

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL062419\
 Data File : VL033935.D
 Acq On : 24 Jun 2019 13:58
 Operator : SY/AP
 Sample : K3481-02
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 TZC-SSDS-AREA-A-2

Quant Time: Jun 25 03:38:06 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	981356	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.27	114	2187762	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.21	117	2452396	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.55	95	2094760	10.40	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.00%

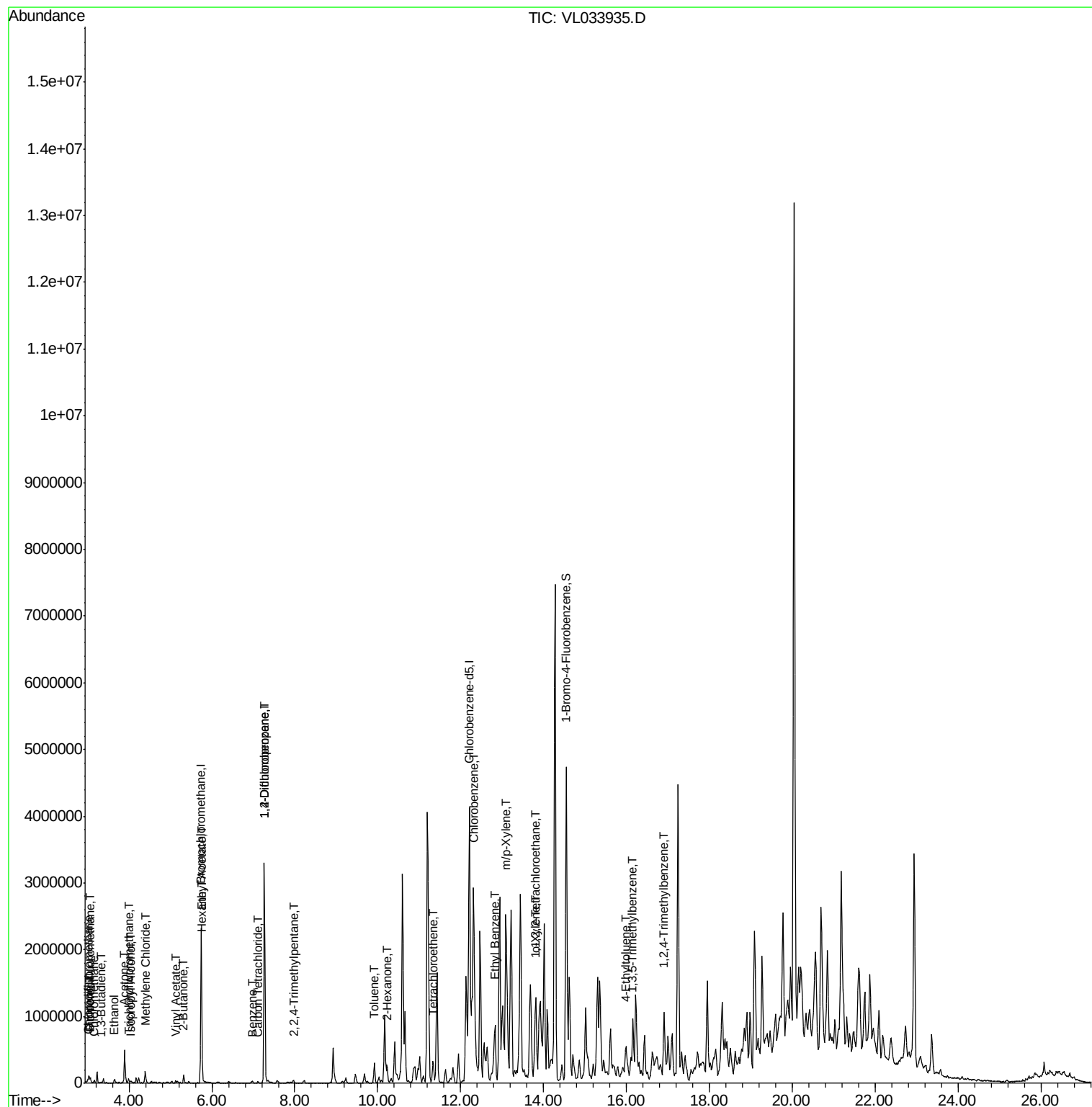
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.07	85	52043	0.327	ppbv	94
3) Chlorodifluoromethane	3.01	51	52772	0.457	ppbv	91
4) Chloromethane	3.16	50	26715	0.405	ppbv	95
9) Propene	3.04	41	21096	0.488	ppbv #	78
11) Trichlorofluoromethane	3.99	101	41172	0.200	ppbv	91
13) Ethanol	3.64	45	29624	2.106	ppbv #	44
15) Acetone	3.89	43	497007	3.472	ppbv	98
16) 1,3-Butadiene	3.34	39	2015	0.037	ppbv #	6
19) Isopropyl Alcohol	4.03	45	14980	0.183	ppbv #	94
20) Methylene Chloride	4.39	84	58032	1.040	ppbv	94
23) Vinyl Acetate	5.13	43	24789	0.149	ppbv #	74
25) Ethyl Acetate	5.76	43	49361	0.226	ppbv #	83
26) Hexane	5.76	57	58262	0.587	ppbv #	41
34) 2-Butanone	5.32	43	128628	1.042	ppbv	97
35) Carbon Tetrachloride	7.11	117	6564	0.039	ppbv	86
36) Benzene	6.98	78	10206	0.061	ppbv #	91
39) 1,2-Dichloropropane	7.27	63	584304	9.059	ppbv #	25
44) 2,2,4-Trimethylpentane	7.96	57	11516	0.039	ppbv #	43
51) 2-Hexanone	10.22	43	135657	0.944	ppbv #	30
52) Tetrachloroethene	11.34	164	9278	0.158	ppbv #	75
53) Toluene	9.92	91	204189	1.104	ppbv	97
57) Chlorobenzene	12.31	112	348071	1.895	ppbv #	33
58) Ethyl Benzene	12.84	91	451654	1.634	ppbv	99
59) m/p-Xylene	13.09	91	2280735	9.071	ppbv	98
60) o-Xylene	13.82	91	766573	2.953	ppbv	99
63) 1,1,2,2-Tetrachloroethane	13.79	83	16957	0.087	ppbv #	25
72) 4-Ethyltoluene	15.98	105	16401	0.056	ppbv #	52
73) 1,3,5-Trimethylbenzene	16.13	105	28727	0.099	ppbv	93
74) 1,2,4-Trimethylbenzene	16.89	105	86402	0.258	ppbv #	80

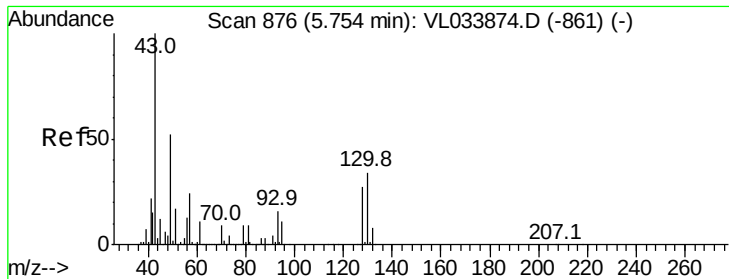
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Fri Jun 07 08:53:27 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.74 min Scan# 871

