

Data Path : Z:\VOASRV\HPCHEM1\MSVOA D\DATA\VD052219\
 Data File : VD062508.D
 Acq On : 22 May 2019 17:42
 Operator : VA/AP
 Sample : K2996-07
 Misc : 5.79g/5ml/MSVOA D/SOIL
 ALS Vial : 14 Sample Multiplier: 1

Instrument :
 MSVOA_D
 ClientSampleId :

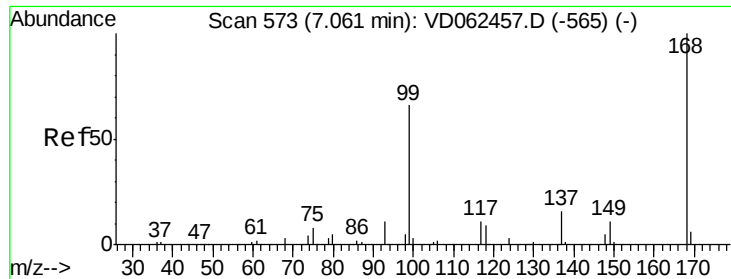
Quant Time: May 23 03:15:13 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_D\METHOD\82D052019S.M
 Quant Title : SW846 8260
 QLast Update : Tue May 21 03:32:39 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.03	168	528891	50.00	ug/l	-0.03
34) 1,4-Difluorobenzene	8.20	114	706157	50.00	ug/l	-0.03
63) Chlorobenzene-d5	12.35	117	595683	50.00	ug/l	-0.02
72) 1,4-Dichlorobenzene-d4	14.51	152	248466	50.00	ug/l	-0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
33) 1,2-Dichloroethane-d4	7.44	65	191787	33.88	ug/l	-0.02
Spiked Amount			Recovery	=	67.76%	
35) Dibromofluoromethane	6.91	113	241209	37.86	ug/l	-0.03
Spiked Amount			Recovery	=	75.72%	
50) Toluene-d8	10.39	98	461613	33.11	ug/l	-0.03
Spiked Amount			Recovery	=	66.22%	
62) 4-Bromofluorobenzene	13.54	95	219582	36.01	ug/l	-0.02
Spiked Amount			Recovery	=	72.02%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
11) Tert butyl alcohol	3.97	59	759	2.904	ug/l #	76
13) Acrolein	2.98	56	373	1.719	ug/l #	1
15) Acrylonitrile	4.22	53	2927	4.888	ug/l #	36
16) Acetone	3.20	43	13346	13.155	ug/l #	50
20) Methylene Chloride	3.80	84	12851	Below Cal	#	87
31) Cyclohexane	6.95	56	26024	4.868	ug/l #	50
36) 1,1-Dichloropropene	7.03	75	41889	6.205	ug/l #	46
38) Carbon Tetrachloride	7.03	117	52489	5.231	ug/l #	17
39) Methylcyclohexane	8.86	83	16042	2.881	ug/l #	80
52) Toluene	10.49	92	28826	3.180	ug/l	94
59) 2-Hexanone	11.47	43	8227	4.925	ug/l #	27
67) Ethyl Benzene	12.51	91	174319	8.835	ug/l	96
68) m/p-Xylenes	12.66	106	252804	35.694	ug/l	87
69) o-Xylene	13.04	106	43275	6.476	ug/l	95
73) Isopropylbenzene	13.39	105	32859	2.098	ug/l	99
74) N-amyl acetate	13.29	43	4714	1.219	ug/l #	1
78) n-propylbenzene	13.76	91	58258	3.211	ug/l	90
79) 2-Chlorotoluene	13.84	91	17607	1.599	ug/l #	38
80) 1,3,5-Trimethylbenzene	13.93	105	76537	5.644	ug/l	98
81) trans-1,4-Dichloro-2-buten	13.54	75	102217	123.841	ug/l #	17
84) 1,2,4-Trimethylbenzene	14.23	105	315092	22.676	ug/l	93
85) sec-Butylbenzene	14.23	105	315112	20.091	ug/l #	60
90) Hexachloroethane	15.05	117	5097	1.298	ug/l #	20
95) Naphthalene	16.12	128	111286	15.504	ug/l	99

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



#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.03 min Scan# 569

Delta R.T. -0.03 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

Instrument :

MSVOA_D

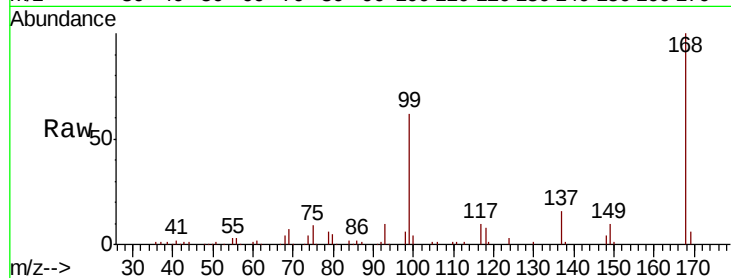
ClientSampled :

Tot Ion:168 Resp: 528891

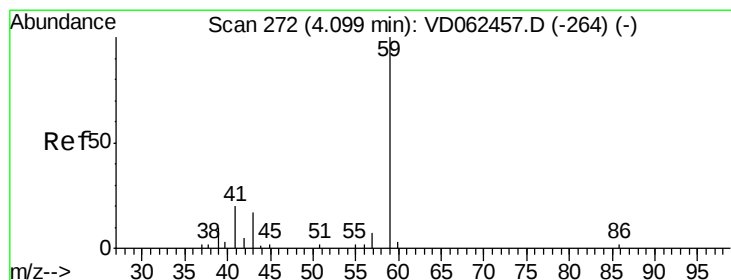
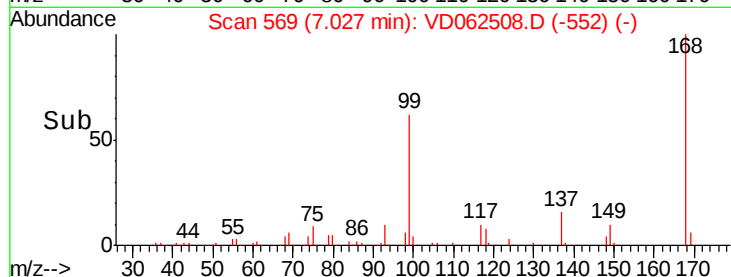
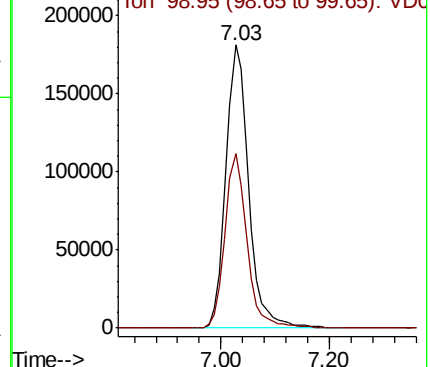
Ion Ratio Lower Upper

168 100

99 61.7 46.5 69.7



Abundance Ion 167.90 (167.60 to 168.60): V



#11

Tert butyl alcohol

Concen: 2.904 ug/l

RT: 3.97 min Scan# 258

Delta R.T. -0.13 min

Lab File: VD062508.D

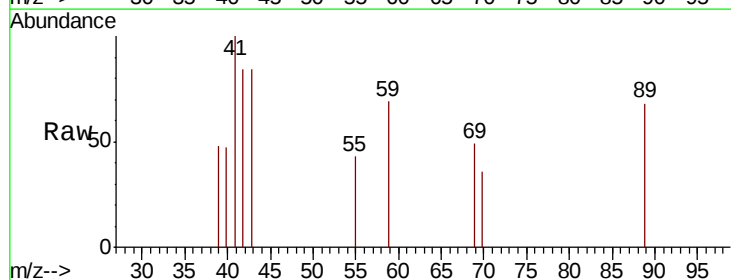
Acq: 22 May 2019 17:42

Tgt Ion: 59 Resp: 759

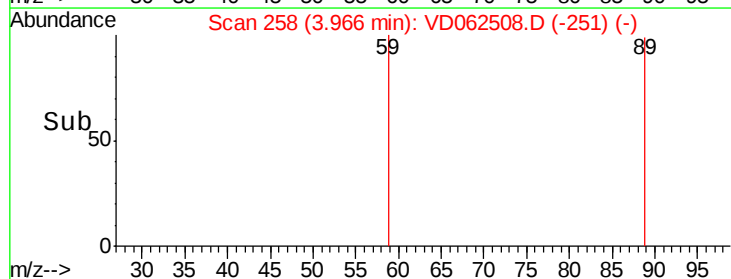
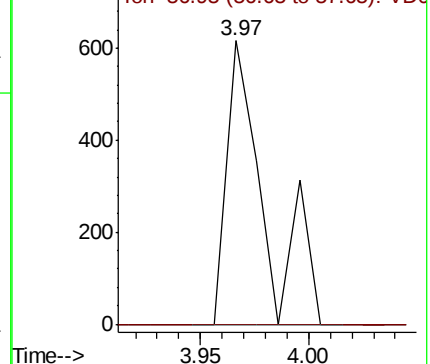
Ion Ratio Lower Upper

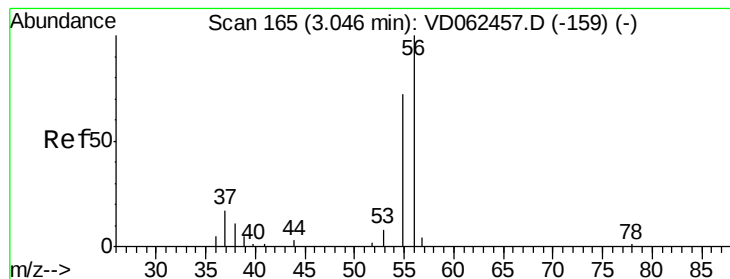
59 100

57 0.0 6.9 10.3#



Abundance Ion 58.95 (58.65 to 59.65): VDC





#13

Acrolein

Concen: 1.719 ug/l

RT: 2.98 min Scan# 158

Delta R.T. -0.06 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

Instrument :

MSVOA_D

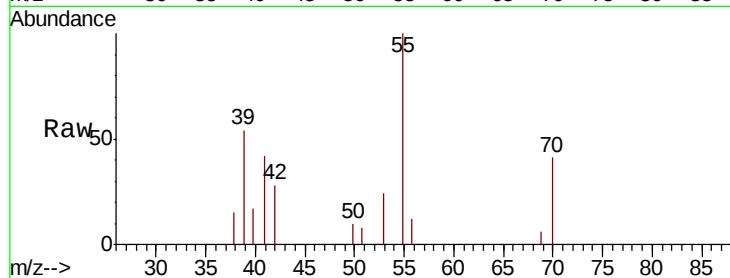
ClientSampled :

Tot Ion: 56 Resp: 373

Ion Ratio Lower Upper

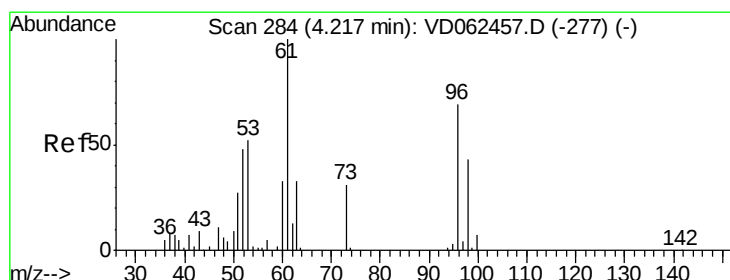
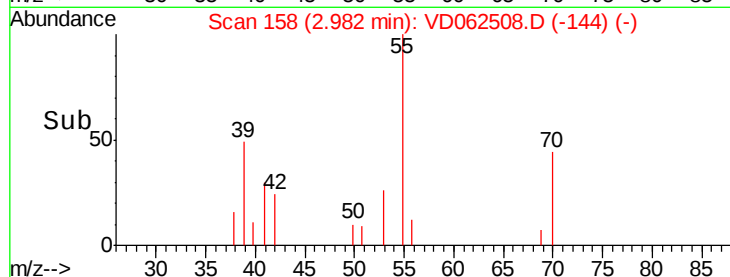
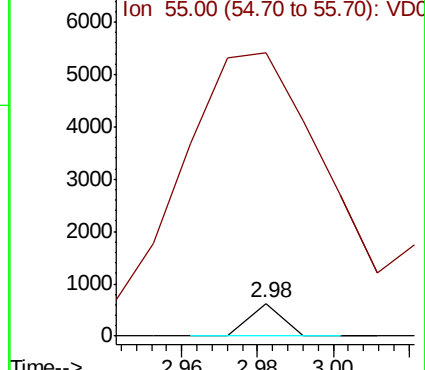
56 100

