

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN053019\  
 Data File : VN055899.D  
 Acq On : 30 May 2019 14:46  
 Operator : JC/SP  
 Sample : VN0530WBL02  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 13 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Quant Time: May 31 04:49:11 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N052219W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Thu May 23 05:54:54 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.19  | 128  | 50358    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.58  | 114  | 270687   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.41 | 117  | 211758   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 8.02   | 65    | 100993   | 30.68    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 102.27% |
| 60) 4-Bromofluorobenzene  | 12.40  | 95    | 74676    | 22.67    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 75.57%  |
| 63) Toluene-d8            | 10.09  | 98    | 308780   | 31.91    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 106.37% |

## Target Compounds

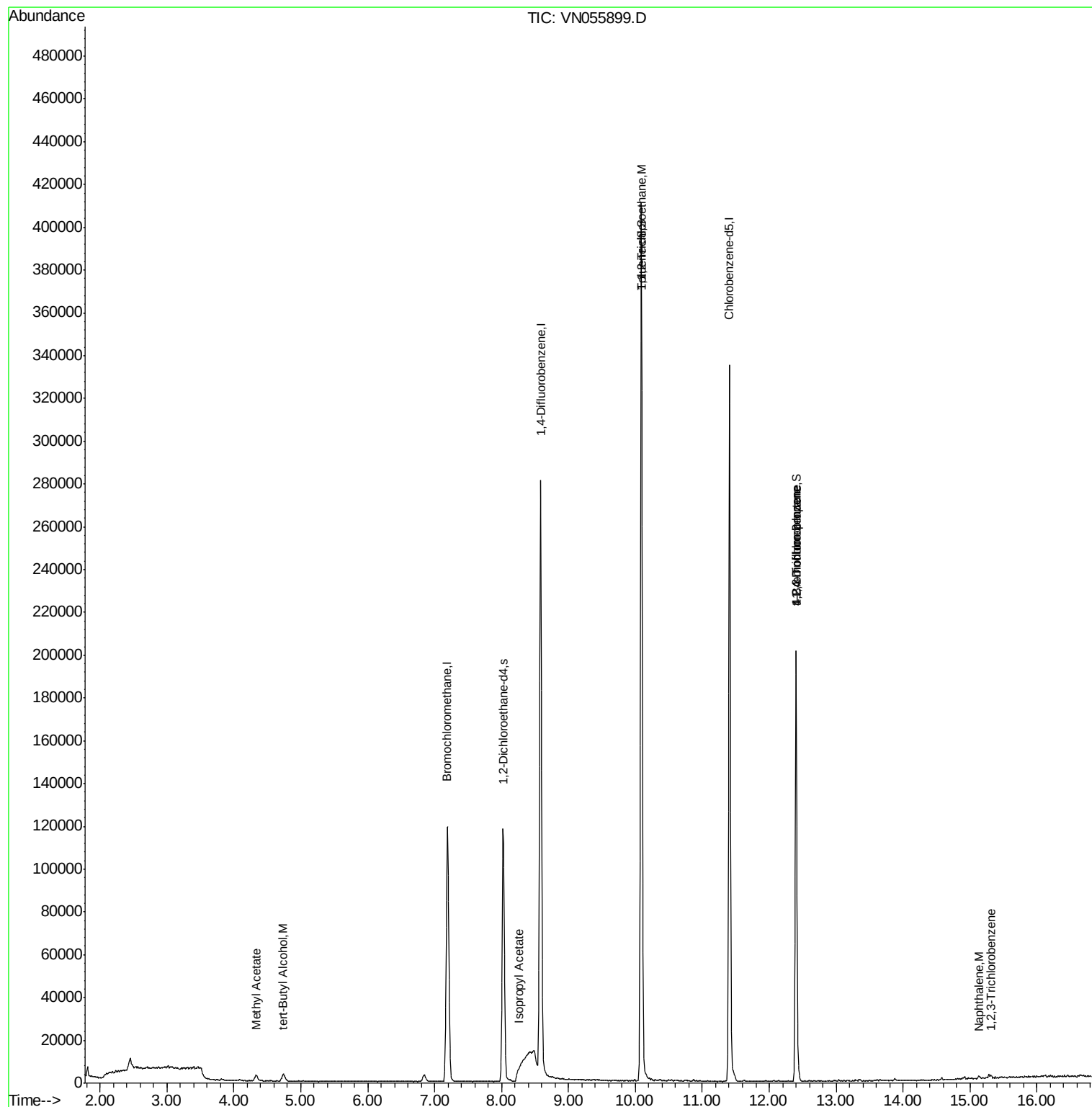
|                             |       |     |       |        | Ovalue |     |
|-----------------------------|-------|-----|-------|--------|--------|-----|
| 12) Methyl Acetate          | 4.33  | 43  | 6218  | 1.913  | ug/l   | 96  |
| 23) tert-Butyl Alcohol      | 4.73  | 59  | 1431  | 2.198  | ug/l # | 100 |
| 44) Isopropyl Acetate       | 8.26  | 43  | 4400  | 0.669  | ug/l # | 47  |
| 50) 1,1,2-Trichloroethane   | 10.09 | 97  | 9334  | 3.157  | ug/l # | 1   |
| 72) 1,2,3-Trichloropropane  | 12.40 | 75  | 34553 | 10.660 | ug/l   | 1   |
| 77) t-1,4-Dichloro-2-butene | 12.40 | 75  | 34553 | 26.837 | ug/l # | 17  |
| 91) Naphthalene             | 15.13 | 128 | 1832  | 0.243  | ug/l # | 70  |
| 92) 1,2,3-Trichlorobenzene  | 15.31 | 180 | 876   | 0.304  | ug/l # | 74  |

