

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN092818\  
 Data File : VN051623.D  
 Acq On : 28 Sep 2018 18:47  
 Operator : MD\SY  
 Sample : J5142-01  
 Misc : Sample  
 ALS Vial : 19 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 SPDES-1

Quant Time: Sep 29 01:58:54 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N092818W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Sat Sep 29 01:07:29 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.19  | 128  | 44205    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.59  | 114  | 365139   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.41 | 117  | 300062   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 8.03   | 65    | 150901   | 49.03    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 163.43% |
| 60) 4-Bromofluorobenzene  | 12.40  | 95    | 98024    | 21.24    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 70.80%  |
| 63) Toluene-d8            | 10.09  | 98    | 404288   | 28.56    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 95.20%  |

## Target Compounds

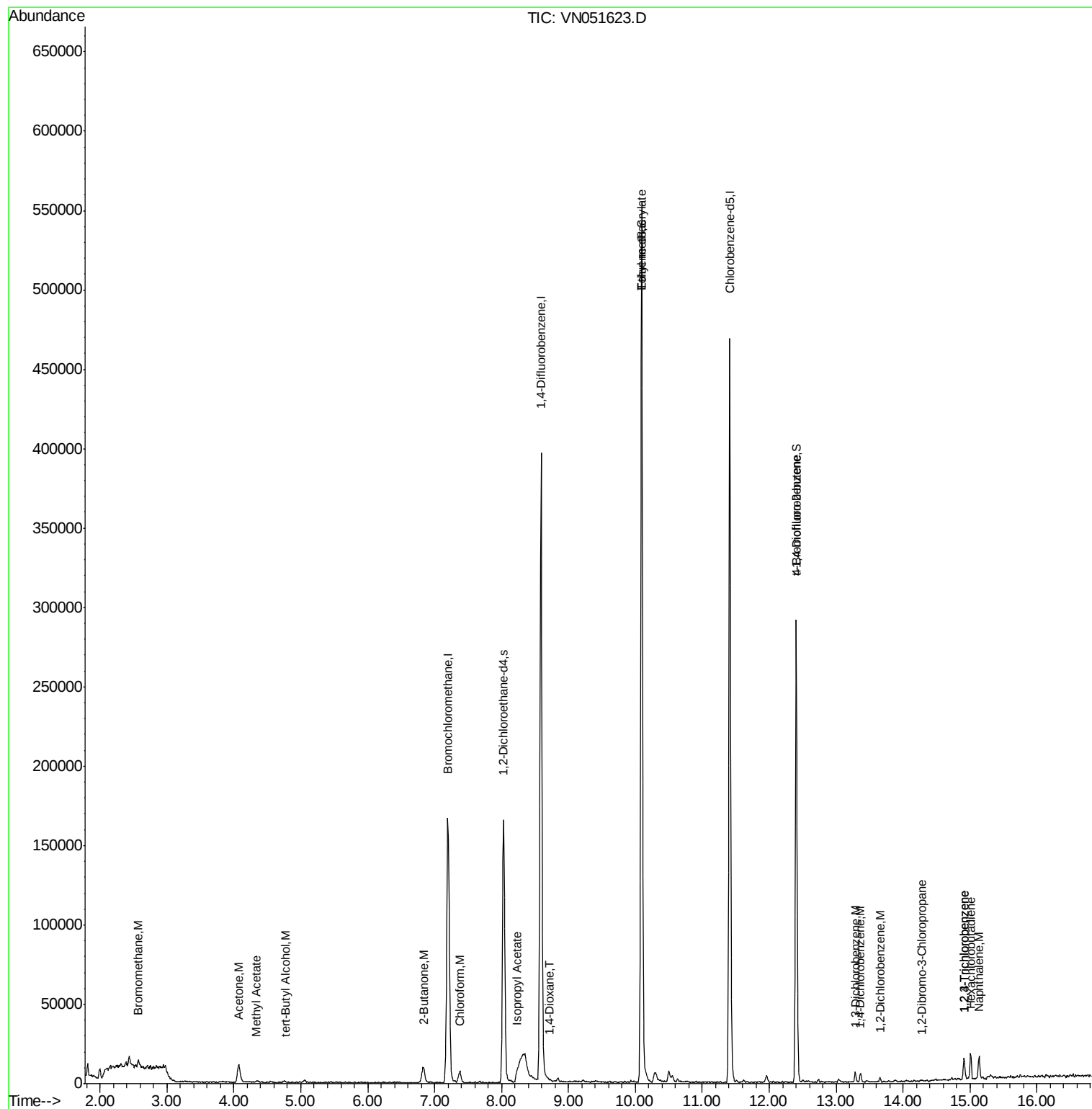
|                                |       |     |       |               | Ovalue |
|--------------------------------|-------|-----|-------|---------------|--------|
| 5) Bromomethane                | 2.57  | 94  | 2497  | 1.129 ug/l    | 85     |
| 12) Methyl Acetate             | 4.33  | 43  | 1175  | 0.499 ug/l #  | 55     |
| 15) Acetone                    | 4.06  | 58  | 69    | 0.279 ug/l    | 82     |
| 23) tert-Butyl Alcohol         | 4.79  | 59  | 123   | 0.682 ug/l #  | 100    |
| 25) Chloroform                 | 7.38  | 83  | 7818  | 1.456 ug/l    | 99     |
| 30) 2-Butanone                 | 6.85  | 43  | 346   | 0.204 ug/l #  | 56     |
| 44) Isopropyl Acetate          | 8.22  | 43  | 2545  | 0.362 ug/l #  | 1      |
| 45) 1,4-Dioxane                | 8.72  | 88  | 65    | 1.711 ug/l #  | 1      |
| 51) Ethyl methacrylate         | 10.10 | 69  | 1384  | 0.287 ug/l #  | 64     |
| 77) t-1,4-Dichloro-2-butene    | 12.40 | 75  | 49105 | 40.561 ug/l # | 11     |
| 83) 1,3-Dichlorobenzene        | 13.28 | 146 | 3301  | 0.412 ug/l    | 92     |
| 84) 1,4-Dichlorobenzene        | 13.36 | 146 | 2899  | 0.385 ug/l    | 98     |
| 87) 1,2-Dichlorobenzene        | 13.66 | 146 | 1696  | 0.216 ug/l    | 91     |
| 88) 1,2-Dibromo-3-Chloropropan | 14.27 | 75  | 252   | 0.387 ug/l #  | 23     |
| 89) 1,2,4-Trichlorobenzene     | 14.91 | 180 | 5193  | 1.415 ug/l    | 92     |
| 90) Hexachlorobutadiene        | 15.01 | 225 | 3559  | 1.190 ug/l    | 93     |
| 91) Naphthalene                | 15.13 | 128 | 13203 | 9.497 ug/l    | 96     |
| 92) 1,2,3-Trichlorobenzene     | 14.91 | 180 | 5193  | 1.407 ug/l    | 93     |

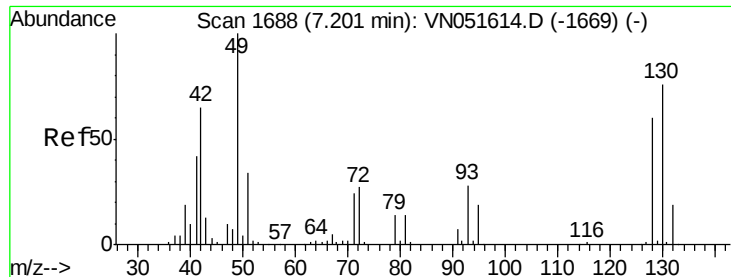
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN092818\  
Data File : VN051623.D  
Acq On : 28 Sep 2018 18:47  
Operator : MD\SY  
Sample : J5142-01  
Misc : Sample  
ALS Vial : 19 Sample Multiplier: 28

Instrument :  
MSVOA\_N  
ClientSampleId :  
SPDES-1

Quant Time: Sep 29 01:58:54 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N092818W.M  
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
QLast Update : Sat Sep 29 01:07:29 2018  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 30.000 ug/l

RT: 7.19 min Scan# 1686

Delta R.T. -0.01 min

Lab File: VN051623.D

Acq: 28 Sep 2018 18:47

Instrument :

MSVOA\_N

ClientSampleId :

SPDES-1

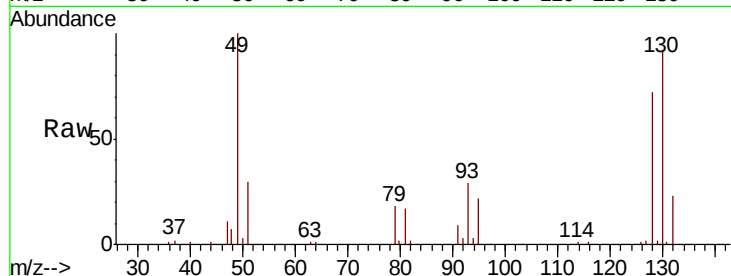
Tot Ion:128 Resp: 44205

Ion Ratio Lower Upper

128 100

49 221.1 0.0 426.8

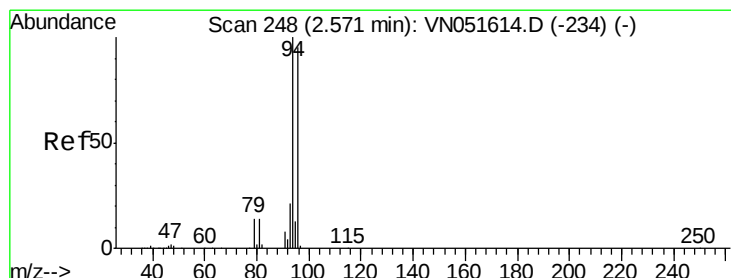
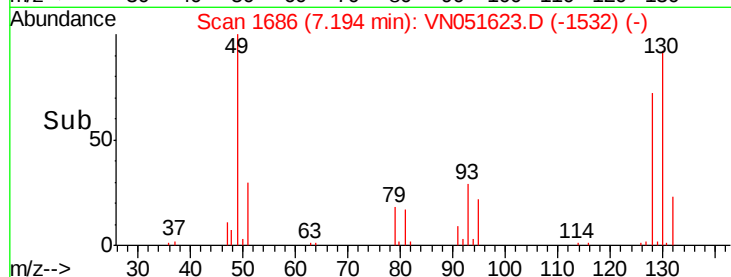
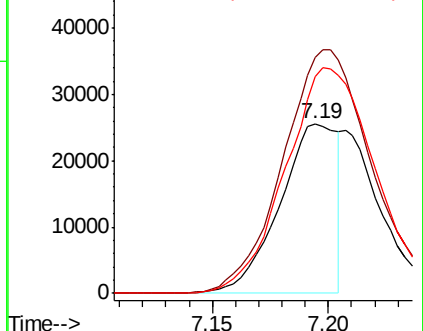
130 207.0 0.0 326.3