55 857.2 51.4 77.2#



Abundance Ion 55.95 (55.65 to 56.65): VDC

Ion 55.00 (54.70 to 55.70): VDC



#15

Acrylonitrile

Concen: 4.888 ug/l

RT: 4.22 min Scan# 284

Delta R.T. 0.00 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

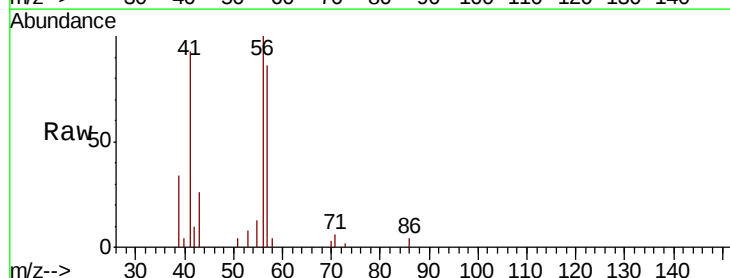
Tgt Ion: 53 Resp: 2927

Ion Ratio Lower Upper

53 100

52 0.0 65.0 97.4#

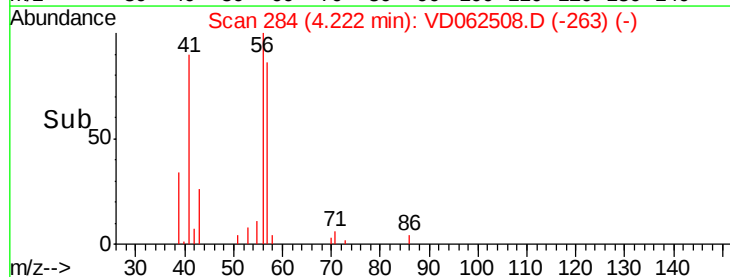
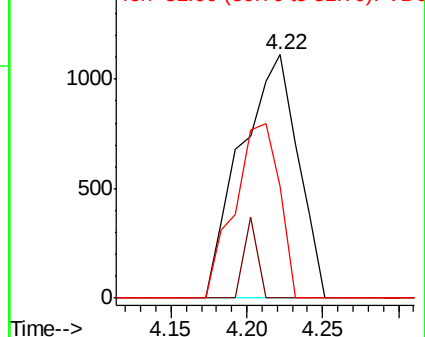
51 46.0 32.6 48.8

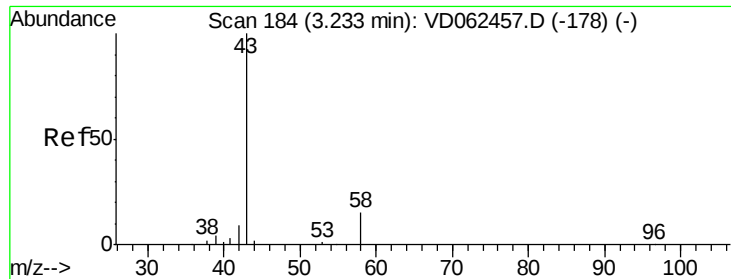


Abundance Ion 53.00 (52.70 to 53.70): VDC

Ion 52.00 (51.70 to 52.70): VDC

Ion 51.00 (50.70 to 51.70): VDC





#16

Acetone

Concen: 13.155 ug/l

RT: 3.20 min Scan# 180

Delta R.T. -0.03 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

Instrument :

MSVOA_D

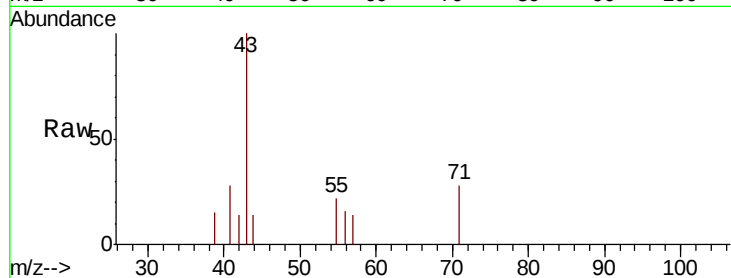
ClientSampleId :

Tot Ion: 43 Resp: 13346

Ion Ratio Lower Upper

43 100

58 0.0 19.9 29.9#



Abundance Ion 42.95 (42.65 to 43.65): VDC

Ion 57.95 (57.65 to 58.65): VDC

3.20

2500

2000

1500

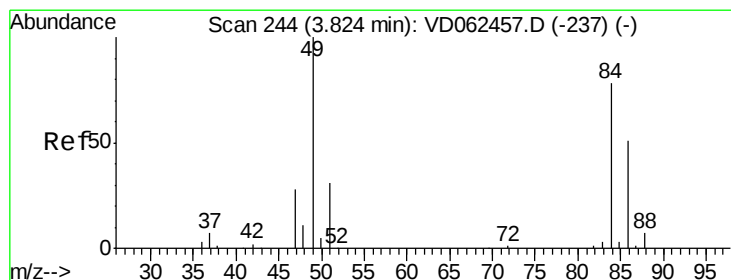
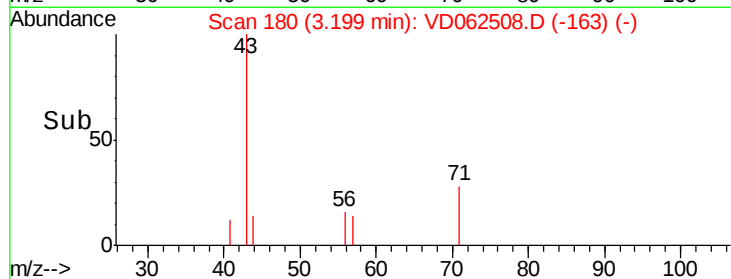
1000

500

0

Time-->

3.10 3.20 3.30



#20

Methylene Chloride

Concen: Below Cal

RT: 3.80 min Scan# 241

Delta R.T. -0.02 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

Tgt Ion: 84 Resp: 12851

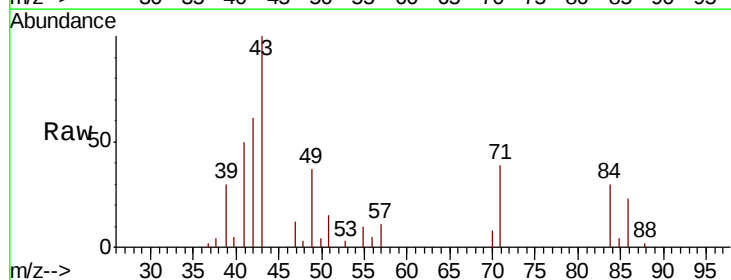
Ion Ratio Lower Upper

84 100

49 123.4 94.0 141.0

51 51.0 29.0 43.4#

86 76.9 49.8 74.6#



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

10000

8000

6000

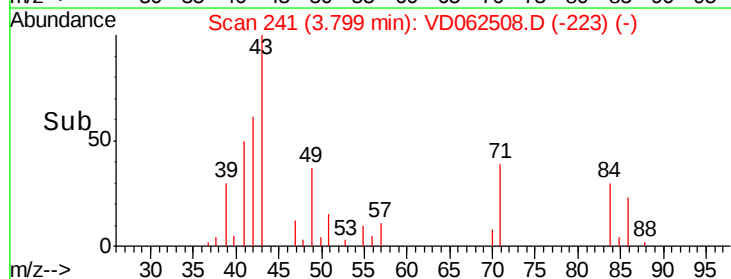
4000

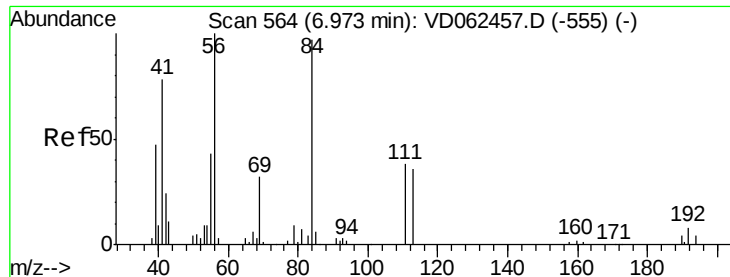
2000

0

Time-->

3.70 3.75 3.80 3.85

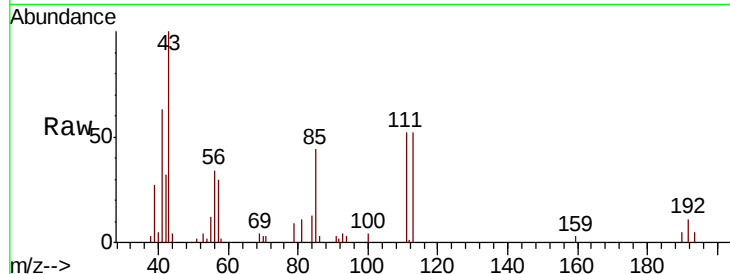




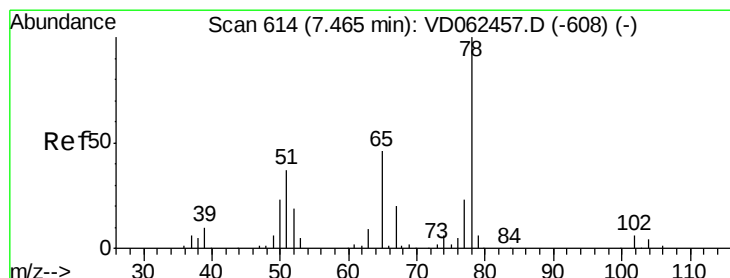
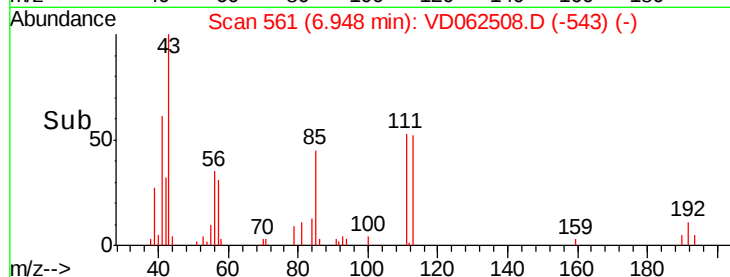
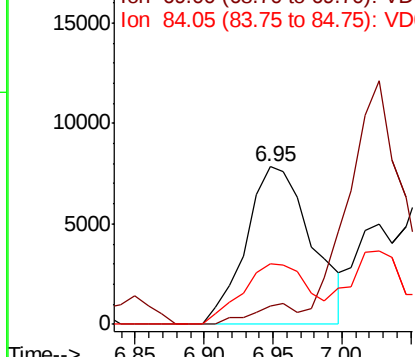
#31
Cvclohexane
Concen: 4.868 ug/l
RT: 6.95 min Scan# 561
Delta R.T. -0.02 min
Lab File: VD062508.D
Acq: 22 May 2019 17:42

Instrument :
MSVOA_D
ClientSampleId :

Tot Ion: 56 Resp: 26024
Ion Ratio Lower Upper
56 100
69 11.4 25.8 38.6#
84 38.6 72.2 108.4#

