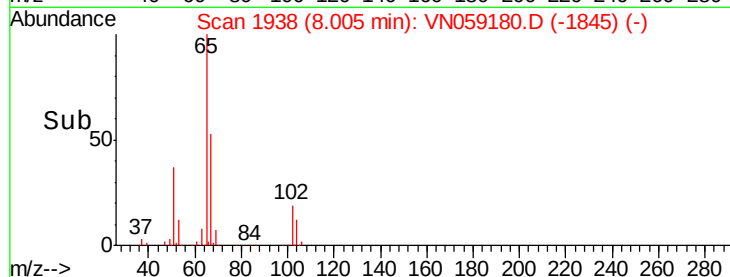
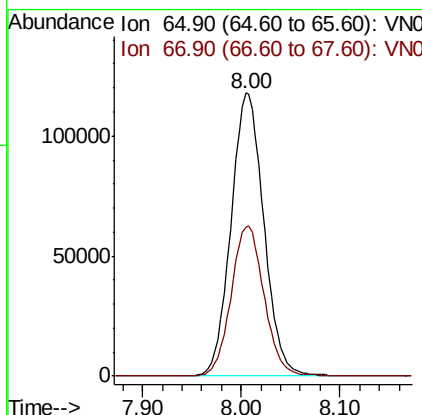
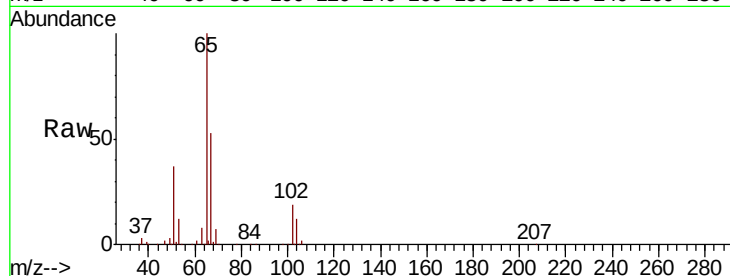




#33  
 1,2-Dichloroethane-d4  
 Concen: 53.607 ug/l  
 RT: 8.00 min Scan# 1938  
 Delta R.T. 0.00 min  
 Lab File: VN059180.D  
 Acq: 12 Nov 2019 11:26

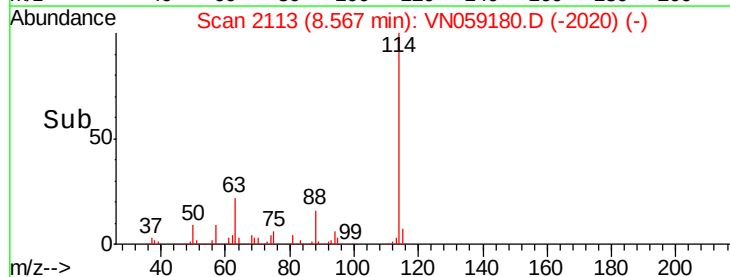
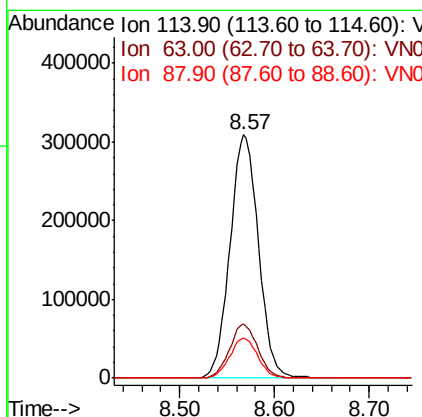
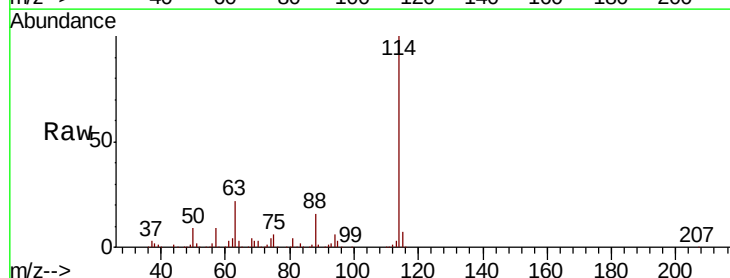
Instrument :  
 MSVOA\_N  
 ClientSampled :

Tot Ion: 65 Resp: 273025  
 Ion Ratio Lower Upper  
 65 100  
 67 53.2 0.0 107.4

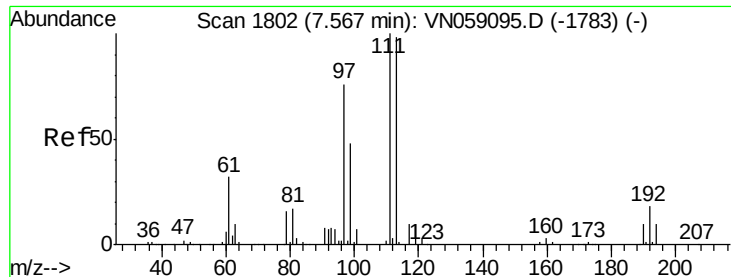


#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.57 min Scan# 2113  
 Delta R.T. 0.00 min  
 Lab File: VN059180.D  
 Acq: 12 Nov 2019 11:26

Tgt Ion: 114 Resp: 645757  
 Ion Ratio Lower Upper  
 114 100  
 63 22.0 0.0 43.4  
 88 16.3 0.0 32.2



