

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\WX072619\
 Data File : VX011102.D
 Acq On : 26 Jul 2019 19:43
 Operator : JC/SP
 Sample : PB121723ZHE#08
 Misc : 5.0mL/MSVOA X/WATER
 ALS Vial : 25 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 PB121723ZHE#08

Quant Time: Jul 27 02:05:41 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_X\METHOD\82X071619W.M
 Quant Title : SW846 8260
 QLast Update : Wed Jul 24 05:39:23 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	5.67	168	201385	50.00	ug/l	0.00
34) 1,4-Difluorobenzene	6.86	114	322850	50.00	ug/l	0.00
63) Chlorobenzene-d5	10.11	117	313197	50.00	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.08	152	144383	50.00	ug/l	0.00

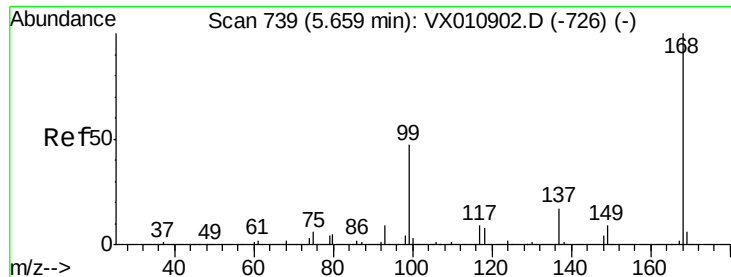
System Monitoring Compounds

33) 1,2-Dichloroethane-d4	6.06	65	110148	51.41	ug/l	0.00
Spiked Amount	50.000		Recovery	=	102.82%	
35) Dibromofluoromethane	5.50	113	101401	49.48	ug/l	0.00
Spiked Amount	50.000		Recovery	=	98.96%	
50) Toluene-d8	8.71	98	402471	52.37	ug/l	0.00
Spiked Amount	50.000		Recovery	=	104.74%	
62) 4-Bromofluorobenzene	11.13	95	142226	50.34	ug/l	0.00
Spiked Amount	50.000		Recovery	=	100.68%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.46	85	28	0.559	ug/l #	43
3) Chloromethane	1.33	50	416	0.225	ug/l #	44
5) Bromomethane	1.65	94	430	0.404	ug/l #	64
6) Chloroethane	1.75	64	350	0.292	ug/l #	47
8) Diethyl Ether	2.19	74	727	0.660	ug/l	92
11) Tert butyl alcohol	3.05	59	601	1.205	ug/l	97
13) Acrolein	2.29	56	198	0.687	ug/l #	79
14) Allyl chloride	2.85	41	5469	2.099	ug/l #	24
16) Acetone	2.44	43	468818	484.504	ug/l	98
18) Methyl Acetate	2.78	43	1400	0.635	ug/l	90
20) Methylene Chloride	2.86	84	152930	74.578	ug/l	96
25) 2-Butanone	4.68	43	1881	1.354	ug/l #	80
31) Cyclohexane	5.66	56	4156	1.429	ug/l #	1
36) 1,1-Dichloropropene	5.66	75	13142	4.956	ug/l #	50
38) Carbon Tetrachloride	5.66	117	18553	6.714	ug/l #	18
43) Isopropyl Acetate	6.45	43	12321	2.759	ug/l	99
48) Methyl methacrylate	7.67	41	5447	2.504	ug/l #	10
49) 1,4-Dioxane	7.87	88	159	2.613	ug/l #	1
51) 4-Methyl-2-Pentanone	8.61	43	59999	20.729	ug/l #	49
54) cis-1,3-Dichloropropene	8.61	75	30289	9.626	ug/l #	64
57) 1,3-Dichloropropane	9.54	76	7432	2.132	ug/l #	43
59) 2-Hexanone	9.44	43	7956	3.544	ug/l #	23
74) N-amyl acetate	10.69	43	9804	2.630	ug/l #	54
76) 1,2,3-Trichloropropane	11.13	75	70135	26.918	ug/l #	35
80) 1,3,5-Trimethylbenzene	11.51	105	4756	0.583	ug/l	97
81) trans-1,4-Dichloro-2-buten	11.13	75	70135	66.751	ug/l #	11

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



#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 5.67 min Scan# 740

Delta R.T. 0.01 min

Lab File: VX011102.D

Acq: 26 Jul 2019 19:43

Instrument :

MSVOA_X

ClientSampleId :

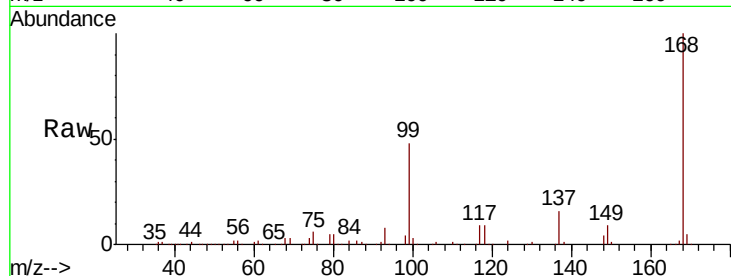
PB121723ZHE#08

Tot Ion:168 Resp: 201385

Ion Ratio Lower Upper

168 100

99 47.7 37.6 56.4



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VX0

5.67

80000

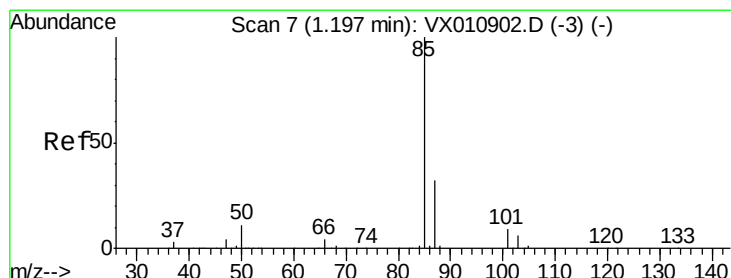
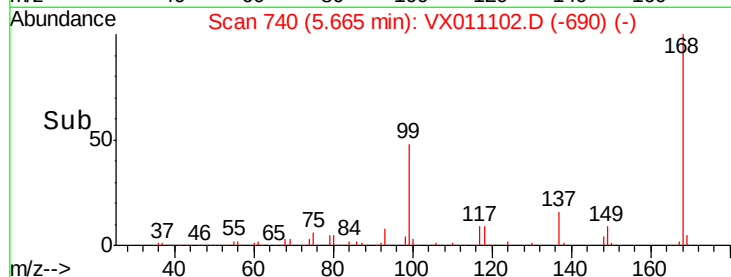
60000

40000

20000

0

Time--> 5.50 5.60 5.70 5.80



#2

Dichlorodifluoromethane

Concen: 0.559 ug/l

RT: 1.46 min Scan# 50

Delta R.T. 0.26 min

Lab File: VX011102.D

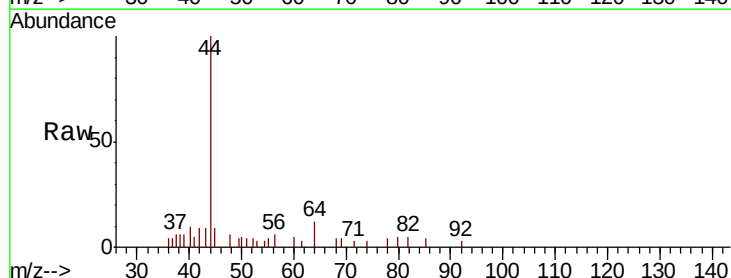
Acq: 26 Jul 2019 19:43

Tgt Ion: 85 Resp: 28

Ion Ratio Lower Upper

85 100

87 0.0 15.9 47.7#



Abundance Ion 84.90 (84.60 to 85.60): VX0

Ion 86.90 (86.60 to 87.60): VX0

1.46

80

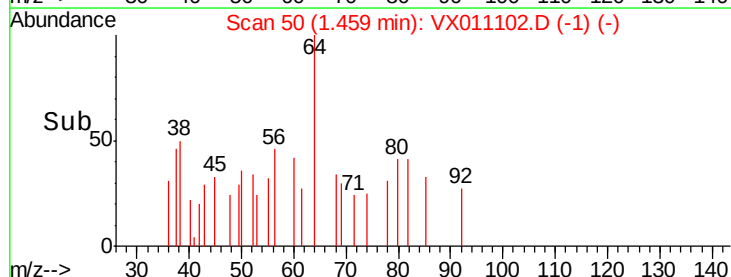
60

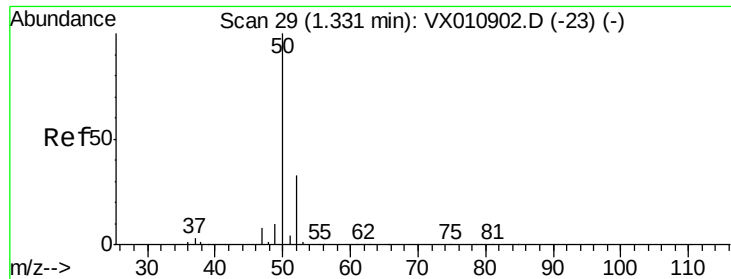
40

20

0

Time--> 1.44 1.45 1.46 1.47





#3

Chloromethane

Concen: 0.225 ug/l

RT: 1.33 min Scan# 29

Delta R.T. -0.00 min

Lab File: VX011102.D

Acq: 26 Jul 2019 19:43

Instrument :

MSVOA_X

ClientSampleId :

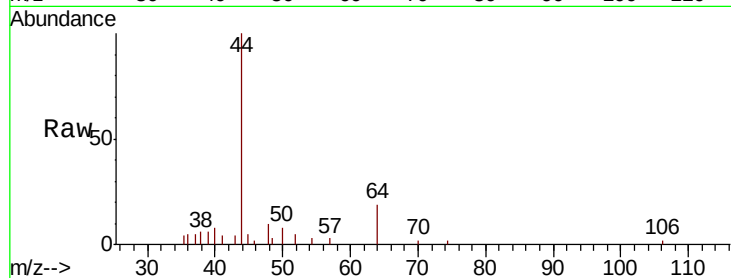
PB121723ZHE#08

Tot Ion: 50 Resp: 416

Ion Ratio Lower Upper

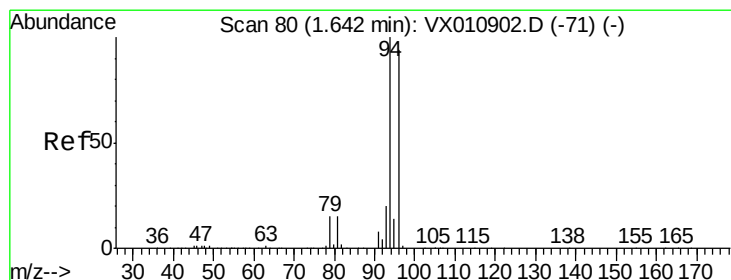
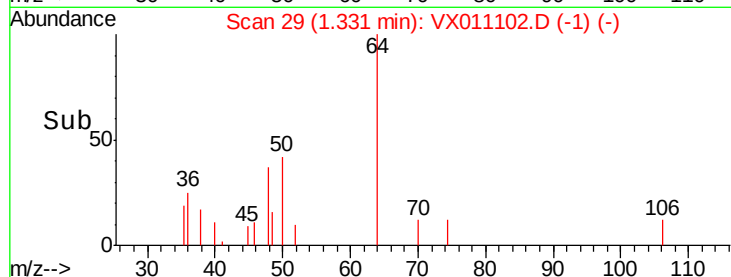
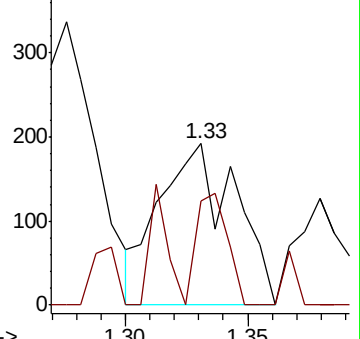
50 100

