

Data Path : Z:\VOASRV\HPCHEM1\MSVOA D\DATA\VD120619\  
 Data File : VD064455.D  
 Acq On : 06 Dec 2019 13:32  
 Operator : VA/SY  
 Sample : K6177-03  
 Misc : 5.36G/5.00ml/MSVOA D/SOIL  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 MSVOA\_D  
 ClientSampleId :

Quant Time: Dec 06 22:36:26 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_D\METHOD\82D112719S.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Nov 29 07:18:03 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.98  | 168  | 32092    | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.87  | 114  | 47063    | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.65 | 117  | 46696    | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.58 | 152  | 25422    | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units   | Dev(Min) |
|-----------------------------|-------|------|----------|-------|---------|----------|
| 33) 1,2-Dichloroethane-d4   | 8.33  | 65   | 17606    | 60.61 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 121.22% |          |
| 35) Dibromofluoromethane    | 7.92  | 113  | 16282    | 54.91 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 109.82% |          |
| 50) Toluene-d8              | 10.34 | 98   | 56634    | 50.70 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 101.40% |          |
| 62) 4-Bromofluorobenzene    | 12.63 | 95   | 22528    | 62.76 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 125.52% |          |

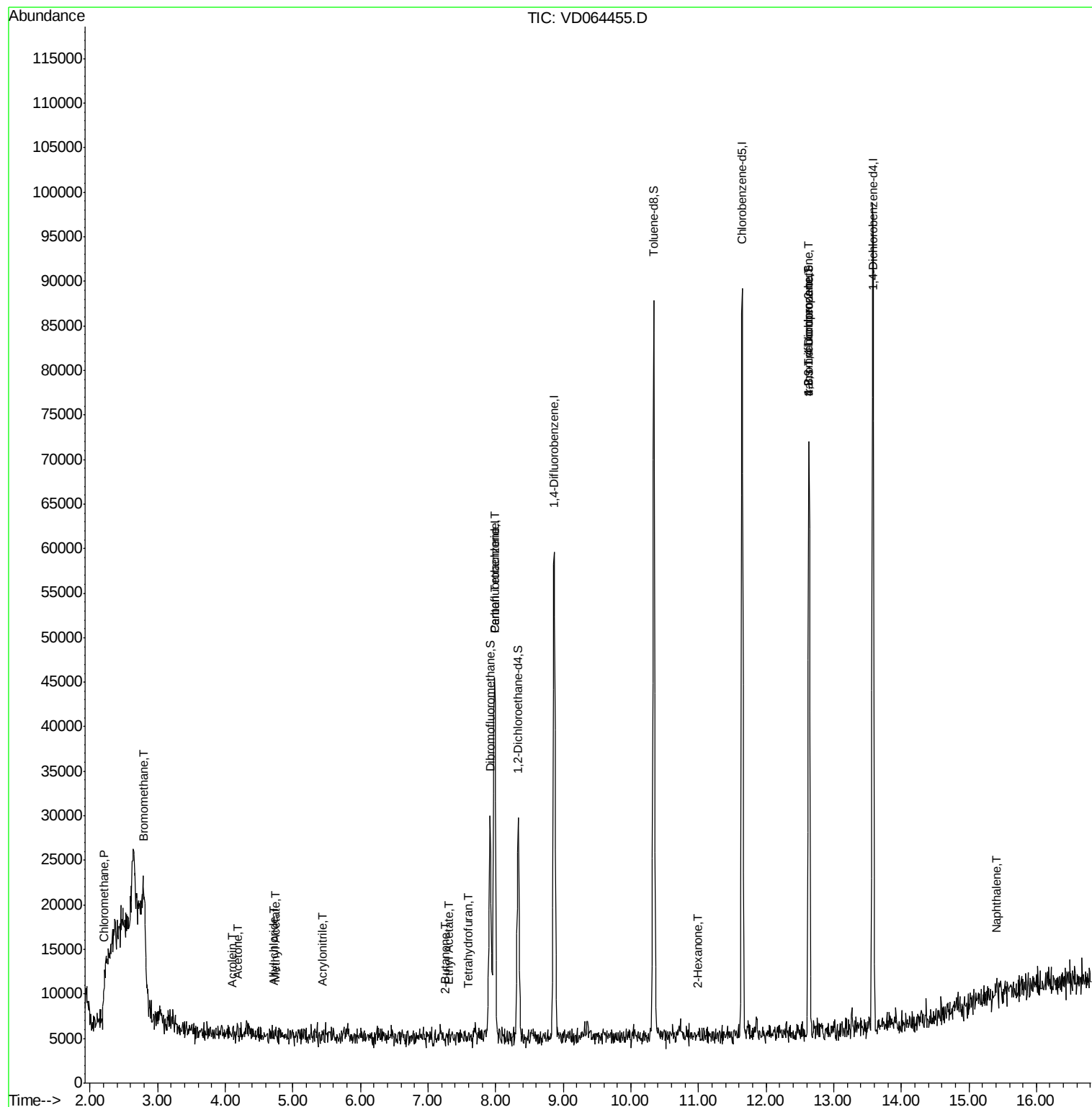
| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 3) Chloromethane               | 2.20  | 50   | 633      | 1.726     | ug/l   | 91     |
| 5) Bromomethane                | 2.80  | 94   | 1563     | 4.991     | ug/l # | 52     |
| 13) Acrolein                   | 4.10  | 56   | 54       | 2.141     | ug/l # | 14     |
| 14) Allyl chloride             | 4.71  | 41   | 559      | 1.238     | ug/l # | 29     |
| 15) Acrylonitrile              | 5.43  | 53   | 82       | 1.282     | ug/l # | 16     |
| 16) Acetone                    | 4.17  | 43   | 335      | 5.707     | ug/l # | 47     |
| 18) Methyl Acetate             | 4.74  | 43   | 348      | 2.032     | ug/l # | 51     |
| 25) 2-Butanone                 | 7.25  | 43   | 245      | 2.951     | ug/l # | 49     |
| 29) Tetrahydrofuran            | 7.60  | 42   | 84       | 1.590     | ug/l # | 33     |
| 31) Cyclohexane                | 7.98  | 56   | 1163     | Below Cal | #      | 84     |
| 37) Ethyl Acetate              | 7.31  | 43   | 215      | 1.138     | ug/l # | 69     |
| 38) Carbon Tetrachloride       | 7.98  | 117  | 3001     | 6.388     | ug/l # | 11     |
| 59) 2-Hexanone                 | 10.98 | 43   | 142      | 1.114     | ug/l   | 92     |
| 76) 1,2,3-Trichloropropane     | 12.63 | 75   | 11764    | 56.270    | ug/l # | 100    |
| 81) trans-1,4-Dichloro-2-buten | 12.63 | 75   | 11764    | 122.699   | ug/l # | 9      |
| 92) 1,2-Dibromo-3-Chloropropan | 14.60 | 75   | 55       | Below Cal | #      | 1      |
| 95) Naphthalene                | 15.41 | 128  | 1214     | 1.297     | ug/l # | 69     |

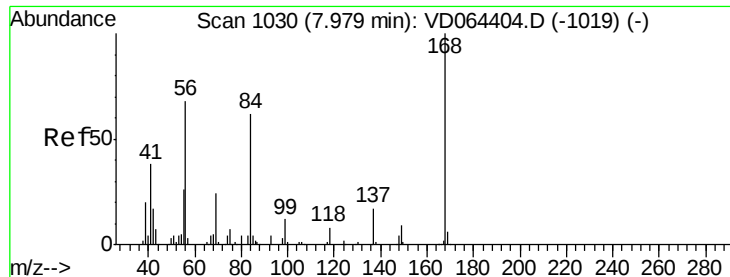
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : SW846 8260  
QLast Update : Fri Nov 29 07:18:03 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.98 min Scan# 1031

Delta R.T. 0.01 min

Lab File: VD064455.D

Acq: 06 Dec 2019 13:32

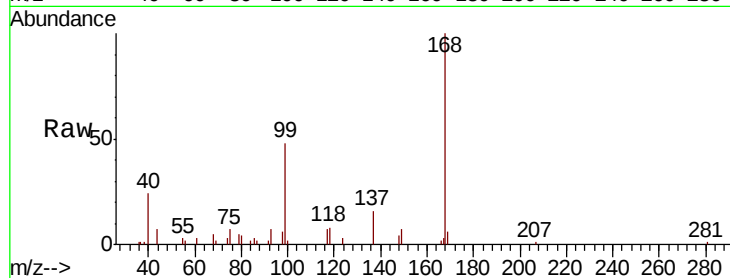
Instrument :  
MSVOA\_D  
ClientSampled :

Tot Ion:168 Resp: 32092

Ion Ratio Lower Upper

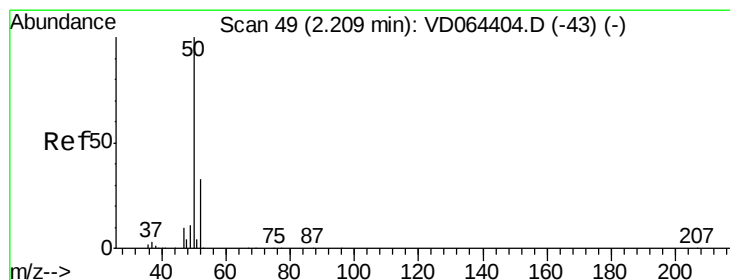
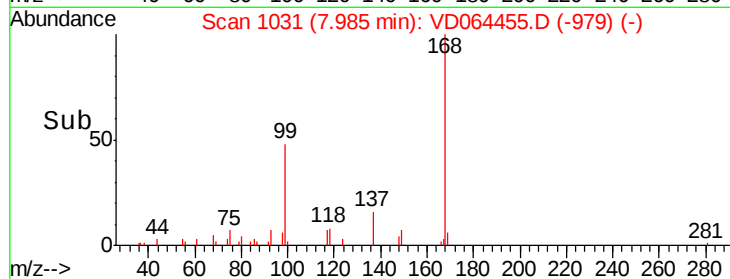
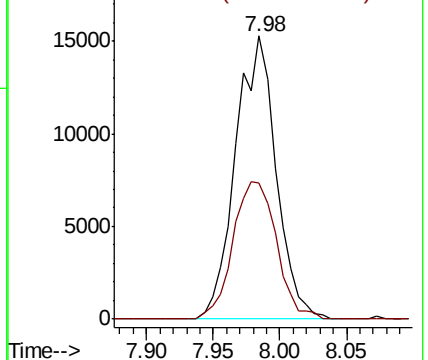
168 100

