

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN082418\  
 Data File : VN050864.D  
 Acq On : 24 Aug 2018 9:37  
 Operator : MD\SY  
 Sample : J4635-01  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 5 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 SPDES-1

Quant Time: Aug 24 14:03:17 2018  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA N\methods\624N072518W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Thu Jul 26 15:21:50 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.20  | 128  | 108931   | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.59  | 114  | 543860   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.41 | 117  | 457063   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |        |
|---------------------------|--------|-------|----------|----------|------|--------|
| 27) 1,2-Dichloroethane-d4 | 8.03   | 65    | 214796   | 29.01    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 96.70% |
| 60) 4-Bromofluorobenzene  | 12.40  | 95    | 148452   | 21.14    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 70.47% |
| 63) Toluene-d8            | 10.09  | 98    | 640816   | 29.35    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 97.83% |

## Target Compounds

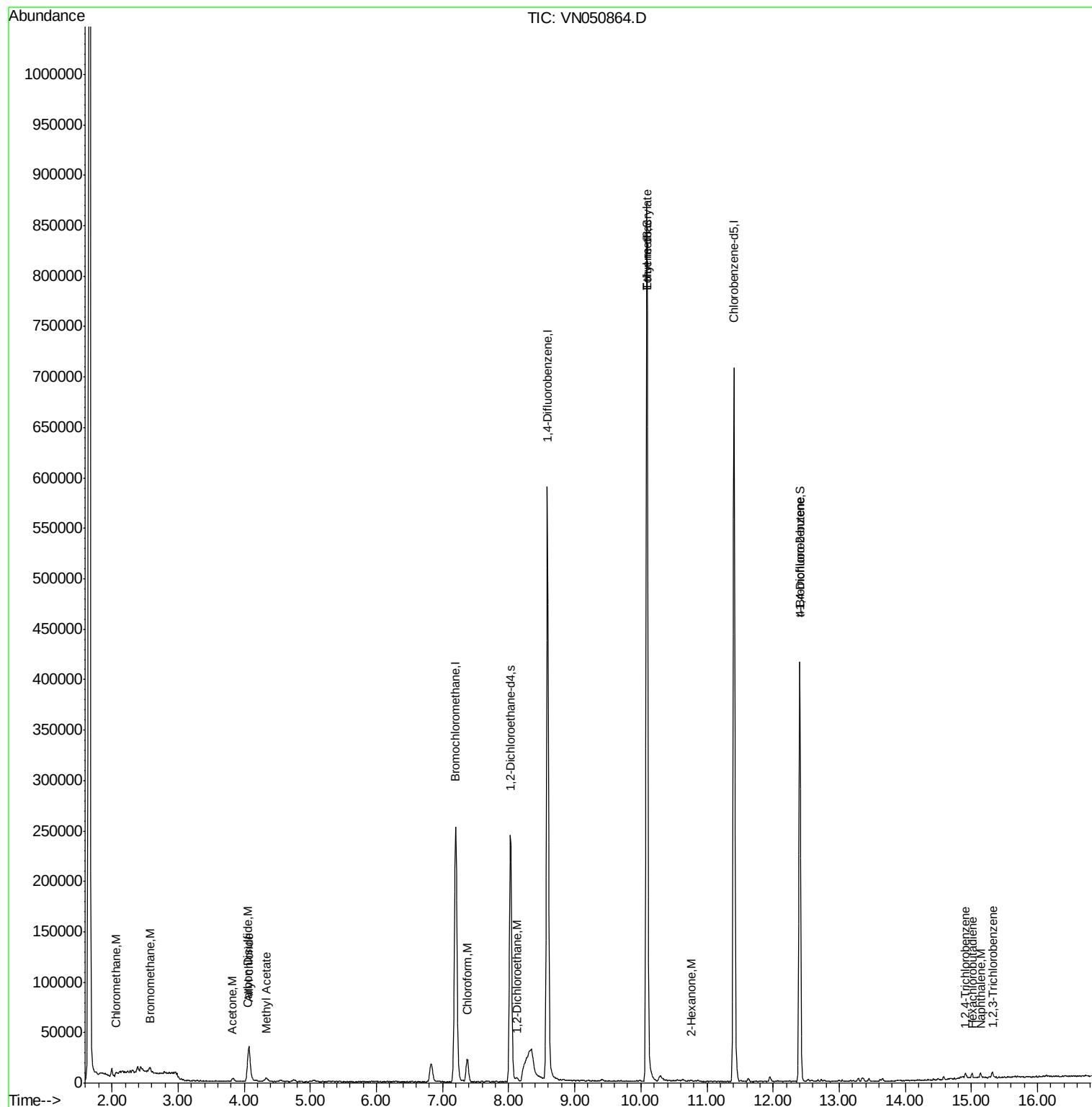
|                             |       |     |       |               | Ovalue |
|-----------------------------|-------|-----|-------|---------------|--------|
| 3) Chloromethane            | 2.06  | 50  | 2808  | 0.363 ug/l #  | 87     |
| 5) Bromomethane             | 2.57  | 94  | 3143  | 0.626 ug/l    | 93     |
| 12) Methyl Acetate          | 4.34  | 43  | 6540  | 0.983 ug/l    | 96     |
| 15) Acetone                 | 3.83  | 58  | 1022  | 1.732 ug/l    | 69     |
| 16) Carbon Disulfide        | 4.05  | 76  | 4499  | 0.253 ug/l #  | 89     |
| 17) Allyl chloride          | 4.07  | 41  | 6333  | 0.690 ug/l    | 98     |
| 25) Chloroform              | 7.37  | 83  | 24645 | 2.059 ug/l    | 99     |
| 36) 1,2-Dichloroethane      | 8.12  | 62  | 1842  | 0.219 ug/l #  | 83     |
| 51) Ethyl methacrylate      | 10.10 | 69  | 2015  | 0.277 ug/l    | 85     |
| 59) 2-Hexanone              | 10.76 | 43  | 1718  | 0.474 ug/l #  | 51     |
| 77) t-1,4-Dichloro-2-butene | 12.40 | 75  | 68487 | 34.374 ug/l # | 14     |
| 89) 1,2,4-Trichlorobenzene  | 14.91 | 180 | 1850  | 0.329 ug/l    | 98     |
| 90) Hexachlorobutadiene     | 15.01 | 225 | 1481  | 0.399 ug/l    | 72     |
| 91) Naphthalene             | 15.14 | 128 | 4473  | 7.893 ug/l #  | 93     |
| 92) 1,2,3-Trichlorobenzene  | 15.31 | 180 | 2344  | 0.410 ug/l    | 96     |

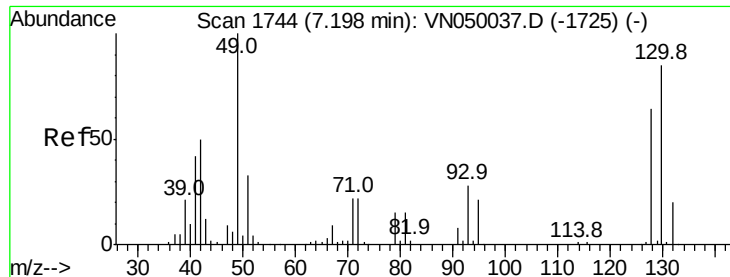
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Aug 24 14:03:17 2018  
Quant Method : Z:\voasrv\HPCHEM1\MSVOA N\methods\624N072518W.M  
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
QLast Update : Thu Jul 26 15:21:50 2018  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 30.000 ug/l

RT: 7.20 min Scan# 1744

Delta R.T. -0.00 min

Lab File: VN050864.D

Acq: 24 Aug 2018 9:37

Instrument :

MSVOA\_N

ClientSampleId :