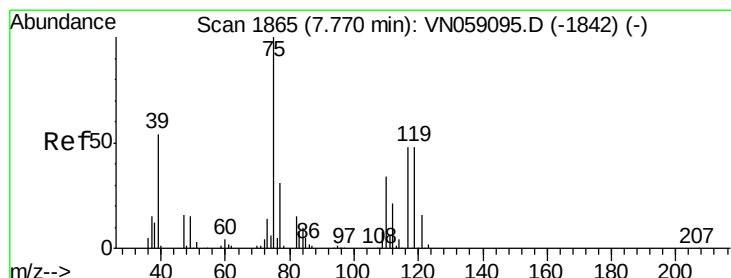
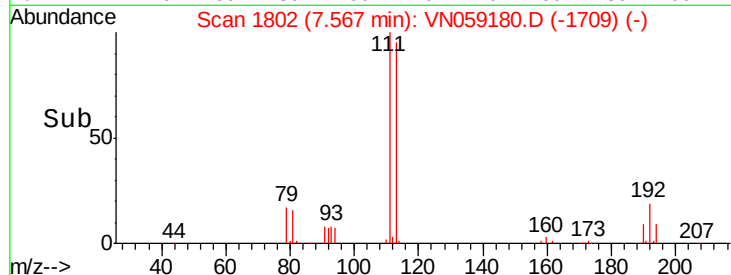
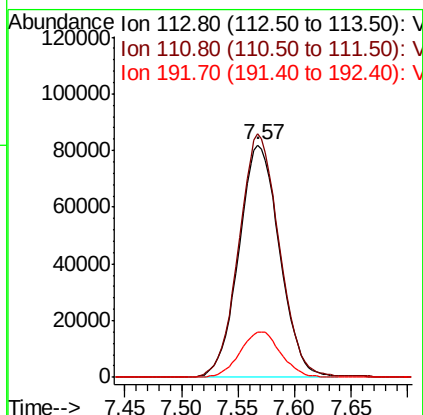
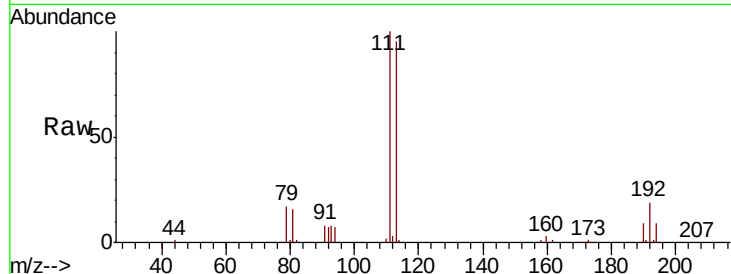




#35  
 Dibromofluoromethane  
 Concen: 53.315 ug/l  
 RT: 7.57 min Scan# 1802  
 Delta R.T. 0.00 min  
 Lab File: VN059180.D  
 Acq: 12 Nov 2019 11:26

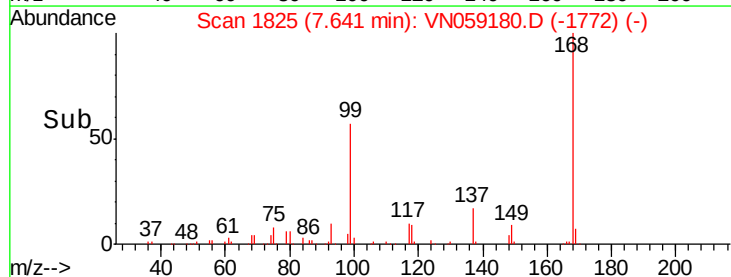
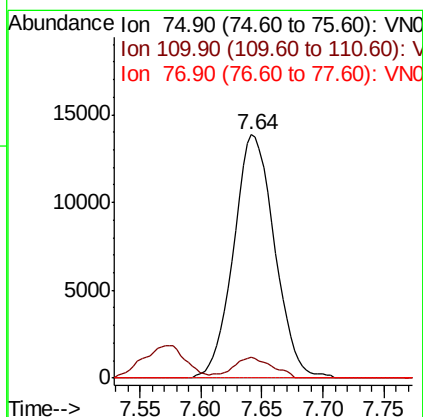
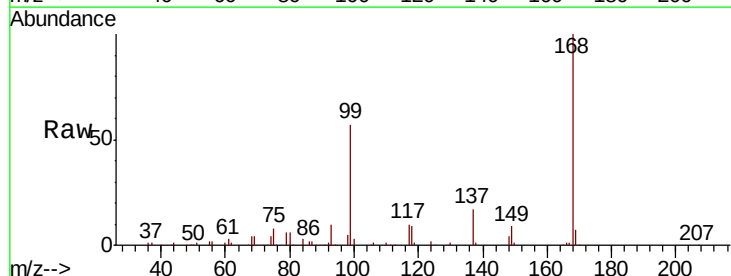
Instrument :  
 MSVOA\_N  
 ClientSampled :

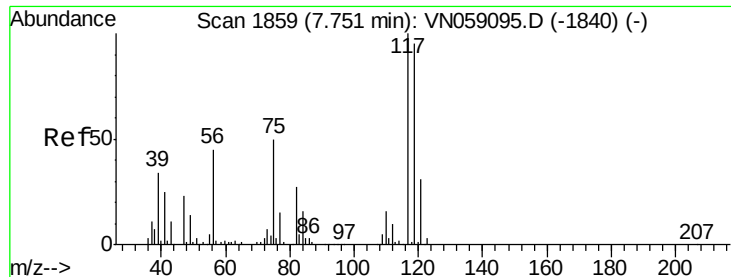
Tot Ion:113 Resp: 205572  
 Ion Ratio Lower Upper  
 113 100  
 111 104.3 82.8 124.2  
 192 19.6 16.1 24.1



#36  
 1,1-Dichloropropene  
 Concen: 5.354 ug/l  
 RT: 7.64 min Scan# 1825  
 Delta R.T. -0.13 min  
 Lab File: VN059180.D  
 Acq: 12 Nov 2019 11:26

Tgt Ion: 75 Resp: 32314  
 Ion Ratio Lower Upper  
 75 100  
 110 8.2 17.1 51.2#  
 77 0.0 24.8 37.2#





#38

Carbon Tetrachloride

Concen: 6.548 ug/l

RT: 7.64 min Scan# 1826

Delta R.T. -0.11 min

Lab File: VN059180.D

Acq: 12 Nov 2019 11:26

Instrument :

MSVOA\_N

ClientSampled :

