

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL062419\
 Data File : VL033947.D
 Acq On : 24 Jun 2019 21:56
 Operator : SY/AP
 Sample : K3481-03DL 10X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 TZC-SSDS-AREA-B-1DL

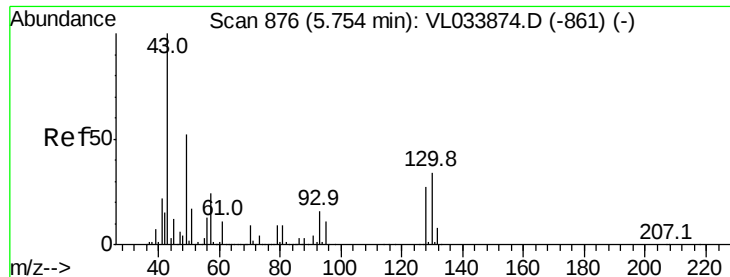
Quant Time: Jun 25 03:40:35 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL060719AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Jun 07 08:53:27 2019
 QLast Update : Fri Jun 07 08:53:27 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.74	49	1007307	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.27	114	2670183	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.21	117	2736670	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.55	95	2178187	9.69	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.90%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.07	85	10694	0.065 ppbv	93
3) Chlorodifluoromethane	3.01	51	21555	0.182 ppbv #	81
4) Chloromethane	3.16	50	2565	0.038 ppbv	92
9) Propene	3.03	41	4932	0.111 ppbv #	14
10) Heptane	8.22	43	21400	0.191 ppbv #	31
13) Ethanol	3.65	45	64038	4.436 ppbv	97
15) Acetone	3.89	43	1081540	7.362 ppbv	93
17) tert-Butyl alcohol	4.34	59	897700	7.817 ppbv	98
19) Isopropyl Alcohol	4.02	45	21404	0.255 ppbv #	94
20) Methylene Chloride	4.39	84	30367	0.530 ppbv	88
21) Allyl Chloride	4.34	41	268274	3.215 ppbv #	56
23) Vinyl Acetate	5.12	43	11416	0.067 ppbv #	26
25) Ethyl Acetate	5.76	43	23308	0.104 ppbv #	84
26) Hexane	5.76	57	32483	0.319 ppbv #	41
34) 2-Butanone	5.32	43	105031	0.697 ppbv	95
36) Benzene	6.98	78	91510	0.449 ppbv	98
39) 1,2-Dichloropropane	7.26	63	623170	7.916 ppbv #	25
40) 1,4-Dioxane	7.96	88	1317	0.041 ppbv #	1
41) Tetrahydrofuran	6.12	42	5914	0.077 ppbv #	35
43) Methyl Methacrylate	8.15	69	88584	1.161 ppbv #	62
53) Toluene	9.92	91	294273	1.304 ppbv	100
58) Ethyl Benzene	12.83	91	170796	0.554 ppbv	100
59) m/p-Xylene	13.09	91	647122	2.306 ppbv	97
60) o-Xylene	13.82	91	338197	1.167 ppbv	97
61) Styrene	13.66	104	4459362	23.787 ppbv	96
62) Isopropylbenzene	14.79	105	144500	0.370 ppbv	98
64) n-propylbenzene	15.69	120	30356	0.304 ppbv	92
71) 2-Chlorotoluene	15.69	91	151813	0.528 ppbv #	45

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.74 min Scan# 872

Delta R.T. -0.01 min

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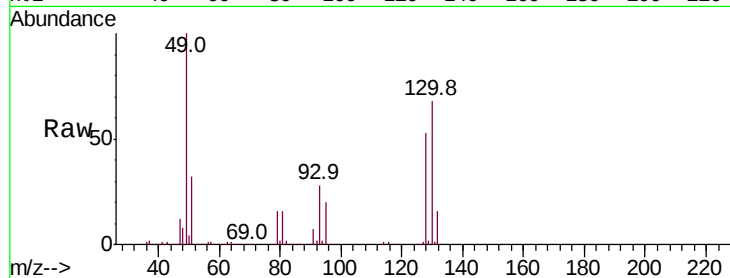
Tot Ion: 49 Resp: 1007307

Ion Ratio Lower Upper

49 100

128 53.6 25.5 76.5

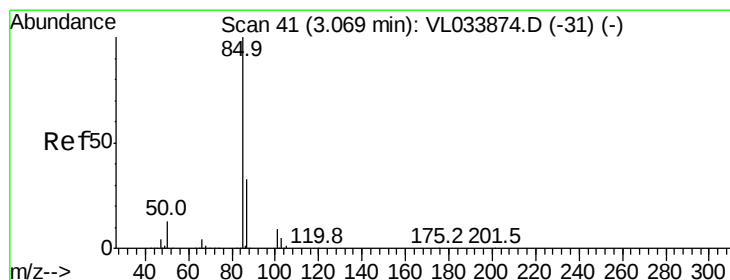
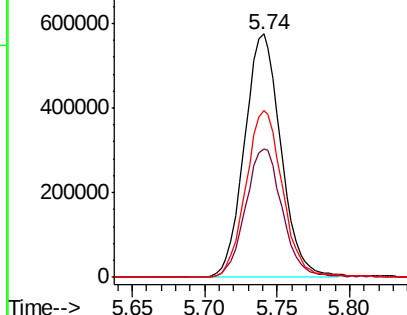
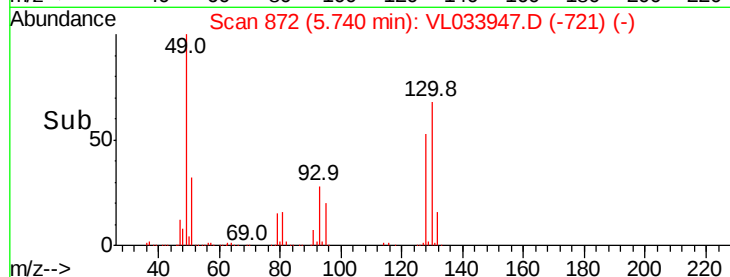
130 69.8 32.5 97.4



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.065 ppbv

RT: 3.07 min Scan# 41

Delta R.T. -0.00 min

Lab File: VL033947.D

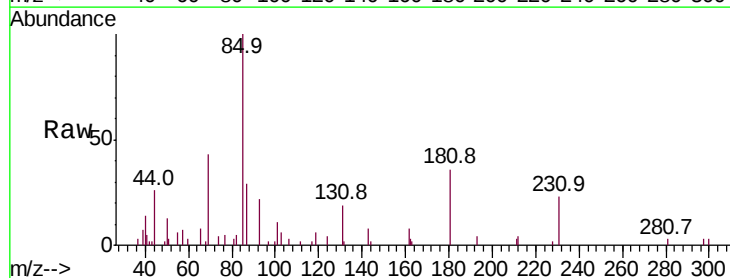
Acq: 24 Jun 2019 21:56

Tgt Ion: 85 Resp: 10694

Ion Ratio Lower Upper

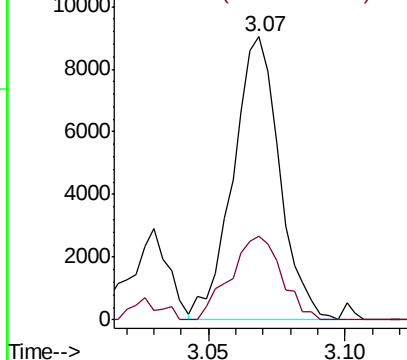
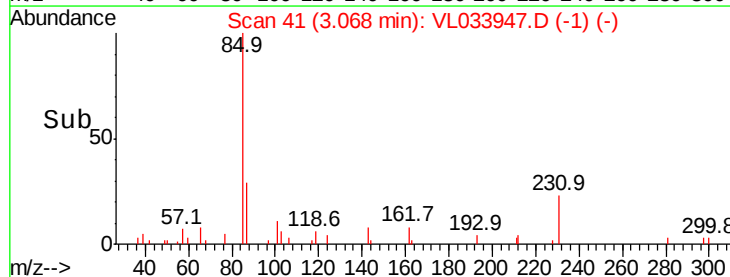
85 100

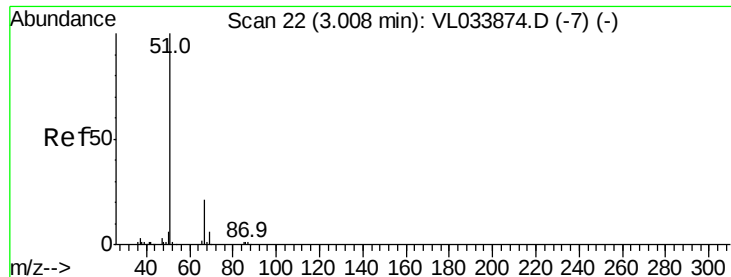
87 29.4 26.6 40.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.182 ppbv

RT: 3.01 min Scan# 22

Delta R.T. -0.00 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Instrument :

MSVOA_L

ClientSampleId :

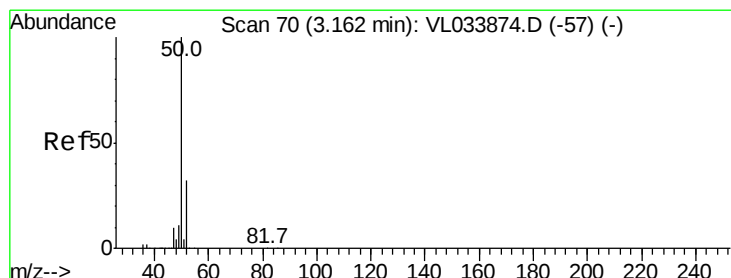
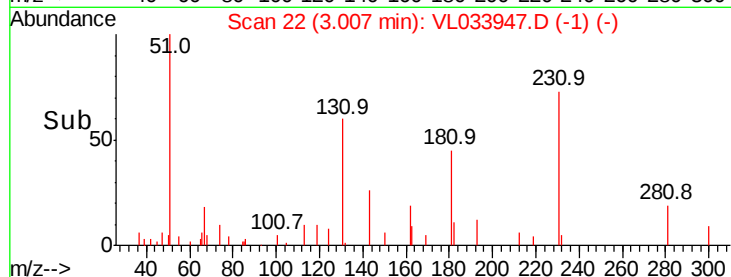
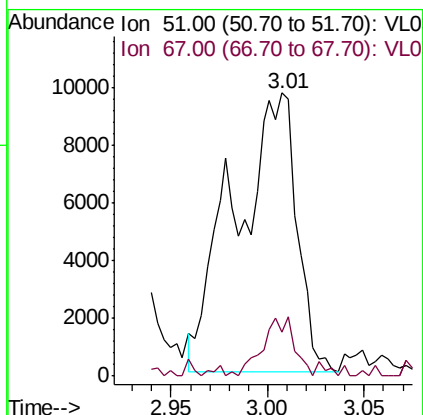
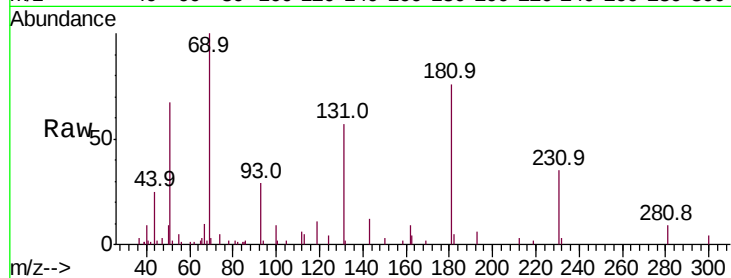
TZC-SSDS-AREA-B-1DL