Abundance Ion 128.00 (127.70 to 128.70): V

Ion 49.00 (48.70 to 49.70): VN0

Ion 130.00 (129.70 to 130.70): V



#5

Bromomethane

Concen: 1.129 ug/l

RT: 2.57 min Scan# 248

Delta R.T. 0.00 min

Lab File: VN051623.D

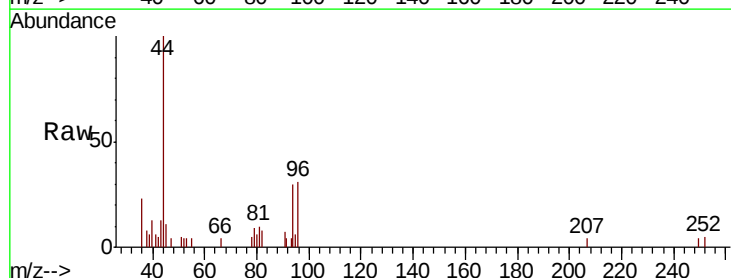
Acq: 28 Sep 2018 18:47

Tgt Ion: 94 Resp: 2497

Ion Ratio Lower Upper

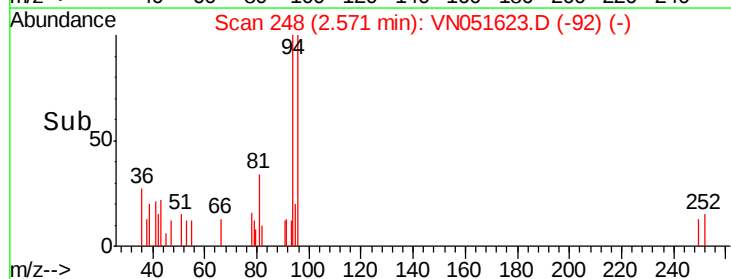
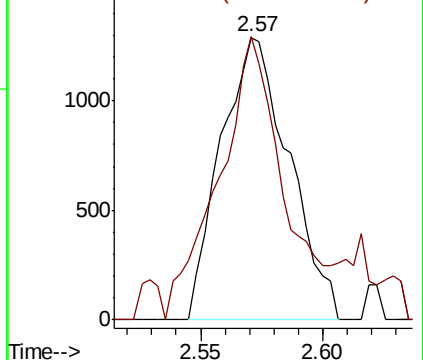
94 100

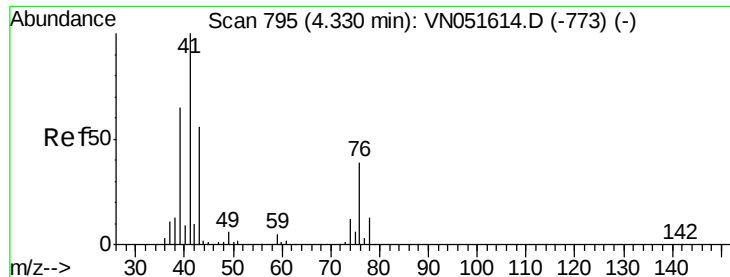
96 80.3 75.8 113.6



Abundance Ion 94.00 (93.70 to 94.70): VN0

Ion 96.00 (95.70 to 96.70): VN0

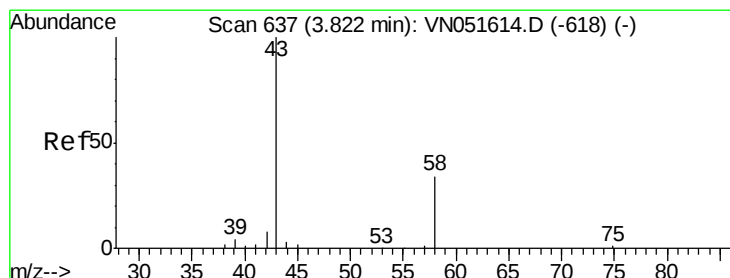
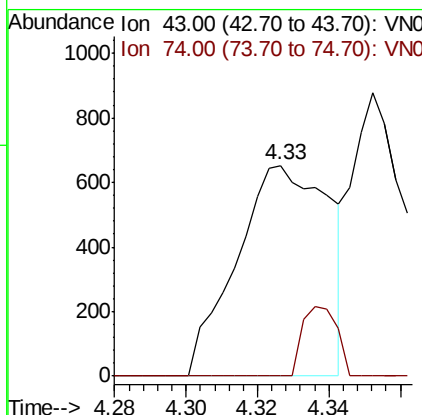
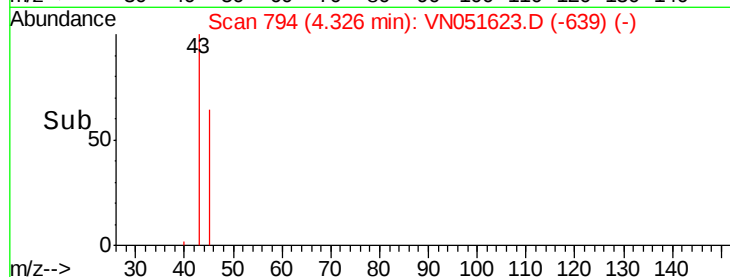
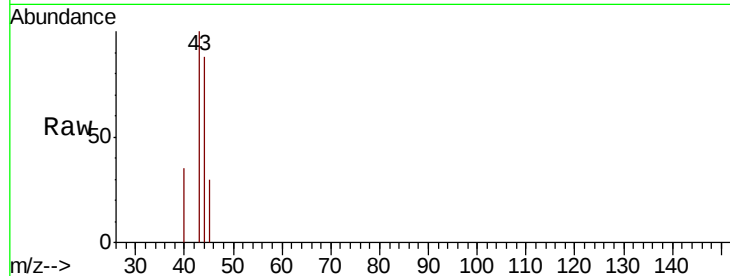




#12  
Methvl Acetate  
Concen: 0.499 ug/l  
RT: 4.33 min Scan# 794  
Delta R.T. -0.00 min  
Lab File: VN051623.D  
Acq: 28 Sep 2018 18:47

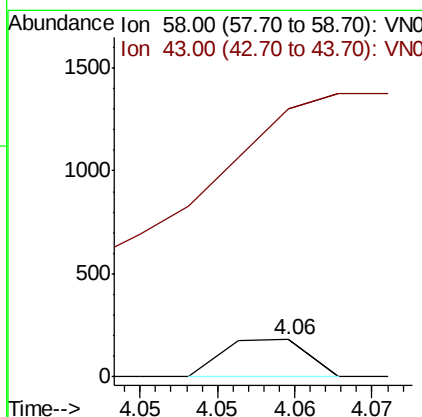
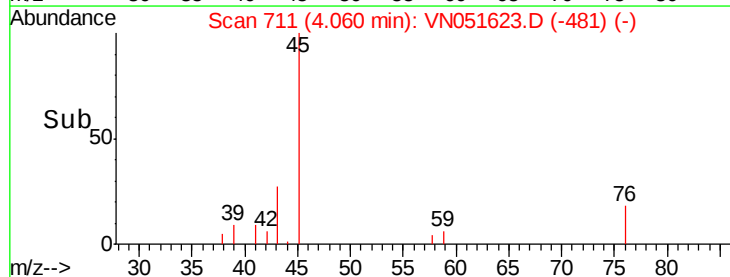
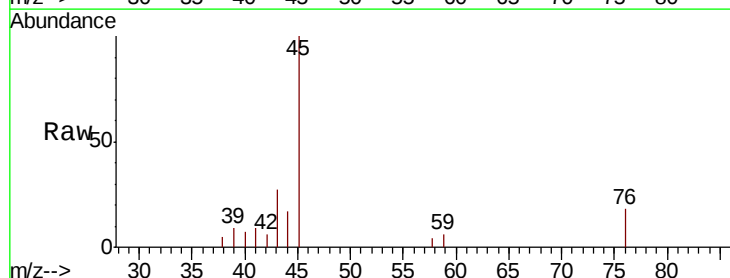
Instrument :  
MSVOA\_N  
ClientSampleId :  
SPDES-1

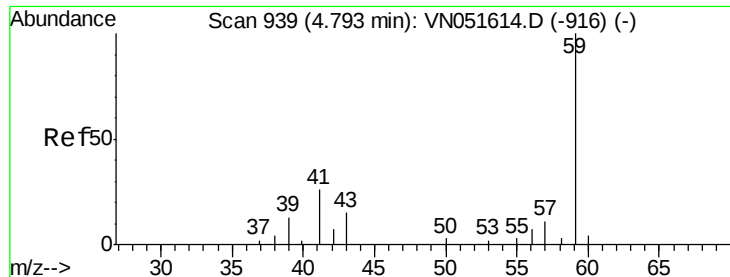
Tot Ion: 43 Resp: 1175  
Ion Ratio Lower Upper  
43 100  
74 0.0 17.0 25.4#