Delta R.T. -0.02 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-A-2

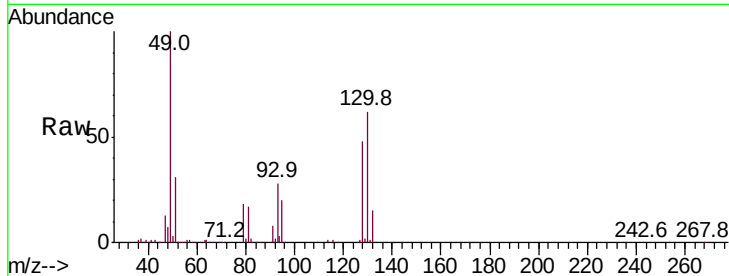
Tot Ion: 49 Resp: 981356

Ion Ratio Lower Upper

49 100

128 50.5 25.5 76.5

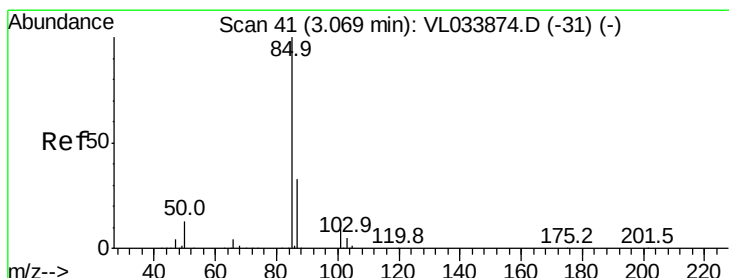
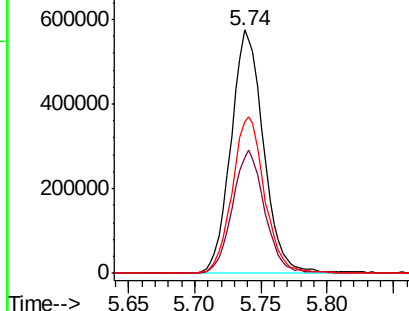
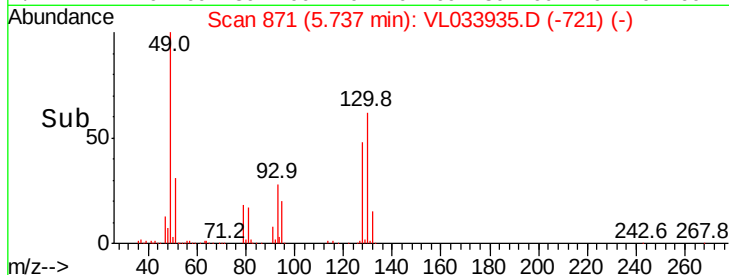
130 64.4 32.5 97.4



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: 0.327 ppbv

RT: 3.07 min Scan# 40

Delta R.T. -0.00 min

Lab File: VL033935.D

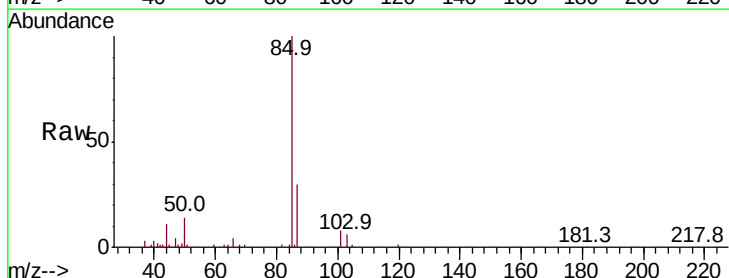
Acq: 24 Jun 2019 13:58

Tgt Ion: 85 Resp: 52043

Ion Ratio Lower Upper

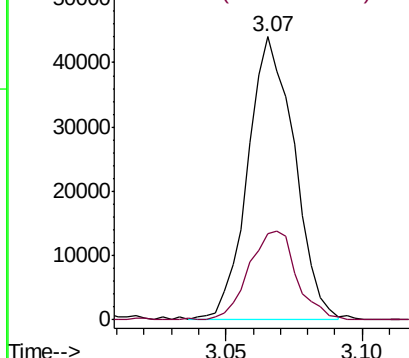
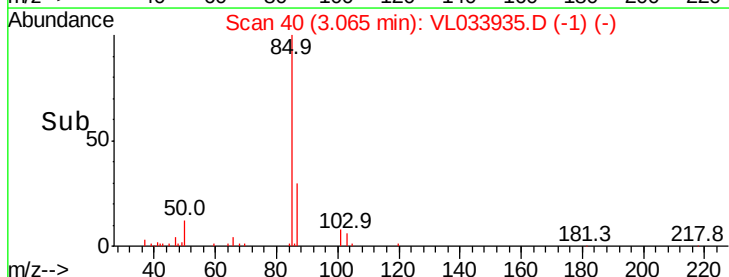
85 100

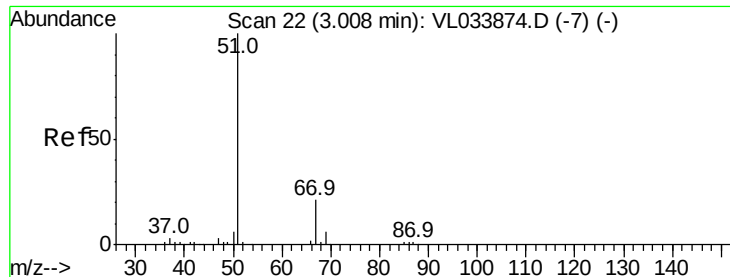
87 30.0 26.6 40.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.457 ppbv

RT: 3.01 min Scan# 22

Delta R.T. -0.00 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

Instrument :

MSVOA_L

ClientSampleId :

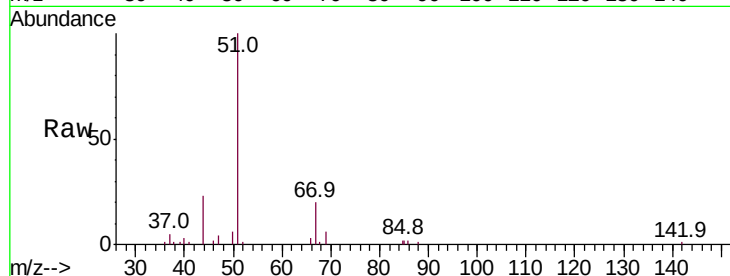
TZC-SSDS-AREA-A-2

Tot Ion: 51 Resp: 52772

Ion Ratio Lower Upper

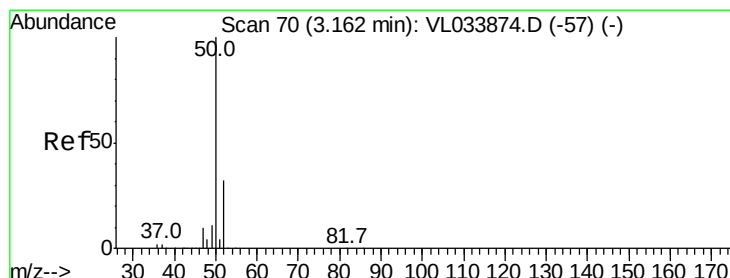
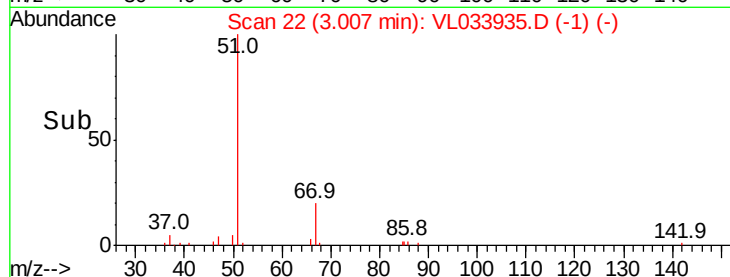
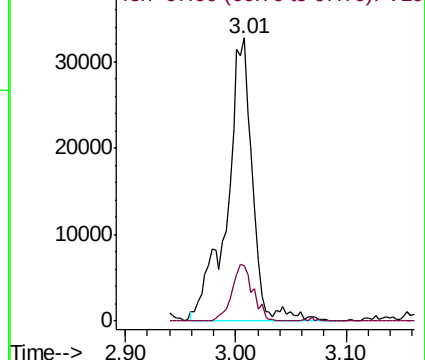
51 100

67 16.5 16.4 24.6



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.405 ppbv

RT: 3.16 min Scan# 70

Delta R.T. -0.00 min

Lab File: VL033935.D

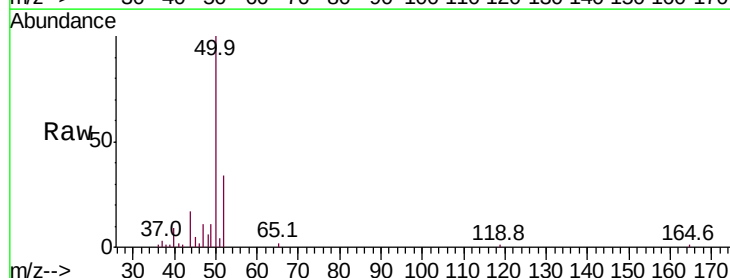
Acq: 24 Jun 2019 13:58

Tgt Ion: 50 Resp: 26715

Ion Ratio Lower Upper

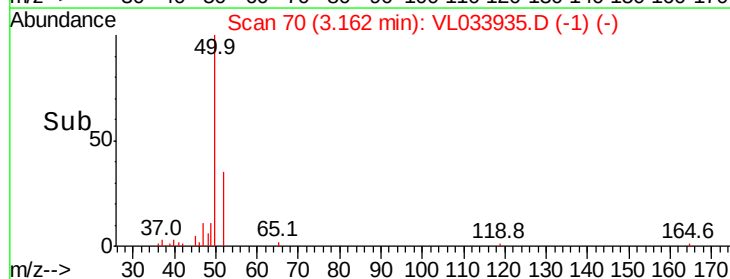
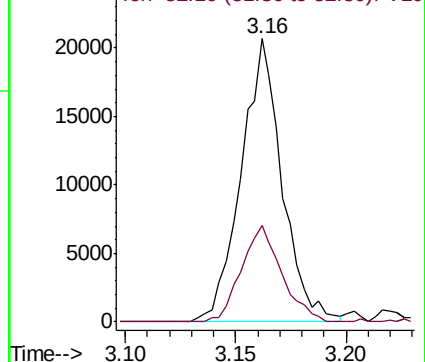
50 100

