

Data Path : Z:\VOASRV\HPCHEM1\MSVOA D\DATA\VD013019\  
 Data File : VD060803.D  
 Acq On : 30 Jan 2019 14:03  
 Operator : VA/AP  
 Sample : K1282-01RE  
 Misc : 3.86g/5ml/MSVOA D/SOIL  
 ALS Vial : 6 Sample Multiplier: 1

Instrument :  
 MSVOA\_D  
 ClientSampleId :  
 TP-1RE

Quant Time: Jan 31 04:59:19 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_D\METHOD\82D012819S.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Jan 29 13:53:55 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 6.81  | 168  | 332588   | 50.00 | ug/l  | 0.02     |
| 34) 1,4-Difluorobenzene    | 7.99  | 114  | 395091   | 50.00 | ug/l  | 0.02     |
| 63) Chlorobenzene-d5       | 12.17 | 117  | 220568   | 50.00 | ug/l  | 0.01     |
| 72) 1,4-Dichlorobenzene-d4 | 14.33 | 152  | 44985    | 50.00 | ug/l  | 0.01     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-----------------------------|-------|------|----------|-------|--------|----------|
| 33) 1,2-Dichloroethane-d4   | 7.24  | 65   | 198590   | 38.95 | ug/l   | 0.02     |
| Spiked Amount               |       |      | Recovery | =     | 77.90% |          |
| 35) Dibromofluoromethane    | 6.70  | 113  | 156152   | 41.21 | ug/l   | 0.03     |
| Spiked Amount               |       |      | Recovery | =     | 82.42% |          |
| 50) Toluene-d8              | 10.20 | 98   | 287913   | 32.54 | ug/l   | 0.01     |
| Spiked Amount               |       |      | Recovery | =     | 65.08% |          |
| 62) 4-Bromofluorobenzene    | 13.36 | 95   | 63519    | 14.28 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 28.56% |          |

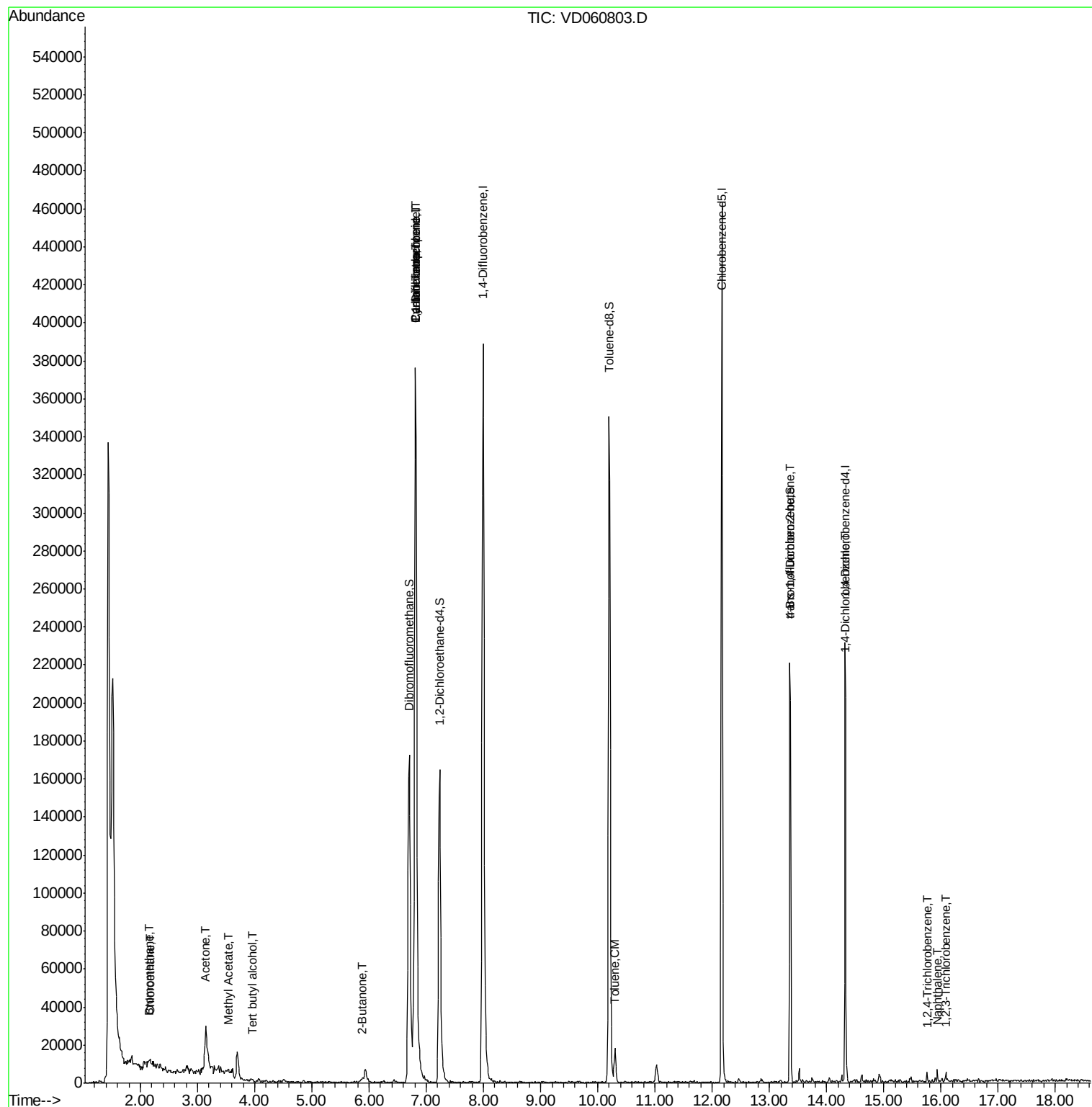
| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 5) Bromomethane                | 2.15  | 94   | 1083     | 1.334     | ug/l # | 1      |
| 6) Chloroethane                | 2.19  | 64   | 261      | 2.868     | ug/l # | 37     |
| 11) Tert butyl alcohol         | 3.95  | 59   | 1880     | 7.715     | ug/l # | 69     |
| 13) Acrolein                   | 2.83  | 56   | 202      | Below Cal |        | 87     |
| 16) Acetone                    | 3.14  | 43   | 64467    | 87.538    | ug/l # | 89     |
| 18) Methyl Acetate             | 3.53  | 43   | 3218     | 2.204     | ug/l # | 63     |
| 20) Methylene Chloride         | 3.70  | 84   | 7621     | Below Cal | #      | 84     |
| 25) 2-Butanone                 | 5.87  | 43   | 4626     | 4.908     | ug/l # | 59     |
| 31) Cyclohexane                | 6.81  | 56   | 11370    | 2.430     | ug/l # | 1      |
| 36) 1,1-Dichloropropene        | 6.81  | 75   | 32827    | 6.959     | ug/l # | 56     |
| 38) Carbon Tetrachloride       | 6.81  | 117  | 37843    | 6.397     | ug/l # | 13     |
| 52) Toluene                    | 10.30 | 92   | 8399     | 1.422     | ug/l   | 80     |
| 81) trans-1,4-Dichloro-2-buten | 13.36 | 75   | 32229    | 149.858   | ug/l # | 1      |
| 88) 1,4-Dichlorobenzene        | 14.34 | 146  | 1952     | 1.218     | ug/l   | 97     |
| 93) 1,2,4-Trichlorobenzene     | 15.76 | 180  | 1335     | 1.126     | ug/l   | 80     |
| 95) Naphthalene                | 15.94 | 128  | 3576     | 1.964     | ug/l # | 72     |
| 96) 1,2,3-Trichlorobenzene     | 16.09 | 180  | 1653     | 1.604     | ug/l   | 96     |

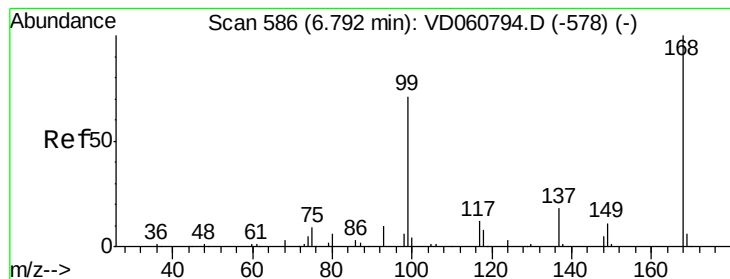
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Jan 31 04:59:19 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_D\METHOD\82D012819S.M  
Quant Title : SW846 8260  
QLast Update : Tue Jan 29 13:53:55 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 6.81 min Scan# 588

Delta R.T. 0.02 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

Instrument :

MSVOA\_D

ClientSampleId :

