

Data Path : Z:\VOASRV\HPCHEM1\MSVOA D\DATA\VD103019\  
 Data File : VD064113.D  
 Acq On : 30 Oct 2019 14:20  
 Operator : VA/SY  
 Sample : K5601-01RE  
 Misc : 5.09G/5.00ml/MSVOA D/SOIL  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_D  
 ClientSampleId :

Quant Time: Oct 31 04:04:01 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_D\METHOD\82D102919S.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Oct 30 08:00:10 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.98  | 168  | 166409   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.87  | 114  | 280652   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.65 | 117  | 298215   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.58 | 152  | 157465   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.34   | 65  | 85144    | 64.33 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 128.66% |      |
| 35) Dibromofluoromethane  | 7.92   | 113 | 89164    | 51.64 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 103.28% |      |
| 50) Toluene-d8            | 10.34  | 98  | 349399   | 50.60 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 101.20% |      |
| 62) 4-Bromofluorobenzene  | 12.64  | 95  | 121556   | 53.10 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 106.20% |      |

## Target Compounds

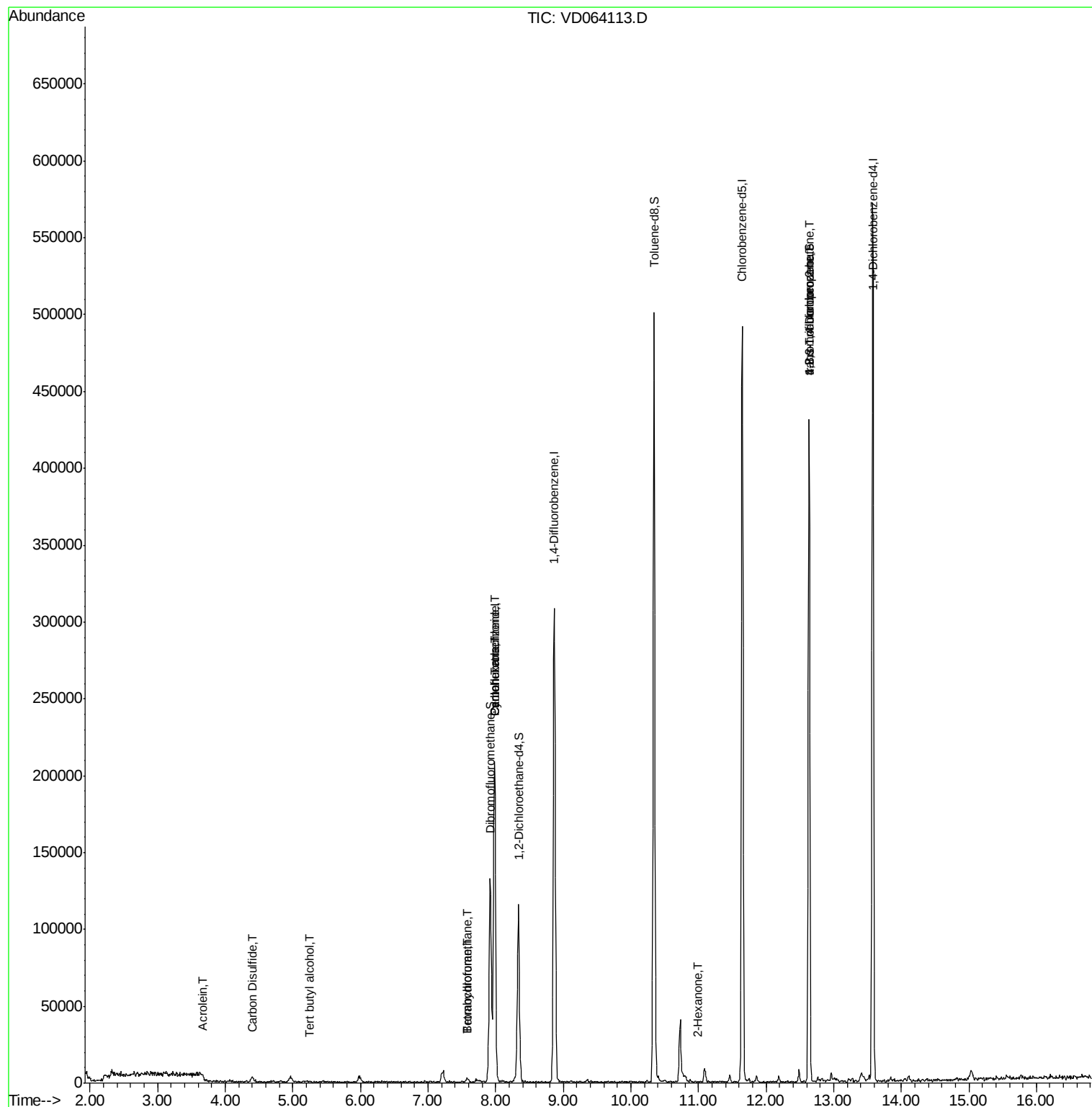
|                                |       |     |       |           | Qvalue |     |
|--------------------------------|-------|-----|-------|-----------|--------|-----|
| 11) Tert butyl alcohol         | 5.24  | 59  | 87    | 7.305     | ug/l # | 71  |
| 13) Acrolein                   | 3.67  | 56  | 145   | 1.718     | ug/l # | 16  |
| 17) Carbon Disulfide           | 4.40  | 76  | 7664  | 1.728     | ug/l # | 94  |
| 20) Methylene Chloride         | 4.96  | 84  | 1382  | Below Cal | #      | 68  |
| 28) Bromochloromethane         | 7.57  | 49  | 61    | 2.309     | ug/l # | 5   |
| 29) Tetrahydrofuran            | 7.58  | 42  | 1926  | 9.480     | ug/l # | 84  |
| 31) Cyclohexane                | 7.99  | 56  | 4051  | 1.646     | ug/l # | 70  |
| 38) Carbon Tetrachloride       | 7.98  | 117 | 15749 | 5.489     | ug/l # | 16  |
| 59) 2-Hexanone                 | 10.98 | 43  | 81    | 9.126     | ug/l # | 59  |
| 76) 1,2,3-Trichloropropane     | 12.64 | 75  | 66818 | 63.151    | ug/l # | 100 |
| 81) trans-1,4-Dichloro-2-buten | 12.64 | 75  | 66818 | 128.970   | ug/l # | 15  |

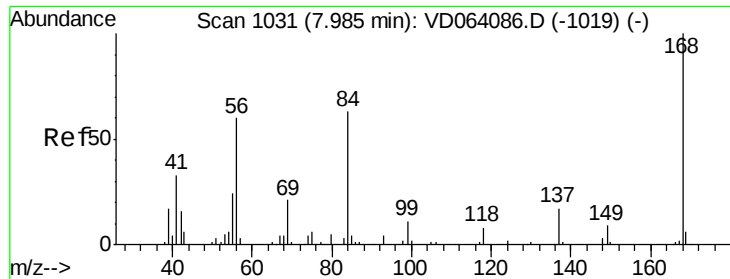
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : SW846 8260  
QLast Update : Wed Oct 30 08:00:10 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.98 min Scan# 1031

Delta R.T. 0.00 min

Lab File: VD064113.D

Acq: 30 Oct 2019 14:20

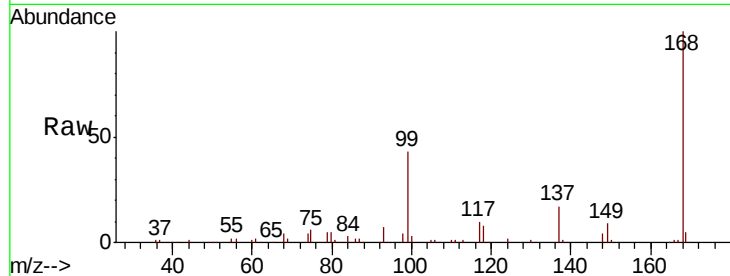
Instrument :  
MSVOA\_D  
ClientSampleId :