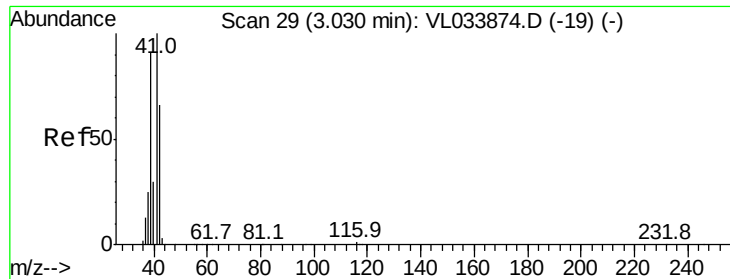
52 34.2 25.4 38.0



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.488 ppbv

RT: 3.04 min Scan# 32

Delta R.T. 0.01 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

Instrument :

MSVOA_L

ClientSampleId :

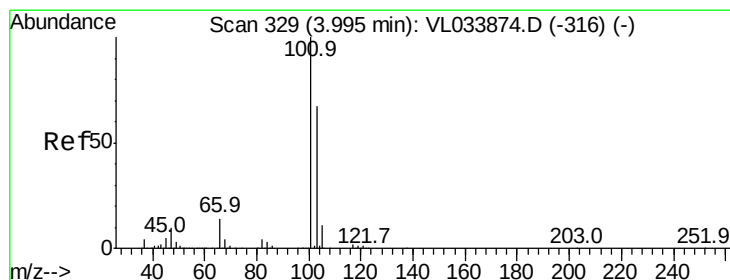
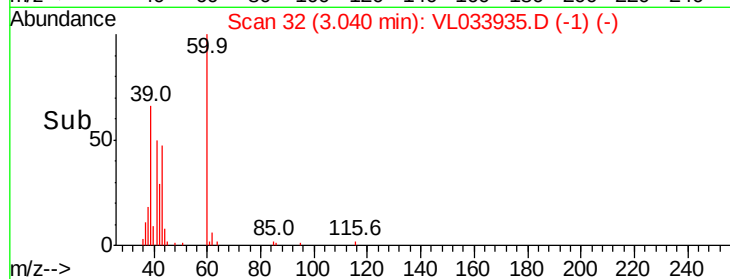
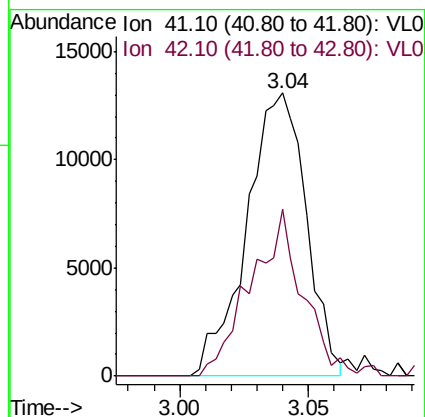
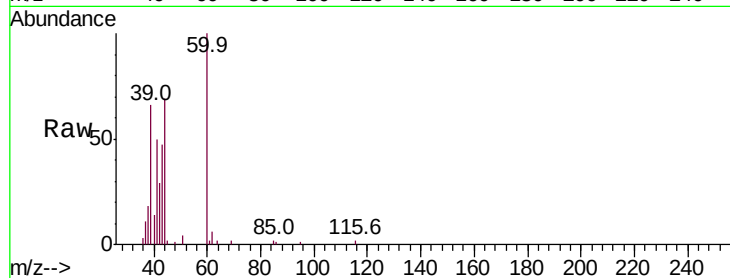
TZC-SSDS-AREA-A-2

Tot Ion: 41 Resp: 21096

Ion Ratio Lower Upper

41 100

42 52.5 56.3 84.5#



#11

Trichlorofluoromethane

Concen: 0.200 ppbv

RT: 3.99 min Scan# 327

Delta R.T. -0.01 min

Lab File: VL033935.D

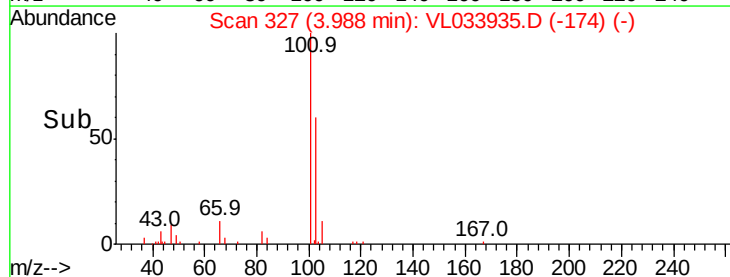
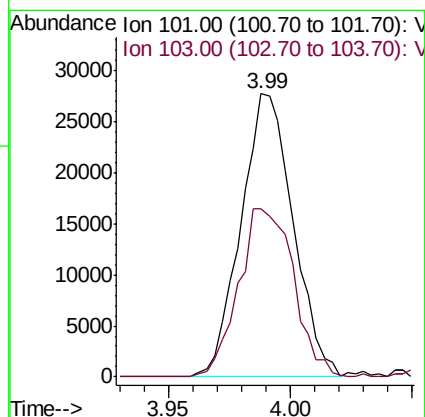
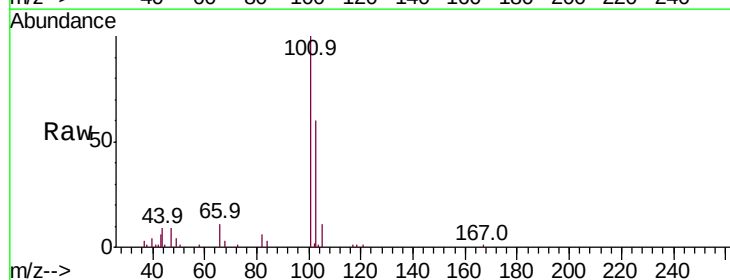
Acq: 24 Jun 2019 13:58

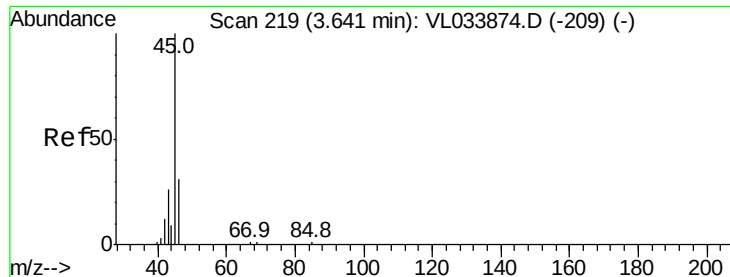
Tgt Ion: 101 Resp: 41172

Ion Ratio Lower Upper

101 100

103 59.5 53.6 80.4

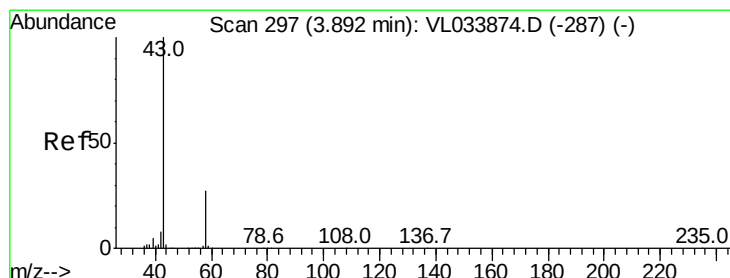
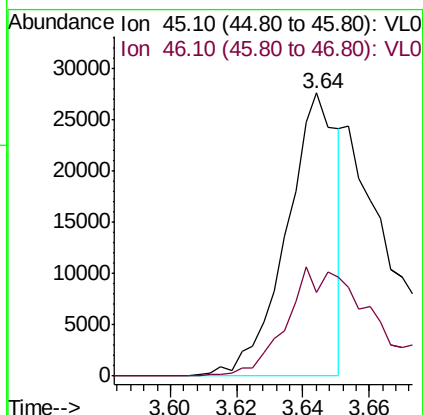
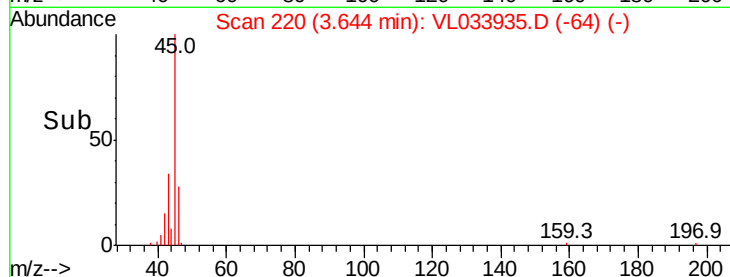
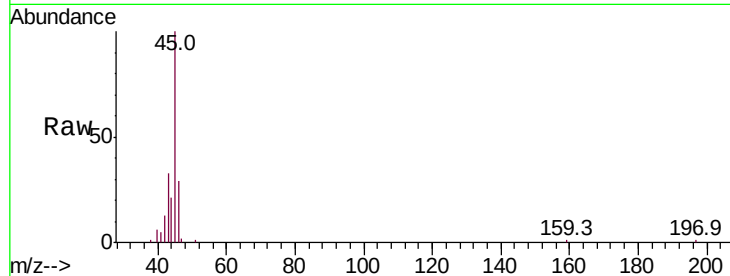