SPDES-1

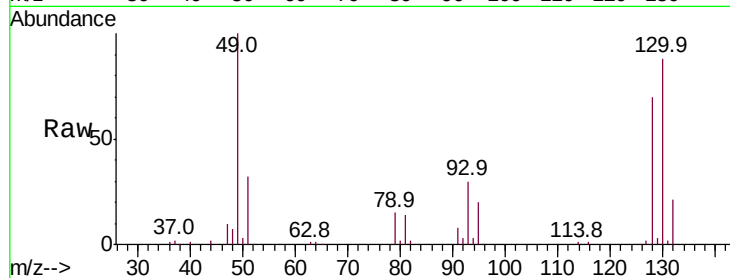
Tot Ion:128 Resp: 108931

Ion Ratio Lower Upper

128 100

49 147.7 0.0 378.3

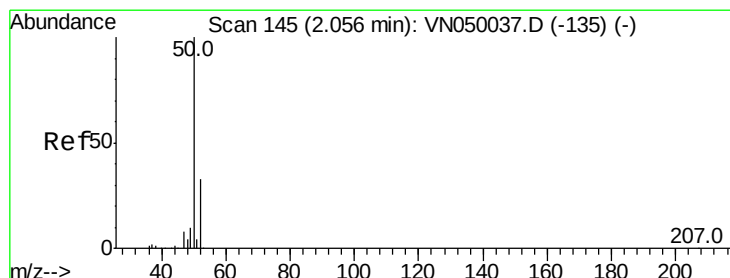
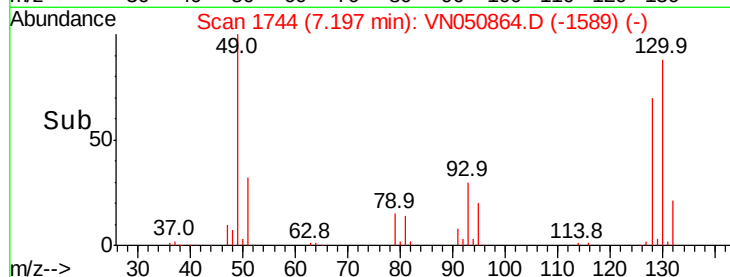
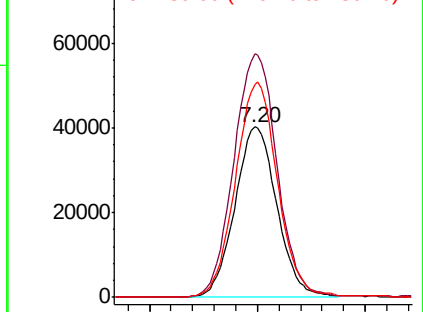
130 126.2 0.0 320.7



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



#3

Chloromethane

Concen: 0.363 ug/l

RT: 2.06 min Scan# 146

Delta R.T. 0.00 min

Lab File: VN050864.D

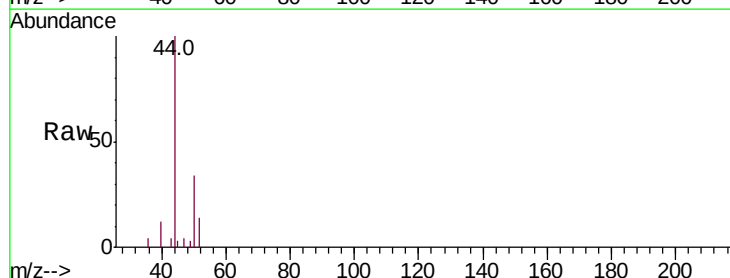
Acq: 24 Aug 2018 9:37

Tgt Ion: 50 Resp: 2808

Ion Ratio Lower Upper

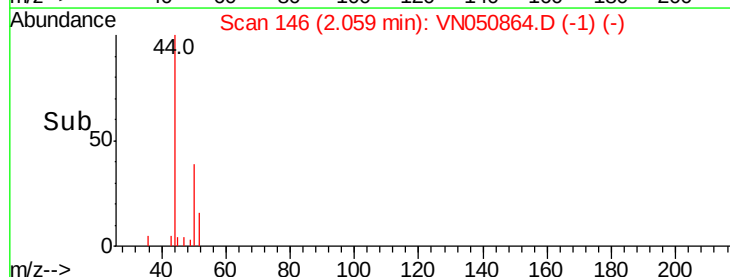
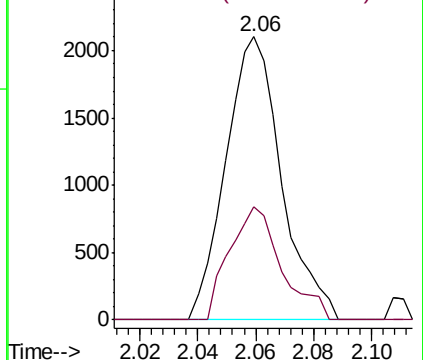
50 100

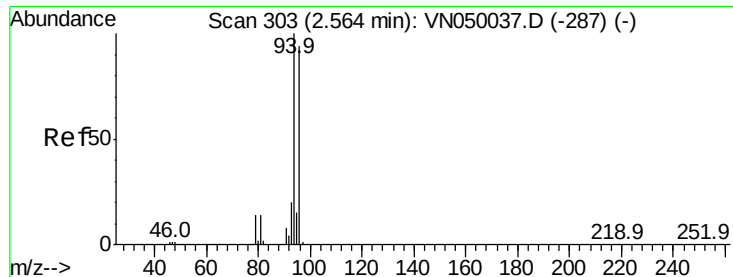
52 40.1 26.1 39.1#



Abundance Ion 50.00 (49.70 to 50.70): VN0

Ion 52.00 (51.70 to 52.70): VN0





#5

Bromomethane

Concen: 0.626 ug/l

RT: 2.57 min Scan# 305

Delta R.T. 0.01 min

Lab File: VN050864.D

Acq: 24 Aug 2018 9:37

Instrument :

MSVOA\_N

ClientSampleId :

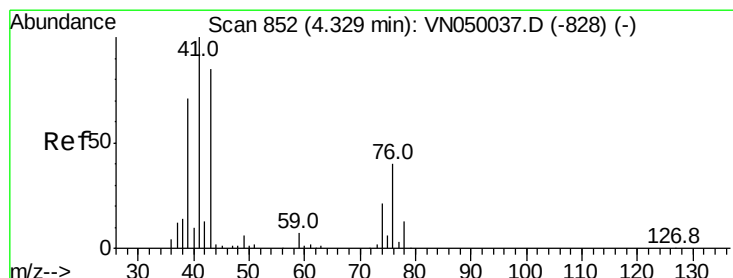
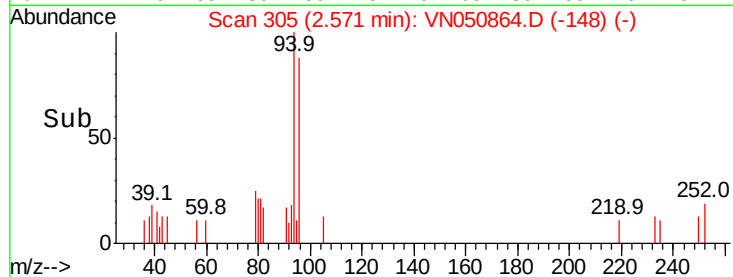
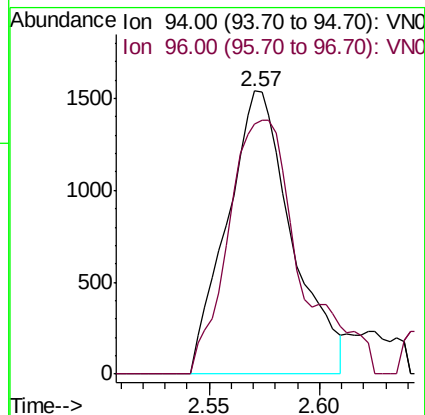
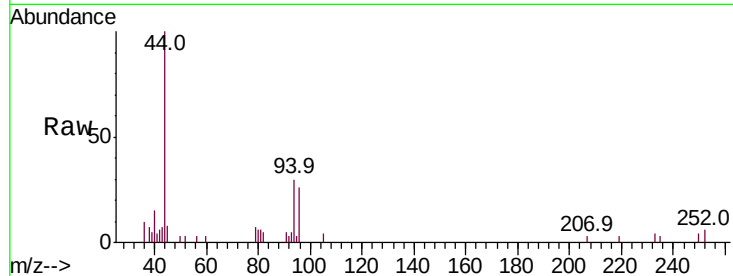
SPDES-1

