

Data Path : Z:\VOASRV\HPCHEM1\MSVOA D\DATA\VD082520\  
 Data File : VD066408.D  
 Acq On : 25 Aug 2020 17:57  
 Operator : VA/SY  
 Sample : L3794-02  
 Misc : 8.30G/5.00ml/MSVOA D/SOIL  
 ALS Vial : 16 Sample Multiplier: 1

Instrument :  
 MSVOA\_D  
 ClientSampleId :  
 336

Quant Time: Aug 26 08:06:07 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_D\METHOD\82D082120S.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Aug 21 13:36:12 2020  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.97  | 168  | 100585   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.86  | 114  | 155463   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.64 | 117  | 162234   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.58 | 152  | 87463    | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.33   | 65  | 69762    | 70.74 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 141.48% |      |
| 35) Dibromofluoromethane  | 7.91   | 113 | 54310    | 55.87 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 111.74% |      |
| 50) Toluene-d8            | 10.33  | 98  | 192104   | 54.01 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 108.02% |      |
| 62) 4-Bromofluorobenzene  | 12.63  | 95  | 78931    | 62.54 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 125.08% |      |

## Target Compounds

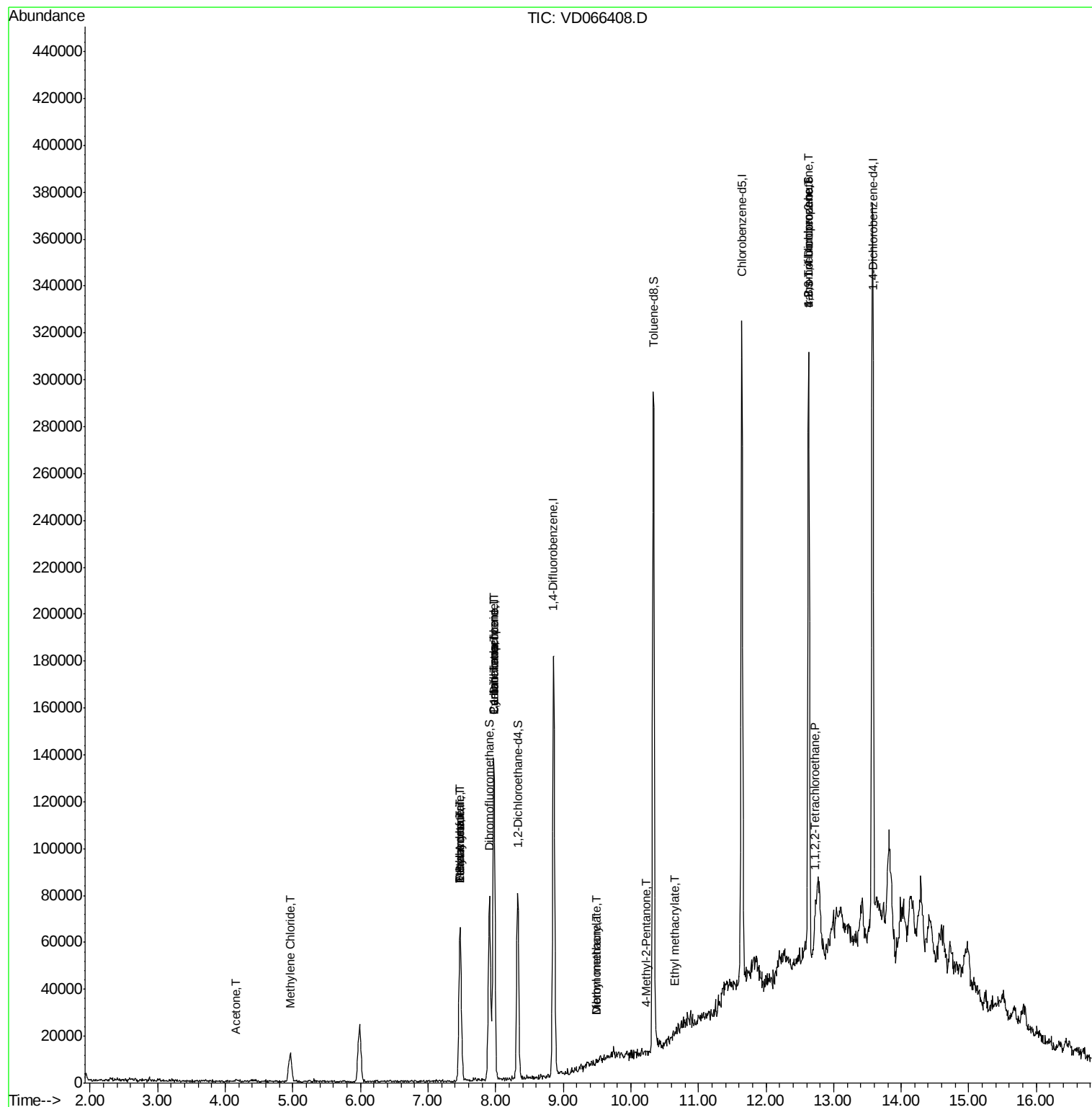
|                                |       |     |       |           | Qvalue |    |
|--------------------------------|-------|-----|-------|-----------|--------|----|
| 11) Tert butyl alcohol         | 5.21  | 59  | 174   | Below Cal | #      | 71 |
| 16) Acetone                    | 4.15  | 43  | 1047  | 5.889     | ug/l # | 46 |
| 20) Methylene Chloride         | 4.96  | 84  | 9838  | 4.607     | ug/l # | 79 |
| 25) 2-Butanone                 | 7.47  | 43  | 40863 | 202.464   | ug/l # | 47 |
| 29) Tetrahydrofuran            | 7.47  | 42  | 8902  | 77.654    | ug/l # | 28 |
| 31) Cyclohexane                | 7.97  | 56  | 2518  | 1.839     | ug/l # | 53 |
| 36) 1,1-Dichloropropene        | 7.97  | 75  | 7780  | 5.485     | ug/l # | 50 |
| 37) Ethyl Acetate              | 7.47  | 43  | 47880 | 99.243    | ug/l # | 67 |
| 38) Carbon Tetrachloride       | 7.98  | 117 | 10726 | 5.804     | ug/l # | 16 |
| 41) Methacrylonitrile          | 7.47  | 41  | 34938 | 117.431   | ug/l # | 83 |
| 46) Dibromomethane             | 9.48  | 93  | 572   | 1.086     | ug/l # | 1  |
| 48) Methyl methacrylate        | 9.48  | 41  | 926   | 1.854     | ug/l # | 30 |
| 51) 4-Methyl-2-Pentanone       | 10.23 | 43  | 977   | 2.086     | ug/l # | 36 |
| 56) Ethyl methacrylate         | 10.66 | 69  | 971   | 1.176     | ug/l # | 42 |
| 75) 1,1,2,2-Tetrachloroethane  | 12.72 | 83  | 1098  | 1.312     | ug/l # | 85 |
| 76) 1,2,3-Trichloropropane     | 12.63 | 75  | 44238 | 71.896    | ug/l # | 1  |
| 81) trans-1,4-Dichloro-2-buten | 12.63 | 75  | 44238 | 152.612   | ug/l # | 7  |

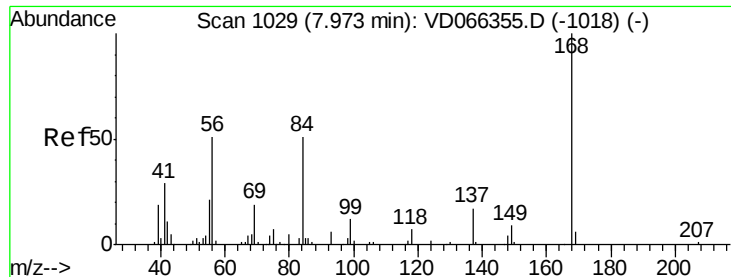
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Aug 26 08:06:07 2020  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_D\METHOD\82D082120S.M  
Quant Title : SW846 8260  
QLast Update : Fri Aug 21 13:36:12 2020  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.97 min Scan# 1029

Delta R.T. 0.00 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

Instrument :

MSVOA\_D

ClientSampleId :

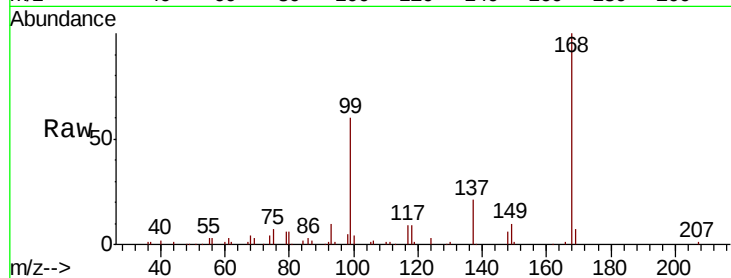
336

Tot Ion:168 Resp: 100585

Ion Ratio Lower Upper

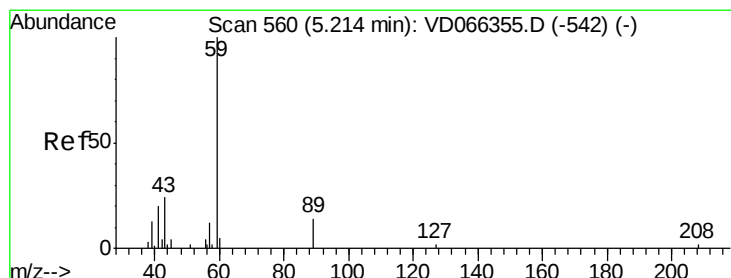
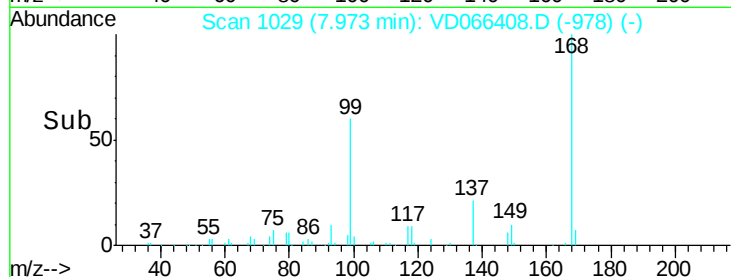
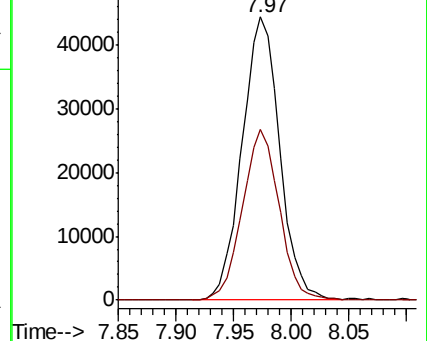
168 100