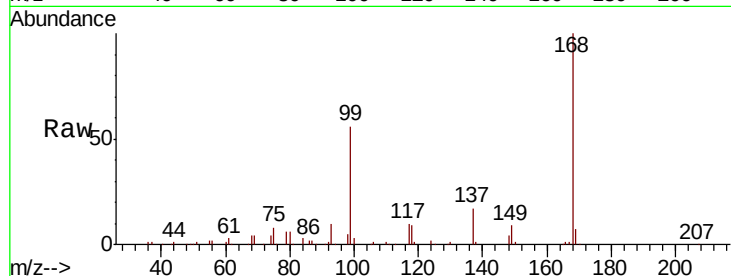
Tot Ion:117 Resp: 39338

Ion Ratio Lower Upper

117 100

119 5.7 75.6 113.4#

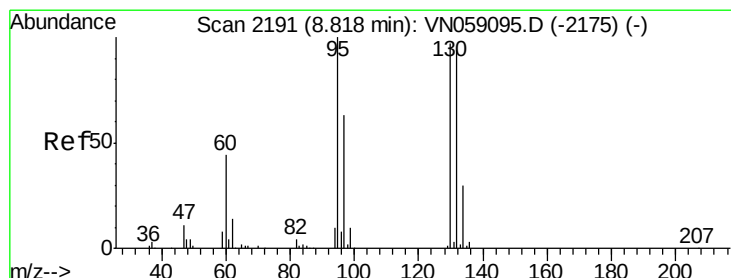
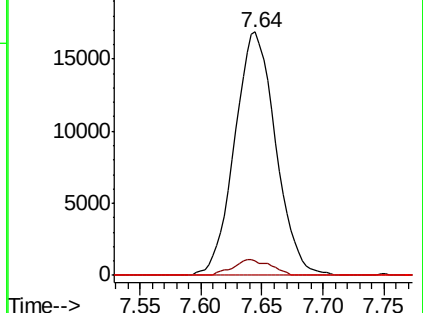
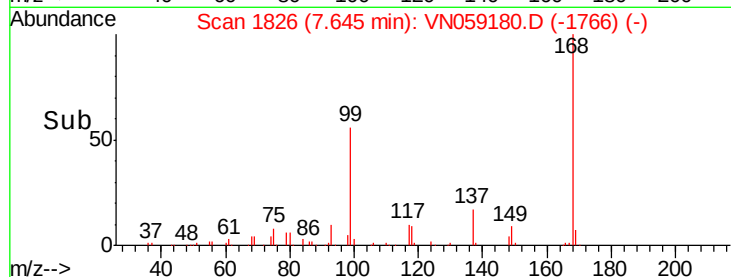
121 0.0 24.6 36.8#



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



#44

Trichloroethene

Concen: 16.065 ug/l

RT: 8.82 min Scan# 2191

Delta R.T. 0.00 min

Lab File: VN059180.D

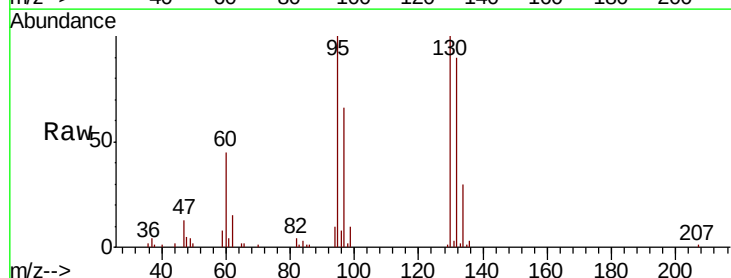
Acq: 12 Nov 2019 11:26

Tgt Ion:130 Resp: 71778

Ion Ratio Lower Upper

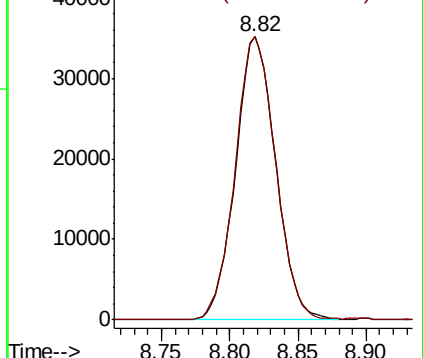
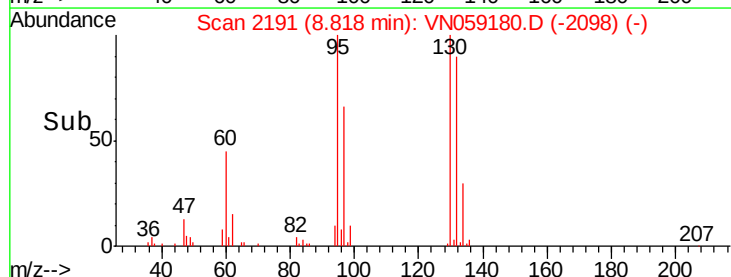
130 100

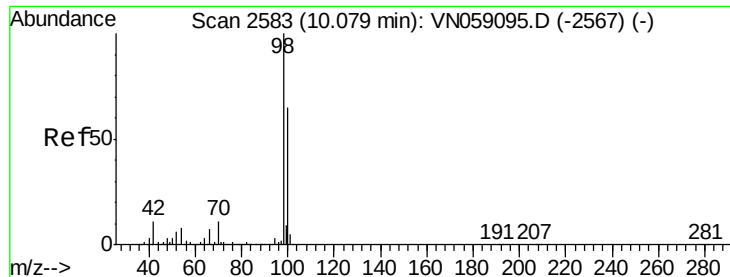
95 100.0 0.0 206.4



Abundance Ion 129.80 (129.50 to 130.50): V

Ion 94.90 (94.60 to 95.60): VN0





#50

Toluene-d8

Concen: 51.558 ug/l

RT: 10.08 min Scan# 2583

Delta R.T. 0.00 min

Lab File: VN059180.D

Acq: 12 Nov 2019 11:26

Instrument :

MSVOA\_N

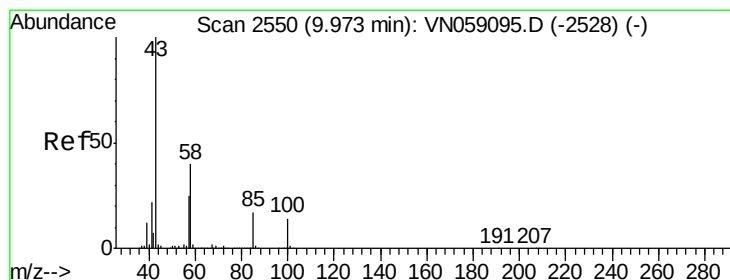
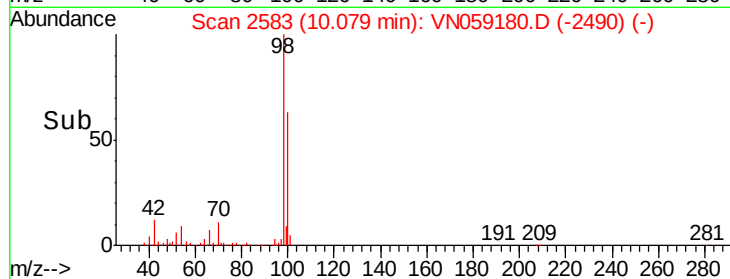
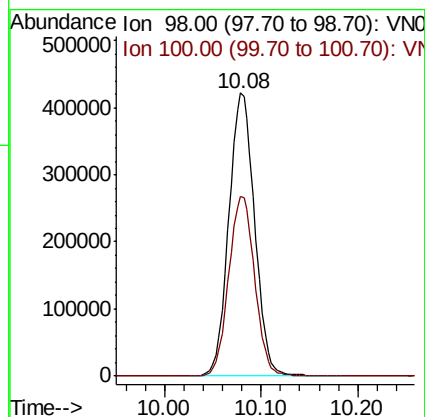
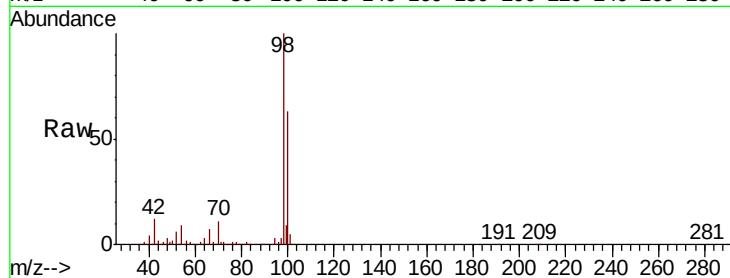
ClientSampleId :