52 64.6 26.4 39.6#



Abundance Ion 49.90 (49.60 to 50.60): VX0

Ion 51.90 (51.60 to 52.60): VX0



#5

Bromomethane

Concen: 0.404 ug/l

RT: 1.65 min Scan# 82

Delta R.T. 0.01 min

Lab File: VX011102.D

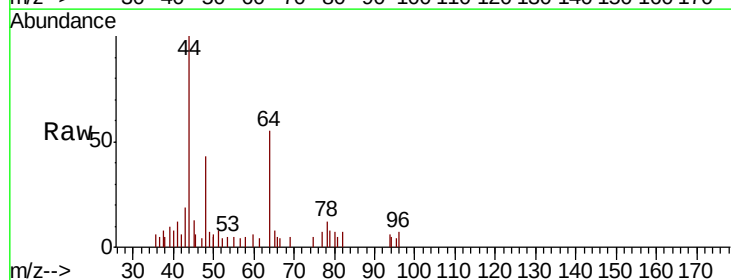
Acq: 26 Jul 2019 19:43

Tgt Ion: 94 Resp: 430

Ion Ratio Lower Upper

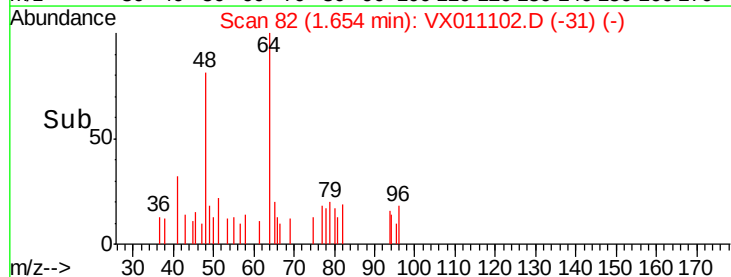
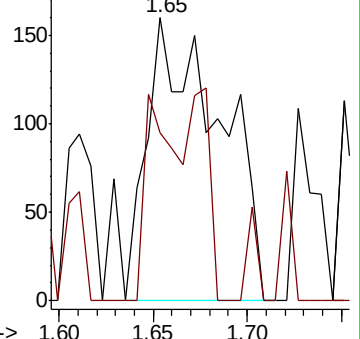
94 100

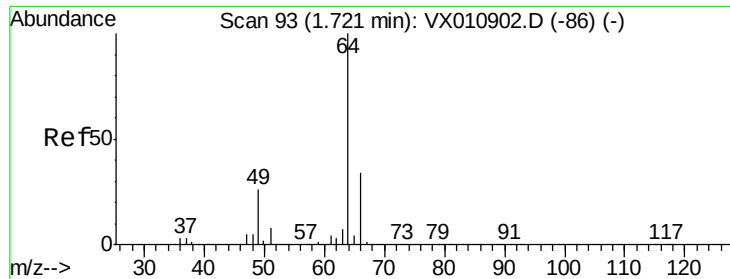
96 59.4 75.6 113.4#



Abundance Ion 93.90 (93.60 to 94.60): VX0

Ion 95.90 (95.60 to 96.60): VX0





#6

Chloroethane

Concen: 0.292 ug/l

RT: 1.75 min Scan# 98

Delta R.T. 0.03 min

Lab File: VX011102.D

Acq: 26 Jul 2019 19:43

Instrument :

MSVOA_X

ClientSampleId :

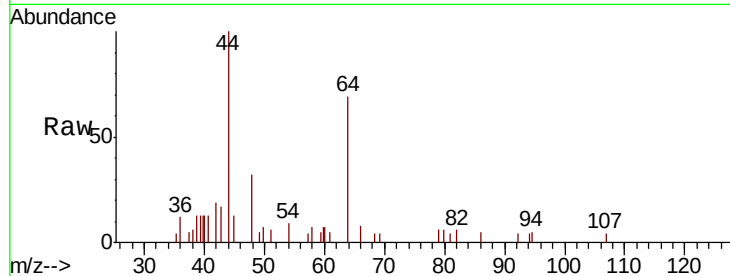
PB121723ZHE#08

Tot Ion: 64 Resp: 350

Ion Ratio Lower Upper

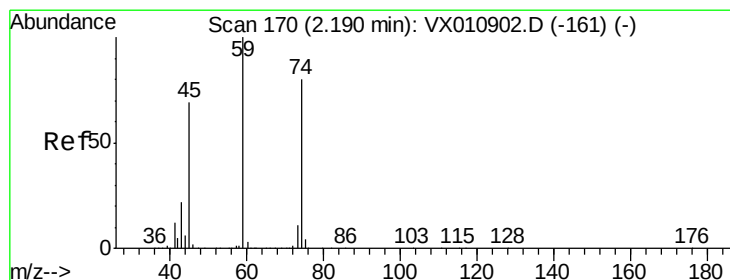
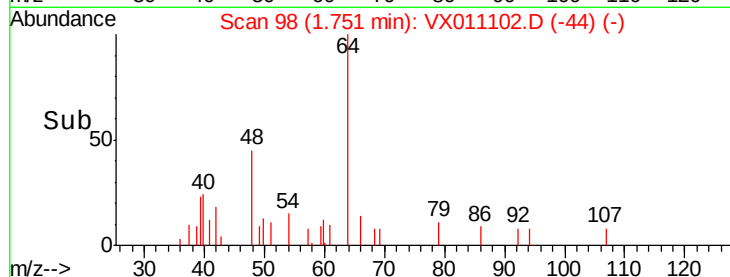
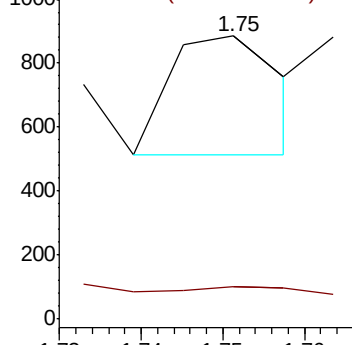
64 100

66 3.5 27.0 40.6#



Abundance Ion 63.90 (63.60 to 64.60): VX0

Ion 65.90 (65.60 to 66.60): VX0



#8

Diethyl Ether

Concen: 0.660 ug/l

RT: 2.19 min Scan# 170

Delta R.T. -0.00 min

Lab File: VX011102.D

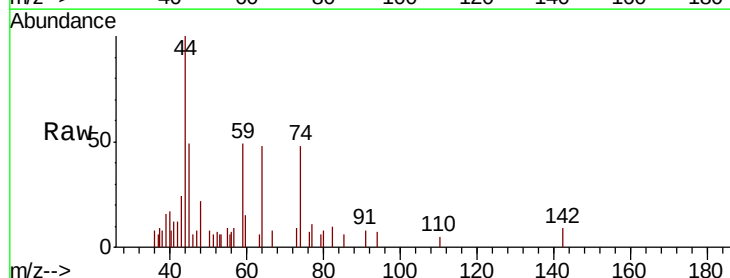
Acq: 26 Jul 2019 19:43

Tgt Ion: 74 Resp: 727

Ion Ratio Lower Upper

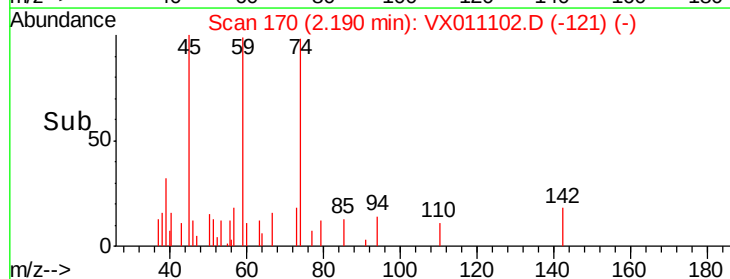
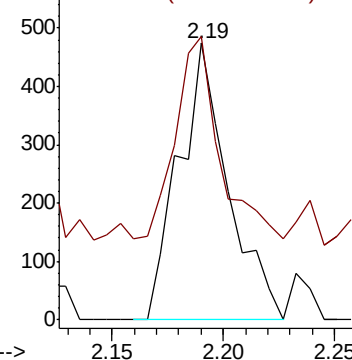
74 100

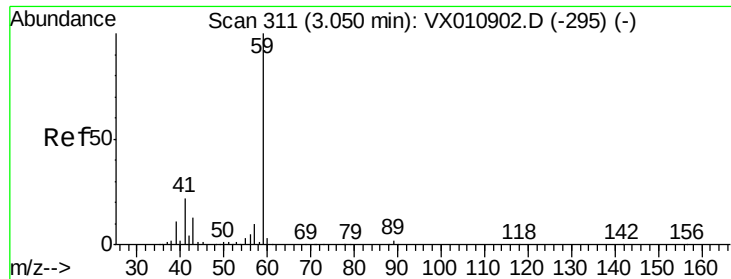
45 83.1 45.5 136.5



Abundance Ion 74.00 (73.70 to 74.70): VX0

Ion 45.00 (44.70 to 45.70): VX0



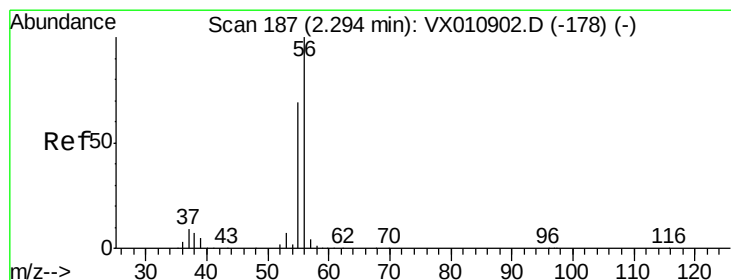
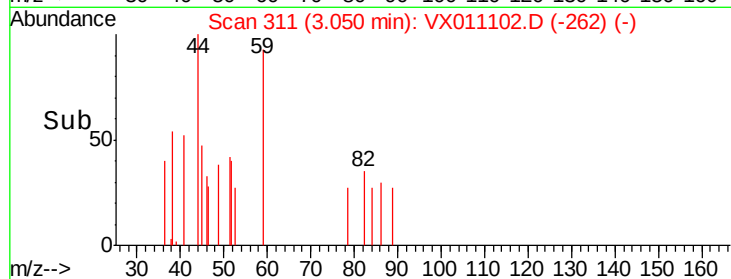
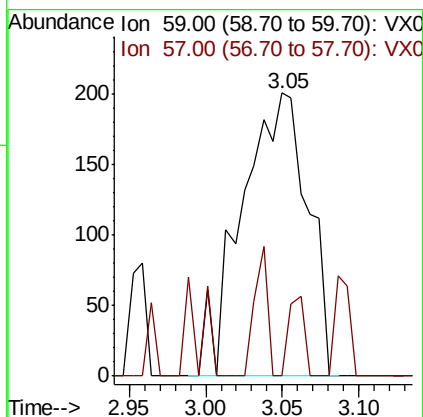
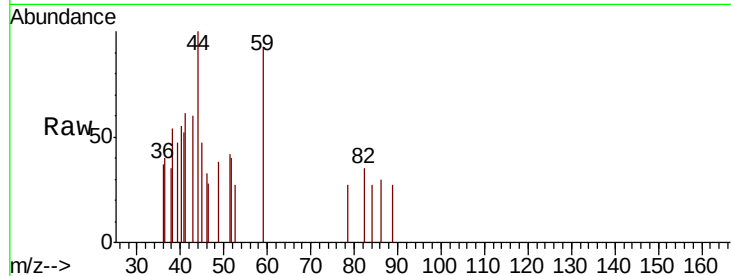


#11

Tert butyl alcohol
Concen: 1.205 ug/l
RT: 3.05 min Scan# 311
Delta R.T. -0.00 min
Lab File: VX011102.D
Acq: 26 Jul 2019 19:43

Instrument :
MSVOA_X
ClientSampleId :
PB121723ZHE#08

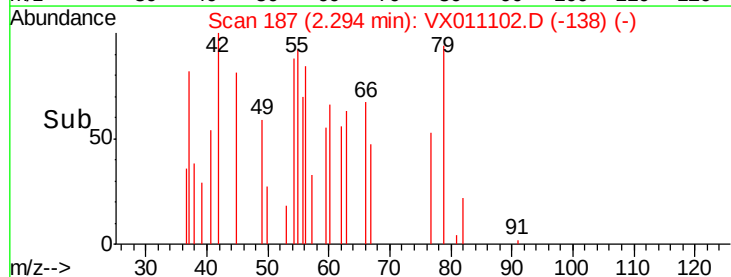
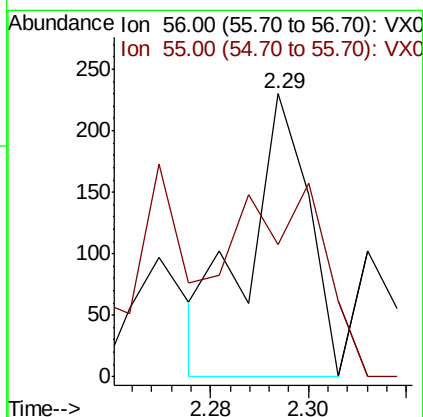
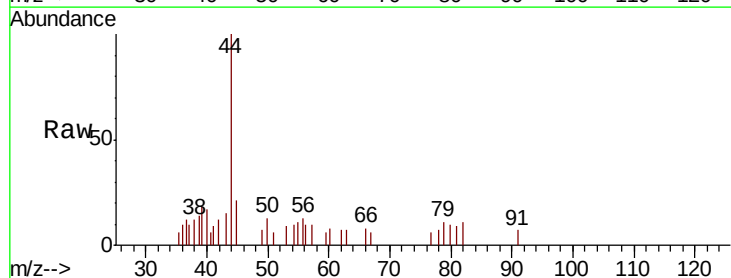
Tot Ion: 59 Resp: 601
Ion Ratio Lower Upper
59 100
57 8.8 7.9 11.9