99 60.5 45.4 68.0



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VDC



#11

Tert butyl alcohol

Concen: Below Cal

RT: 5.21 min Scan# 560

Delta R.T. 0.00 min

Lab File: VD066408.D

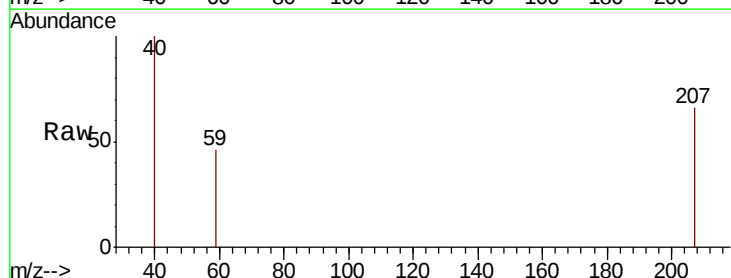
Acq: 25 Aug 2020 17:57

Tgt Ion: 59 Resp: 174

Ion Ratio Lower Upper

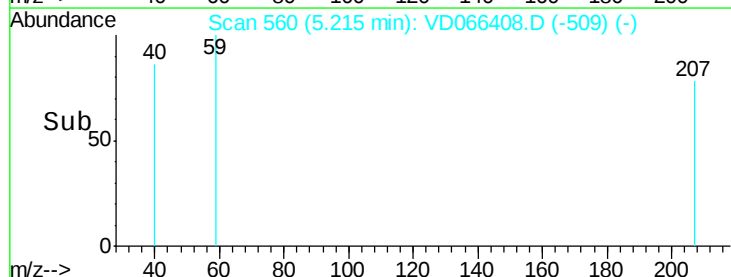
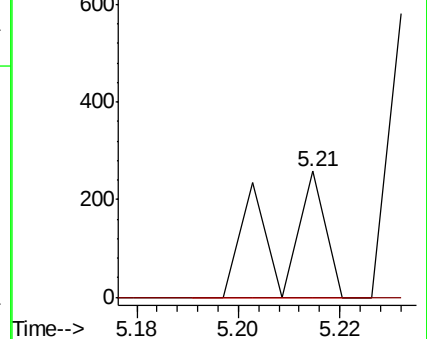
59 100

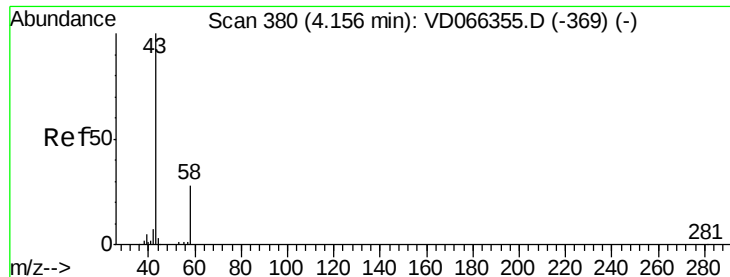
57 0.0 9.0 13.4#



Abundance Ion 59.00 (58.70 to 59.70): VDC

Ion 57.00 (56.70 to 57.70): VDC





#16

Acetone

Concen: 5.889 ug/l

RT: 4.15 min Scan# 379

Delta R.T. -0.01 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

Instrument :

MSVOA\_D

ClientSampleId :

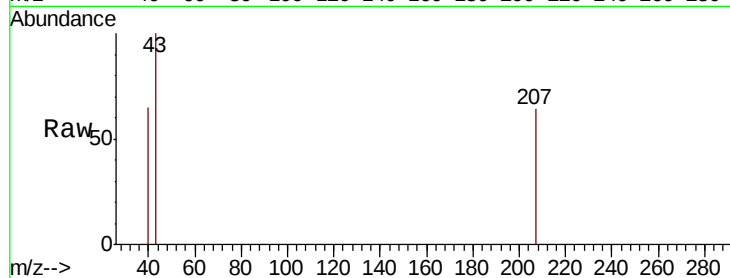
336

Tot Ion: 43 Resp: 1047

Ion Ratio Lower Upper

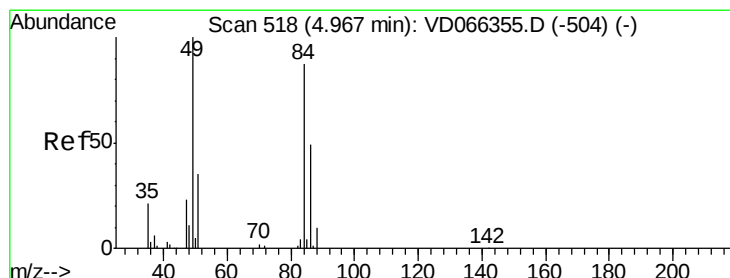
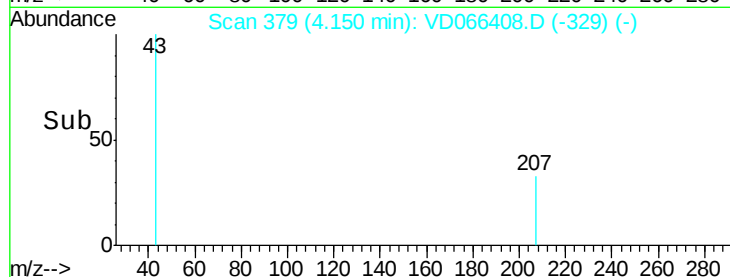
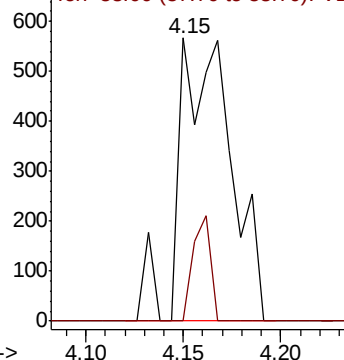
43 100

58 0.0 22.7 34.1#



Abundance Ion 43.00 (42.70 to 43.70): VDC

Ion 58.00 (57.70 to 58.70): VDC



#20

Methylene Chloride

Concen: 4.607 ug/l

RT: 4.96 min Scan# 517

Delta R.T. -0.01 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

Tgt Ion: 84 Resp: 9838

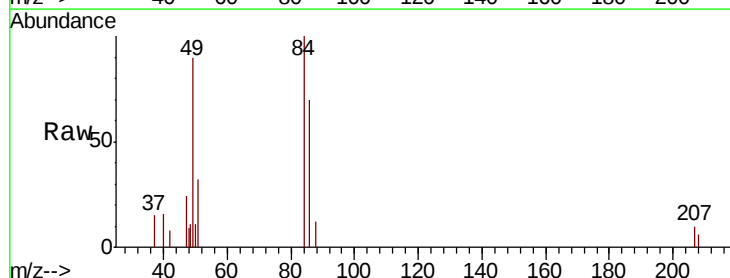
Ion Ratio Lower Upper

84 100

49 89.9 92.5 138.7#

51 31.5 32.5 48.7#

86 69.9 45.0 67.6#

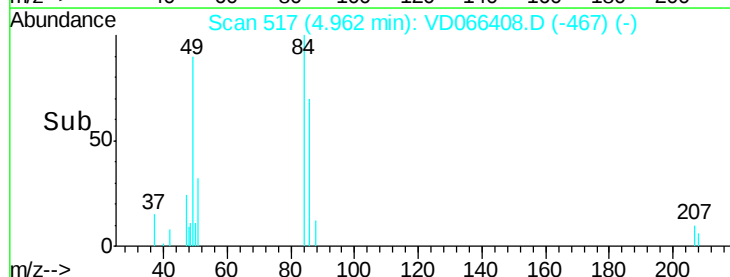
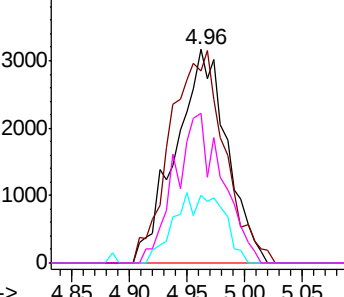


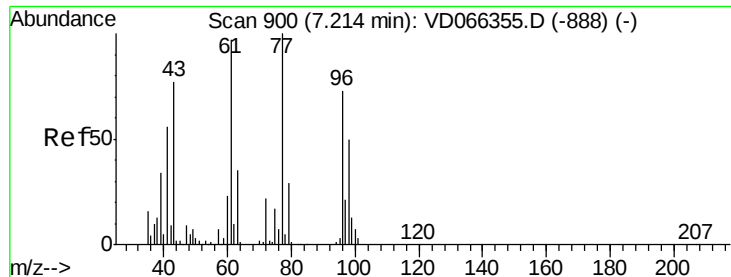
Abundance Ion 83.90 (83.60 to 84.60): VDC

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





#25

2-Butanone

Concen: 202.464 ug/l

RT: 7.47 min Scan# 943

Delta R.T. 0.25 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

Instrument :

MSVOA\_D

ClientSampleId :