Tot Ion:168 Resp: 166409

Ion Ratio Lower Upper

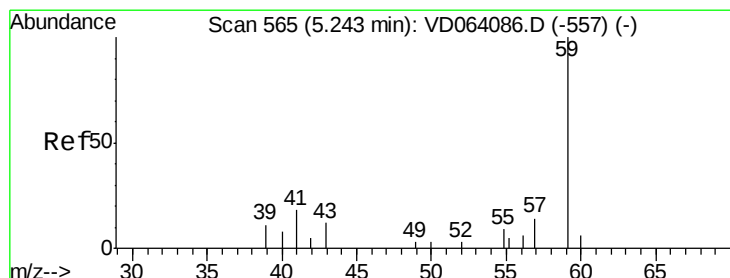
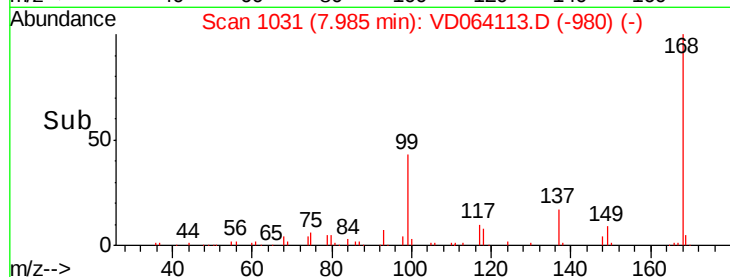
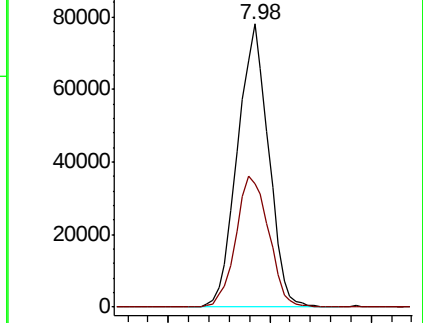
168 100

99 43.4 37.6 56.4



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VDC



#11

Tert butyl alcohol

Concen: 7.305 ug/l

RT: 5.24 min Scan# 565

Delta R.T. 0.00 min

Lab File: VD064113.D

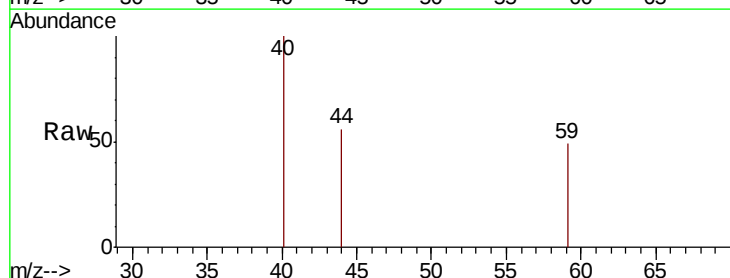
Acq: 30 Oct 2019 14:20

Tgt Ion: 59 Resp: 87

Ion Ratio Lower Upper

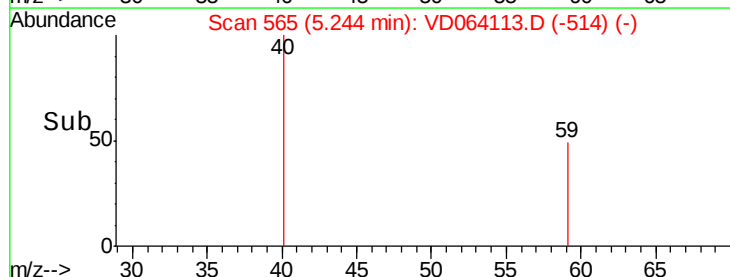
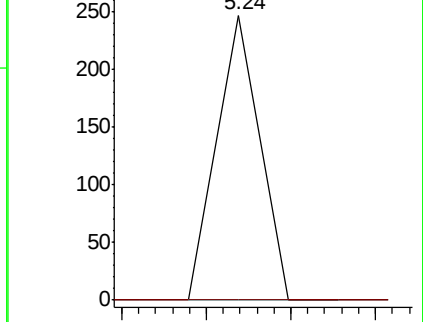
59 100

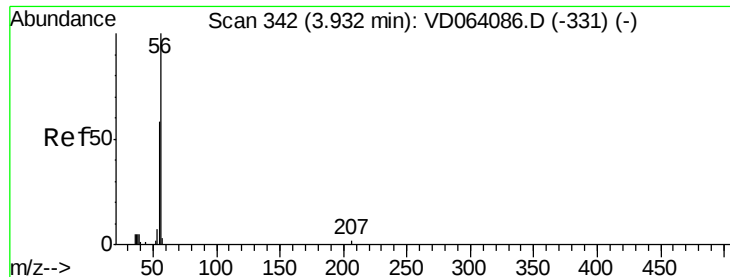
57 0.0 8.7 13.1#



Abundance Ion 59.00 (58.70 to 59.70): VDC

Ion 57.00 (56.70 to 57.70): VDC





#13

Acrolein

Concen: 1.718 ug/l

RT: 3.67 min Scan# 297

Delta R.T. -0.26 min

Lab File: VD064113.D

Acq: 30 Oct 2019 14:20

Instrument :

MSVOA\_D

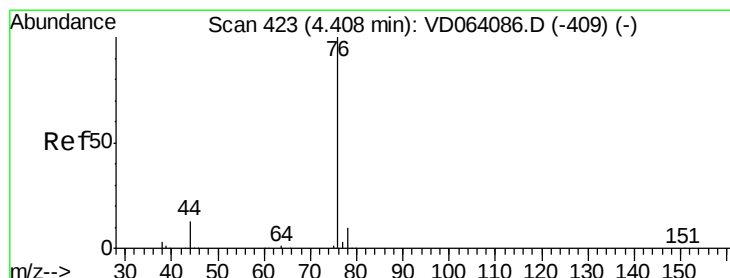
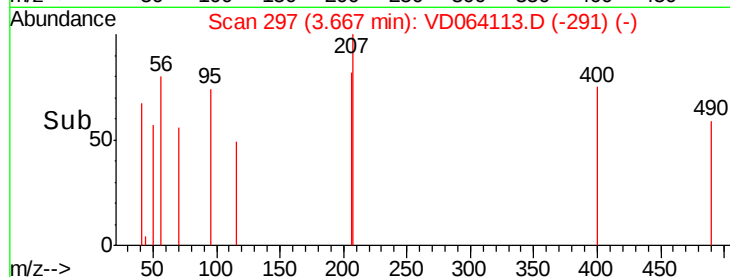
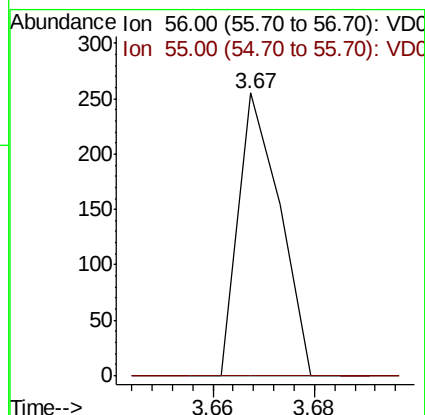
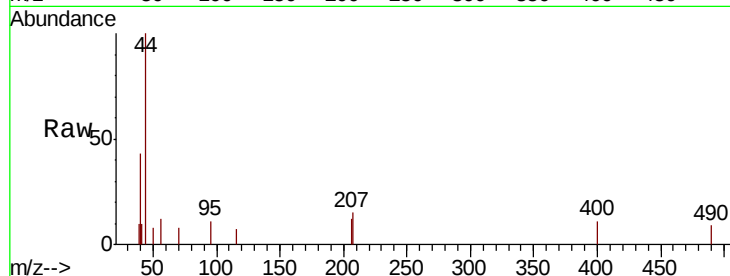
ClientSampled :