#15  
Acetone  
Concen: 0.279 ug/l  
RT: 4.06 min Scan# 711  
Delta R.T. 0.24 min  
Lab File: VN051623.D  
Acq: 28 Sep 2018 18:47

Tgt Ion: 58 Resp: 69  
Ion Ratio Lower Upper  
58 100  
43 261.9 238.0 357.0

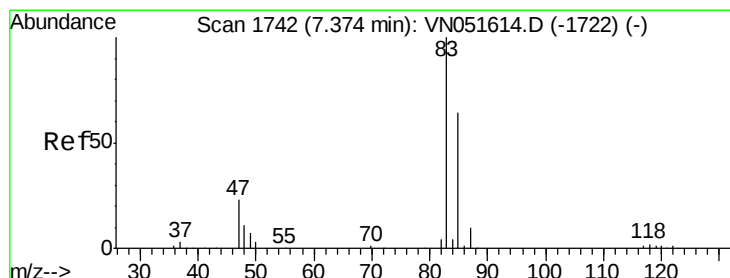
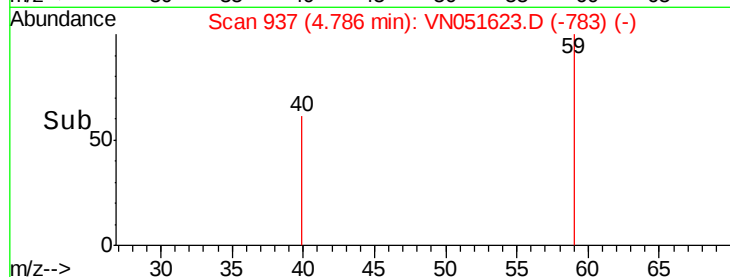
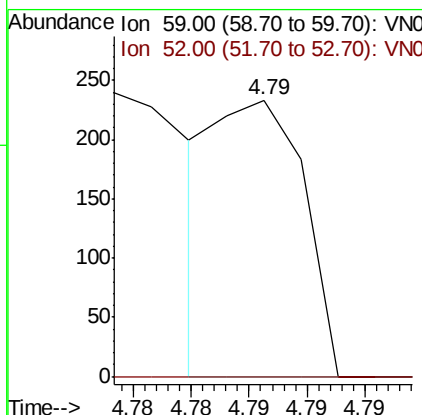
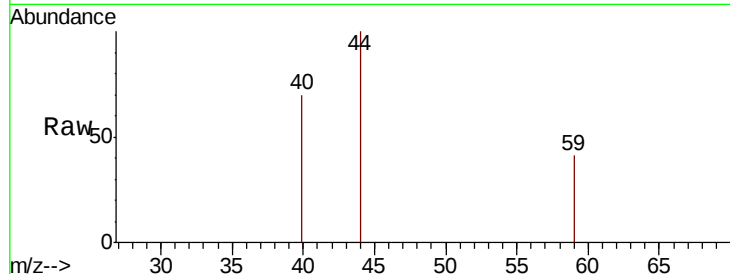




#23  
tert-Butyl Alcohol  
Concen: 0.682 ug/l  
RT: 4.79 min Scan# 937  
Delta R.T. -0.01 min  
Lab File: VN051623.D  
Acq: 28 Sep 2018 18:47

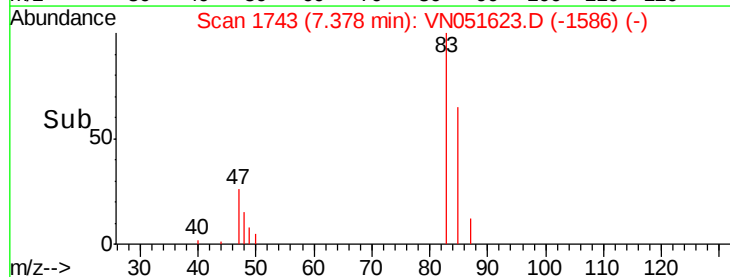
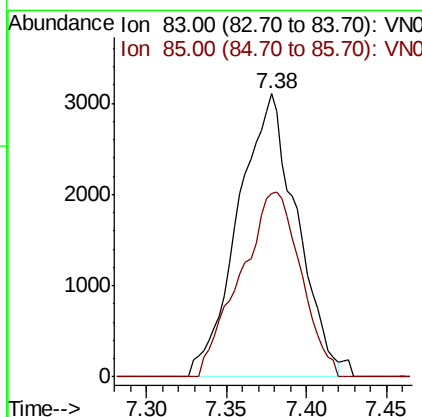
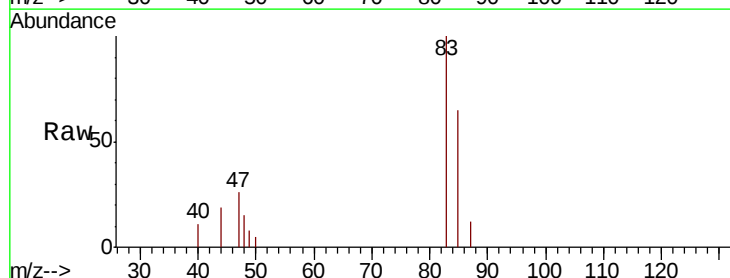
Instrument :  
MSVOA\_N  
ClientSampled :  
SPDES-1

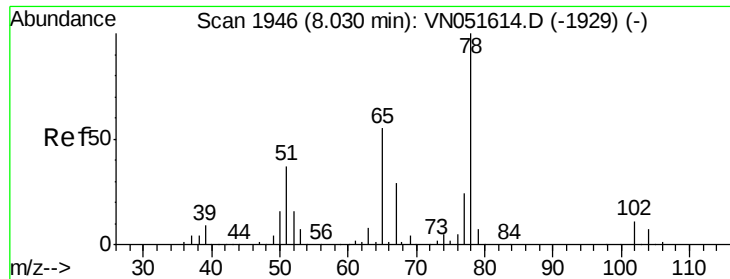
Tot Ion: 59 Resp: 123  
Ion Ratio Lower Upper  
59 100  
52 0.0 0.0 0.0



#25  
Chloroform  
Concen: 1.456 ug/l  
RT: 7.38 min Scan# 1743  
Delta R.T. 0.00 min  
Lab File: VN051623.D  
Acq: 28 Sep 2018 18:47

Tgt Ion: 83 Resp: 7818  
Ion Ratio Lower Upper  
83 100  
85 64.8 51.4 77.0

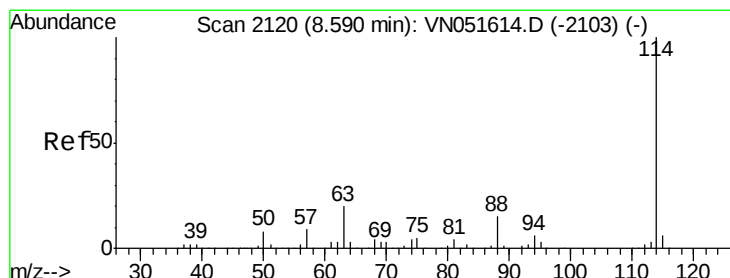
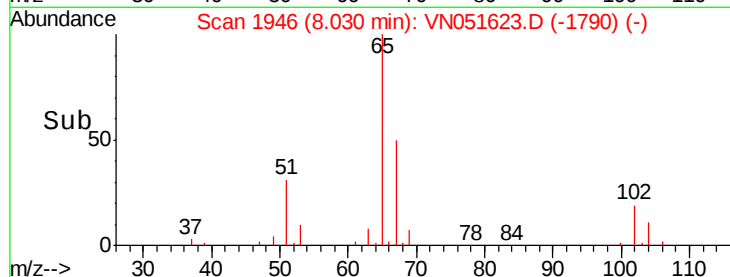
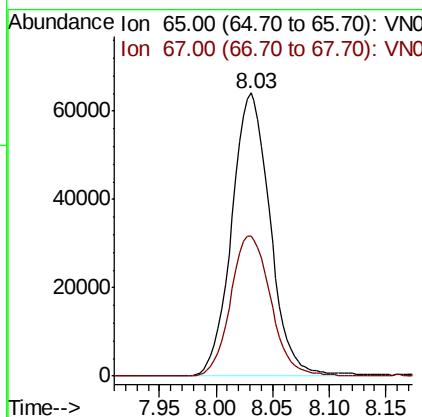
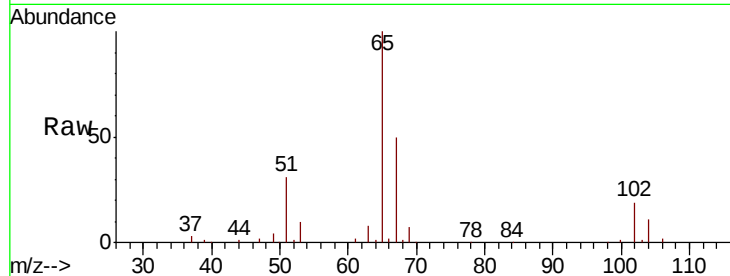




#27  
 1,2-Dichloroethane-d4  
 Concen: N.D. ug/l  
 RT: 8.03 min Scan# 1946  
 Delta R.T. 0.00 min  
 Lab File: VN051623.D  
 Acq: 28 Sep 2018 18:47