Tot Ion: 94 Resp: 3143

Ion Ratio Lower Upper

94 100

96 88.2 75.9 113.9



#12

Methyl Acetate

Concen: 0.983 ug/l

RT: 4.34 min Scan# 855

Delta R.T. 0.01 min

Lab File: VN050864.D

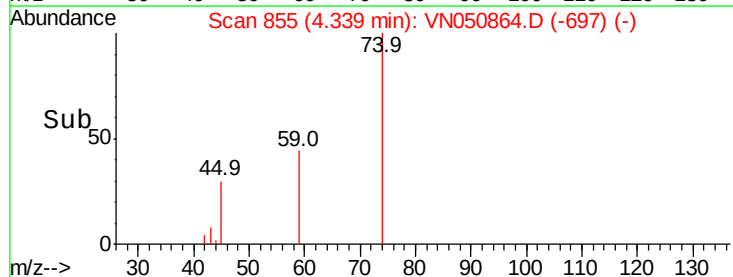
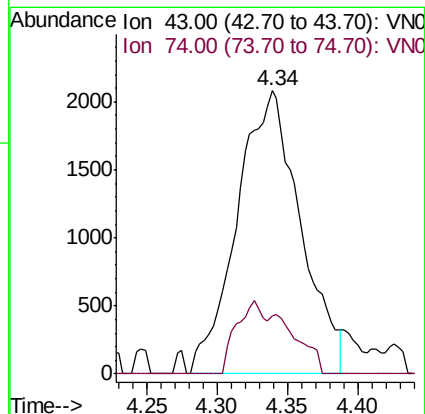
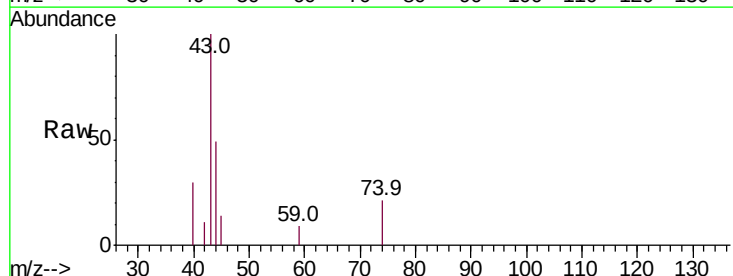
Acq: 24 Aug 2018 9:37

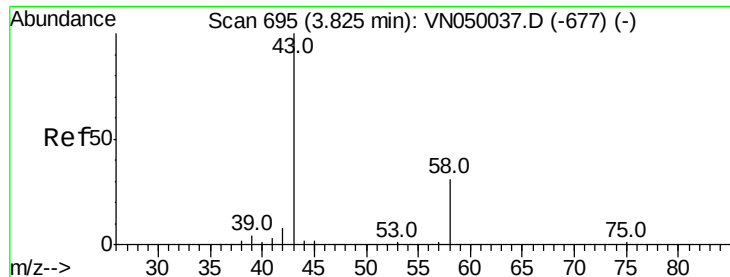
Tgt Ion: 43 Resp: 6540

Ion Ratio Lower Upper

43 100

74 22.3 19.3 28.9





#15

Acetone

Concen: 1.732 ug/l

RT: 3.83 min Scan# 696

Delta R.T. 0.00 min

Lab File: VN050864.D

Acq: 24 Aug 2018 9:37

Instrument :

MSVOA\_N

ClientSampleId :

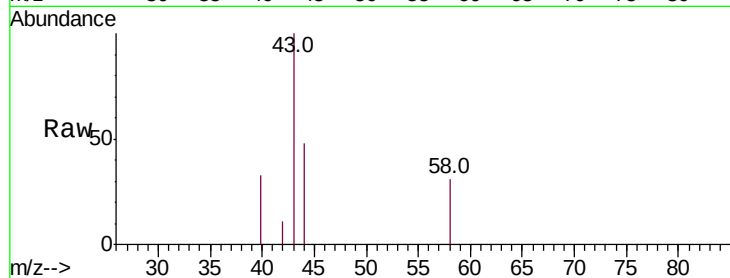
SPDES-1

Tot Ion: 58 Resp: 1022

Ion Ratio Lower Upper

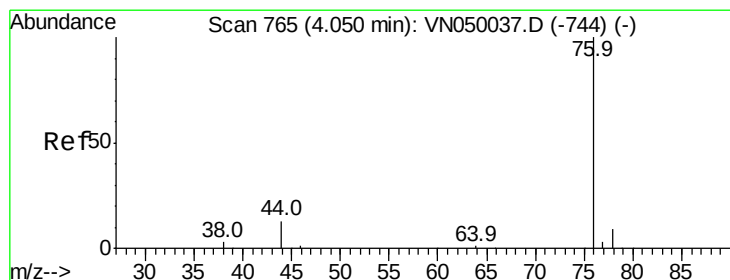
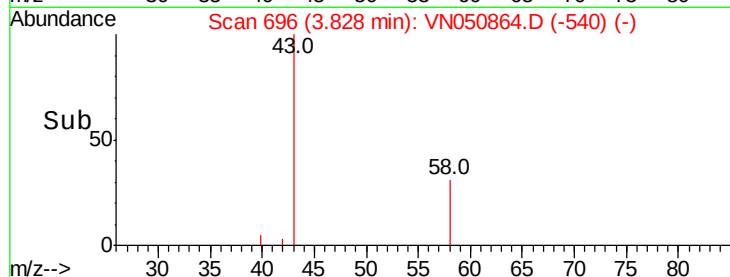
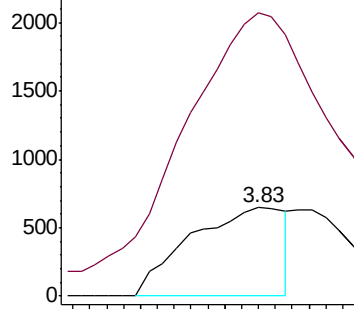
58 100

43 252.9 252.0 378.0



Abundance Ion 58.00 (57.70 to 58.70): VN0

Ion 43.00 (42.70 to 43.70): VN0



#16

Carbon Disulfide

Concen: 0.253 ug/l

RT: 4.05 min Scan# 765

Delta R.T. -0.00 min

Lab File: VN050864.D

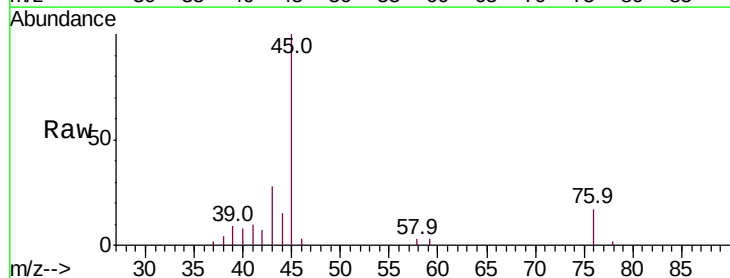
Acq: 24 Aug 2018 9:37

Tgt Ion: 76 Resp: 4499

Ion Ratio Lower Upper

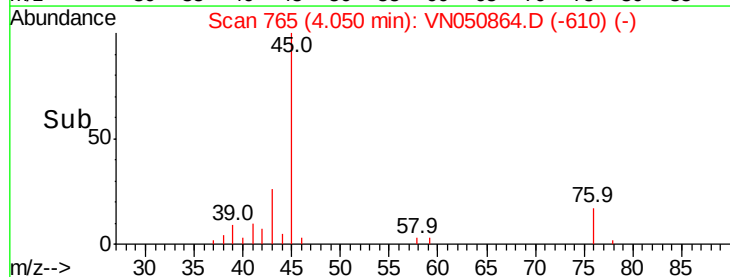
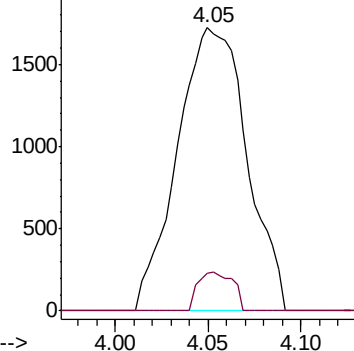
76 100