Tot Ion: 51 Resp: 21555

Ion Ratio Lower Upper

51 100

67 11.9 16.4 24.6#



#4

Chloromethane

Concen: 0.038 ppbv

RT: 3.16 min Scan# 69

Delta R.T. -0.00 min

Lab File: VL033947.D

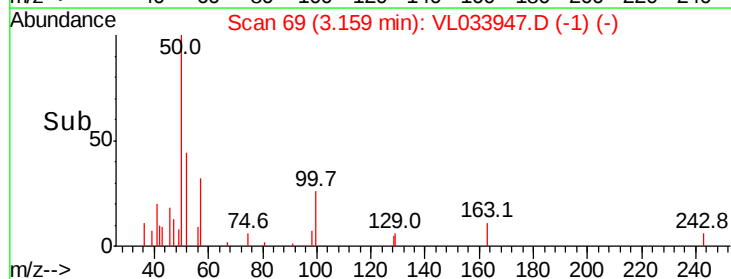
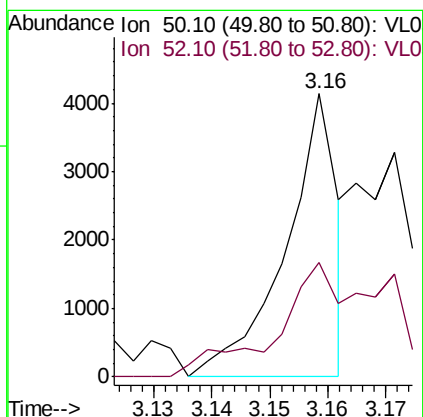
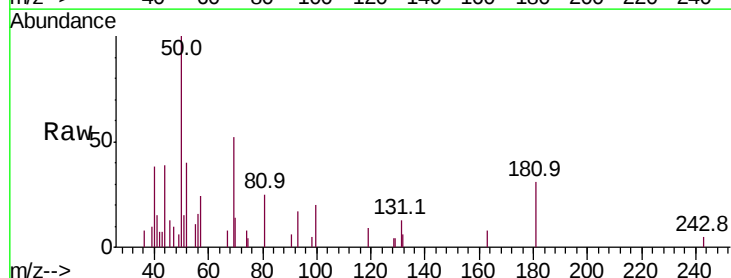
Acq: 24 Jun 2019 21:56

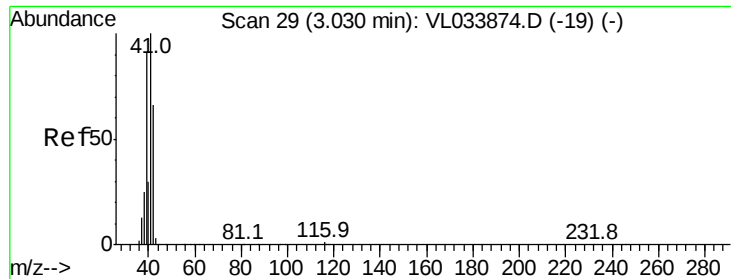
Tgt Ion: 50 Resp: 2565

Ion Ratio Lower Upper

50 100

52 36.0 25.4 38.0





#9

Propene

Concen: 0.111 ppbv

RT: 3.03 min Scan# 29

Delta R.T. -0.00 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Instrument :

MSVOA_L

ClientSampleId :

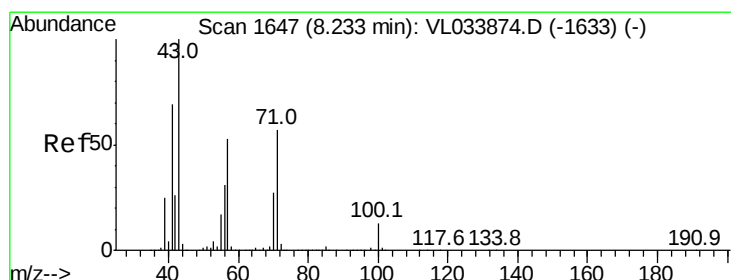
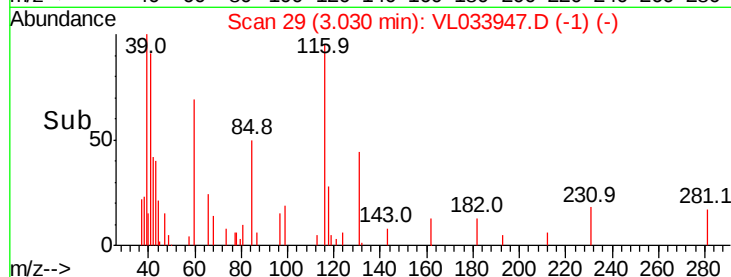
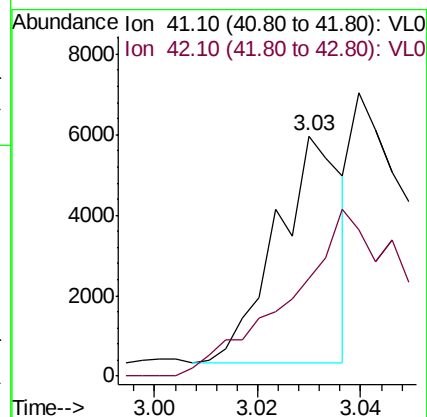
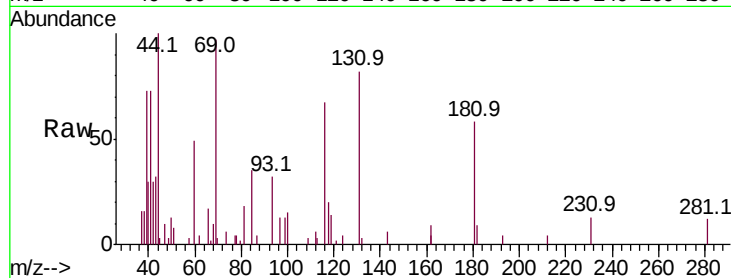
TZC-SSDS-AREA-B-1DL

Tot Ion: 41 Resp: 4932

Ion Ratio Lower Upper

41 100

42 0.0 56.3 84.5#



#10

Heptane

Concen: 0.191 ppbv

RT: 8.22 min Scan# 1644

Delta R.T. -0.01 min

Lab File: VL033947.D

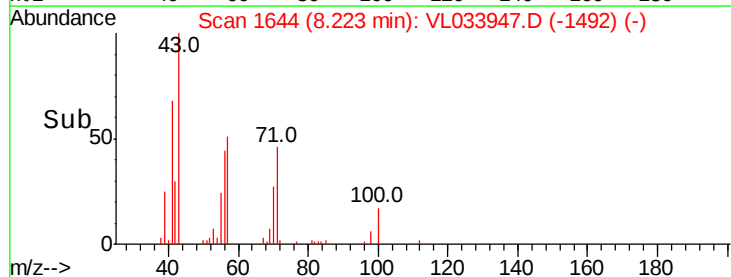
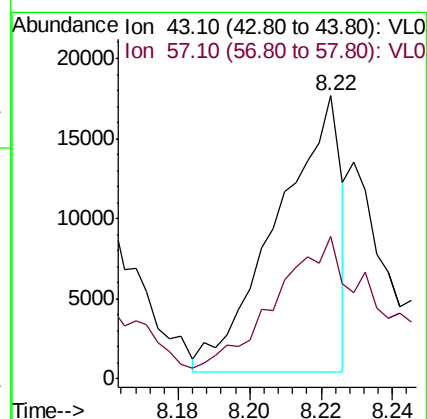
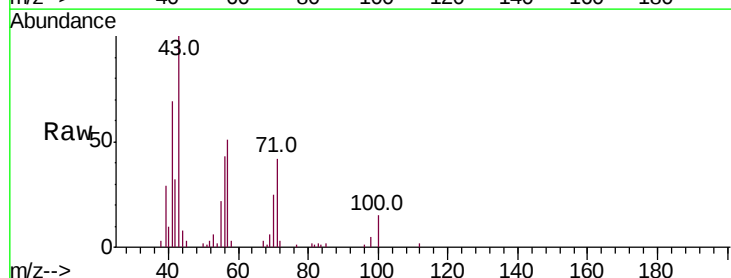
Acq: 24 Jun 2019 21:56

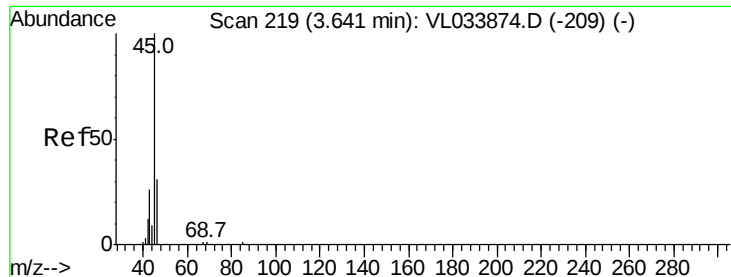
Tgt Ion: 43 Resp: 21400

Ion Ratio Lower Upper

43 100

57 100.8 41.7 62.5#

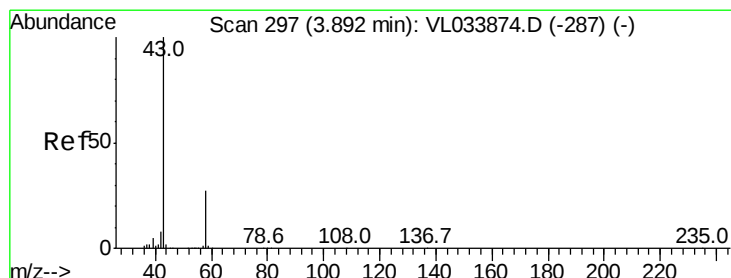
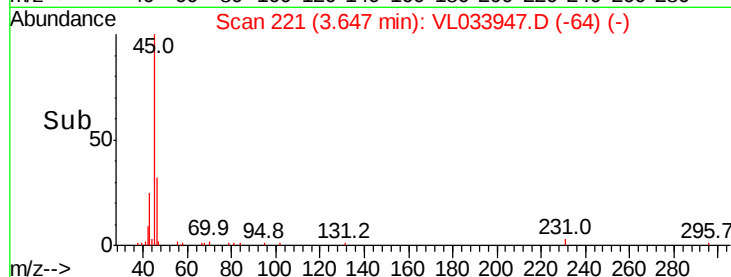
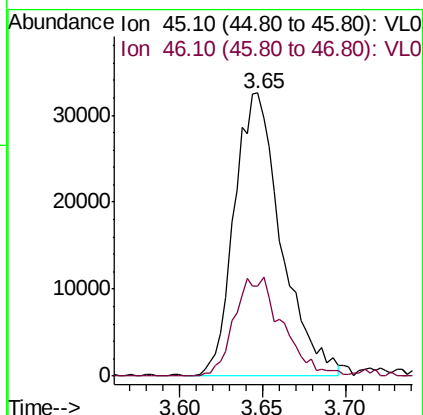
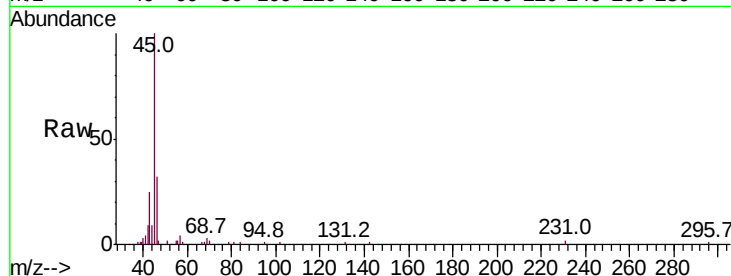




#13
Ethanol
Concen: 4.436 ppbv
RT: 3.65 min Scan# 221
Delta R.T. 0.01 min
Lab File: VL033947.D
Acq: 24 Jun 2019 21:56