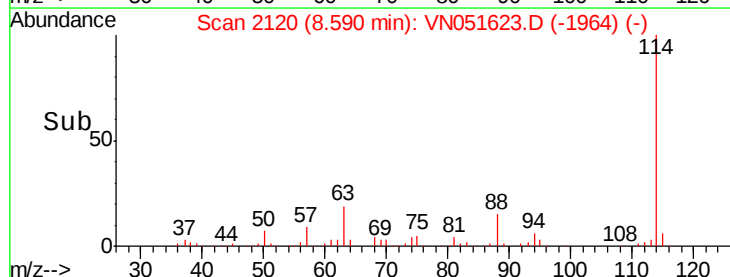
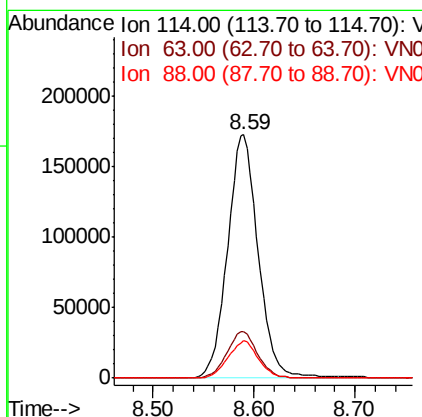
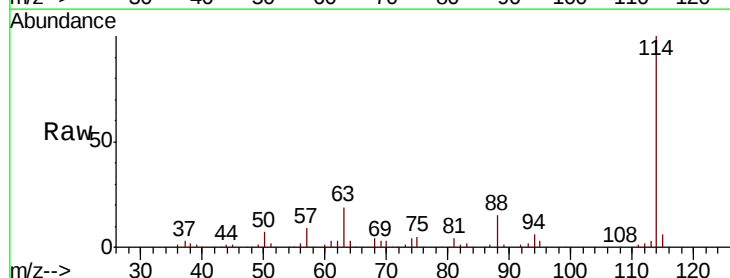
Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 SPDES-1

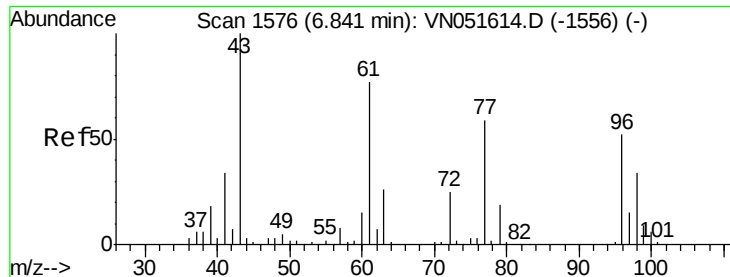
Tot Ion: 65 Resp: 150901  
 Ion Ratio Lower Upper  
 65 100  
 67 51.9 43.1 64.7



#28  
 1,4-Difluorobenzene  
 Concen: 30.000 ug/l  
 RT: 8.59 min Scan# 2120  
 Delta R.T. 0.00 min  
 Lab File: VN051623.D  
 Acq: 28 Sep 2018 18:47

Tgt Ion: 114 Resp: 365139  
 Ion Ratio Lower Upper  
 114 100  
 63 19.1 16.4 24.6  
 88 15.3 12.6 18.8

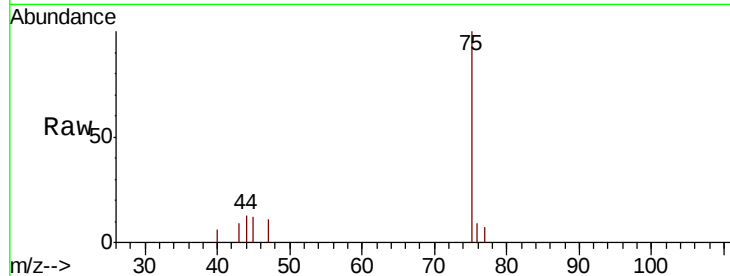




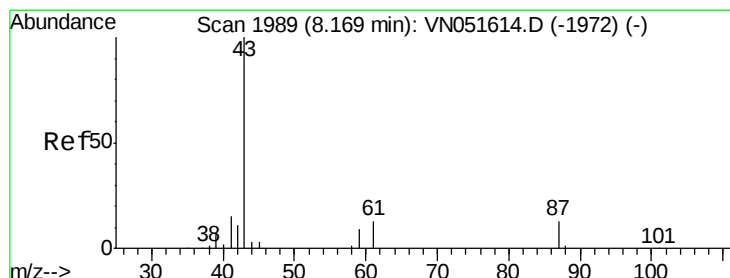
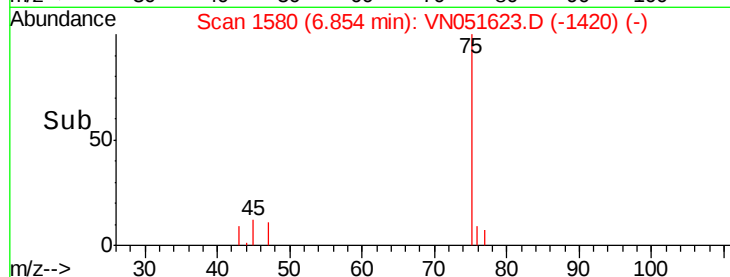
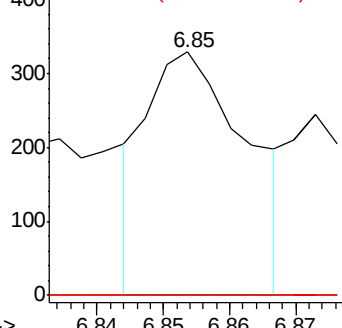
#30  
2-Butanone  
Concen: 0.204 ug/l  
RT: 6.85 min Scan# 1580  
Delta R.T. 0.01 min  
Lab File: VN051623.D  
Acq: 28 Sep 2018 18:47

Instrument :  
MSVOA\_N  
ClientSampled :  
SPDES-1

Tot Ion: 43 Resp: 346  
Ion Ratio Lower Upper  
43 100  
57 0.0 6.6 10.0#  
72 0.0 20.8 31.2#

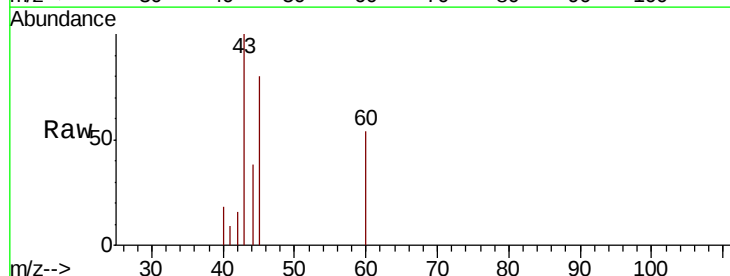


Abundance Ion 43.00 (42.70 to 43.70): VN0  
Ion 57.00 (56.70 to 57.70): VN0  
Ion 72.00 (71.70 to 72.70): VN0

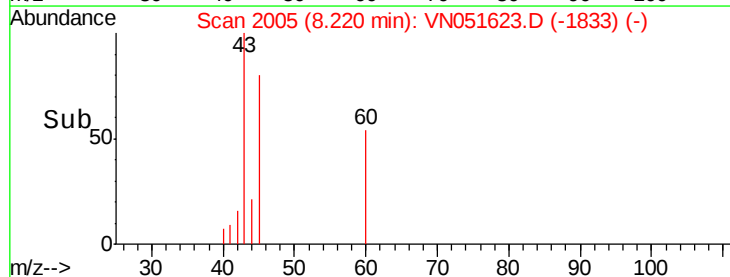
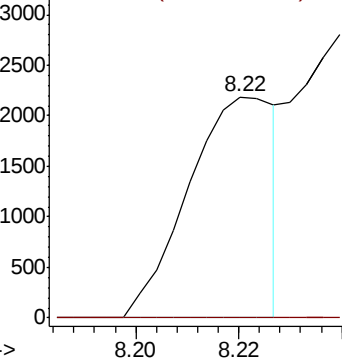


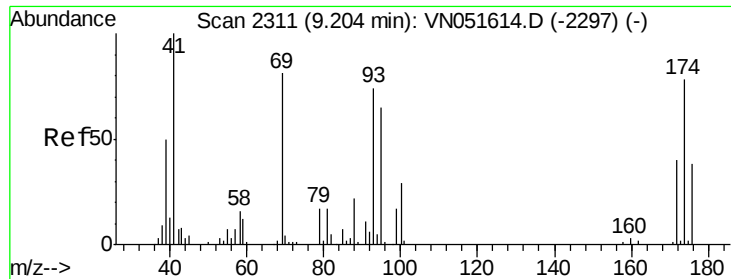
#44  
Isopropyl Acetate  
Concen: 0.362 ug/l  
RT: 8.22 min Scan# 2005  
Delta R.T. 0.05 min  
Lab File: VN051623.D  
Acq: 28 Sep 2018 18:47

Tgt Ion: 43 Resp: 2545  
Ion Ratio Lower Upper  
43 100  
61 110.0 15.4 23.0#



Abundance Ion 43.00 (42.70 to 43.70): VN0  
Ion 61.00 (60.70 to 61.70): VN0

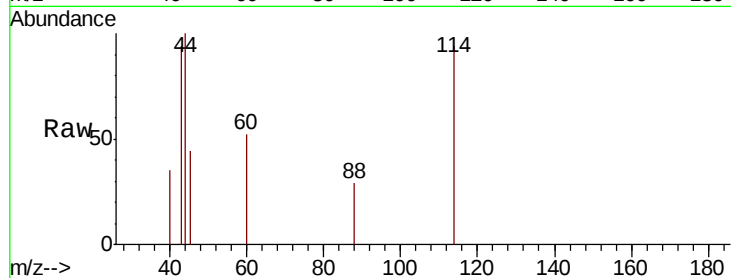




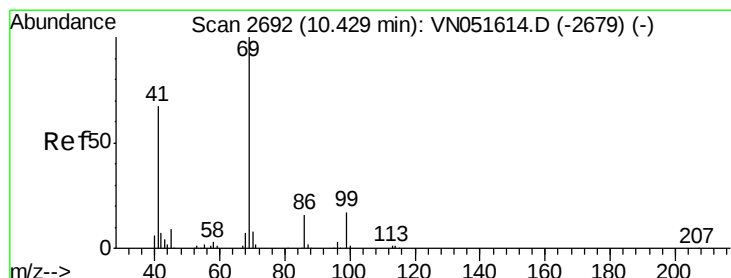
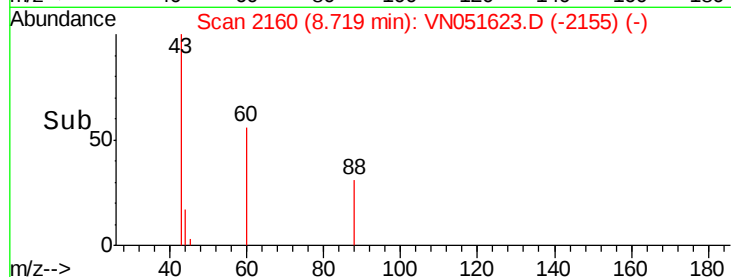
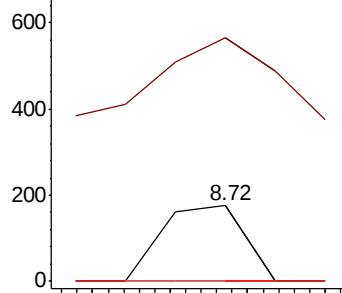
#45  
 1,4-Dioxane  
 Concen: 1.711 ug/l  
 RT: 8.72 min Scan# 2160  
 Delta R.T. -0.49 min  
 Lab File: VN051623.D  
 Acq: 28 Sep 2018 18:47