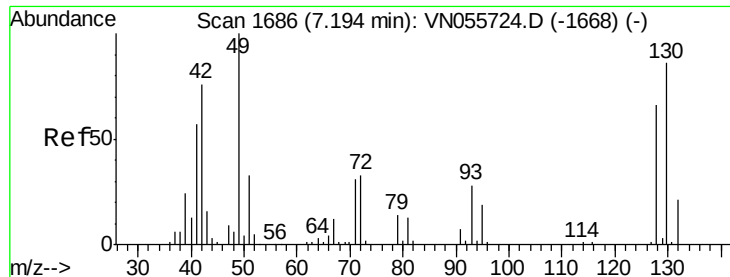
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Instrument :  
MSVOA\_N  
ClientSampleId :

Quant Time: May 31 04:49:11 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA N\METHODS\624N052219W.M  
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
QLast Update : Thu May 23 05:54:54 2019  
Response via : Initial Calibration

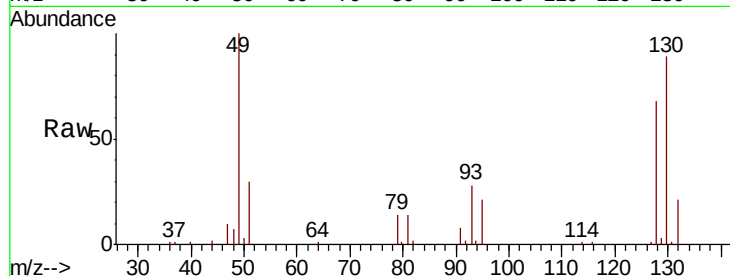




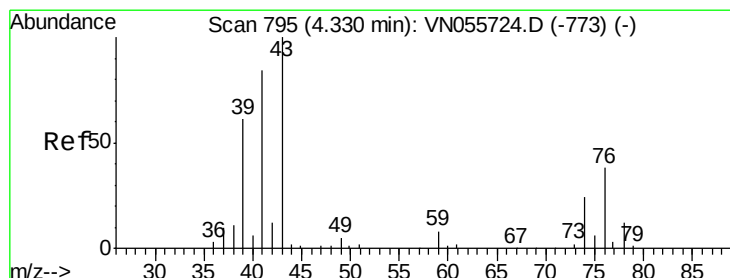
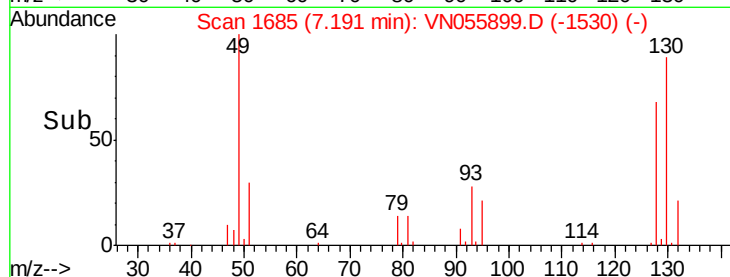
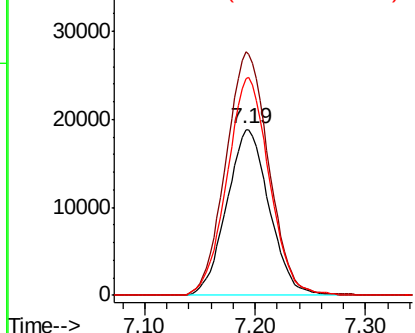
#1  
 Bromochloromethane  
 Concen: 30.000 ug/l  
 RT: 7.19 min Scan# 1685  
 Delta R.T. -0.00 min  
 Lab File: VN055899.D  
 Acq: 30 May 2019 14:46

Instrument :  
 MSVOA\_N  
 ClientSampleId :

Tot Ion:128 Resp: 50358  
 Ion Ratio Lower Upper  
 128 100  
 49 148.3 0.0 383.2  
 130 130.9 0.0 326.3

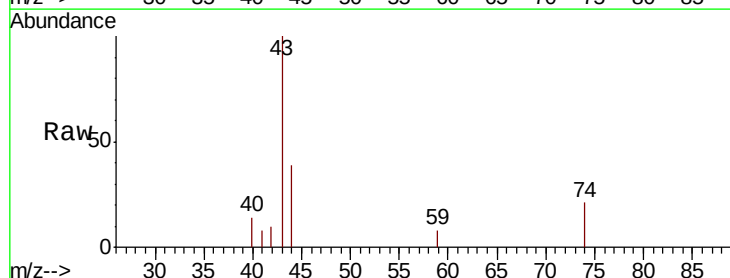


Abundance Ion 128.00 (127.70 to 128.70): V  
 Ion 49.00 (48.70 to 49.70): VN  
 Ion 130.00 (129.70 to 130.70): V

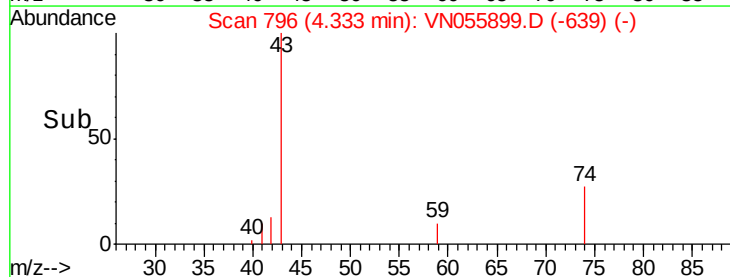
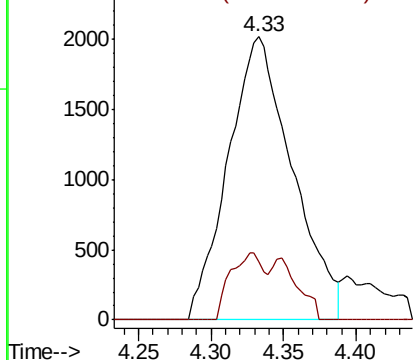