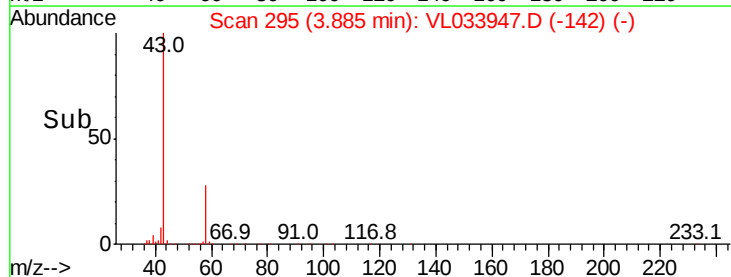
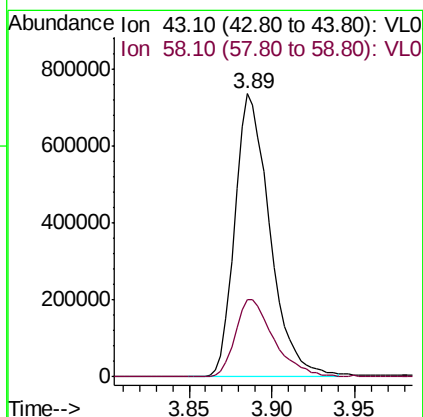
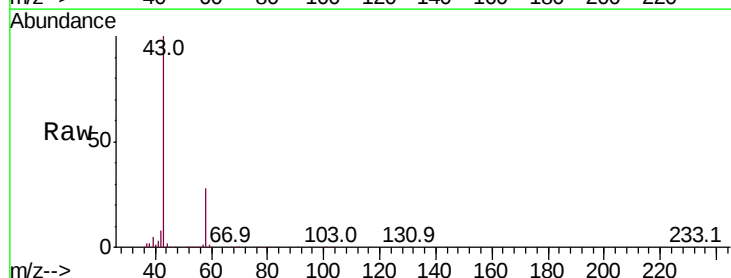
Instrument :
MSVOA_L
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TZC-SSDS-AREA-B-1DL

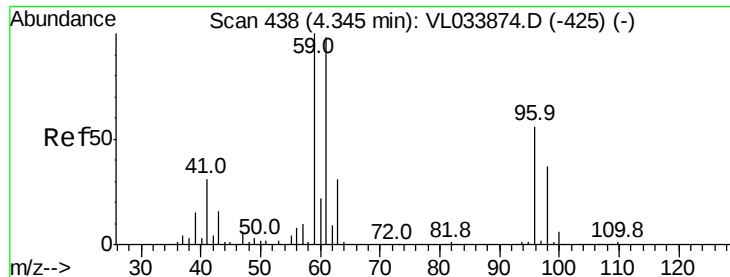
Tot Ion: 45 Resp: 64038
Ion Ratio Lower Upper
45 100
46 36.6 15.3 61.1



#15
Acetone
Concen: 7.362 ppbv
RT: 3.89 min Scan# 295
Delta R.T. -0.01 min
Lab File: VL033947.D
Acq: 24 Jun 2019 21:56

Tgt Ion: 43 Resp: 1081540
Ion Ratio Lower Upper
43 100
58 30.3 21.3 31.9



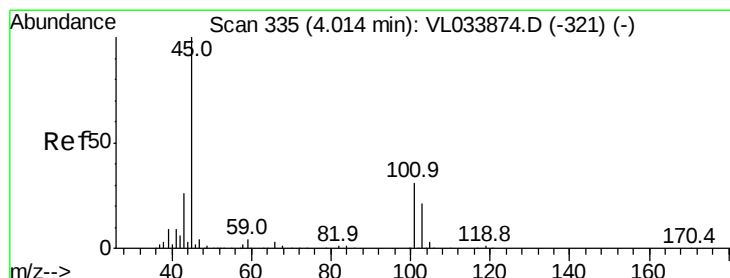
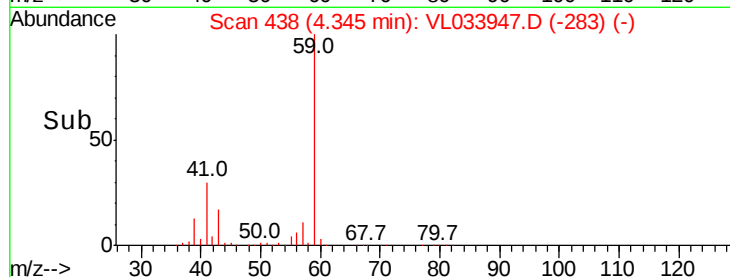
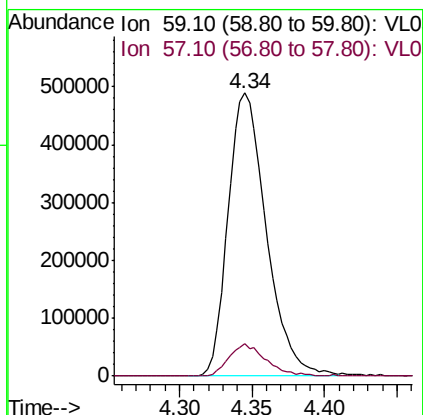
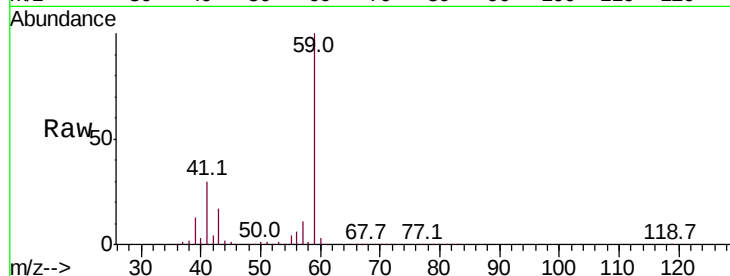


#17

tert-Butyl alcohol
Concen: 7.817 ppbv
RT: 4.34 min Scan# 438
Delta R.T. -0.00 min
Lab File: VL033947.D
Acq: 24 Jun 2019 21:56

Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-B-1DL

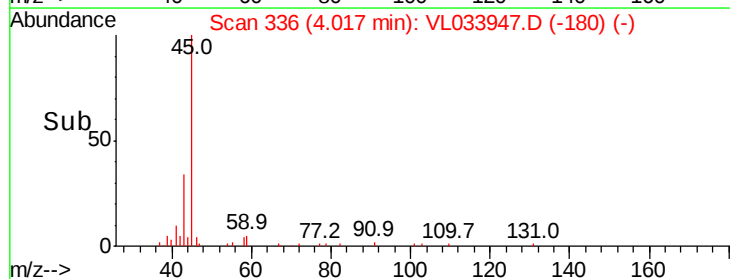
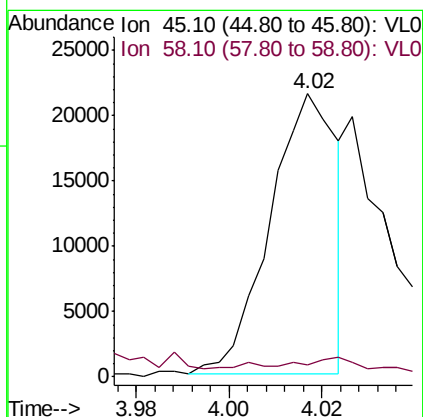
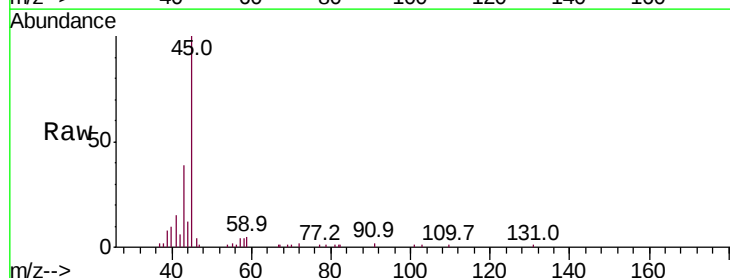
Tot Ion: 59 Resp: 897700
Ion Ratio Lower Upper
59 100
57 11.4 8.4 12.6

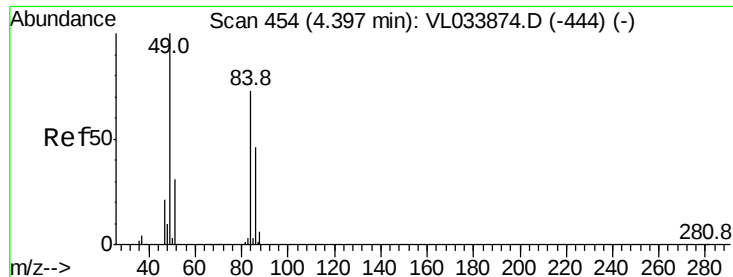


#19

Isopropyl Alcohol
Concen: 0.255 ppbv
RT: 4.02 min Scan# 336
Delta R.T. 0.00 min
Lab File: VL033947.D
Acq: 24 Jun 2019 21:56

Tgt Ion: 45 Resp: 21404
Ion Ratio Lower Upper
45 100
58 0.0 1.8 2.6#

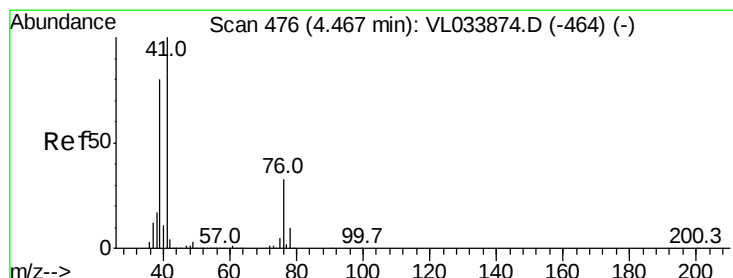
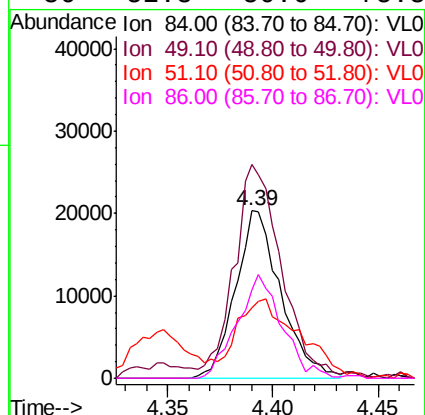
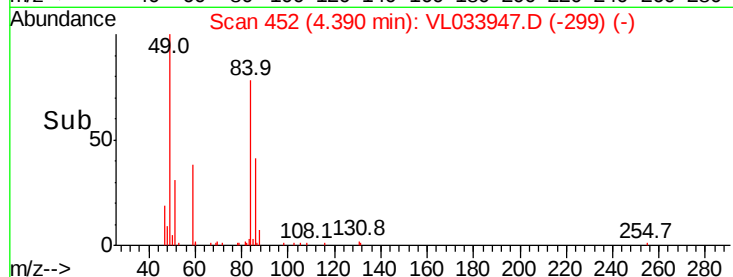
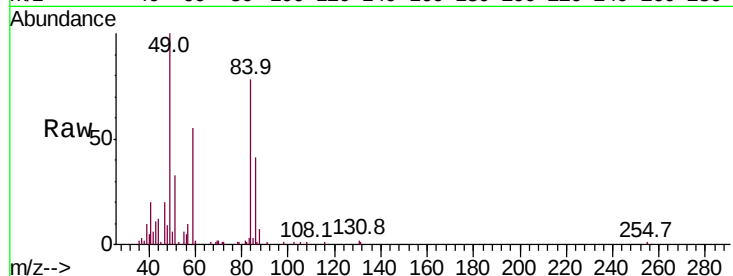




#20
Methylene Chloride
Concen: 0.530 ppbv
RT: 4.39 min Scan# 452
Delta R.T. -0.01 min
Lab File: VL033947.D
Acq: 24 Jun 2019 21:56