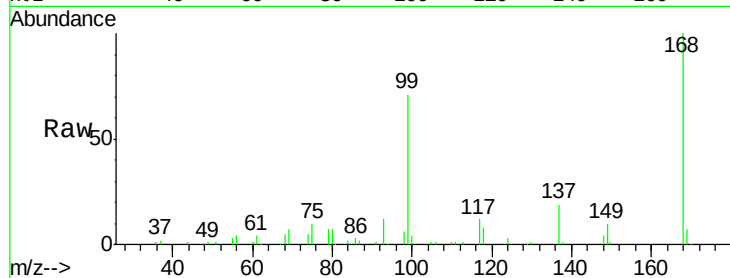
TP-1RE

Tot Ion:168 Resp: 332588

Ion Ratio Lower Upper

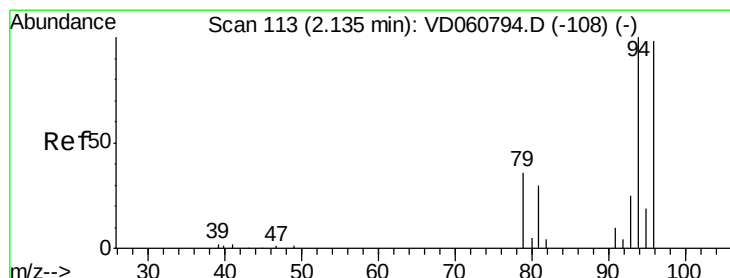
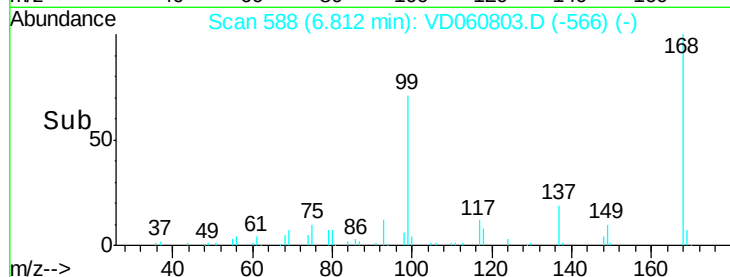
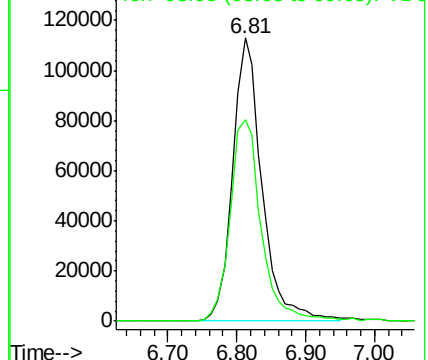
168 100

99 71.3 59.2 88.8



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.95 (98.65 to 99.65): VDC



#5

Bromomethane

Concen: 1.334 ug/l

RT: 2.15 min Scan# 114

Delta R.T. 0.01 min

Lab File: VD060803.D

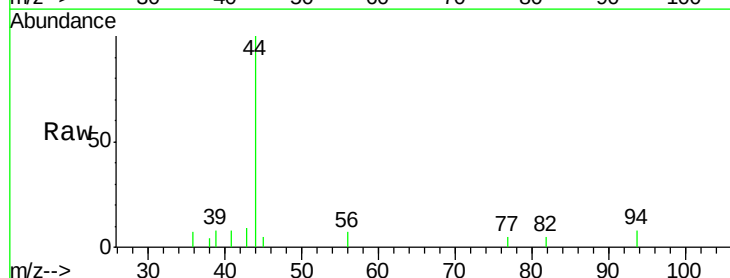
Acq: 30 Jan 2019 14:03

Tgt Ion: 94 Resp: 1083

Ion Ratio Lower Upper

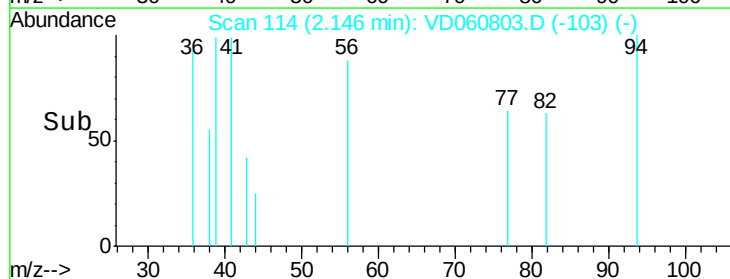
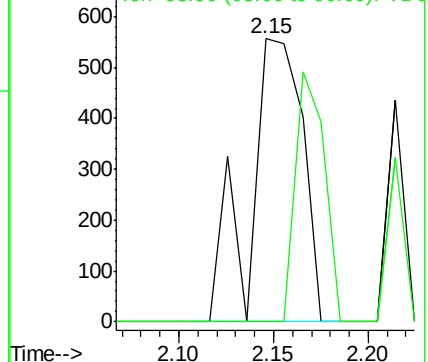
94 100

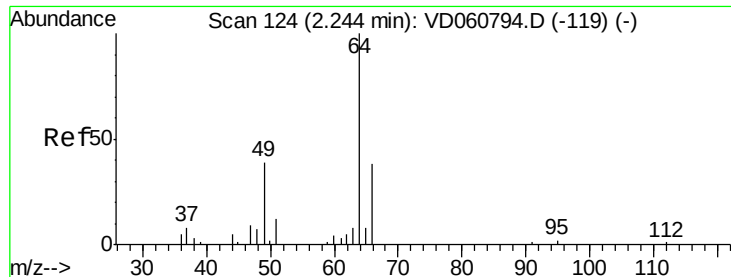
96 0.0 78.0 117.0#



Abundance Ion 93.90 (93.60 to 94.60): VDC

Ion 95.90 (95.60 to 96.60): VDC





#6

Chloroethane

Concen: 2.868 ug/l

RT: 2.19 min Scan# 118

Delta R.T. -0.06 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

Instrument :

MSVOA\_D

ClientSampleId :

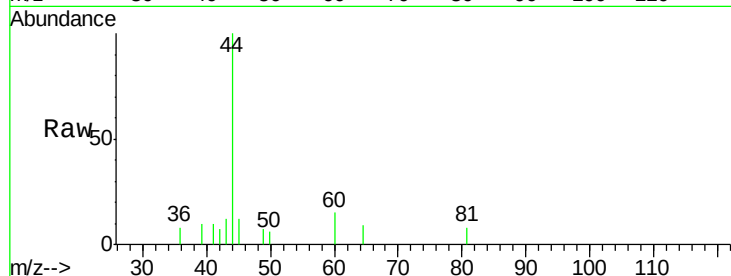
TP-1RE

Tot Ion: 64 Resp: 261

Ion Ratio Lower Upper

64 100

66 0.0 30.2 45.4#



Abundance Ion 63.95 (63.65 to 64.65): VDC

Ion 65.90 (65.60 to 66.60): VDC

2.19

400

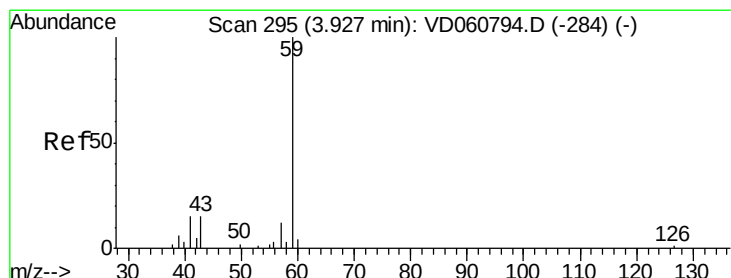
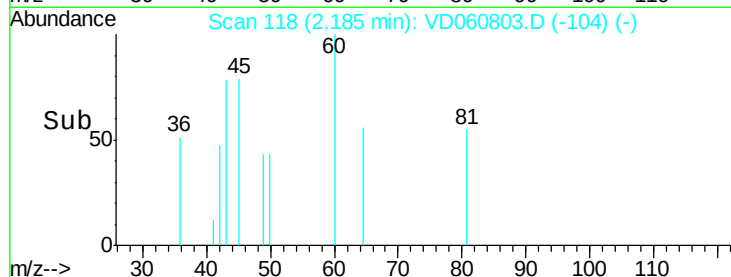
300

200

100

0

Time-->



#11

Tert butyl alcohol

Concen: 7.715 ug/l

RT: 3.95 min Scan# 297

Delta R.T. 0.02 min

Lab File: VD060803.D

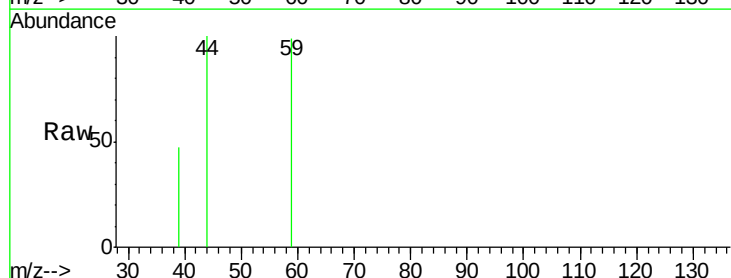
Acq: 30 Jan 2019 14:03

Tgt Ion: 59 Resp: 1880

Ion Ratio Lower Upper

59 100

57 0.0 9.8 14.6#



Abundance Ion 58.95 (58.65 to 59.65): VDC

Ion 56.95 (56.65 to 57.65): VDC

3.95

800

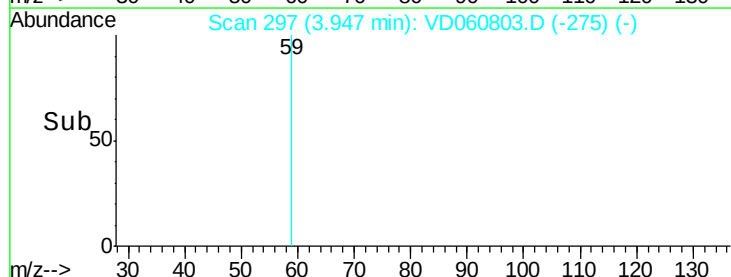
600

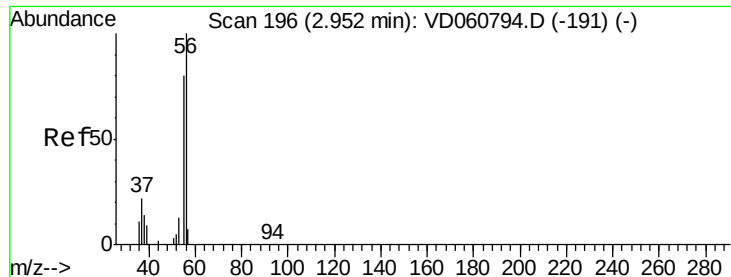
400

200

0

Time-->





#13

Acrolein

Concen: Below Cal

RT: 2.83 min Scan# 184

Delta R.T. -0.12 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

Instrument :

MSVOA\_D

ClientSampleId :