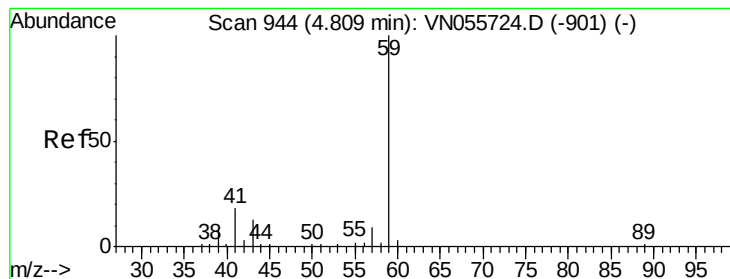
#12  
 Methyl Acetate  
 Concen: 1.913 ug/l  
 RT: 4.33 min Scan# 796  
 Delta R.T. 0.00 min  
 Lab File: VN055899.D  
 Acq: 30 May 2019 14:46

Tgt Ion: 43 Resp: 6218  
 Ion Ratio Lower Upper  
 43 100  
 74 22.1 19.2 28.8



Abundance Ion 43.00 (42.70 to 43.70): VN  
 Ion 74.00 (73.70 to 74.70): VN



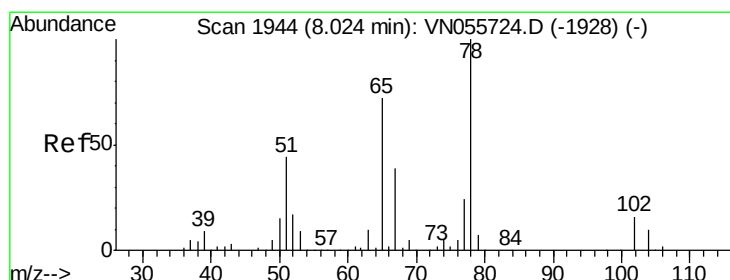
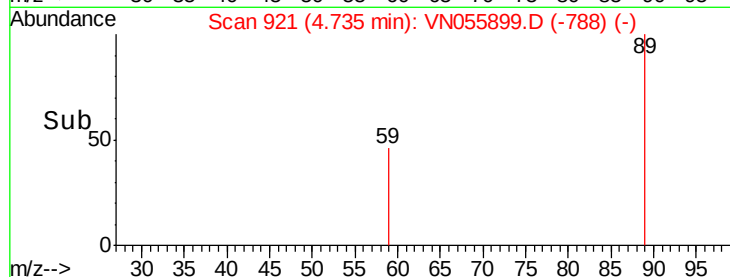
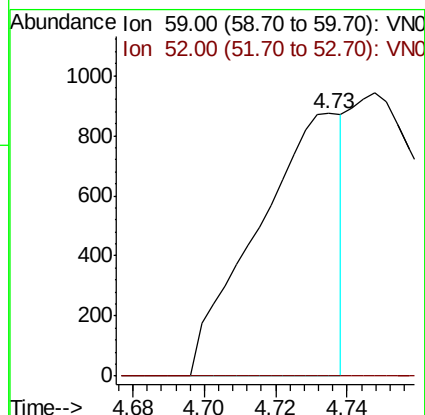
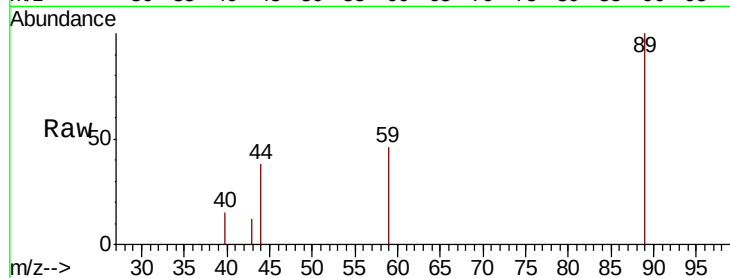


#23

tert-Butyl Alcohol  
 Concen: 2.198 ug/l  
 RT: 4.73 min Scan# 921  
 Delta R.T. -0.07 min  
 Lab File: VN055899.D  
 Acq: 30 May 2019 14:46

Instrument :  
 MSVOA\_N  
 ClientSampled :

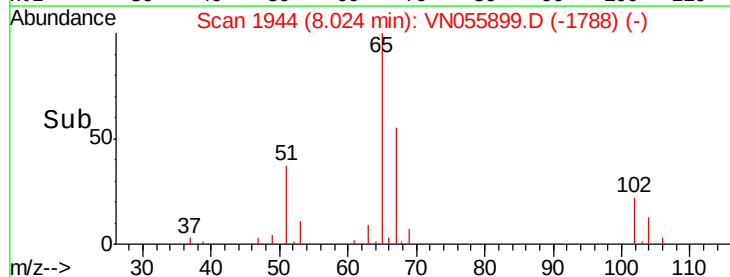
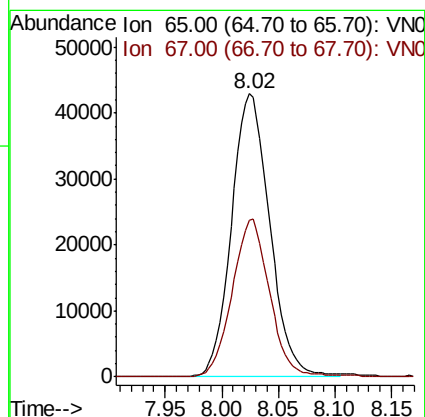
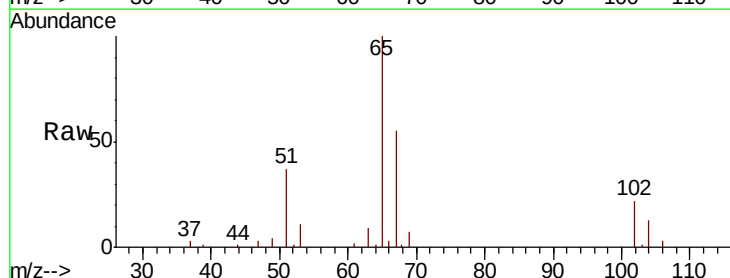
Tot Ion: 59 Resp: 1431  
 Ion Ratio Lower Upper  
 59 100  
 52 0.0 0.0 0.0