Tot Ion: 56 Resp: 145

Ion Ratio Lower Upper

56 100

55 0.0 53.8 80.6#



#17

Carbon Disulfide

Concen: 1.728 ug/l

RT: 4.40 min Scan# 421

Delta R.T. -0.01 min

Lab File: VD064113.D

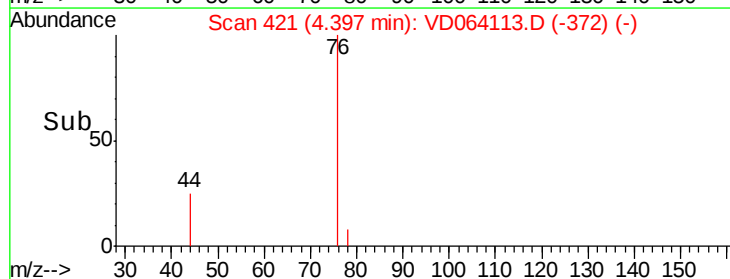
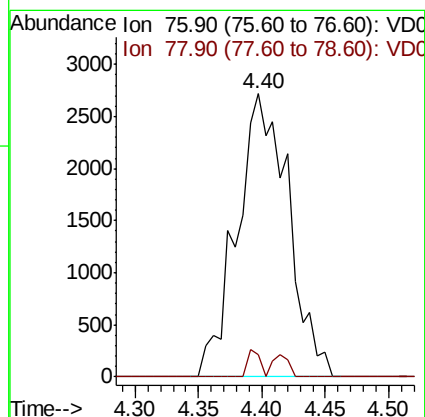
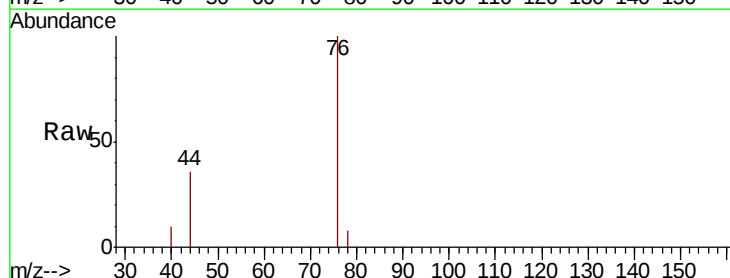
Acq: 30 Oct 2019 14:20

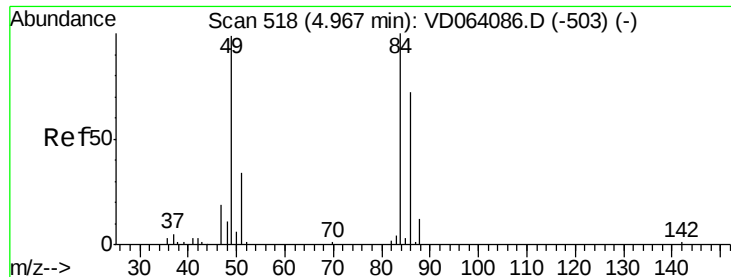
Tgt Ion: 76 Resp: 7664

Ion Ratio Lower Upper

76 100

78 8.0 8.1 12.1#

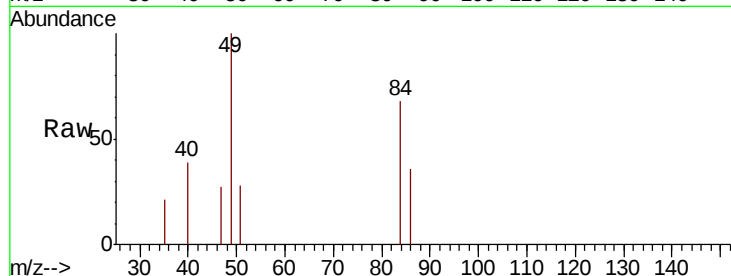




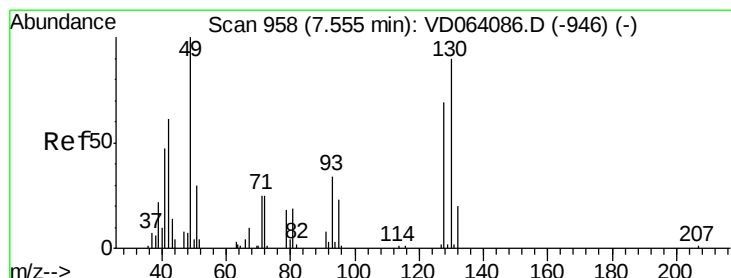
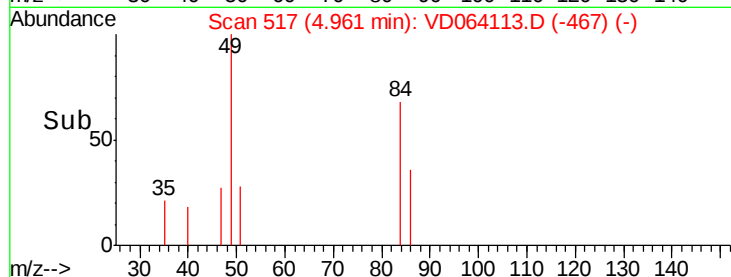
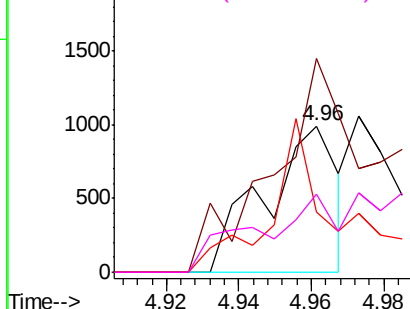
#20  
Methvlene Chloride  
Concen: Below Cal  
RT: 4.96 min Scan# 517  
Delta R.T. -0.01 min  
Lab File: VD064113.D  
Acq: 30 Oct 2019 14:20

Instrument :  
MSVOA\_D  
ClientSampleId :

Tot Ion: 84 Resp: 1382  
Ion Ratio Lower Upper  
84 100  
49 146.0 79.4 119.0#  
51 41.0 27.4 41.2  
86 53.3 57.4 86.0#

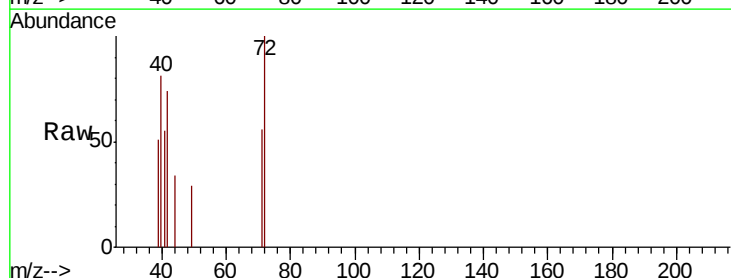


Abundance Ion 83.90 (83.60 to 84.60): VDC  
Ion 48.90 (48.60 to 49.60): VDC  
Ion 50.90 (50.60 to 51.60): VDC  
Ion 85.90 (85.60 to 86.60): VDC