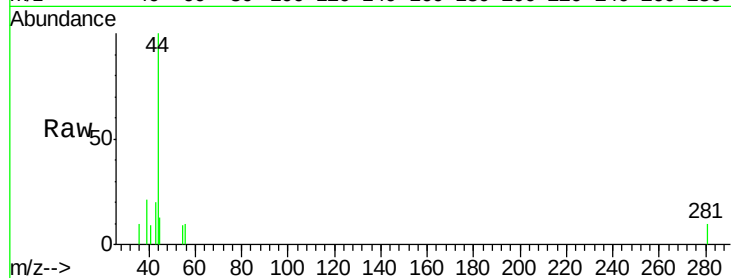
TP-1RE

Tot Ion: 56 Resp: 202

Ion Ratio Lower Upper

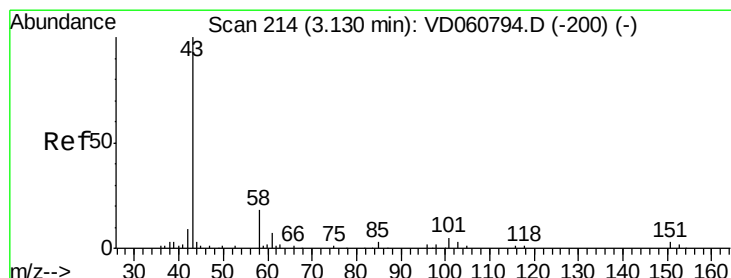
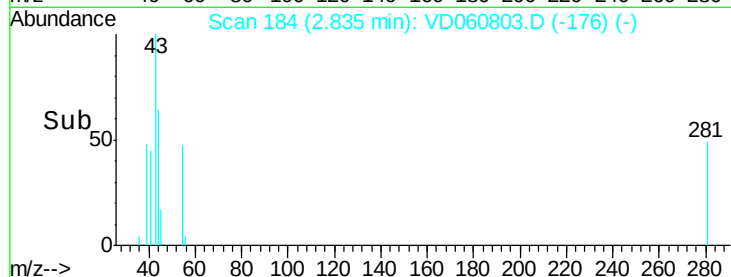
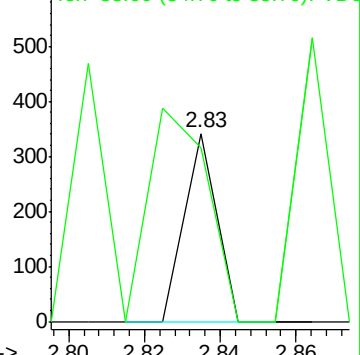
56 100

55 92.1 64.2 96.2



Abundance Ion 55.95 (55.65 to 56.65): VDC

Ion 55.00 (54.70 to 55.70): VDC



#16

Acetone

Concen: 87.538 ug/l

RT: 3.14 min Scan# 215

Delta R.T. 0.01 min

Lab File: VD060803.D

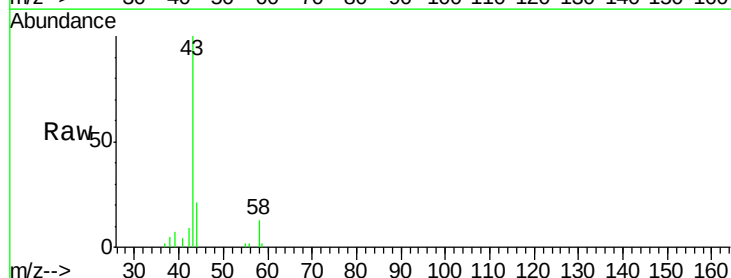
Acq: 30 Jan 2019 14:03

Tgt Ion: 43 Resp: 64467

Ion Ratio Lower Upper

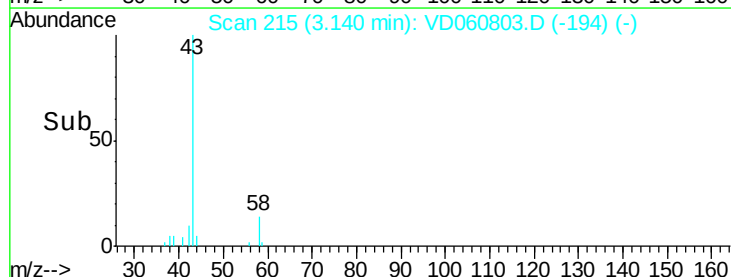
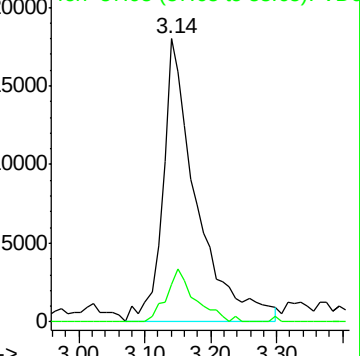
43 100

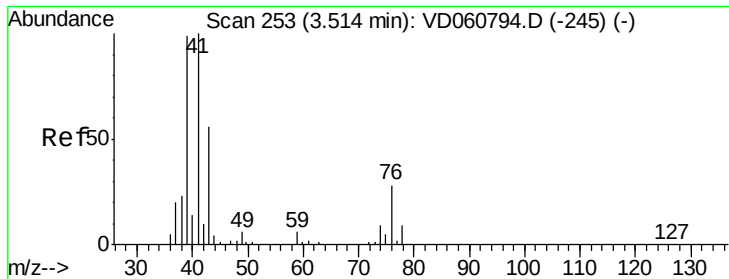
58 13.4 14.5 21.7#



Abundance Ion 42.95 (42.65 to 43.65): VDC

Ion 57.95 (57.65 to 58.65): VDC





#18

Methyl Acetate

Concen: 2.204 ug/l

RT: 3.53 min Scan# 255

Delta R.T. 0.02 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

Instrument :

MSVOA\_D

ClientSampled :

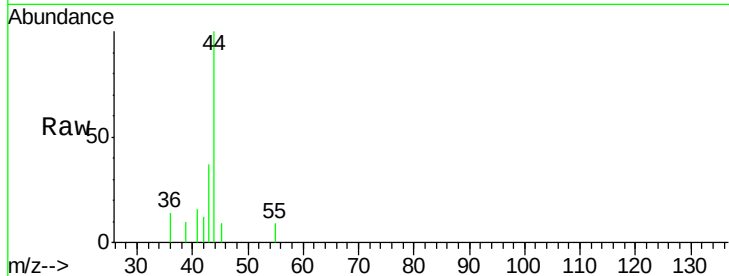
TP-1RE

Tot Ion: 43 Resp: 3218

Ion Ratio Lower Upper

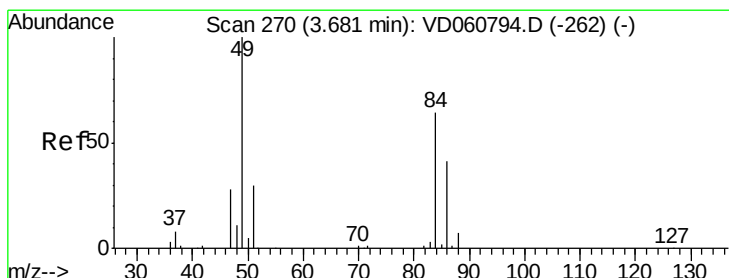
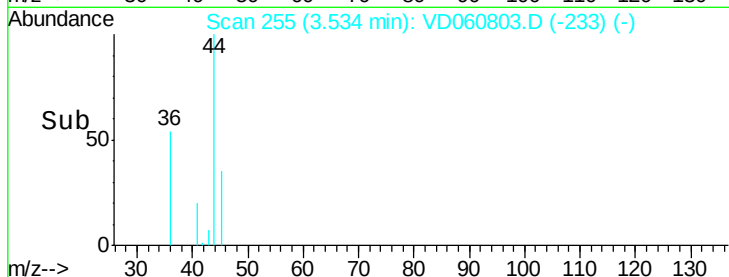
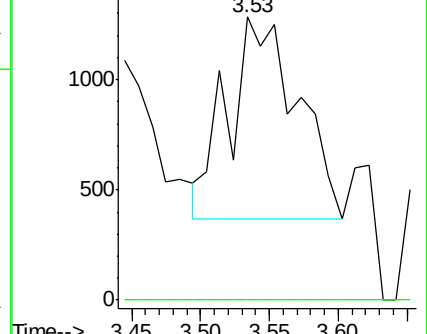
43 100

74 0.0 12.5 18.7#



Abundance Ion 42.95 (42.65 to 43.65): VDC

Ion 74.00 (73.70 to 74.70): VDC



#20

Methylene Chloride

Concen: Below Cal

RT: 3.70 min Scan# 272

Delta R.T. 0.02 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

Tgt Ion: 84 Resp: 7621

Ion Ratio Lower Upper

84 100

49 132.7 124.2 186.2

51 28.4 38.1 57.1#

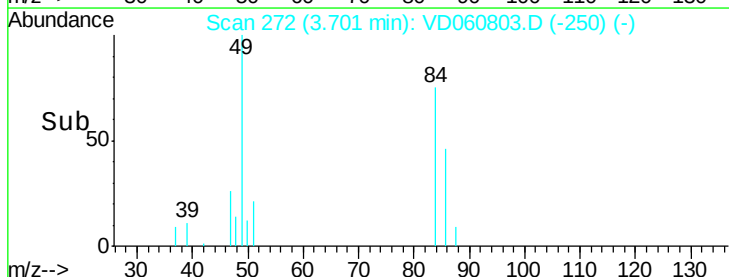
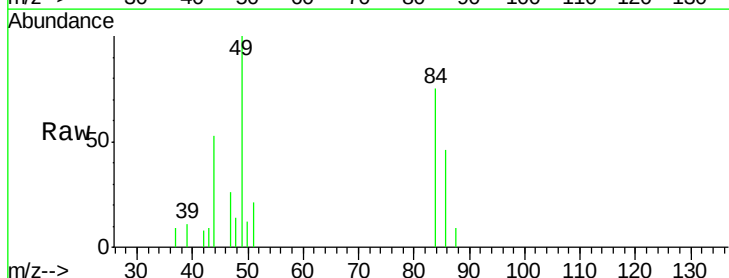
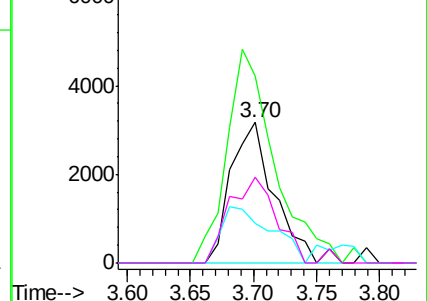
86 60.9 50.6 76.0