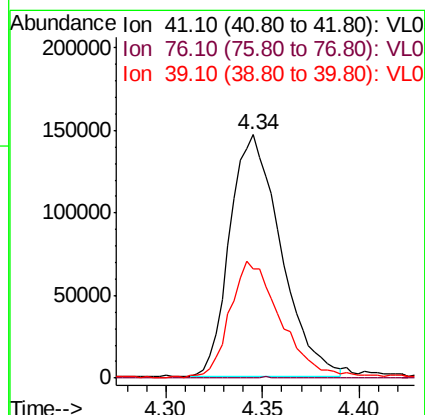
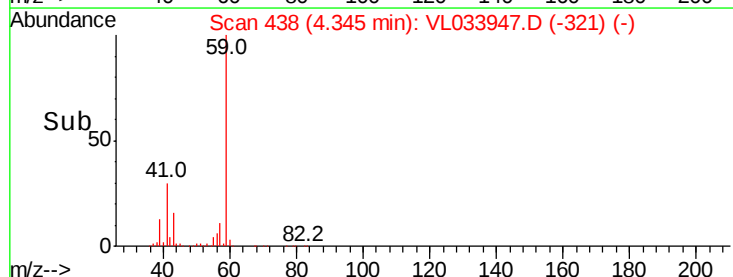
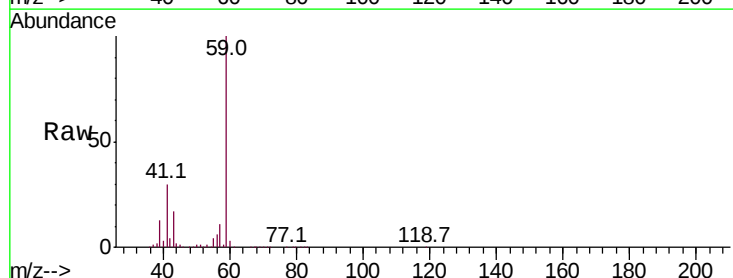
Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-B-1DL

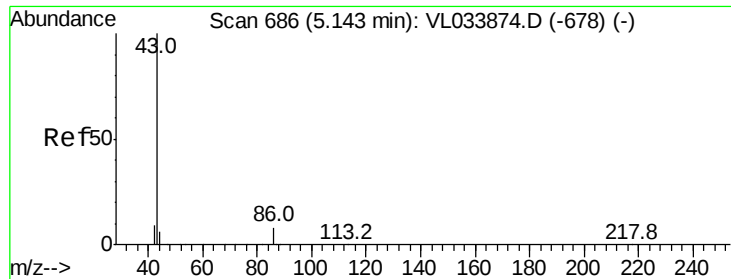
Tot Ion: 84 Resp: 30367
Ion Ratio Lower Upper
84 100
49 123.4 110.0 165.0
51 36.9 34.6 51.8
86 52.8 50.6 75.8



#21
Allyl Chloride
Concen: 3.215 ppbv
RT: 4.34 min Scan# 438
Delta R.T. -0.12 min
Lab File: VL033947.D
Acq: 24 Jun 2019 21:56

Tgt Ion: 41 Resp: 268274
Ion Ratio Lower Upper
41 100
76 0.2 26.6 39.8#
39 48.0 65.2 97.8#





#23

Vinyl Acetate

Concen: 0.067 ppbv

RT: 5.12 min Scan# 680

Delta R.T. -0.02 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-B-1DL

Tot Ion: 43 Resp: 11416

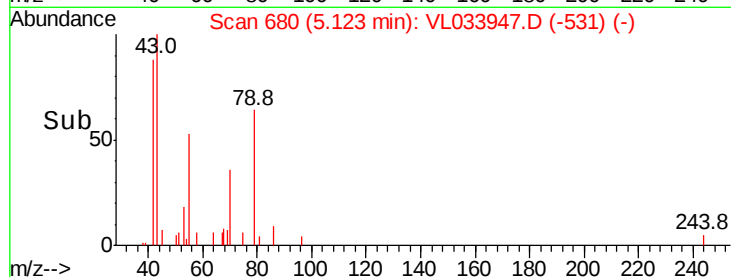
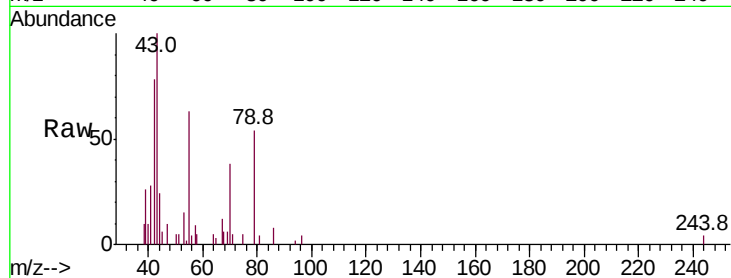
Ion Ratio Lower Upper

43 100

86 7.6 5.8 8.8

42 70.6 7.8 11.8#

44 7.3 4.2 6.4#

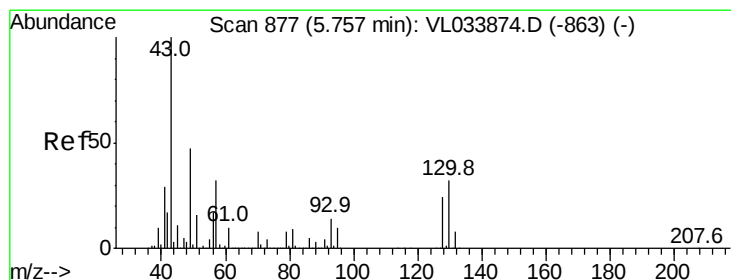
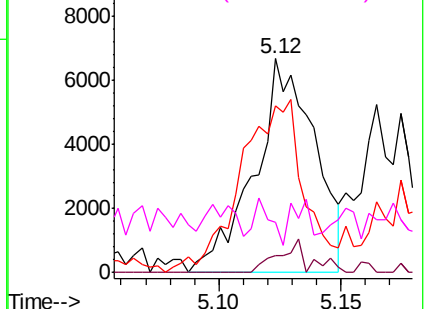


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 0.104 ppbv

RT: 5.76 min Scan# 877

Delta R.T. -0.00 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Tgt Ion: 43 Resp: 23308

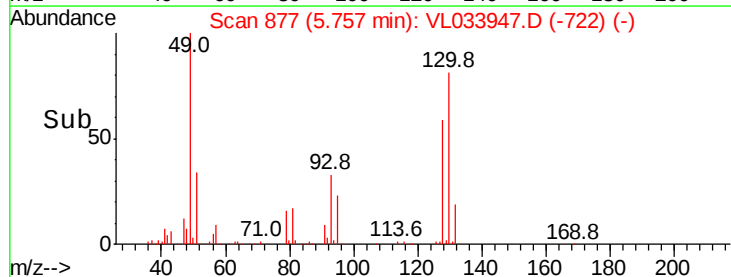
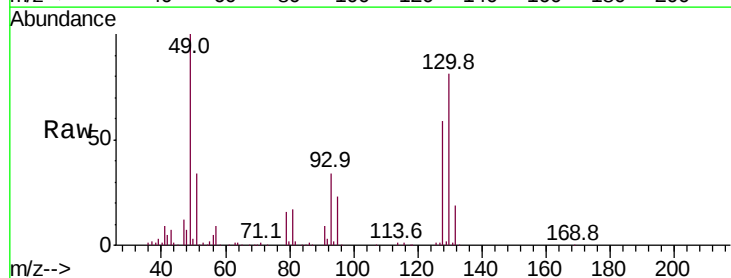
Ion Ratio Lower Upper

43 100

45 5.1 7.9 11.9#

61 1.2 7.8 11.6#

70 3.9 5.8 8.6#

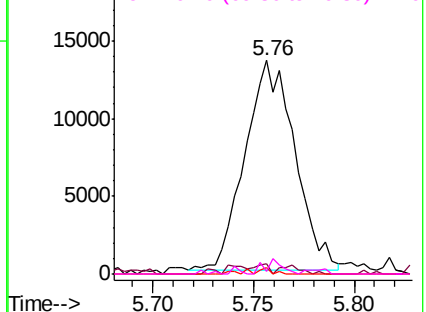


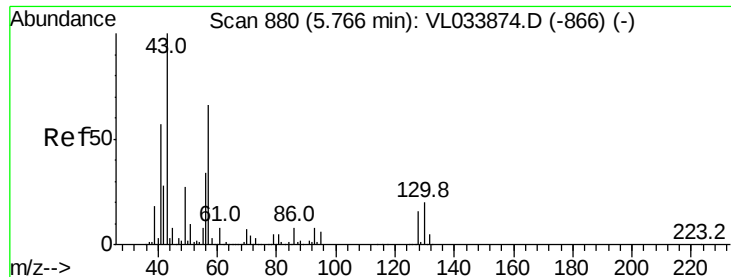
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0





#26

Hexane

Concen: 0.319 ppbv

RT: 5.76 min Scan# 878

Delta R.T. -0.01 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Instrument :

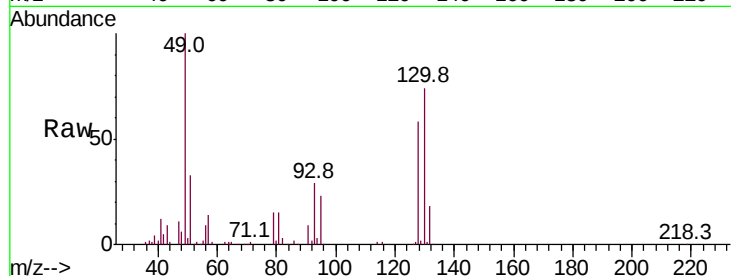
MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-B-1DL

Tot Ion: 57 Resp: 32483

Ion	Ratio	Lower	Upper
57	100		
41	91.7	71.4	107.2
43	75.6	183.7	275.5#
56	57.0	42.7	64.1



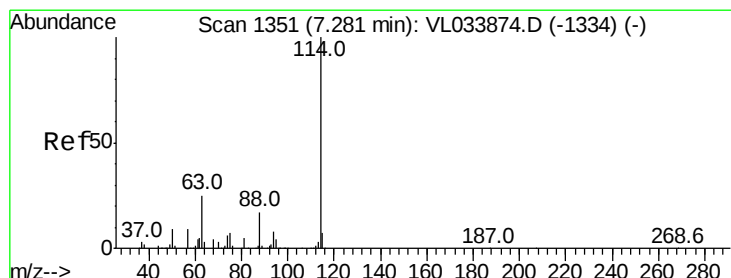
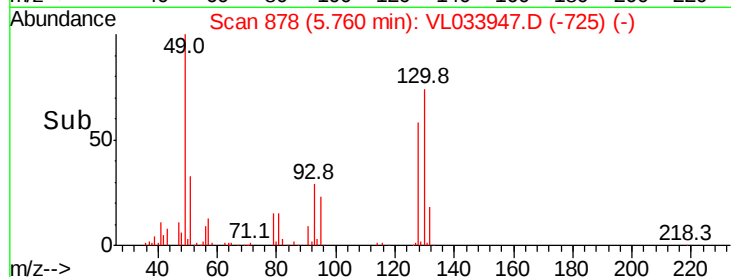
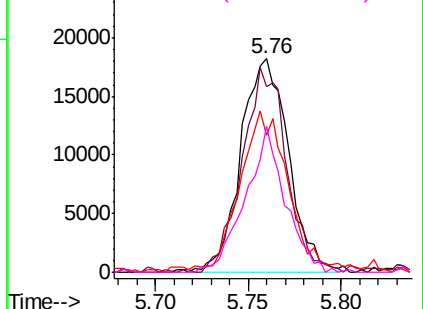
Abundance

Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.27 min Scan# 1347

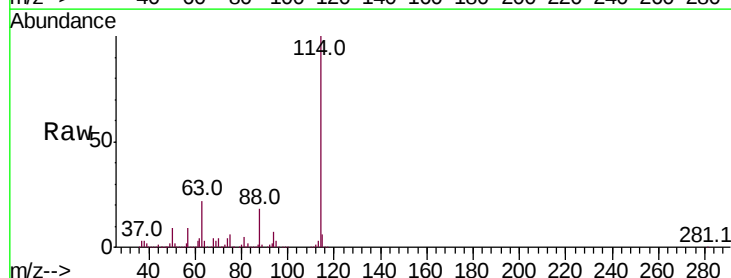
Delta R.T. -0.01 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Tgt Ion: 114 Resp: 2670183