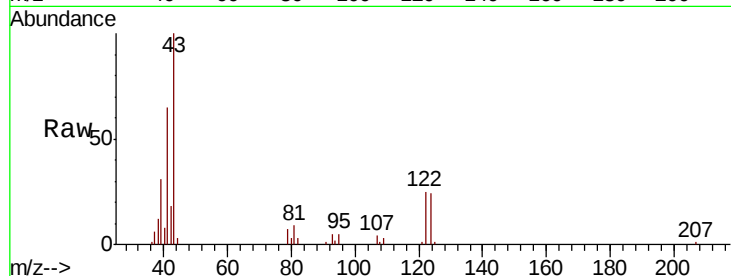
336

Tot Ion: 43 Resp: 40863

Ion Ratio Lower Upper

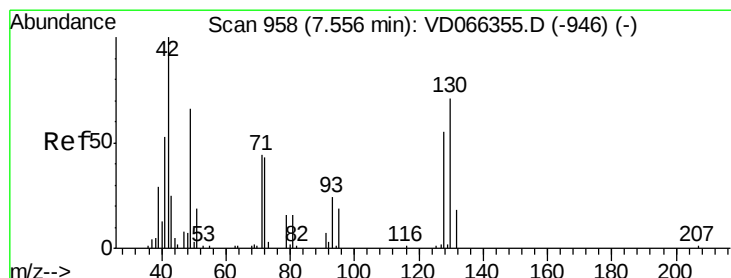
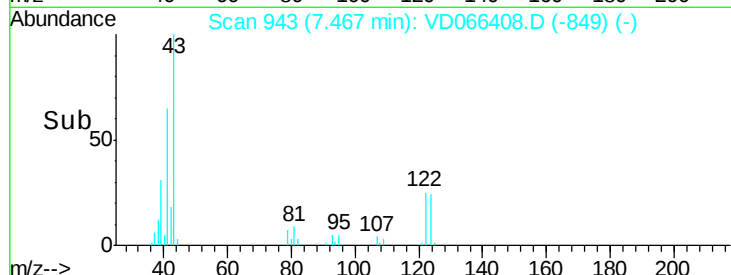
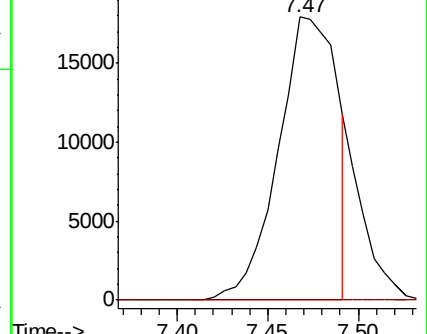
43 100

72 0.0 22.5 33.7#



Abundance Ion 43.00 (42.70 to 43.70): VDC

Ion 72.00 (71.70 to 72.70): VDC



#29

Tetrahydrofuran

Concen: 77.654 ug/l

RT: 7.47 min Scan# 944

Delta R.T. -0.08 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

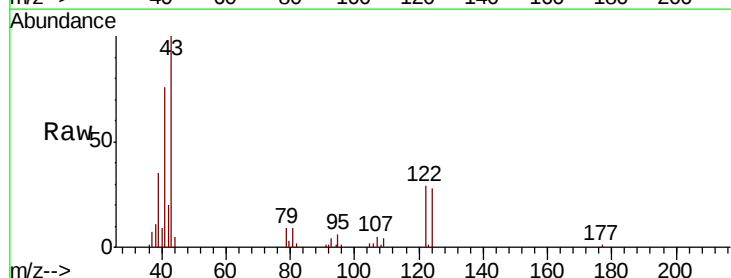
Tgt Ion: 42 Resp: 8902

Ion Ratio Lower Upper

42 100

72 0.0 41.0 61.4#

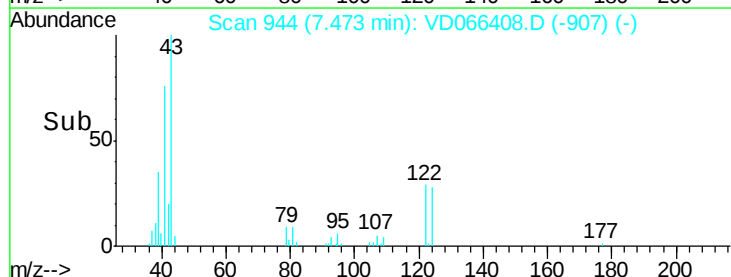
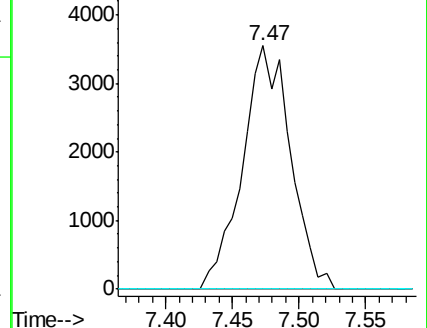
71 0.0 37.2 55.8#

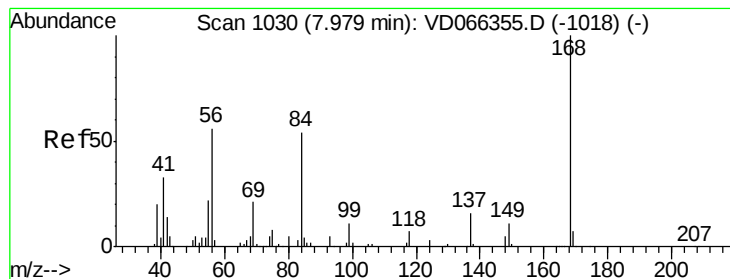


Abundance Ion 42.00 (41.70 to 42.70): VDC

Ion 72.00 (71.70 to 72.70): VDC

Ion 71.00 (70.70 to 71.70): VDC





#31

Cyclohexane

Concen: 1.839 ug/l

RT: 7.97 min Scan# 1029

Delta R.T. -0.01 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

Instrument :

MSVOA\_D

ClientSampled :

336

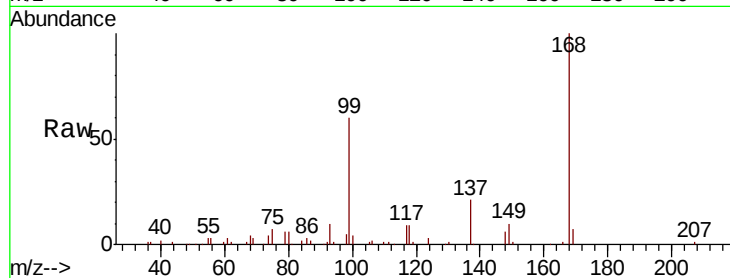
Tot Ion: 56 Resp: 2518

Ion Ratio Lower Upper

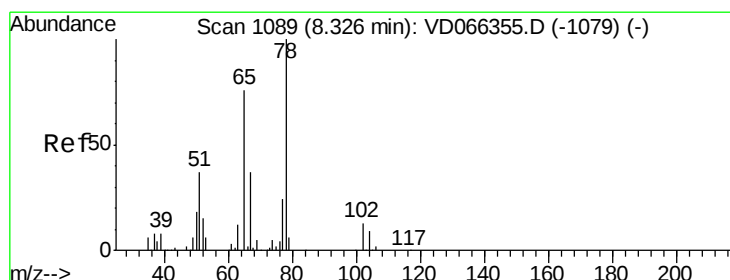
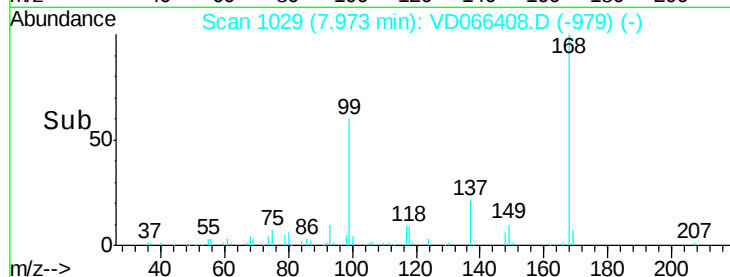
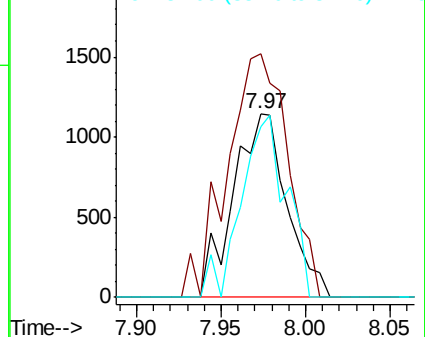
56 100

69 132.5 29.6 44.4#

84 92.8 76.6 115.0



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: 70.743 ug/l

RT: 8.33 min Scan# 1089

Delta R.T. 0.00 min

Lab File: VD066408.D

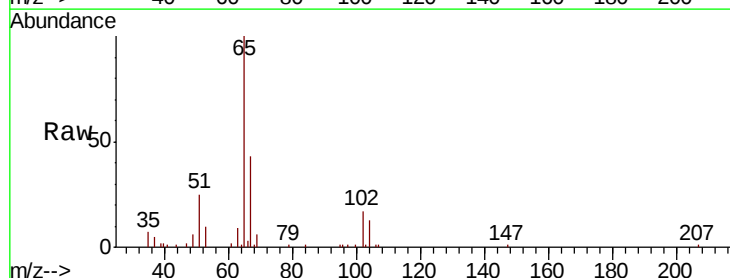
Acq: 25 Aug 2020 17:57

Tgt Ion: 65 Resp: 69762

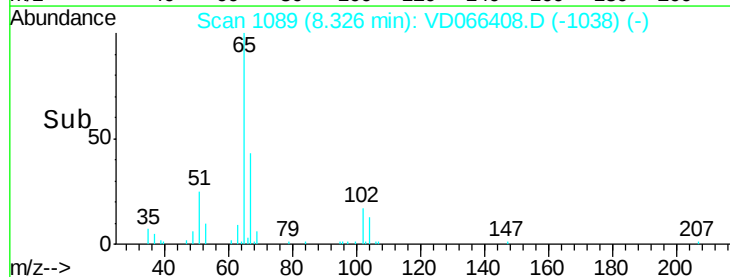
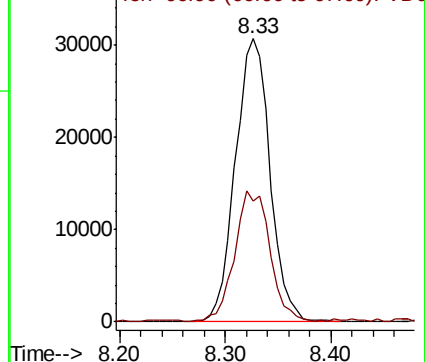
Ion Ratio Lower Upper