#13
Ethanol
Concen: 2.106 ppbv
RT: 3.64 min Scan# 220
Delta R.T. 0.00 min
Lab File: VL033935.D
Acq: 24 Jun 2019 13:58

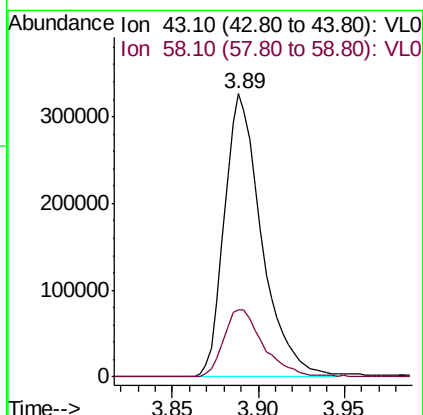
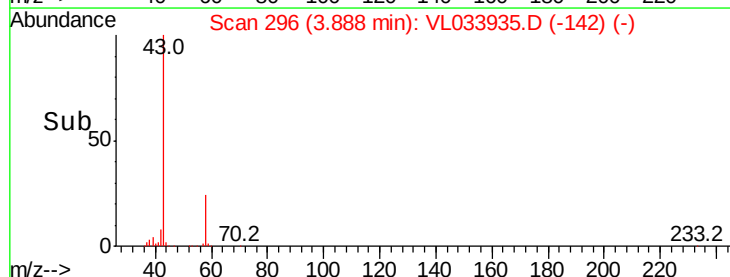
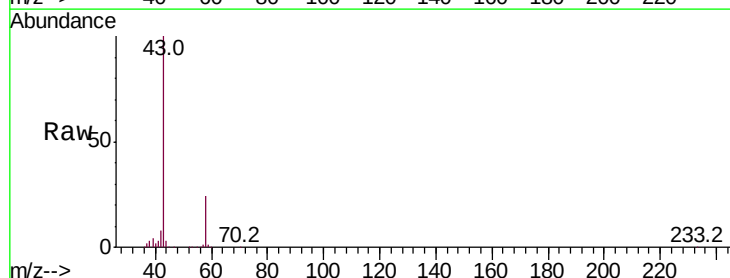
Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-A-2

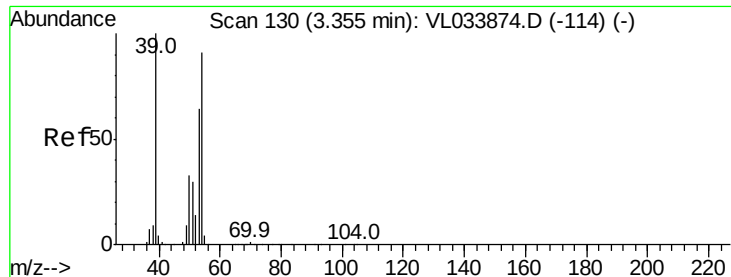
Tot Ion: 45 Resp: 29624
Ion Ratio Lower Upper
45 100
46 72.0 15.3 61.1#



#15
Acetone
Concen: 3.472 ppbv
RT: 3.89 min Scan# 296
Delta R.T. -0.00 min
Lab File: VL033935.D
Acq: 24 Jun 2019 13:58

Tgt Ion: 43 Resp: 497007
Ion Ratio Lower Upper
43 100
58 25.5 21.3 31.9

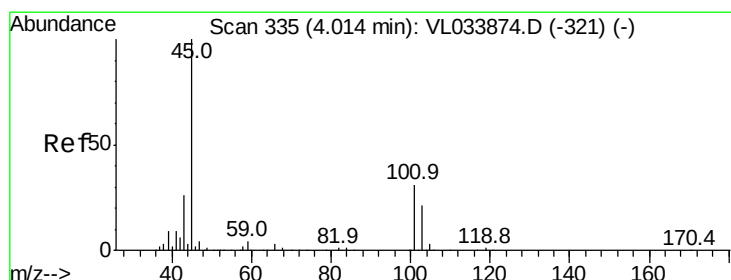
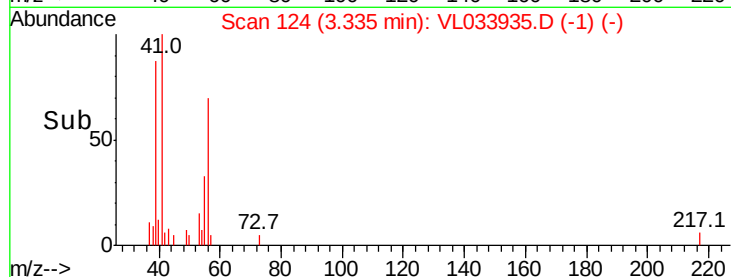
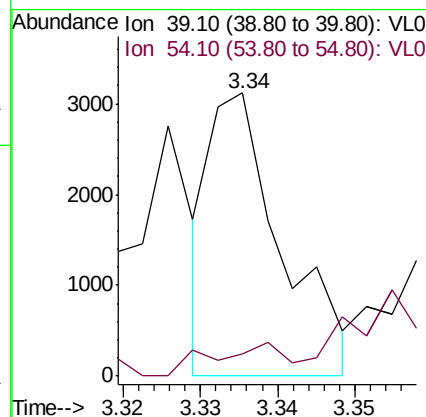
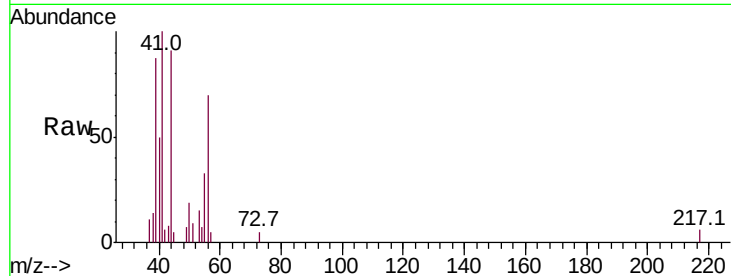




#16
 1,3-Butadiene
 Concen: 0.037 ppbv
 RT: 3.34 min Scan# 124
 Delta R.T. -0.02 min
 Lab File: VL033935.D
 Acq: 24 Jun 2019 13:58

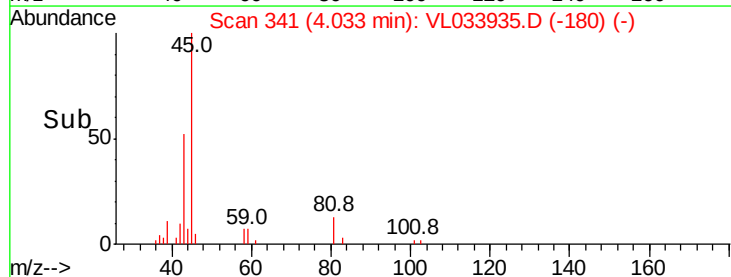
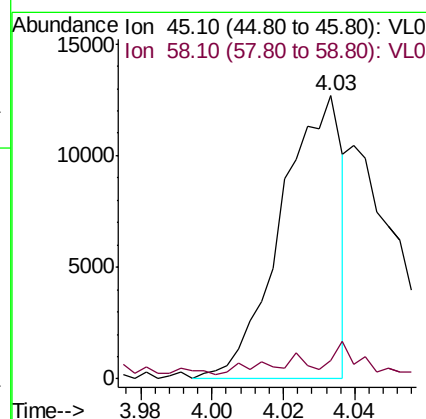
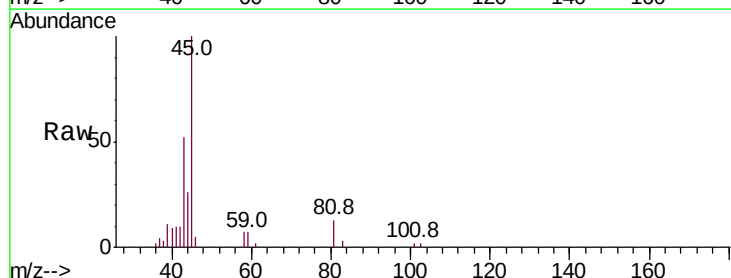
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 TZC-SSDS-AREA-A-2