Ion	Ratio	Lower	Upper
114	100		
63	23.4	21.1	31.7
88	17.3	14.2	21.4

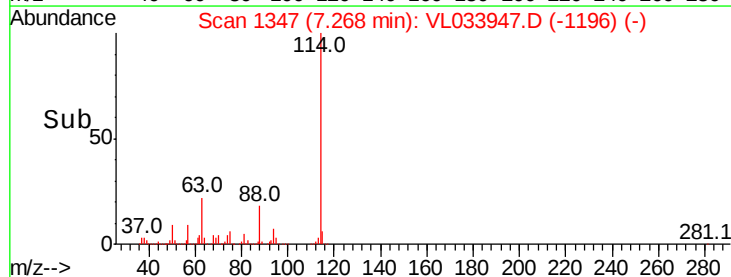
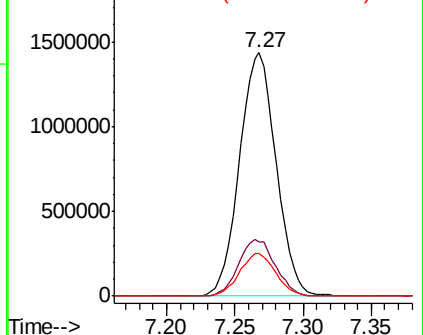


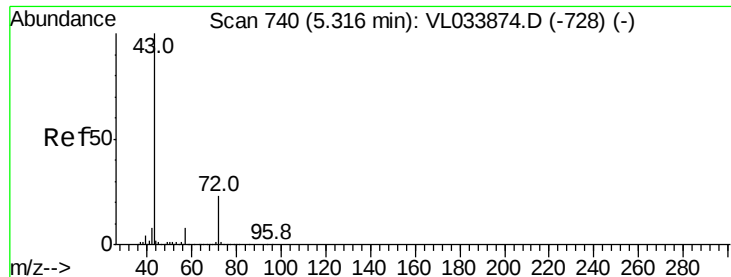
Abundance

Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0





#34

2-Butanone

Concen: 0.697 ppbv

RT: 5.32 min Scan# 740

Delta R.T. -0.00 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Instrument :

MSVOA_L

ClientSampleId :

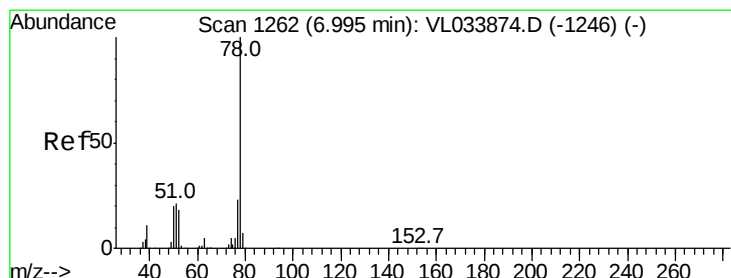
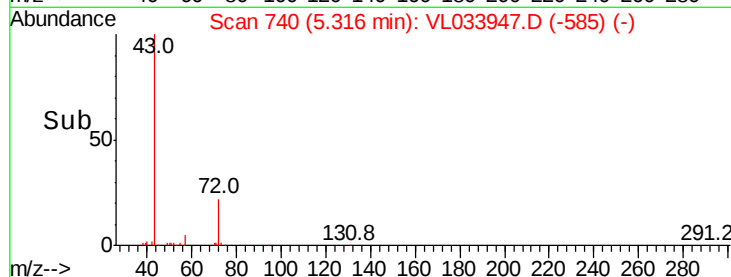
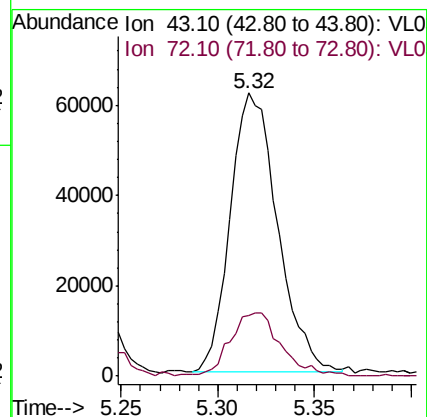
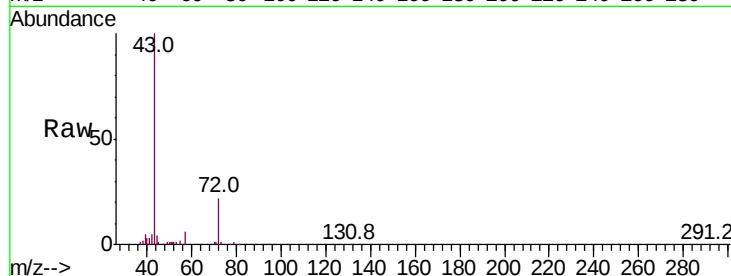
TZC-SSDS-AREA-B-1DL

Tot Ion: 43 Resp: 105031

Ion Ratio Lower Upper

43 100

72 24.6 17.9 26.9



#36

Benzene

Concen: 0.449 ppbv

RT: 6.98 min Scan# 1258

Delta R.T. -0.01 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

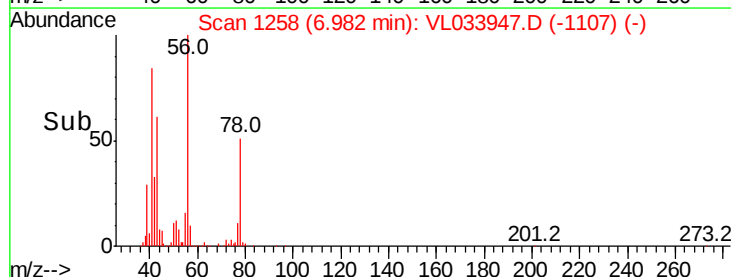
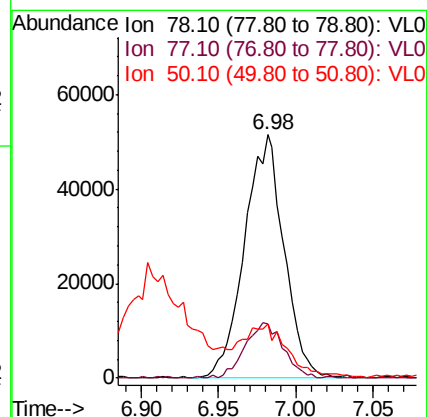
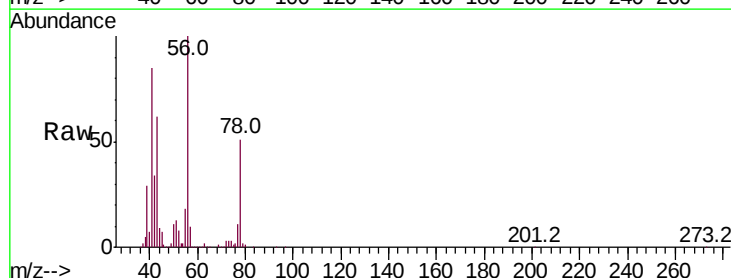
Tgt Ion: 78 Resp: 91510

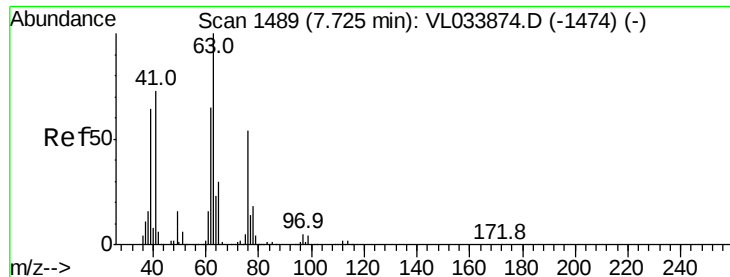
Ion Ratio Lower Upper

78 100

77 21.6 18.2 27.2

50 20.9 15.9 23.9





#39

1,2-Dichloropropane

Concen: 7.916 ppbv

RT: 7.26 min Scan# 1346

Delta R.T. -0.46 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-B-1DL

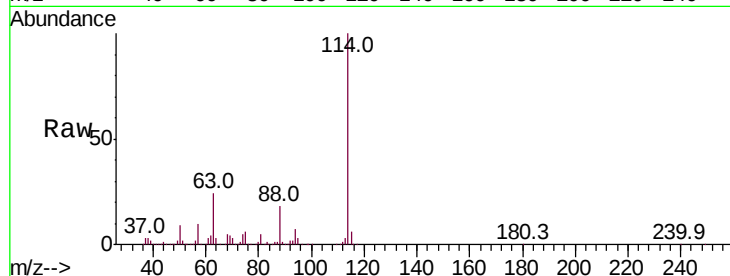
Tot Ion: 63 Resp: 623170

Ion Ratio Lower Upper

63 100

41 0.5 58.7 88.1#

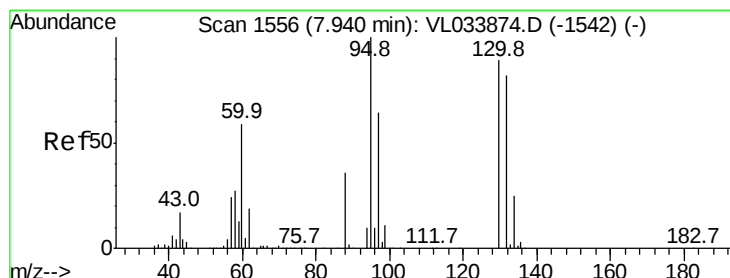
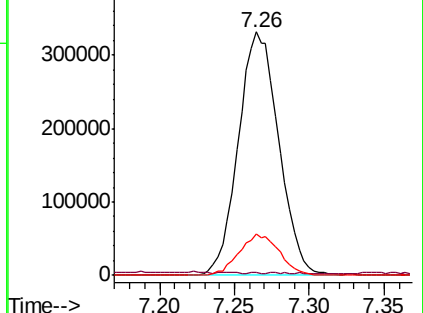
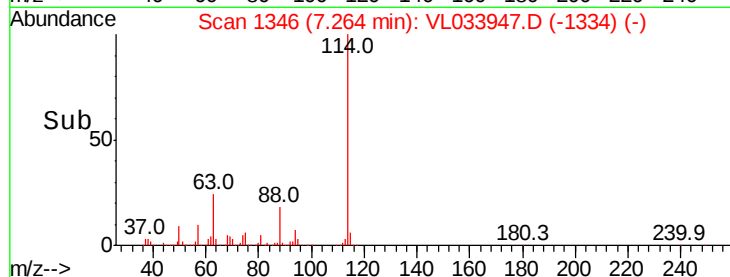
62 16.7 51.9 77.9#



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0



#40

1,4-Dioxane

Concen: 0.041 ppbv

RT: 7.96 min Scan# 1562

Delta R.T. 0.02 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Tgt Ion: 88 Resp: 1317