99 48.1 40.7 61.1



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VDC



#3

Chloromethane

Concen: 1.726 ug/l

RT: 2.20 min Scan# 48

Delta R.T. -0.01 min

Lab File: VD064455.D

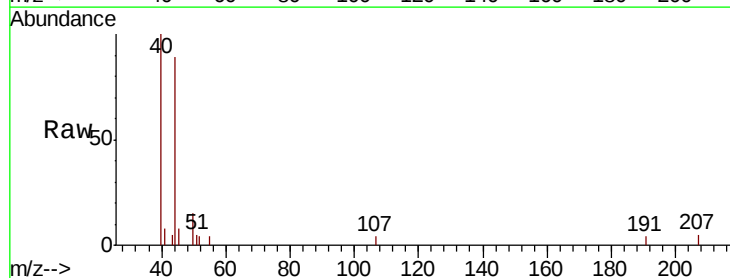
Acq: 06 Dec 2019 13:32

Tgt Ion: 50 Resp: 633

Ion Ratio Lower Upper

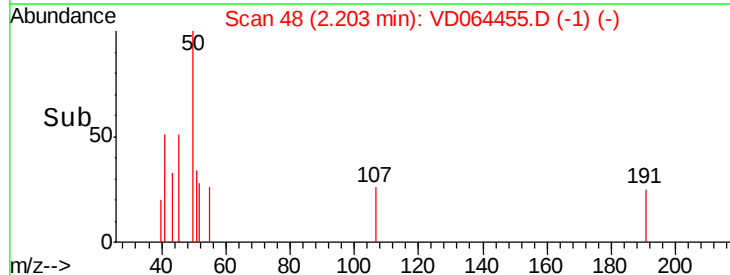
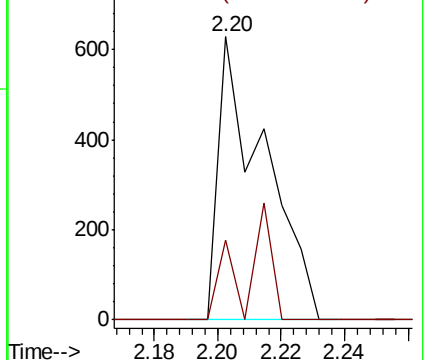
50 100

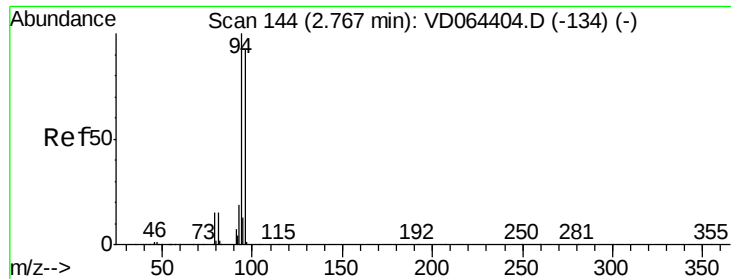
52 28.2 26.7 40.1



Abundance Ion 49.90 (49.60 to 50.60): VDC

Ion 51.90 (51.60 to 52.60): VDC





#5

Bromomethane

Concen: 4.991 ug/l

RT: 2.80 min Scan# 149

Delta R.T. 0.03 min

Lab File: VD064455.D

Acq: 06 Dec 2019 13:32

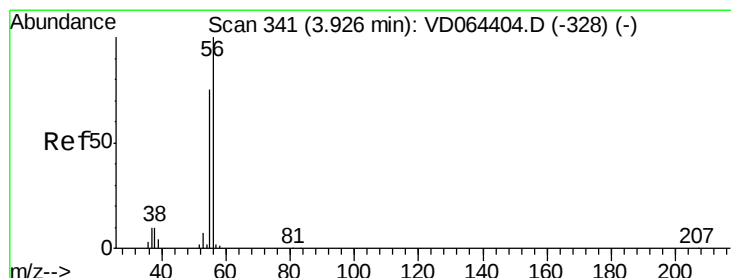
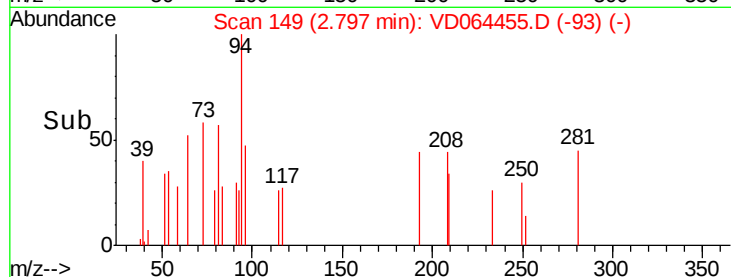
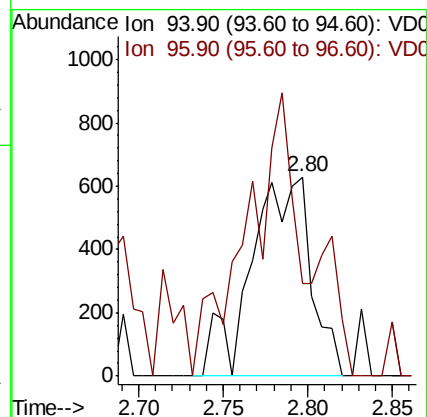
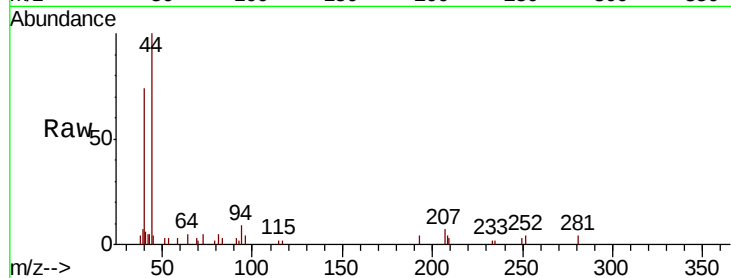
Instrument :  
MSVOA\_D  
ClientSampled :

Tot Ion: 94 Resp: 1563

Ion Ratio Lower Upper

94 100

96 46.5 73.6 110.4#



#13

Acrolein

Concen: 2.141 ug/l

RT: 4.10 min Scan# 371

Delta R.T. 0.18 min

Lab File: VD064455.D

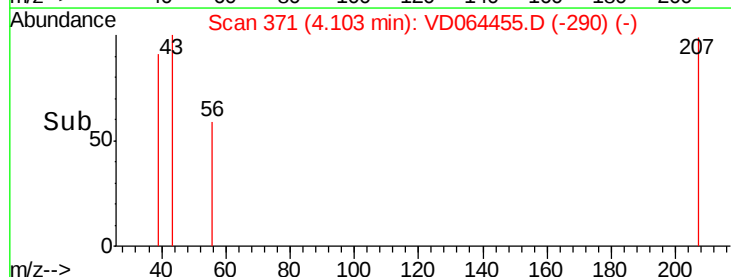
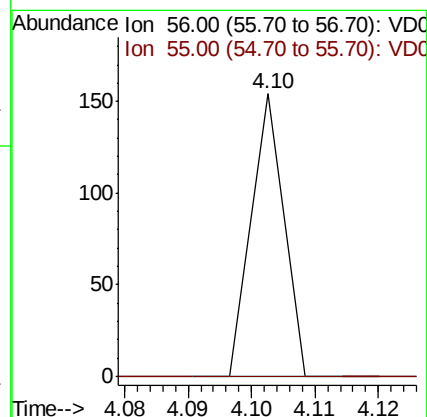
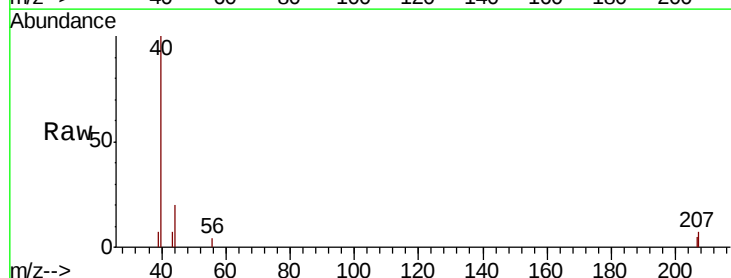
Acq: 06 Dec 2019 13:32

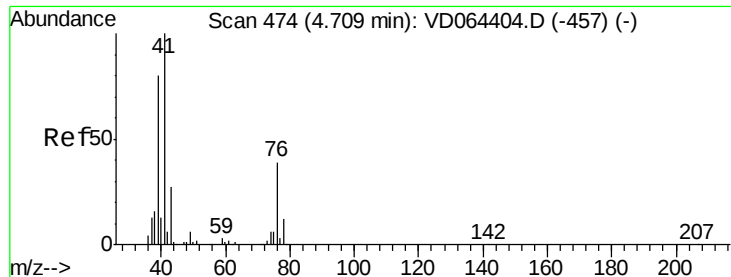
Tgt Ion: 56 Resp: 54

Ion Ratio Lower Upper

56 100

55 0.0 56.9 85.3#





#14

Allvl chloride

Concen: 1.238 ug/l

RT: 4.71 min Scan# 474

Delta R.T. -0.00 min

Lab File: VD064455.D

Acq: 06 Dec 2019 13:32

Instrument :

MSVOA\_D

ClientSampleId :