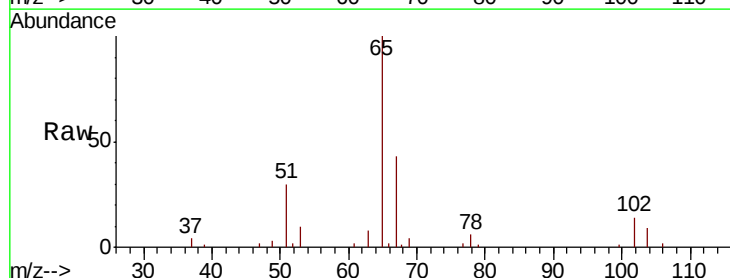


Abundance Ion 55.95 (55.65 to 56.65): VDC
Ion 69.00 (68.70 to 69.70): VDC
Ion 84.05 (83.75 to 84.75): VDC

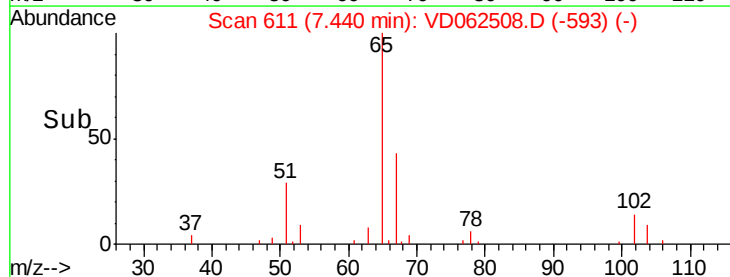
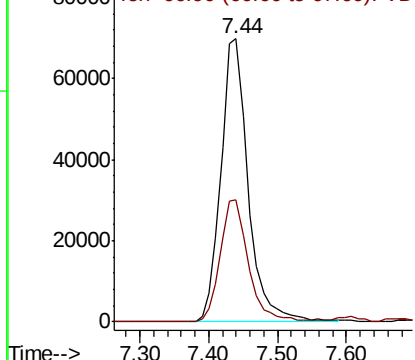


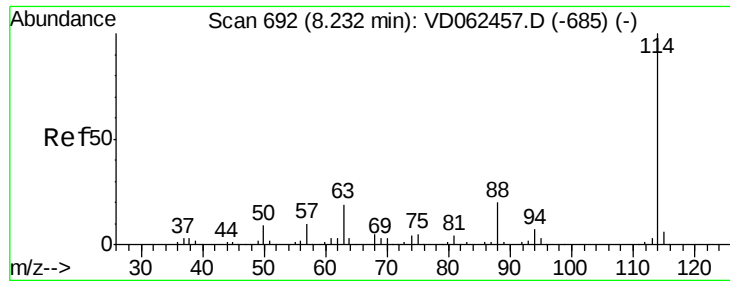
#33
1,2-Dichloroethane-d4
Concen: 33.876 ug/l
RT: 7.44 min Scan# 611
Delta R.T. -0.02 min
Lab File: VD062508.D
Acq: 22 May 2019 17:42

Tgt Ion: 65 Resp: 191787
Ion Ratio Lower Upper
65 100
67 43.3 0.0 98.0



Abundance Ion 64.95 (64.65 to 65.65): VDC
Ion 66.90 (66.60 to 67.60): VDC

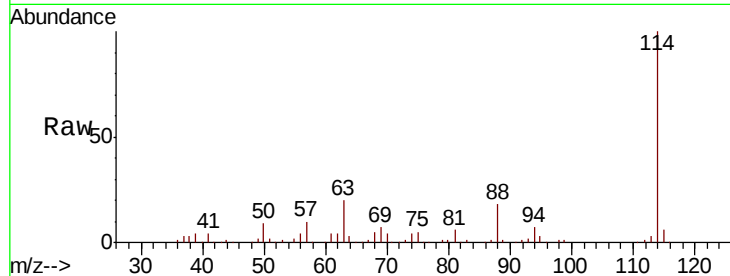




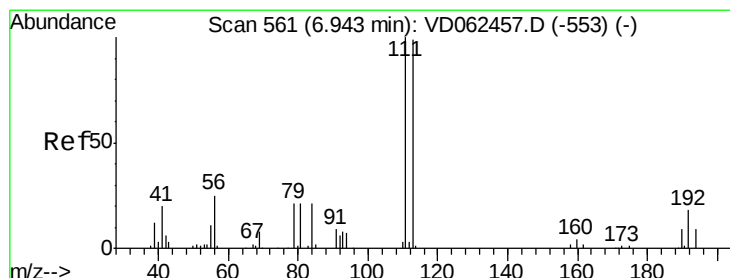
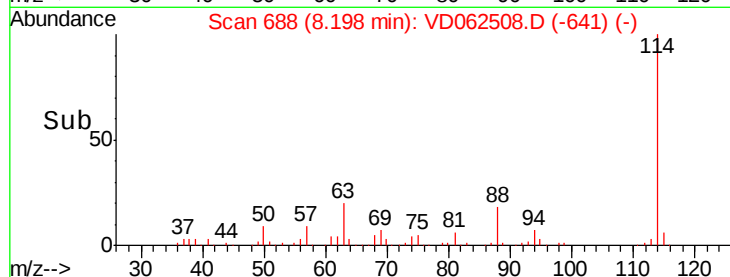
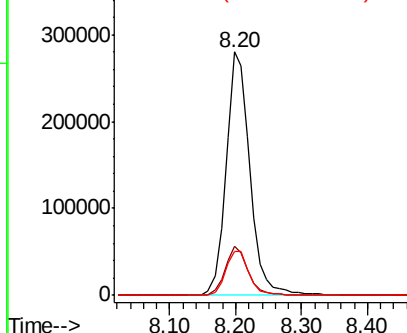
#34
 1,4-Difluorobenzene
 Concen: 50.000 ug/l
 RT: 8.20 min Scan# 688
 Delta R.T. -0.03 min
 Lab File: VD062508.D
 Acq: 22 May 2019 17:42

Instrument :
 MSVOA_D
 ClientSampleId :

Tot Ion:114 Resp: 706157
 Ion Ratio Lower Upper
 114 100
 63 20.0 0.0 32.4
 88 18.1 0.0 33.6

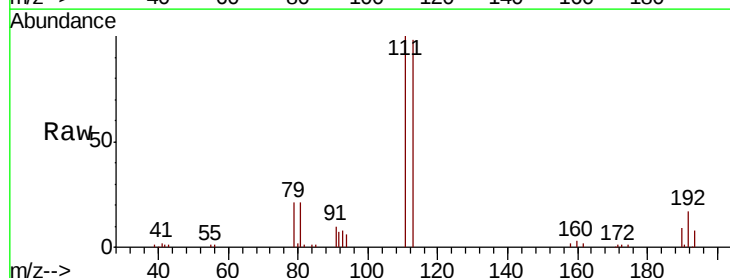


Abundance Ion 114.00 (113.70 to 114.70): V
 Ion 62.95 (62.65 to 63.65): V
 Ion 87.90 (87.60 to 88.60): V

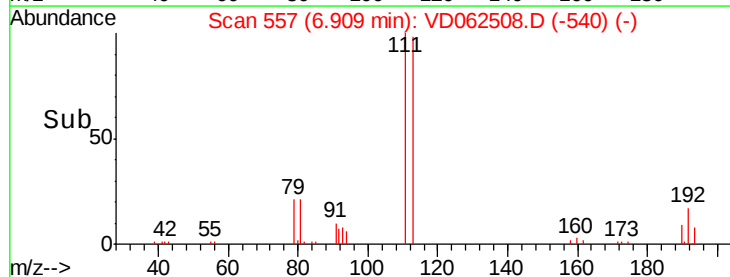
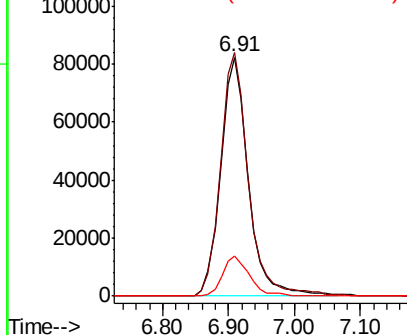


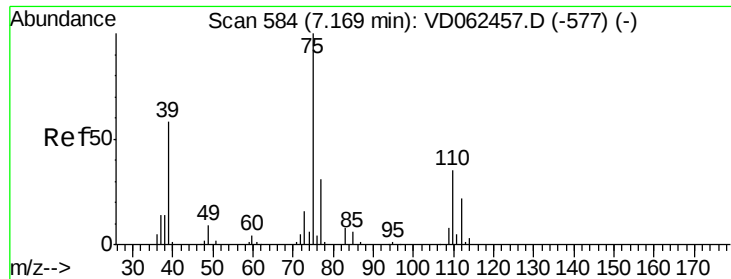
#35
 Dibromofluoromethane
 Concen: 37.864 ug/l
 RT: 6.91 min Scan# 557
 Delta R.T. -0.03 min
 Lab File: VD062508.D
 Acq: 22 May 2019 17:42

Tgt Ion:113 Resp: 241209
 Ion Ratio Lower Upper
 113 100
 111 101.9 78.5 117.7
 192 16.9 13.0 19.4



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: 6.205 ug/l

RT: 7.03 min Scan# 569

Delta R.T. -0.14 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

Instrument :

MSVOA_D

ClientSampleId :

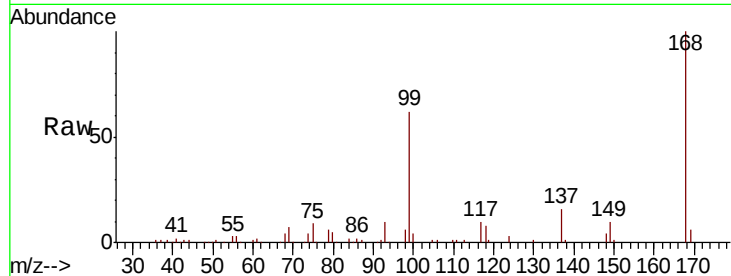
Tot Ion: 75 Resp: 41889

Ion Ratio Lower Upper

75 100

110 6.8 19.1 57.1#

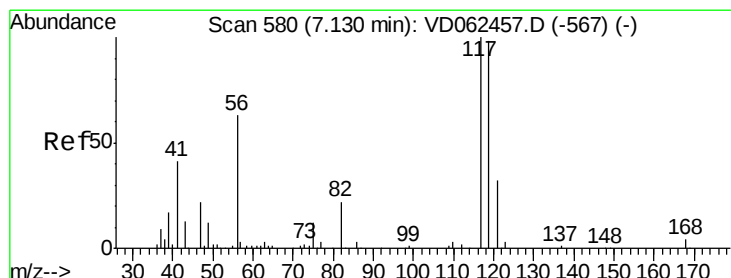
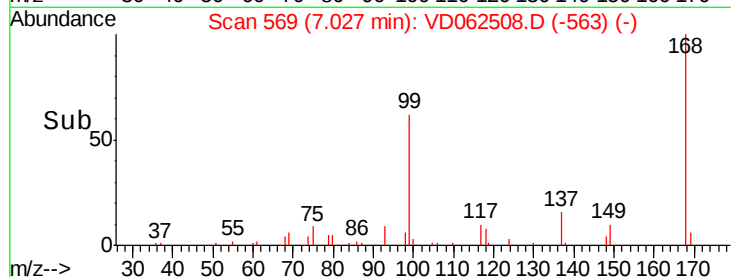
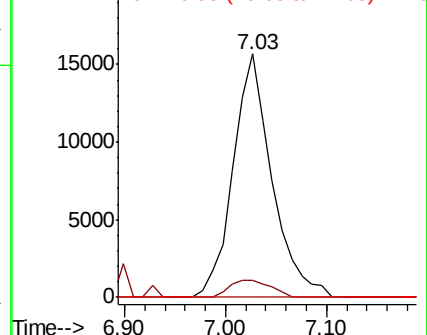
77 0.0 25.6 38.4#