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 SPDES-1

Tot Ion: 88 Resp: 65  
 Ion Ratio Lower Upper  
 88 100  
 43 161.5 29.0 43.6#  
 58 0.0 59.0 88.6#

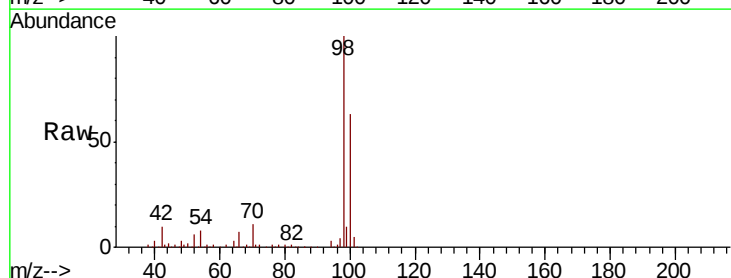


Abundance Ion 88.00 (87.70 to 88.70): VNO  
 Ion 43.00 (42.70 to 43.70): VNO  
 Ion 58.00 (57.70 to 58.70): VNO

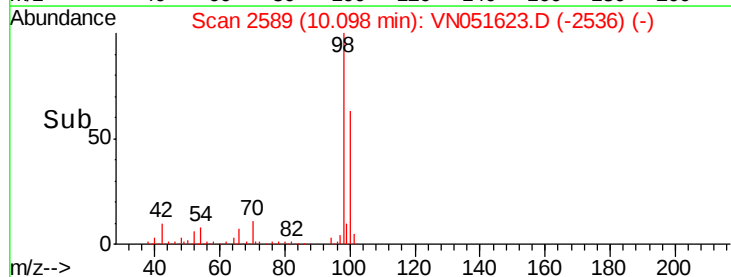
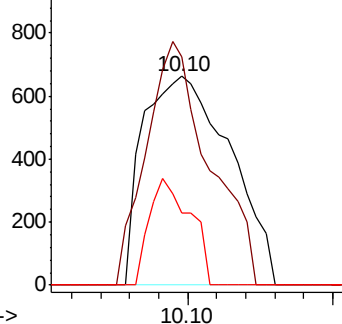


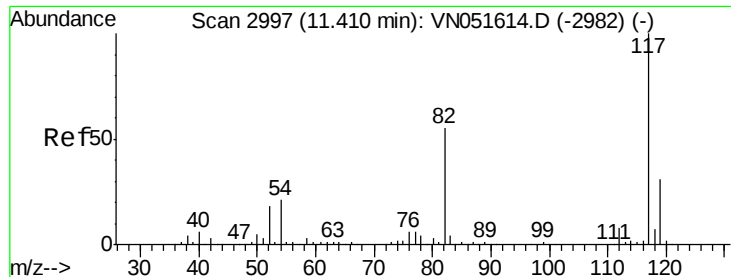
#51  
 Ethyl methacrylate  
 Concen: 0.287 ug/l  
 RT: 10.10 min Scan# 2589  
 Delta R.T. -0.33 min  
 Lab File: VN051623.D  
 Acq: 28 Sep 2018 18:47

Tgt Ion: 69 Resp: 1384  
 Ion Ratio Lower Upper  
 69 100  
 41 109.5 33.3 99.8#  
 39 34.7 17.2 51.6



Abundance Ion 69.00 (68.70 to 69.70): VNO  
 Ion 41.00 (40.70 to 41.70): VNO  
 Ion 39.00 (38.70 to 39.70): VNO

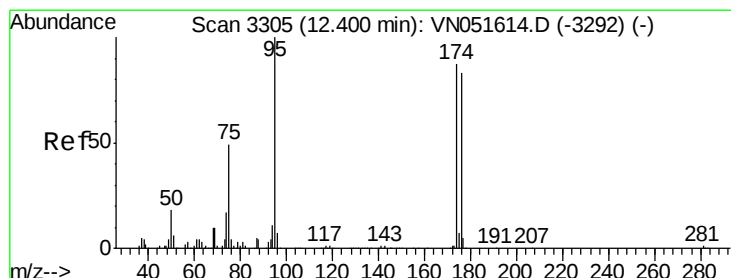
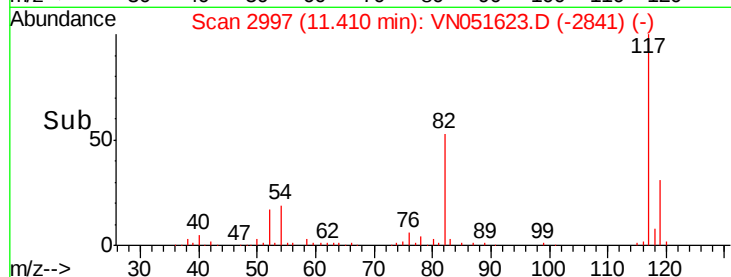
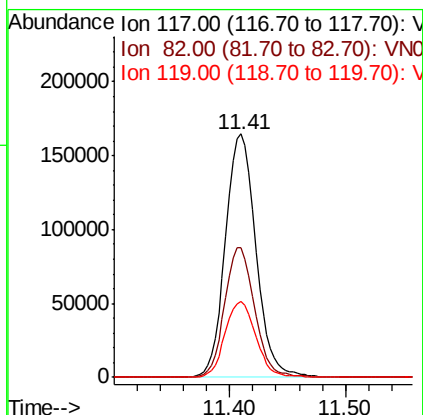
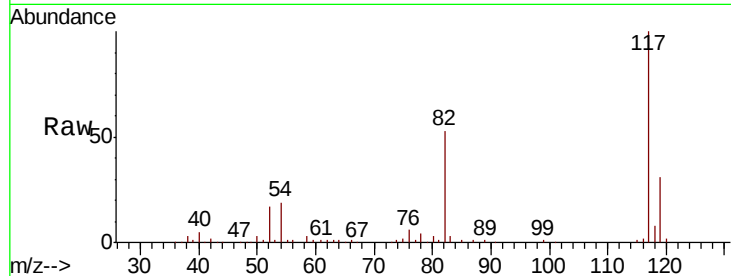




#57  
Chlorobenzene-d5  
Concen: 30.000 ug/l  
RT: 11.41 min Scan# 2997  
Delta R.T. 0.00 min  
Lab File: VN051623.D  
Acq: 28 Sep 2018 18:47

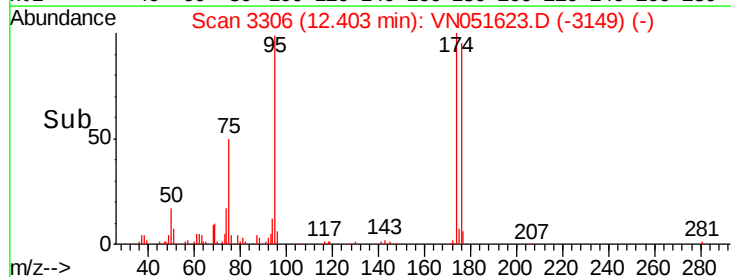
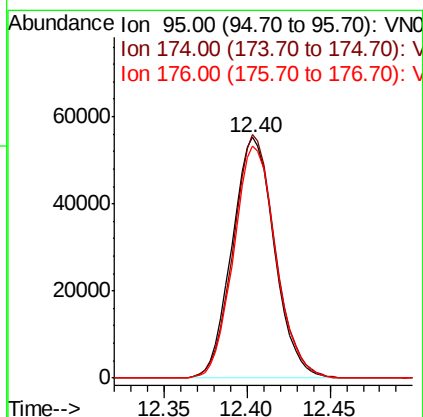
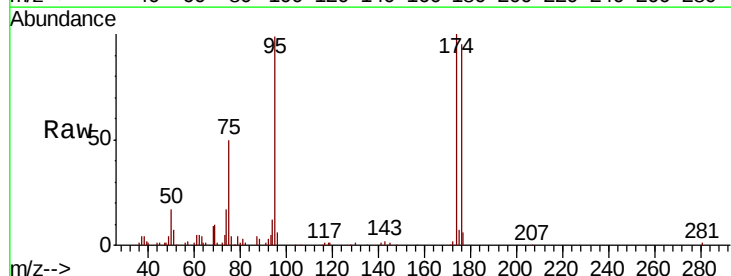
Instrument :  
MSVOA\_N  
ClientSampled :  
SPDES-1