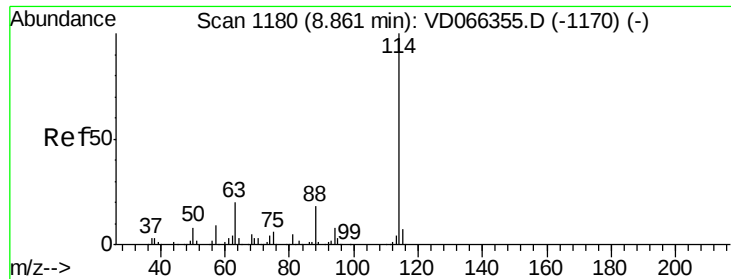
65 100

67 47.1 0.0 101.6



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

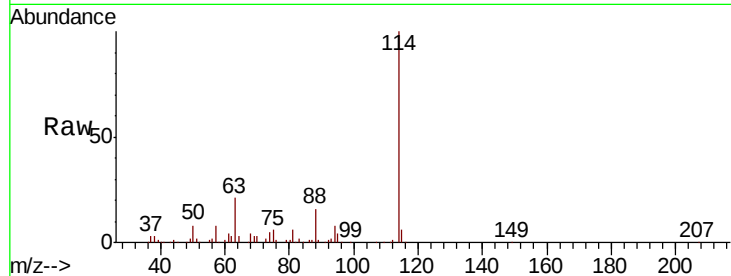




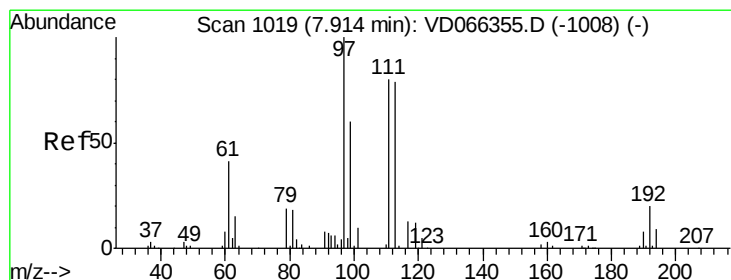
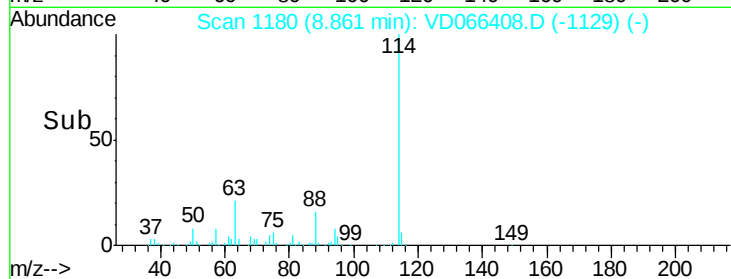
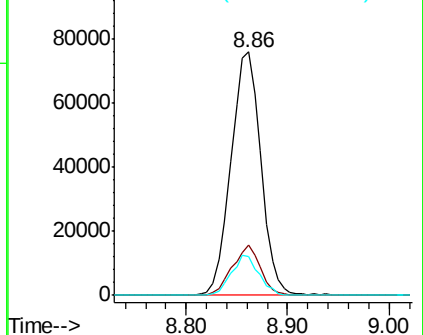
#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.86 min Scan# 1180  
 Delta R.T. 0.00 min  
 Lab File: VD066408.D  
 Acq: 25 Aug 2020 17:57

Instrument :  
 MSVOA\_D  
 ClientSampleId :  
 336

Tot Ion:114 Resp: 155463  
 Ion Ratio Lower Upper  
 114 100  
 63 20.6 0.0 40.8  
 88 15.7 0.0 35.4

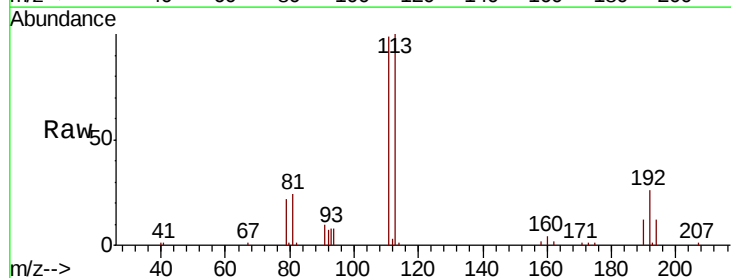


Abundance Ion 113.90 (113.60 to 114.60): V  
 Ion 63.00 (62.70 to 63.70): V  
 Ion 87.90 (87.60 to 88.60): V

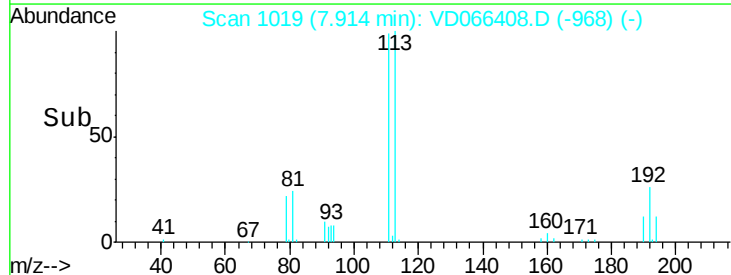
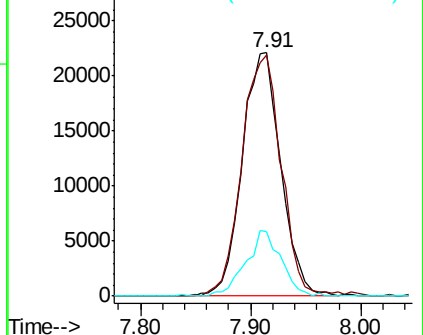


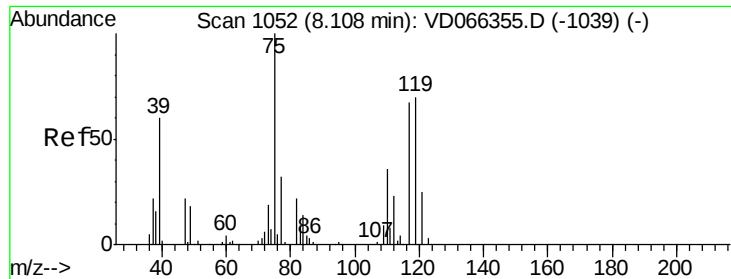
#35  
 Dibromofluoromethane  
 Concen: 55.867 ug/l  
 RT: 7.91 min Scan# 1019  
 Delta R.T. 0.00 min  
 Lab File: VD066408.D  
 Acq: 25 Aug 2020 17:57

Tgt Ion:113 Resp: 54310  
 Ion Ratio Lower Upper  
 113 100  
 111 101.9 80.3 120.5  
 192 24.5 19.0 28.6



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





#36

1,1-Dichloropropene

Concen: 5.485 ug/l

RT: 7.97 min Scan# 1028

Delta R.T. -0.14 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

Instrument :

MSVOA\_D

ClientSampled :

336

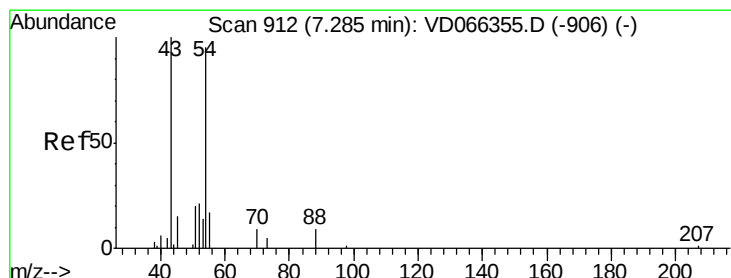
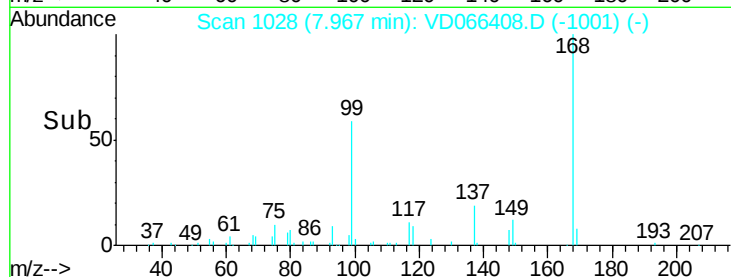
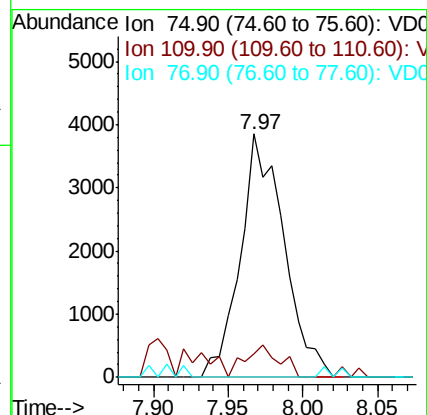
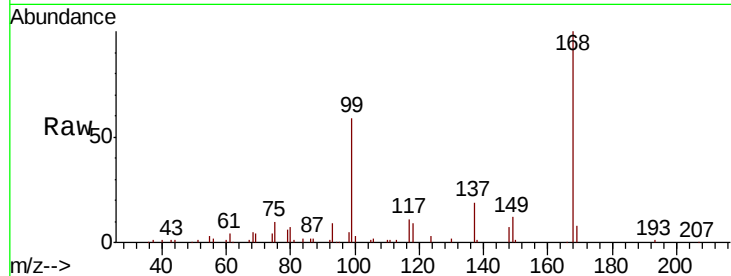
Tot Ion: 75 Resp: 7780