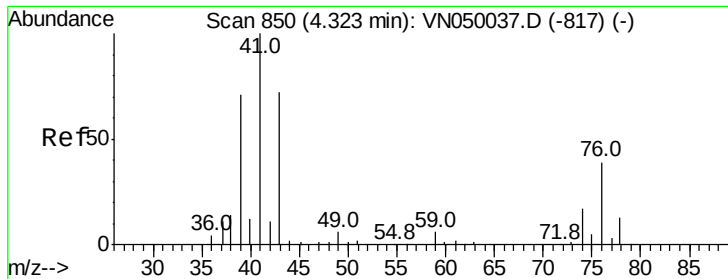
78 13.2 7.3 10.9#



Abundance Ion 76.00 (75.70 to 76.70): VN0

Ion 78.00 (77.70 to 78.70): VN0

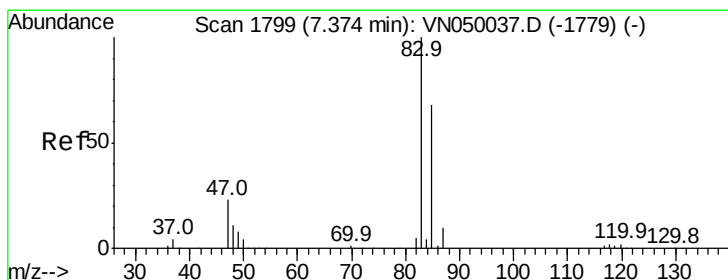
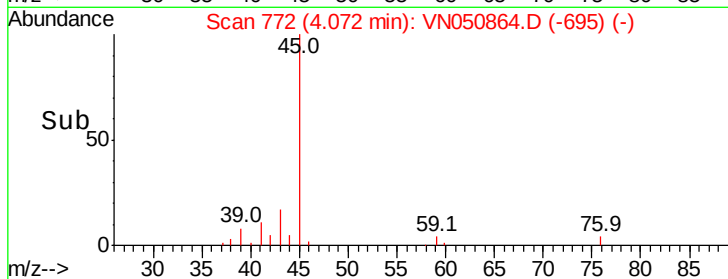
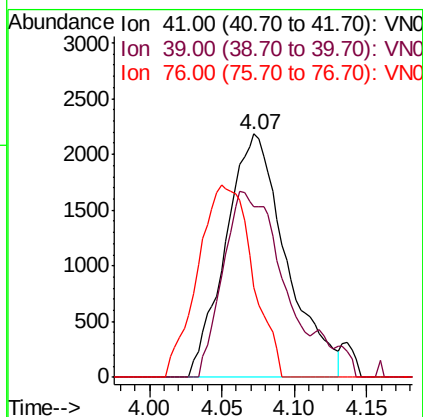
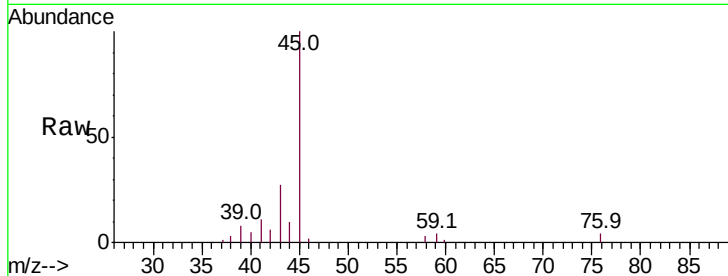




#17  
Allvl chloride  
Concen: 0.690 ug/l  
RT: 4.07 min Scan# 772  
Delta R.T. -0.25 min  
Lab File: VN050864.D  
Acq: 24 Aug 2018 9:37

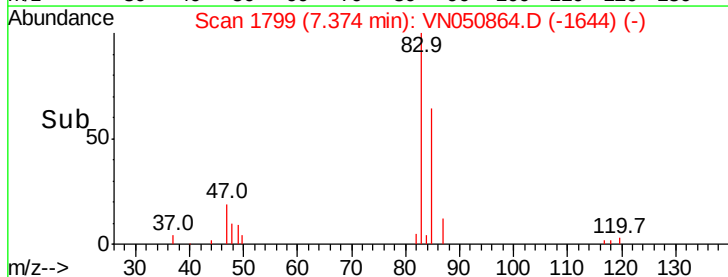
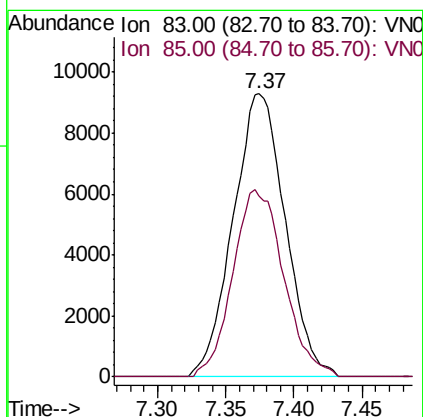
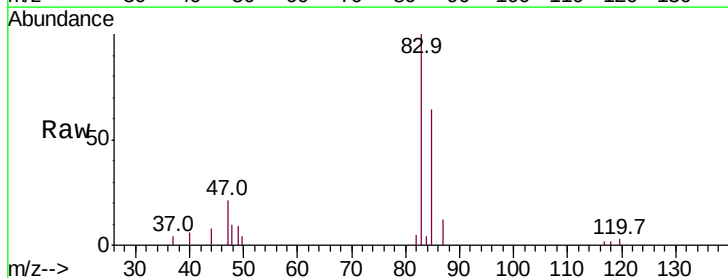
Instrument :  
MSVOA\_N  
ClientSampleId :  
SPDES-1

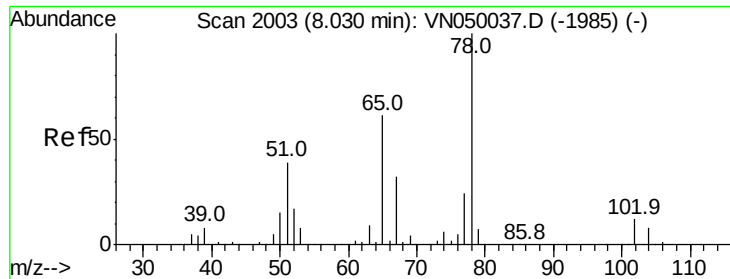
Tot Ion: 41 Resp: 6333  
Ion Ratio Lower Upper  
41 100  
39 70.2 35.4 106.3  
76 37.1 19.7 59.1



#25  
Chloroform  
Concen: 2.059 ug/l  
RT: 7.37 min Scan# 1799  
Delta R.T. -0.00 min  
Lab File: VN050864.D  
Acq: 24 Aug 2018 9:37

Tgt Ion: 83 Resp: 24645  
Ion Ratio Lower Upper  
83 100  
85 63.9 52.1 78.1

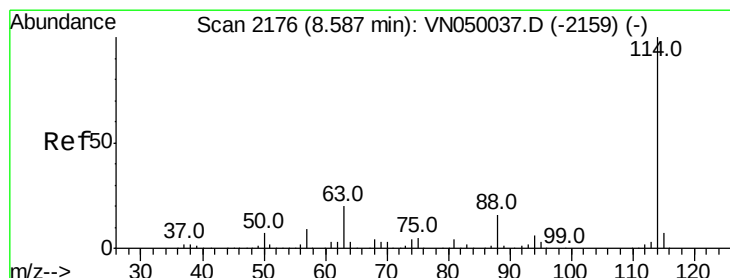
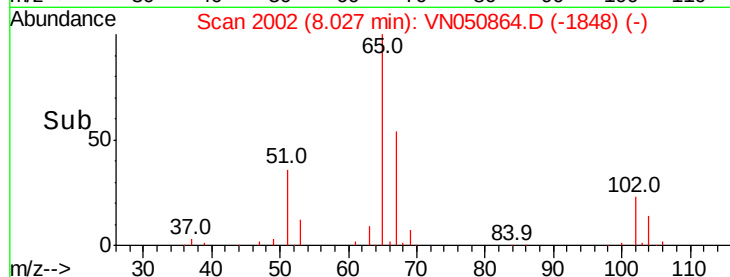
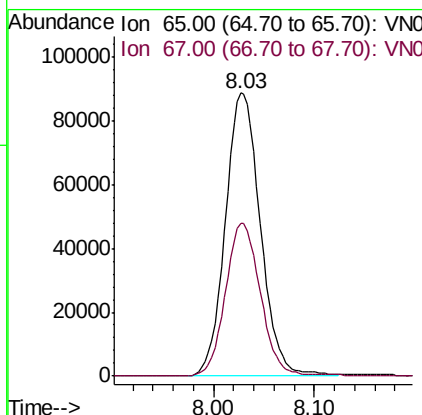
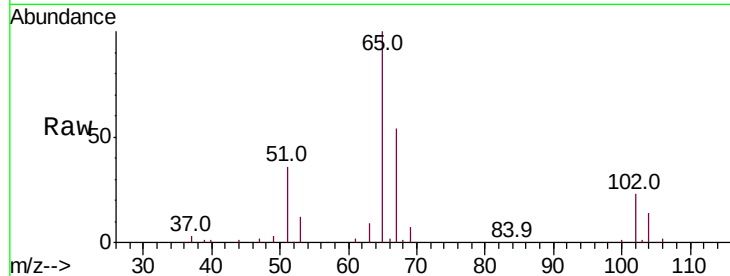