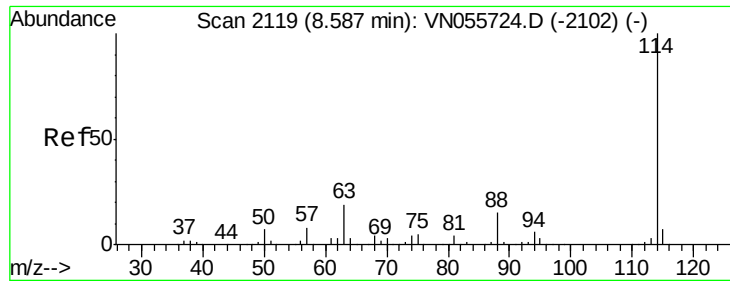


#27

1,2-Dichloroethane-d4  
 Concen: 30.682 ug/l  
 RT: 8.02 min Scan# 1944  
 Delta R.T. 0.00 min  
 Lab File: VN055899.D  
 Acq: 30 May 2019 14:46

Tgt Ion: 65 Resp: 100993  
 Ion Ratio Lower Upper  
 65 100  
 67 54.4 43.5 65.3

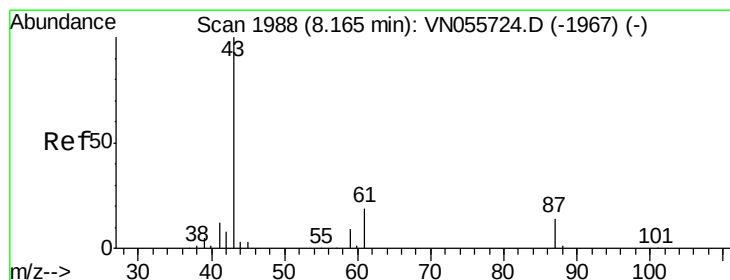
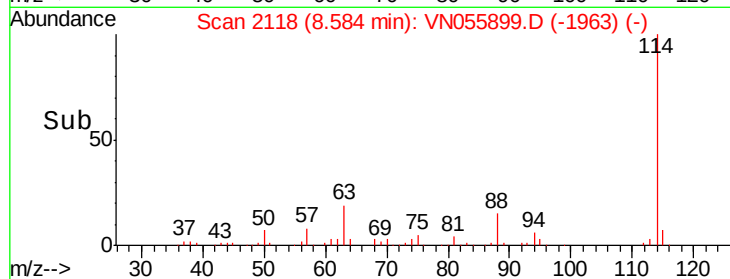
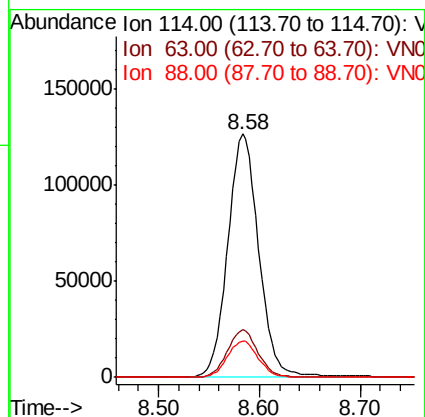
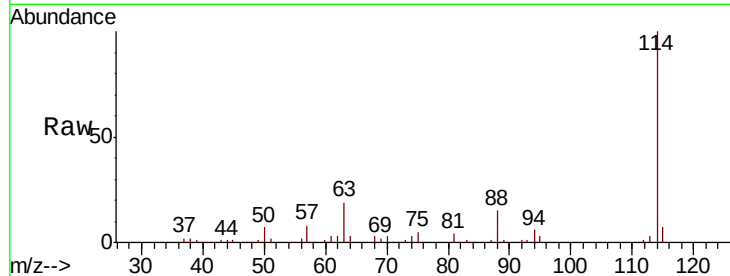




#28  
 1,4-Difluorobenzene  
 Concen: 30.000 ug/l  
 RT: 8.58 min Scan# 2118  
 Delta R.T. -0.00 min  
 Lab File: VN055899.D  
 Acq: 30 May 2019 14:46

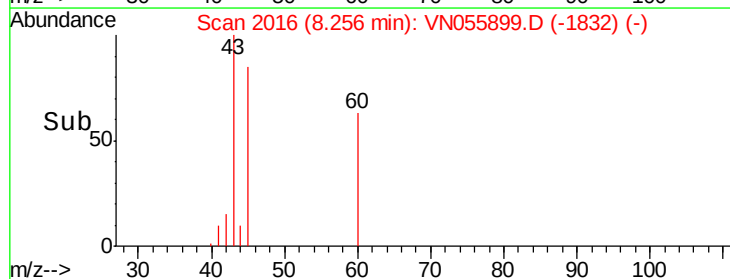
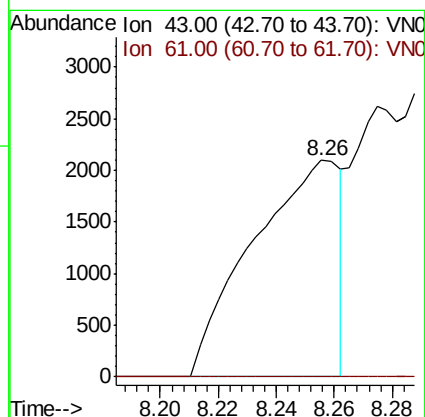
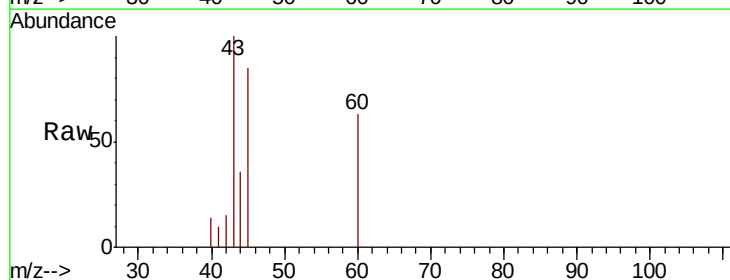
Instrument :  
 MSVOA\_N  
 ClientSampleId :