Ion Ratio Lower Upper

75 100

110 10.4 18.7 56.1#

77 0.0 25.2 37.8#



#37

Ethyl Acetate

Concen: 99.243 ug/l

RT: 7.47 min Scan# 943

Delta R.T. 0.18 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

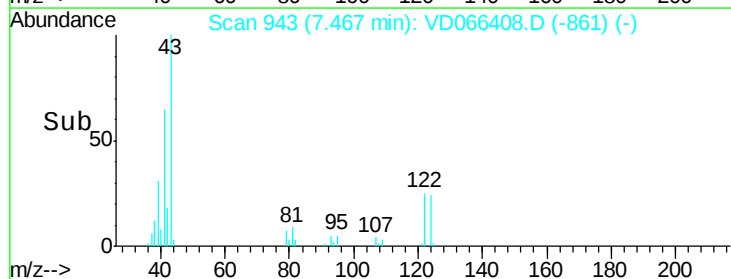
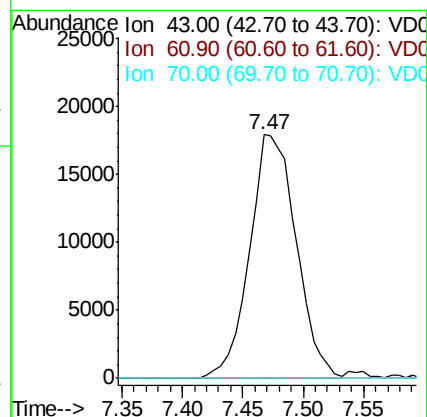
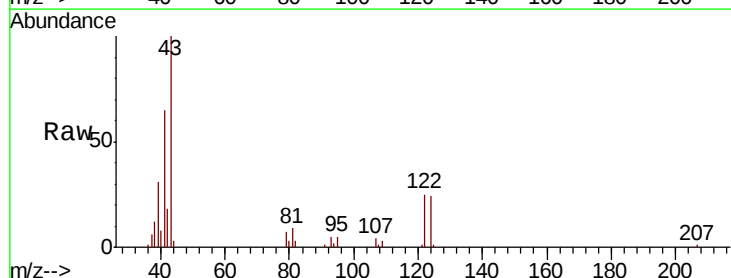
Tgt Ion: 43 Resp: 47880

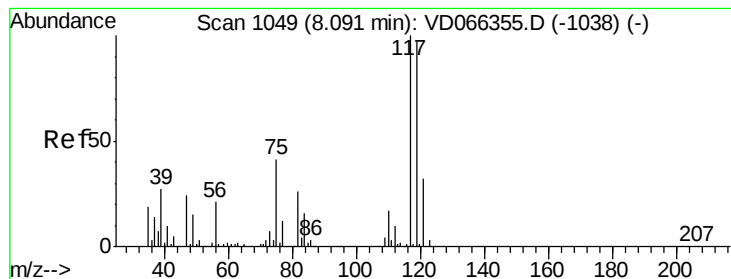
Ion Ratio Lower Upper

43 100

61 0.0 13.3 19.9#

70 0.0 3.5 5.3#





#38

Carbon Tetrachloride

Concen: 5.804 ug/l

RT: 7.98 min Scan# 1030

Delta R.T. -0.11 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

Instrument :

MSVOA\_D

ClientSampleId :

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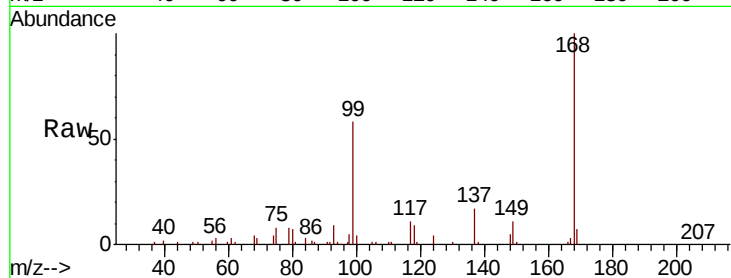
Tot Ion:117 Resp: 10726

Ion Ratio Lower Upper

117 100

119 5.5 77.2 115.8#

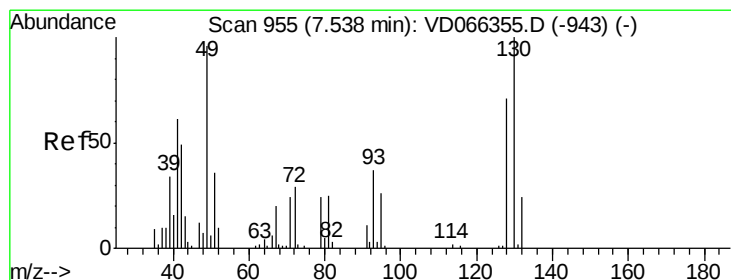
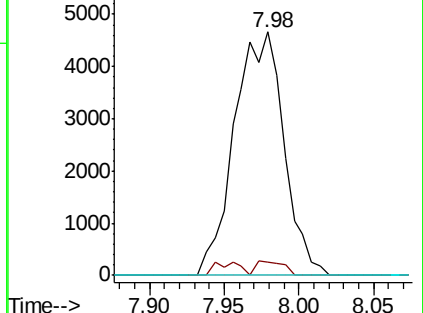
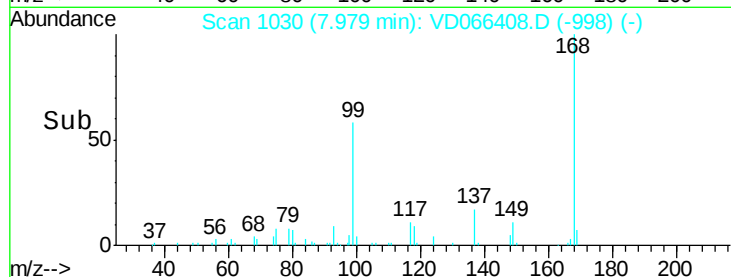
121 0.0 25.8 38.8#



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



#41

Methacrylonitrile

Concen: 117.431 ug/l

RT: 7.47 min Scan# 944

Delta R.T. -0.06 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

Tgt Ion: 41 Resp: 34938

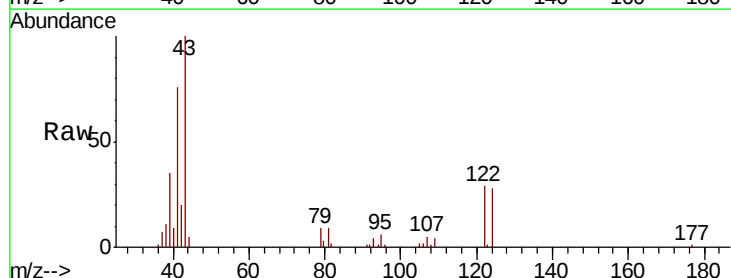
Ion Ratio Lower Upper

41 100

39 51.1 51.8 77.8#

67 0.0 0.0 0.0

52 0.0 0.0 0.0

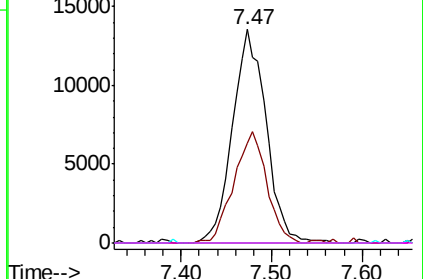
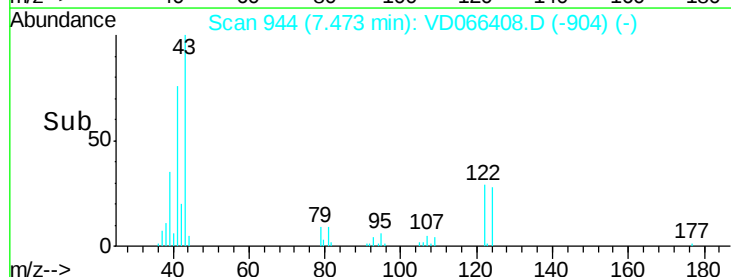


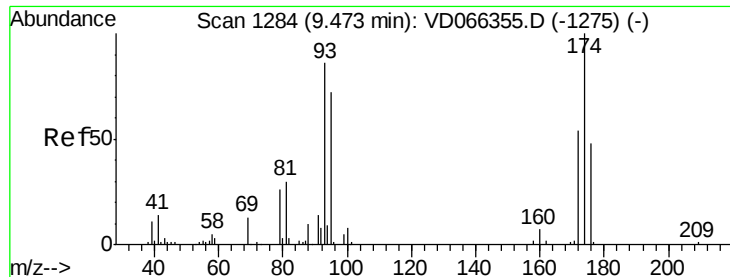
Abundance Ion 41.00 (40.70 to 41.70): VDC

Ion 39.00 (38.70 to 39.70): VDC

Ion 67.00 (66.70 to 67.70): VDC

Ion 52.00 (51.70 to 52.70): VDC





#46

Dibromomethane

Concen: 1.086 ug/l

RT: 9.48 min Scan# 1286

Delta R.T. 0.01 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

Instrument :

MSVOA\_D

ClientSampleId :