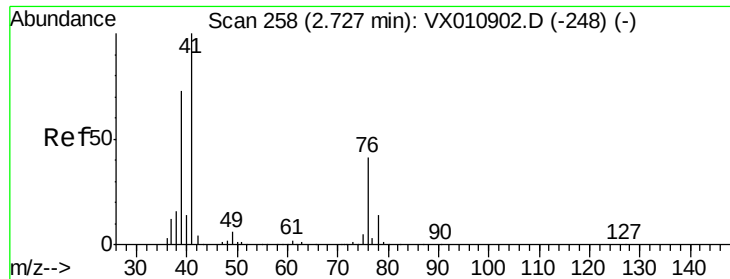


#13

Acrolein
Concen: 0.687 ug/l
RT: 2.29 min Scan# 187
Delta R.T. -0.00 min
Lab File: VX011102.D
Acq: 26 Jul 2019 19:43

Tgt Ion: 56 Resp: 198
Ion Ratio Lower Upper
56 100
55 87.4 55.9 83.9#

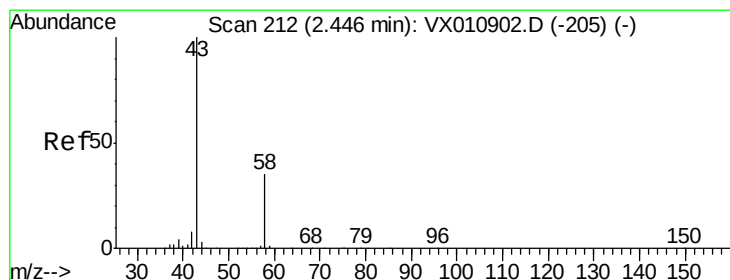
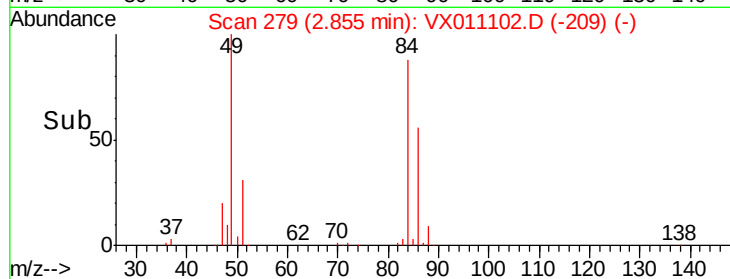
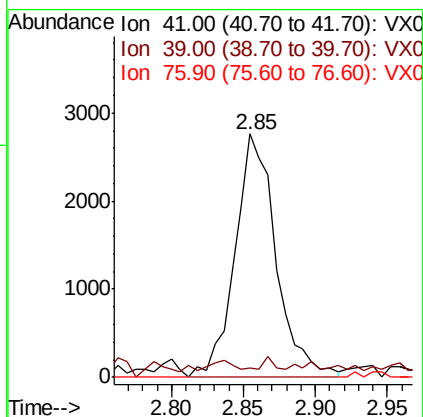
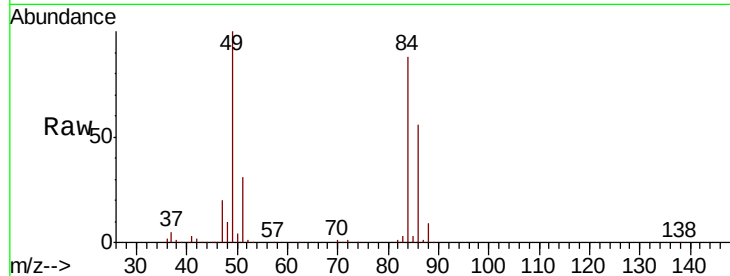




#14
Allvl chloride
Concen: 2.099 ug/l
RT: 2.85 min Scan# 279
Delta R.T. 0.13 min
Lab File: VX011102.D
Acq: 26 Jul 2019 19:43

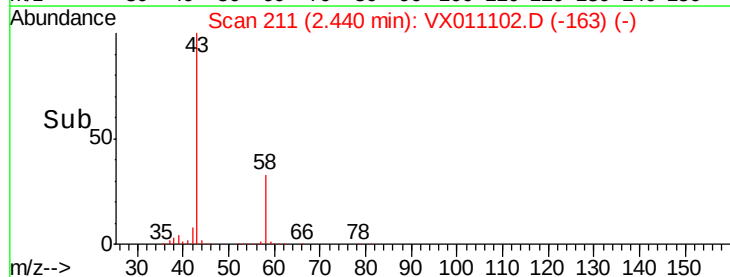
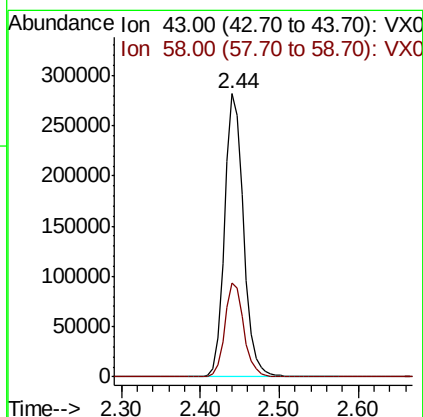
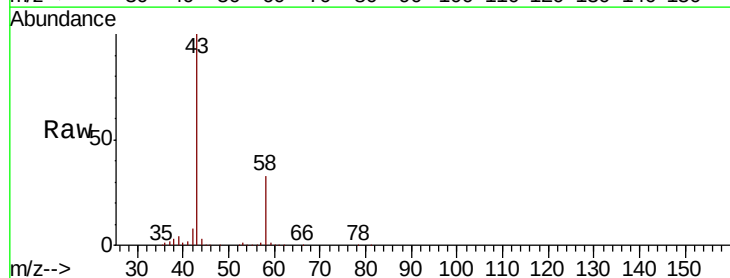
Instrument :
MSVOA_X
ClientSampleId :
PB121723ZHE#08

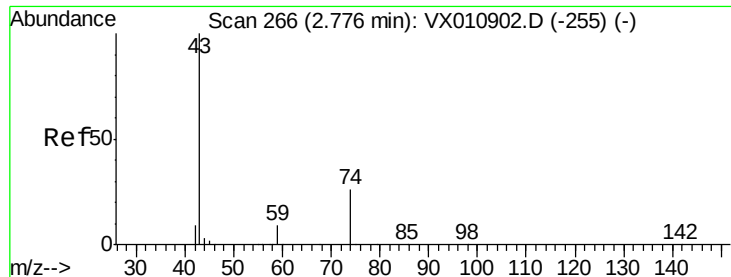
Tot Ion: 41 Resp: 5469
Ion Ratio Lower Upper
41 100
39 0.0 53.6 80.4#
76 0.0 29.7 44.5#



#16
Acetone
Concen: 484.504 ug/l
RT: 2.44 min Scan# 211
Delta R.T. -0.01 min
Lab File: VX011102.D
Acq: 26 Jul 2019 19:43

Tgt Ion: 43 Resp: 468818
Ion Ratio Lower Upper
43 100
58 33.4 27.7 41.5

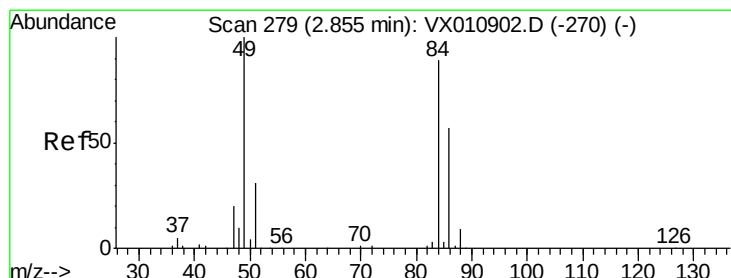
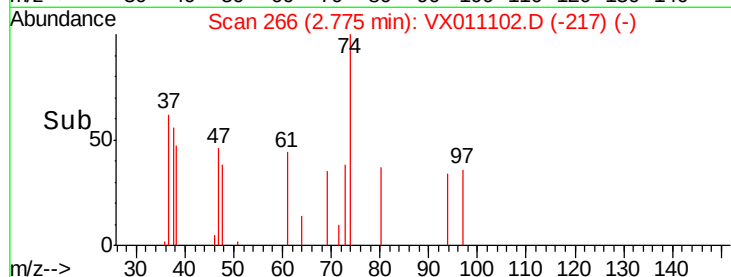
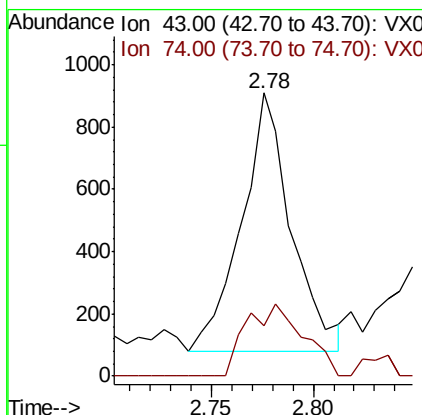
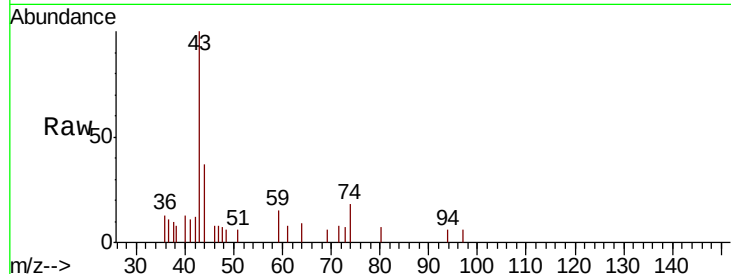




#18
Methyl Acetate
Concen: 0.635 ug/l
RT: 2.78 min Scan# 266
Delta R.T. -0.00 min
Lab File: VX011102.D
Acq: 26 Jul 2019 19:43

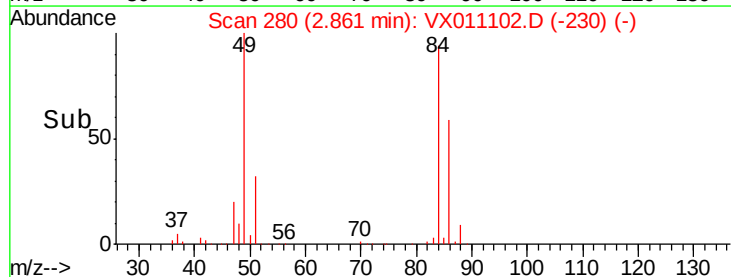
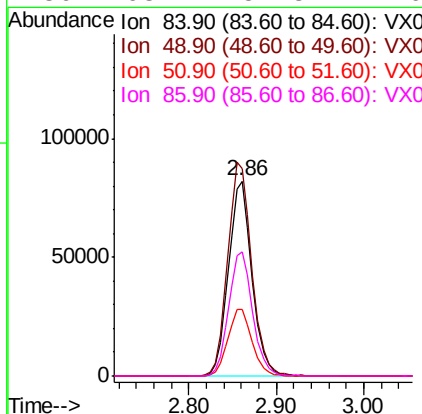
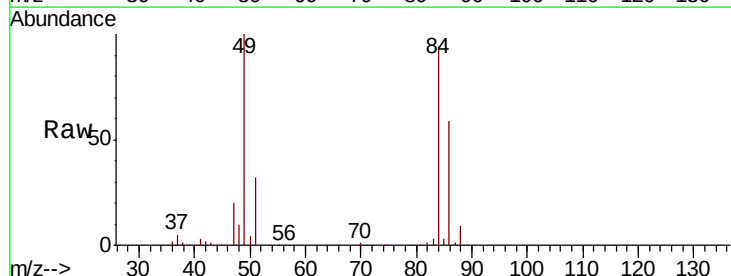
Instrument :
MSVOA_X
ClientSampleId :
PB121723ZHE#08

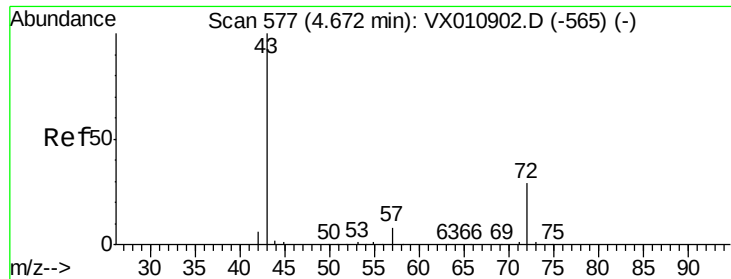
Tot Ion: 43 Resp: 1400
Ion Ratio Lower Upper
43 100
74 32.1 21.5 32.3



#20
Methylene Chloride
Concen: 74.578 ug/l
RT: 2.86 min Scan# 280
Delta R.T. 0.01 min
Lab File: VX011102.D
Acq: 26 Jul 2019 19:43