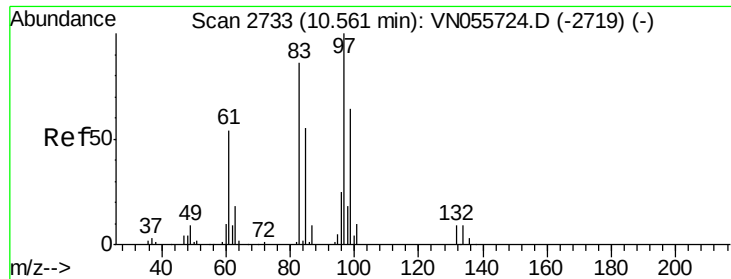
Tot Ion:114 Resp: 270687  
 Ion Ratio Lower Upper  
 114 100  
 63 19.3 15.6 23.4  
 88 14.9 12.3 18.5



#44  
 Isopropyl Acetate  
 Concen: 0.669 ug/l  
 RT: 8.26 min Scan# 2016  
 Delta R.T. 0.09 min  
 Lab File: VN055899.D  
 Acq: 30 May 2019 14:46

Tgt Ion: 43 Resp: 4400  
 Ion Ratio Lower Upper  
 43 100  
 61 0.0 22.1 33.1#

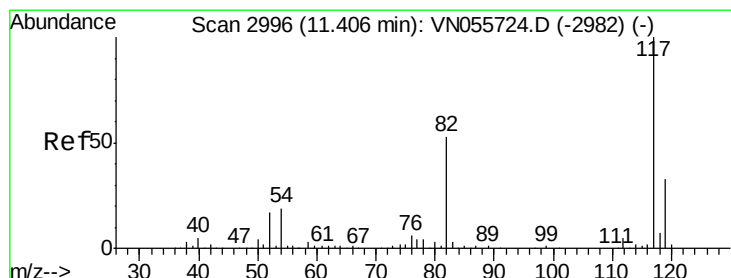
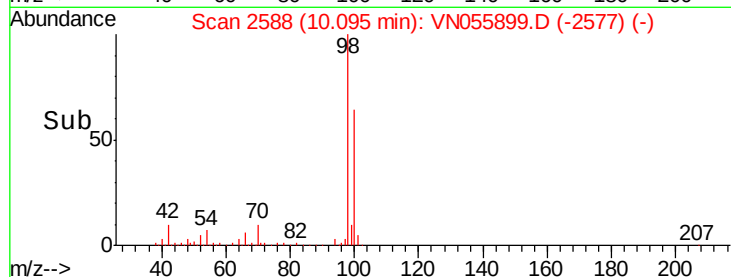
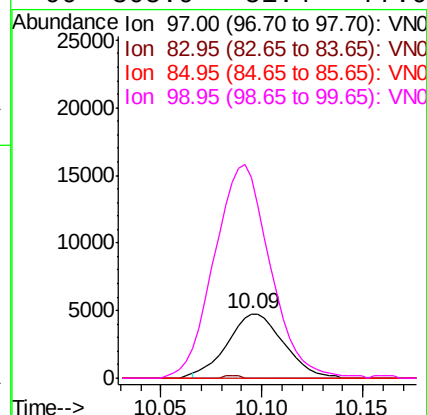
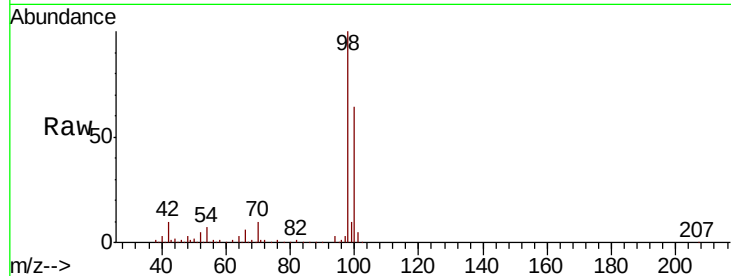




#50  
1,1,2-Trichloroethane  
Concen: 3.157 ug/l  
RT: 10.09 min Scan# 2588  
Delta R.T. -0.47 min  
Lab File: VN055899.D  
Acq: 30 May 2019 14:46

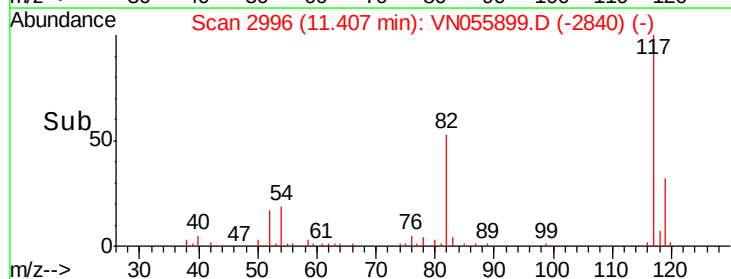
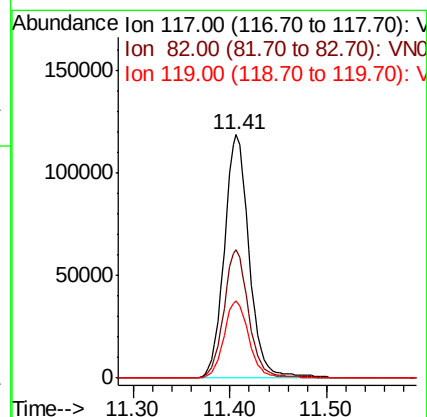
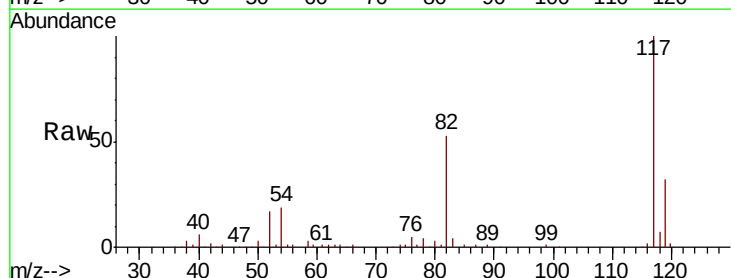
Instrument :  
MSVOA\_N  
ClientSampleId :