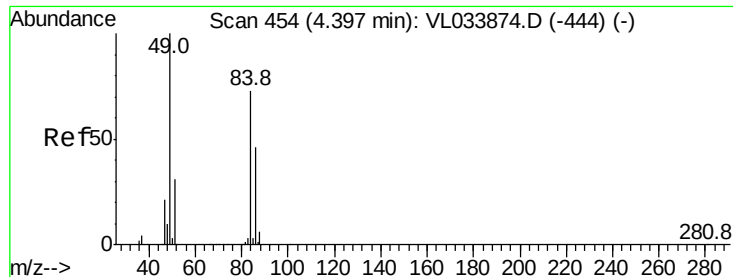
Tot Ion: 39 Resp: 2015
 Ion Ratio Lower Upper
 39 100
 54 0.0 68.6 103.0#



#19
 Isopropyl Alcohol
 Concen: 0.183 ppbv
 RT: 4.03 min Scan# 341
 Delta R.T. 0.02 min
 Lab File: VL033935.D
 Acq: 24 Jun 2019 13:58

Tgt Ion: 45 Resp: 14980
 Ion Ratio Lower Upper
 45 100
 58 0.0 1.8 2.6#

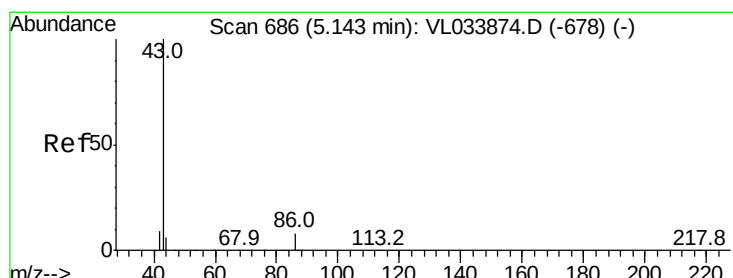
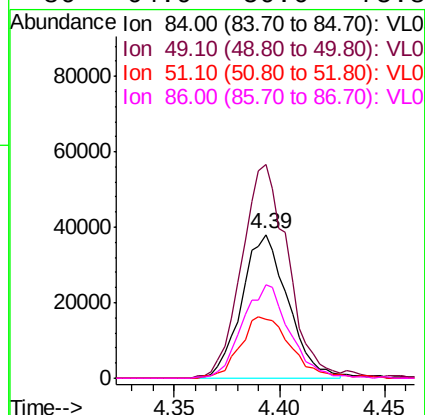
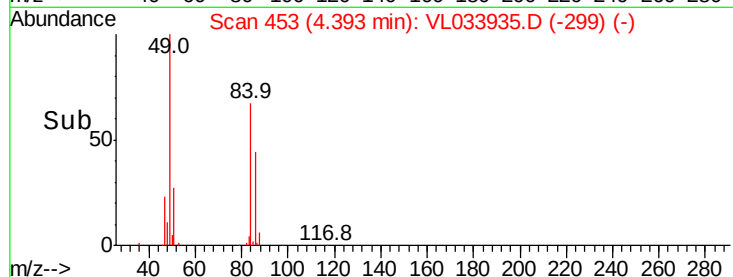
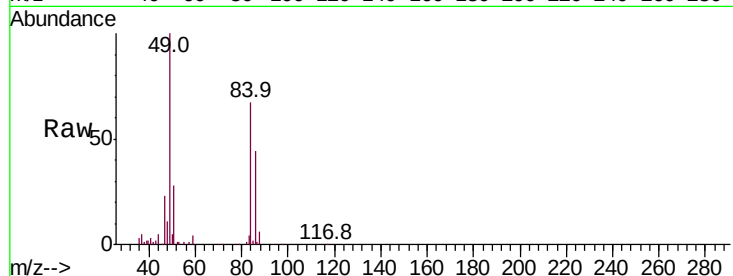




#20
Methvlene Chloride
Concen: 1.040 ppbv
RT: 4.39 min Scan# 453
Delta R.T. -0.00 min
Lab File: VL033935.D
Acq: 24 Jun 2019 13:58

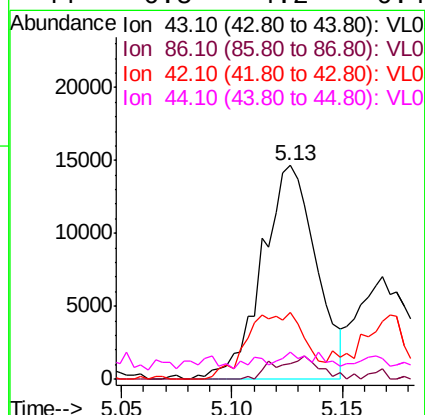
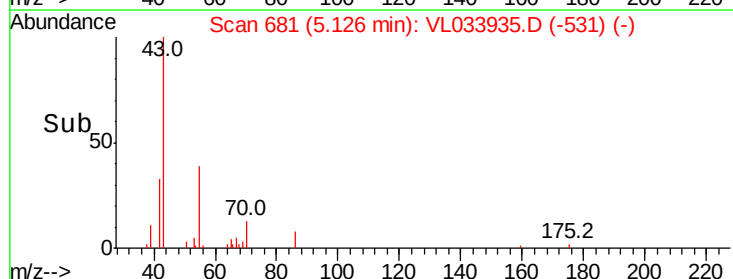
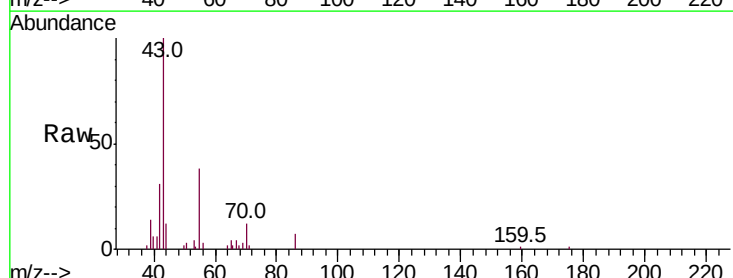
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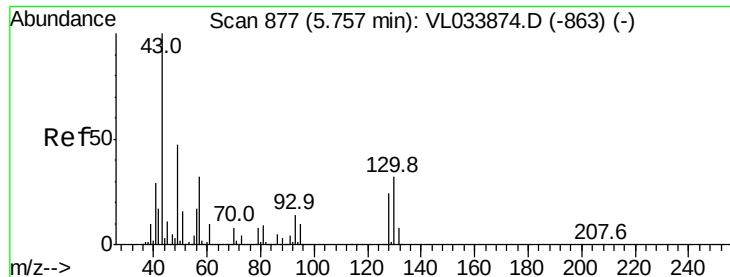
Tot Ion: 84 Resp: 58032
Ion Ratio Lower Upper
84 100
49 148.3 110.0 165.0
51 40.8 34.6 51.8
86 64.9 50.6 75.8



#23
Vinyl Acetate
Concen: 0.149 ppbv
RT: 5.13 min Scan# 681
Delta R.T. -0.02 min
Lab File: VL033935.D
Acq: 24 Jun 2019 13:58

Tgt Ion: 43 Resp: 24789
Ion Ratio Lower Upper
43 100
86 7.3 5.8 8.8
42 31.0 7.8 11.8#
44 6.5 4.2 6.4#