Tgt Ion: 84 Resp: 152930
Ion Ratio Lower Upper
84 100
49 106.6 89.9 134.9
51 34.1 27.8 41.6
86 63.4 51.8 77.6





#25

2-Butanone

Concen: 1.354 ug/l

RT: 4.68 min Scan# 578

Delta R.T. 0.01 min

Lab File: VX011102.D

Acq: 26 Jul 2019 19:43

Instrument :

MSVOA_X

ClientSampleId :

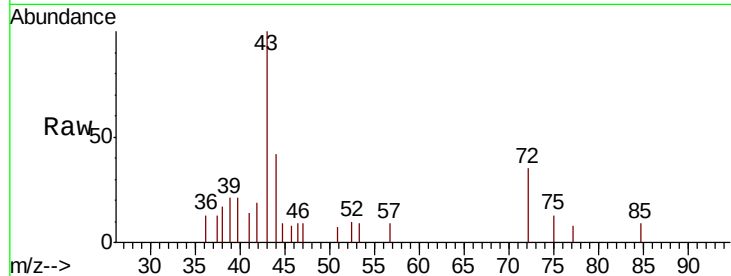
PB121723ZHE#08

Tot Ion: 43 Resp: 1881

Ion Ratio Lower Upper

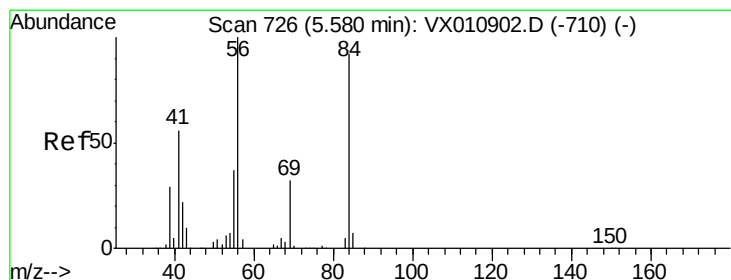
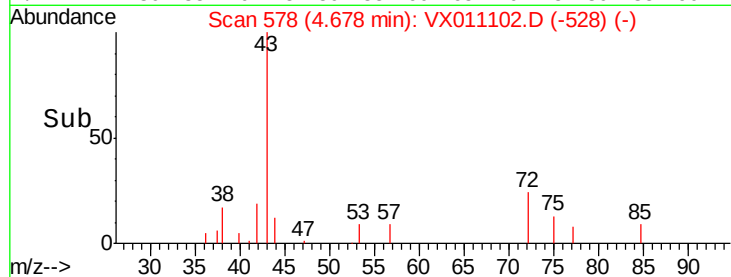
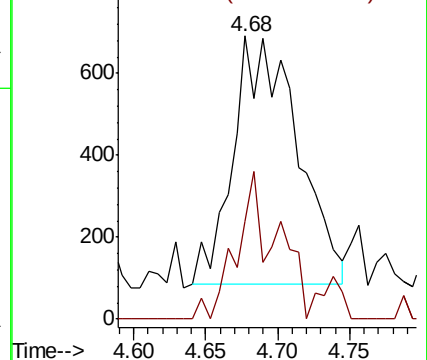
43 100

72 39.4 23.0 34.6#



Abundance Ion 43.00 (42.70 to 43.70): VX0

Ion 72.00 (71.70 to 72.70): VX0



#31

Cyclohexane

Concen: 1.429 ug/l

RT: 5.66 min Scan# 739

Delta R.T. 0.08 min

Lab File: VX011102.D

Acq: 26 Jul 2019 19:43

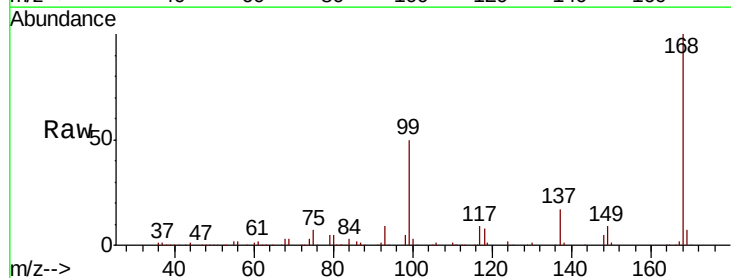
Tgt Ion: 56 Resp: 4156

Ion Ratio Lower Upper

56 100

69 167.7 25.8 38.8#

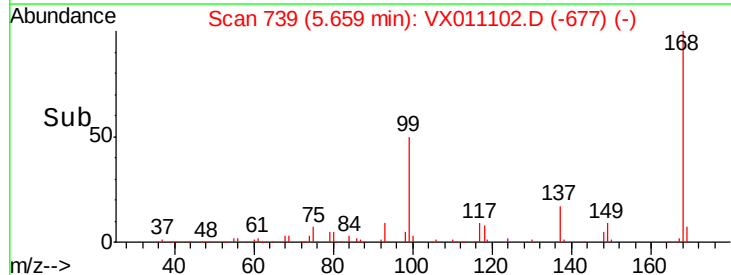
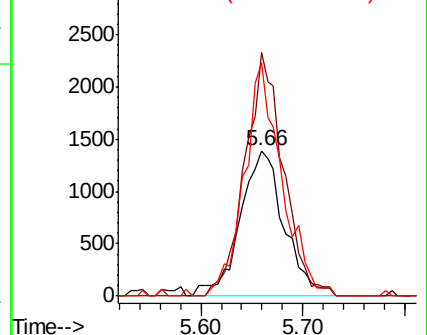
84 161.0 73.8 110.6#

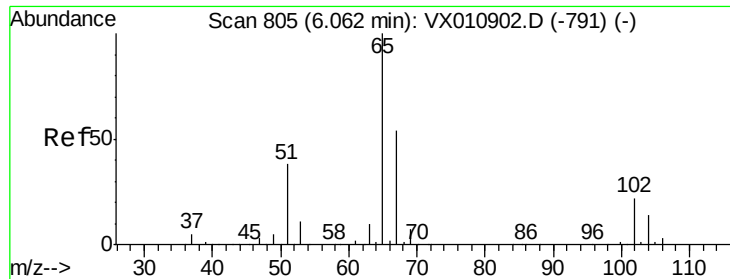


Abundance Ion 56.00 (55.70 to 56.70): VX0

Ion 69.00 (68.70 to 69.70): VX0

Ion 84.00 (83.70 to 84.70): VX0

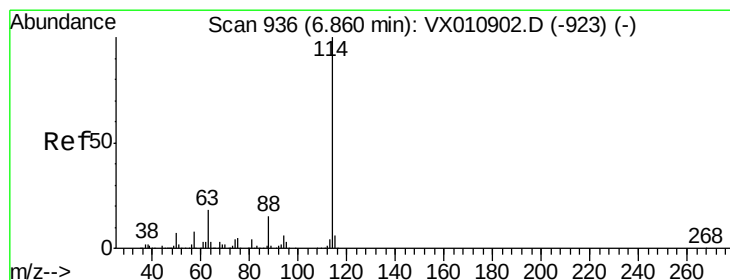
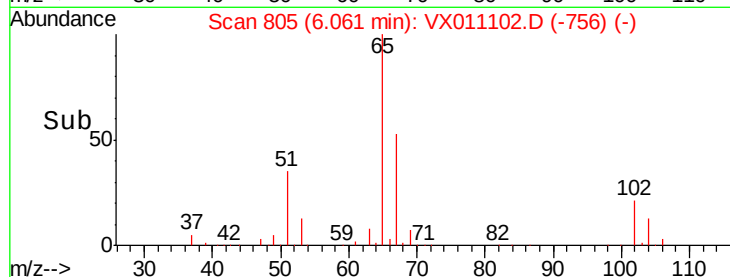
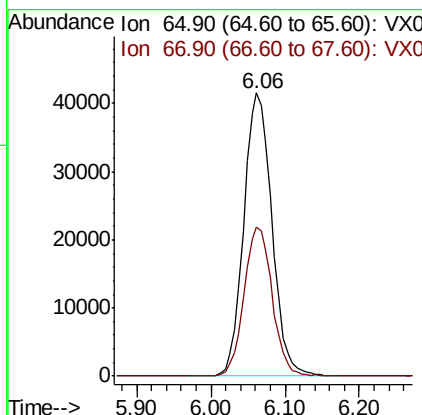
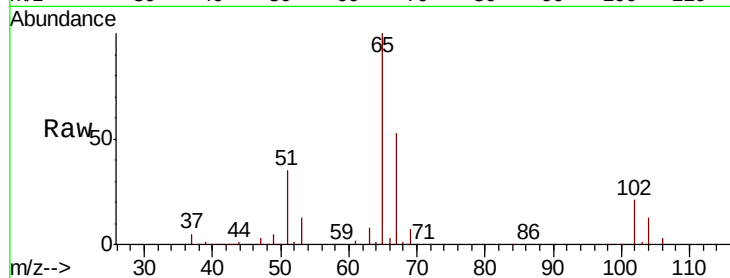




#33
 1,2-Dichloroethane-d4
 Concen: 51.413 ug/l
 RT: 6.06 min Scan# 805
 Delta R.T. -0.00 min
 Lab File: VX011102.D
 Acq: 26 Jul 2019 19:43

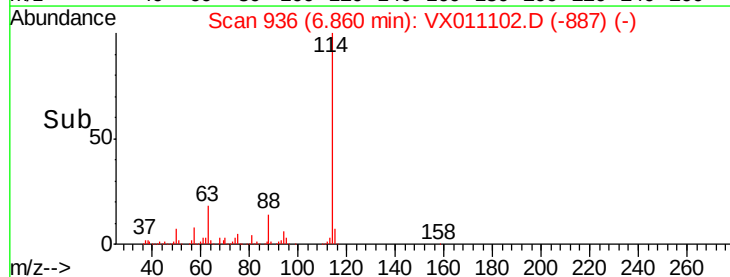
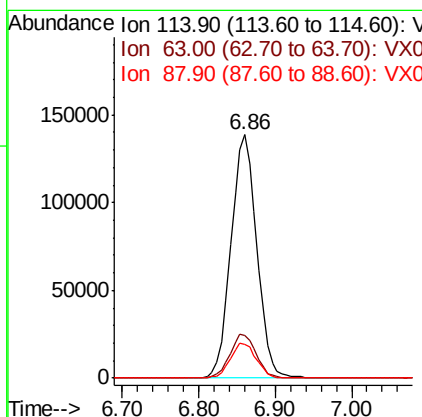
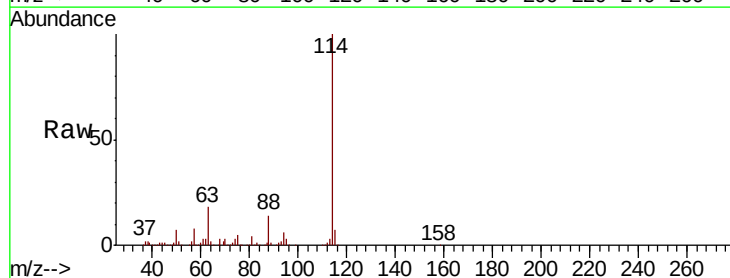
Instrument :
 MSVOA_X
 ClientSampleId :
 PB121723ZHE#08

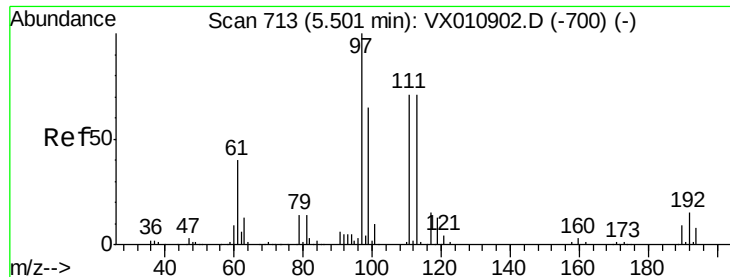
Tot Ion: 65 Resp: 110148
 Ion Ratio Lower Upper
 65 100
 67 52.9 0.0 107.8



#34
 1,4-Difluorobenzene
 Concen: 50.000 ug/l
 RT: 6.86 min Scan# 936
 Delta R.T. -0.00 min
 Lab File: VX011102.D
 Acq: 26 Jul 2019 19:43

Tgt Ion: 114 Resp: 322850
 Ion Ratio Lower Upper
 114 100
 63 17.7 0.0 35.6
 88 13.8 0.0 29.8





#35

Dibromofluoromethane

Concen: 49.483 ug/l

RT: 5.50 min Scan# 713

Delta R.T. -0.00 min

Lab File: VX011102.D

Acq: 26 Jul 2019 19:43

Instrument :

MSVOA_X

ClientSampleId :