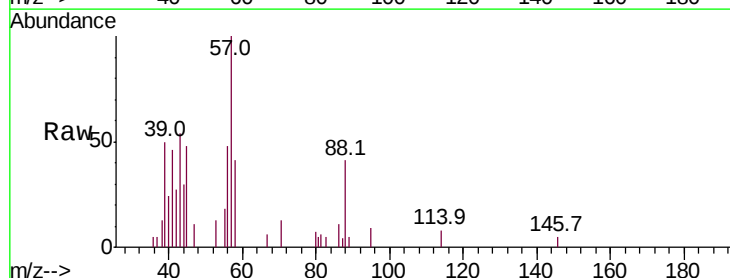
Ion Ratio Lower Upper

88 100

58 40.7 100.0 150.0#

43 0.0 184.7 277.1#

57 63.6 826.8 1240.2#

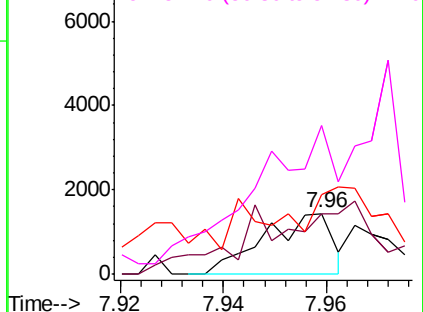
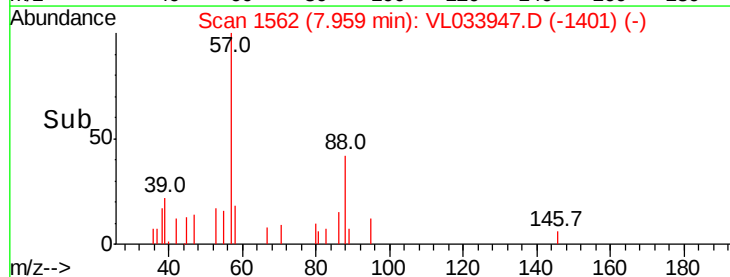


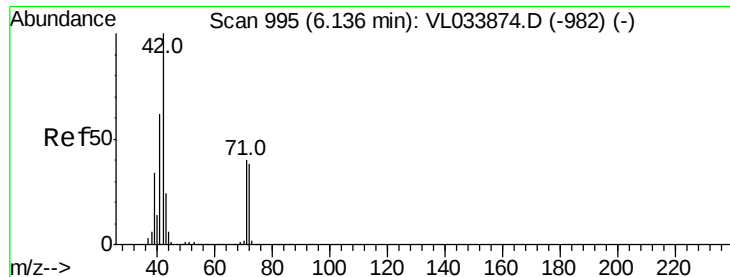
Abundance Ion 88.10 (87.80 to 88.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

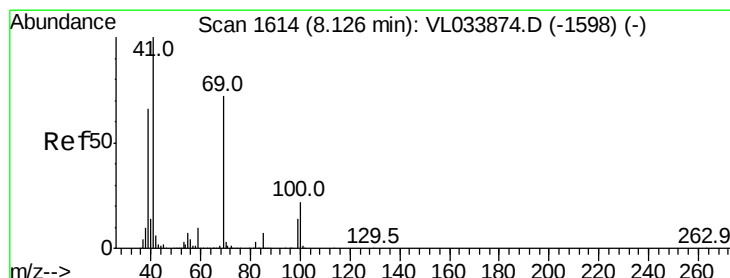
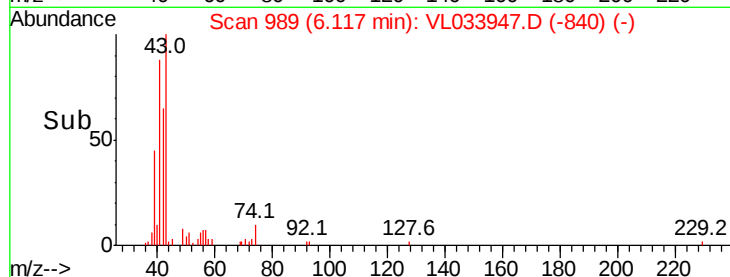
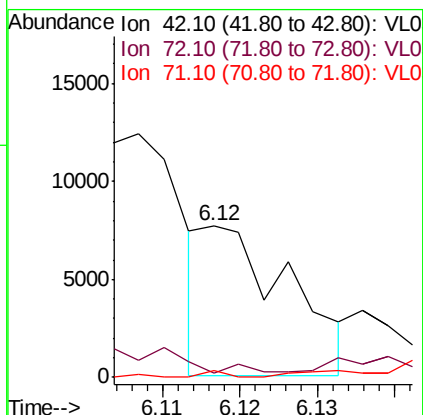
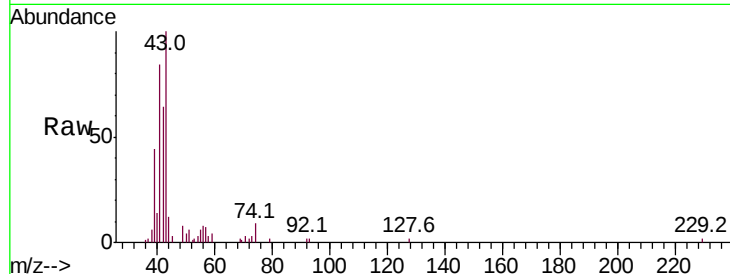




#41
Tetrahydrofuran
Concen: 0.077 ppbv
RT: 6.12 min Scan# 989
Delta R.T. -0.02 min
Lab File: VL033947.D
Acq: 24 Jun 2019 21:56

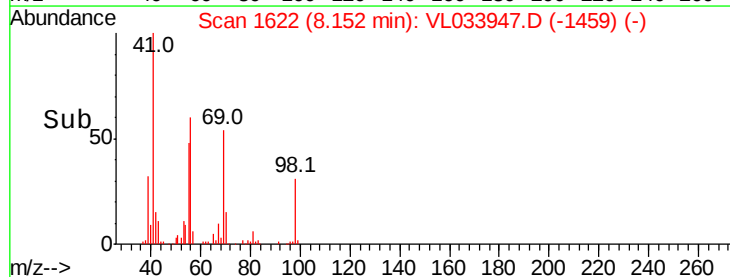
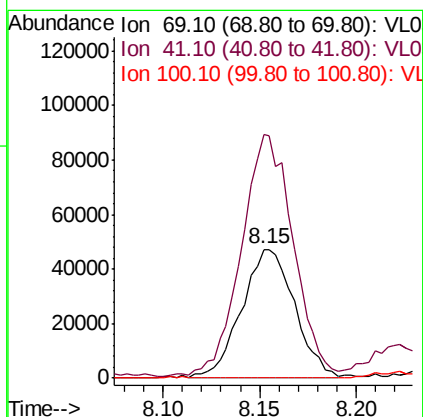
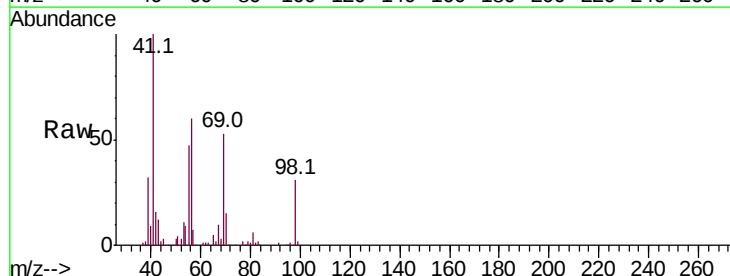
Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-B-1DL

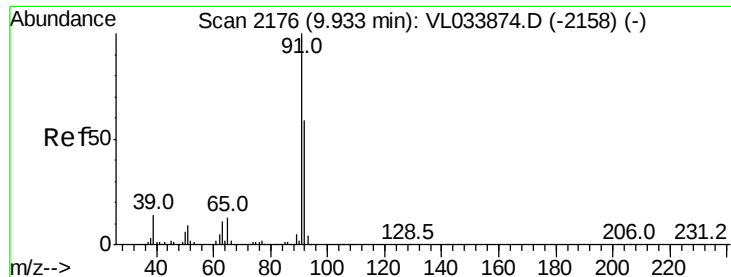
Tot Ion: 42 Resp: 5914
Ion Ratio Lower Upper
42 100
72 0.0 32.2 48.4#
71 0.0 31.7 47.5#



#43
Methyl Methacrylate
Concen: 1.161 ppbv
RT: 8.15 min Scan# 1622
Delta R.T. 0.03 min
Lab File: VL033947.D
Acq: 24 Jun 2019 21:56

Tgt Ion: 69 Resp: 88584
Ion Ratio Lower Upper
69 100
41 184.4 114.3 171.5#
100 0.5 24.8 37.2#





#53

Toluene

Concen: 1.304 ppbv

RT: 9.92 min Scan# 2172

Delta R.T. -0.01 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Instrument :

MSVOA_L

ClientSampleId :

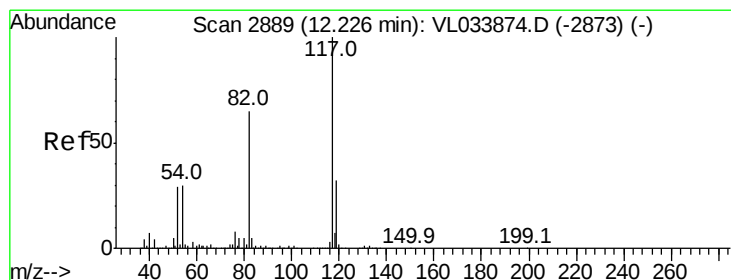
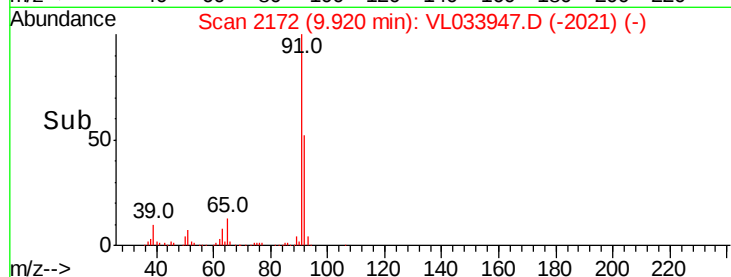
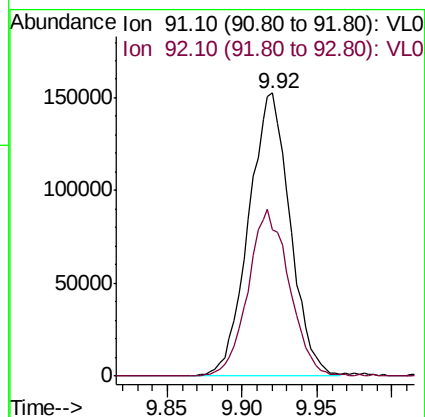
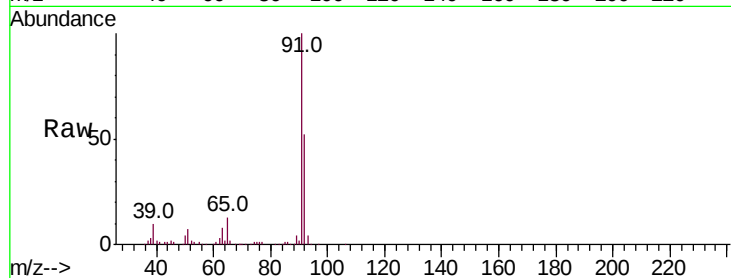
TZC-SSDS-AREA-B-1DL

Tot Ion: 91 Resp: 294273

Ion Ratio Lower Upper

91 100

92 58.8 47.0 70.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.21 min Scan# 2884