Tot Ion: 98 Resp: 783045

Ion Ratio Lower Upper

98 100

100 64.0 52.2 78.2



#51

4-Methyl-2-Pentanone

Concen: 0.598 ug/l

RT: 10.08 min Scan# 2583

Delta R.T. 0.11 min

Lab File: VN059180.D

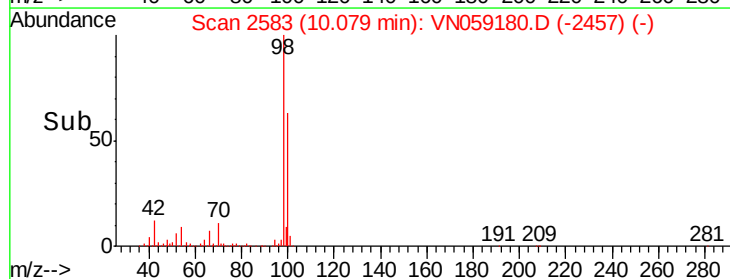
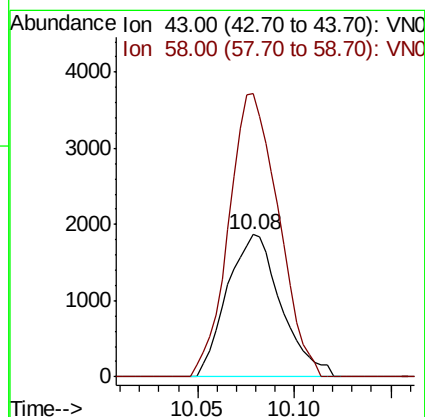
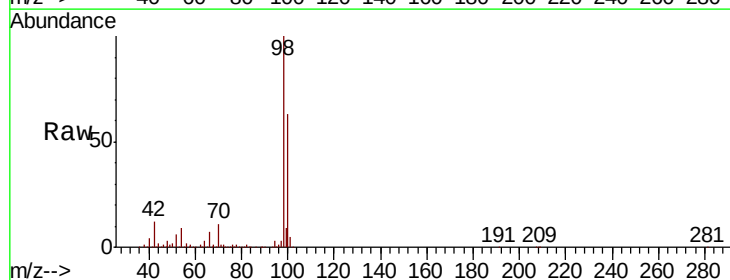
Acq: 12 Nov 2019 11:26

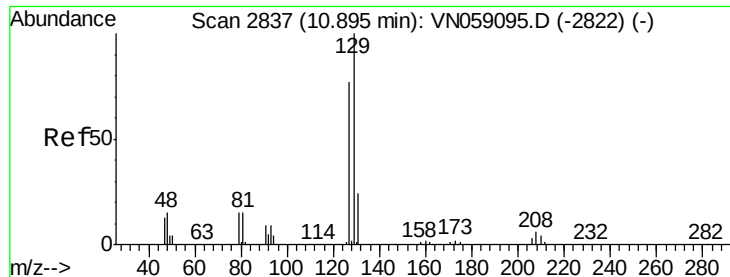
Tgt Ion: 43 Resp: 3625

Ion Ratio Lower Upper

43 100

58 182.9 31.5 47.3#

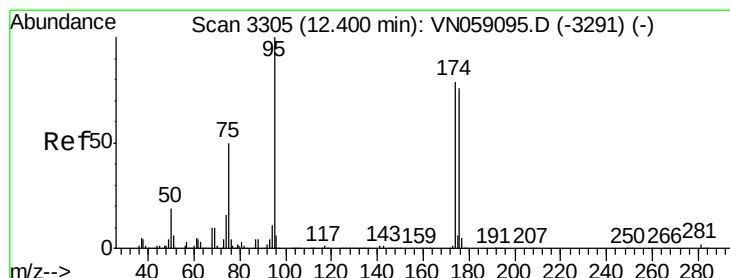
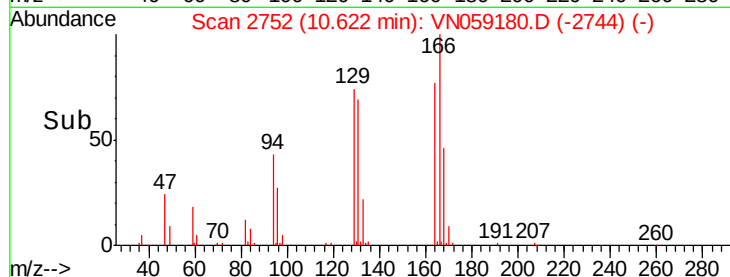
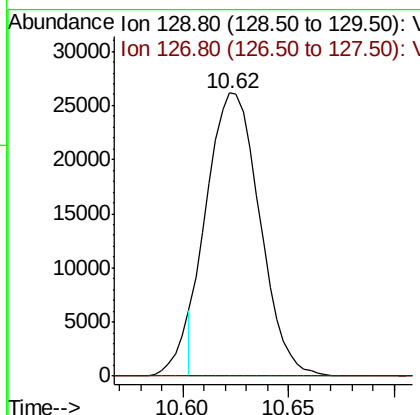
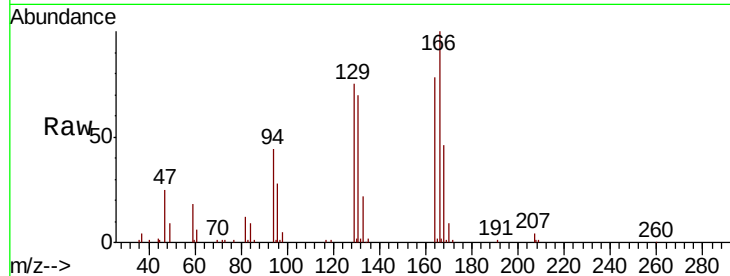