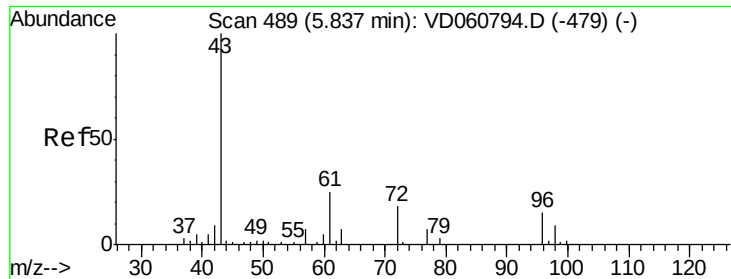
Abundance Ion 83.95 (83.65 to 84.65): VDC

Ion 48.90 (48.60 to 49.60): VDC

Ion 50.90 (50.60 to 51.60): VDC

Ion 85.90 (85.60 to 86.60): VDC





#25

2-Butanone

Concen: 4.908 ug/l

RT: 5.87 min Scan# 492

Delta R.T. 0.03 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

Instrument :

MSVOA\_D

ClientSampleId :

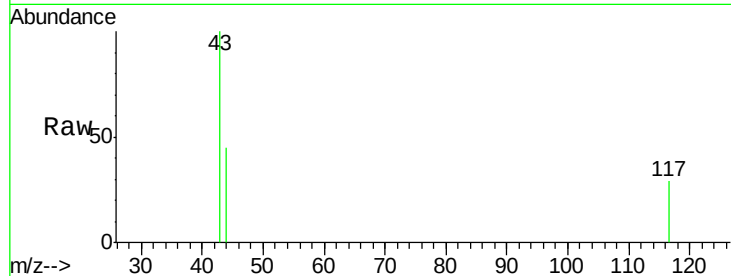
TP-1RE

Tot Ion: 43 Resp: 4626

Ion Ratio Lower Upper

43 100

72 0.0 14.4 21.6#



Abundance Ion 42.95 (42.65 to 43.65): VDC

Ion 72.00 (71.70 to 72.70): VDC

5.87

1200

1000

800

600

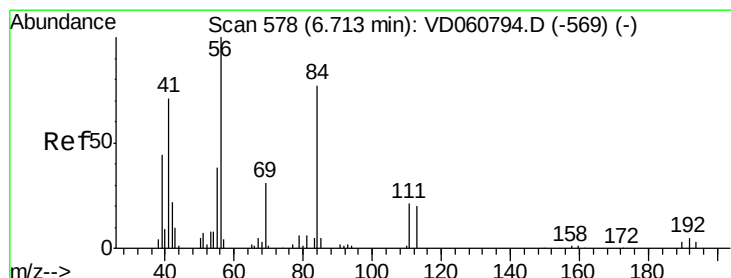
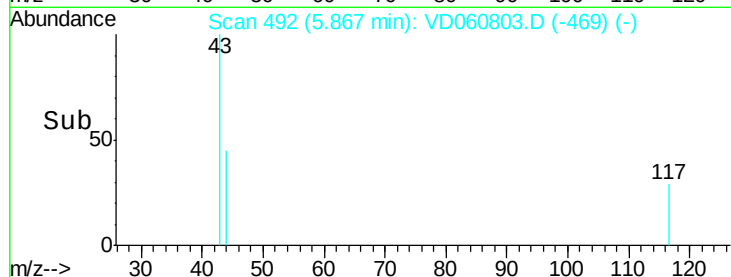
400

200

0

5.75 5.80 5.85 5.90 5.95

Time-->



#31

Cyclohexane

Concen: 2.430 ug/l

RT: 6.81 min Scan# 588

Delta R.T. 0.10 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

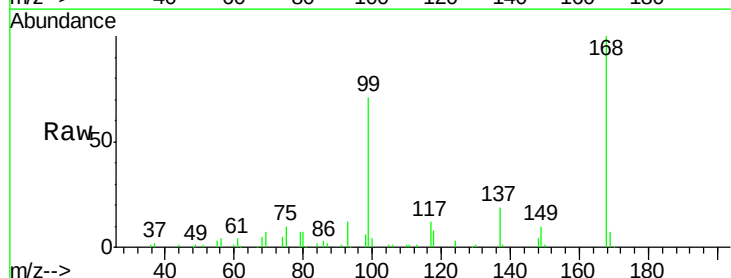
Tgt Ion: 56 Resp: 11370

Ion Ratio Lower Upper

56 100

69 187.7 25.1 37.7#

84 51.1 63.9 95.9#



Abundance Ion 55.95 (55.65 to 56.65): VDC

Ion 69.00 (68.70 to 69.70): VDC

Ion 84.05 (83.75 to 84.75): VDC

10000

8000

6000

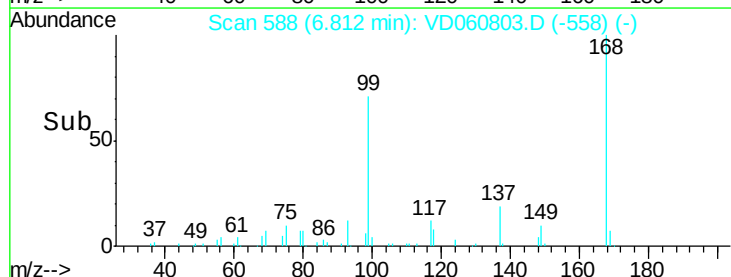
4000

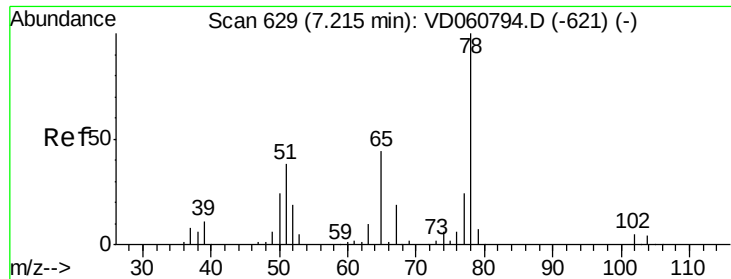
2000

0

6.70 6.75 6.80 6.85 6.90

Time-->

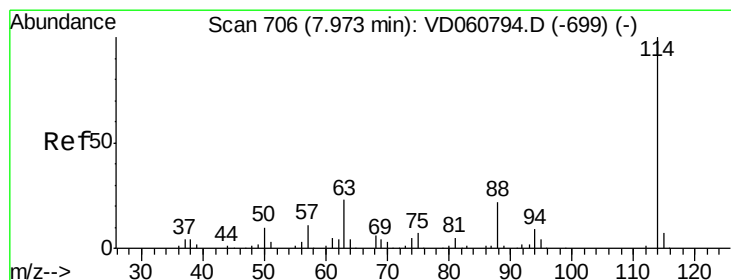
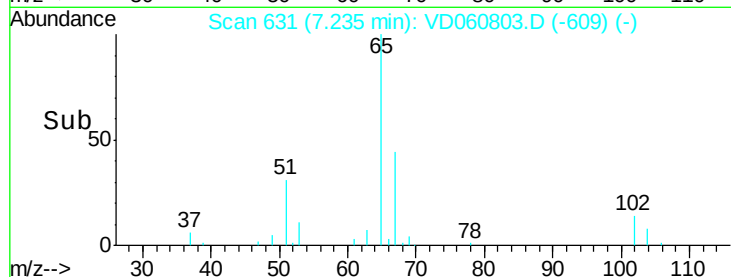
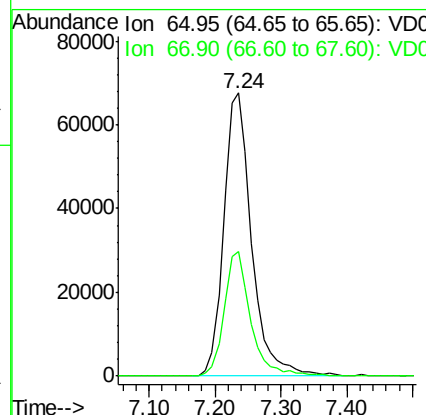
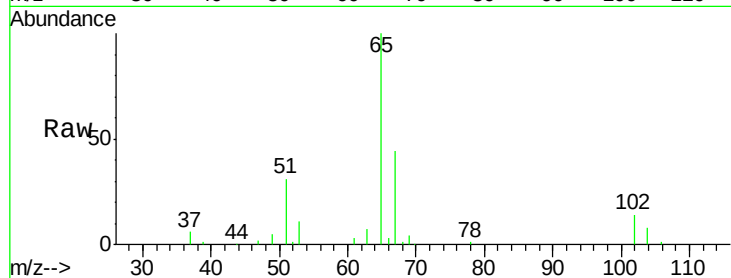




#33  
 1,2-Dichloroethane-d4  
 Concen: N.D. ug/l  
 RT: 7.24 min Scan# 631  
 Delta R.T. 0.02 min  
 Lab File: VD060803.D  
 Acq: 30 Jan 2019 14:03