Delta R.T. -0.02 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

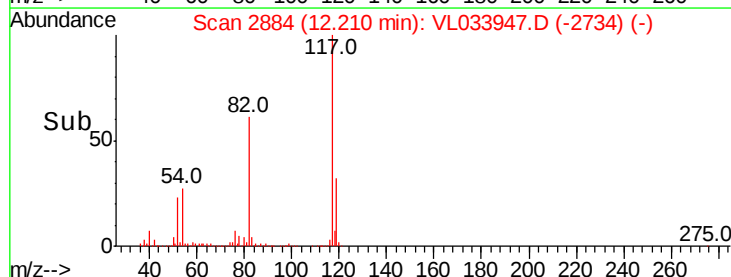
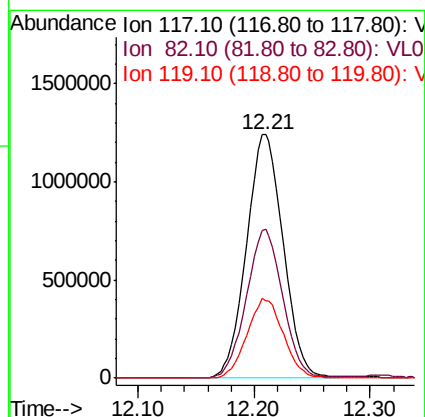
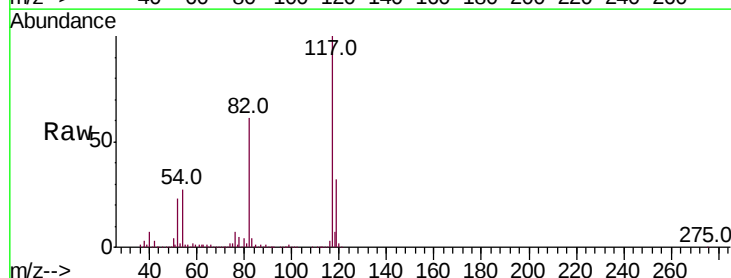
Tgt Ion: 117 Resp: 2736670

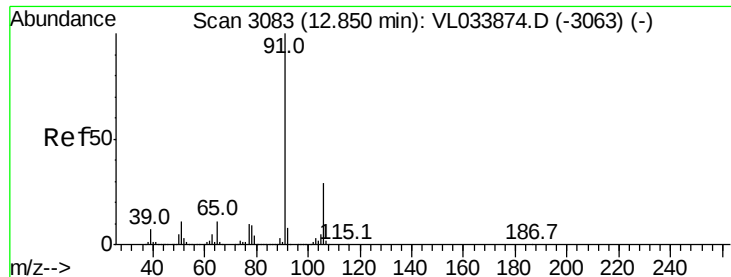
Ion Ratio Lower Upper

117 100

82 60.6 50.2 75.2

119 32.7 24.8 37.2





#58

Ethyl Benzene

Concen: 0.554 ppbv

RT: 12.83 min Scan# 3078

Delta R.T. -0.02 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Instrument :

MSVOA_L

ClientSampleId :

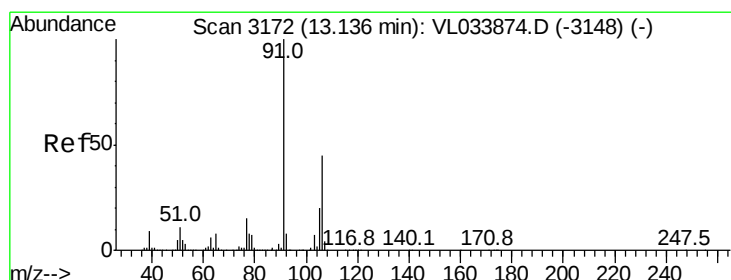
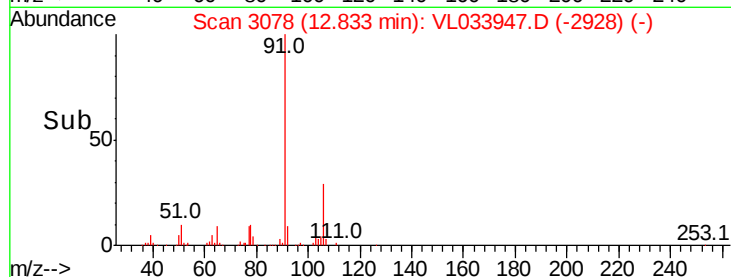
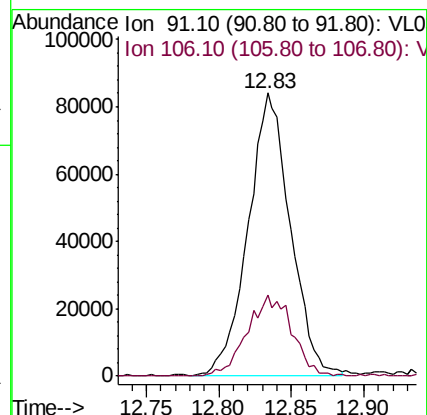
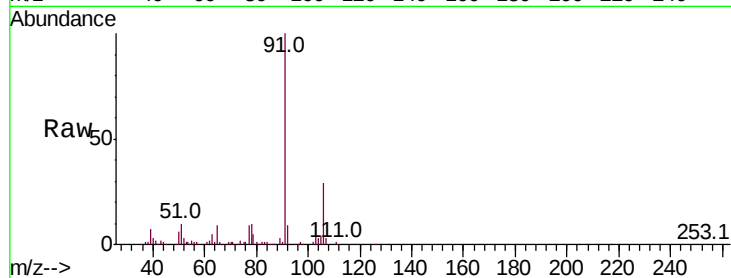
TZC-SSDS-AREA-B-1DL

Tot Ion: 91 Resp: 170796

Ion Ratio Lower Upper

91 100

106 28.8 23.0 34.6



#59

m/p-Xylene

Concen: 2.306 ppbv

RT: 13.09 min Scan# 3158

Delta R.T. -0.05 min

Lab File: VL033947.D

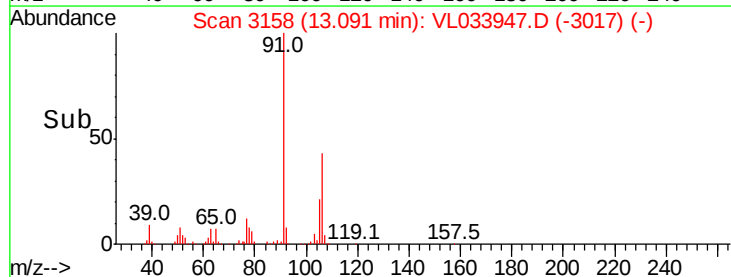
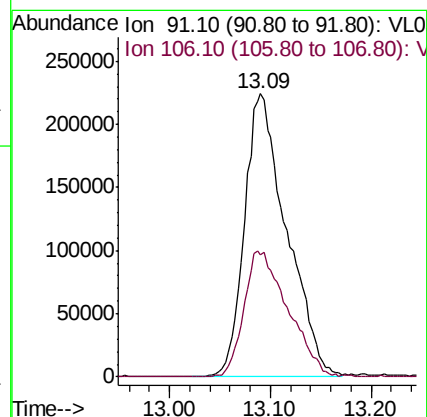
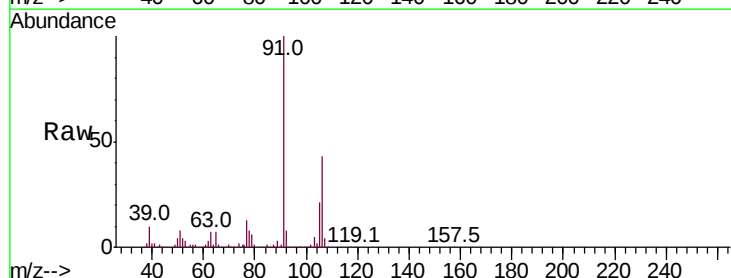
Acq: 24 Jun 2019 21:56

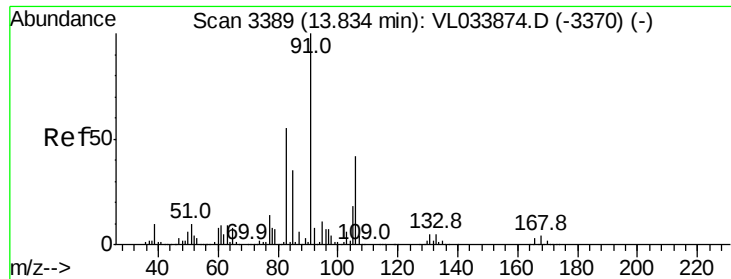
Tgt Ion: 91 Resp: 647122

Ion Ratio Lower Upper

91 100

106 46.9 35.8 53.8

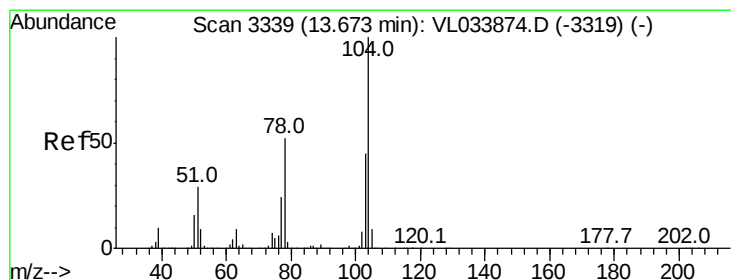
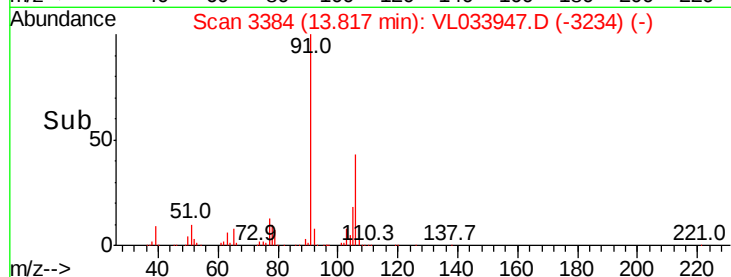
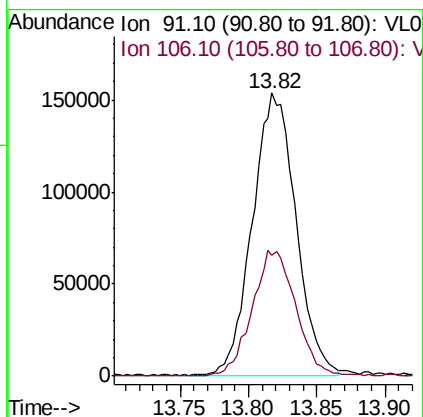
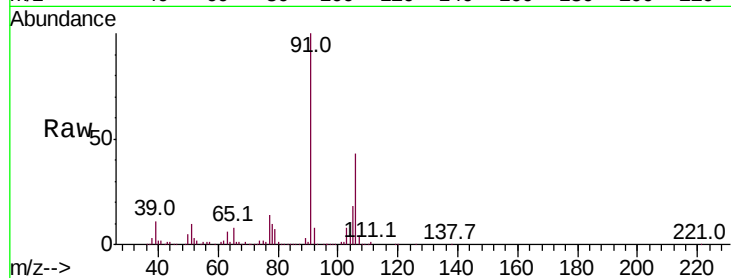




#60
o-Xylene
Concen: 1.167 ppbv
RT: 13.82 min Scan# 3384
Delta R.T. -0.02 min
Lab File: VL033947.D
Acq: 24 Jun 2019 21:56

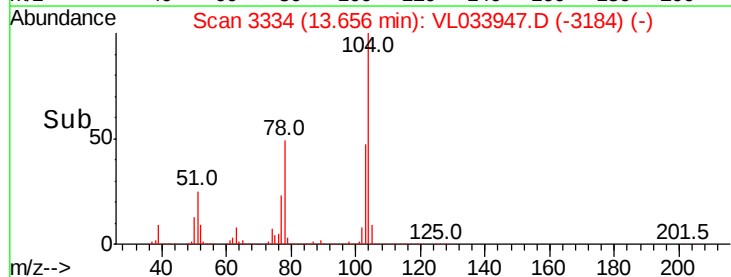
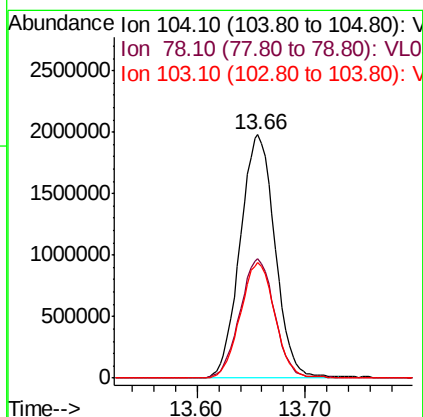
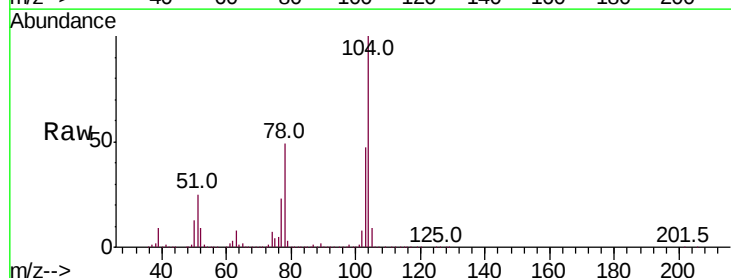
Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-B-1DL