#25

Ethyl Acetate

Concen: 0.226 ppbv

RT: 5.76 min Scan# 877

Delta R.T. -0.00 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-A-2

Tot Ion: 43 Resp: 49361

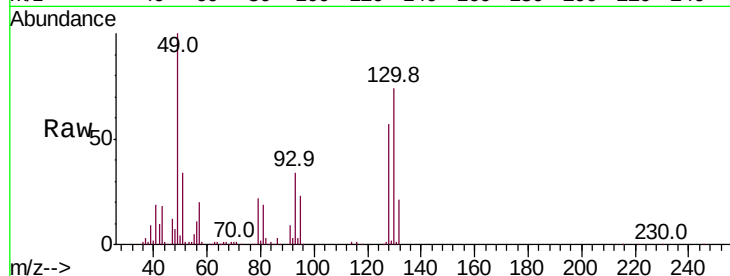
Ion Ratio Lower Upper

43 100

45 3.1 7.9 11.9#

61 2.1 7.8 11.6#

70 3.9 5.8 8.6#

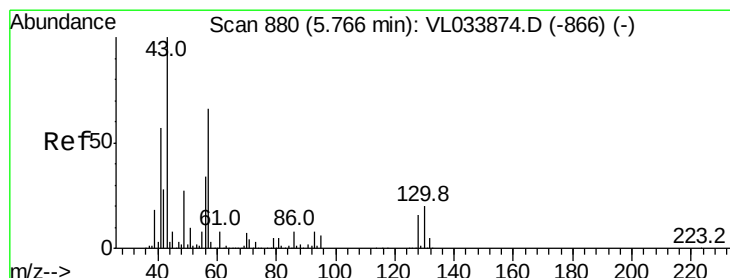
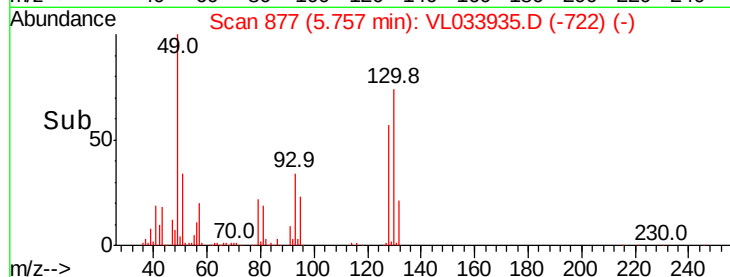
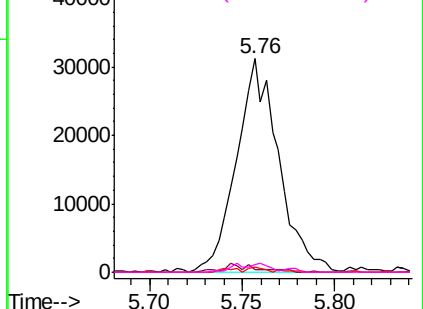


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.587 ppbv

RT: 5.76 min Scan# 878

Delta R.T. -0.01 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

Tgt Ion: 57 Resp: 58262

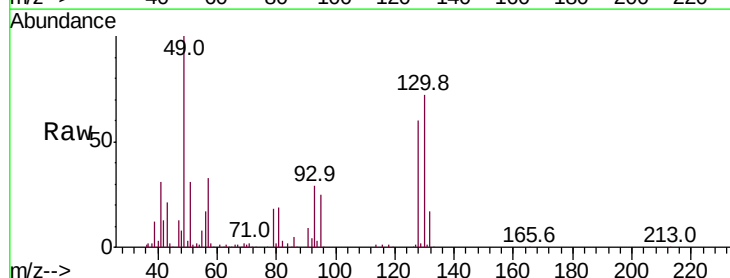
Ion Ratio Lower Upper

57 100

41 104.2 71.4 107.2

43 86.3 183.7 275.5#

56 63.3 42.7 64.1

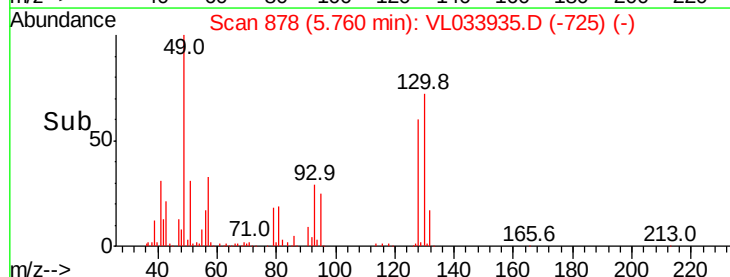
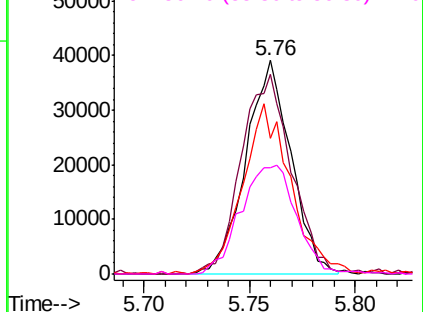


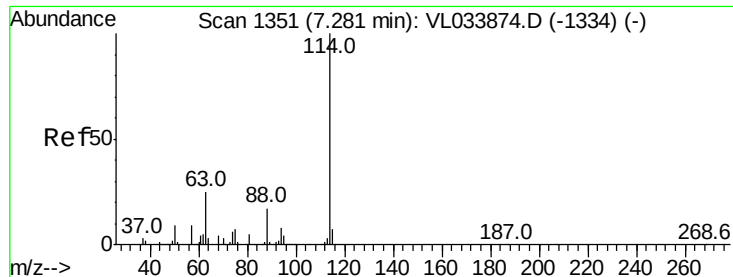
Abundance Ion 57.10 (56.80 to 57.80): VL0

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

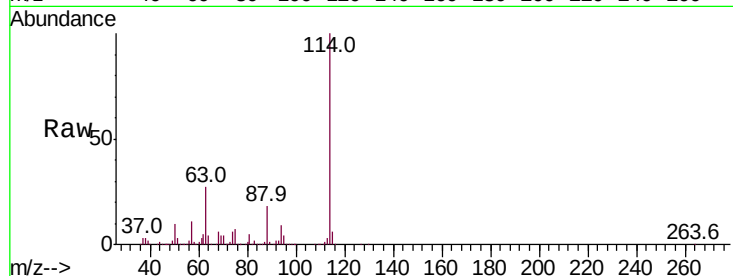




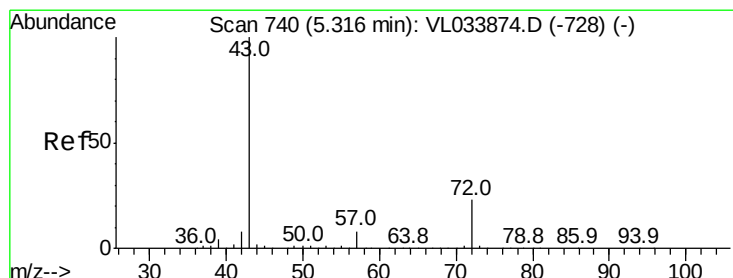
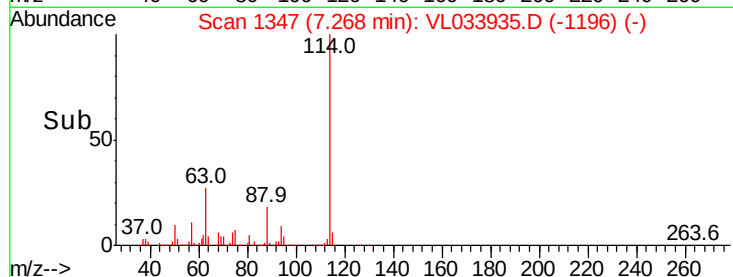
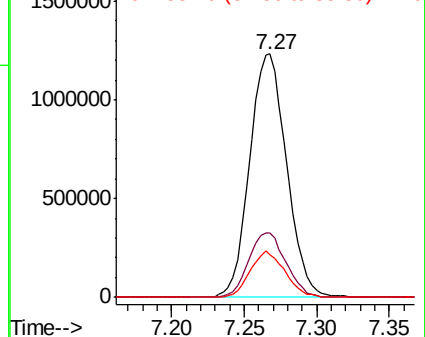
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.27 min Scan# 1347
 Delta R.T. -0.01 min
 Lab File: VL033935.D
 Acq: 24 Jun 2019 13:58

Instrument :
 MSVOA_L
 ClientSampleId :
 TZC-SSDS-AREA-A-2

Tot Ion:114 Resp: 2187762
 Ion Ratio Lower Upper
 114 100
 63 26.9 21.1 31.7
 88 18.0 14.2 21.4