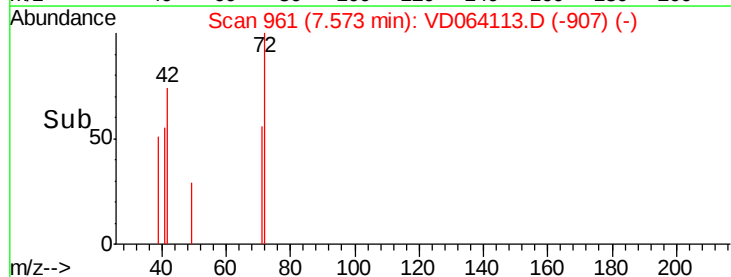
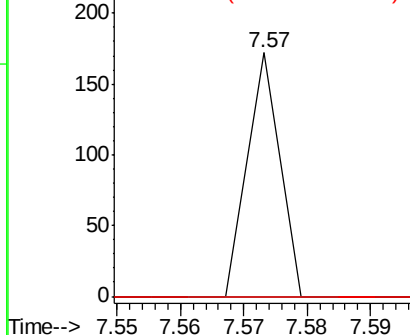


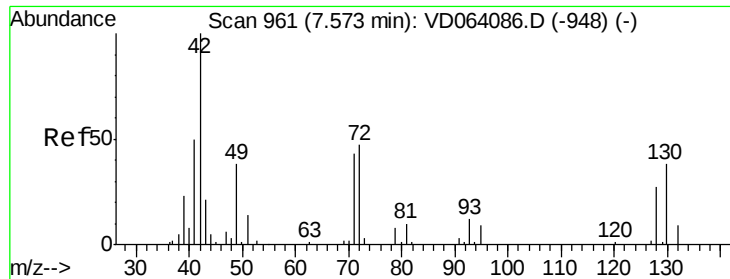
#28  
Bromochloromethane  
Concen: 2.309 ug/l  
RT: 7.57 min Scan# 961  
Delta R.T. 0.02 min  
Lab File: VD064113.D  
Acq: 30 Oct 2019 14:20

Tgt Ion: 49 Resp: 61  
Ion Ratio Lower Upper  
49 100  
129 0.0 0.0 5.4  
130 0.0 75.3 112.9#



Abundance Ion 48.90 (48.60 to 49.60): VDC  
Ion 128.80 (128.50 to 129.50): V  
Ion 129.80 (129.50 to 130.50): V





#29

Tetrahydrofuran

Concen: 9.480 ug/l

RT: 7.58 min Scan# 962

Delta R.T. 0.01 min

Lab File: VD064113.D

Acq: 30 Oct 2019 14:20

Instrument :

MSVOA\_D

ClientSampled :

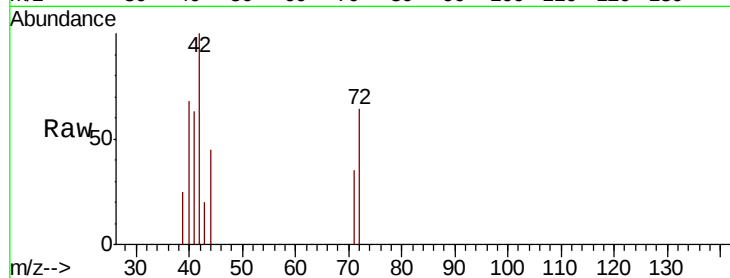
Tot Ion: 42 Resp: 1926

Ion Ratio Lower Upper

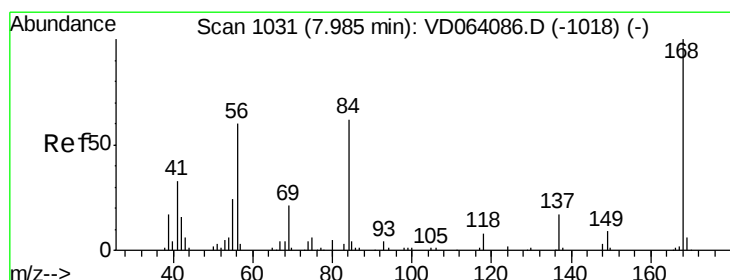
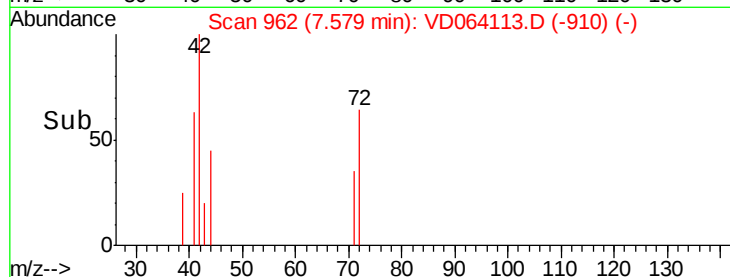
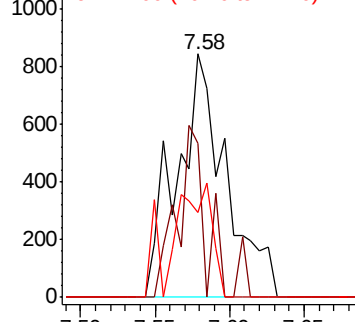
42 100

72 39.7 38.9 58.3

71 31.6 35.4 53.2#



Abundance Ion 42.00 (41.70 to 42.70): VDC  
Ion 72.00 (71.70 to 72.70): VDC  
Ion 71.00 (70.70 to 71.70): VDC



#31

Cyclohexane

Concen: 1.646 ug/l

RT: 7.99 min Scan# 1032

Delta R.T. 0.01 min

Lab File: VD064113.D

Acq: 30 Oct 2019 14:20

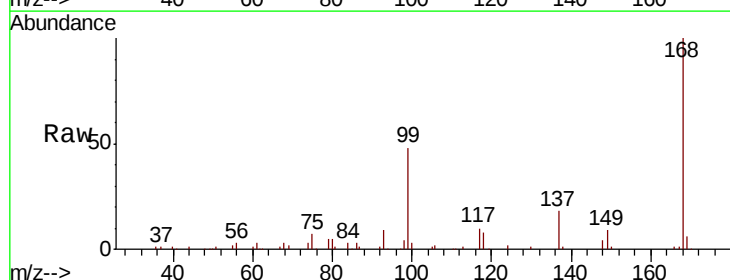
Tgt Ion: 56 Resp: 4051

Ion Ratio Lower Upper

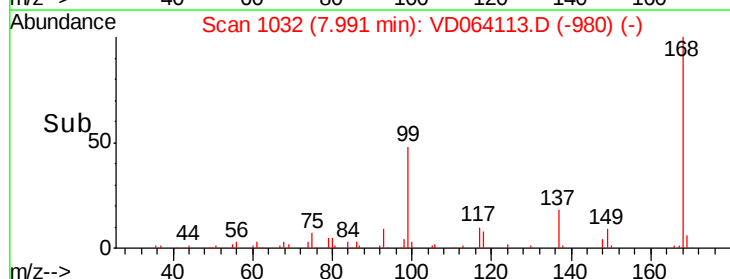
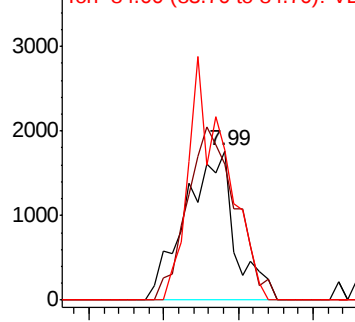
56 100