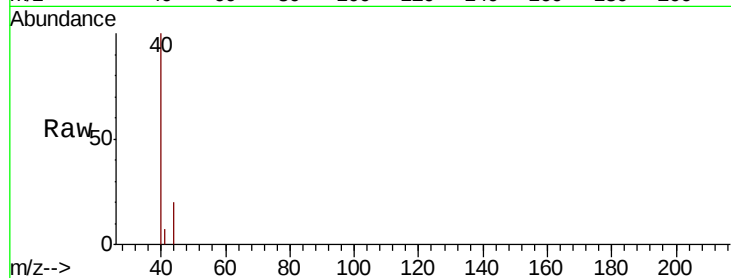
Tot Ion: 41 Resp: 559

Ion Ratio Lower Upper

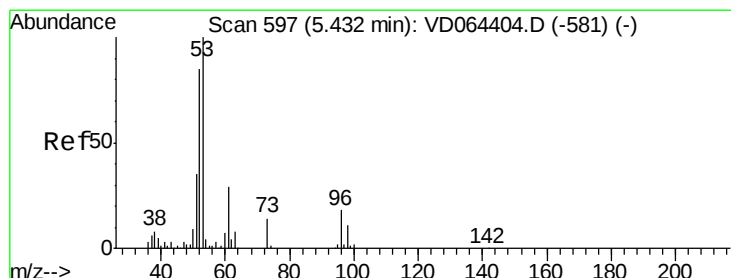
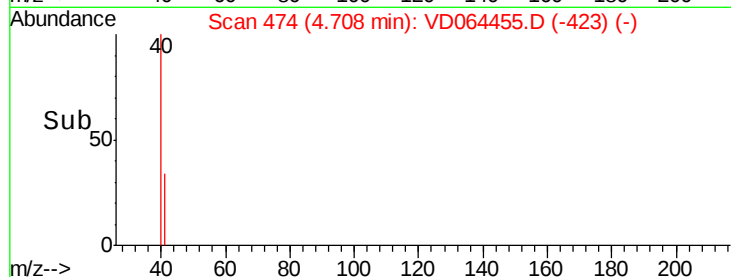
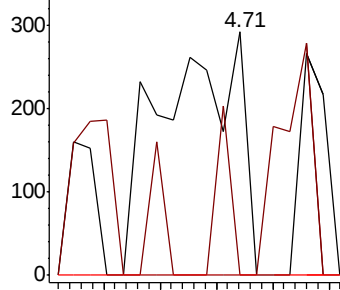
41 100

39 12.9 62.1 93.1#

76 0.0 29.8 44.8#



Abundance Ion 41.00 (40.70 to 41.70): VDC  
Ion 39.00 (38.70 to 39.70): VDC  
Ion 75.90 (75.60 to 76.60): VDC



#15

Acrylonitrile

Concen: 1.282 ug/l

RT: 5.43 min Scan# 597

Delta R.T. -0.00 min

Lab File: VD064455.D

Acq: 06 Dec 2019 13:32

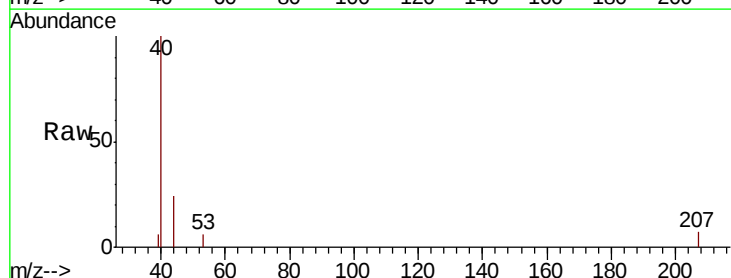
Tgt Ion: 53 Resp: 82

Ion Ratio Lower Upper

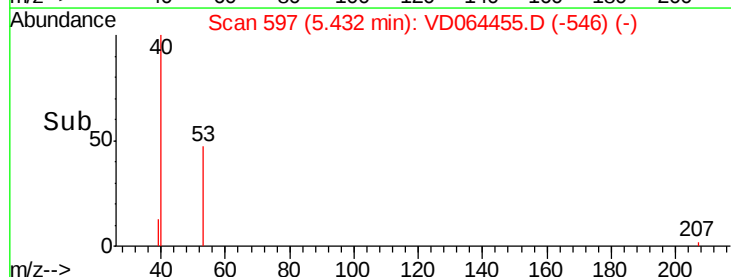
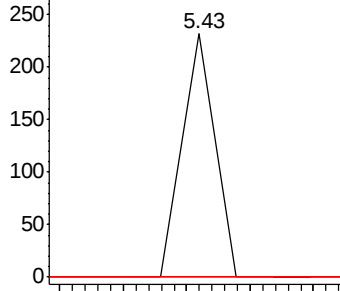
53 100

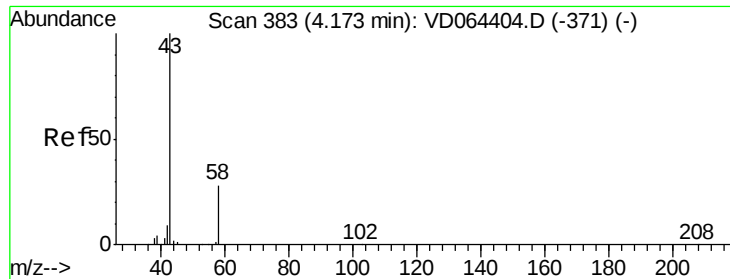
52 0.0 67.9 101.9#

51 0.0 30.6 45.8#



Abundance Ion 53.00 (52.70 to 53.70): VDC  
Ion 52.00 (51.70 to 52.70): VDC  
Ion 51.00 (50.70 to 51.70): VDC





#16

Acetone

Concen: 5.707 ug/l

RT: 4.17 min Scan# 383

Delta R.T. -0.00 min

Lab File: VD064455.D

Acq: 06 Dec 2019 13:32

Instrument :

MSVOA\_D

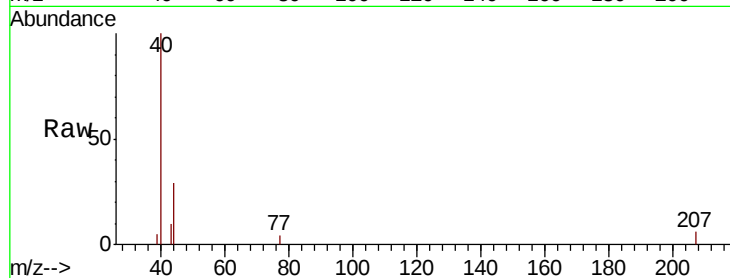
ClientSampleId :

Tot Ion: 43 Resp: 335

Ion Ratio Lower Upper

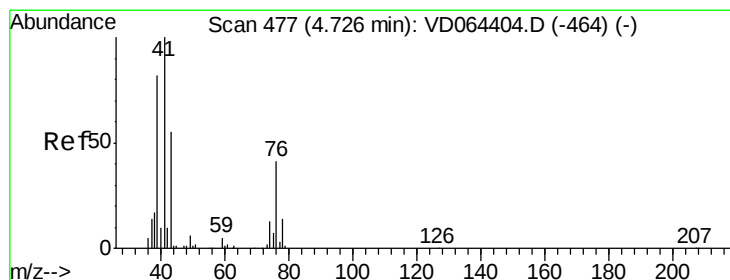
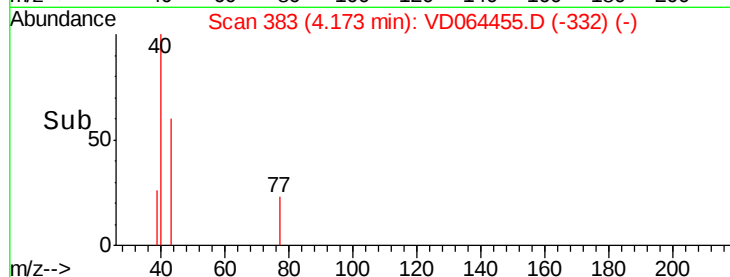
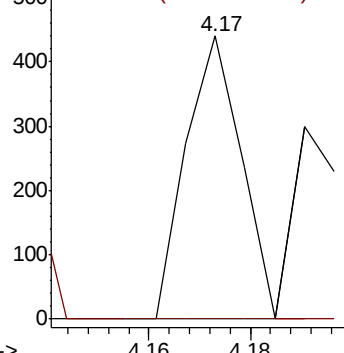
43 100

58 0.0 22.6 33.8#



Abundance Ion 43.00 (42.70 to 43.70): VDC

Ion 58.00 (57.70 to 58.70): VDC



#18

Methyl Acetate

Concen: 2.032 ug/l

RT: 4.74 min Scan# 480

Delta R.T. 0.02 min

Lab File: VD064455.D

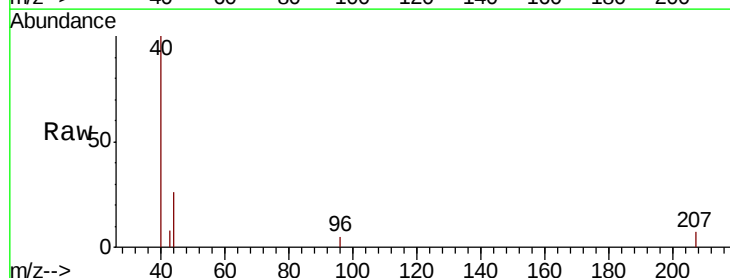
Acq: 06 Dec 2019 13:32

Tgt Ion: 43 Resp: 348

Ion Ratio Lower Upper

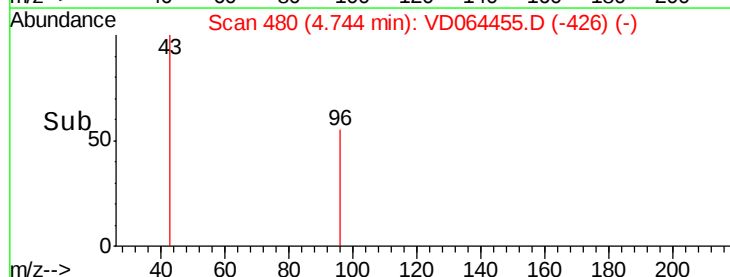
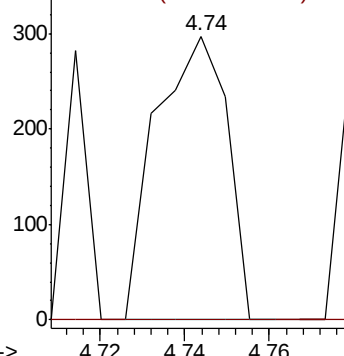
43 100