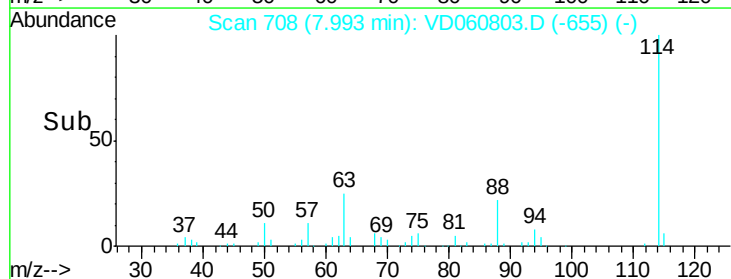
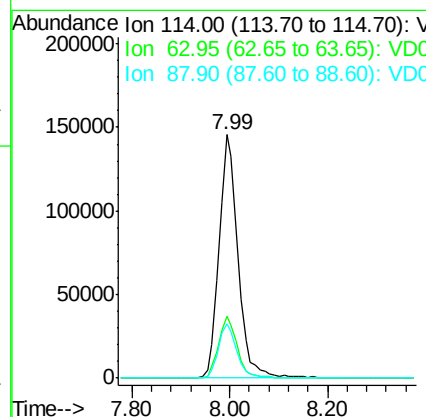
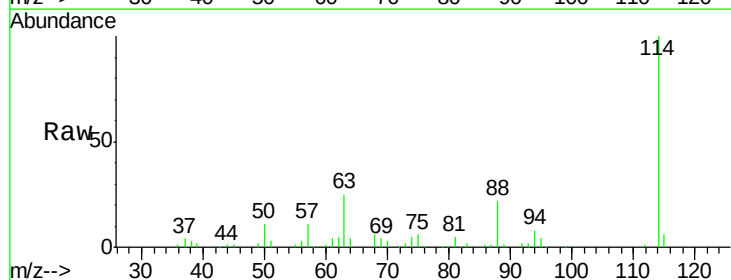
Instrument :  
 MSVOA\_D  
 ClientSampleId :  
 TP-1RE

Tot Ion: 65 Resp: 198590  
 Ion Ratio Lower Upper  
 65 100  
 67 43.9 0.0 85.8

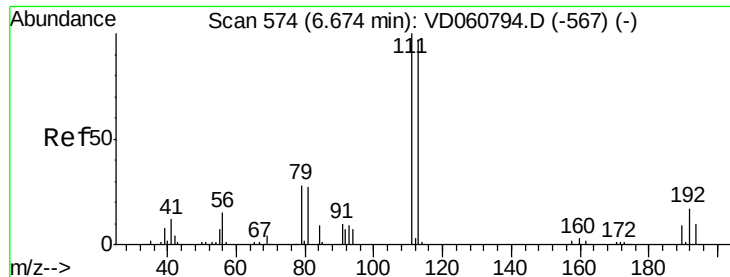


#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 7.99 min Scan# 708  
 Delta R.T. 0.02 min  
 Lab File: VD060803.D  
 Acq: 30 Jan 2019 14:03

Tgt Ion: 114 Resp: 395091  
 Ion Ratio Lower Upper  
 114 100  
 63 25.4 0.0 46.6  
 88 22.4 0.0 44.0







#35

Dibromofluoromethane

Concen: 50.000 ug/l

RT: 6.70 min Scan# 577

Delta R.T. 0.03 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

Instrument :

MSVOA\_D

ClientSampleId :

TP-1RE

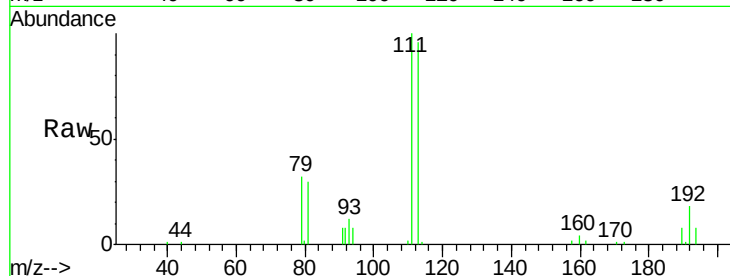
Tot Ion:113 Resp: 156152

Ion Ratio Lower Upper

113 100

111 104.2 82.3 123.5

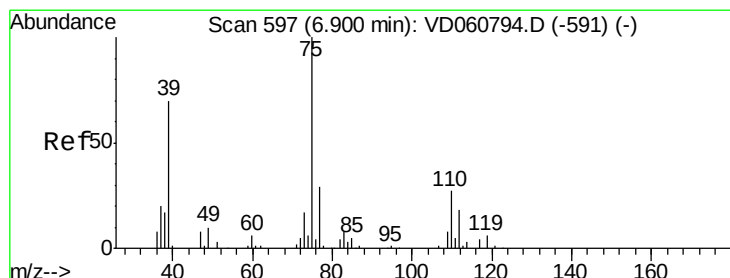
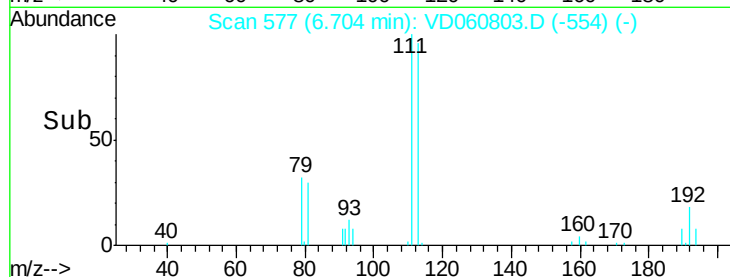
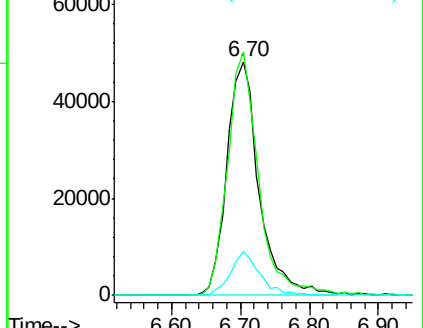
192 18.6 14.4 21.6



Abundance Ion 112.90 (112.60 to 113.60): V

Ion 110.90 (110.60 to 111.60): V

Ion 191.80 (191.50 to 192.50): V



#36

1,1-Dichloropropene

Concen: 6.959 ug/l

RT: 6.81 min Scan# 588

Delta R.T. -0.09 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

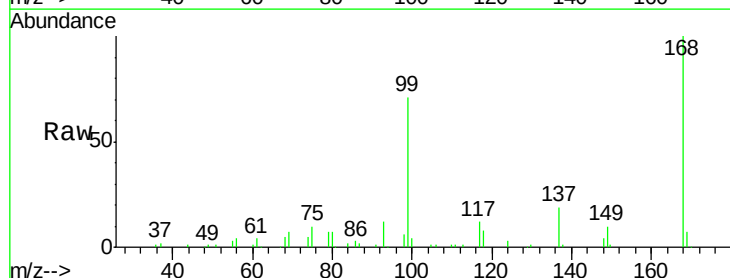
Tgt Ion: 75 Resp: 32827

Ion Ratio Lower Upper

75 100

110 10.1 13.5 40.4#

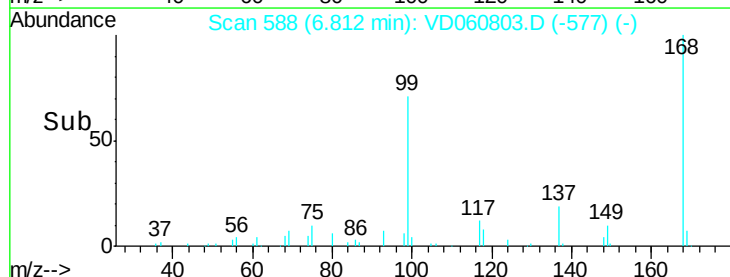
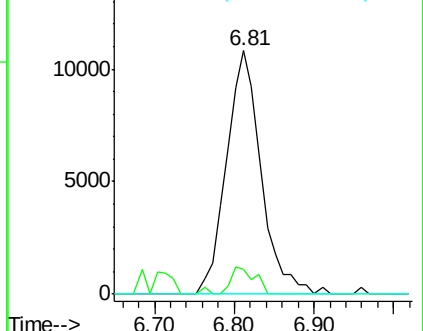
77 0.0 23.4 35.2#

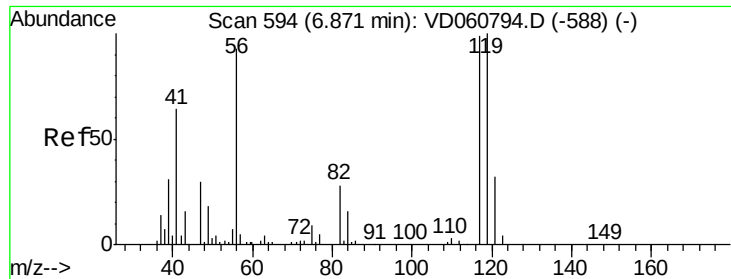


Abundance Ion 75.00 (74.70 to 75.70): VDC

Ion 109.90 (109.60 to 110.60): V

Ion 76.95 (76.65 to 77.65): VDC





#38

Carbon Tetrachloride

Concen: 6.397 ug/l

RT: 6.81 min Scan# 588

Delta R.T. -0.06 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

Instrument :

MSVOA\_D

ClientSampleId :