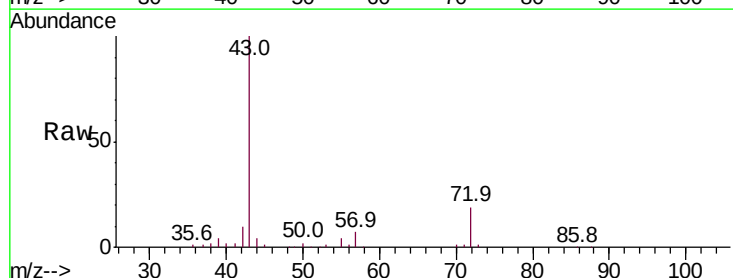


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

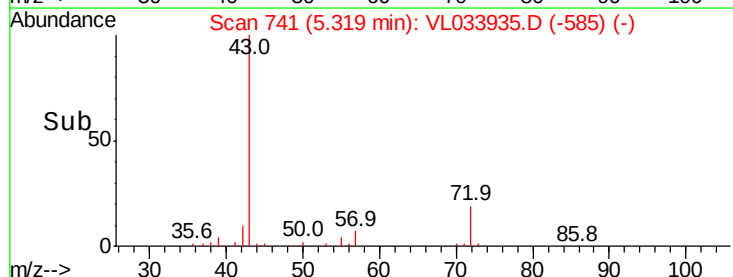
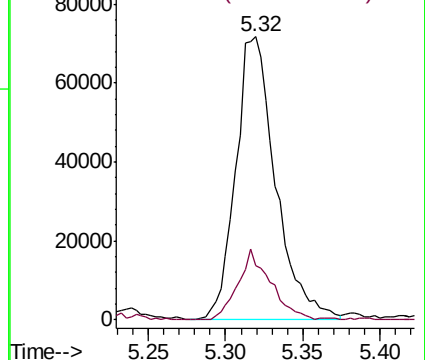


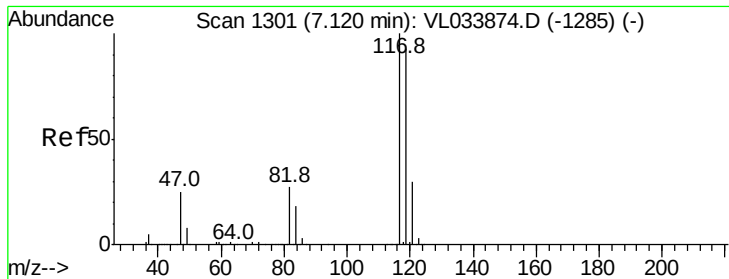
#34
 2-Butanone
 Concen: 1.042 ppbv
 RT: 5.32 min Scan# 741
 Delta R.T. 0.00 min
 Lab File: VL033935.D
 Acq: 24 Jun 2019 13:58

Tgt Ion: 43 Resp: 128628
 Ion Ratio Lower Upper
 43 100
 72 21.1 17.9 26.9



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.039 ppbv

RT: 7.11 min Scan# 1297

Delta R.T. -0.01 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-A-2

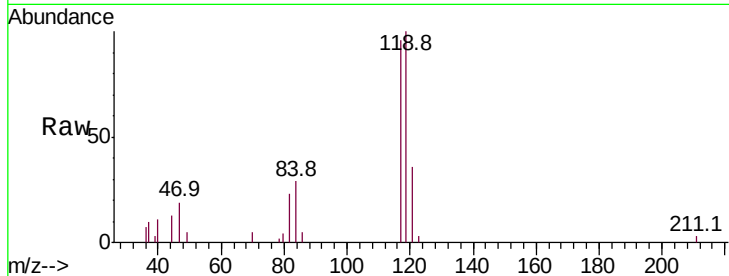
Tot Ion:117 Resp: 6564

Ion Ratio Lower Upper

117 100

119 109.0 74.6 111.8

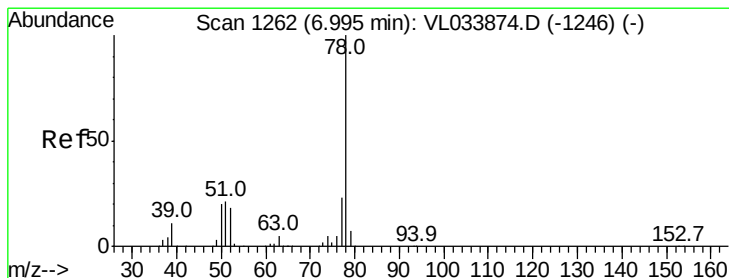
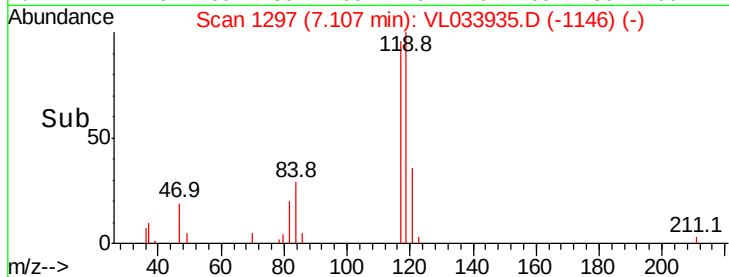
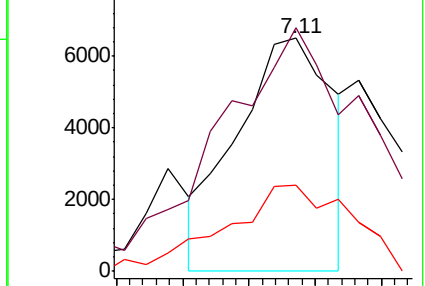
121 34.2 24.0 36.0



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.061 ppbv

RT: 6.98 min Scan# 1258

Delta R.T. -0.01 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

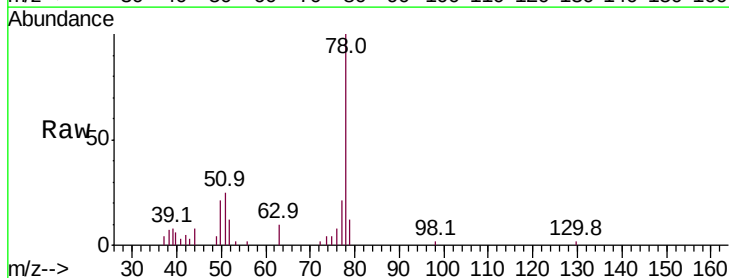
Tgt Ion: 78 Resp: 10206

Ion Ratio Lower Upper

78 100

77 16.0 18.2 27.2#

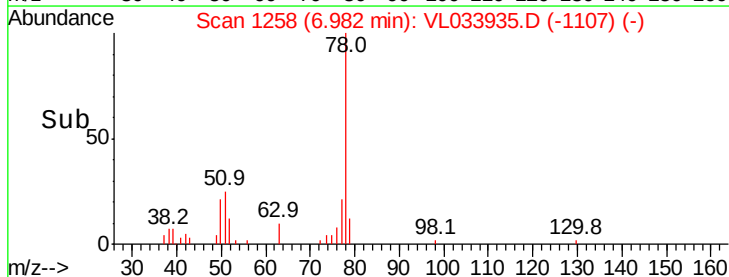
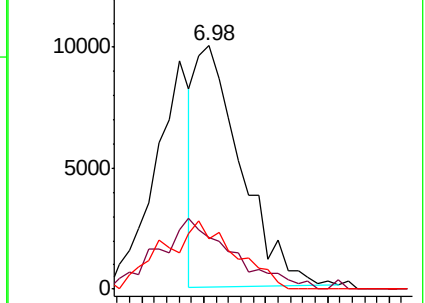
50 21.1 15.9 23.9