#27  
 1,2-Dichloroethane-d4  
 Concen: 29.010 ug/l  
 RT: 8.03 min Scan# 2002  
 Delta R.T. -0.00 min  
 Lab File: VN050864.D  
 Acq: 24 Aug 2018 9:37

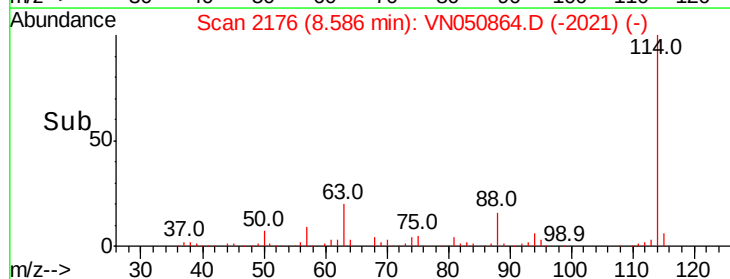
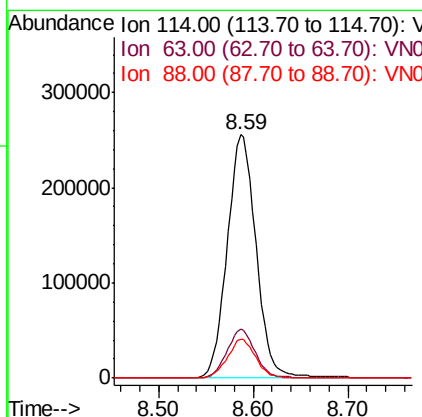
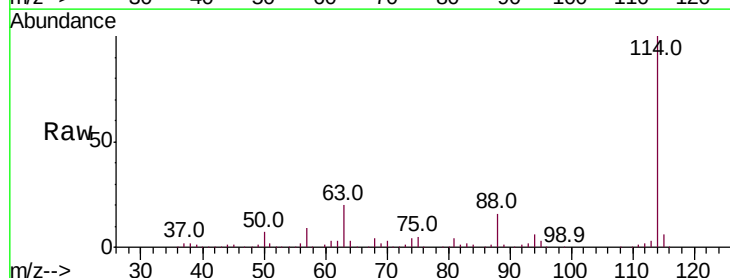
Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 SPDES-1

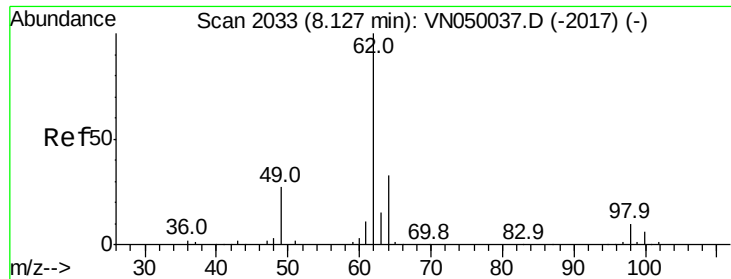
Tot Ion: 65 Resp: 214796  
 Ion Ratio Lower Upper  
 65 100  
 67 53.5 42.7 64.1



#28  
 1,4-Difluorobenzene  
 Concen: 30.000 ug/l  
 RT: 8.59 min Scan# 2176  
 Delta R.T. -0.00 min  
 Lab File: VN050864.D  
 Acq: 24 Aug 2018 9:37

Tgt Ion:114 Resp: 543860  
 Ion Ratio Lower Upper  
 114 100  
 63 19.7 16.2 24.2  
 88 15.6 12.3 18.5

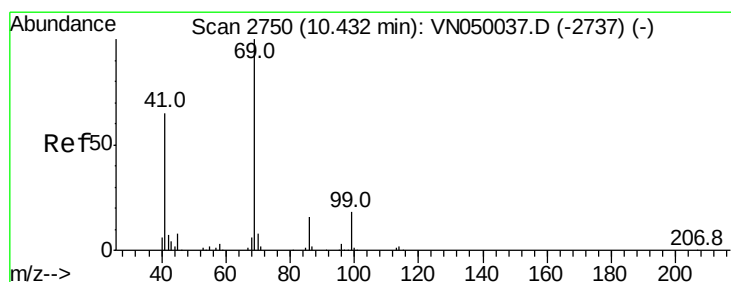
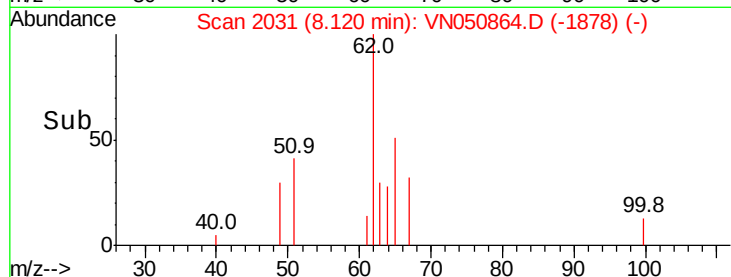
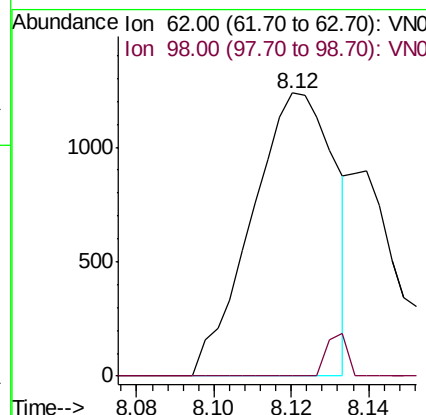
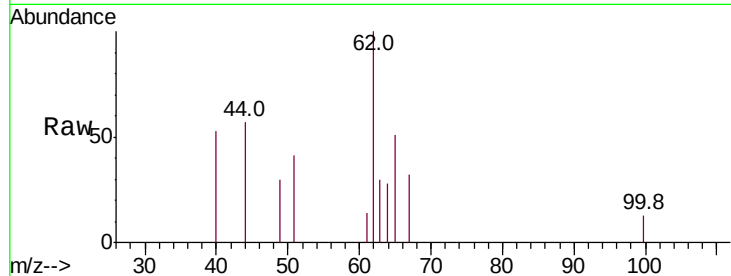




#36  
 1,2-Dichloroethane  
 Concen: 0.219 ug/l  
 RT: 8.12 min Scan# 2031  
 Delta R.T. -0.01 min  
 Lab File: VN050864.D  
 Acq: 24 Aug 2018 9:37

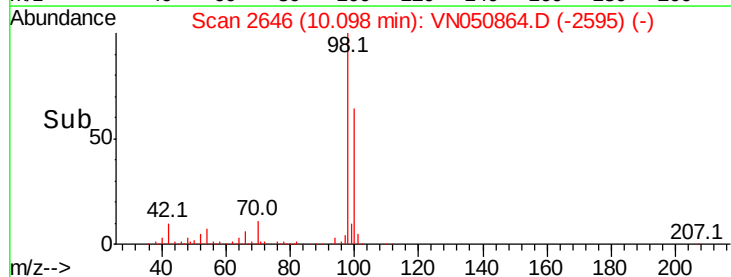
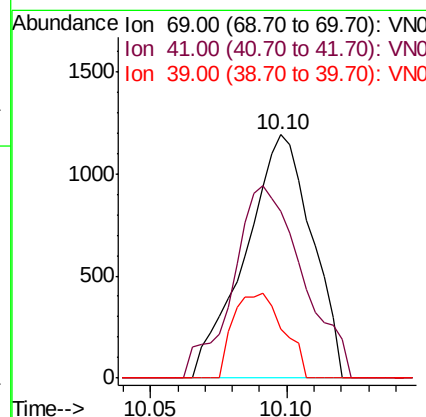
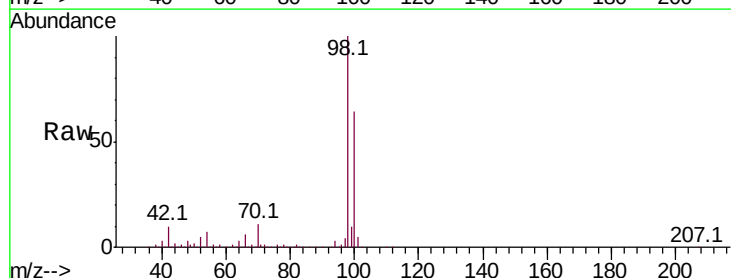
Instrument :  
 MSVOA\_N  
 ClientSampled :  
 SPDES-1