PB121723ZHE#08

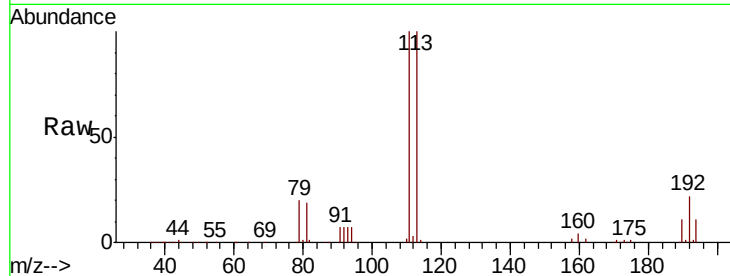
Tot Ion:113 Resp: 101401

Ion Ratio Lower Upper

113 100

111 102.1 82.3 123.5

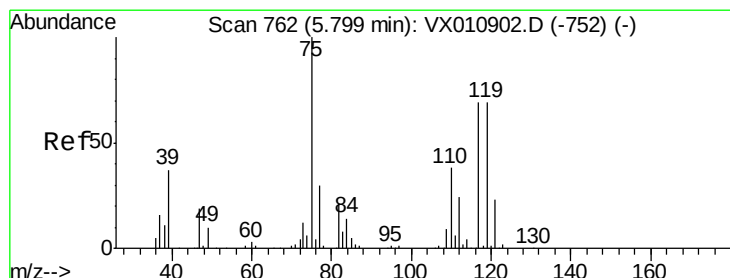
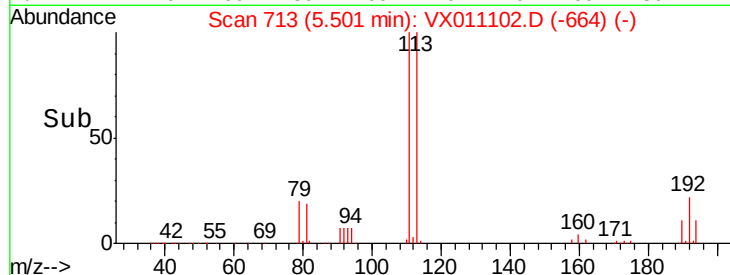
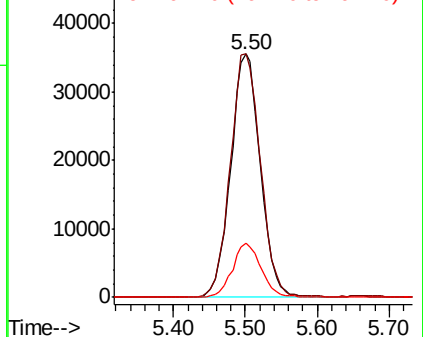
192 21.6 17.4 26.2



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: 4.956 ug/l

RT: 5.66 min Scan# 739

Delta R.T. -0.14 min

Lab File: VX011102.D

Acq: 26 Jul 2019 19:43

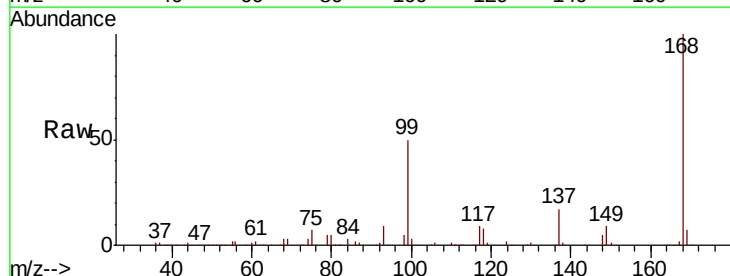
Tgt Ion: 75 Resp: 13142

Ion Ratio Lower Upper

75 100

110 11.7 19.9 59.7#

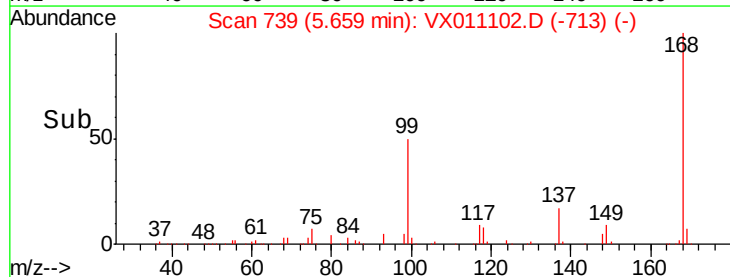
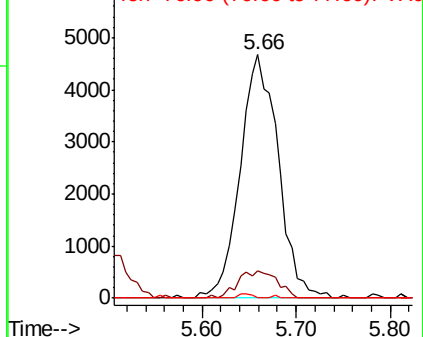
77 0.6 25.0 37.4#

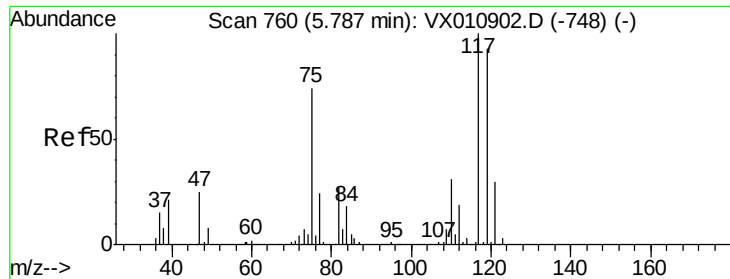


Abundance Ion 74.90 (74.60 to 75.60): VX0

Ion 109.90 (109.60 to 110.60): V

Ion 76.90 (76.60 to 77.60): VX0





#38

Carbon Tetrachloride

Concen: 6.714 ug/l

RT: 5.66 min Scan# 739

Delta R.T. -0.13 min

Lab File: VX011102.D

Acq: 26 Jul 2019 19:43

Instrument :

MSVOA_X

ClientSampleId :

PB121723ZHE#08

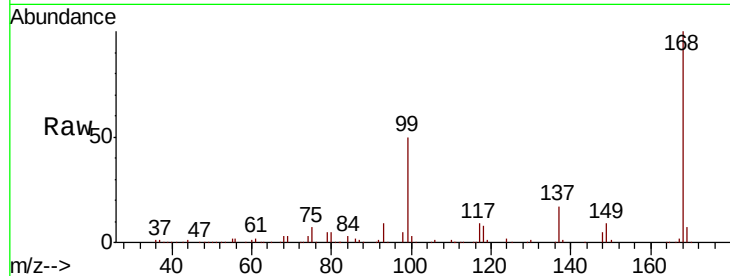
Tot Ion:117 Resp: 18553

Ion Ratio Lower Upper

117 100

119 5.6 74.2 111.2#

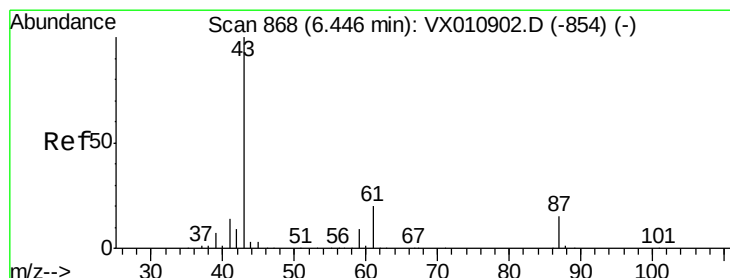
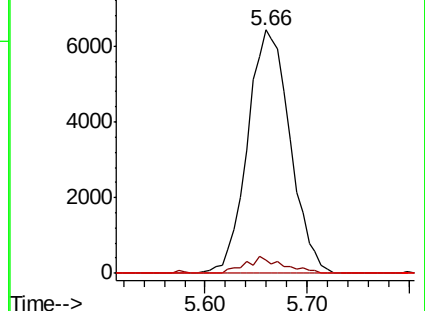
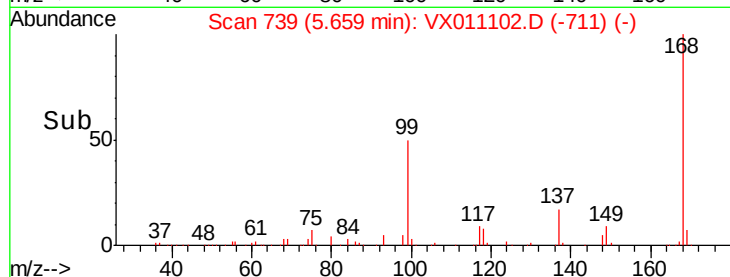
121 0.0 24.2 36.2#



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



#43

Isopropyl Acetate

Concen: 2.759 ug/l

RT: 6.45 min Scan# 868

Delta R.T. -0.00 min

Lab File: VX011102.D

Acq: 26 Jul 2019 19:43

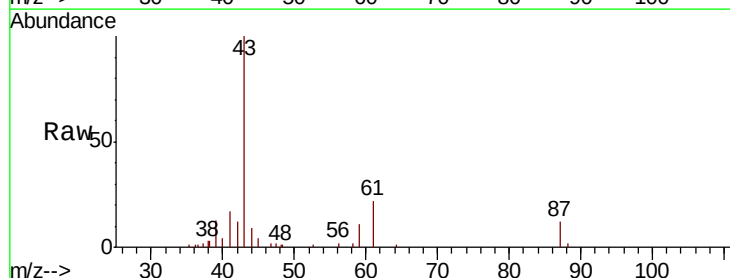
Tgt Ion: 43 Resp: 12321

Ion Ratio Lower Upper

43 100

61 22.0 17.1 25.7

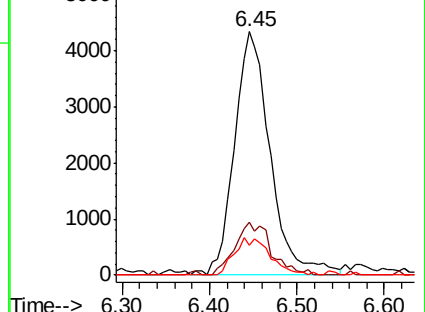
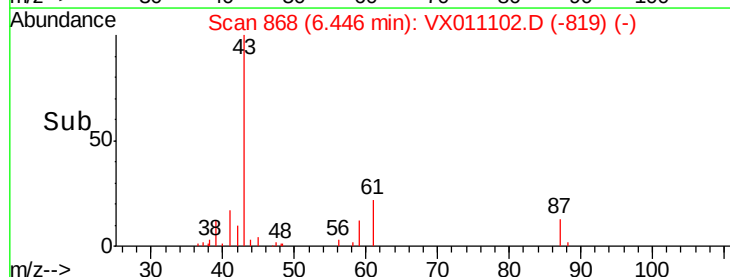
87 15.4 12.0 18.0

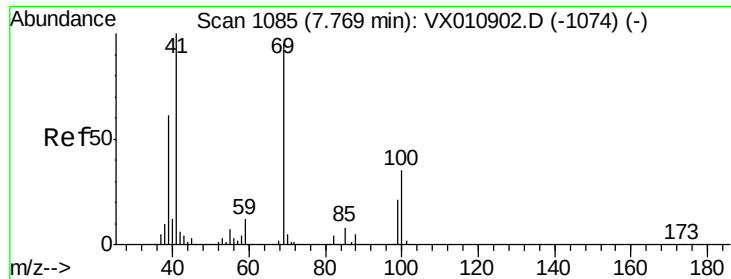


Abundance Ion 43.00 (42.70 to 43.70): VX0

Ion 61.00 (60.70 to 61.70): VX0

Ion 87.00 (86.70 to 87.70): VX0





#48

Methvl methacrylate

Concen: 2.504 ug/l

RT: 7.67 min Scan# 1069

Delta R.T. -0.10 min

Lab File: VX011102.D

Acq: 26 Jul 2019 19:43

Instrument :

MSVOA_X

ClientSampleId :