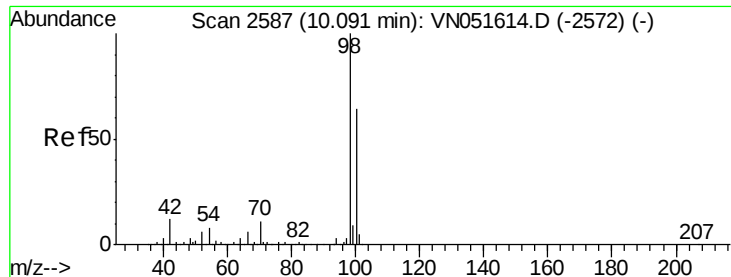
Tot Ion:117 Resp: 300062  
Ion Ratio Lower Upper  
117 100  
82 52.4 44.2 66.2  
119 31.6 25.2 37.8



#60  
4-Bromofluorobenzene  
Concen: Below ug/l  
RT: 12.40 min Scan# 3306  
Delta R.T. 0.00 min  
Lab File: VN051623.D  
Acq: 28 Sep 2018 18:47

Tgt Ion: 95 Resp: 98024  
Ion Ratio Lower Upper  
95 100  
174 100.6 71.2 106.8  
176 96.0 67.8 101.8





#63

Toluene-d8

Concen: Below ug/l

RT: 10.09 min Scan# 2587

Delta R.T. 0.00 min

Lab File: VN051623.D

Acq: 28 Sep 2018 18:47

Instrument :

MSVOA\_N

ClientSampleId :

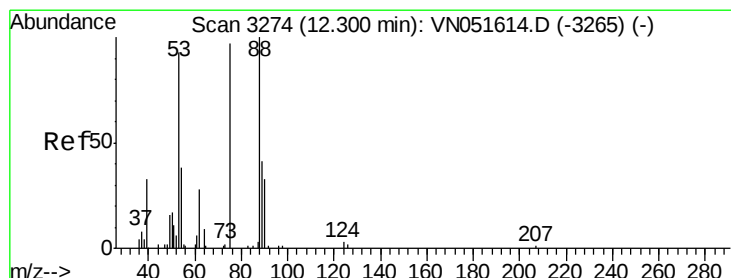
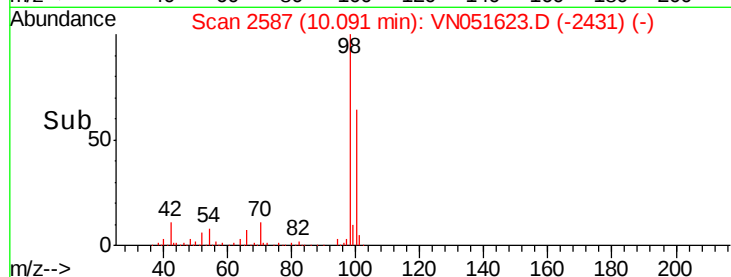
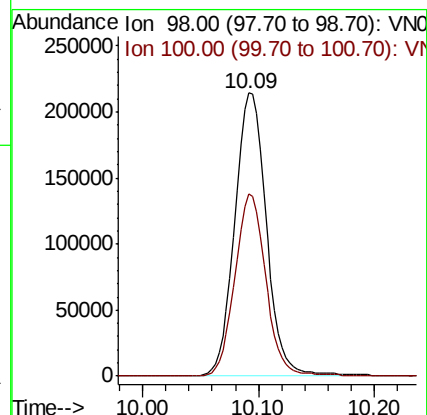
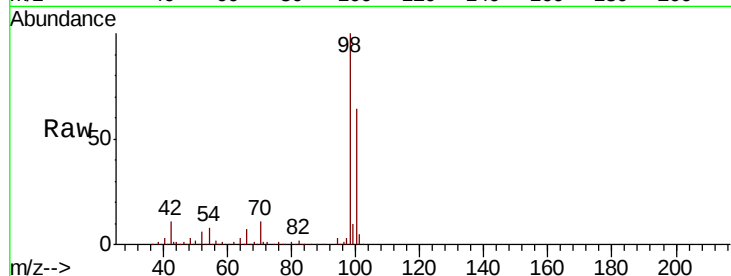
SPDES-1

Tot Ion: 98 Resp: 404288

Ion Ratio Lower Upper

98 100

100 63.1 51.4 77.0



#77

t-1,4-Dichloro-2-butene

Concen: 40.561 ug/l

RT: 12.40 min Scan# 3306

Delta R.T. 0.10 min

Lab File: VN051623.D

Acq: 28 Sep 2018 18:47

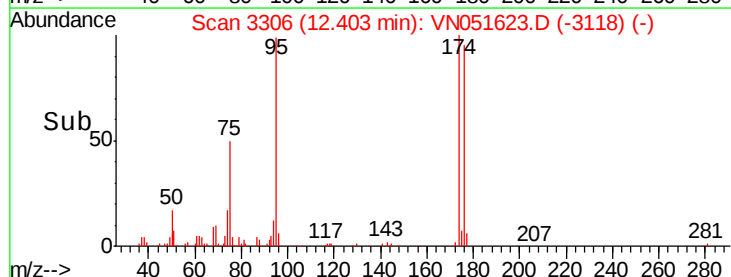
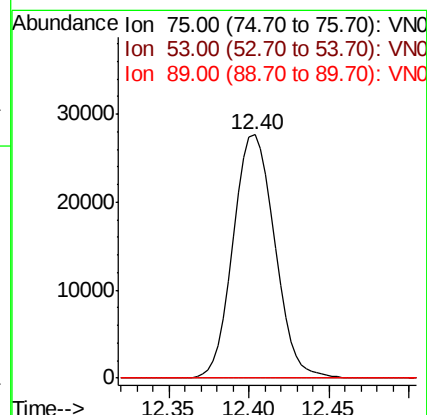
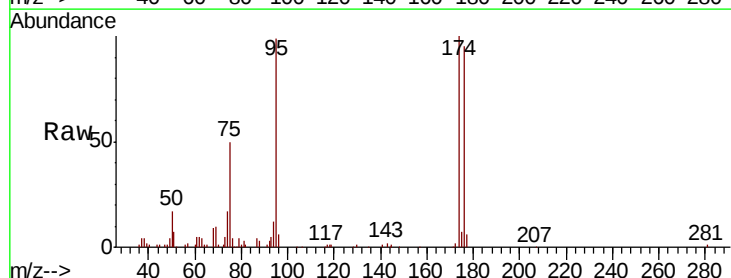
Tgt Ion: 75 Resp: 49105

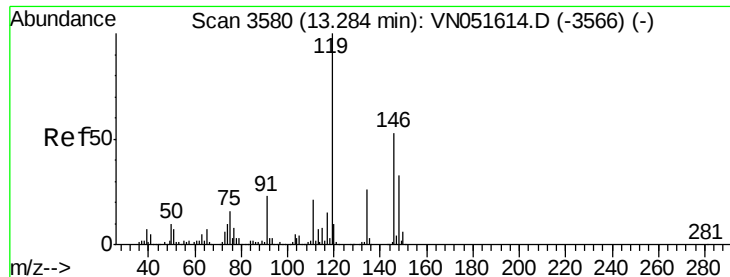
Ion Ratio Lower Upper

75 100

53 0.0 48.1 144.4#

89 0.0 22.4 67.3#

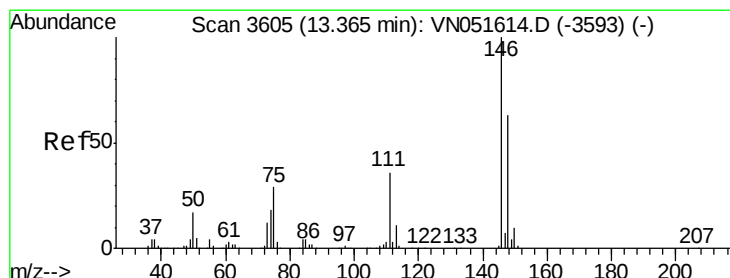
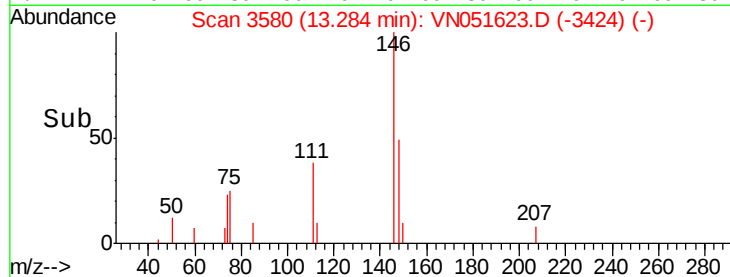
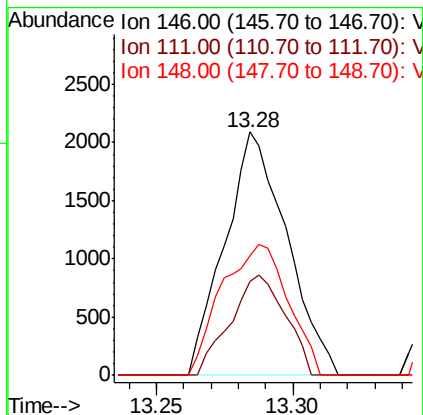
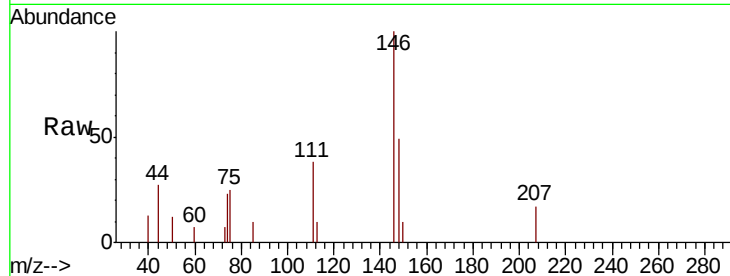