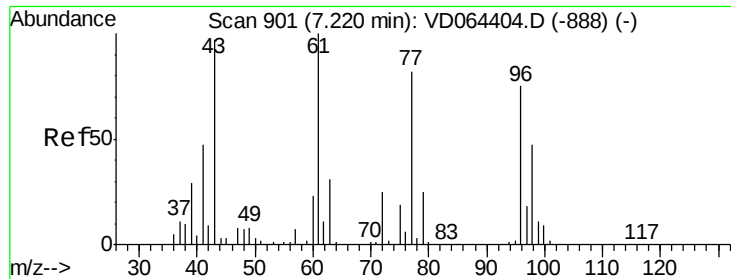
74 0.0 19.7 29.5#



Abundance Ion 43.00 (42.70 to 43.70): VDC

Ion 74.00 (73.70 to 74.70): VDC

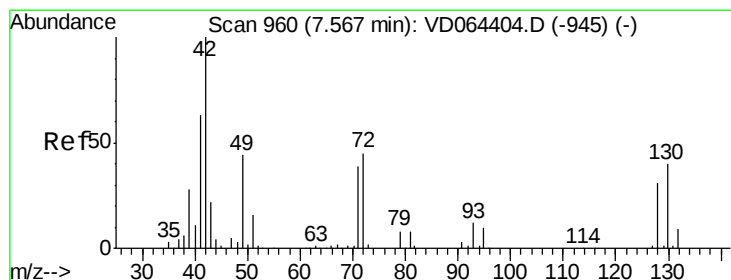
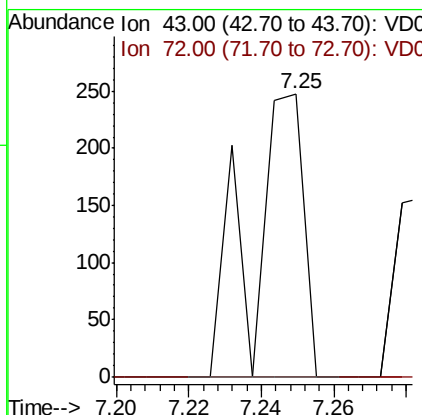
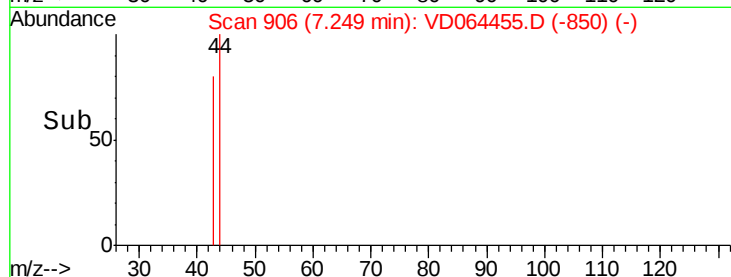
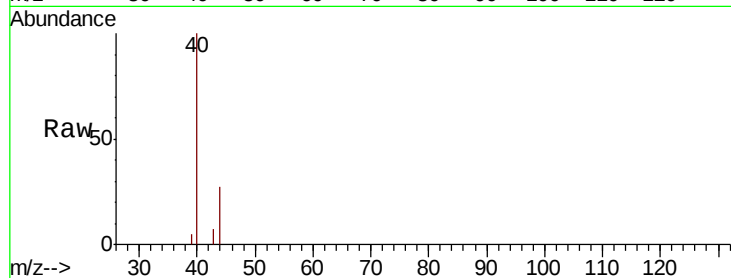




#25  
2-Butanone  
Concen: 2.951 ug/l  
RT: 7.25 min Scan# 906  
Delta R.T. 0.03 min  
Lab File: VD064455.D  
Acq: 06 Dec 2019 13:32

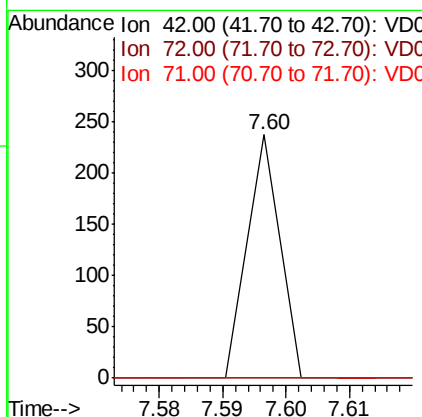
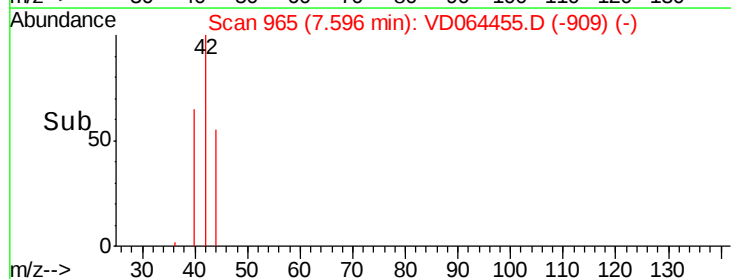
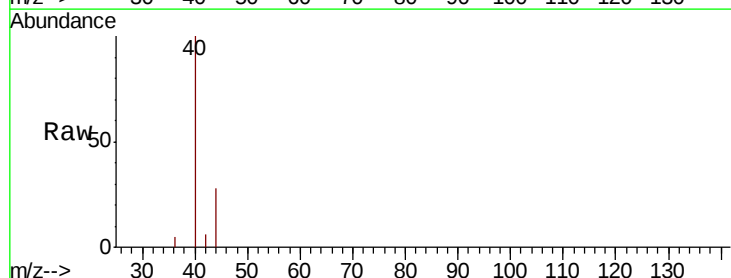
Instrument :  
MSVOA\_D  
ClientSampled :

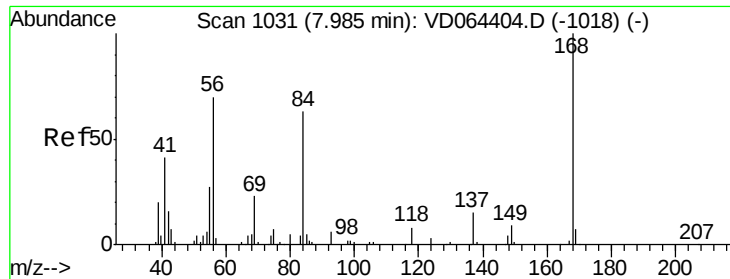
Tot Ion: 43 Resp: 245  
Ion Ratio Lower Upper  
43 100  
72 0.0 21.0 31.4#



#29  
Tetrahydrofuran  
Concen: 1.590 ug/l  
RT: 7.60 min Scan# 965  
Delta R.T. 0.03 min  
Lab File: VD064455.D  
Acq: 06 Dec 2019 13:32

Tgt Ion: 42 Resp: 84  
Ion Ratio Lower Upper  
42 100  
72 0.0 35.8 53.8#  
71 0.0 32.7 49.1#

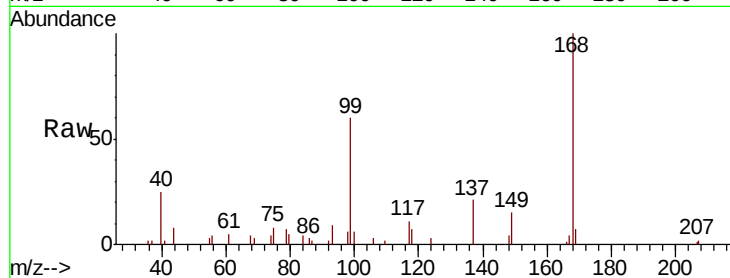




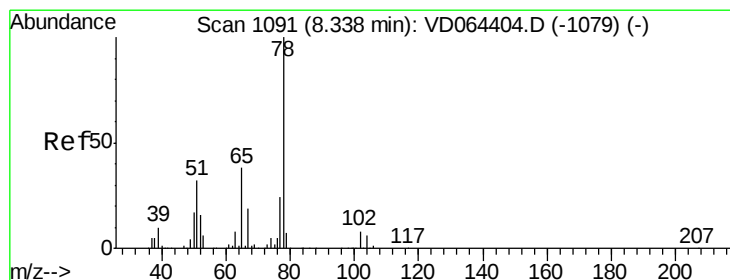
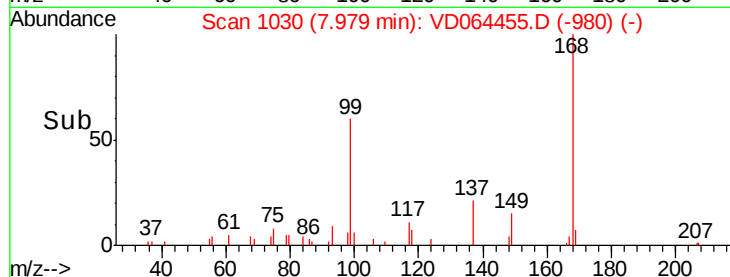
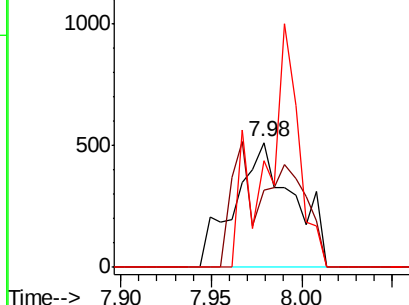
#31  
Cyclohexane  
Concen: Below Cal  
RT: 7.98 min Scan# 1030  
Delta R.T. -0.01 min  
Lab File: VD064455.D  
Acq: 06 Dec 2019 13:32

Instrument :  
MSVOA\_D  
ClientSampled :

Tot Ion: 56 Resp: 1163  
Ion Ratio Lower Upper  
56 100  
69 61.7 26.2 39.4#  
84 85.6 70.3 105.5