#60  
 Dibromochloromethane  
 Concen: 9.709 ug/l  
 RT: 10.62 min Scan# 2752  
 Delta R.T. -0.27 min  
 Lab File: VN059180.D  
 Acq: 12 Nov 2019 11:26

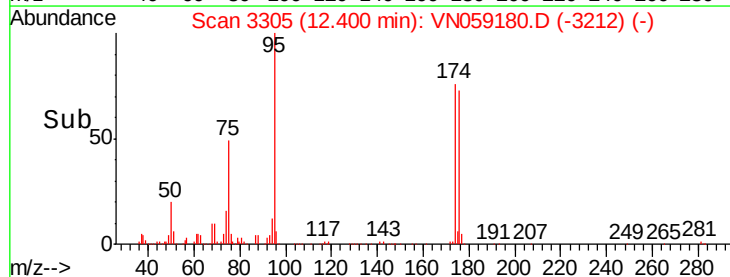
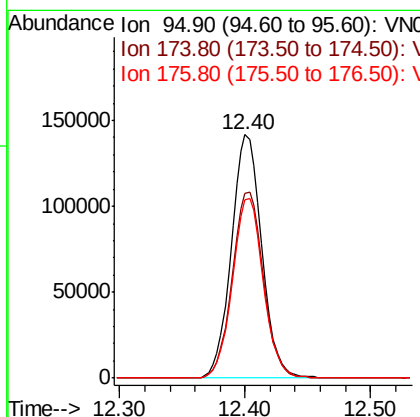
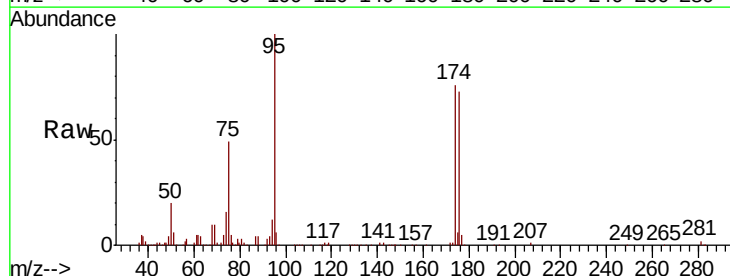
Instrument :  
 MSVOA\_N  
 ClientSampled :

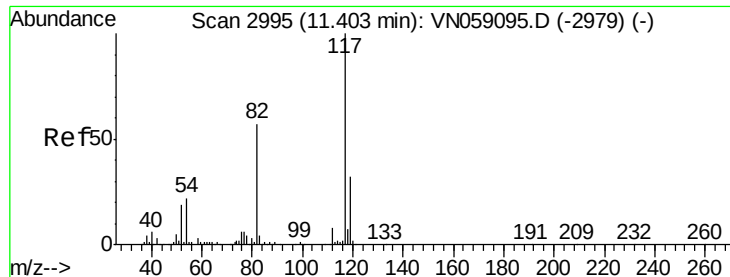
Tot Ion:129 Resp: 45258  
 Ion Ratio Lower Upper  
 129 100  
 127 0.0 38.6 115.8#



#62  
 4-Bromofluorobenzene  
 Concen: 43.392 ug/l  
 RT: 12.40 min Scan# 3305  
 Delta R.T. 0.00 min  
 Lab File: VN059180.D  
 Acq: 12 Nov 2019 11:26

Tgt Ion: 95 Resp: 237620  
 Ion Ratio Lower Upper  
 95 100  
 174 78.6 0.0 158.2  
 176 75.3 0.0 151.8

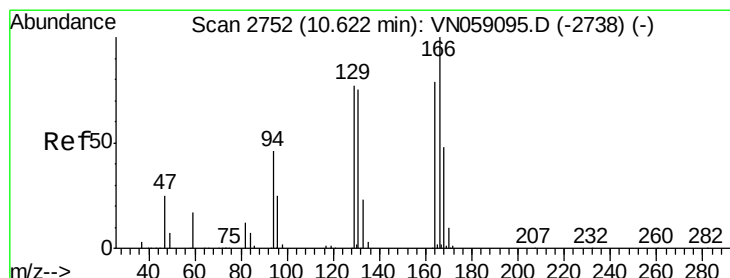
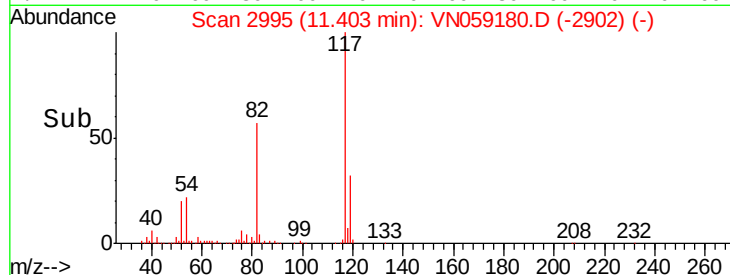
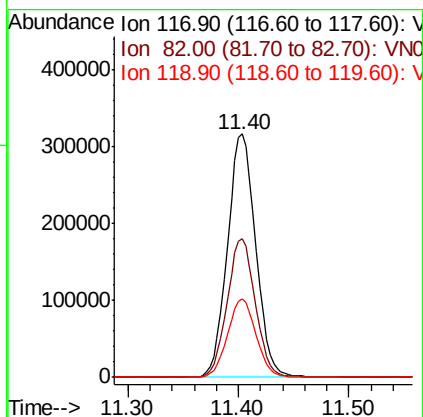
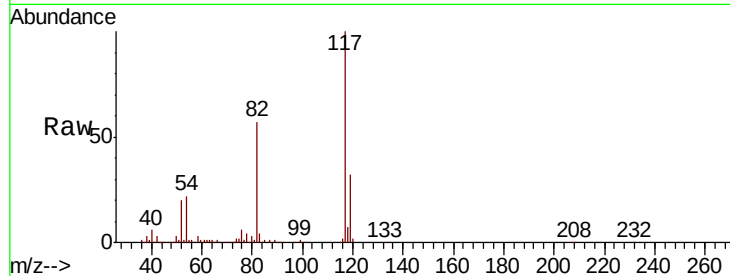