Tot Ion: 62 Resp: 1842  
 Ion Ratio Lower Upper  
 62 100  
 98 3.6 7.8 11.6#

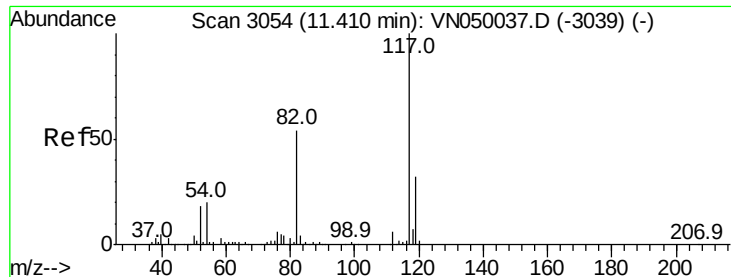


#51  
 Ethyl methacrylate  
 Concen: 0.277 ug/l  
 RT: 10.10 min Scan# 2646  
 Delta R.T. -0.33 min  
 Lab File: VN050864.D  
 Acq: 24 Aug 2018 9:37

Tgt Ion: 69 Resp: 2015  
 Ion Ratio Lower Upper  
 69 100  
 41 55.6 31.9 95.9  
 39 20.1 16.7 50.1



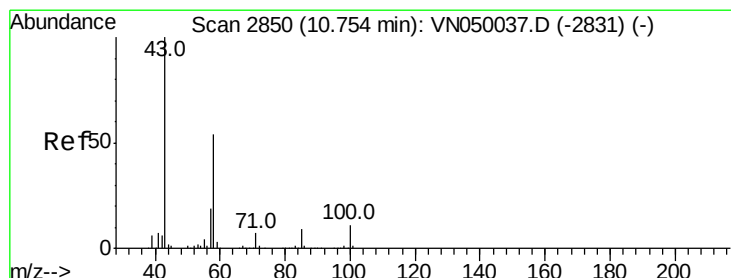
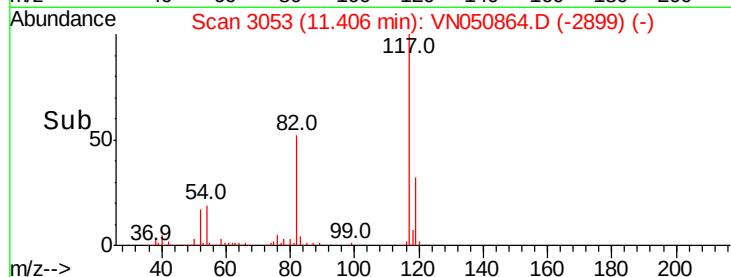
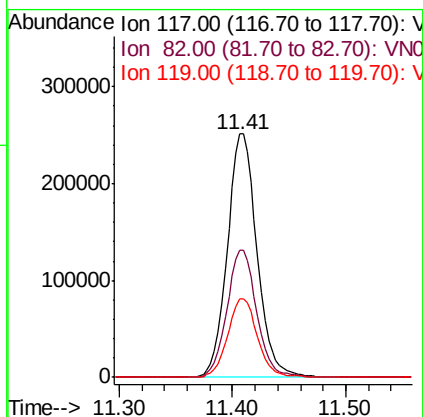
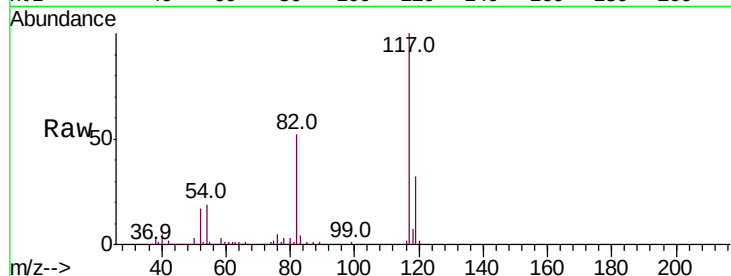




#57  
Chlorobenzene-d5  
Concen: 30.000 ug/l  
RT: 11.41 min Scan# 3053  
Delta R.T. -0.00 min  
Lab File: VN050864.D  
Acq: 24 Aug 2018 9:37

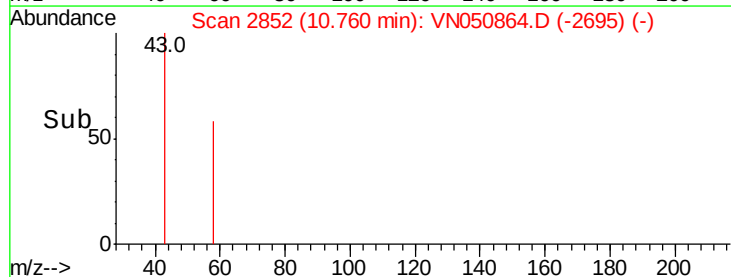
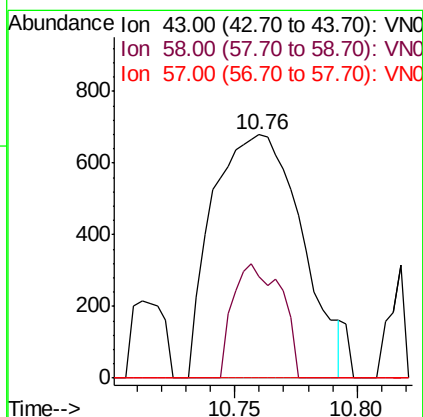
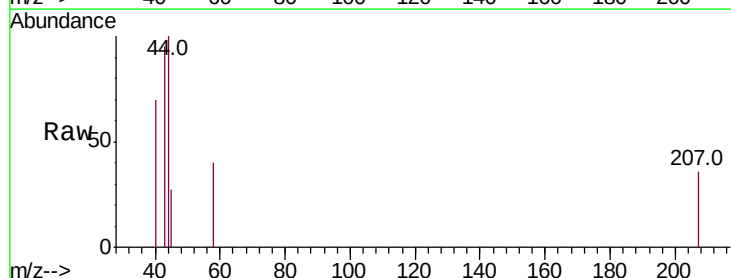
Instrument :  
MSVOA\_N  
ClientSampleId :  
SPDES-1

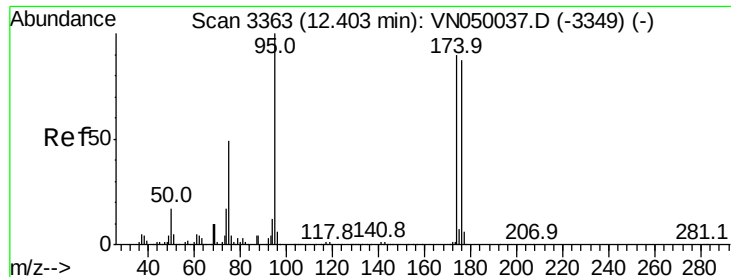
Tot Ion:117 Resp: 457063  
Ion Ratio Lower Upper  
117 100  
82 52.7 42.4 63.6  
119 32.4 25.4 38.0



#59  
2-Hexanone  
Concen: 0.474 ug/l  
RT: 10.76 min Scan# 2852  
Delta R.T. 0.01 min  
Lab File: VN050864.D  
Acq: 24 Aug 2018 9:37

Tgt Ion: 43 Resp: 1718  
Ion Ratio Lower Upper  
43 100  
58 17.8 43.8 65.8#  
57 0.0 15.1 22.7#