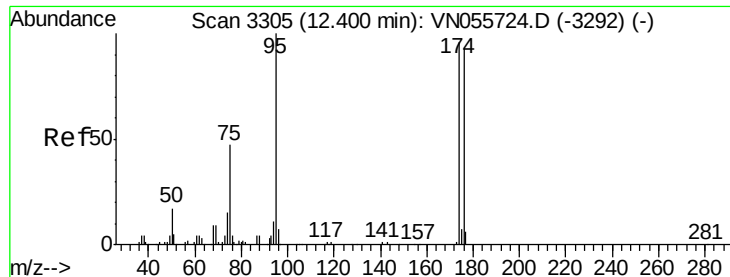
| Tot Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 97      | 100   |       |        |
| 83      | 0.0   | 68.9  | 103.3# |
| 85      | 0.0   | 44.3  | 66.5#  |
| 99      | 305.9 | 51.4  | 77.0#  |



#57  
Chlorobenzene-d5  
Concen: 30.000 ug/l  
RT: 11.41 min Scan# 2996  
Delta R.T. 0.00 min  
Lab File: VN055899.D  
Acq: 30 May 2019 14:46

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 52.1  | 42.6  | 64.0  |
| 119     | 32.1  | 25.9  | 38.9  |





#60

4-Bromofluorobenzene

Concen: 22.669 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. 0.00 min

Lab File: VN055899.D

Acq: 30 May 2019 14:46

Instrument :

MSVOA\_N

ClientSampled :

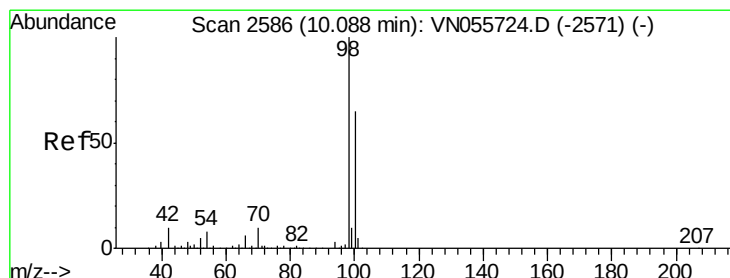
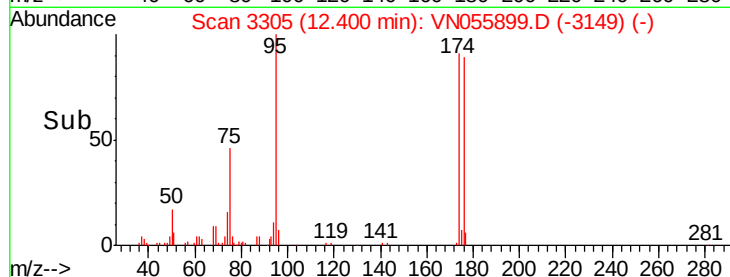
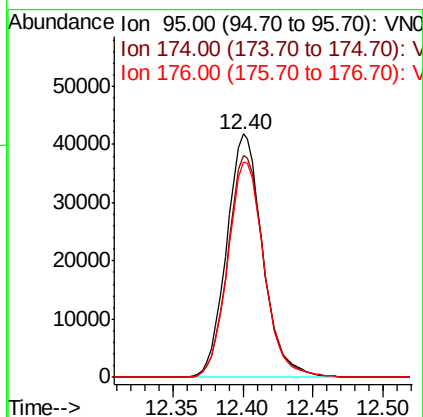
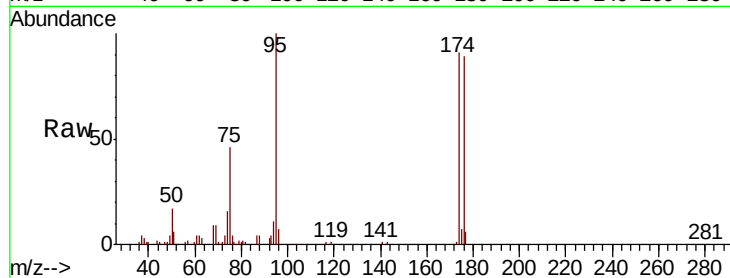
Tot Ion: 95 Resp: 74676

Ion Ratio Lower Upper

95 100

174 91.9 75.7 113.5

176 89.2 74.1 111.1



#63

Toluene-d8

Concen: 31.908 ug/l

RT: 10.09 min Scan# 2586

Delta R.T. 0.00 min

Lab File: VN055899.D

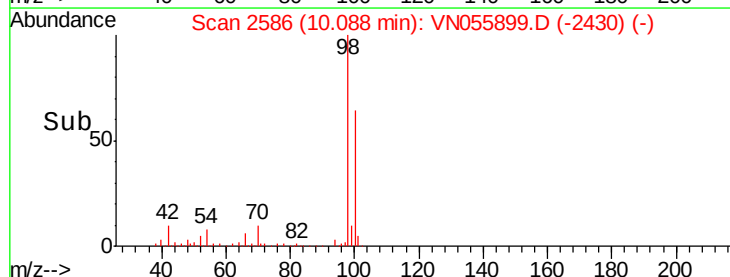
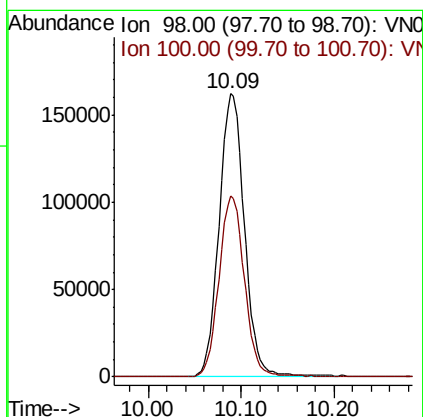
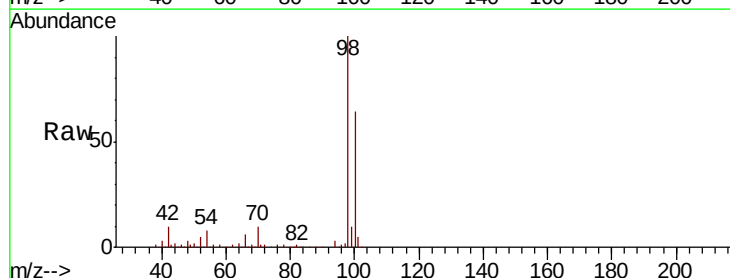
Acq: 30 May 2019 14:46