#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.40 min Scan# 2995  
Delta R.T. 0.00 min  
Lab File: VN059180.D  
Acq: 12 Nov 2019 11:26

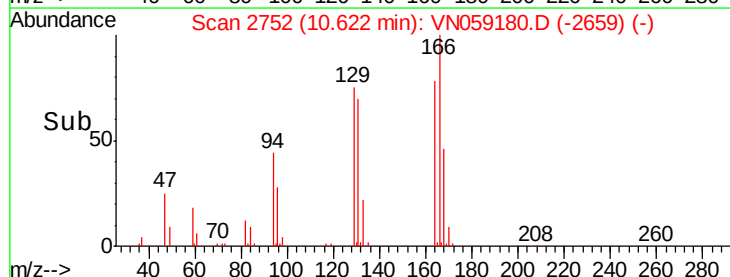
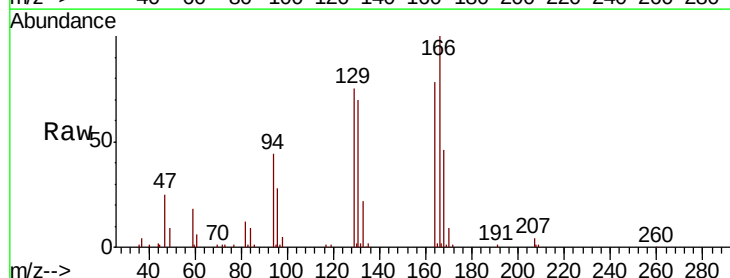
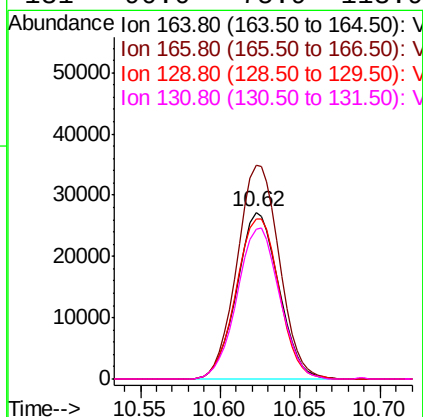
Instrument :  
MSVOA\_N  
ClientSampleId :

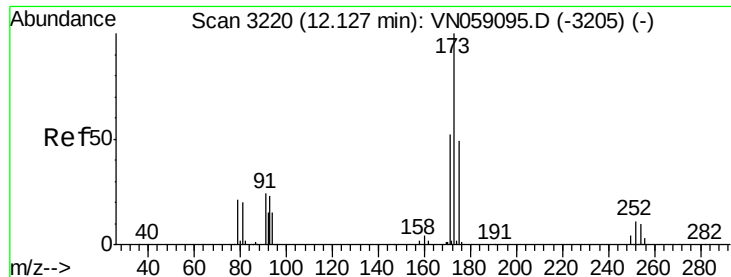
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 56.9  | 45.8  | 68.8  |
| 119     | 32.0  | 25.8  | 38.6  |



#64  
Tetrachloroethene  
Concen: 12.694 ug/l  
RT: 10.62 min Scan# 2752  
Delta R.T. 0.00 min  
Lab File: VN059180.D  
Acq: 12 Nov 2019 11:26

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 164     | 100   |       |       |
| 166     | 128.0 | 101.5 | 152.3 |
| 129     | 96.0  | 78.3  | 117.5 |
| 131     | 90.0  | 75.9  | 113.9 |





#71

Bromoform

Concen: 0.441 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. 0.28 min

Lab File: VN059180.D

Acq: 12 Nov 2019 11:26

Instrument :

MSVOA\_N

ClientSampled :

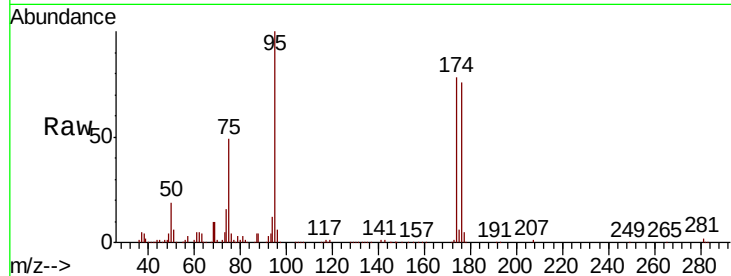
Tot Ion:173 Resp: 1412

Ion Ratio Lower Upper

173 100

175 844.3 24.2 72.6#

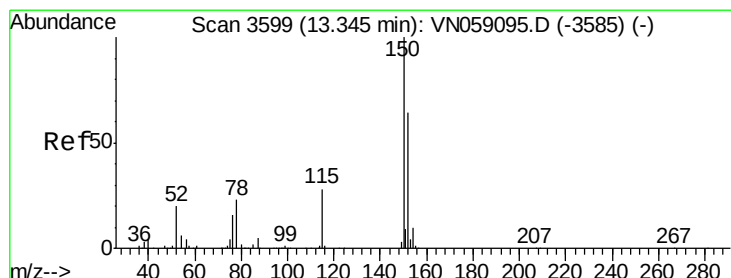
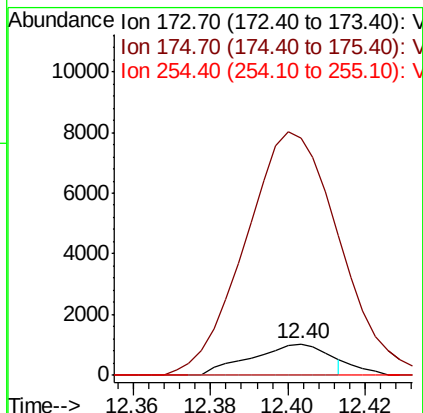
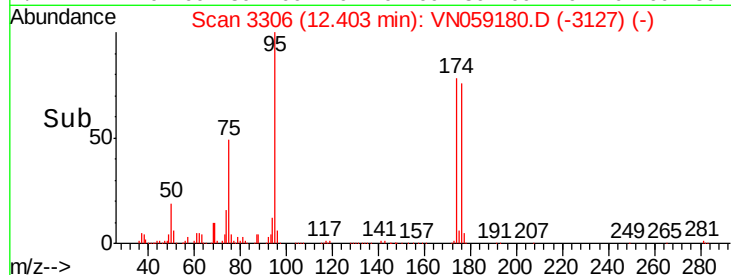
254 0.0 0.1 0.1#