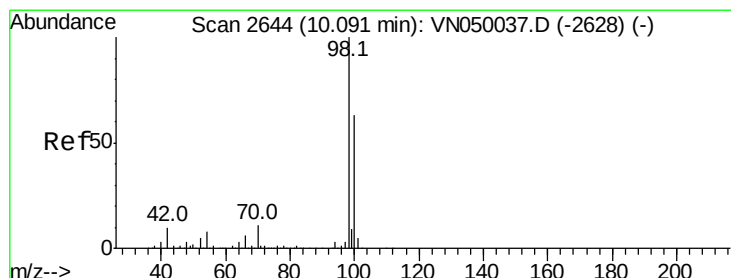
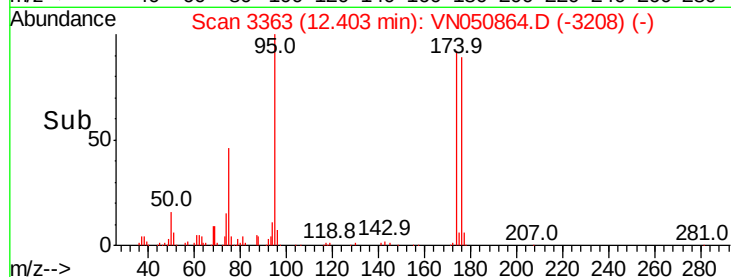
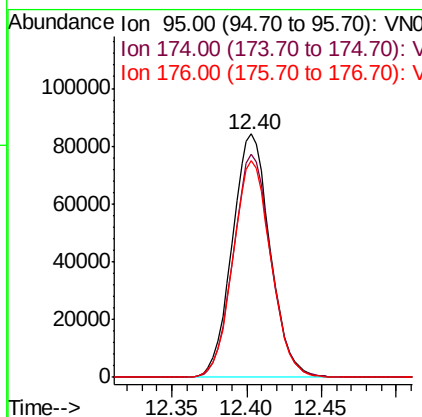
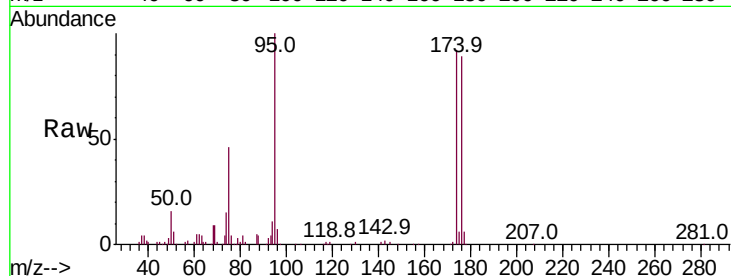




#60  
4-Bromofluorobenzene  
Concen: 21.141 ug/l  
RT: 12.40 min Scan# 3363  
Delta R.T. -0.00 min  
Lab File: VN050864.D  
Acq: 24 Aug 2018 9:37

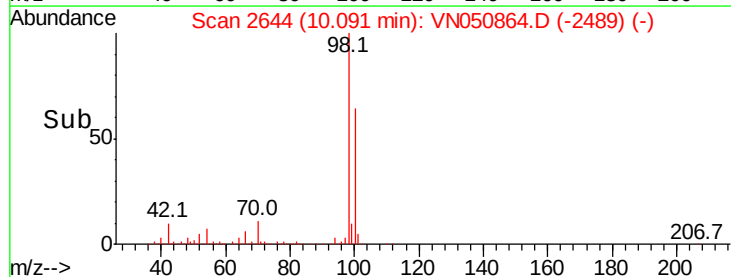
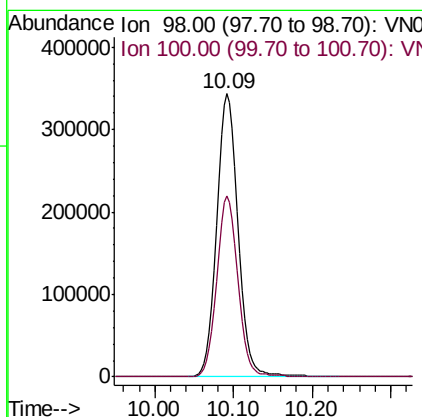
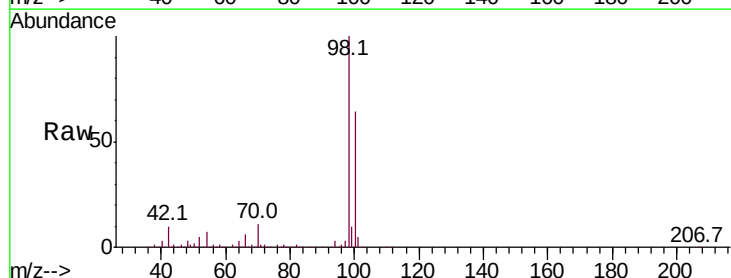
Instrument :  
MSVOA\_N  
ClientSampled :  
SPDES-1

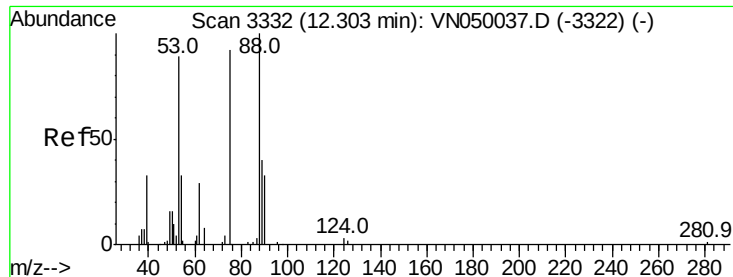
Tot Ion: 95 Resp: 148452  
Ion Ratio Lower Upper  
95 100  
174 90.9 72.3 108.5  
176 89.0 70.0 105.0



#63  
Toluene-d8  
Concen: 29.352 ug/l  
RT: 10.09 min Scan# 2644  
Delta R.T. -0.00 min  
Lab File: VN050864.D  
Acq: 24 Aug 2018 9:37

Tgt Ion: 98 Resp: 640816  
Ion Ratio Lower Upper  
98 100  
100 63.7 51.2 76.8





#77

t-1,4-Dichloro-2-butene

Concen: 34.374 ug/l

RT: 12.40 min Scan# 3363

Delta R.T. 0.10 min

Lab File: VN050864.D

Acq: 24 Aug 2018 9:37

Instrument :

MSVOA\_N

ClientSampleId :

SPDES-1

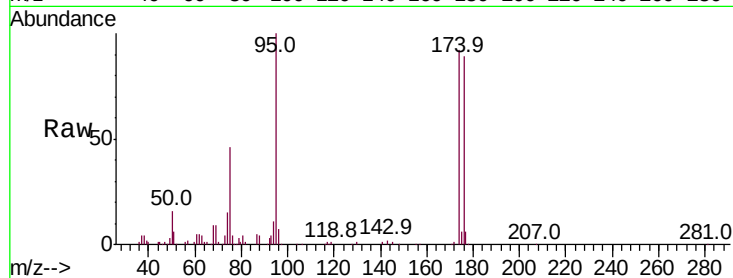
Tot Ion: 75 Resp: 68487

Ion Ratio Lower Upper

75 100

53 0.0 44.6 134.0#

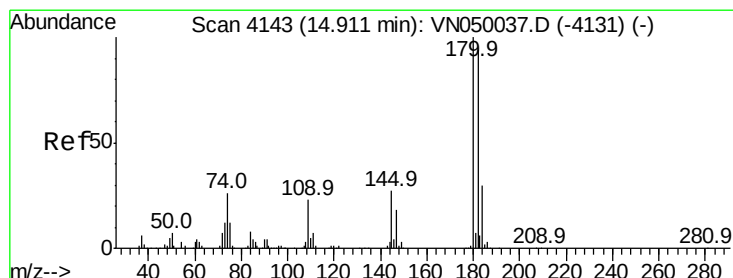
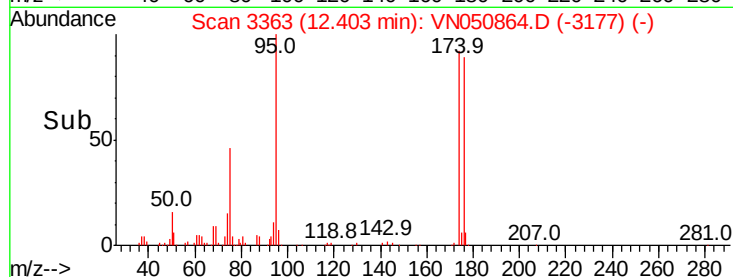
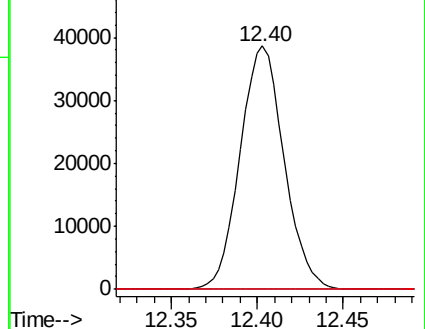
89 0.0 20.7 62.1#



Abundance Ion 75.00 (74.70 to 75.70): VN050037.D (-3322) (-)

Ion 53.00 (52.70 to 53.70): VN050037.D (-3322) (-)

Ion 89.00 (88.70 to 89.70): VN050037.D (-3322) (-)