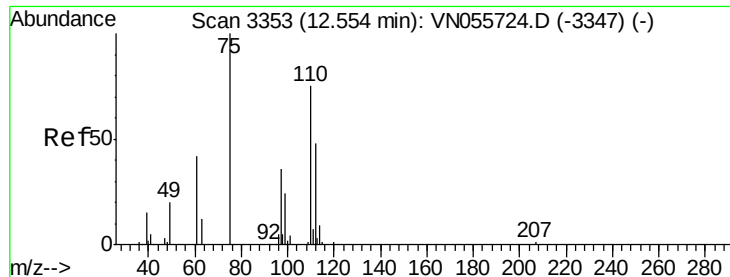
Tgt Ion: 98 Resp: 308780

Ion Ratio Lower Upper

98 100

100 63.7 51.6 77.4





#72

1,2,3-Trichloropropane

Concen: 10.660 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. -0.15 min

Lab File: VN055899.D

Acq: 30 May 2019 14:46

Instrument :

MSVOA\_N

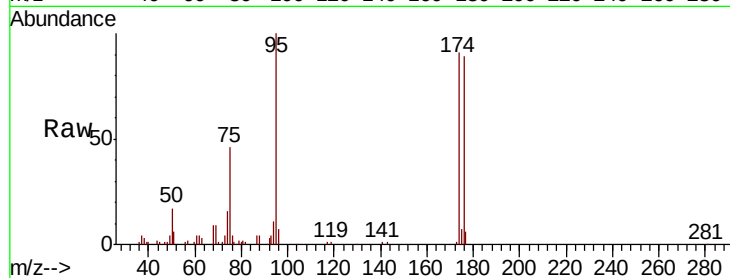
ClientSampleId :

Tot Ion: 75 Resp: 34553

Ion Ratio Lower Upper

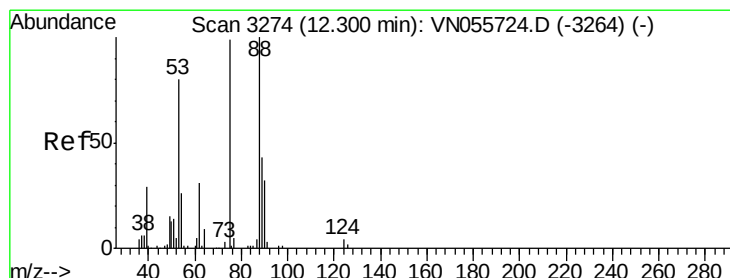
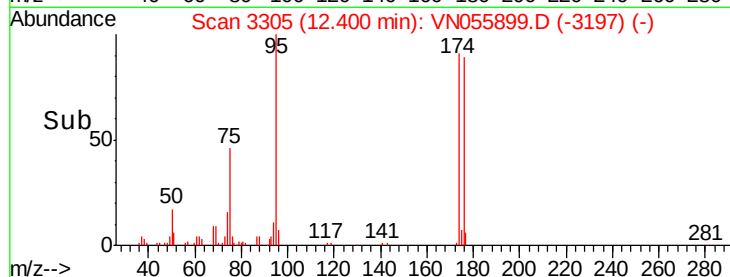
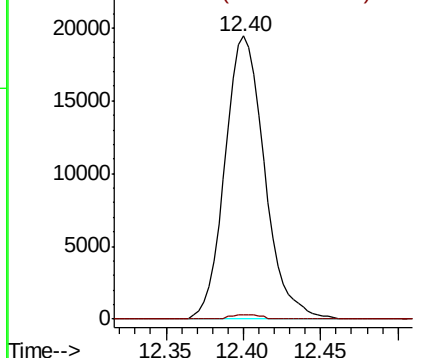
75 100