336

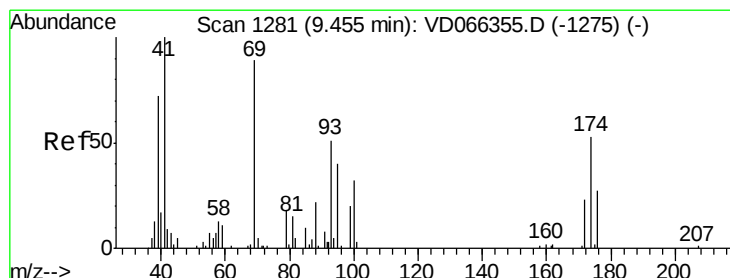
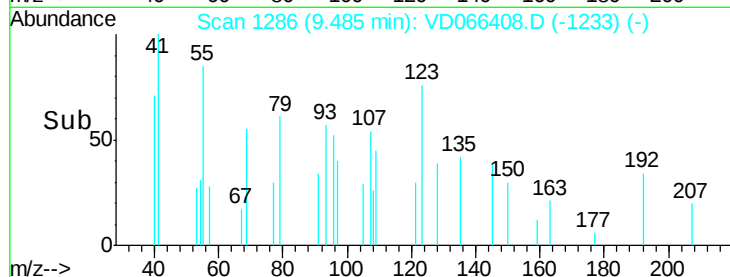
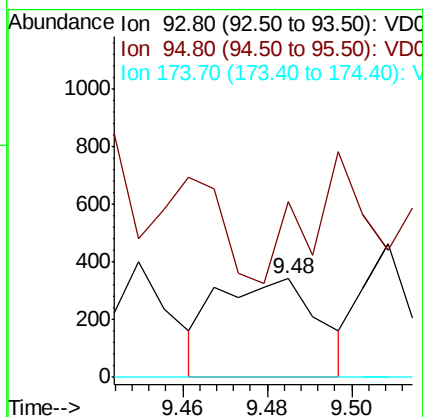
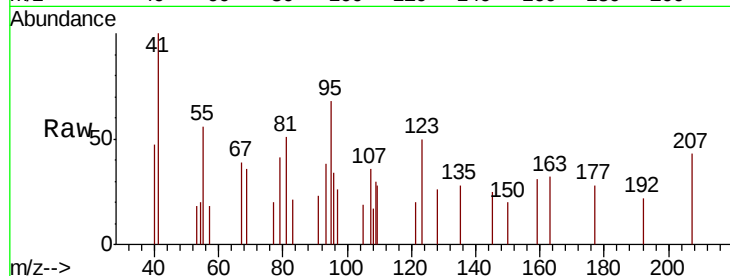
Tot Ion: 93 Resp: 572

Ion Ratio Lower Upper

93 100

95 0.0 66.0 99.0#

174 0.0 94.6 141.8#



#48

Methyl methacrylate

Concen: 1.854 ug/l

RT: 9.48 min Scan# 1286

Delta R.T. 0.03 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

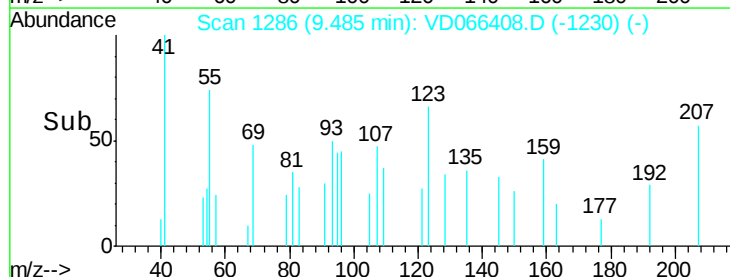
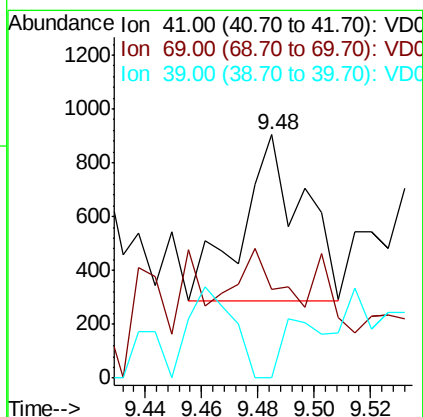
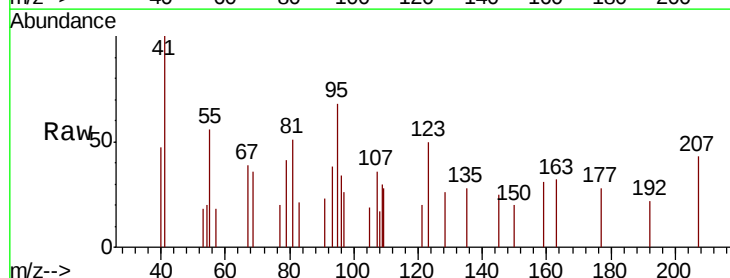
Tgt Ion: 41 Resp: 926

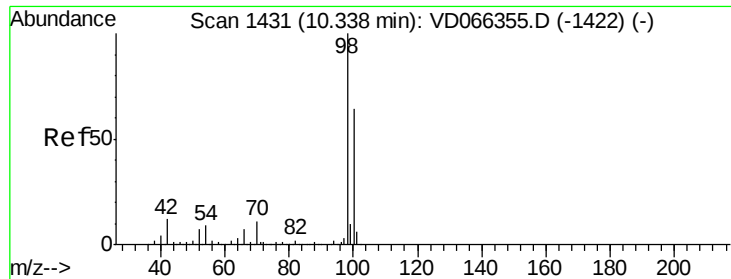
Ion Ratio Lower Upper

41 100

69 19.4 75.5 113.3#

39 22.4 57.0 85.4#





#50

Toluene-d8

Concen: 54.009 ug/l

RT: 10.33 min Scan# 1430

Delta R.T. -0.01 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

Instrument :

MSVOA\_D

ClientSampleId :

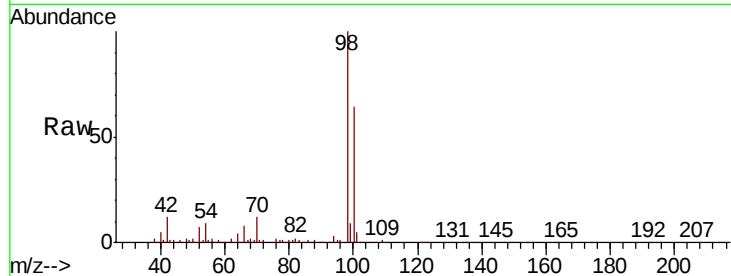
336

Tot Ion: 98 Resp: 192104

Ion Ratio Lower Upper

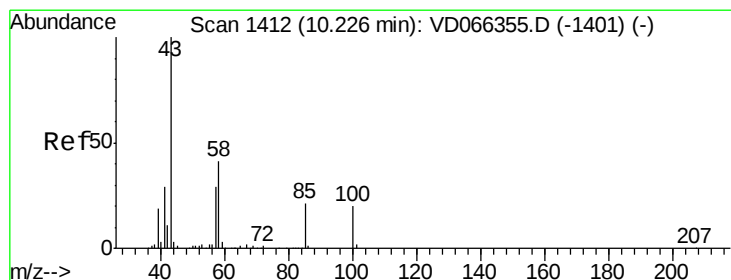
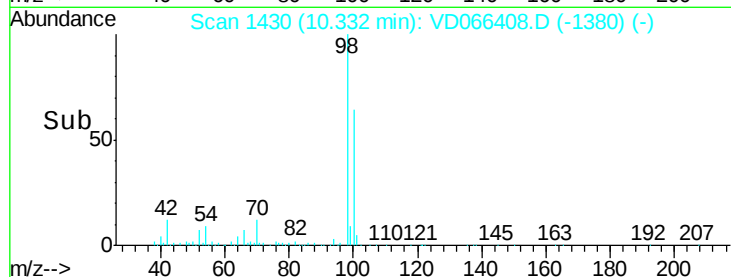
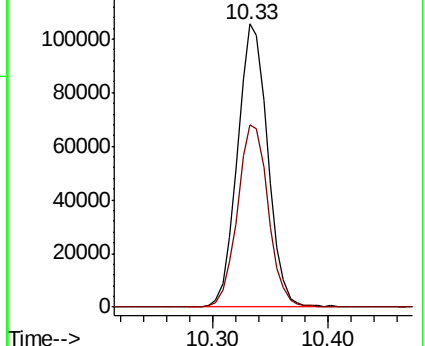
98 100

100 65.7 53.0 79.4



Abundance Ion 98.00 (97.70 to 98.70): VDC

Ion 100.00 (99.70 to 100.70): VDC



#51

4-Methyl-2-Pentanone

Concen: 2.086 ug/l

RT: 10.23 min Scan# 1413

Delta R.T. 0.01 min

Lab File: VD066408.D

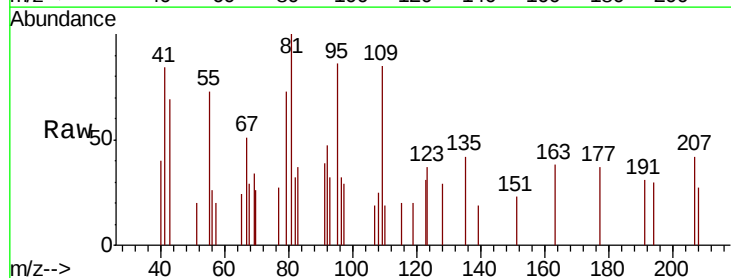
Acq: 25 Aug 2020 17:57

Tgt Ion: 43 Resp: 977

Ion Ratio Lower Upper

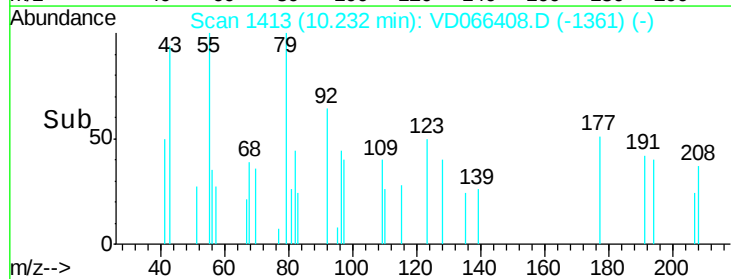
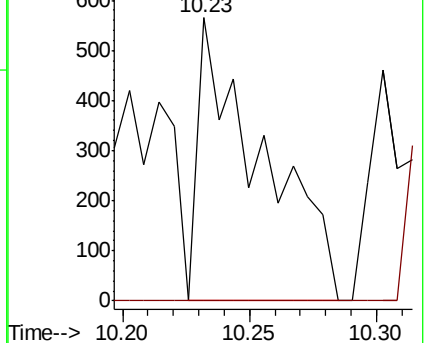
43 100