PB121723ZHE#08

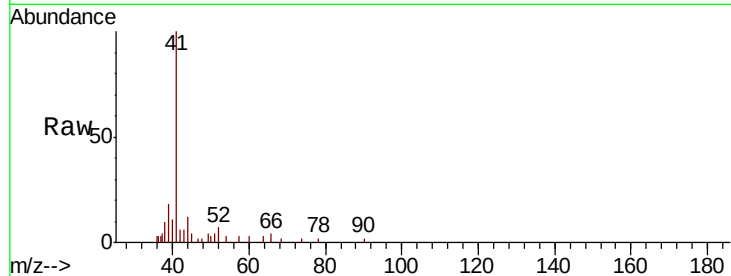
Tot Ion: 41 Resp: 5447

Ion Ratio Lower Upper

41 100

69 0.8 74.4 111.6#

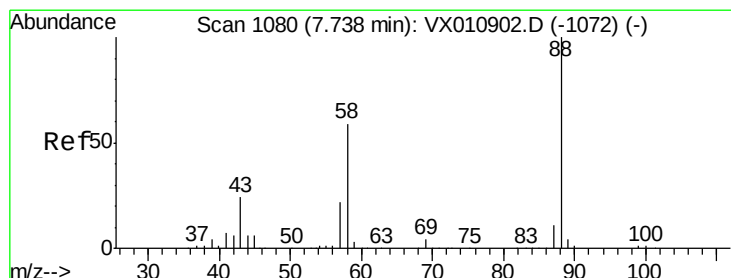
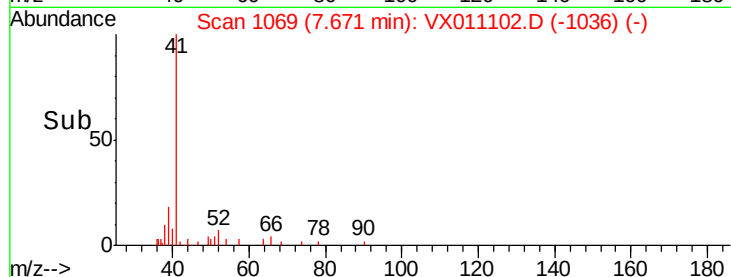
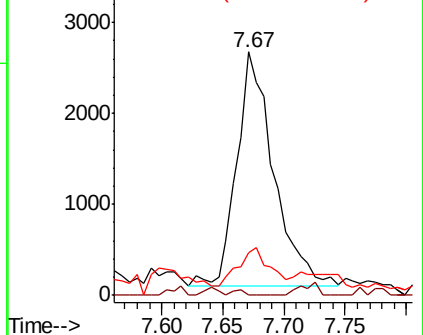
39 0.0 48.9 73.3#



Abundance Ion 41.00 (40.70 to 41.70): VX0

Ion 69.00 (68.70 to 69.70): VX0

Ion 39.00 (38.70 to 39.70): VX0



#49

1,4-Dioxane

Concen: 2.613 ug/l

RT: 7.87 min Scan# 1101

Delta R.T. 0.13 min

Lab File: VX011102.D

Acq: 26 Jul 2019 19:43

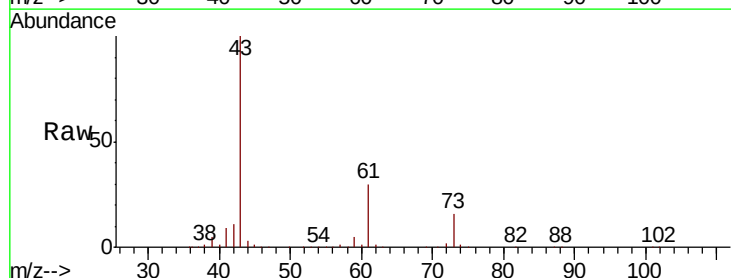
Tgt Ion: 88 Resp: 159

Ion Ratio Lower Upper

88 100

43 515869.2 22.9 34.3#

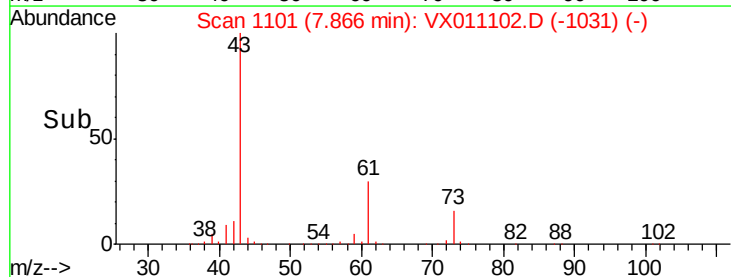
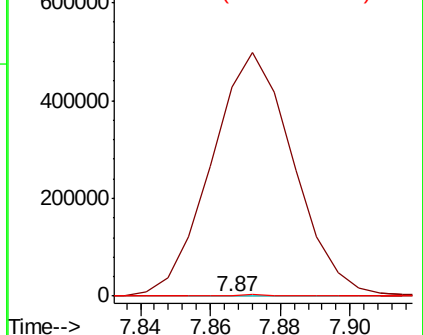
58 2478.6 49.8 74.8#

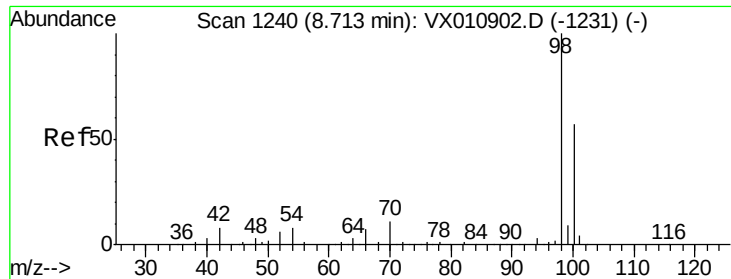


Abundance Ion 88.00 (87.70 to 88.70): VX0

Ion 43.00 (42.70 to 43.70): VX0

Ion 58.00 (57.70 to 58.70): VX0

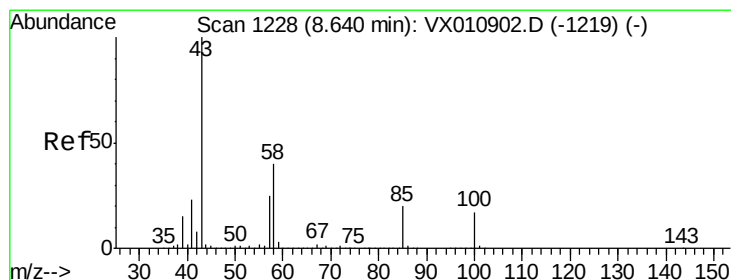
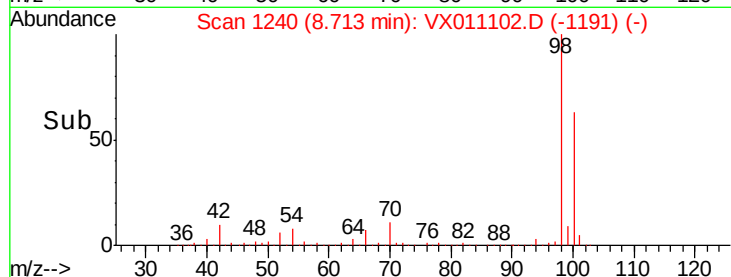
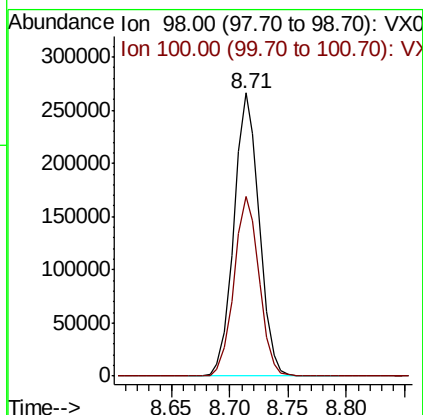
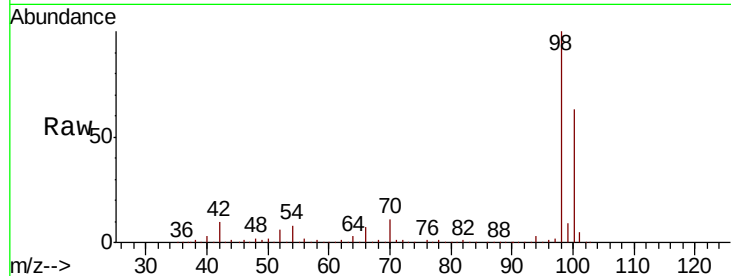




#50
Toluene-d8
Concen: 52.366 ug/l
RT: 8.71 min Scan# 1240
Delta R.T. -0.00 min
Lab File: VX011102.D
Acq: 26 Jul 2019 19:43

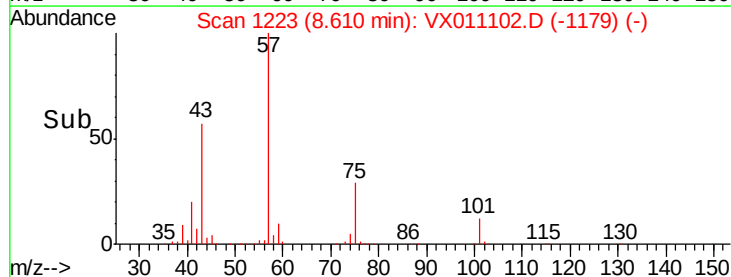
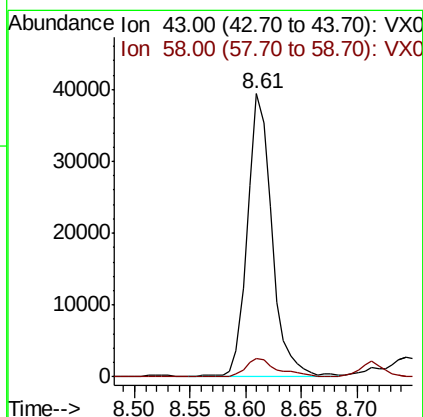
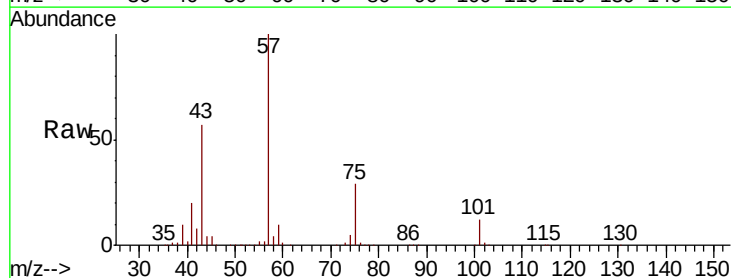
Instrument :
MSVOA_X
ClientSampleId :
PB121723ZHE#08

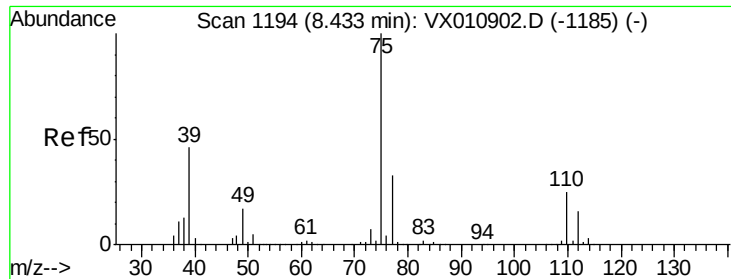
Tot Ion: 98 Resp: 402471
Ion Ratio Lower Upper
98 100
100 63.1 50.6 75.8



#51
4-Methyl-2-Pentanone
Concen: 20.729 ug/l
RT: 8.61 min Scan# 1223
Delta R.T. -0.03 min
Lab File: VX011102.D
Acq: 26 Jul 2019 19:43

Tgt Ion: 43 Resp: 59999
Ion Ratio Lower Upper
43 100
58 8.5 32.2 48.4#



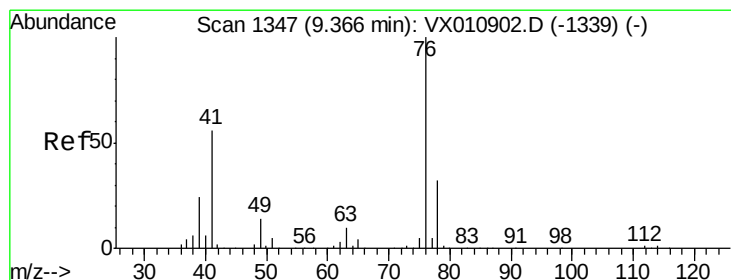
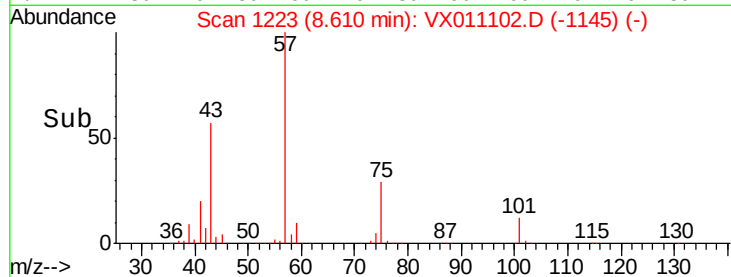
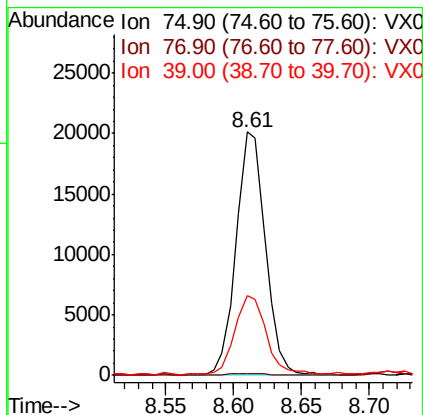
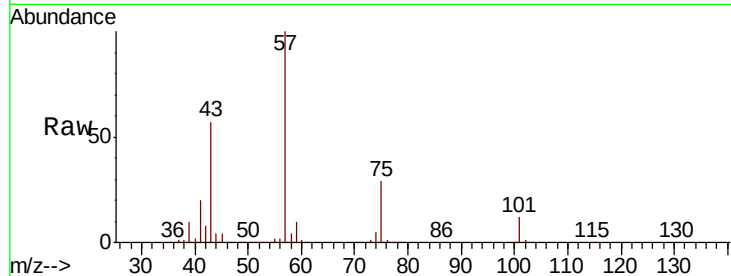