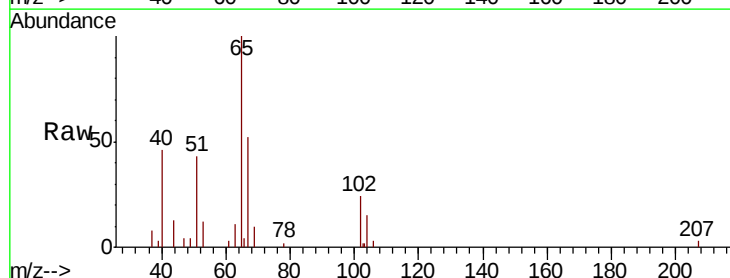


Abundance Ion 56.00 (55.70 to 56.70): VDC  
Ion 69.00 (68.70 to 69.70): VDC  
Ion 84.00 (83.70 to 84.70): VDC

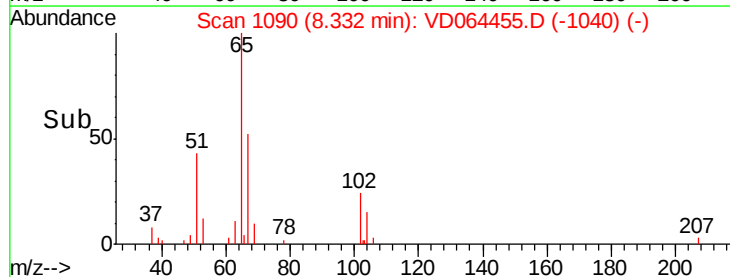
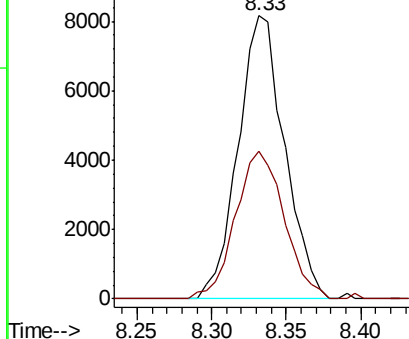


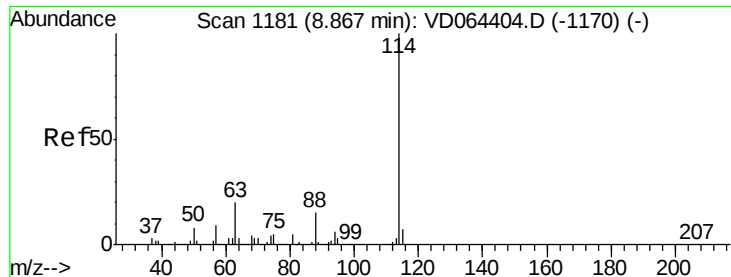
#33  
1,2-Dichloroethane-d4  
Concen: 60.610 ug/l  
RT: 8.33 min Scan# 1090  
Delta R.T. -0.01 min  
Lab File: VD064455.D  
Acq: 06 Dec 2019 13:32

Tgt Ion: 65 Resp: 17606  
Ion Ratio Lower Upper  
65 100  
67 54.8 0.0 102.0



Abundance Ion 64.90 (64.60 to 65.60): VDC  
Ion 66.90 (66.60 to 67.60): VDC

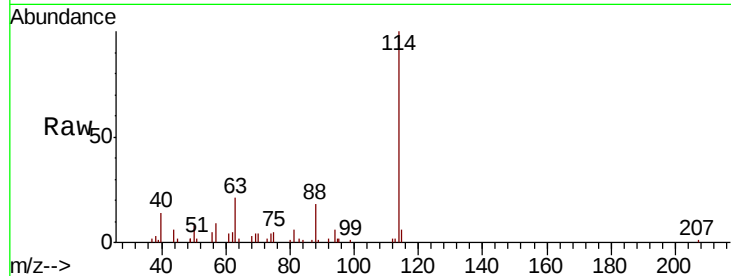




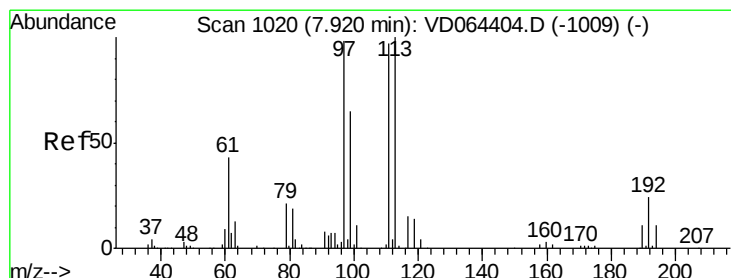
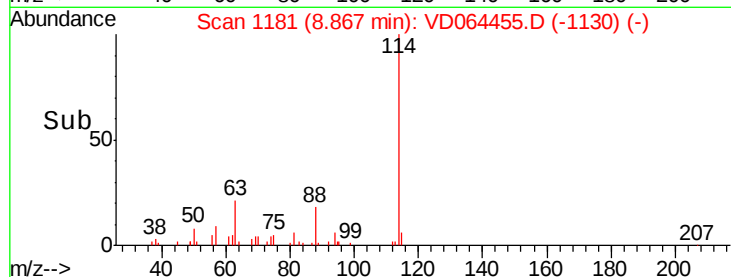
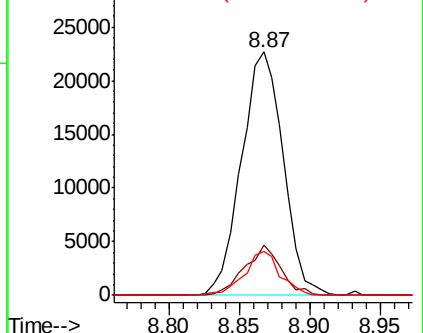
#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.87 min Scan# 1181  
 Delta R.T. -0.00 min  
 Lab File: VD064455.D  
 Acq: 06 Dec 2019 13:32

Instrument :  
 MSVOA\_D  
 ClientSampleId :

Tot Ion:114 Resp: 47063  
 Ion Ratio Lower Upper  
 114 100  
 63 20.6 0.0 40.0  
 88 18.1 0.0 29.2

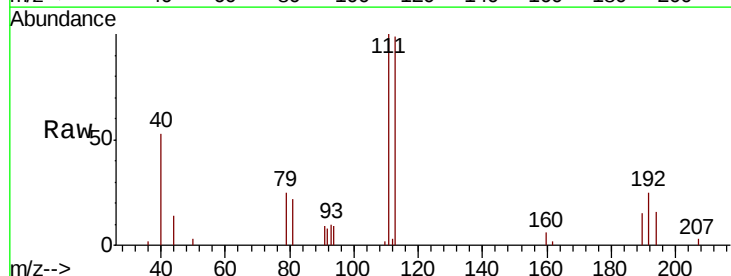


Abundance Ion 113.90 (113.60 to 114.60): V  
 Ion 63.00 (62.70 to 63.70): V  
 Ion 87.90 (87.60 to 88.60): V

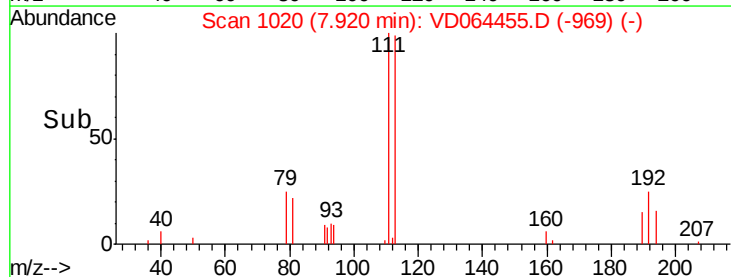
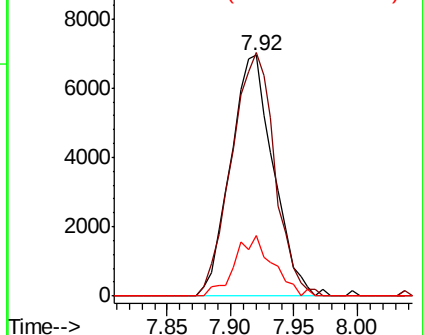


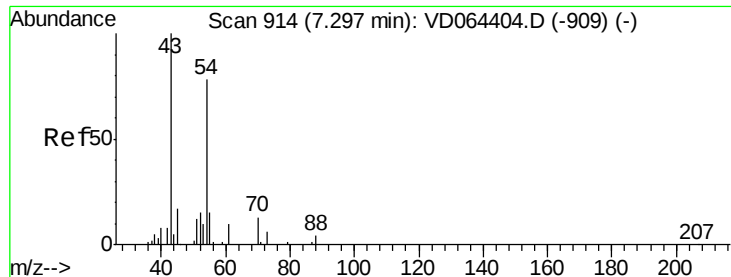
#35  
 Dibromofluoromethane  
 Concen: 54.910 ug/l  
 RT: 7.92 min Scan# 1020  
 Delta R.T. -0.00 min  
 Lab File: VD064455.D  
 Acq: 06 Dec 2019 13:32

Tgt Ion:113 Resp: 16282  
 Ion Ratio Lower Upper  
 113 100  
 111 101.9 79.4 119.2  
 192 22.4 18.6 28.0



Abundance Ion 112.80 (112.50 to 113.50): V  
 Ion 110.80 (110.50 to 111.50): V  
 Ion 191.70 (191.40 to 192.40): V





#37

Ethyl Acetate

Concen: 1.138 ug/l

RT: 7.31 min Scan# 916

Delta R.T. 0.01 min

Lab File: VD064455.D

Acq: 06 Dec 2019 13:32

Instrument :

MSVOA\_D

ClientSampleId :