TP-1RE

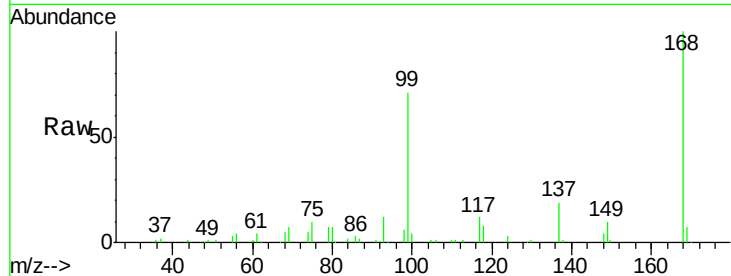
Tot Ion:117 Resp: 37843

Ion Ratio Lower Upper

117 100

119 0.0 75.6 113.4#

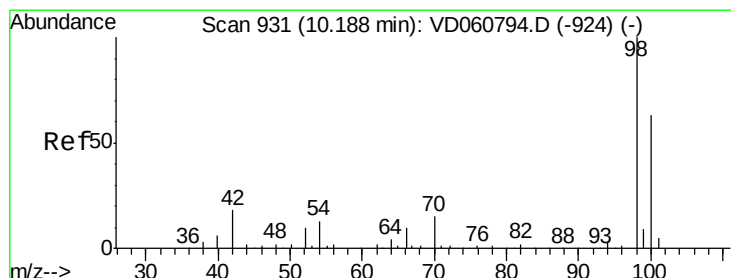
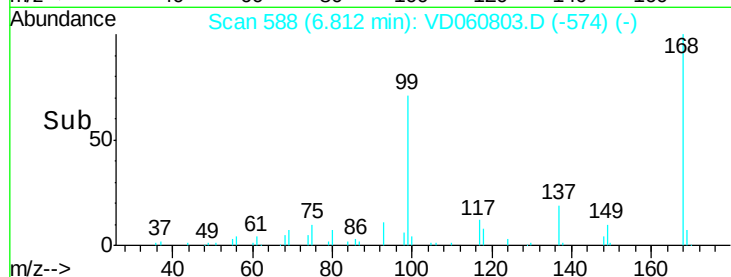
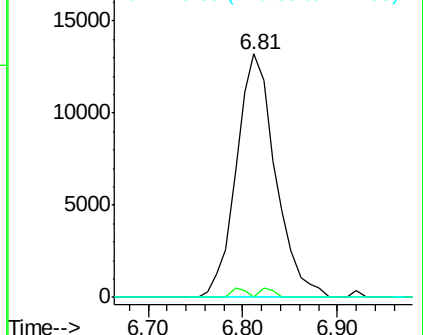
121 0.0 23.4 35.2#



Abundance Ion 116.85 (116.55 to 117.55): V

Ion 118.85 (118.55 to 119.55): V

Ion 120.85 (120.55 to 121.55): V



#50

Toluene-d8

Concen: N.D. ug/l

RT: 10.20 min Scan# 932

Delta R.T. 0.01 min

Lab File: VD060803.D

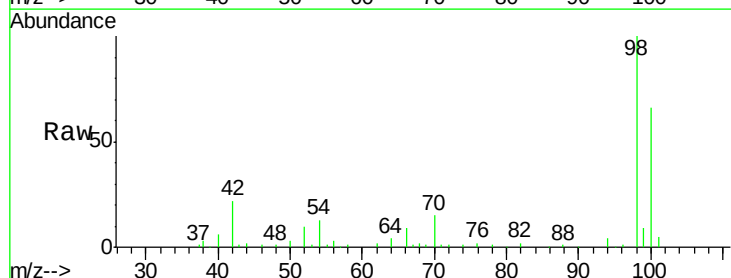
Acq: 30 Jan 2019 14:03

Tgt Ion: 98 Resp: 287913

Ion Ratio Lower Upper

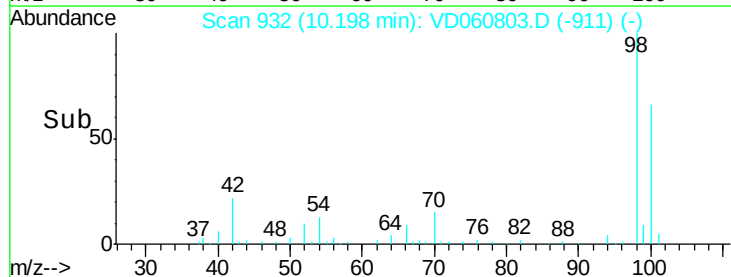
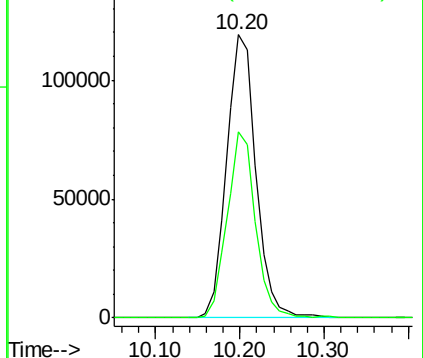
98 100

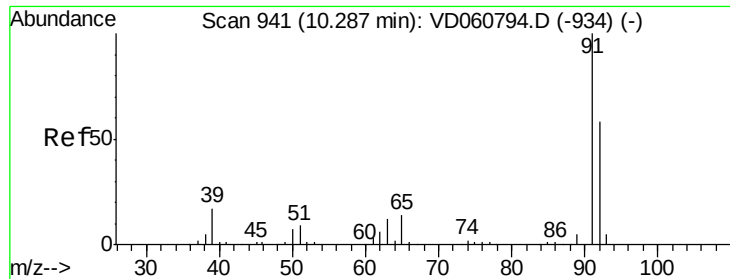
100 65.9 51.0 76.6



Abundance Ion 98.05 (97.75 to 98.75): V

Ion 100.05 (99.75 to 100.75): V





#52

Toluene

Concen: 1.422 ug/l

RT: 10.30 min Scan# 942

Delta R.T. 0.01 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

Instrument :

MSVOA\_D

ClientSampleId :

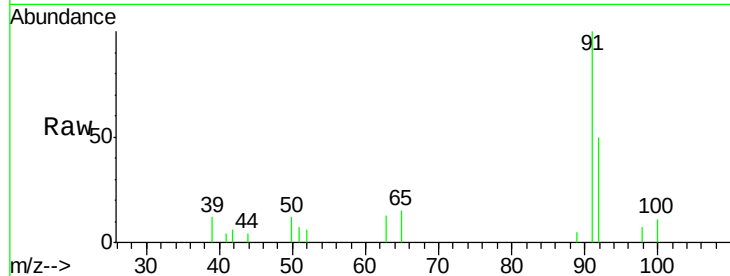
TP-1RE

Tot Ion: 92 Resp: 8399

Ion Ratio Lower Upper

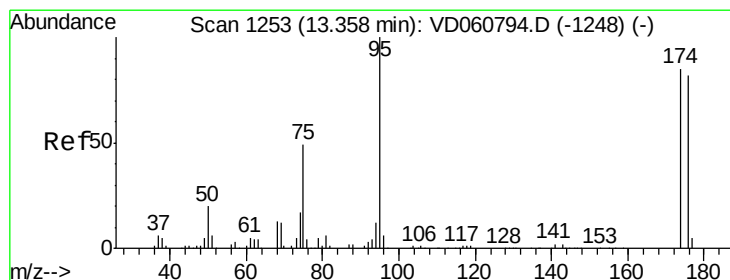
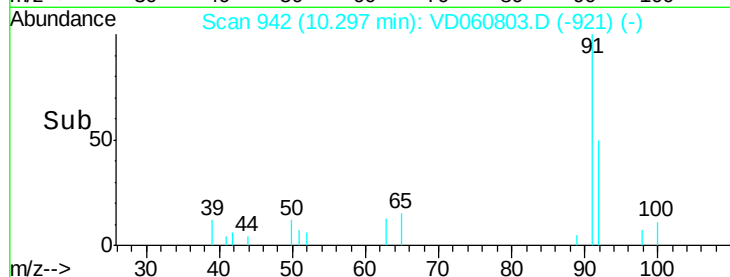
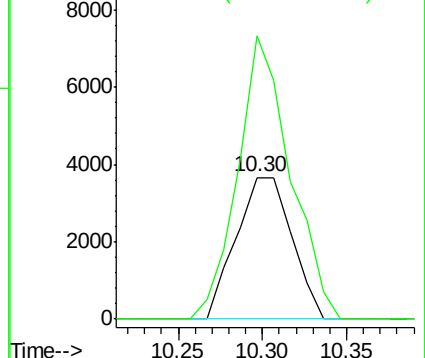
92 100

91 200.0 137.7 206.5



Abundance Ion 92.00 (91.70 to 92.70): VDC

Ion 91.00 (90.70 to 91.70): VDC



#62

4-Bromofluorobenzene

Concen: N.D. ug/l

RT: 13.36 min Scan# 1253

Delta R.T. 0.00 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

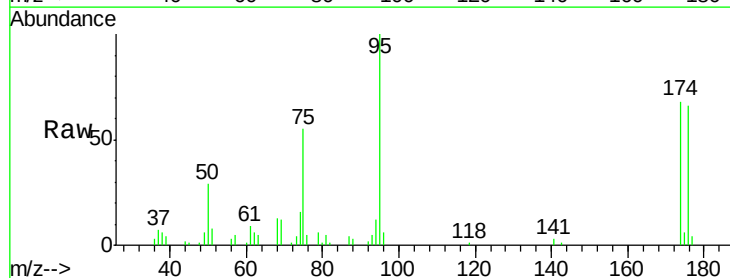
Tgt Ion: 95 Resp: 63519

Ion Ratio Lower Upper

95 100

174 68.2 0.0 169.6

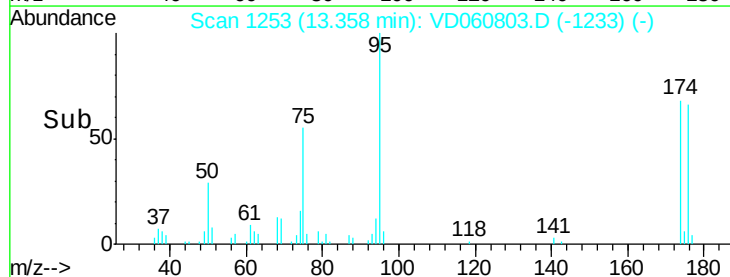
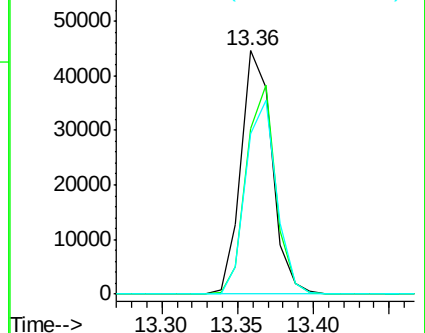
176 66.1 0.0 163.8