Abundance Ion 75.00 (74.70 to 75.70): V

Ion 109.90 (109.60 to 110.60): V

Ion 76.95 (76.65 to 77.65): V



#38

Carbon Tetrachloride

Concen: 5.231 ug/l

RT: 7.03 min Scan# 569

Delta R.T. -0.10 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

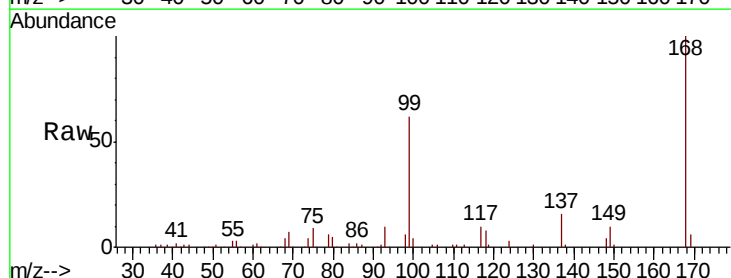
Tgt Ion: 117 Resp: 52489

Ion Ratio Lower Upper

117 100

119 5.3 75.8 113.8#

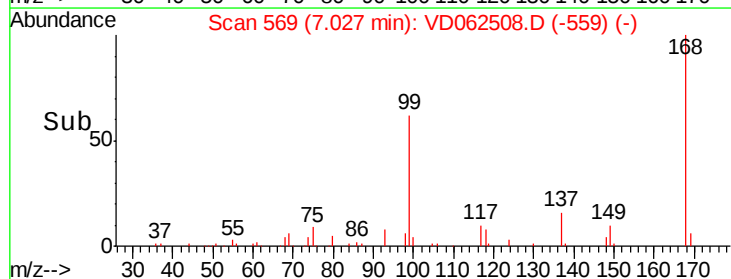
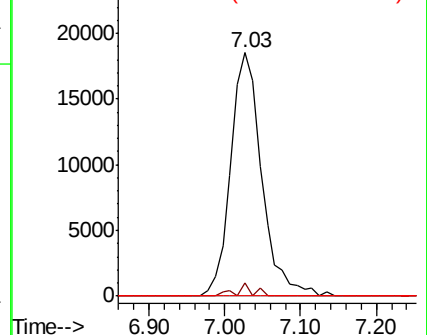
121 0.0 25.9 38.9#

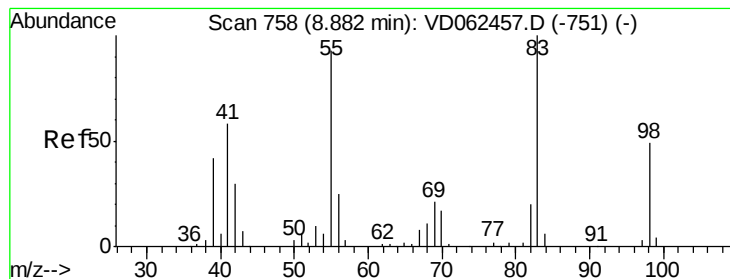


Abundance Ion 116.85 (116.55 to 117.55): V

Ion 118.85 (118.55 to 119.55): V

Ion 120.85 (120.55 to 121.55): V





#39

Methvlcvclohexane

Concen: 2.881 ug/l

RT: 8.86 min Scan# 755

Delta R.T. -0.02 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

Instrument :

MSVOA_D

ClientSampled :

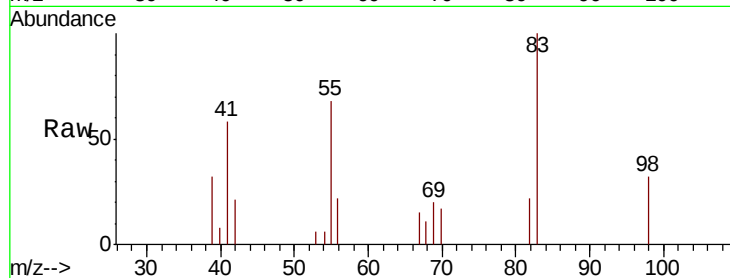
Tot Ion: 83 Resp: 16042

Ion Ratio Lower Upper

83 100

55 68.3 68.2 102.4

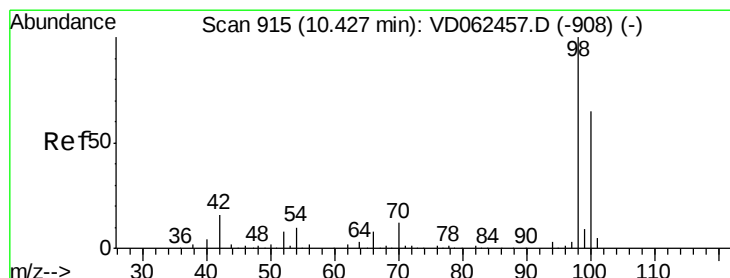
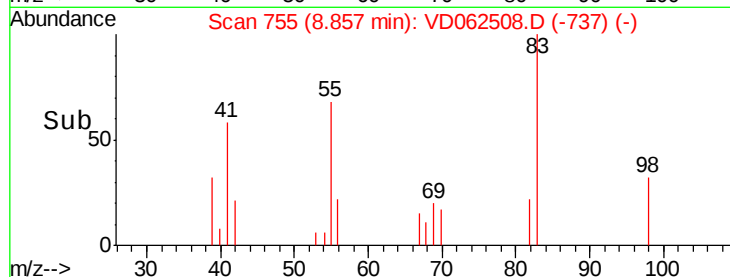
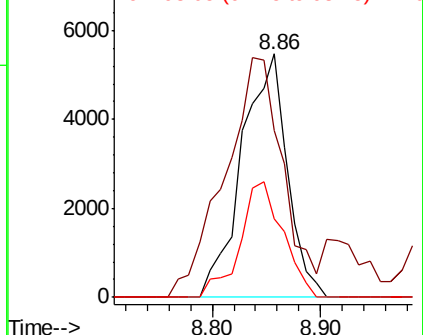
98 32.5 38.2 57.4#



Abundance Ion 83.05 (82.75 to 83.75): VDC

Ion 55.00 (54.70 to 55.70): VDC

Ion 98.05 (97.75 to 98.75): VDC



#50

Toluene-d8

Concen: 33.112 ug/l

RT: 10.39 min Scan# 911

Delta R.T. -0.03 min

Lab File: VD062508.D

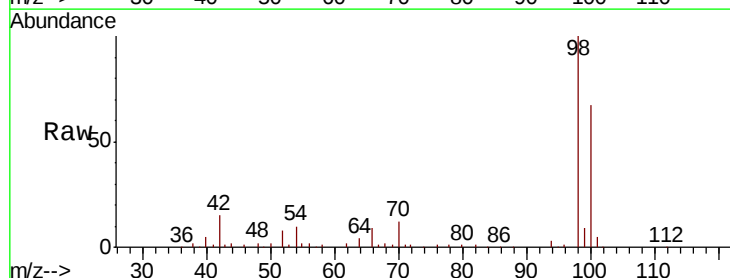
Acq: 22 May 2019 17:42

Tgt Ion: 98 Resp: 461613

Ion Ratio Lower Upper

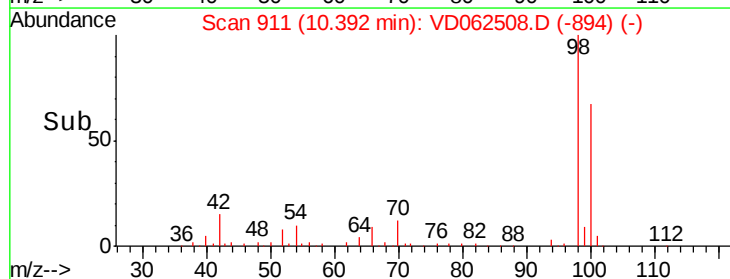
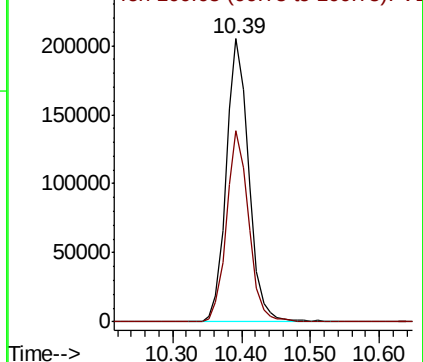
98 100

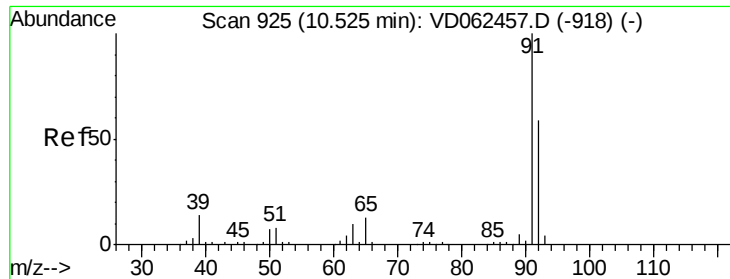
100 67.5 53.8 80.8



Abundance Ion 98.05 (97.75 to 98.75): VDC

Ion 100.05 (99.75 to 100.75): VDC





#52

Toluene

Concen: 3.180 ug/l

RT: 10.49 min Scan# 921

Delta R.T. -0.03 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

Instrument :

MSVOA_D

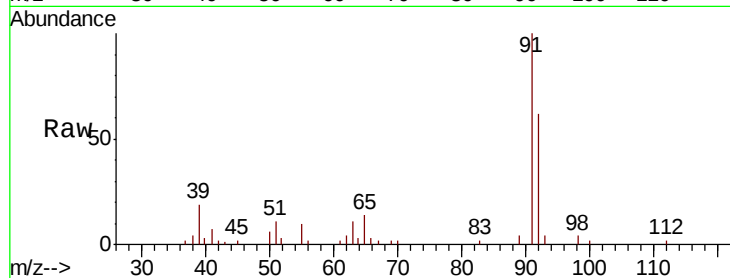
ClientSampleId :

Tot Ion: 92 Resp: 28826

Ion Ratio Lower Upper

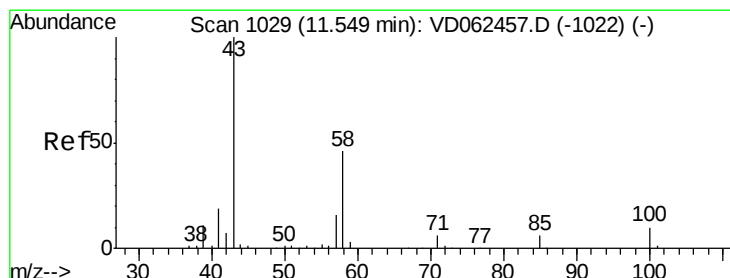
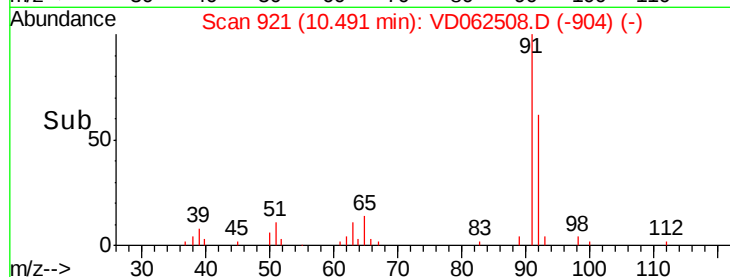
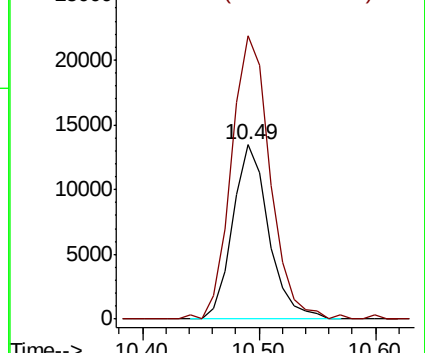
92 100