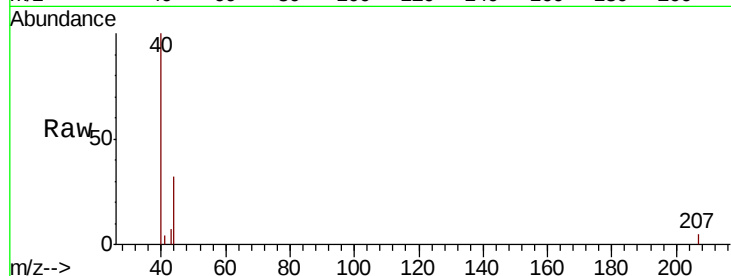
Tot Ion: 43 Resp: 215

Ion Ratio Lower Upper

43 100

61 0.0 10.9 16.3#

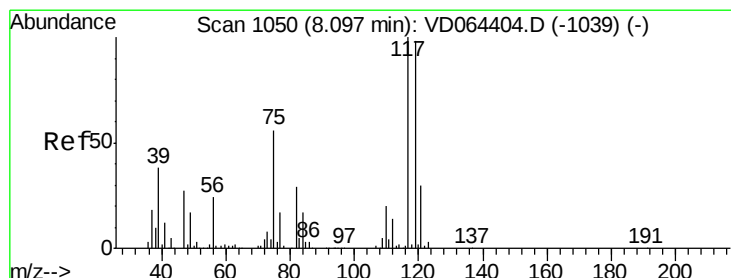
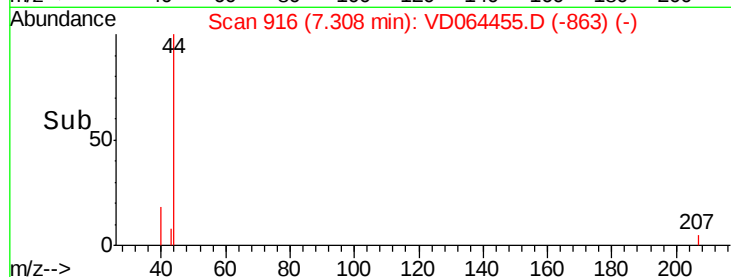
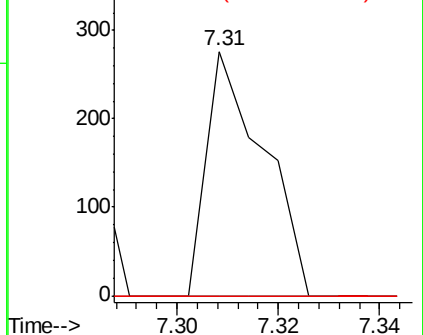
70 0.0 8.3 12.5#



Abundance Ion 43.00 (42.70 to 43.70): VDC

Ion 60.90 (60.60 to 61.60): VDC

Ion 70.00 (69.70 to 70.70): VDC



#38

Carbon Tetrachloride

Concen: 6.388 ug/l

RT: 7.98 min Scan# 1030

Delta R.T. -0.12 min

Lab File: VD064455.D

Acq: 06 Dec 2019 13:32

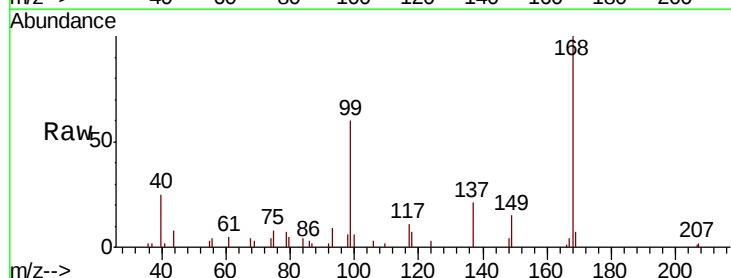
Tgt Ion: 117 Resp: 3001

Ion Ratio Lower Upper

117 100

119 0.0 78.8 118.2#

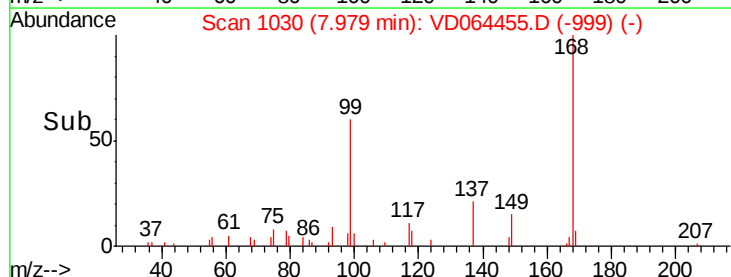
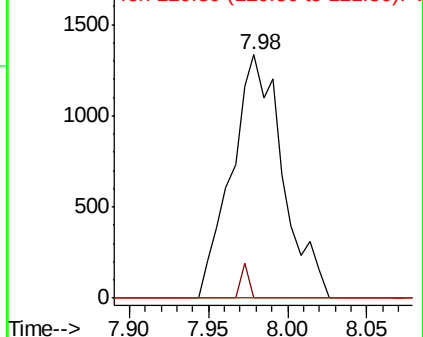
121 0.0 24.2 36.2#

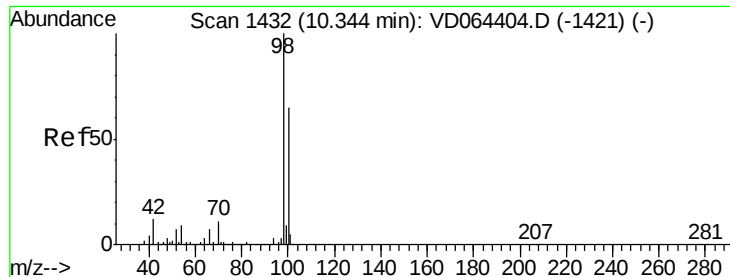


Abundance Ion 116.80 (116.50 to 117.50): V

Ion 118.80 (118.50 to 119.50): V

Ion 120.80 (120.50 to 121.50): V





#50

Toluene-d8

Concen: 50.704 ug/l

RT: 10.34 min Scan# 1431

Delta R.T. -0.01 min

Lab File: VD064455.D

Acq: 06 Dec 2019 13:32

Instrument :

MSVOA\_D

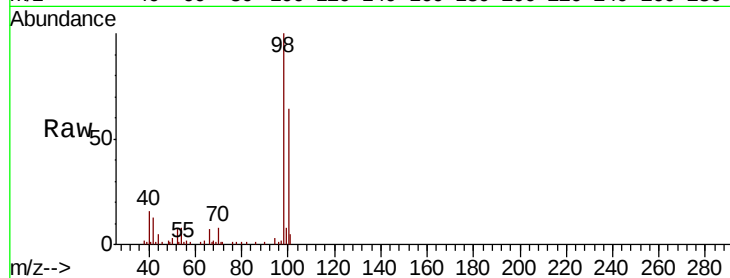
ClientSampleId :

Tot Ion: 98 Resp: 56634

Ion Ratio Lower Upper

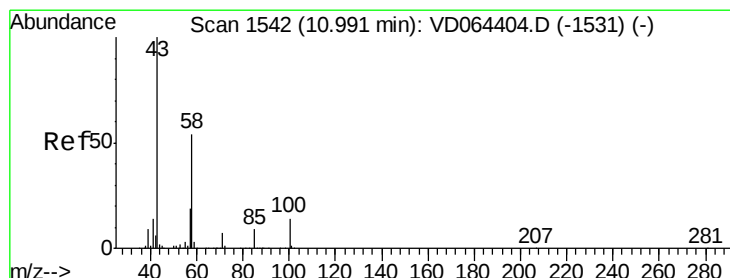
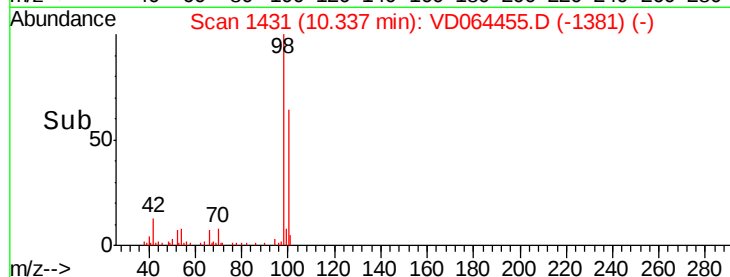
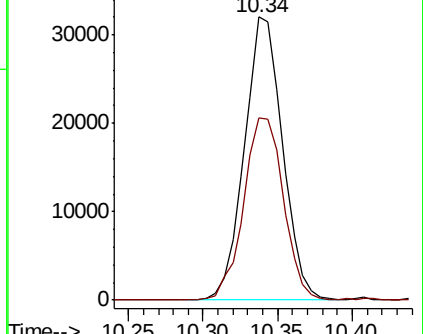
98 100

100 67.1 52.6 79.0



Abundance Ion 98.00 (97.70 to 98.70): VDC

Ion 100.00 (99.70 to 100.70): VDC



#59

2-Hexanone

Concen: 1.114 ug/l

RT: 10.98 min Scan# 1540

Delta R.T. -0.01 min

Lab File: VD064455.D

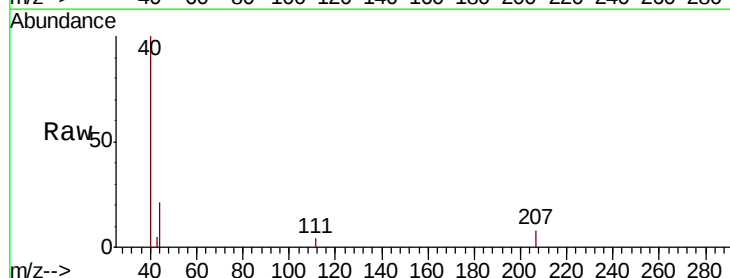
Acq: 06 Dec 2019 13:32

Tgt Ion: 43 Resp: 142

Ion Ratio Lower Upper

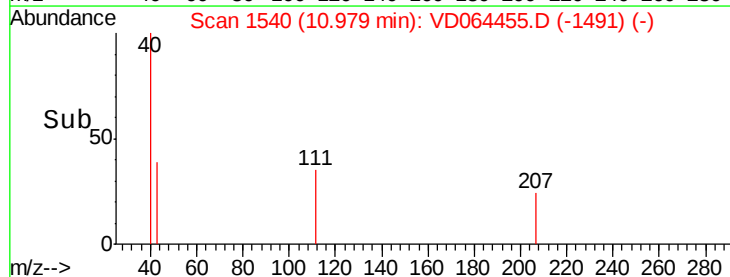
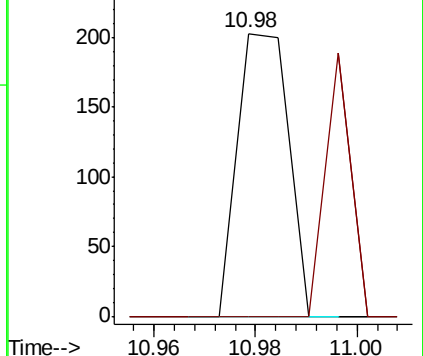
43 100