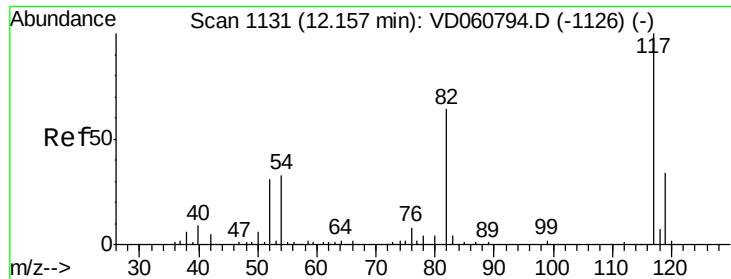


Abundance Ion 95.00 (94.70 to 95.70): VDC

Ion 173.90 (173.60 to 174.60): V

Ion 175.90 (175.60 to 176.60): V





#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 12.17 min Scan# 1132

Delta R.T. 0.01 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

Instrument :

MSVOA\_D

ClientSampleId :

TP-1RE

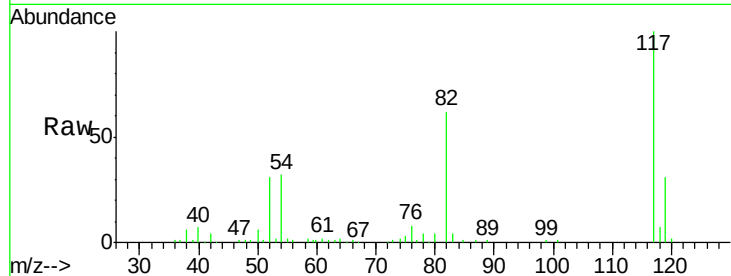
Tot Ion:117 Resp: 220568

Ion Ratio Lower Upper

117 100

82 61.7 51.5 77.3

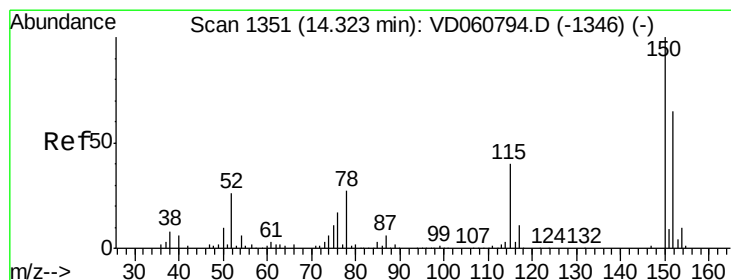
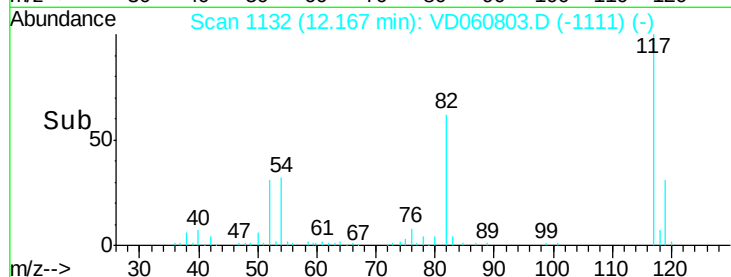
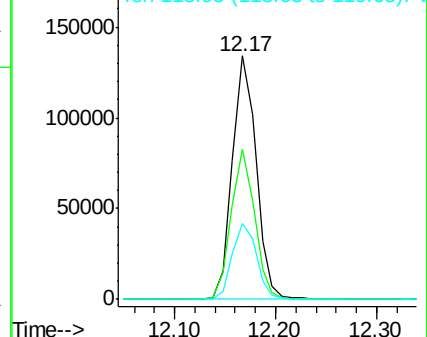
119 31.4 27.1 40.7



Abundance Ion 116.95 (116.65 to 117.65): V

Ion 82.05 (81.75 to 82.75): V

Ion 118.95 (118.65 to 119.65): V



#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 14.33 min Scan# 1352

Delta R.T. 0.01 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

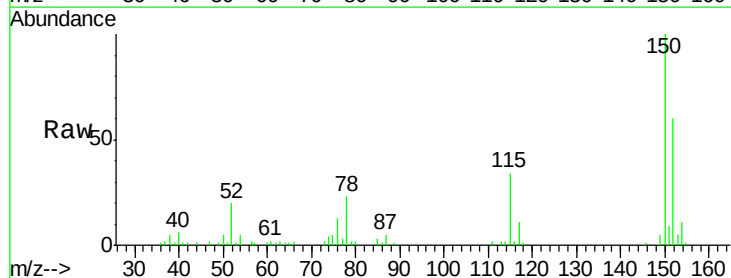
Tgt Ion:152 Resp: 44985

Ion Ratio Lower Upper

152 100

115 57.5 31.6 95.0

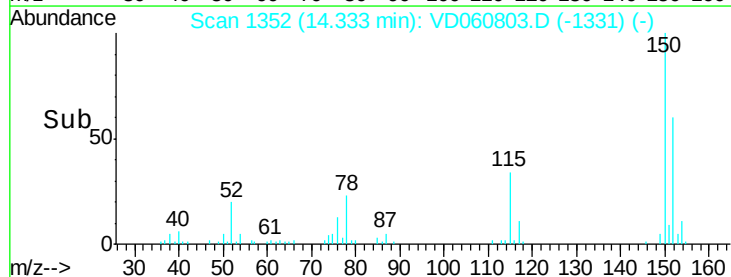
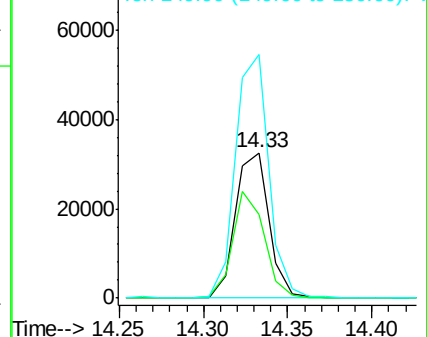
150 167.7 0.0 317.6

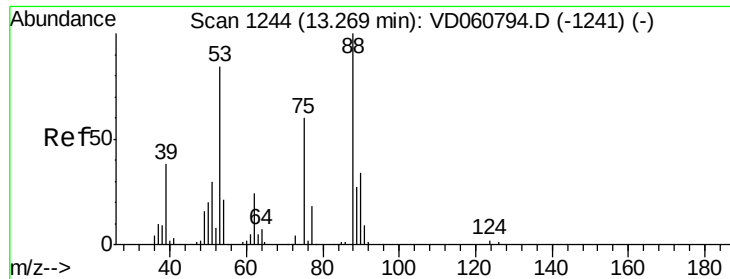


Abundance Ion 151.90 (151.60 to 152.60): V

Ion 115.00 (114.70 to 115.70): V

Ion 149.90 (149.60 to 150.60): V





#81

trans-1,4-Dichloro-2-butene

Concen: 149.858 ug/l

RT: 13.36 min Scan# 1253

Delta R.T. 0.09 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

Instrument :

MSVOA\_D

ClientSampleId :

TP-1RE

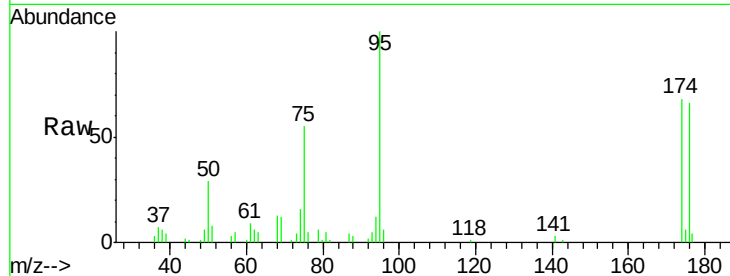
Tot Ion: 75 Resp: 32229

Ion Ratio Lower Upper

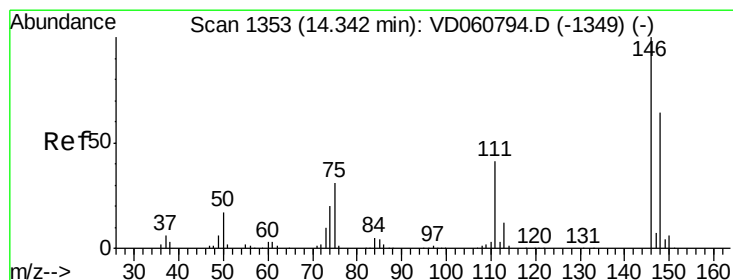
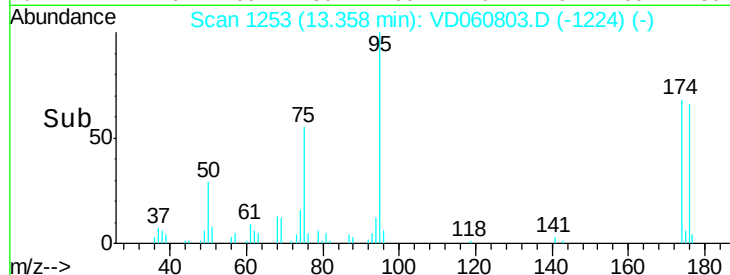
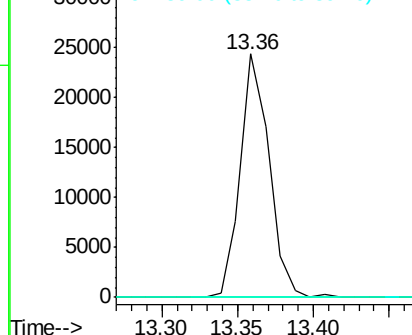
75 100

53 0.0 111.6 167.4#

89 0.0 35.9 53.9#



Abundance Ion 75.00 (74.70 to 75.70): VDC  
Ion 53.00 (52.70 to 53.70): VDC  
Ion 89.00 (88.70 to 89.70): VDC