77 1.1 0.0 349.8



Abundance Ion 75.00 (74.70 to 75.70): VN0

Ion 77.00 (76.70 to 77.70): VN0



#77

t-1,4-Dichloro-2-butene

Concen: 26.837 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. 0.10 min

Lab File: VN055899.D

Acq: 30 May 2019 14:46

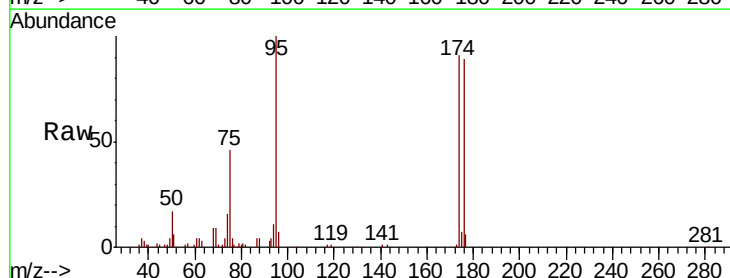
Tgt Ion: 75 Resp: 34553

Ion Ratio Lower Upper

75 100

53 0.0 40.1 120.3#

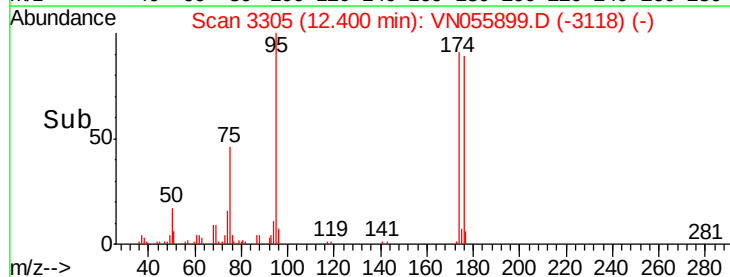
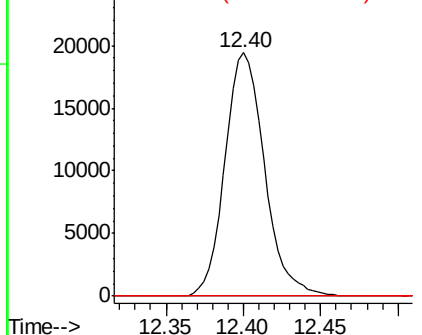
89 0.0 22.6 67.8#



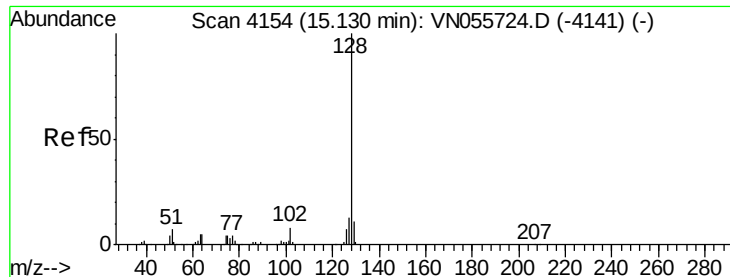
Abundance Ion 75.00 (74.70 to 75.70): VN0

Ion 53.00 (52.70 to 53.70): VN0

Ion 89.00 (88.70 to 89.70): VN0







#91

Naphthalene

Concen: 0.243 ug/l

RT: 15.13 min Scan# 4154

Delta R.T. 0.00 min

Lab File: VN055899.D

Acq: 30 May 2019 14:46

Instrument :

MSVOA\_N

ClientSampled :

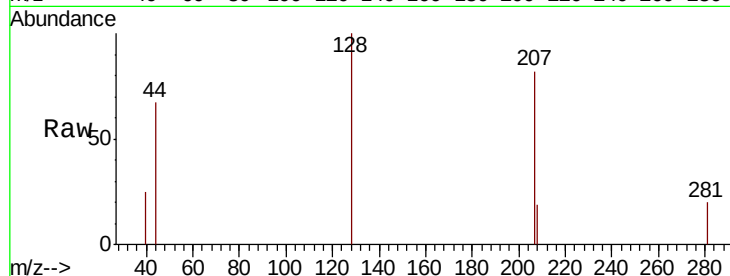
Tot Ion:128 Resp: 1832

Ion Ratio Lower Upper

128 100

127 0.0 10.0 15.0#

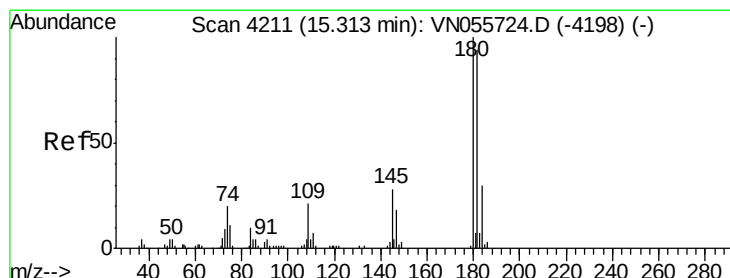
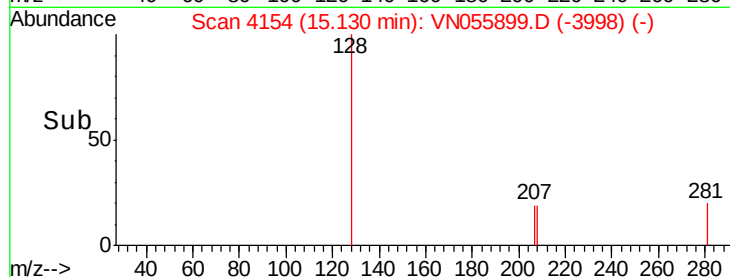
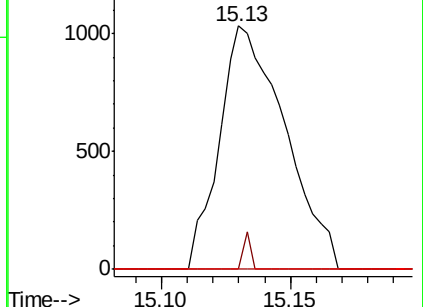
129 0.0 8.7 13.1#



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



#92

1,2,3-Trichlorobenzene

Concen: 0.304 ug/l

RT: 15.31 min Scan# 4211

Delta R.T. 0.00 min

Lab File: VN055899.D

Acq: 30 May 2019 14:46

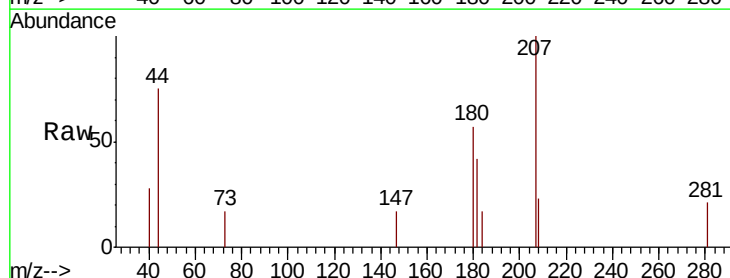
Tgt Ion:180 Resp: 876

Ion Ratio Lower Upper

180 100

182 77.2 0.0 188.6

145 0.0 0.0 56.8



Abundance Ion 180.00 (179.70 to 180.70): V

Ion 182.00 (181.70 to 182.70): V

Ion 145.00 (144.70 to 145.70): V