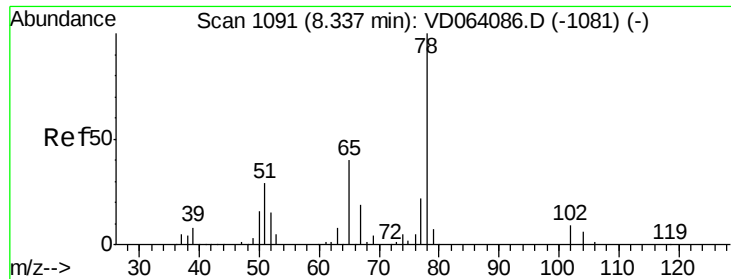
69 91.2 27.7 41.5#

84 111.2 83.1 124.7



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: 64.334 ug/l

RT: 8.34 min Scan# 1091

Delta R.T. 0.00 min

Lab File: VD064113.D

Acq: 30 Oct 2019 14:20

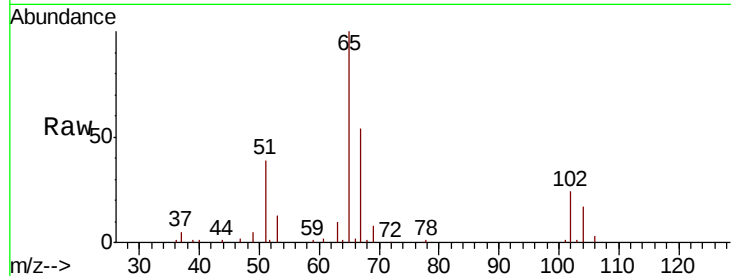
Instrument :  
MSVOA\_D  
ClientSampleId :

Tot Ion: 65 Resp: 85144

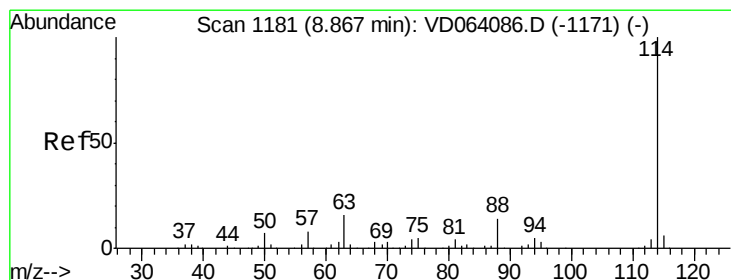
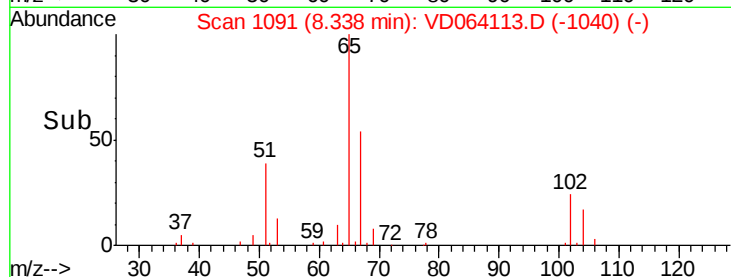
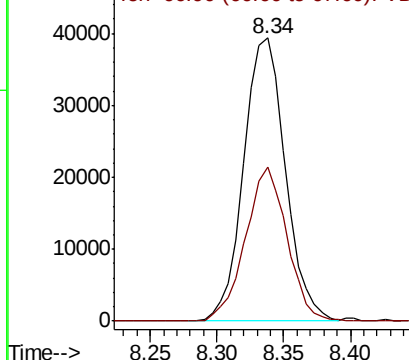
Ion Ratio Lower Upper

65 100

67 54.2 0.0 104.6



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: VD064113.D

Acq: 30 Oct 2019 14:20

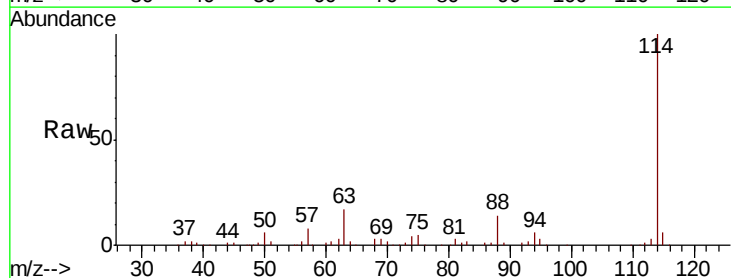
Tgt Ion: 114 Resp: 280652

Ion Ratio Lower Upper

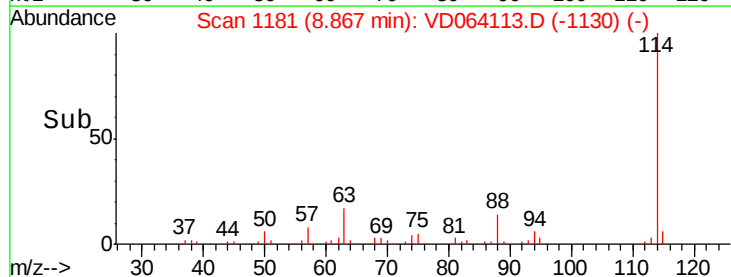
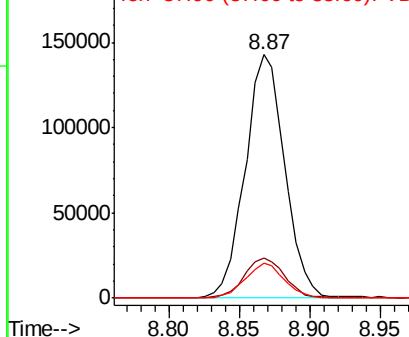
114 100

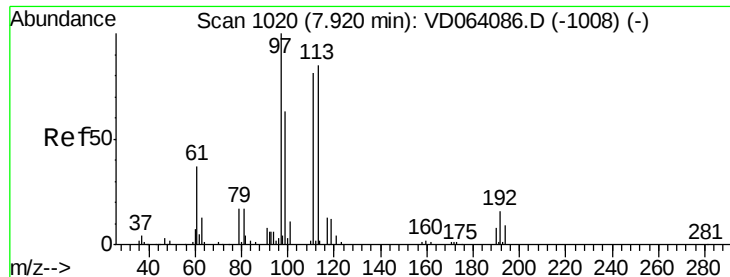
63 16.6 0.0 32.8

88 14.2 0.0 27.6



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

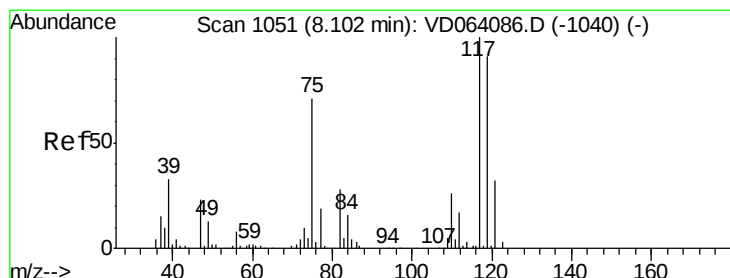
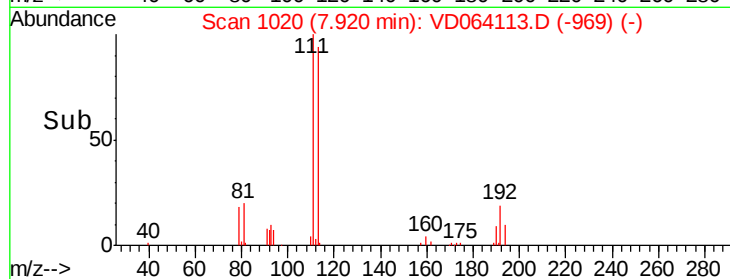
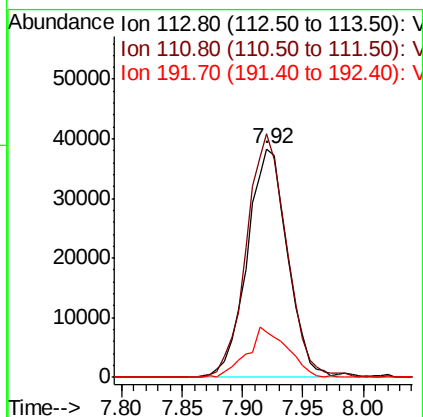
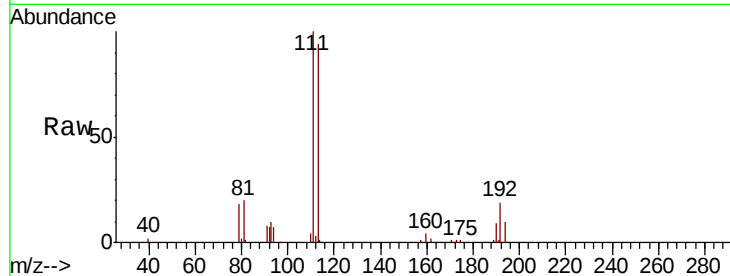