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# 3599

Delta R.T. 0.00 min

Lab File: VN059180.D

Acq: 12 Nov 2019 11:26

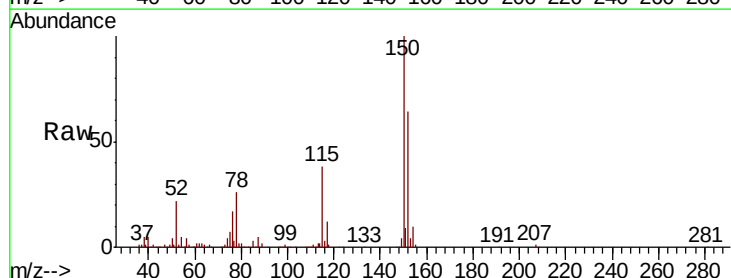
Tgt Ion:152 Resp: 195048

Ion Ratio Lower Upper

152 100

115 59.5 29.4 88.2

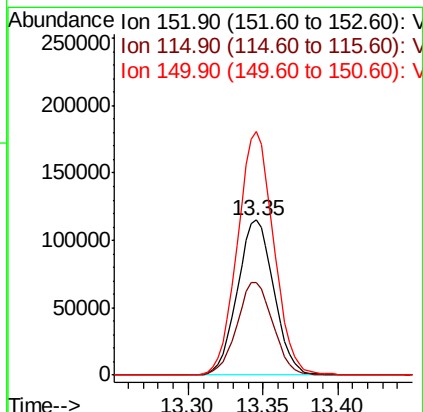
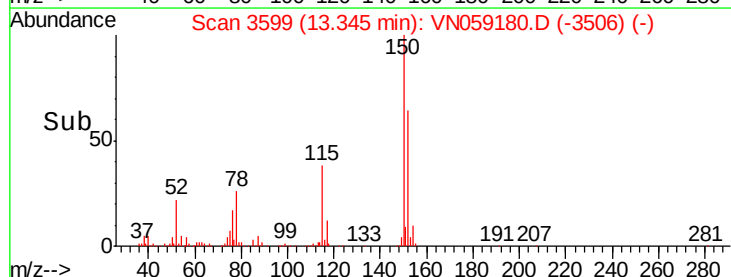
150 156.2 0.0 345.8

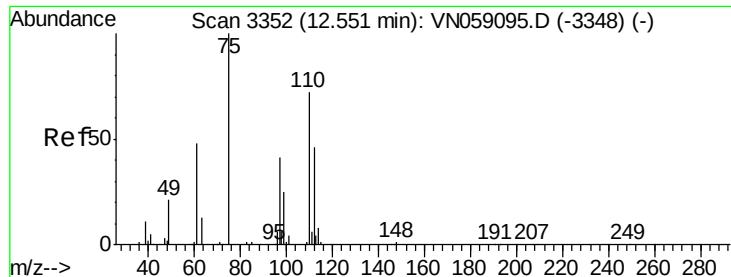


Abundance Ion 151.90 (151.60 to 152.60): V

Ion 114.90 (114.60 to 115.60): V

Ion 149.90 (149.60 to 150.60): V





#76

1,2,3-Trichloropropane

Concen: 27.038 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. -0.15 min

Lab File: VN059180.D

Acq: 12 Nov 2019 11:26

Instrument :

MSVOA\_N

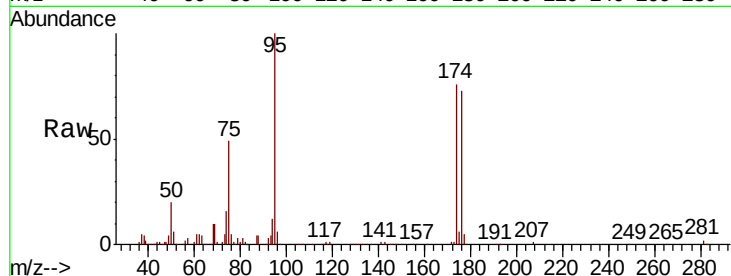
ClientSampleId :

Tot Ion: 75 Resp: 120065

Ion Ratio Lower Upper

75 100

77 1.6 0.0 0.0#



Abundance Ion 74.90 (74.60 to 75.60): VN0

Ion 77.00 (76.70 to 77.70): VN0

12.40

80000

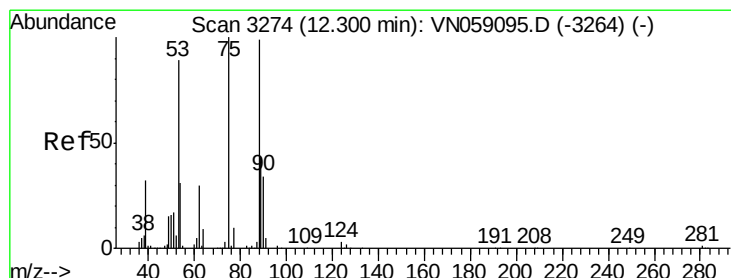
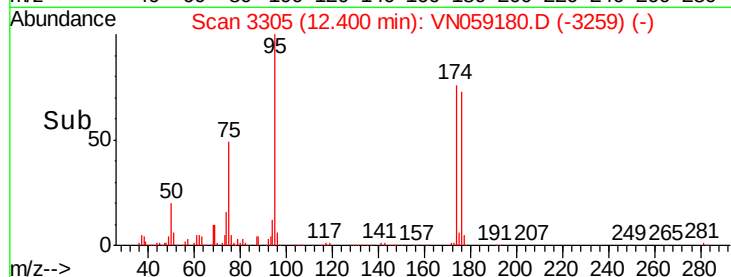
60000