#89

1,2,4-Trichlorobenzene

Concen: 0.329 ug/l

RT: 14.91 min Scan# 4142

Delta R.T. -0.00 min

Lab File: VN050864.D

Acq: 24 Aug 2018 9:37

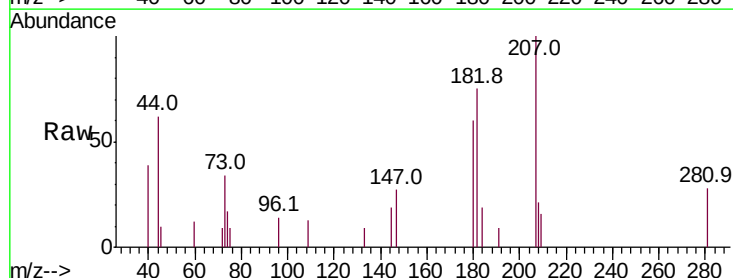
Tgt Ion: 180 Resp: 1850

Ion Ratio Lower Upper

180 100

182 96.6 76.7 115.1

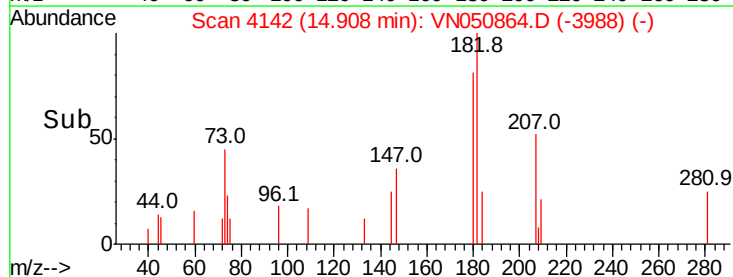
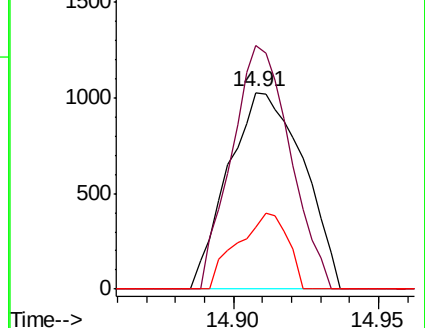
145 25.9 23.4 35.0

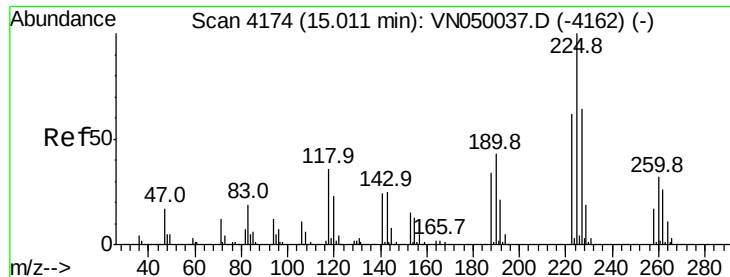


Abundance Ion 180.00 (179.70 to 180.70): VN050037.D (-4131) (-)

Ion 182.00 (181.70 to 182.70): VN050037.D (-4131) (-)

Ion 145.00 (144.70 to 145.70): VN050037.D (-4131) (-)





#90

Hexachlorobutadiene

Concen: 0.399 ug/l

RT: 15.01 min Scan# 4174

Delta R.T. -0.00 min

Lab File: VN050864.D

Acq: 24 Aug 2018 9:37

Instrument :

MSVOA\_N

ClientSampleId :

SPDES-1

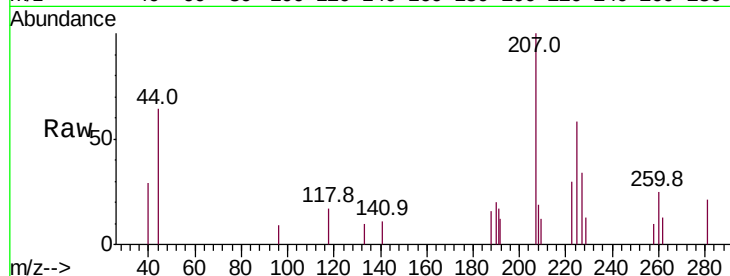
Tot Ion:225 Resp: 1481

Ion Ratio Lower Upper

225 100

223 45.0 0.0 124.4

227 40.4 0.0 133.0



Abundance Ion 225.00 (224.70 to 225.70): V

Ion 223.00 (222.70 to 223.70): V

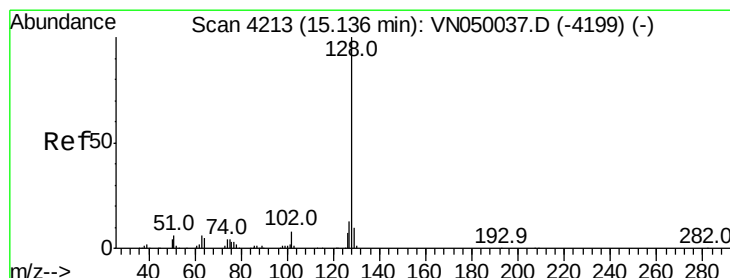
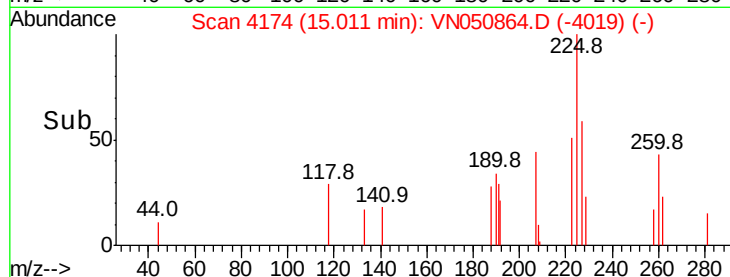
Ion 227.00 (226.70 to 227.70): V

15.01

500

0

Time-->



#91

Naphthalene

Concen: 7.893 ug/l

RT: 15.14 min Scan# 4213

Delta R.T. -0.00 min

Lab File: VN050864.D

Acq: 24 Aug 2018 9:37

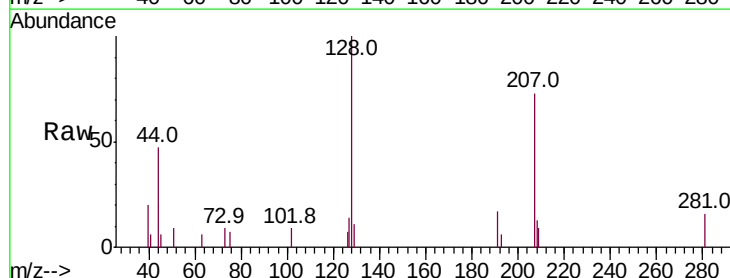
Tgt Ion:128 Resp: 4473

Ion Ratio Lower Upper

128 100

127 14.7 10.2 15.4

129 7.9 9.0 13.4#



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

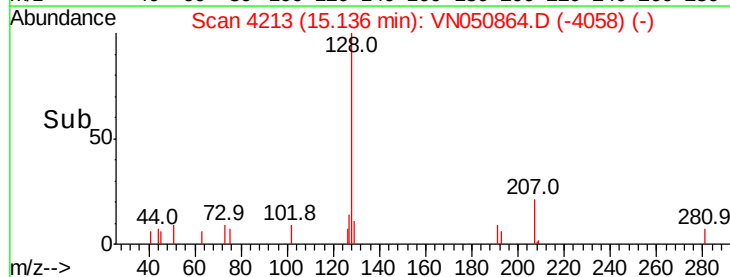
15.14

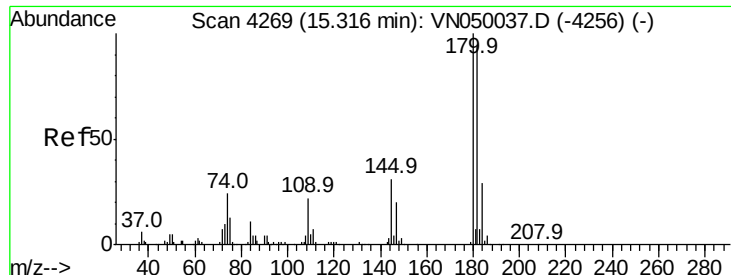
2000

1000

0

Time-->





#92  
 1,2,3-Trichlorobenzene  
 Concen: 0.410 ug/l  
 RT: 15.31 min Scan# 4268  
 Delta R.T. -0.00 min  
 Lab File: VN050864.D  
 Acq: 24 Aug 2018 9:37

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 SPDES-1

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 94.5  | 0.0   | 188.8 |
| 145     | 21.7  | 0.0   | 60.8  |