#83  
 1,3-Dichlorobenzene  
 Concen: 0.412 ug/l  
 RT: 13.28 min Scan# 3580  
 Delta R.T. 0.00 min  
 Lab File: VN051623.D  
 Acq: 28 Sep 2018 18:47

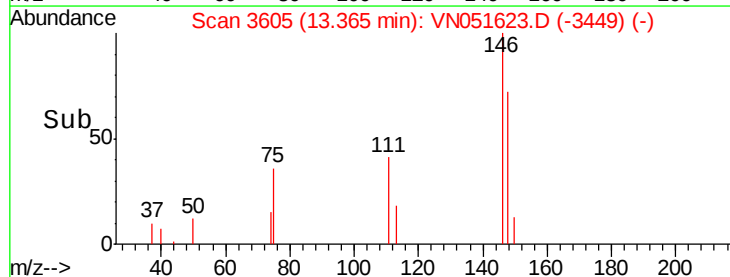
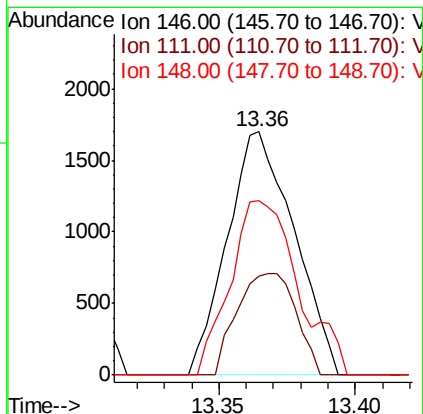
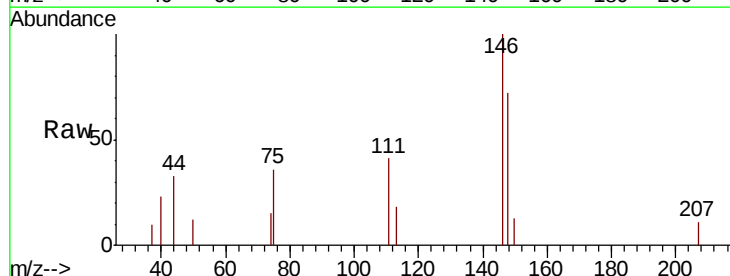
Instrument :  
 MSVOA\_N  
 ClientSampled :  
 SPDES-1

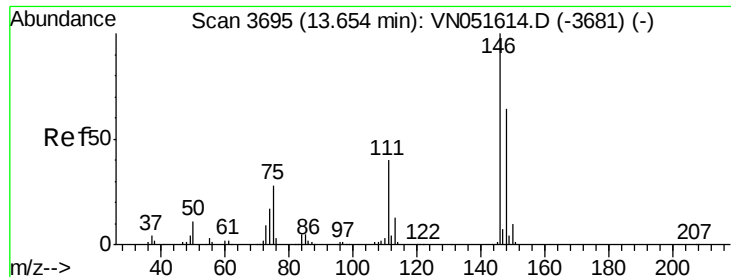
Tot Ion:146 Resp: 3301  
 Ion Ratio Lower Upper  
 146 100  
 111 36.3 19.9 59.6  
 148 57.6 32.4 97.2



#84  
 1,4-Dichlorobenzene  
 Concen: 0.385 ug/l  
 RT: 13.36 min Scan# 3605  
 Delta R.T. 0.00 min  
 Lab File: VN051623.D  
 Acq: 28 Sep 2018 18:47

Tgt Ion:146 Resp: 2899  
 Ion Ratio Lower Upper  
 146 100  
 111 36.7 18.6 55.8  
 148 66.2 32.1 96.5





#87

1,2-Dichlorobenzene

Concen: 0.216 ug/l

RT: 13.66 min Scan# 3696

Delta R.T. 0.00 min

Lab File: VN051623.D

Acq: 28 Sep 2018 18:47

Instrument :

MSVOA\_N

ClientSampleId :

SPDES-1

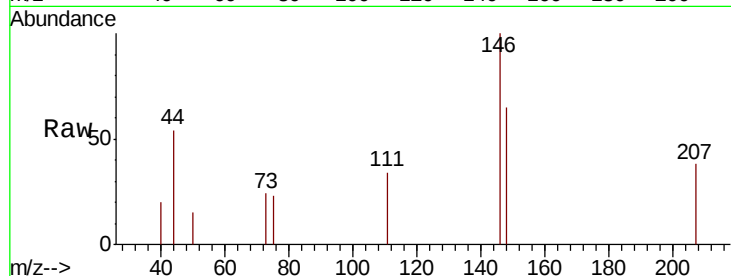
Tot Ion:146 Resp: 1696

Ion Ratio Lower Upper

146 100

111 29.7 20.1 60.3

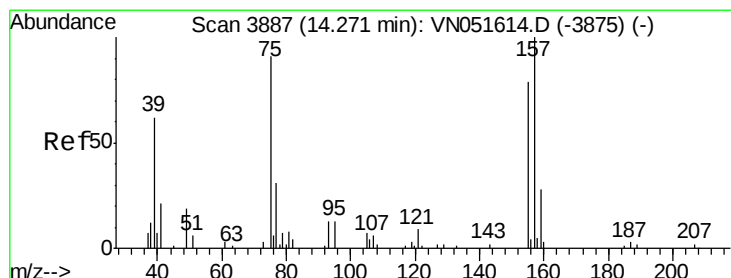
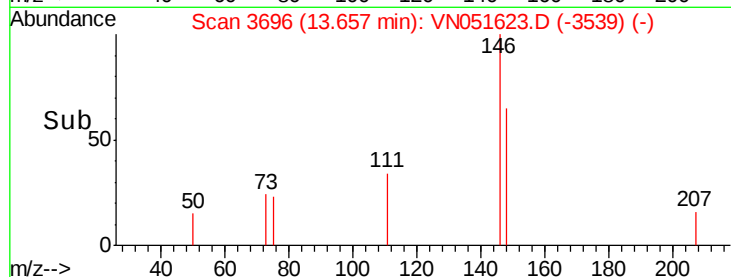
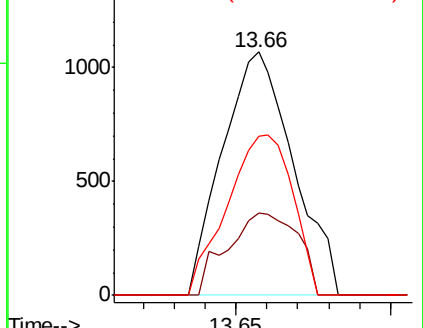
148 61.3 32.1 96.5



Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.00 (110.70 to 111.70): V

Ion 148.00 (147.70 to 148.70): V



#88

1,2-Dibromo-3-Chloropropane

Concen: 0.387 ug/l

RT: 14.27 min Scan# 3887

Delta R.T. 0.00 min

Lab File: VN051623.D

Acq: 28 Sep 2018 18:47

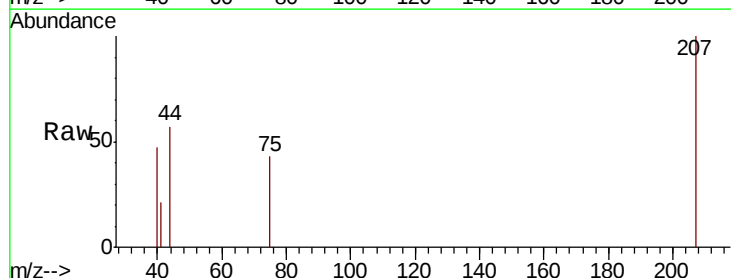
Tgt Ion: 75 Resp: 252

Ion Ratio Lower Upper

75 100

155 0.0 67.1 100.7#

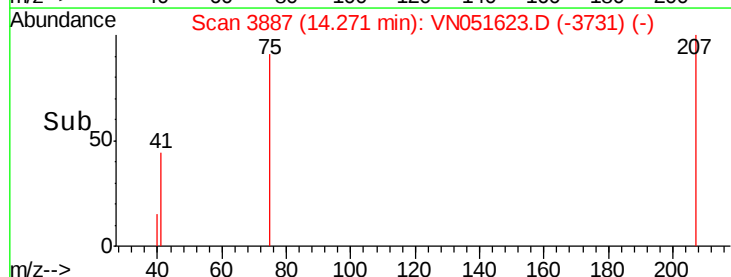
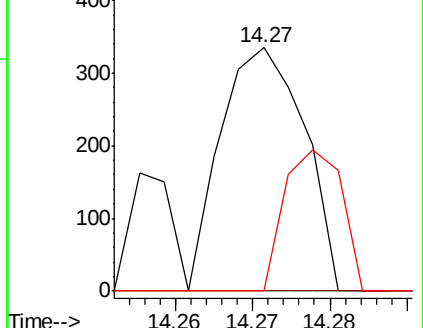
157 40.1 85.8 128.6#