40000

20000

0

Time--> 12.30 12.40 12.50



#81

trans-1,4-Dichloro-2-butene

Concen: 71.415 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. 0.10 min

Lab File: VN059180.D

Acq: 12 Nov 2019 11:26

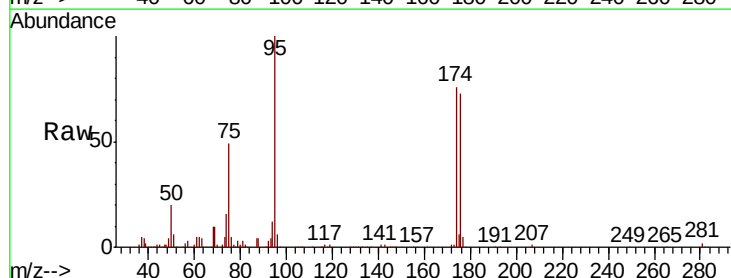
Tgt Ion: 75 Resp: 120065

Ion Ratio Lower Upper

75 100

53 0.0 72.2 108.2#

89 0.0 35.8 53.8#



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

12.40

80000

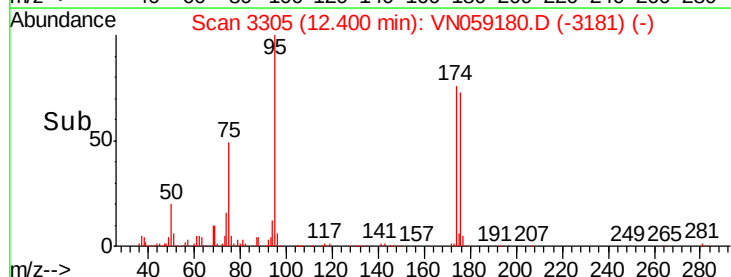
60000

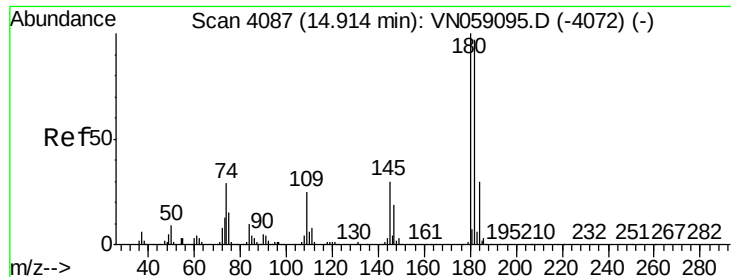
40000

20000

0

Time--> 12.30 12.40 12.50

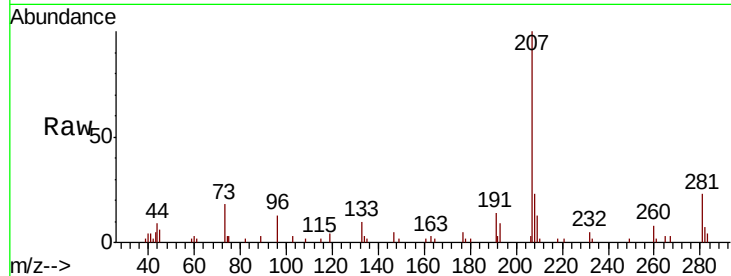




#93  
1,2,4-Trichlorobenzene  
Concen: 3.054 ug/l  
RT: 14.90 min Scan# 4084  
Delta R.T. -0.01 min  
Lab File: VN059180.D  
Acq: 12 Nov 2019 11:26

Instrument :  
MSVOA\_N  
ClientSampleId :

| Tot Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 180     | 100   |       |        |
| 182     | 366.7 | 48.1  | 144.3# |
| 145     | 100.0 | 15.1  | 45.3#  |

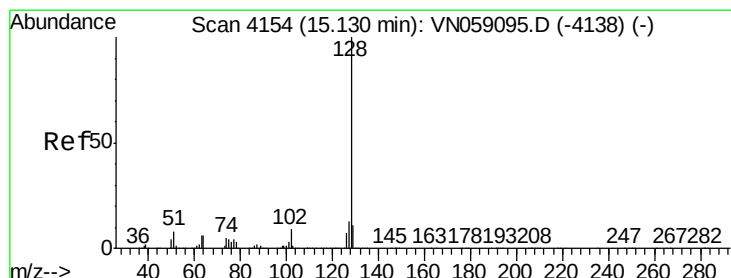
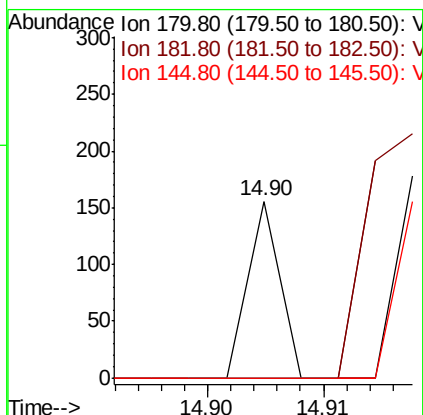
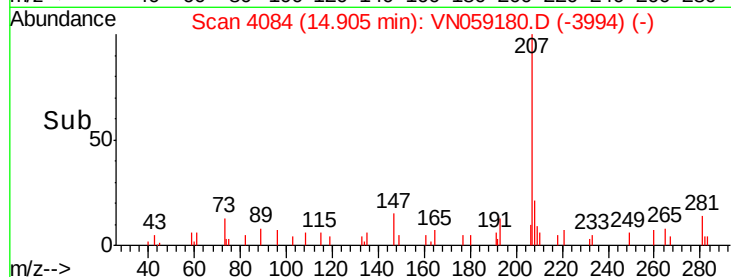


Abundance

Ion 179.80 (179.50 to 180.50): V

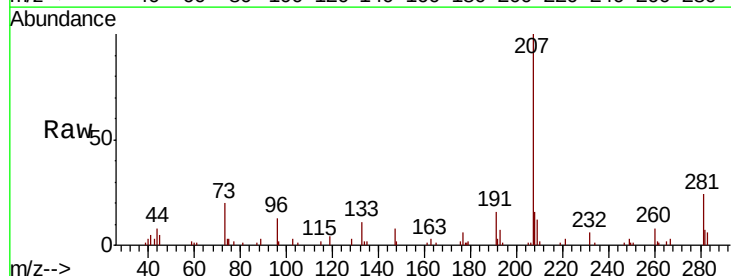
Ion 181.80 (181.50 to 182.50): V

Ion 144.80 (144.50 to 145.50): V



#95  
Naphthalene  
Concen: 3.115 ug/l  
RT: 15.13 min Scan# 4155  
Delta R.T. 0.00 min  
Lab File: VN059180.D  
Acq: 12 Nov 2019 11:26

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 127     | 0.0   | 10.2  | 15.2# |
| 129     | 0.0   | 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