#54

cis-1,3-Dichloropropene
 Concen: 9.626 ug/l
 RT: 8.61 min Scan# 1223
 Delta R.T. 0.18 min
 Lab File: VX011102.D
 Acq: 26 Jul 2019 19:43

Instrument :
 MSVOA_X
 ClientSampleId :
 PB121723ZHE#08

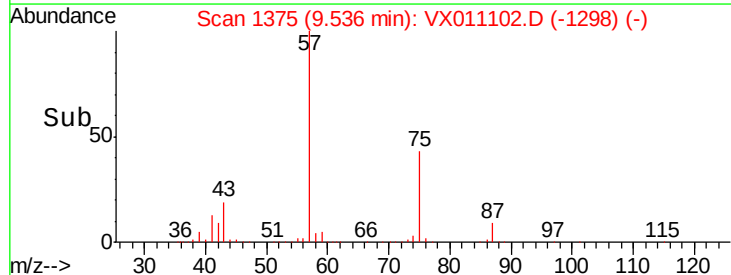
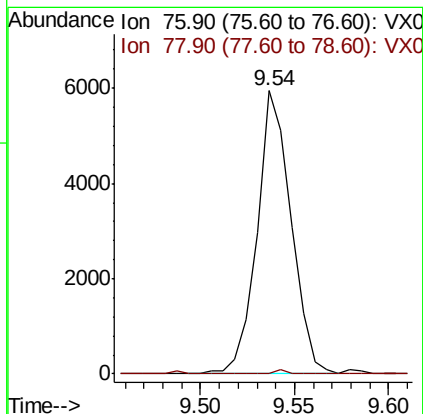
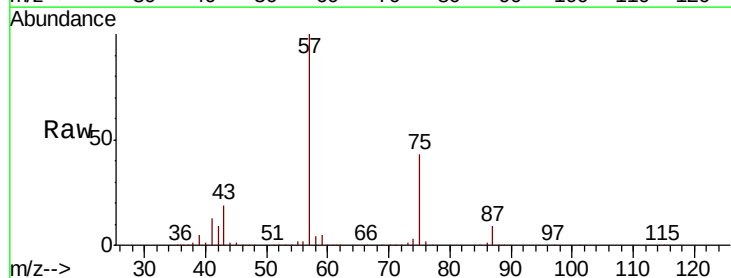
Tot Ion: 75 Resp: 30289
 Ion Ratio Lower Upper
 75 100
 77 0.6 26.1 39.1#
 39 32.2 36.6 54.8#

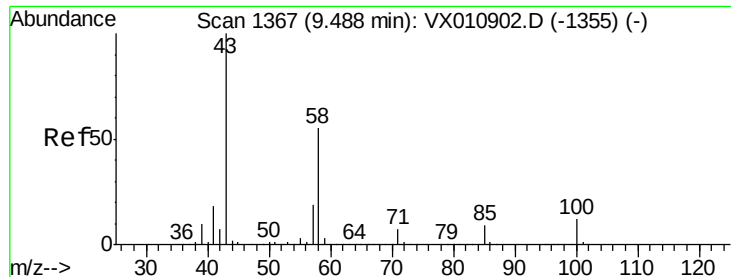


#57

1,3-Dichloropropane
 Concen: 2.132 ug/l
 RT: 9.54 min Scan# 1375
 Delta R.T. 0.17 min
 Lab File: VX011102.D
 Acq: 26 Jul 2019 19:43

Tgt Ion: 76 Resp: 7432
 Ion Ratio Lower Upper
 76 100
 78 0.4 25.6 38.4#

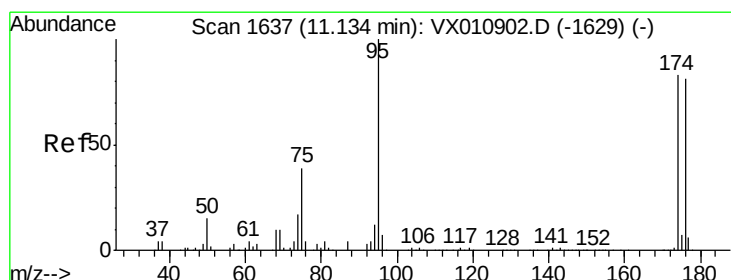
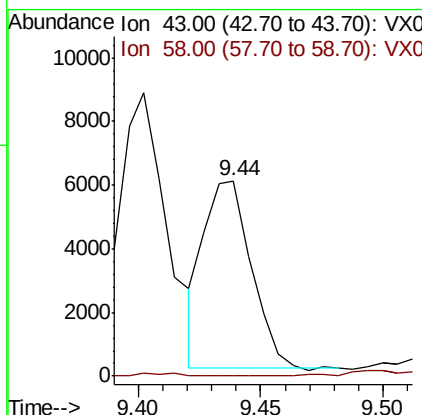
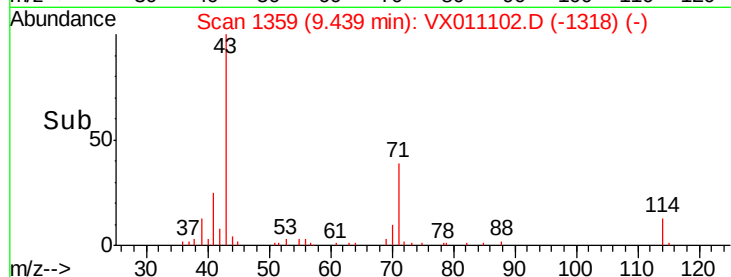
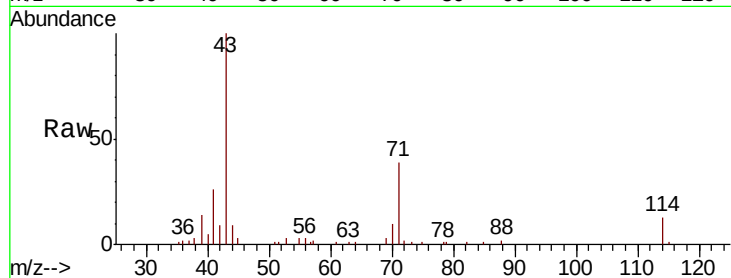




#59
2-Hexanone
Concen: 3.544 ug/l
RT: 9.44 min Scan# 1359
Delta R.T. -0.05 min
Lab File: VX011102.D
Acq: 26 Jul 2019 19:43

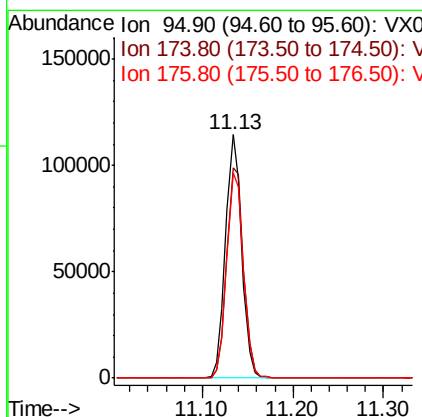
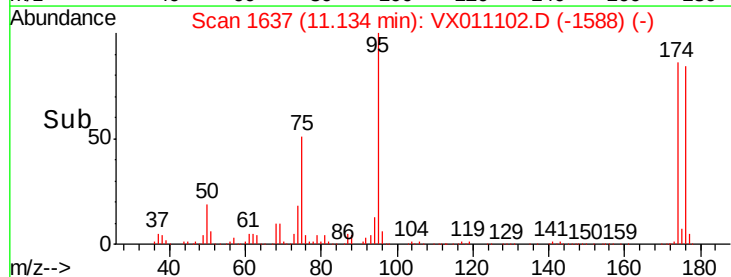
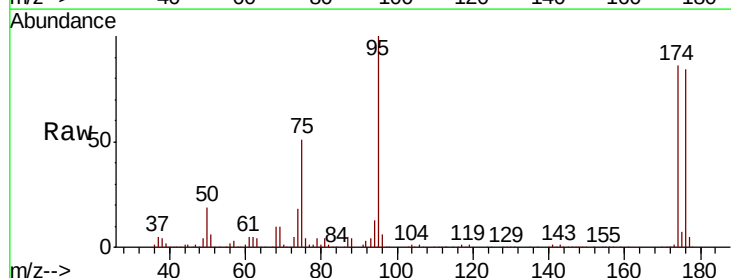
Instrument :
MSVOA_X
ClientSampleId :
PB121723ZHE#08

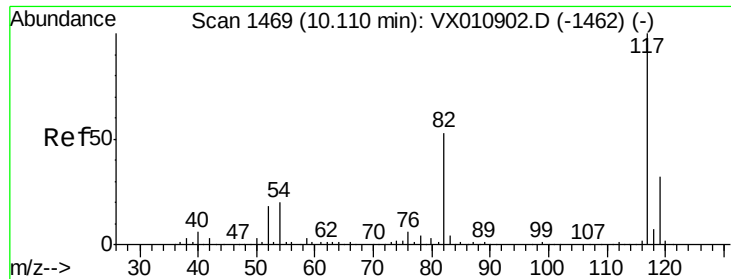
Tot Ion: 43 Resp: 7956
Ion Ratio Lower Upper
43 100
58 0.0 28.0 83.9#



#62
4-Bromofluorobenzene
Concen: 50.344 ug/l
RT: 11.13 min Scan# 1637
Delta R.T. -0.00 min
Lab File: VX011102.D
Acq: 26 Jul 2019 19:43

Tgt Ion: 95 Resp: 142226
Ion Ratio Lower Upper
95 100
174 90.3 0.0 180.6
176 87.3 0.0 173.8

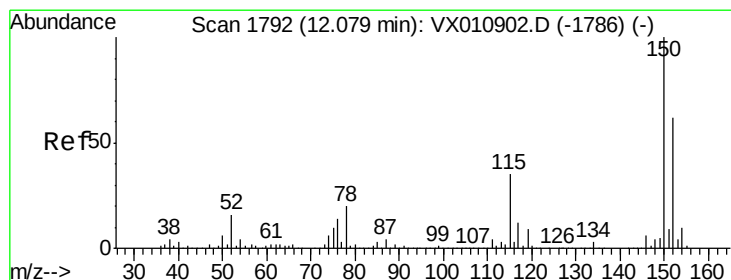
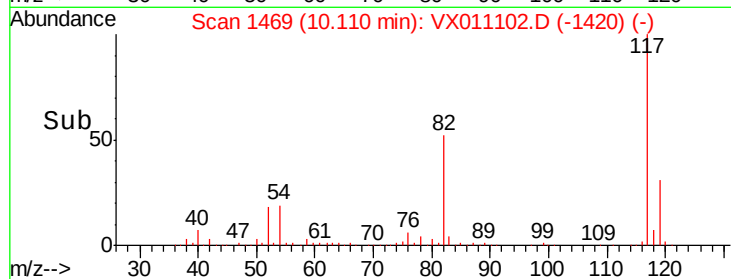
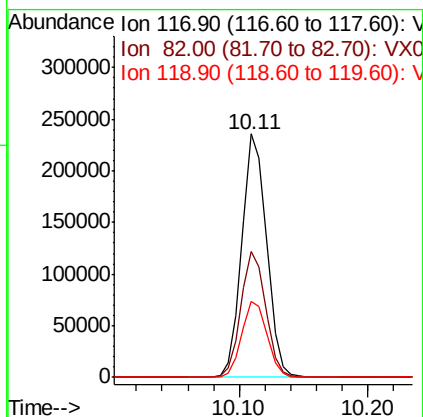
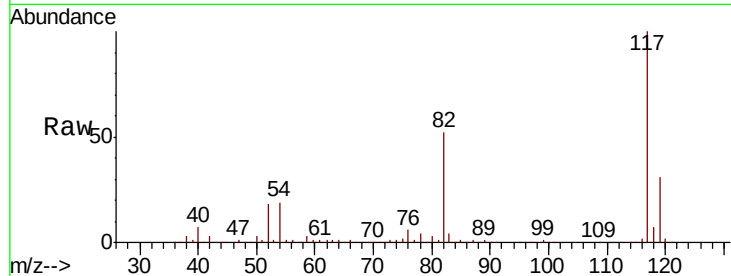