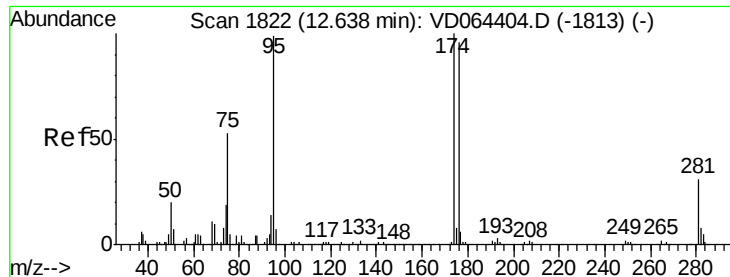
58 47.2 26.3 78.8



Abundance Ion 43.00 (42.70 to 43.70): VDC

Ion 58.00 (57.70 to 58.70): VDC

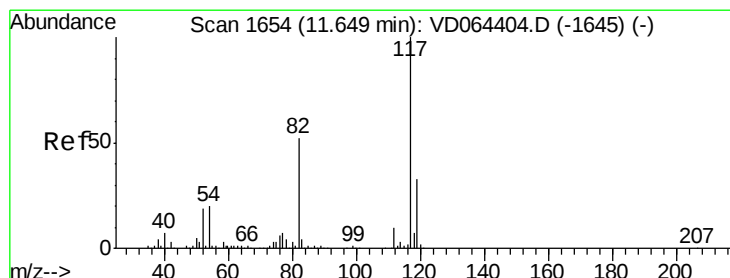
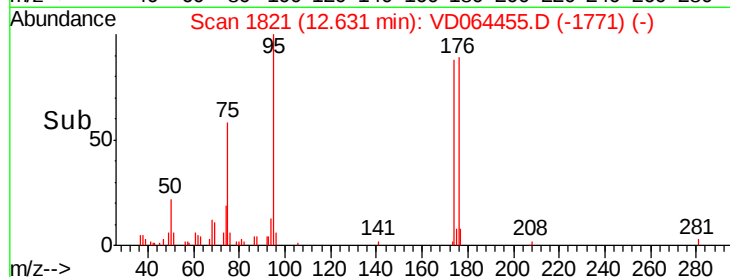
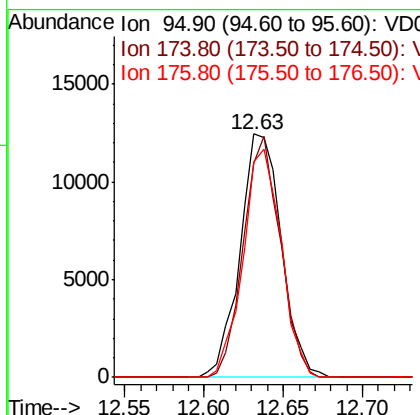
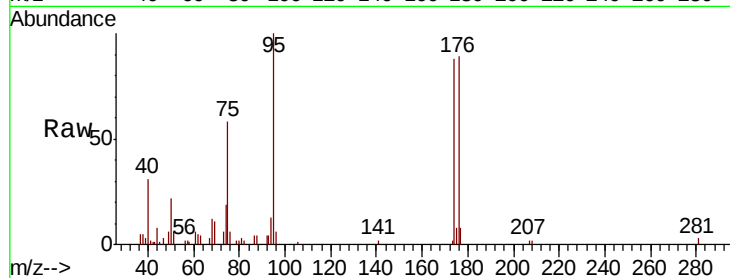




#62  
4-Bromofluorobenzene  
Concen: 62.759 ug/l  
RT: 12.63 min Scan# 1821  
Delta R.T. -0.01 min  
Lab File: VD064455.D  
Acq: 06 Dec 2019 13:32

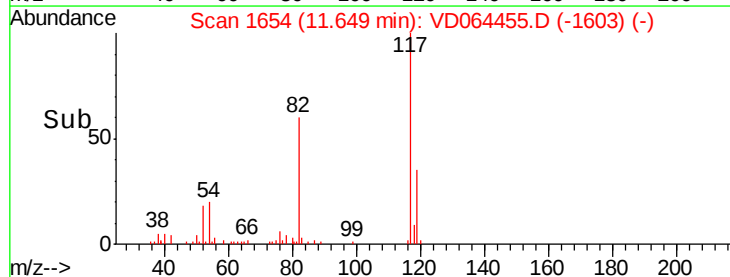
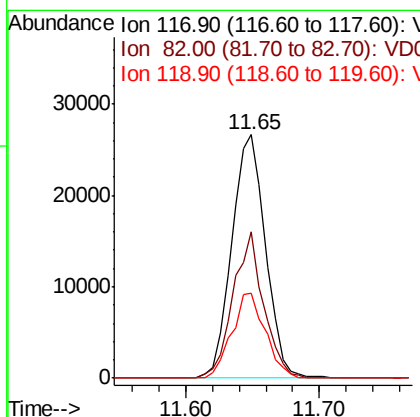
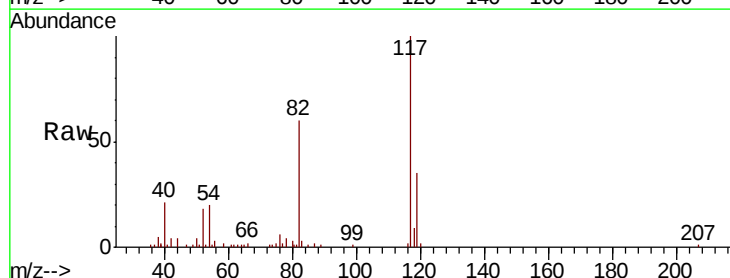
Instrument :  
MSVOA\_D  
ClientSampleId :

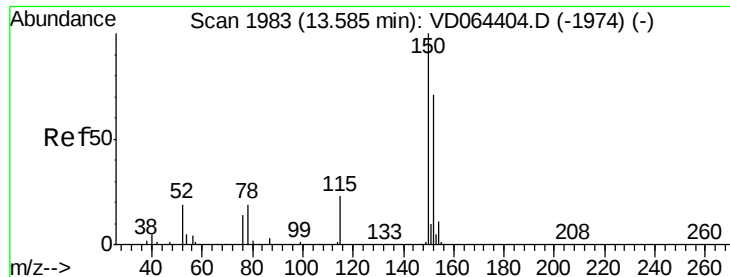
Tot Ion: 95 Resp: 22528  
Ion Ratio Lower Upper  
95 100  
174 88.4 0.0 197.2  
176 86.9 0.0 189.6



#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.65 min Scan# 1654  
Delta R.T. -0.00 min  
Lab File: VD064455.D  
Acq: 06 Dec 2019 13:32

Tgt Ion: 117 Resp: 46696  
Ion Ratio Lower Upper  
117 100  
82 59.9 41.4 62.2  
119 34.7 26.2 39.2





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 13.58 min Scan# 1982

Delta R.T. -0.01 min

Lab File: VD064455.D

Acq: 06 Dec 2019 13:32

Instrument :

MSVOA\_D

ClientSampleId :

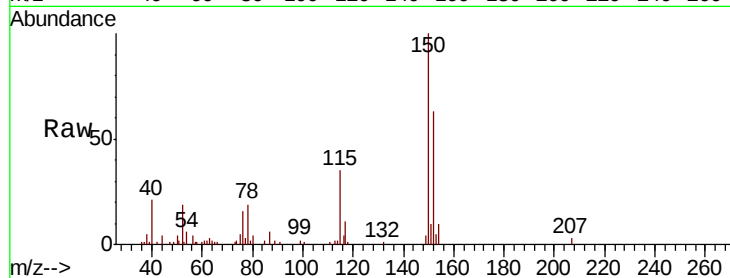
Tot Ion:152 Resp: 25422

Ion Ratio Lower Upper

152 100

115 51.4 26.7 80.1

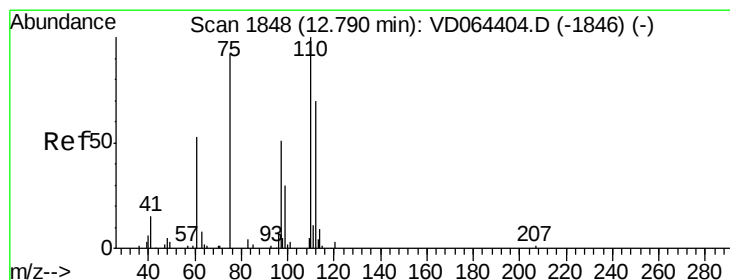
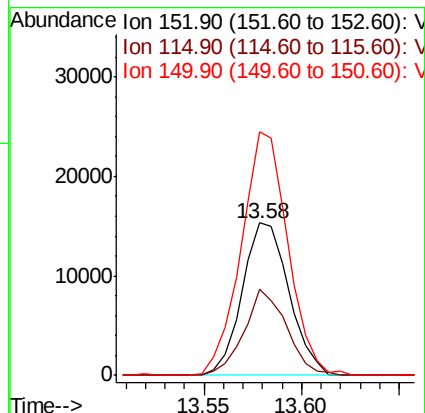
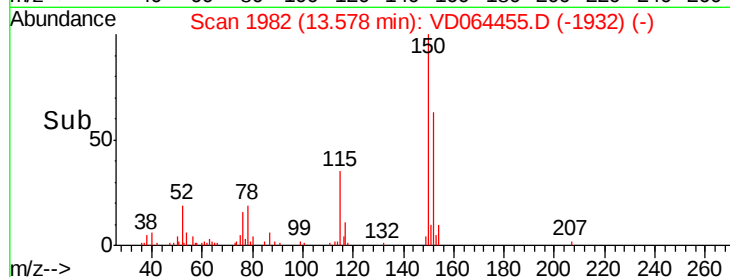
150 159.3 0.0 347.2