#88

1,4-Dichlorobenzene

Concen: 1.218 ug/l

RT: 14.34 min Scan# 1353

Delta R.T. 0.00 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

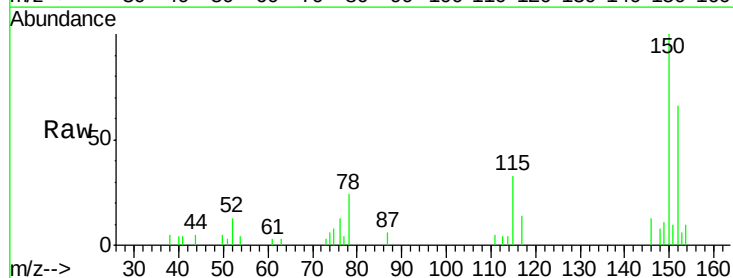
Tgt Ion: 146 Resp: 1952

Ion Ratio Lower Upper

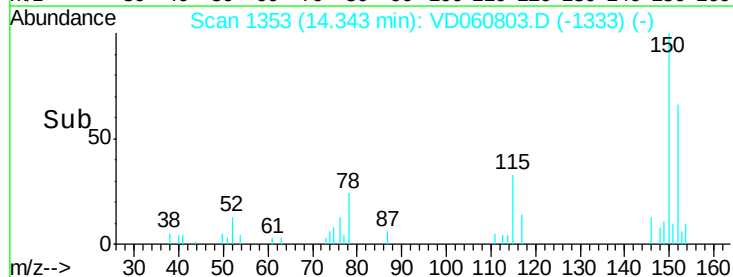
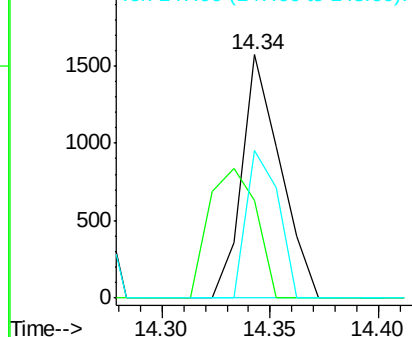
146 100

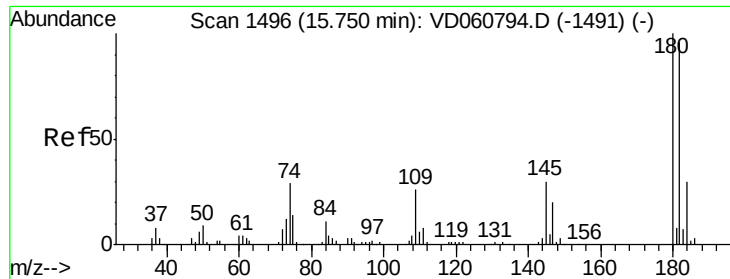
111 39.9 20.6 61.8

148 60.8 31.9 95.7



Abundance Ion 145.95 (145.65 to 146.65): V  
Ion 110.90 (110.60 to 111.60): V  
Ion 147.90 (147.60 to 148.60): V

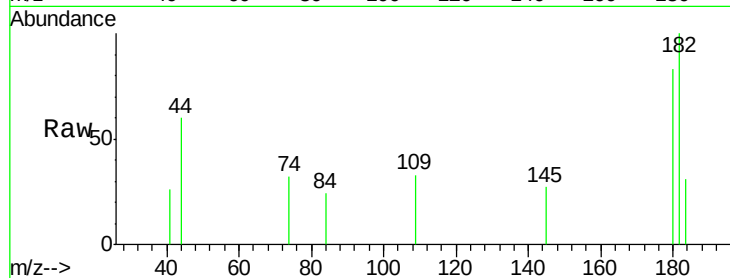




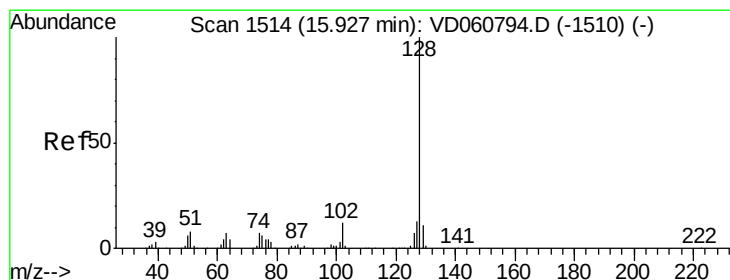
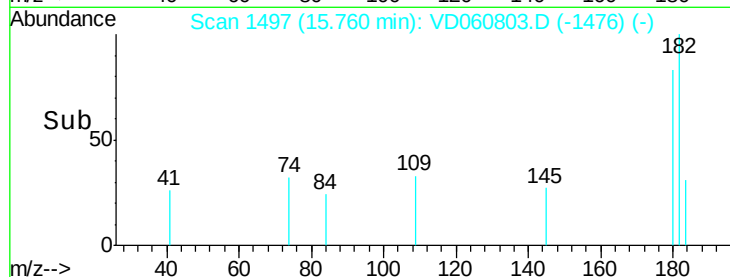
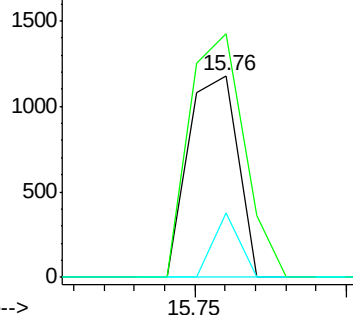
#93  
 1,2,4-Trichlorobenzene  
 Concen: 1.126 ug/l  
 RT: 15.76 min Scan# 1497  
 Delta R.T. 0.01 min  
 Lab File: VD060803.D  
 Acq: 30 Jan 2019 14:03

Instrument :  
 MSVOA\_D  
 ClientSampleId :  
 TP-1RE

Tot Ion:180 Resp: 1335  
 Ion Ratio Lower Upper  
 180 100  
 182 120.8 47.9 143.7  
 145 32.1 15.0 45.1

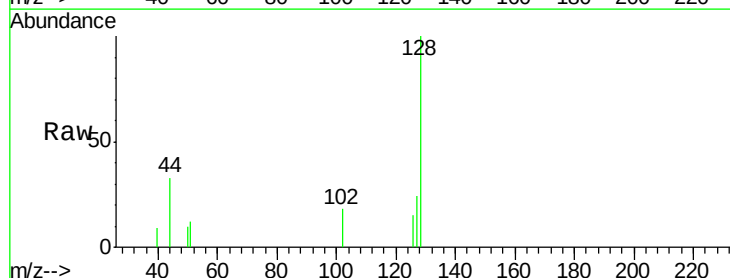


Abundance Ion 179.85 (179.55 to 180.55): V  
 Ion 181.85 (181.55 to 182.55): V  
 Ion 144.95 (144.65 to 145.65): V

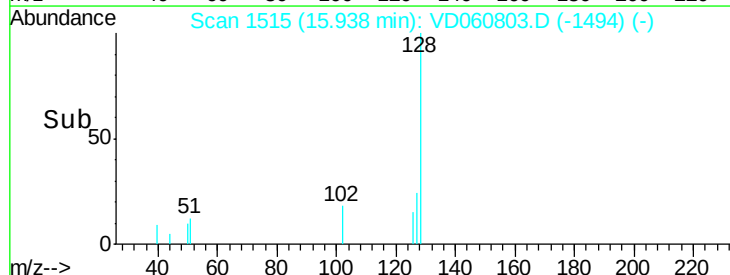
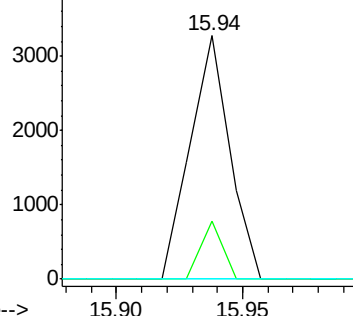


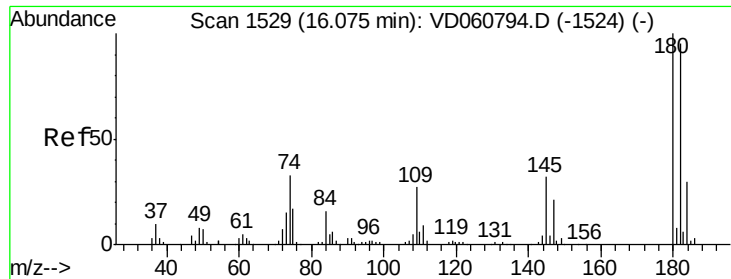
#95  
 Naphthalene  
 Concen: 1.964 ug/l  
 RT: 15.94 min Scan# 1515  
 Delta R.T. 0.01 min  
 Lab File: VD060803.D  
 Acq: 30 Jan 2019 14:03

Tgt Ion:128 Resp: 3576  
 Ion Ratio Lower Upper  
 128 100  
 127 23.8 10.4 15.6#  
 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





#96

1,2,3-Trichlorobenzene

Concen: 1.604 ug/l

RT: 16.09 min Scan# 1530

Delta R.T. 0.01 min

Lab File: VD060803.D

Acq: 30 Jan 2019 14:03

Instrument :

MSVOA\_D

ClientSampleId :

TP-1RE

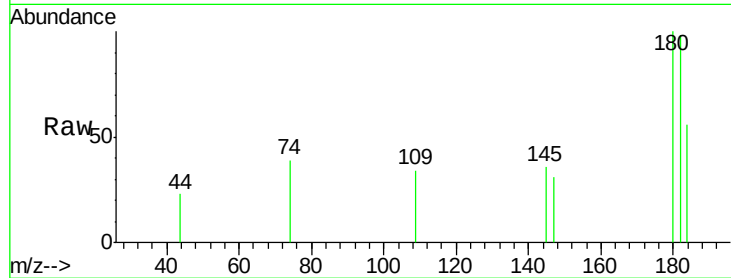
Tot Ion:180 Resp: 1653

Ion Ratio Lower Upper

180 100

182 97.8 47.4 142.3

145 35.6 15.8 47.4



Abundance Ion 179.85 (179.55 to 180.55): V

Ion 181.85 (181.55 to 182.55): V

Ion 144.95 (144.65 to 145.65): V