91 162.2 136.6 204.8



Abundance Ion 92.00 (91.70 to 92.70): VDC

Ion 91.00 (90.70 to 91.70): VDC



#59

2-Hexanone

Concen: 4.925 ug/l

RT: 11.47 min Scan# 1021

Delta R.T. -0.07 min

Lab File: VD062508.D

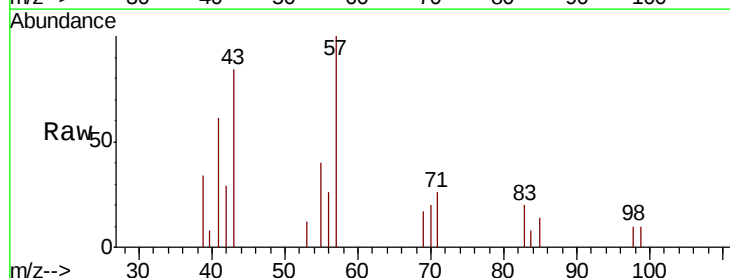
Acq: 22 May 2019 17:42

Tgt Ion: 43 Resp: 8227

Ion Ratio Lower Upper

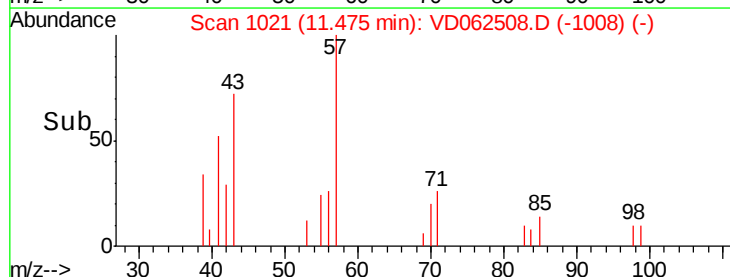
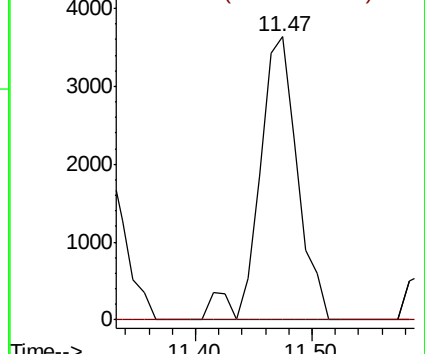
43 100

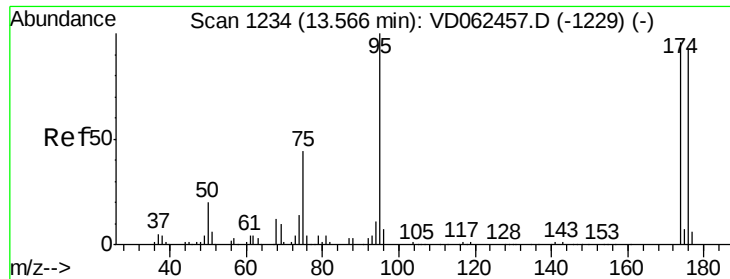
58 0.0 25.4 76.4#



Abundance Ion 42.95 (42.65 to 43.65): VDC

Ion 57.95 (57.65 to 58.65): VDC





#62

4-Bromofluorobenzene

Concen: 36.007 ug/l

RT: 13.54 min Scan# 1231

Delta R.T. -0.02 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

Instrument :

MSVOA_D

ClientSampleId :

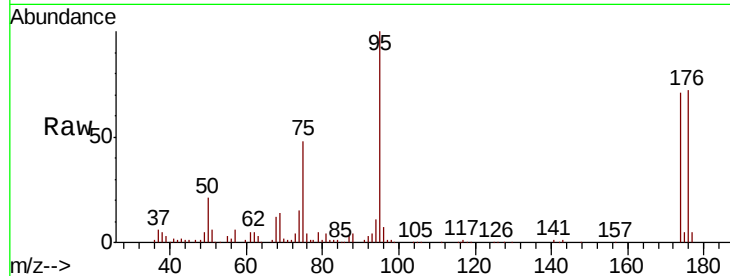
Tot Ion: 95 Resp: 219582

Ion Ratio Lower Upper

95 100

174 71.3 0.0 181.8

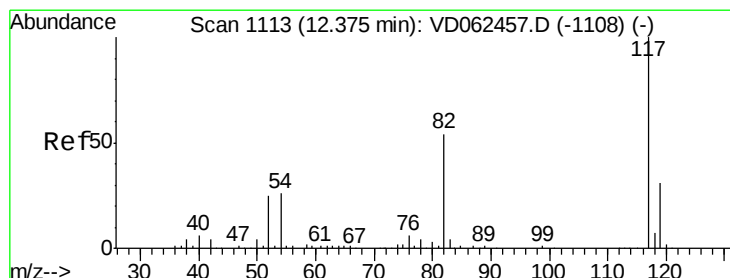
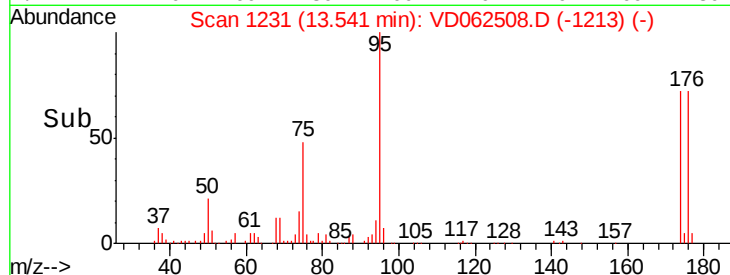
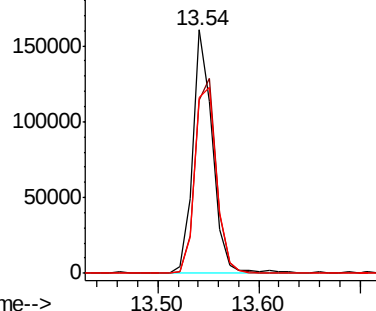
176 72.1 0.0 174.4



Abundance Ion 95.00 (94.70 to 95.70): V

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: 12.35 min Scan# 1110

Delta R.T. -0.02 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

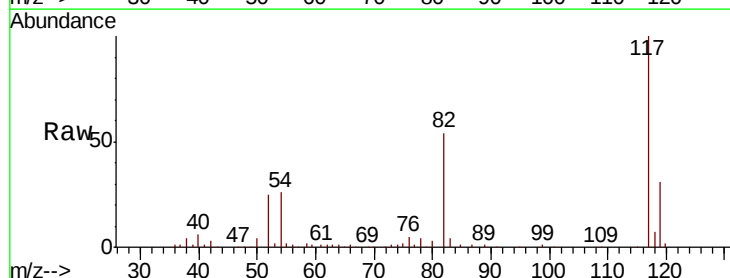
Tgt Ion: 117 Resp: 595683

Ion Ratio Lower Upper

117 100

82 54.2 36.2 54.2#

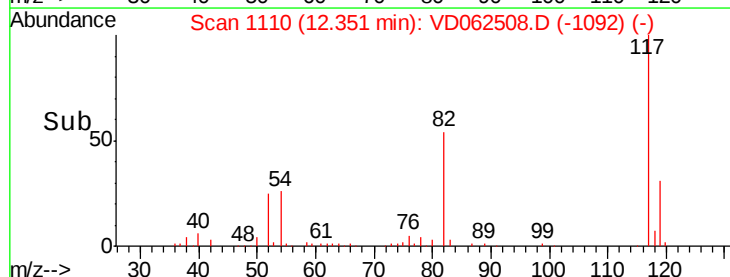
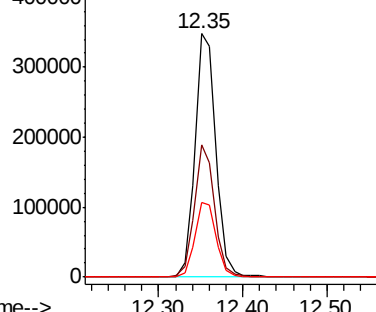
119 30.8 26.2 39.4

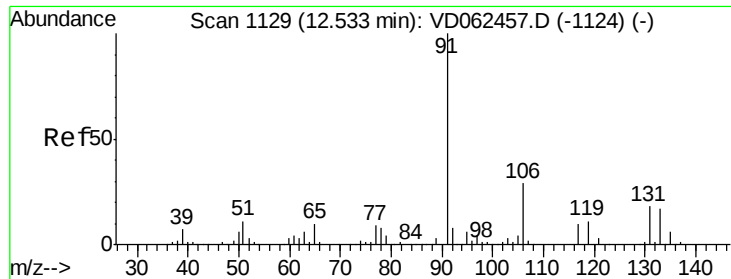


Abundance Ion 116.95 (116.65 to 117.65): V

Ion 82.05 (81.75 to 82.75): V

Ion 118.95 (118.65 to 119.65): V

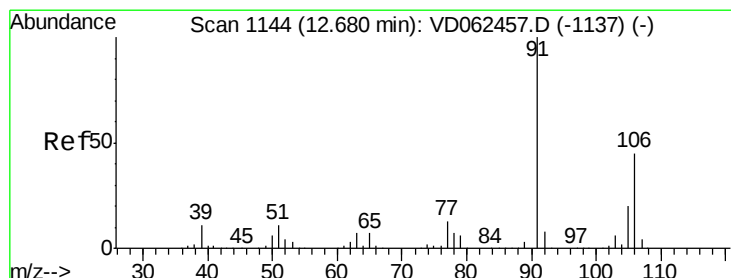
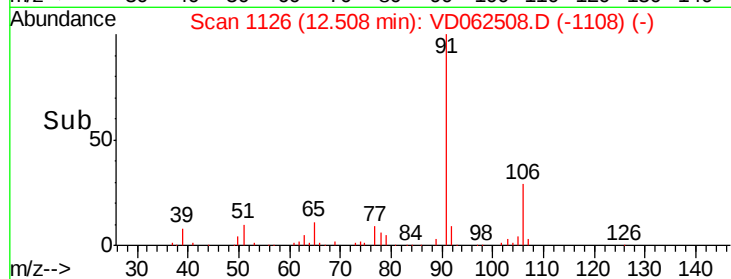
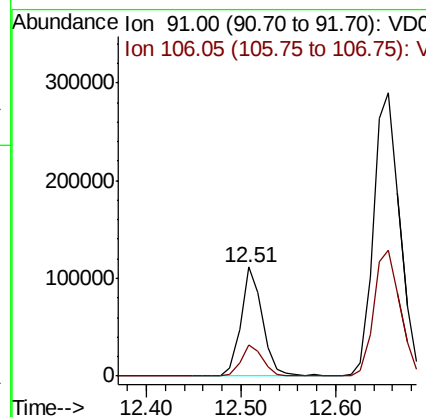
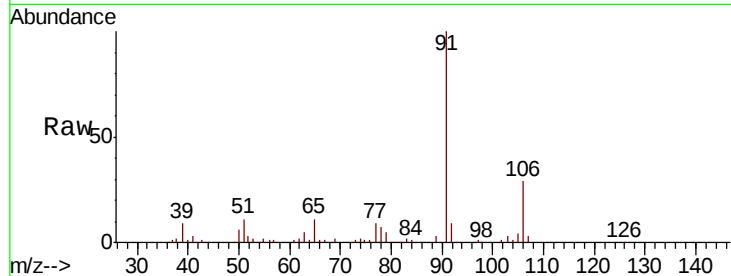




#67
Ethyl Benzene
Concen: 8.835 ug/l
RT: 12.51 min Scan# 1126
Delta R.T. -0.02 min
Lab File: VD062508.D
Acq: 22 May 2019 17:42