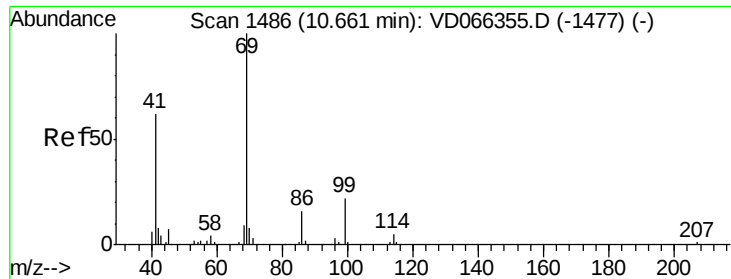
58 0.0 31.4 47.2#



Abundance Ion 43.00 (42.70 to 43.70): VDC

Ion 58.00 (57.70 to 58.70): VDC





#56

Ethyl methacrylate

Concen: 1.176 ug/l

RT: 10.66 min Scan# 1485

Delta R.T. -0.01 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

Instrument :

MSVOA\_D

ClientSampleId :

336

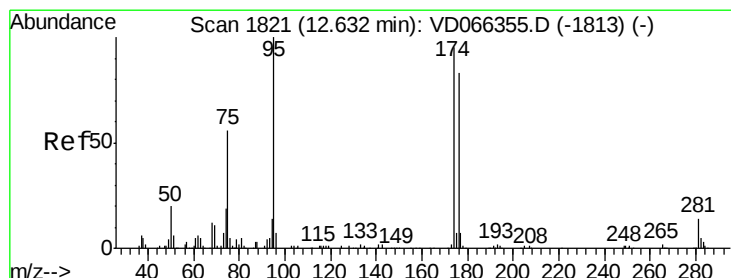
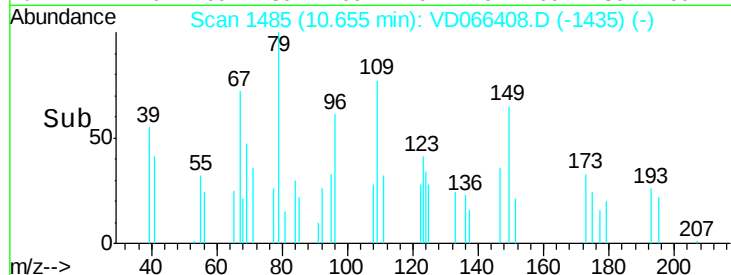
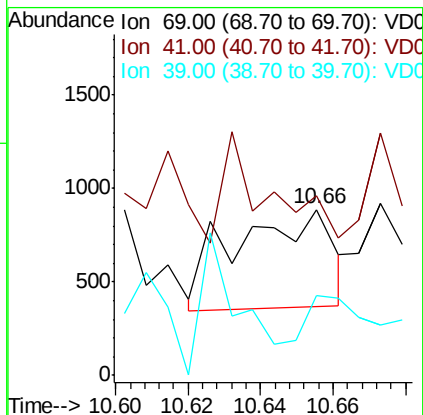
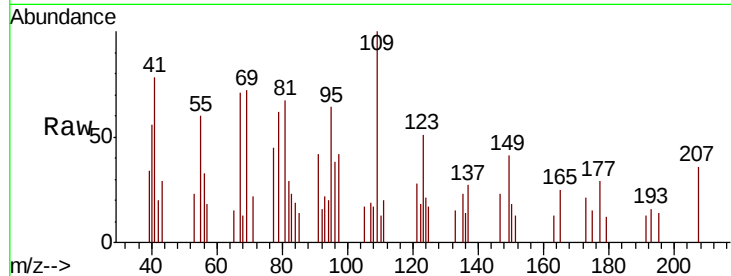
Tot Ion: 69 Resp: 971

Ion Ratio Lower Upper

69 100

41 0.0 50.8 76.2#

39 28.2 32.9 49.3#



#62

4-Bromofluorobenzene

Concen: 62.538 ug/l

RT: 12.63 min Scan# 1821

Delta R.T. 0.00 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

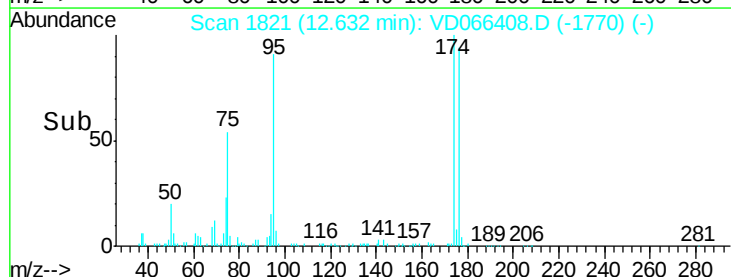
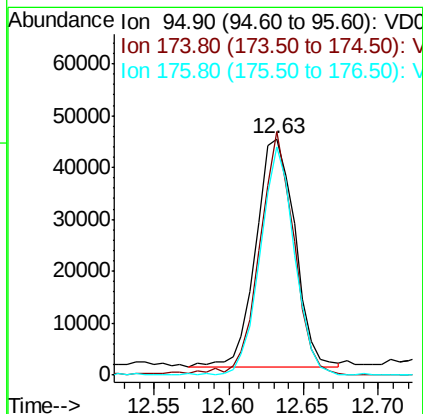
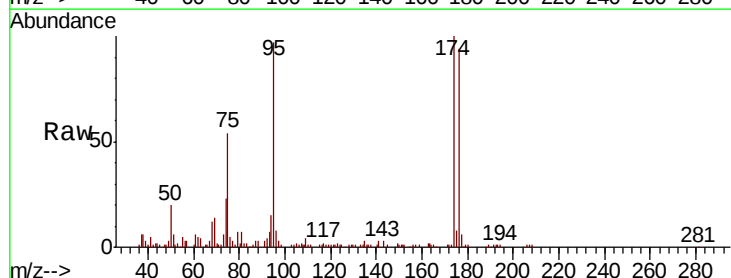
Tgt Ion: 95 Resp: 78931

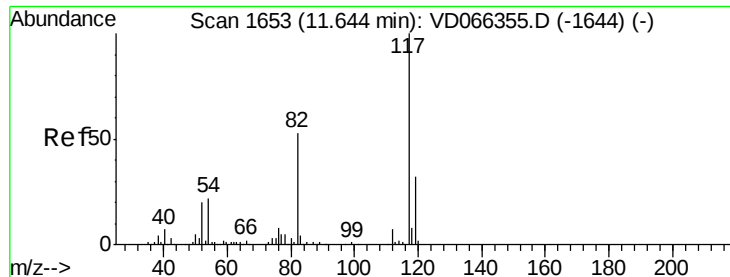
Ion Ratio Lower Upper

95 100

174 94.8 0.0 183.4

176 88.0 0.0 173.8

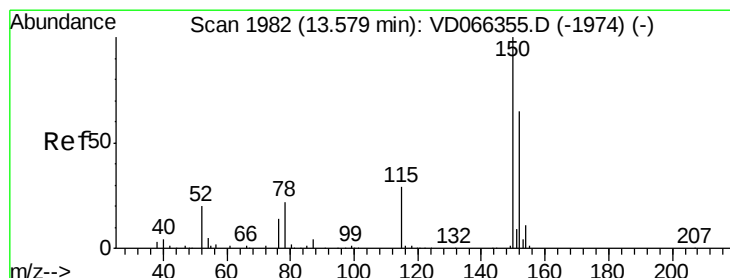
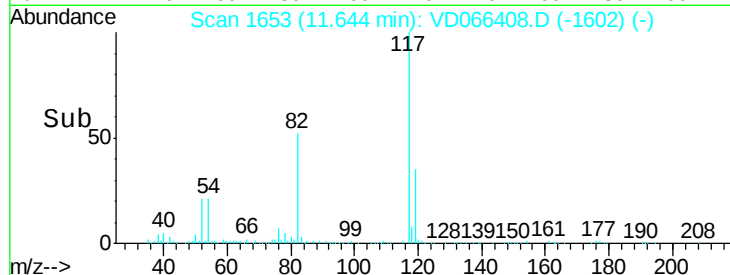
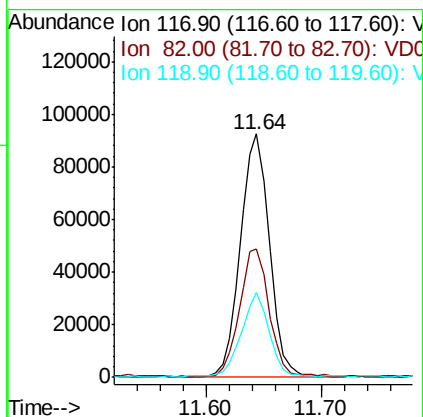
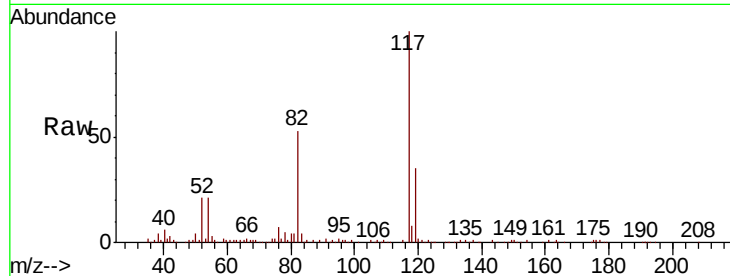




#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.64 min Scan# 1653  
Delta R.T. 0.00 min  
Lab File: VD066408.D  
Acq: 25 Aug 2020 17:57