#35  
Dibromofluoromethane  
Concen: 51.640 ug/l  
RT: 7.92 min Scan# 1020  
Delta R.T. 0.00 min  
Lab File: VD064113.D  
Acq: 30 Oct 2019 14:20

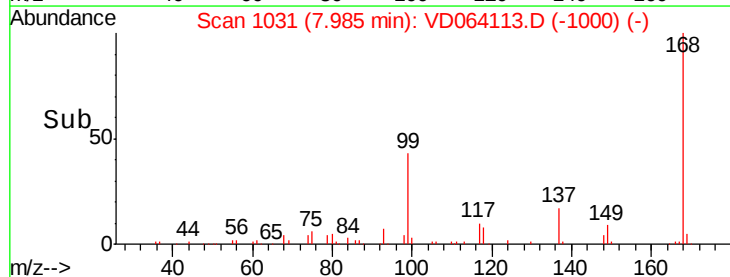
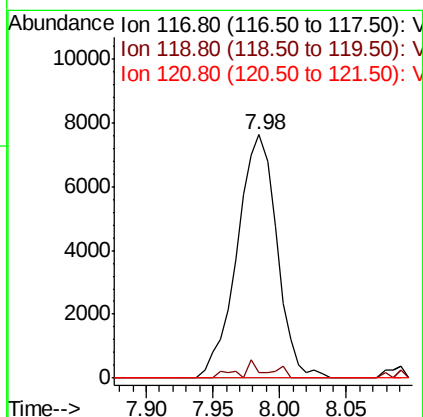
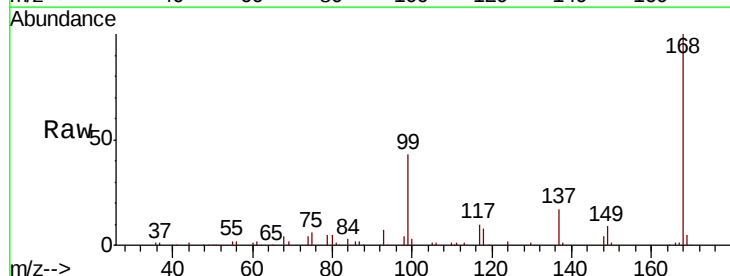
Instrument :  
MSVOA\_D  
ClientSampleId :

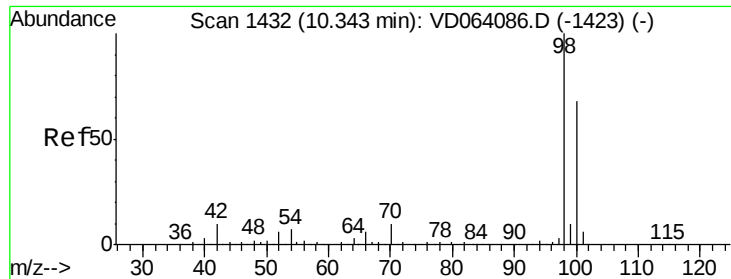
Tot Ion:113 Resp: 89164  
Ion Ratio Lower Upper  
113 100  
111 105.7 79.3 118.9  
192 21.7 16.2 24.2



#38  
Carbon Tetrachloride  
Concen: 5.489 ug/l  
RT: 7.98 min Scan# 1031  
Delta R.T. -0.12 min  
Lab File: VD064113.D  
Acq: 30 Oct 2019 14:20

Tgt Ion:117 Resp: 15749  
Ion Ratio Lower Upper  
117 100  
119 2.0 72.6 108.8#  
121 0.0 25.8 38.6#





#50

Toluene-d8

Concen: 50.600 ug/l

RT: 10.34 min Scan# 1432

Delta R.T. 0.00 min

Lab File: VD064113.D

Acq: 30 Oct 2019 14:20

Instrument :

MSVOA\_D

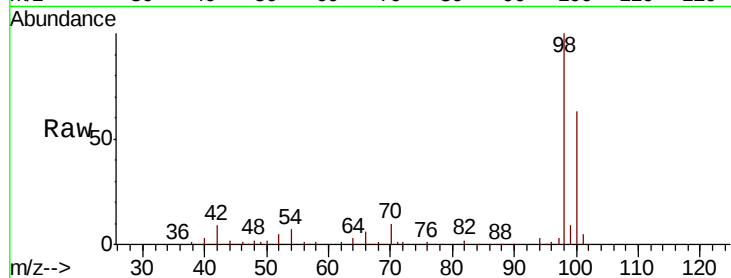
ClientSampleId :

Tot Ion: 98 Resp: 349399

Ion Ratio Lower Upper

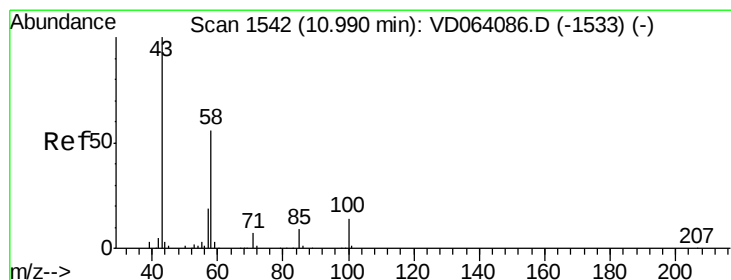
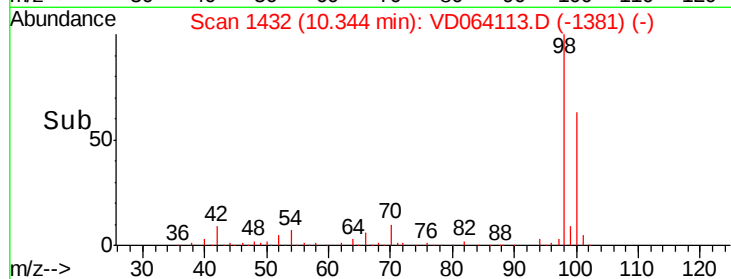
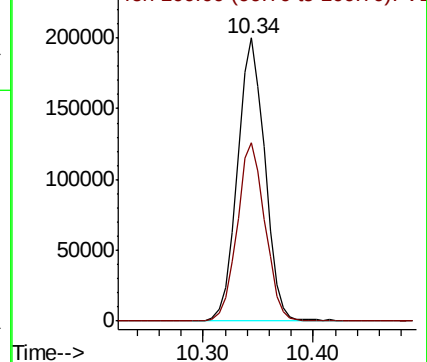
98 100