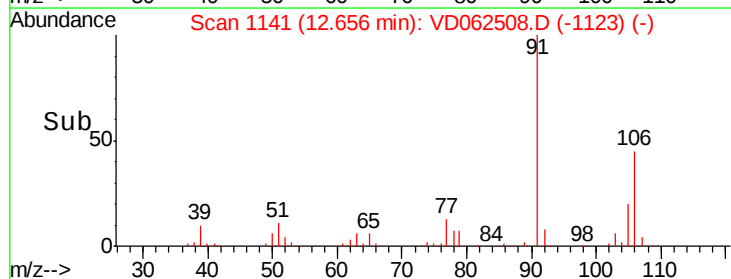
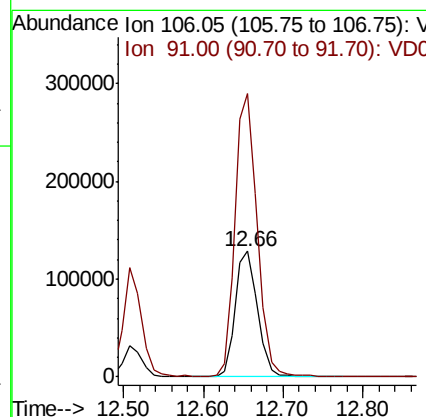
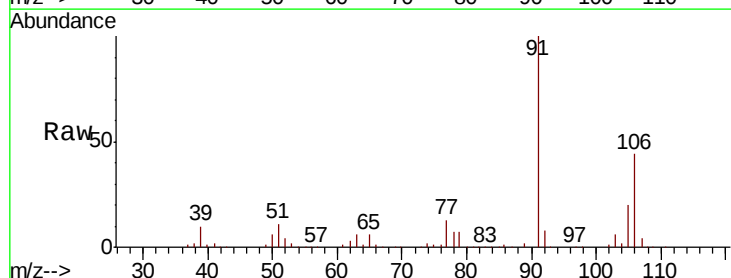
Instrument :
MSVOA_D
ClientSampleId :

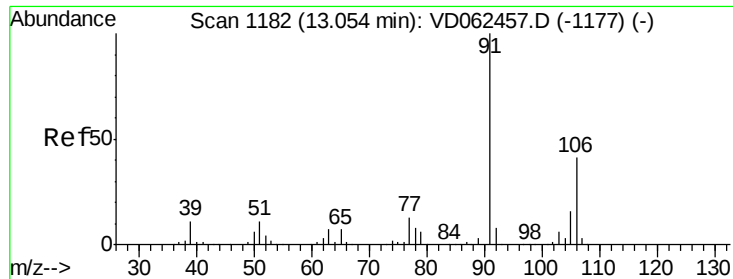
Tot Ion: 91 Resp: 174319
Ion Ratio Lower Upper
91 100
106 28.9 24.7 37.1



#68
m/p-Xylenes
Concen: 35.694 ug/l
RT: 12.66 min Scan# 1141
Delta R.T. -0.02 min
Lab File: VD062508.D
Acq: 22 May 2019 17:42

Tgt Ion: 106 Resp: 252804
Ion Ratio Lower Upper
106 100
91 225.1 164.0 246.0

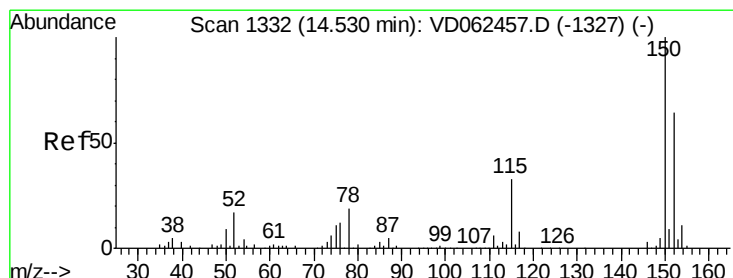
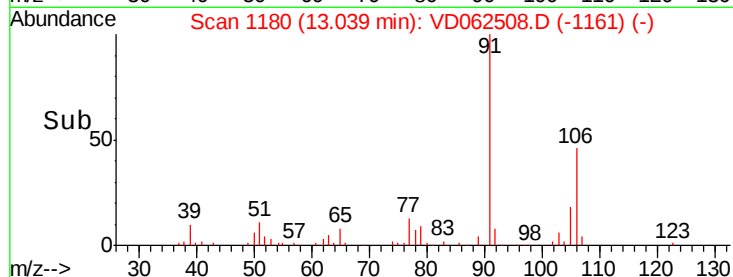
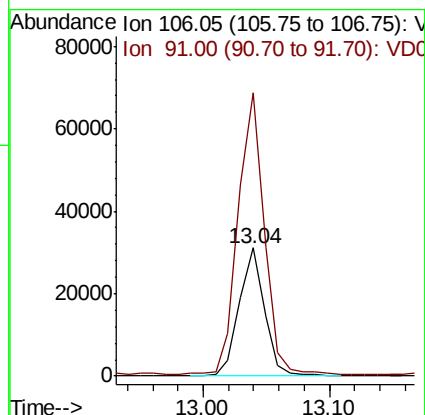
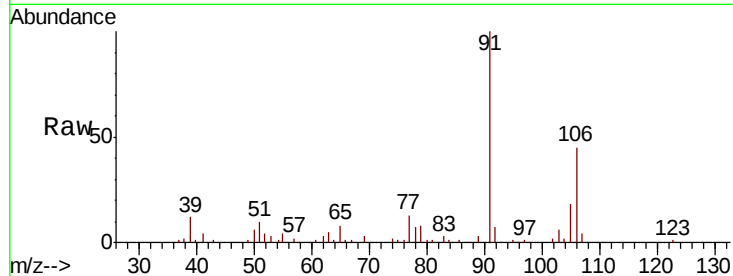




#69
o-Xylene
Concen: 6.476 ug/l
RT: 13.04 min Scan# 1180
Delta R.T. -0.01 min
Lab File: VD062508.D
Acq: 22 May 2019 17:42

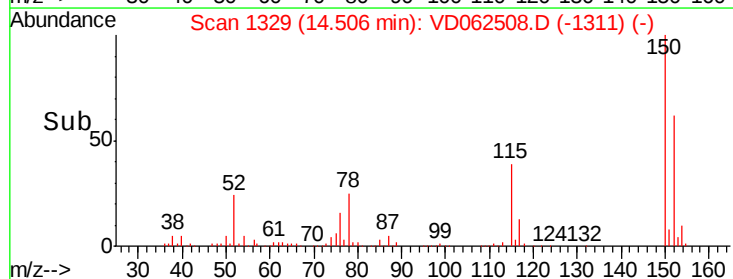
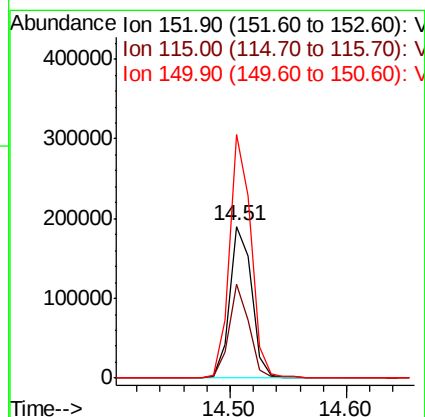
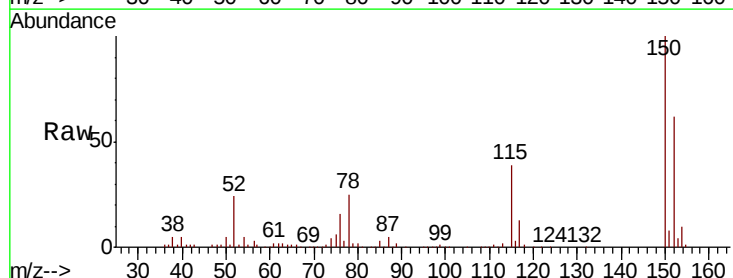
Instrument :
MSVOA_D
ClientSampled :

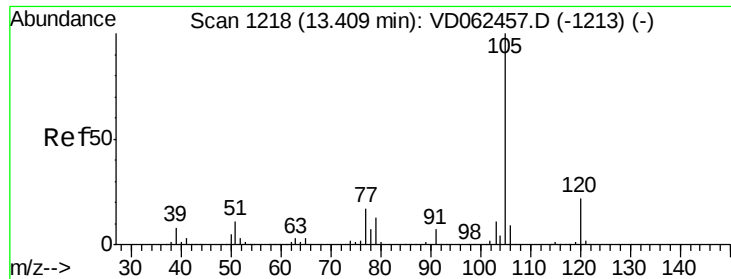
Tot Ion:106 Resp: 43275
Ion Ratio Lower Upper
106 100
91 220.5 106.7 319.9



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 14.51 min Scan# 1329
Delta R.T. -0.02 min
Lab File: VD062508.D
Acq: 22 May 2019 17:42

Tgt Ion:152 Resp: 248466
Ion Ratio Lower Upper
152 100
115 62.4 30.9 92.7
150 160.8 0.0 314.8





#73

Isopropylbenzene

Concen: 2.098 ug/l

RT: 13.39 min Scan# 1216

Delta R.T. -0.01 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

Instrument :

MSVOA_D

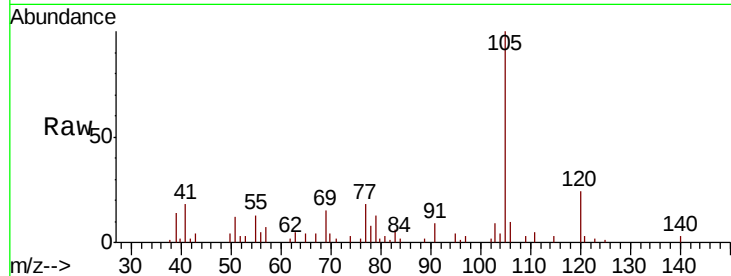
ClientSampleId :

Tot Ion:105 Resp: 32859

Ion Ratio Lower Upper

105 100

120 23.7 12.0 36.1



Abundance Ion 105.05 (104.75 to 105.75): V

Ion 120.05 (119.75 to 120.75): V

25000

20000

15000

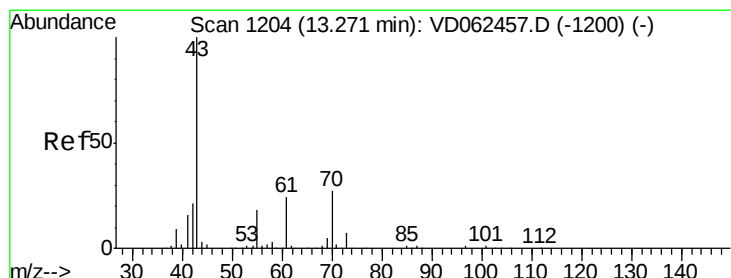
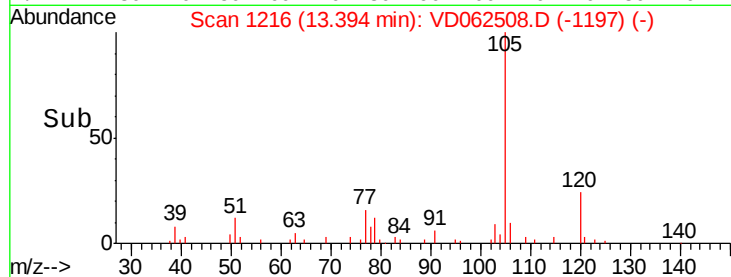
10000