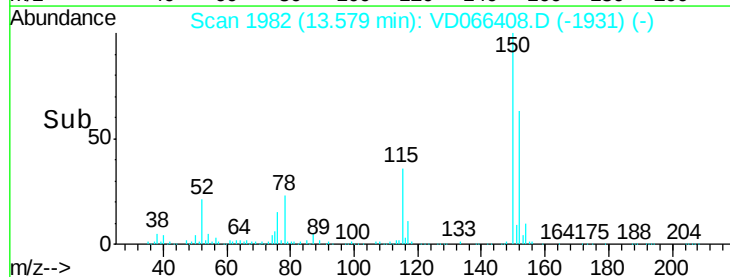
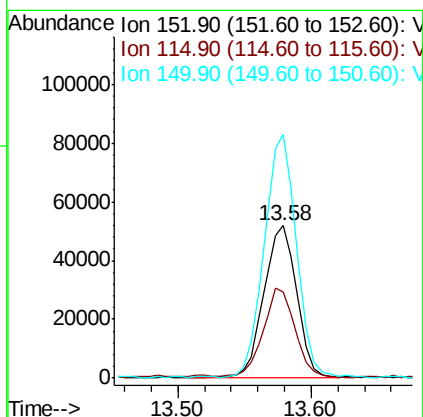
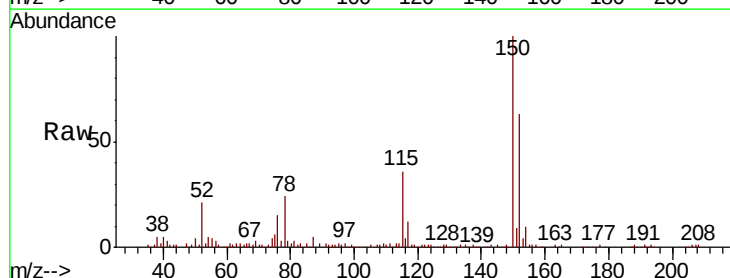
Instrument :  
MSVOA\_D  
ClientSampleId :  
336

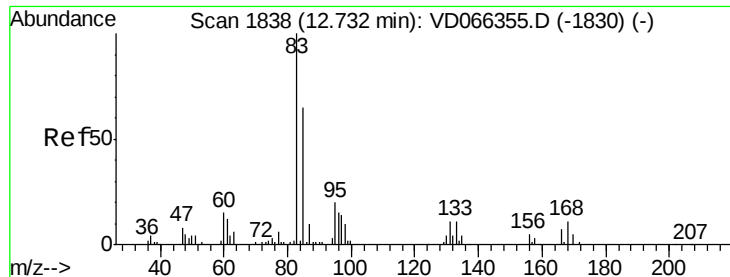
Tot Ion:117 Resp: 162234  
Ion Ratio Lower Upper  
117 100  
82 52.3 42.8 64.2  
119 34.3 25.8 38.8



#72  
1,4-Dichlorobenzene-d4  
Concen: 50.000 ug/l  
RT: 13.58 min Scan# 1982  
Delta R.T. 0.00 min  
Lab File: VD066408.D  
Acq: 25 Aug 2020 17:57

Tgt Ion:152 Resp: 87463  
Ion Ratio Lower Upper  
152 100  
115 57.2 28.3 85.0  
150 157.6 0.0 343.2





#75

1,1,2,2-Tetrachloroethane

Concen: 1.312 ug/l

RT: 12.72 min Scan# 1836

Delta R.T. -0.01 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

Instrument :

MSVOA\_D

ClientSampleId :

336

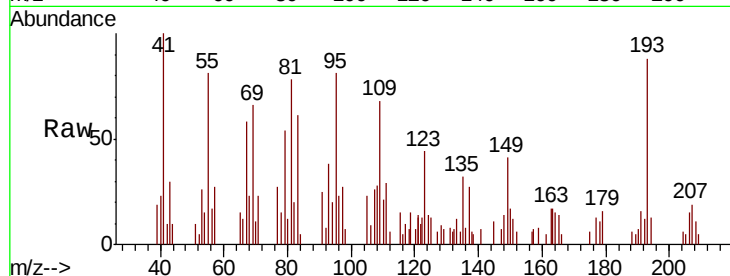
Tot Ion: 83 Resp: 1098

Ion Ratio Lower Upper

83 100

131 0.0 7.0 20.9#

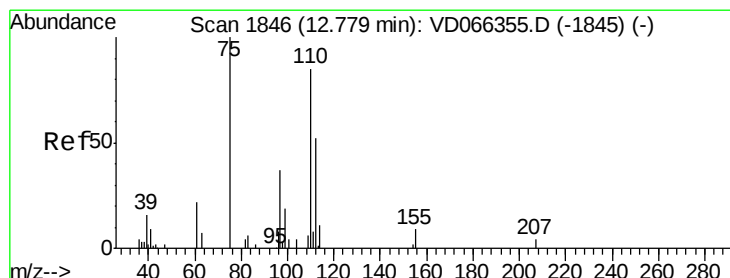
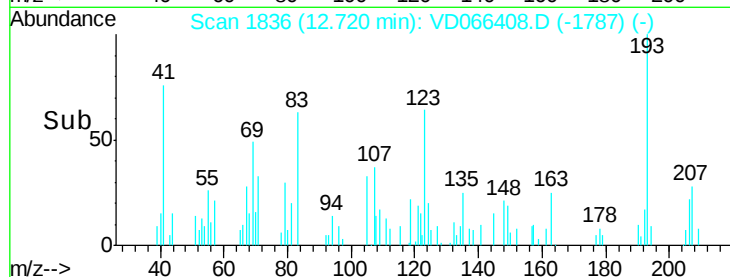
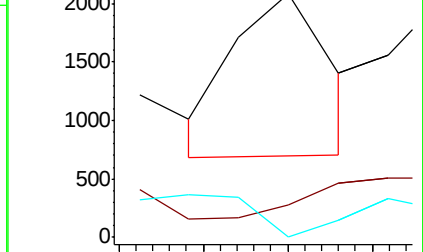
85 56.3 32.4 97.0



Abundance Ion 82.90 (82.60 to 83.60): VDC

Ion 130.80 (130.50 to 131.50): VDC

Ion 84.90 (84.60 to 85.60): VDC



#76

1,2,3-Trichloropropane

Concen: 71.896 ug/l

RT: 12.63 min Scan# 1821

Delta R.T. -0.15 min

Lab File: VD066408.D

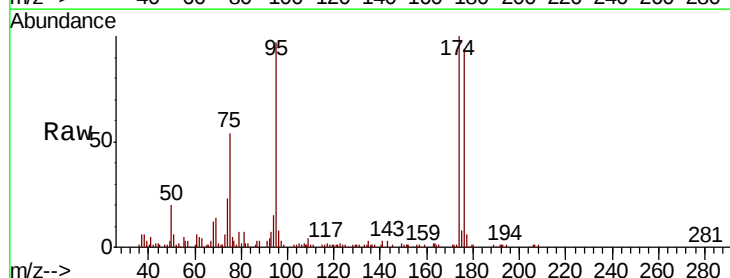
Acq: 25 Aug 2020 17:57

Tgt Ion: 75 Resp: 44238

Ion Ratio Lower Upper

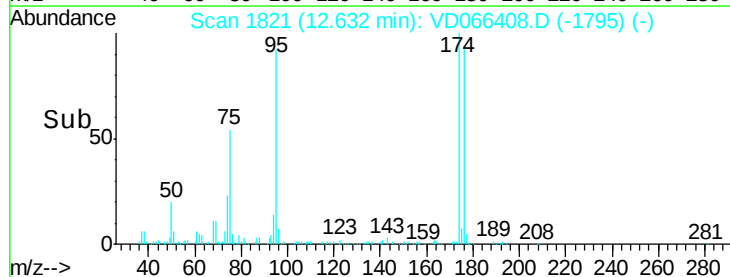
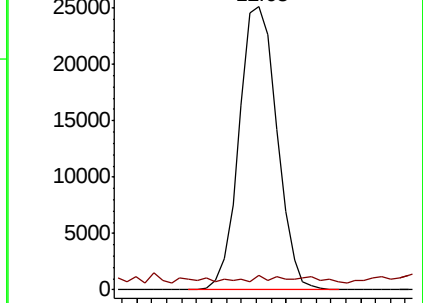
75 100

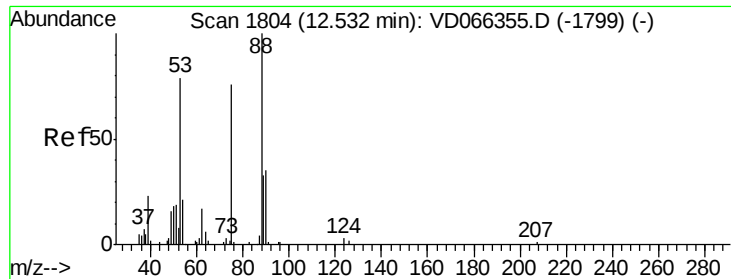
77 0.5 182.9 548.9#



Abundance Ion 74.90 (74.60 to 75.60): VDC

Ion 77.00 (76.70 to 77.70): VDC





#81

trans-1,4-Dichloro-2-butene

Concen: 152.612 ug/l

RT: 12.63 min Scan# 1821

Delta R.T. 0.10 min

Lab File: VD066408.D

Acq: 25 Aug 2020 17:57

Instrument :

MSVOA\_D

ClientSampleId :

336

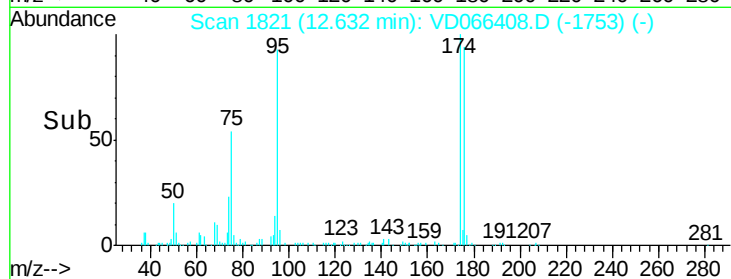
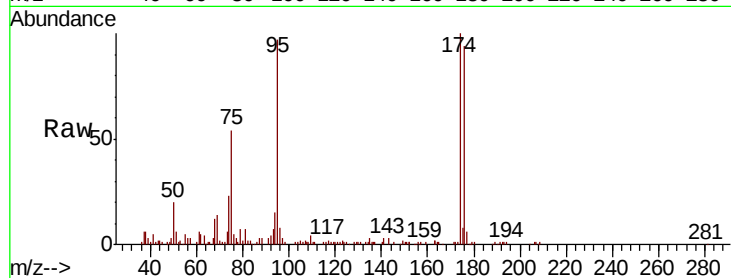
Tot Ion: 75 Resp: 44238

Ion Ratio Lower Upper

75 100

53 1.1 87.4 131.2#

89 0.3 39.4 59.0#



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