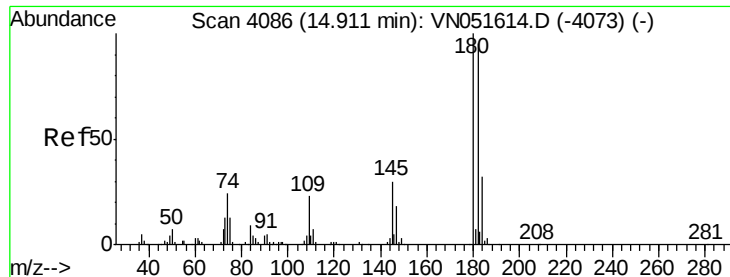


Abundance Ion 75.00 (74.70 to 75.70): V

Ion 155.00 (154.70 to 155.70): V

Ion 157.00 (156.70 to 157.70): V

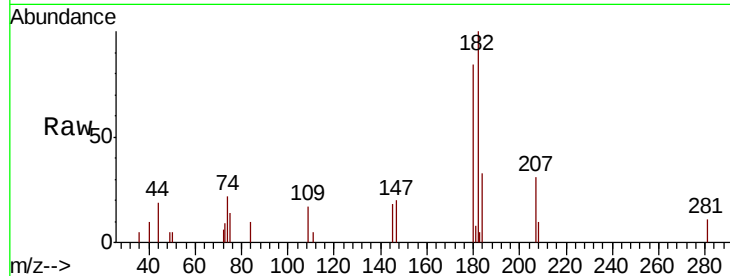




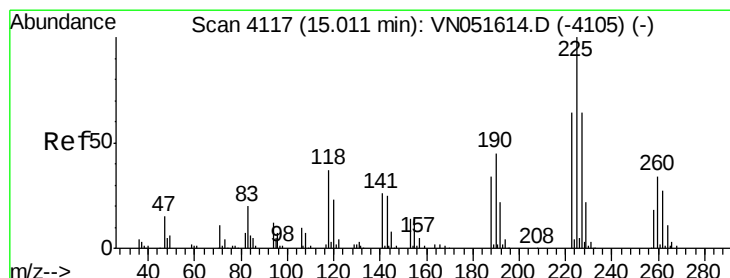
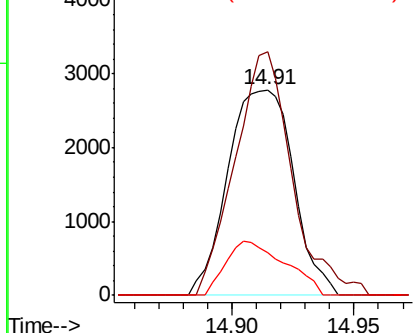
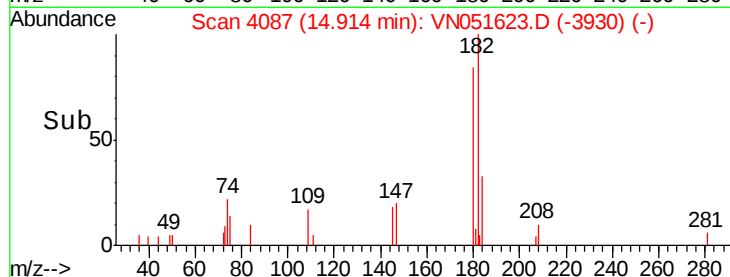
#89  
 1,2,4-Trichlorobenzene  
 Concen: 1.415 ug/l  
 RT: 14.91 min Scan# 4087  
 Delta R.T. 0.00 min  
 Lab File: VN051623.D  
 Acq: 28 Sep 2018 18:47

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 SPDES-1

Tot Ion:180 Resp: 5193  
 Ion Ratio Lower Upper  
 180 100  
 182 101.8 75.2 112.8  
 145 24.1 22.9 34.3

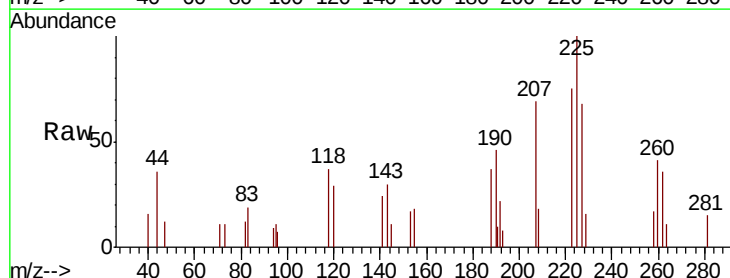


Abundance Ion 180.00 (179.70 to 180.70): V  
 Ion 182.00 (181.70 to 182.70): V  
 Ion 145.00 (144.70 to 145.70): V

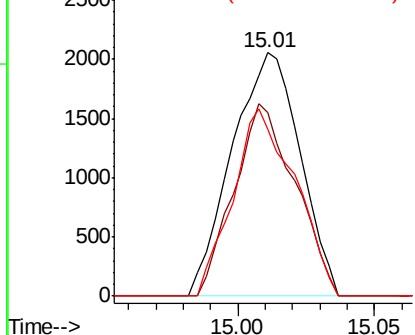
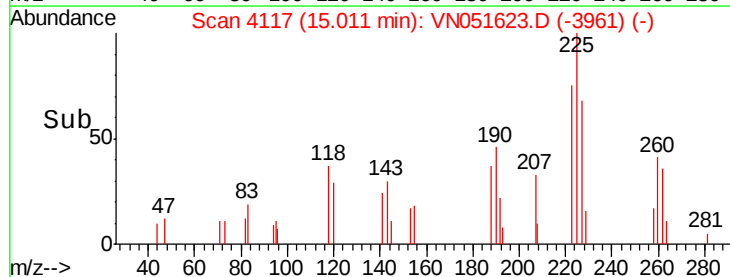


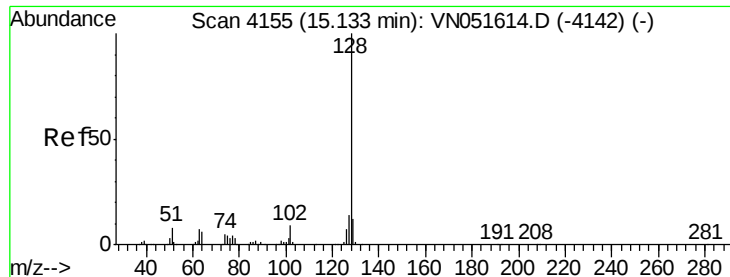
#90  
 Hexachlorobutadiene  
 Concen: 1.190 ug/l  
 RT: 15.01 min Scan# 4117  
 Delta R.T. 0.00 min  
 Lab File: VN051623.D  
 Acq: 28 Sep 2018 18:47

Tgt Ion:225 Resp: 3559  
 Ion Ratio Lower Upper  
 225 100  
 223 71.1 0.0 131.0  
 227 70.6 0.0 129.0



Abundance Ion 225.00 (224.70 to 225.70): V  
 Ion 223.00 (222.70 to 223.70): V  
 Ion 227.00 (226.70 to 227.70): V





#91

Naphthalene

Concen: 9.497 ug/l

RT: 15.13 min Scan# 4155

Delta R.T. 0.00 min

Lab File: VN051623.D

Acq: 28 Sep 2018 18:47

Instrument :

MSVOA\_N

ClientSampleId :

SPDES-1

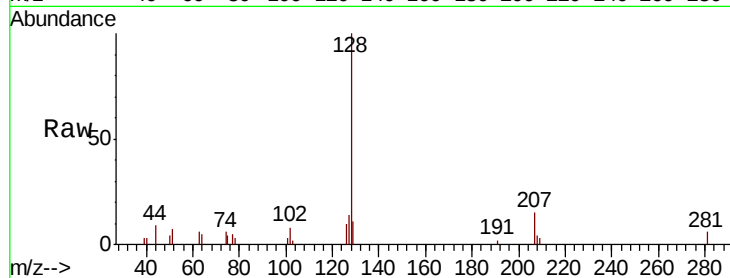
Tot Ion:128 Resp: 13203

Ion Ratio Lower Upper

128 100

127 14.5 10.8 16.2

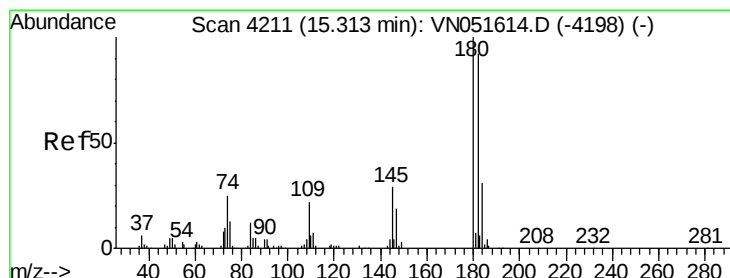
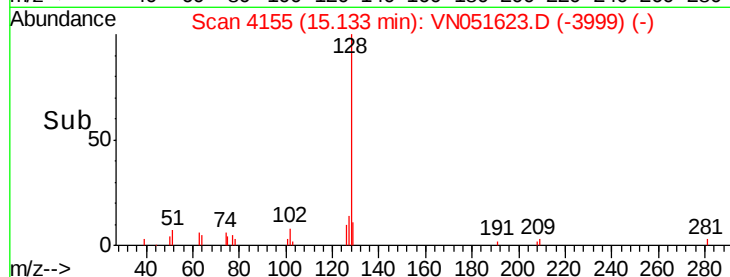
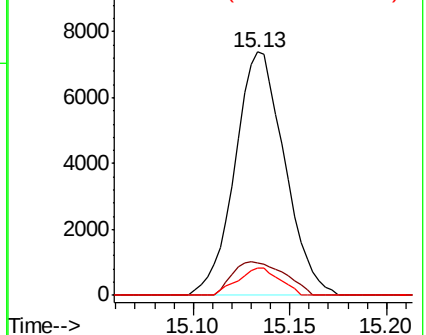
129 9.5 9.1 13.7



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: 1.407 ug/l

RT: 14.91 min Scan# 4087

Delta R.T. -0.40 min

Lab File: VN051623.D

Acq: 28 Sep 2018 18:47

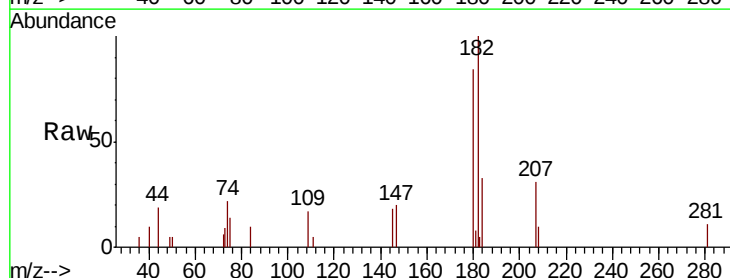
Tgt Ion:180 Resp: 5193

Ion Ratio Lower Upper

180 100

182 101.8 0.0 191.8

145 24.1 0.0 60.4



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