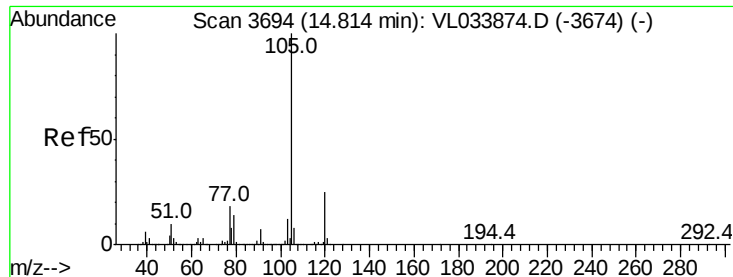
Tot Ion: 91 Resp: 338197
Ion Ratio Lower Upper
91 100
106 45.1 21.7 65.1



#61
Styrene
Concen: 23.787 ppbv
RT: 13.66 min Scan# 3334
Delta R.T. -0.02 min
Lab File: VL033947.D
Acq: 24 Jun 2019 21:56

Tgt Ion:104 Resp: 4459362
Ion Ratio Lower Upper
104 100
78 49.0 43.4 65.0
103 47.2 37.6 56.4





#62

Isopropylbenzene

Concen: 0.370 ppbv

RT: 14.79 min Scan# 3688

Delta R.T. -0.02 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Instrument :

MSVOA_L

ClientSampleId :

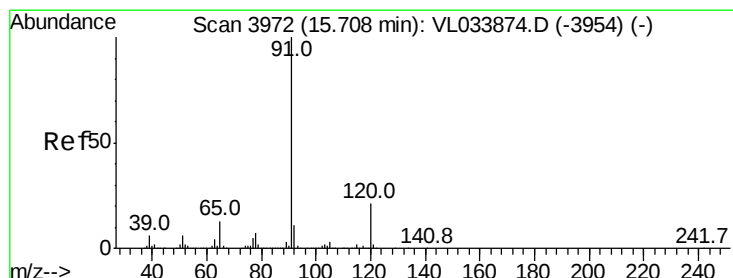
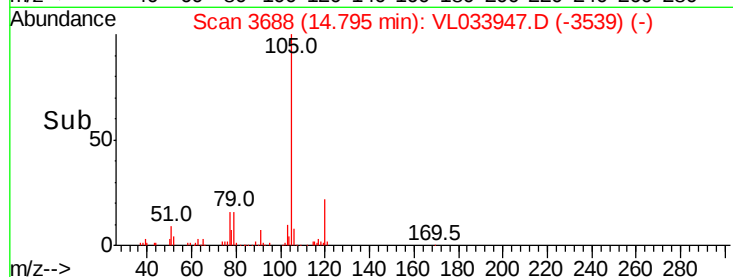
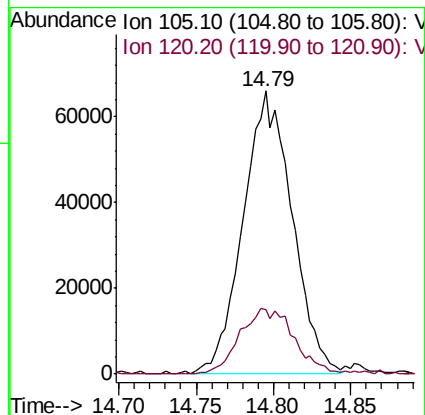
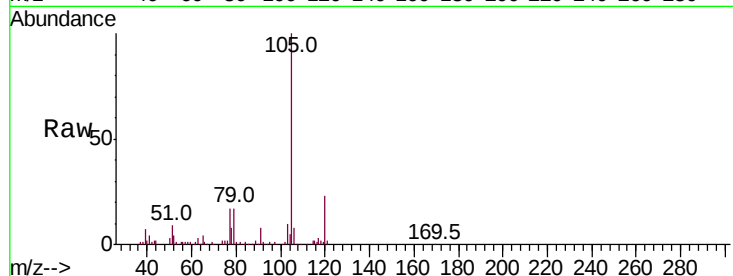
TZC-SSDS-AREA-B-1DL

Tot Ion:105 Resp: 144500

Ion Ratio Lower Upper

105 100

120 26.6 20.3 30.5



#64

n-propylbenzene

Concen: 0.304 ppbv

RT: 15.69 min Scan# 3967

Delta R.T. -0.02 min

Lab File: VL033947.D

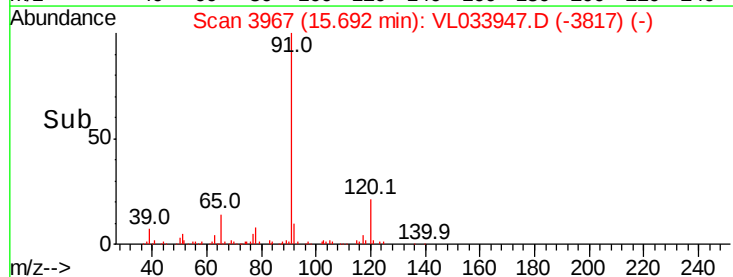
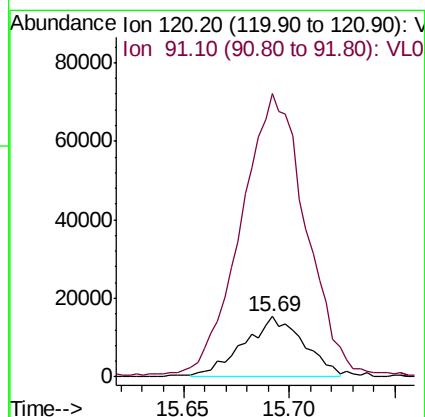
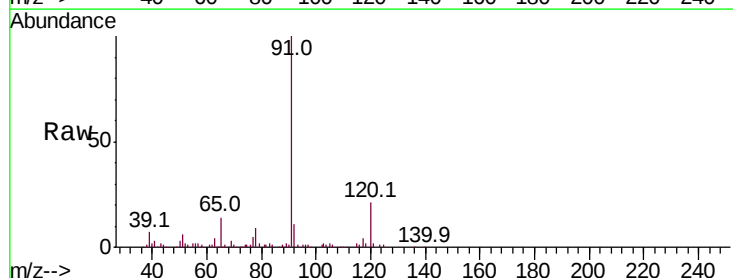
Acq: 24 Jun 2019 21:56

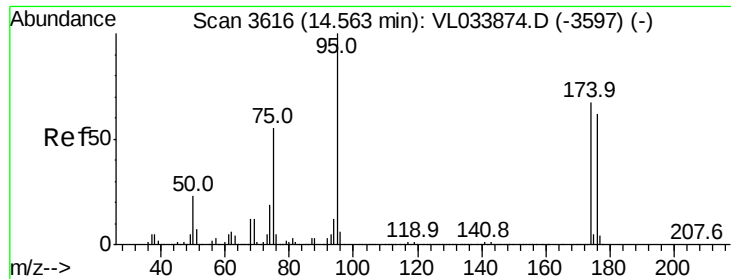
Tgt Ion:120 Resp: 30356

Ion Ratio Lower Upper

120 100

91 506.6 387.0 580.6





#68

1-Bromo-4-Fluorobenzene

Concen: 9.690 ppbv

RT: 14.55 min Scan# 3611

Delta R.T. -0.02 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Instrument :

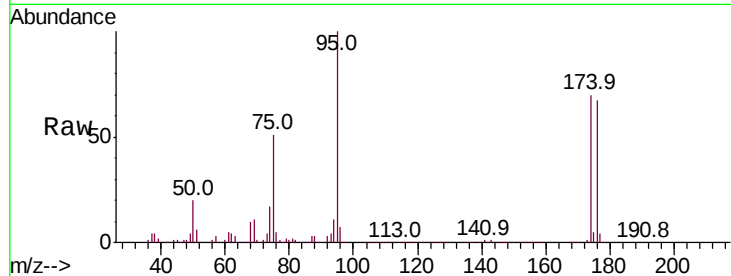
MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-B-1DL

Tot Ion: 95 Resp: 2178187

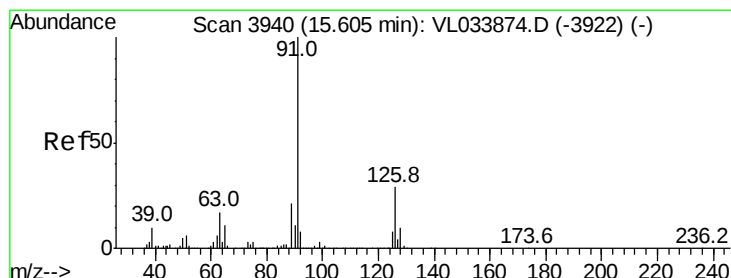
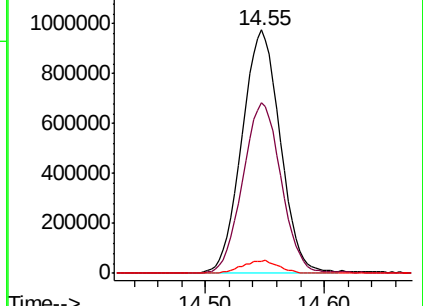
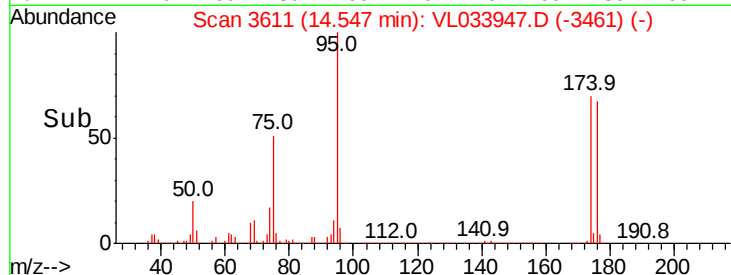
Ion	Ratio	Lower	Upper
95	100		
174	70.5	54.0	81.0
175	5.1	3.8	5.8



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V



#71

2-Chlorotoluene

Concen: 0.528 ppbv

RT: 15.69 min Scan# 3967

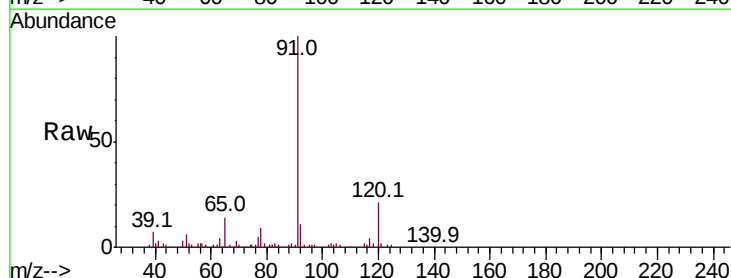
Delta R.T. 0.09 min

Lab File: VL033947.D

Acq: 24 Jun 2019 21:56

Tgt Ion: 91 Resp: 151813

Ion	Ratio	Lower	Upper
91	100		
126	0.1	12.0	48.2#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 126.10 (125.80 to 126.80): V