100 63.9 53.4 80.0



Abundance Ion 98.00 (97.70 to 98.70): VDC

Ion 100.00 (99.70 to 100.70): VDC



#59

2-Hexanone

Concen: 9.126 ug/l

RT: 10.98 min Scan# 1541

Delta R.T. -0.01 min

Lab File: VD064113.D

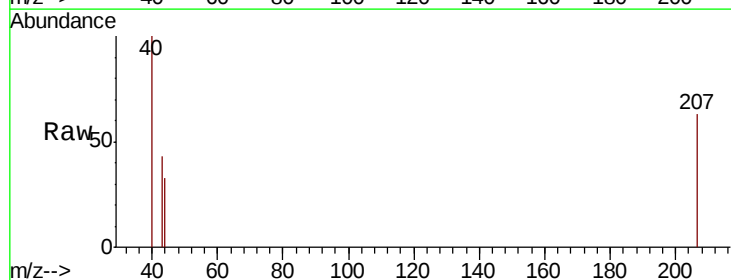
Acq: 30 Oct 2019 14:20

Tgt Ion: 43 Resp: 81

Ion Ratio Lower Upper

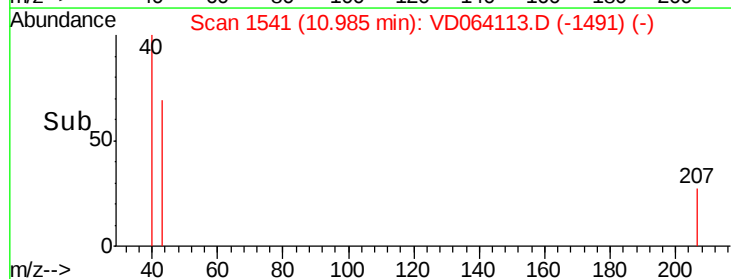
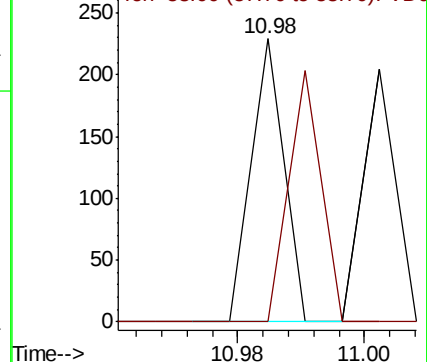
43 100

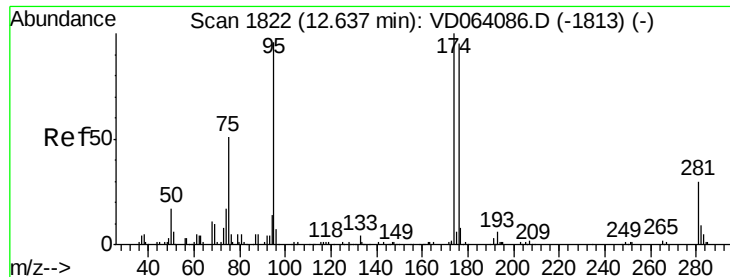
58 88.9 29.2 87.6#



Abundance Ion 43.00 (42.70 to 43.70): VDC

Ion 58.00 (57.70 to 58.70): VDC

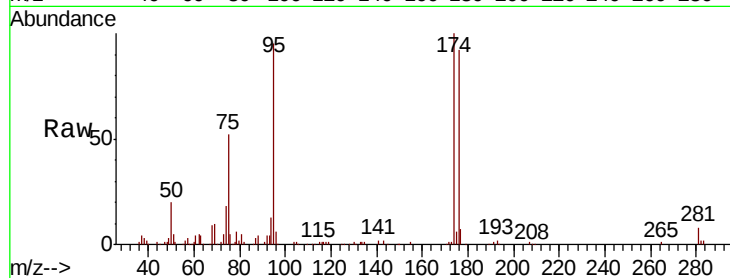




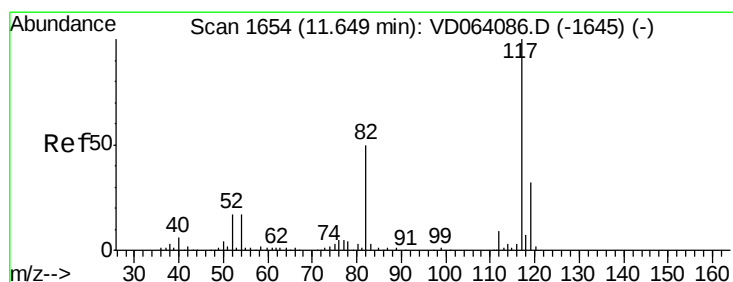
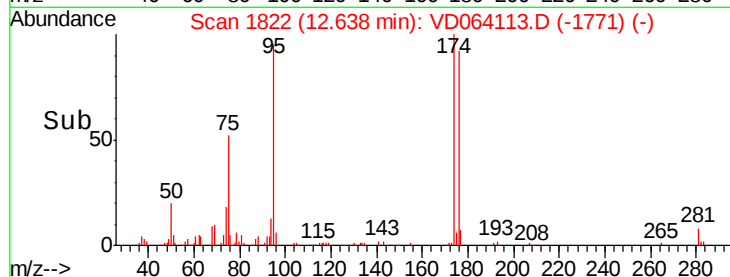
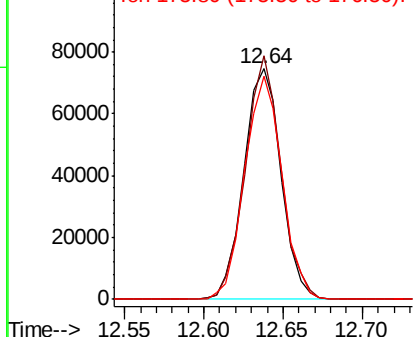
#62  
4-Bromofluorobenzene  
Concen: 53.098 ug/l  
RT: 12.64 min Scan# 1822  
Delta R.T. 0.00 min  
Lab File: VD064113.D  
Acq: 30 Oct 2019 14:20

Instrument :  
MSVOA\_D  
ClientSampleId :

Tot Ion: 95 Resp: 121556  
Ion Ratio Lower Upper  
95 100  
174 101.3 0.0 201.6  
176 97.5 0.0 192.6

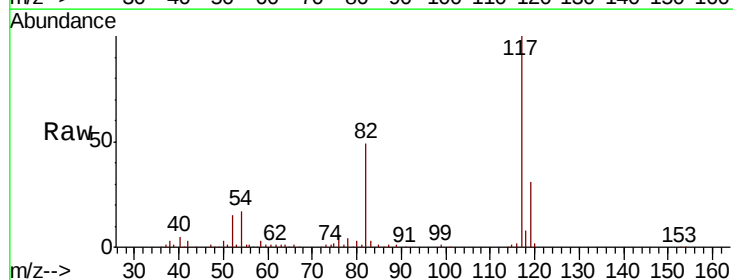


Abundance Ion 94.90 (94.60 to 95.60): V  
Ion 173.80 (173.50 to 174.50): V  
Ion 175.80 (175.50 to 176.50): V

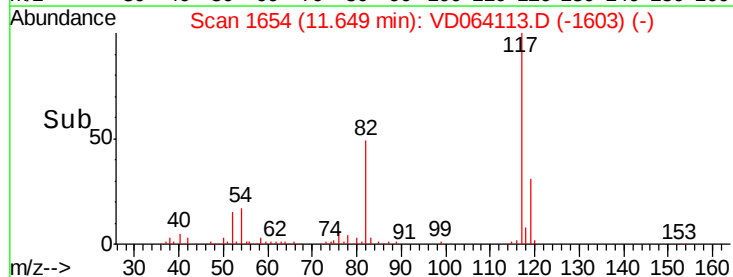
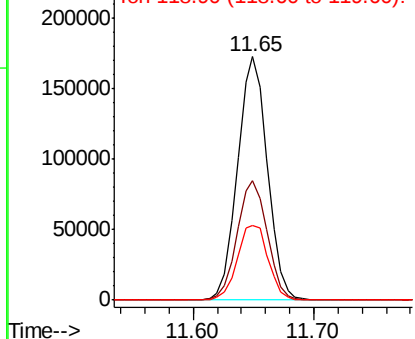