5000

0

13.35 13.40 13.45

Time-->



#74

N-ethyl acetate

Concen: 1.219 ug/l

RT: 13.29 min Scan# 1205

Delta R.T. 0.01 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

Tgt Ion: 43 Resp: 4714

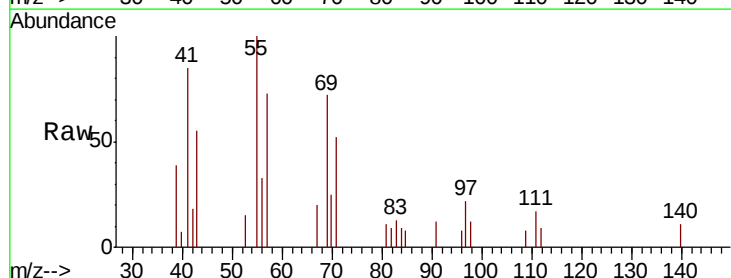
Ion Ratio Lower Upper

43 100

70 45.8 24.2 36.4#

55 182.9 16.0 24.0#

61 0.0 21.6 32.4#



Abundance Ion 42.95 (42.65 to 43.65): VDC

Ion 70.00 (69.70 to 70.70): VDC

Ion 55.00 (54.70 to 55.70): VDC

Ion 60.95 (60.65 to 61.65): VDC

10000

8000

6000

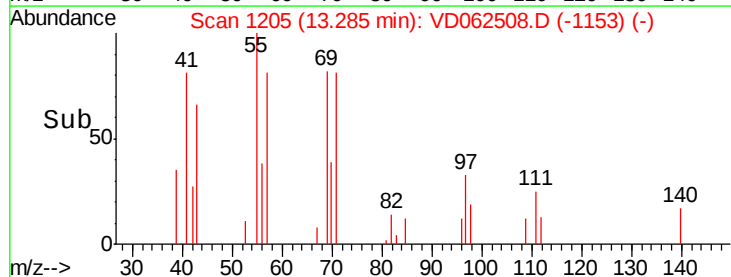
4000

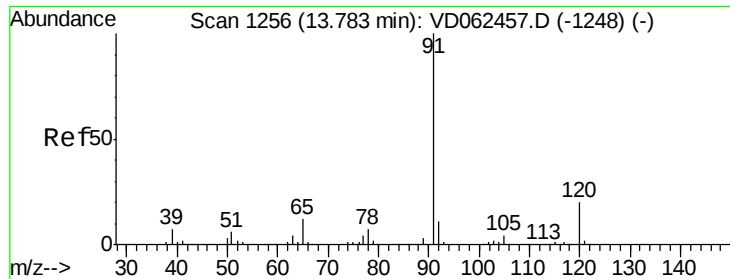
2000

0

13.25 13.30

Time-->





#78

n-propylbenzene

Concen: 3.211 ug/l

RT: 13.76 min Scan# 1253

Delta R.T. -0.02 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

Instrument :

MSVOA_D

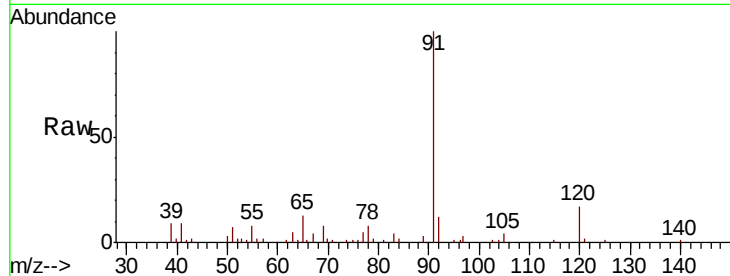
ClientSampled :

Tot Ion: 91 Resp: 58258

Ion Ratio Lower Upper

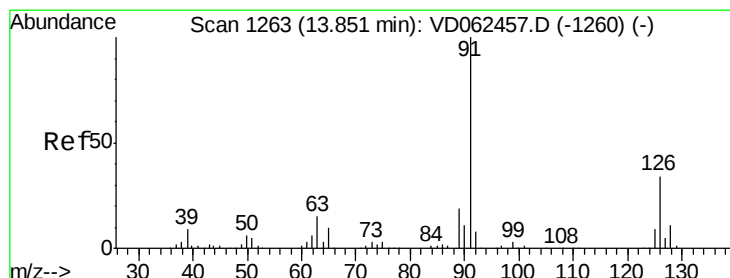
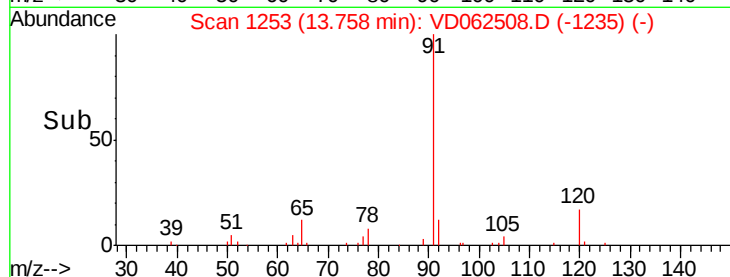
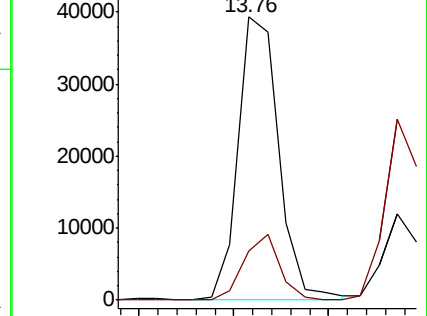
91 100

120 17.2 11.1 33.1



Abundance Ion 91.00 (90.70 to 91.70): VDC

Ion 120.05 (119.75 to 120.75): V



#79

2-Chlorotoluene

Concen: 1.599 ug/l

RT: 13.84 min Scan# 1261

Delta R.T. -0.01 min

Lab File: VD062508.D

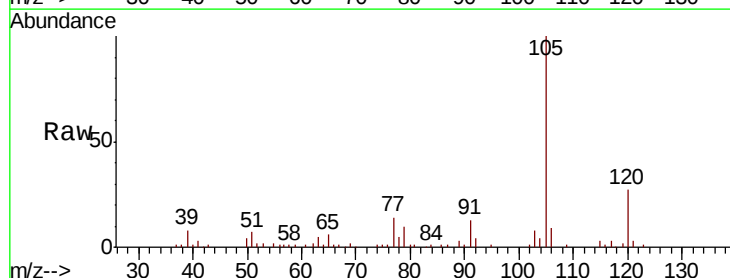
Acq: 22 May 2019 17:42

Tgt Ion: 91 Resp: 17607

Ion Ratio Lower Upper

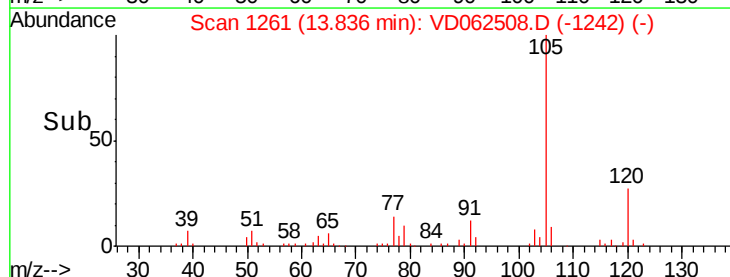
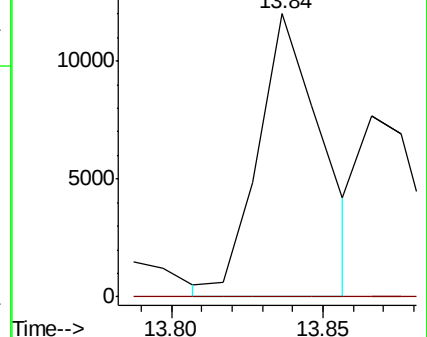
91 100

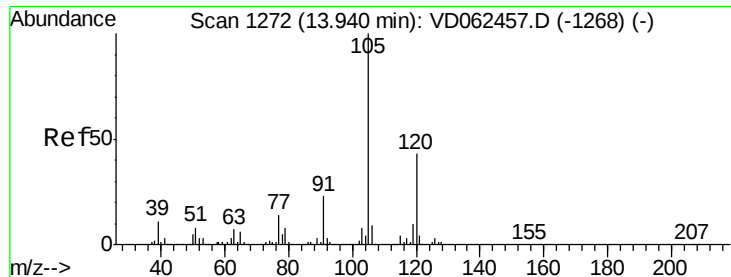
126 0.0 18.6 55.8#



Abundance Ion 91.00 (90.70 to 91.70): VDC

Ion 125.95 (125.65 to 126.65): V





#80

1,3,5-Trimethylbenzene

Concen: 5.644 ug/l

RT: 13.93 min Scan# 1270

Delta R.T. -0.01 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

Instrument :

MSVOA_D

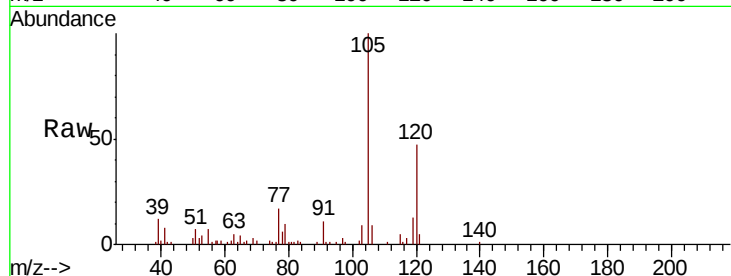
ClientSampleId :

Tot Ion:105 Resp: 76537

Ion Ratio Lower Upper

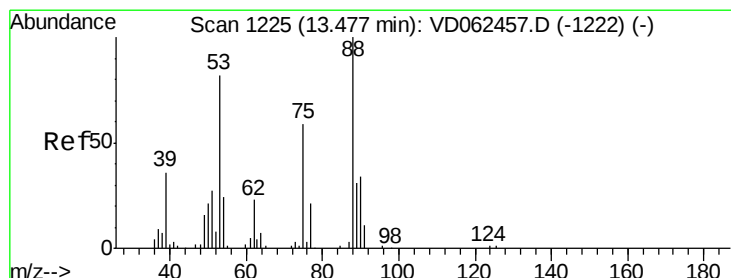
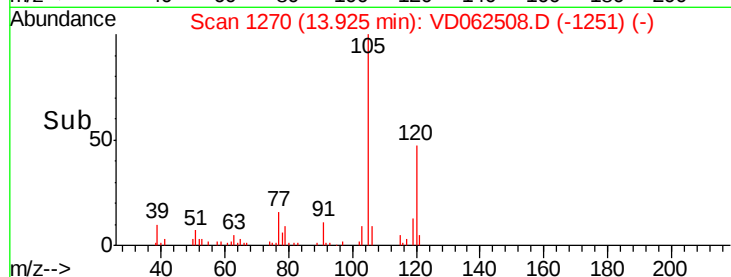
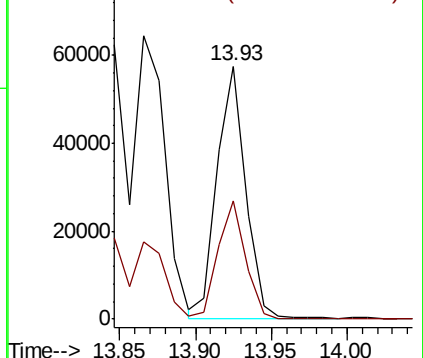
105 100

120 46.7 24.0 72.0



Abundance Ion 105.05 (104.75 to 105.75): V

Ion 120.05 (119.75 to 120.75): V



#81

trans-1,4-Dichloro-2-butene

Concen: 123.841 ug/l

RT: 13.54 min Scan# 1231

Delta R.T. 0.06 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

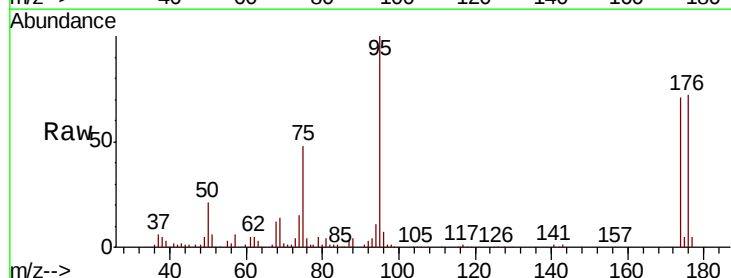
Tgt Ion: 75 Resp: 102217

Ion Ratio Lower Upper

75 100

53 0.7 65.8 98.8#

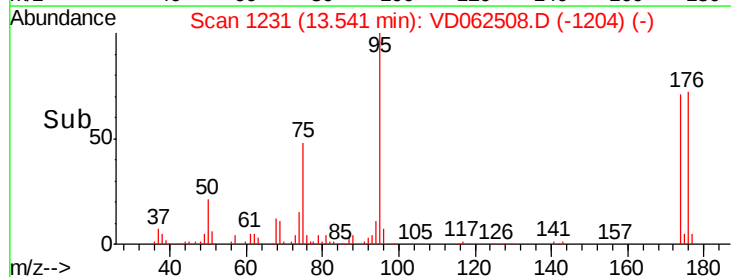
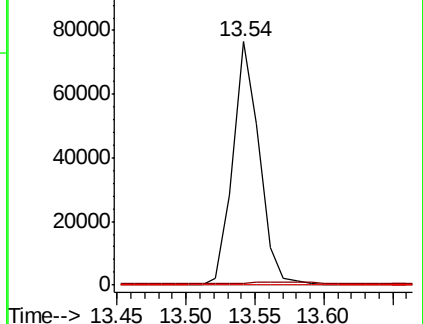
89 0.0 35.0 52.6#