Abundance Ion 151.90 (151.60 to 152.60): V

Ion 114.90 (114.60 to 115.60): V

Ion 149.90 (149.60 to 150.60): V



#76

1,2,3-Trichloropropane

Concen: 56.270 ug/l

RT: 12.63 min Scan# 1821

Delta R.T. -0.16 min

Lab File: VD064455.D

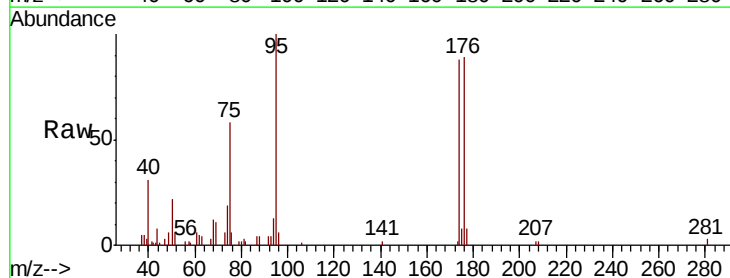
Acq: 06 Dec 2019 13:32

Tgt Ion: 75 Resp: 11764

Ion Ratio Lower Upper

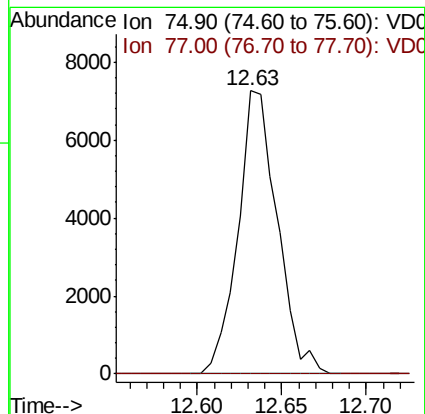
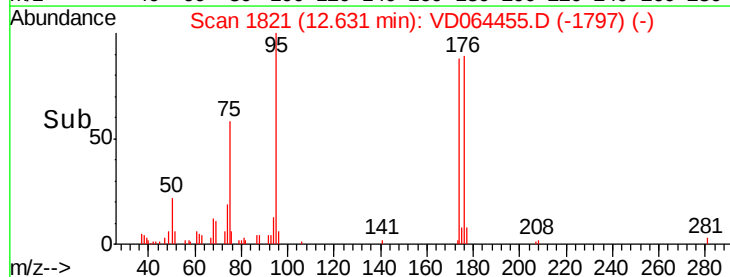
75 100

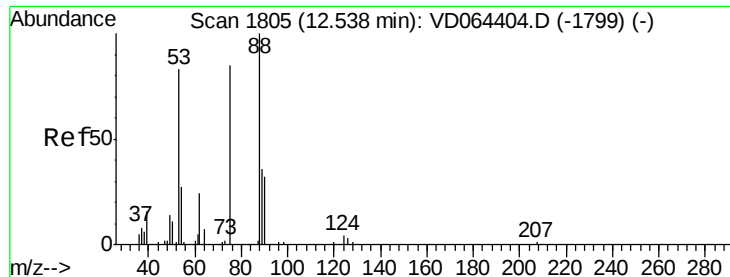
77 0.0 0.0 0.0



Abundance Ion 74.90 (74.60 to 75.60): V

Ion 77.00 (76.70 to 77.70): V





#81

trans-1,4-Dichloro-2-butene

Concen: 122.699 ug/l

RT: 12.63 min Scan# 1821

Delta R.T. 0.09 min

Lab File: VD064455.D

Acq: 06 Dec 2019 13:32

Instrument :

MSVOA\_D

ClientSampleId :

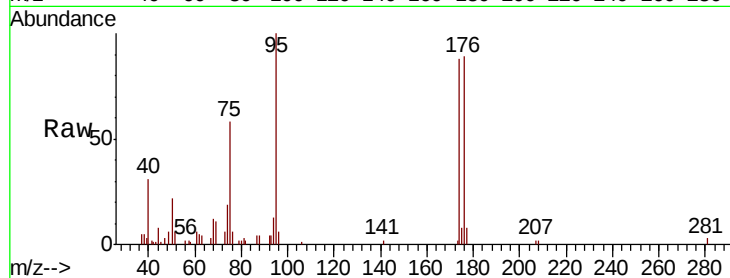
Tot Ion: 75 Resp: 11764

Ion Ratio Lower Upper

75 100

53 0.0 81.0 121.6#

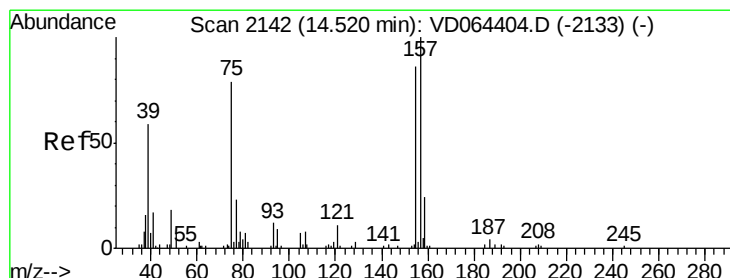
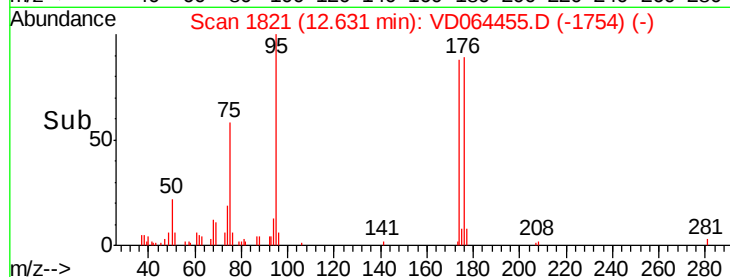
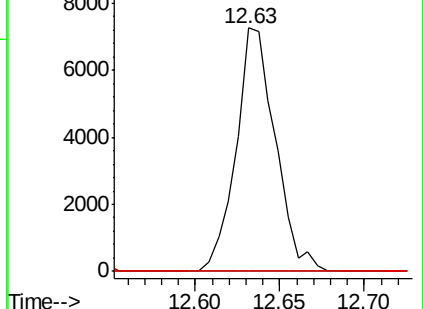
89 0.0 38.5 57.7#



Abundance Ion 74.90 (74.60 to 75.60): VDC

Ion 53.00 (52.70 to 53.70): VDC

Ion 88.90 (88.60 to 89.60): VDC



#92

1,2-Dibromo-3-Chloropropane

Concen: Below Cal

RT: 14.60 min Scan# 2155

Delta R.T. 0.08 min

Lab File: VD064455.D

Acq: 06 Dec 2019 13:32

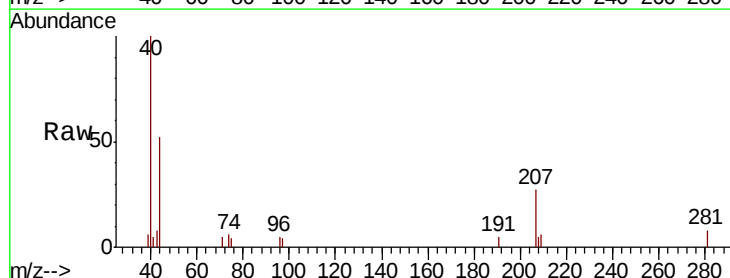
Tgt Ion: 75 Resp: 55

Ion Ratio Lower Upper

75 100

155 0.0 51.9 155.7#

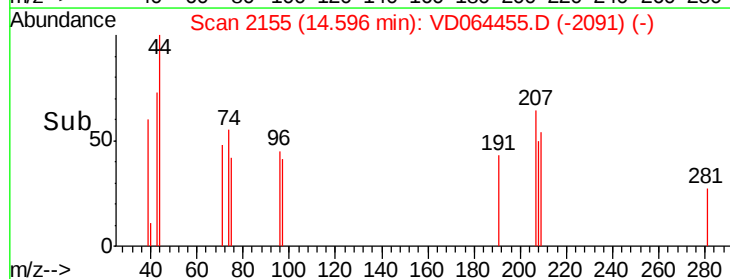
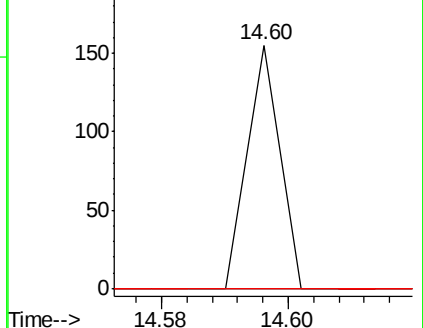
157 0.0 63.2 189.8#

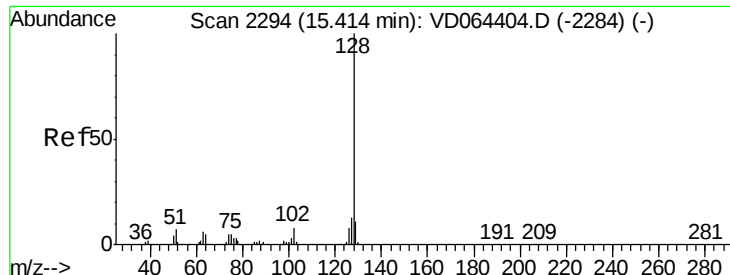


Abundance Ion 74.90 (74.60 to 75.60): VDC

Ion 154.80 (154.50 to 155.50): V

Ion 156.80 (156.50 to 157.50): V





#95

Naphthalene

Concen: 1.297 ug/l

RT: 15.41 min Scan# 2293

Delta R.T. -0.01 min

Lab File: VD064455.D

Acq: 06 Dec 2019 13:32

Instrument :

MSVOA\_D

ClientSampleId :

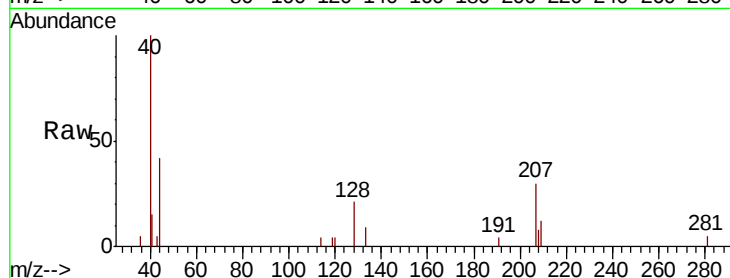
Tot Ion:128 Resp: 1214

Ion Ratio Lower Upper

128 100

127 0.0 10.5 15.7#

129 0.0 8.8 13.2#



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