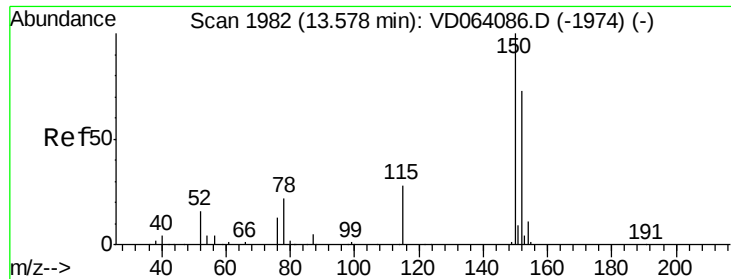
#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.65 min Scan# 1654  
Delta R.T. 0.00 min  
Lab File: VD064113.D  
Acq: 30 Oct 2019 14:20

Tgt Ion: 117 Resp: 298215  
Ion Ratio Lower Upper  
117 100  
82 48.8 40.2 60.4  
119 30.9 26.0 39.0



Abundance Ion 116.90 (116.60 to 117.60): V  
Ion 82.00 (81.70 to 82.70): V  
Ion 118.90 (118.60 to 119.60): V





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 13.58 min Scan# 1982

Delta R.T. 0.00 min

Lab File: VD064113.D

Acq: 30 Oct 2019 14:20

Instrument :

MSVOA\_D

ClientSampleId :

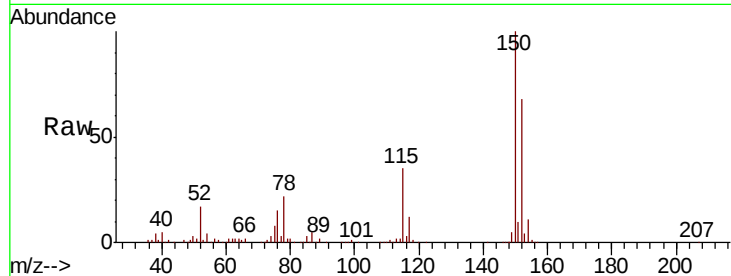
Tot Ion:152 Resp: 157465

Ion Ratio Lower Upper

152 100

115 54.7 26.2 78.6

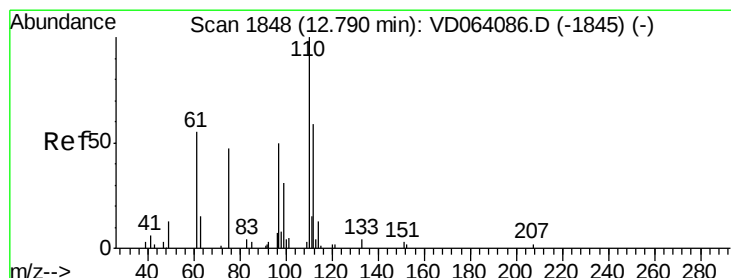
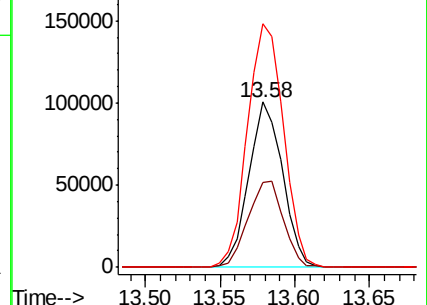
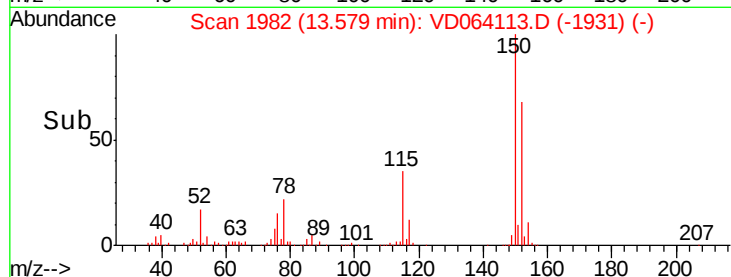
150 156.8 0.0 338.8



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: 63.151 ug/l

RT: 12.64 min Scan# 1822

Delta R.T. -0.15 min

Lab File: VD064113.D

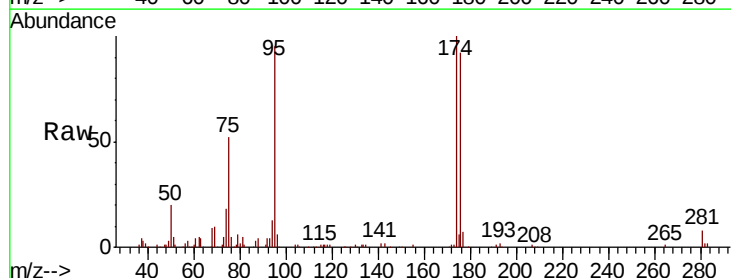
Acq: 30 Oct 2019 14:20

Tgt Ion: 75 Resp: 66818

Ion Ratio Lower Upper

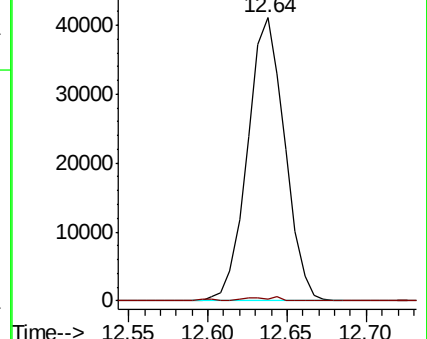
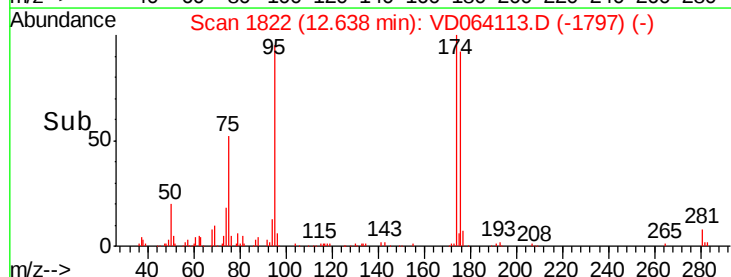
75 100

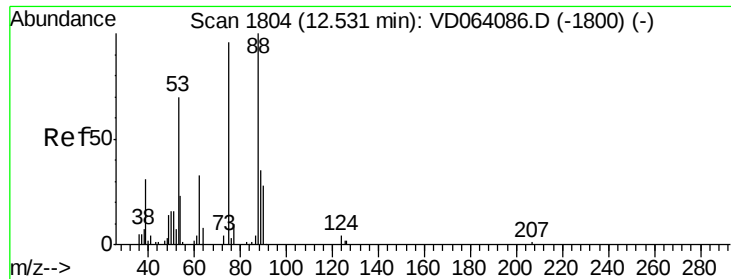
77 1.0 0.0 0.0#



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: 128.970 ug/l

RT: 12.64 min Scan# 1822

Delta R.T. 0.11 min

Lab File: VD064113.D

Acq: 30 Oct 2019 14:20

Instrument :

MSVOA\_D

ClientSampleId :

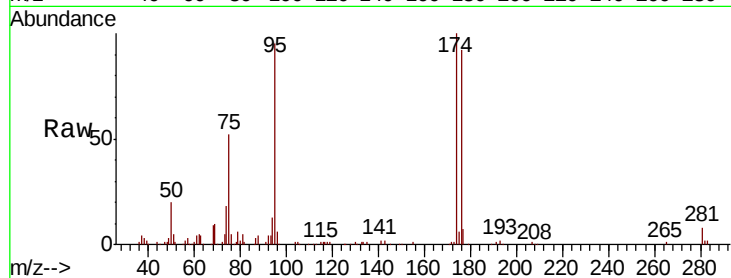
Tot Ion: 75 Resp: 66818

Ion Ratio Lower Upper

75 100

53 0.0 68.6 103.0#

89 0.0 36.9 55.3#



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