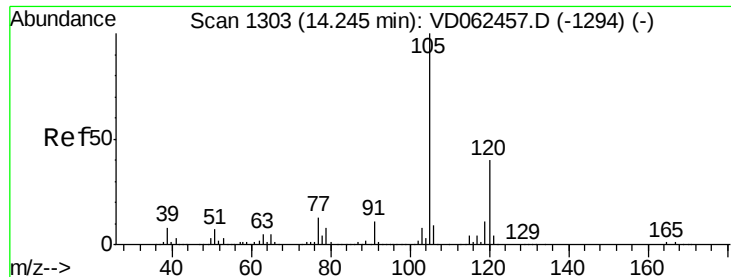


Abundance Ion 75.00 (74.70 to 75.70): VDC

Ion 53.00 (52.70 to 53.70): VDC

Ion 89.00 (88.70 to 89.70): VDC

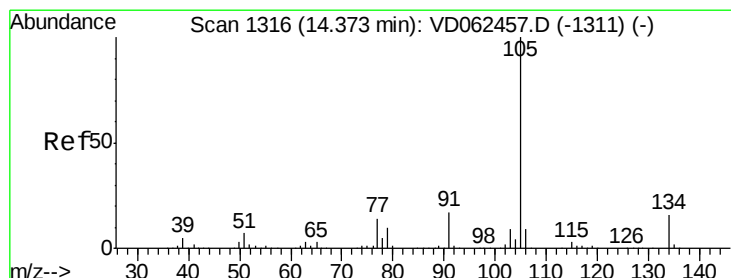
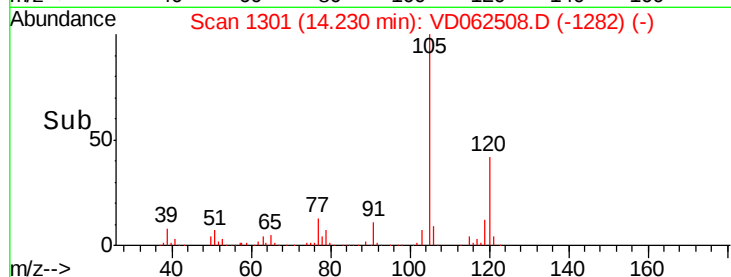
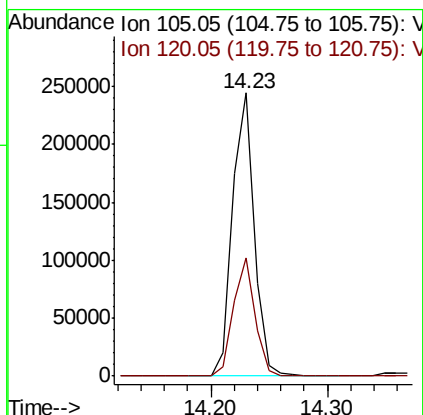
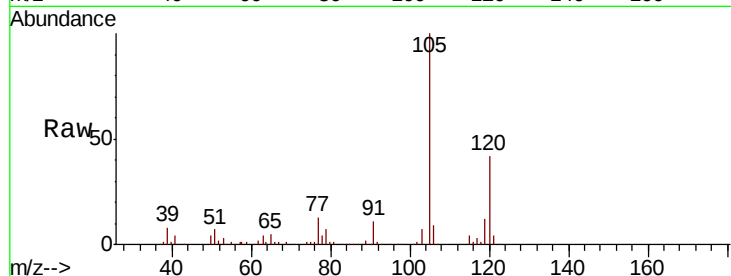




#84
 1,2,4-Trimethylbenzene
 Concen: 22.676 ug/l
 RT: 14.23 min Scan# 1301
 Delta R.T. -0.01 min
 Lab File: VD062508.D
 Acq: 22 May 2019 17:42

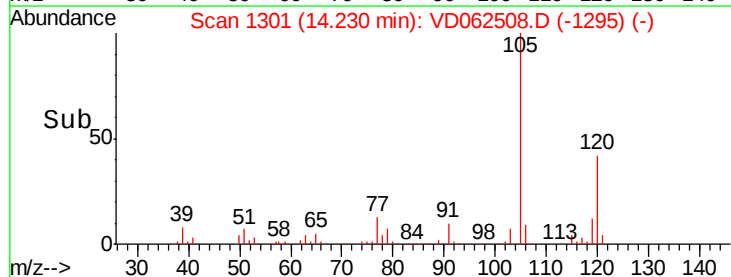
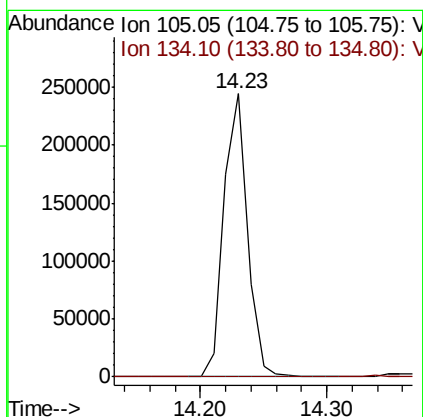
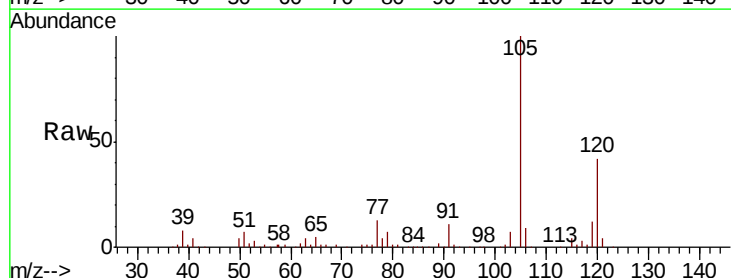
Instrument :
 MSVOA_D
 ClientSampleId :

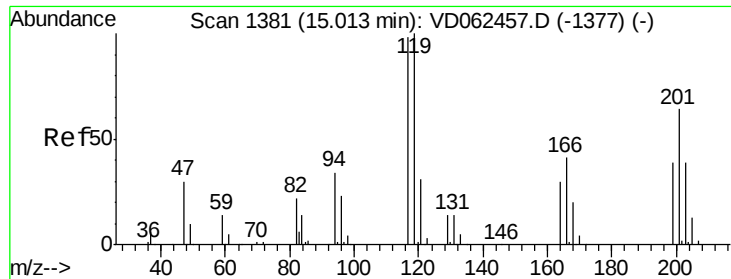
Tot Ion:105 Resp: 315092
 Ion Ratio Lower Upper
 105 100
 120 41.7 23.1 69.2



#85
 sec-Butylbenzene
 Concen: 20.091 ug/l
 RT: 14.23 min Scan# 1301
 Delta R.T. -0.14 min
 Lab File: VD062508.D
 Acq: 22 May 2019 17:42

Tgt Ion:105 Resp: 315112
 Ion Ratio Lower Upper
 105 100
 134 0.0 8.9 26.7#





#90

Hexachloroethane

Concen: 1.298 ug/l

RT: 15.05 min Scan# 1384

Delta R.T. 0.03 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

Instrument :

MSVOA_D

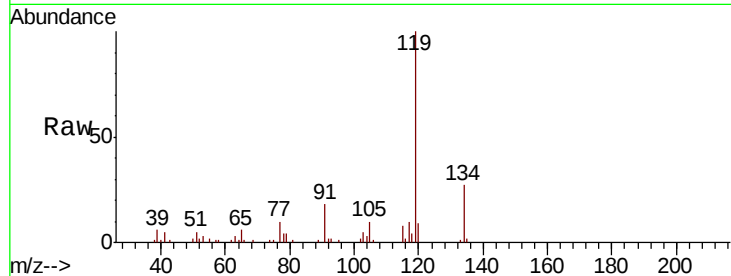
ClientSampled :

Tot Ion:117 Resp: 5097

Ion Ratio Lower Upper

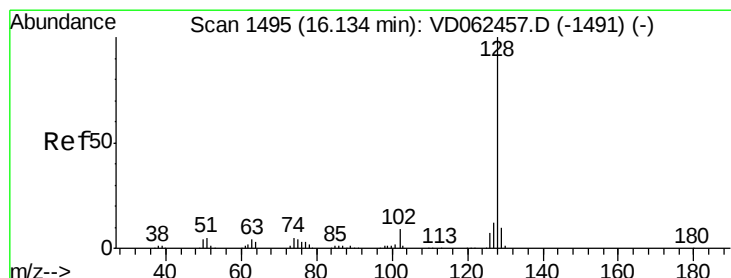
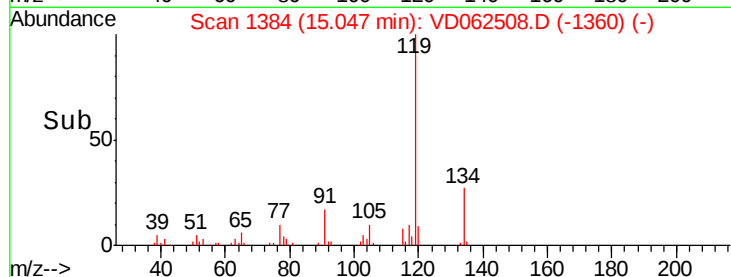
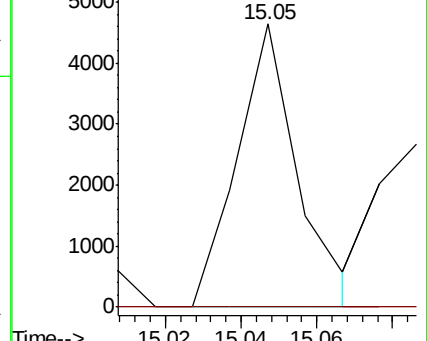
117 100

201 0.0 30.2 90.6#



Abundance Ion 116.85 (116.55 to 117.55): V

Ion 200.75 (200.45 to 201.45): V



#95

Naphthalene

Concen: 15.504 ug/l

RT: 16.12 min Scan# 1493

Delta R.T. -0.01 min

Lab File: VD062508.D

Acq: 22 May 2019 17:42

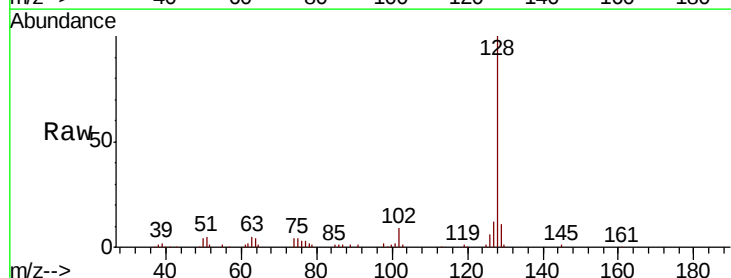
Tgt Ion:128 Resp: 111286

Ion Ratio Lower Upper

128 100

127 11.9 9.8 14.8

129 10.9 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