#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 10.11 min Scan# 1469
Delta R.T. -0.00 min
Lab File: VX011102.D
Acq: 26 Jul 2019 19:43

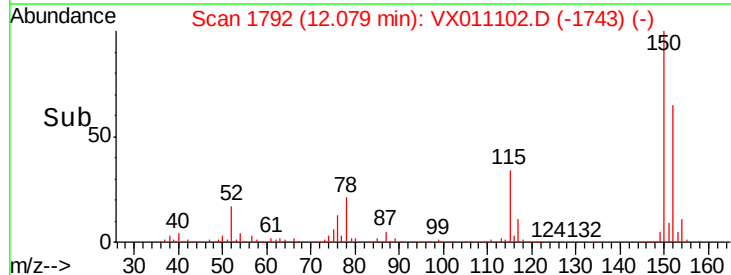
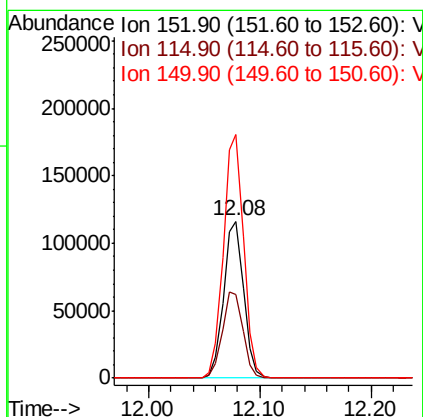
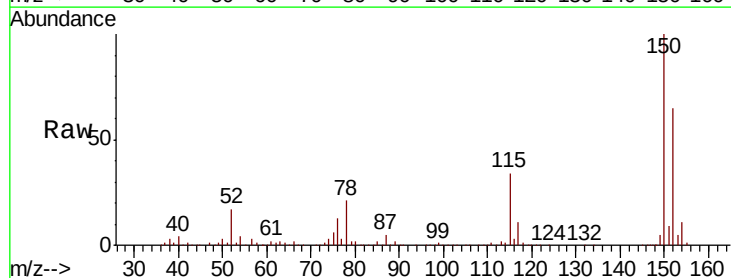
Instrument :
MSVOA_X
ClientSampleId :
PB121723ZHE#08

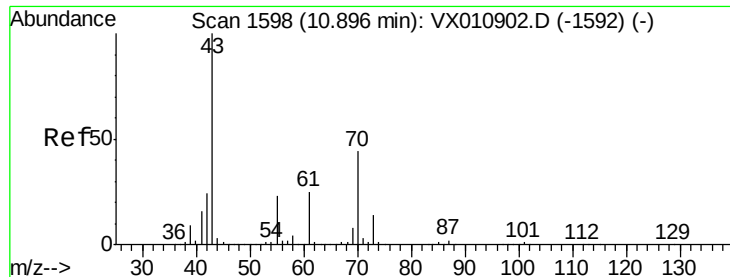
Tot Ion	Ratio	Lower	Upper
117	100		
82	51.6	42.6	63.8
119	31.4	25.9	38.9



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 12.08 min Scan# 1792
Delta R.T. -0.00 min
Lab File: VX011102.D
Acq: 26 Jul 2019 19:43

Tgt Ion	Ratio	Lower	Upper
152	100		
115	56.4	39.7	119.1
150	156.9	0.0	345.6





#74

N-amvl acetate

Concen: 2.630 ug/l

RT: 10.69 min Scan# 1564

Delta R.T. -0.21 min

Lab File: VX011102.D

Acq: 26 Jul 2019 19:43

Instrument :

MSVOA_X

ClientSampleId :

PB121723ZHE#08

Tot Ion: 43 Resp: 9804

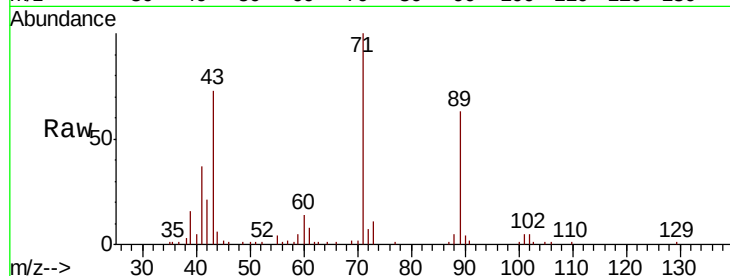
Ion Ratio Lower Upper

43 100

70 2.6 34.7 52.1#

55 7.3 19.1 28.7#

61 12.0 19.9 29.9#

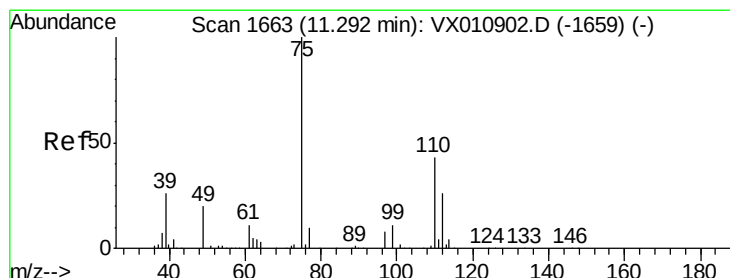
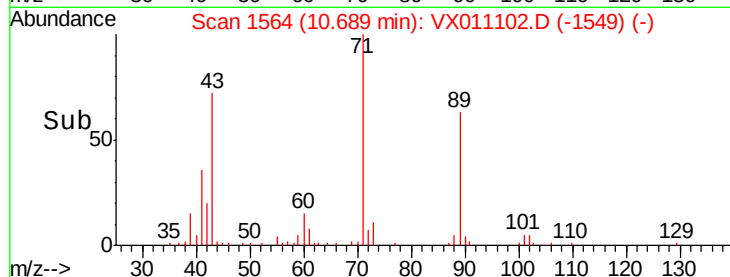
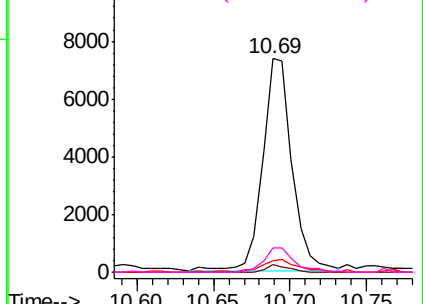


Abundance Ion 43.00 (42.70 to 43.70): VX0

Ion 70.00 (69.70 to 70.70): VX0

Ion 55.00 (54.70 to 55.70): VX0

Ion 61.00 (60.70 to 61.70): VX0



#76

1,2,3-Trichloropropane

Concen: 26.918 ug/l

RT: 11.13 min Scan# 1637

Delta R.T. -0.16 min

Lab File: VX011102.D

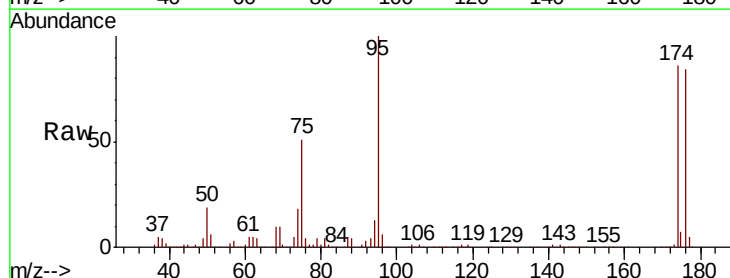
Acq: 26 Jul 2019 19:43

Tgt Ion: 75 Resp: 70135

Ion Ratio Lower Upper

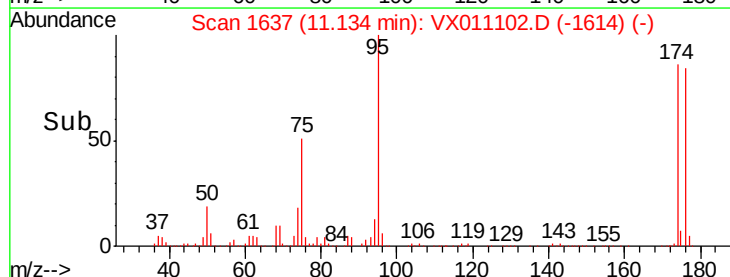
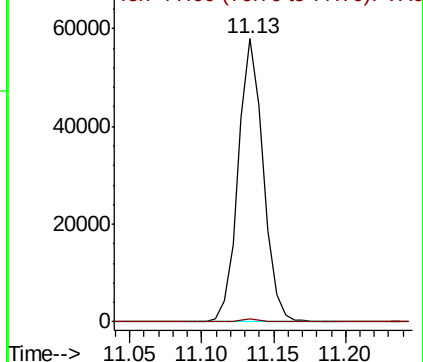
75 100

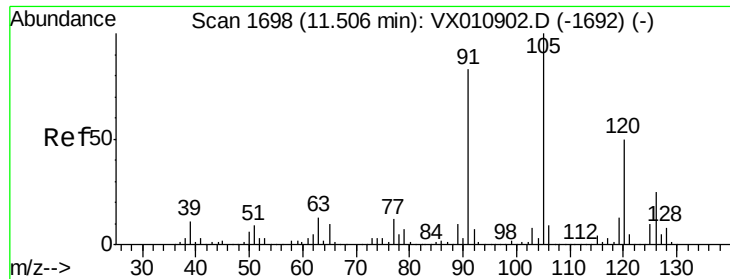
77 1.1 21.3 64.0#



Abundance Ion 74.90 (74.60 to 75.60): VX0

Ion 77.00 (76.70 to 77.70): VX0

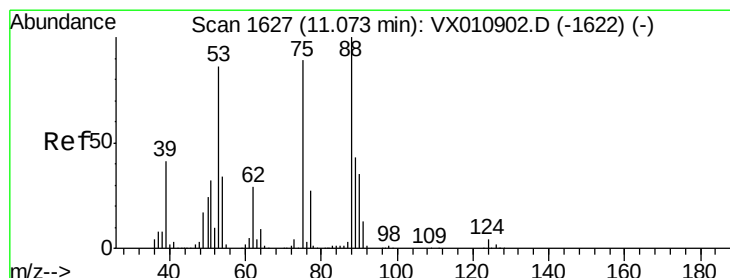
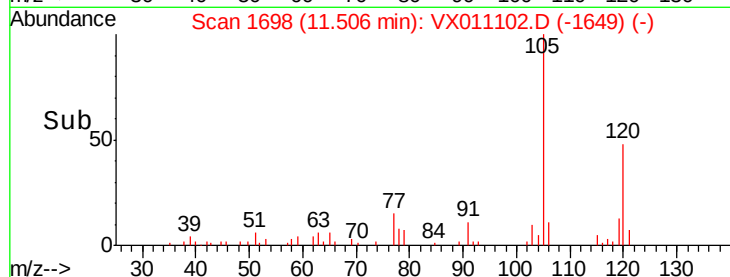
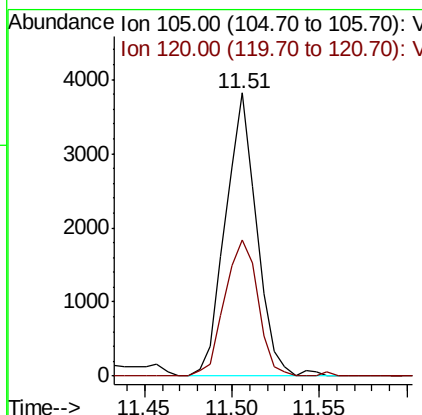
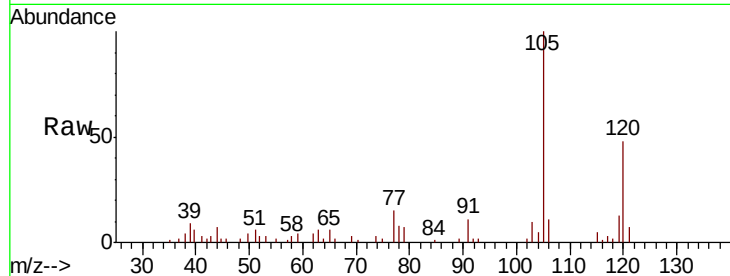




#80
 1,3,5-Trimethylbenzene
 Concen: 0.583 ug/l
 RT: 11.51 min Scan# 1698
 Delta R.T. -0.00 min
 Lab File: VX011102.D
 Acq: 26 Jul 2019 19:43

Instrument :
 MSVOA_X
 ClientSampleId :
 PB121723ZHE#08

Tot Ion:105 Resp: 4756
 Ion Ratio Lower Upper
 105 100
 120 51.2 24.6 73.8



#81
 trans-1,4-Dichloro-2-butene
 Concen: 66.751 ug/l
 RT: 11.13 min Scan# 1637
 Delta R.T. 0.06 min
 Lab File: VX011102.D
 Acq: 26 Jul 2019 19:43

Tgt Ion: 75 Resp: 70135
 Ion Ratio Lower Upper
 75 100
 53 0.4 76.7 115.1#
 89 0.0 38.5 57.7#