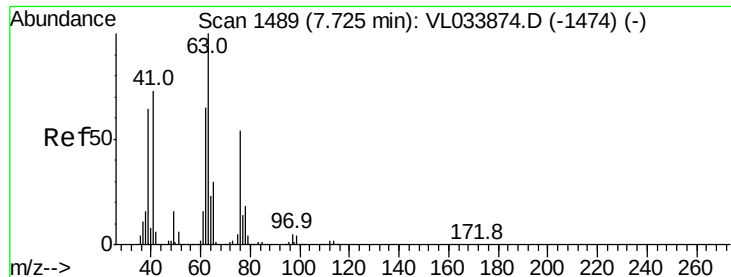


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0





#39

1,2-Dichloropropane

Concen: 9.059 ppbv

RT: 7.27 min Scan# 1347

Delta R.T. -0.46 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-A-2

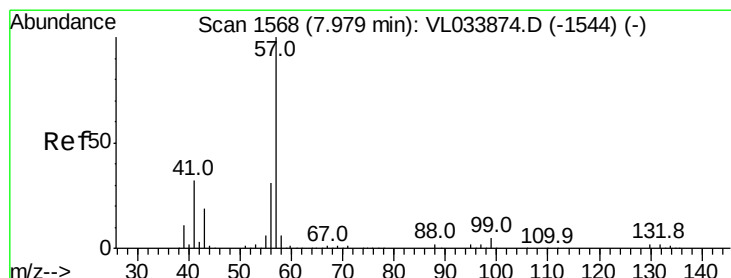
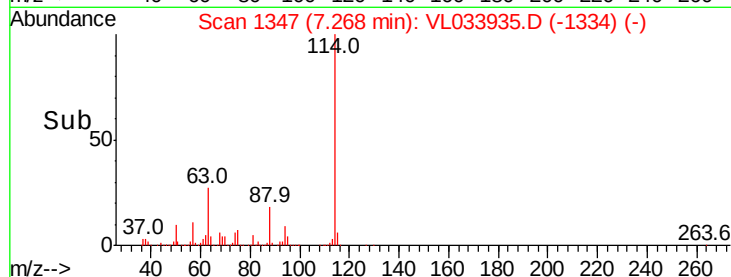
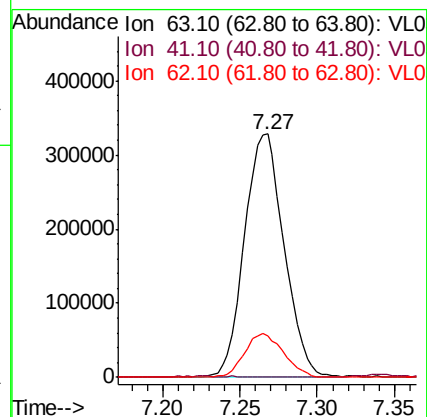
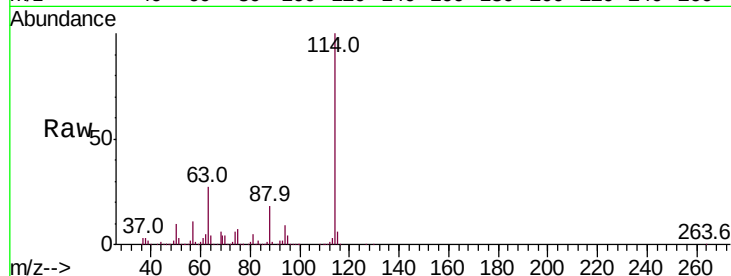
Tot Ion: 63 Resp: 584304

Ion Ratio Lower Upper

63 100

41 0.0 58.7 88.1#

62 17.1 51.9 77.9#



#44

2,2,4-Trimethylpentane

Concen: 0.039 ppbv

RT: 7.96 min Scan# 1563

Delta R.T. -0.02 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

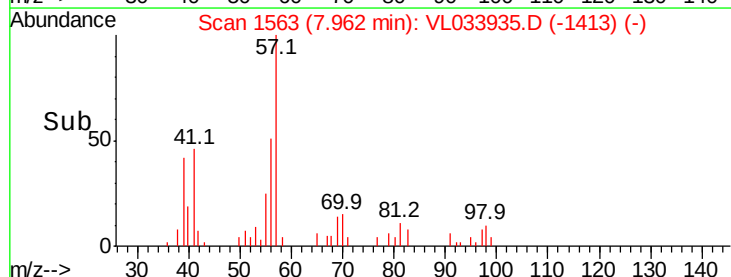
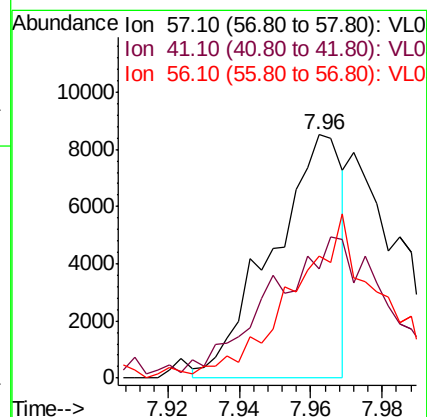
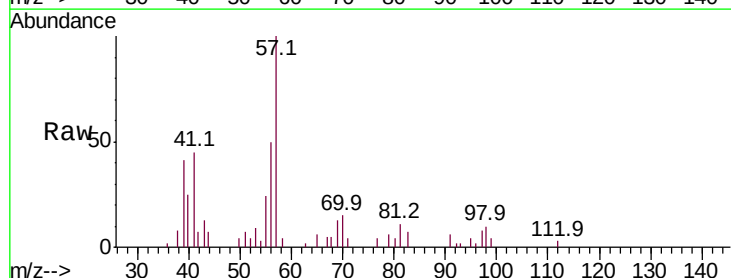
Tgt Ion: 57 Resp: 11516

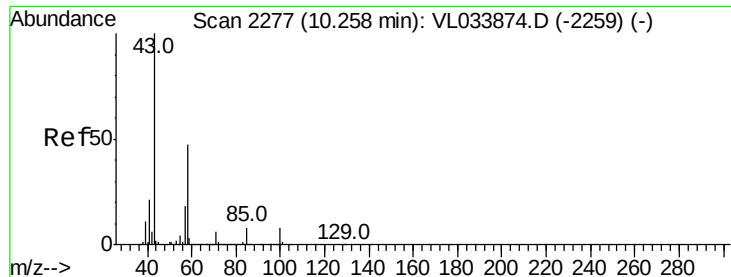
Ion Ratio Lower Upper

57 100

41 0.0 26.1 39.1#

56 0.0 24.6 36.8#

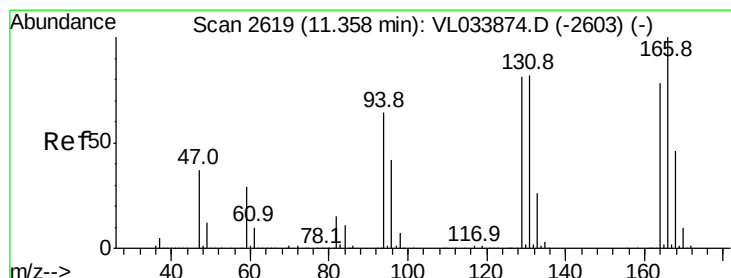
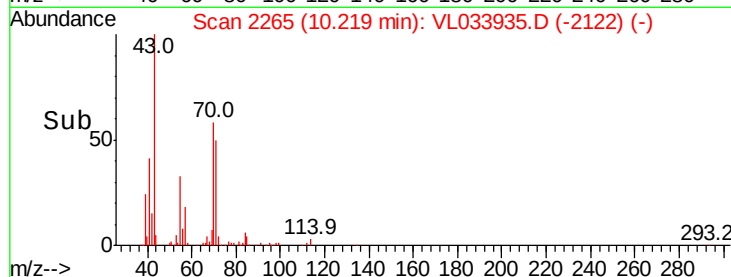
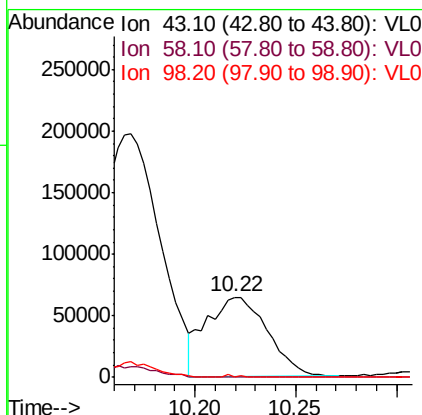
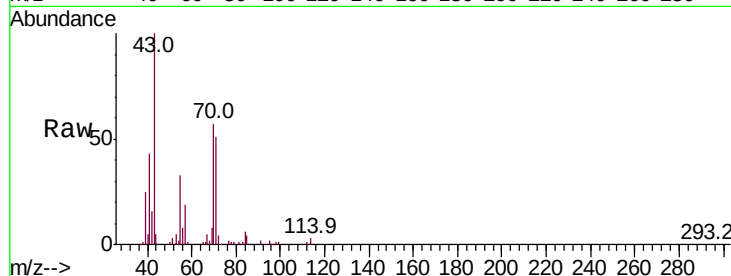




#51
2-Hexanone
Concen: 0.944 ppbv
RT: 10.22 min Scan# 2265
Delta R.T. -0.04 min
Lab File: VL033935.D
Acq: 24 Jun 2019 13:58

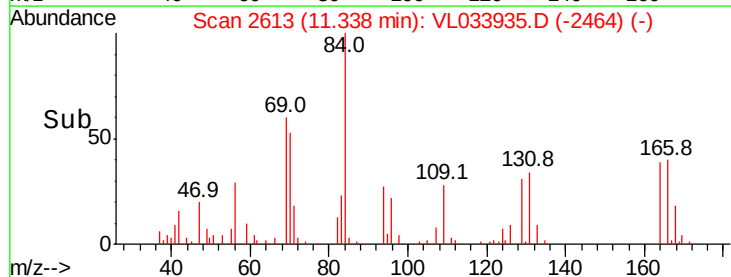
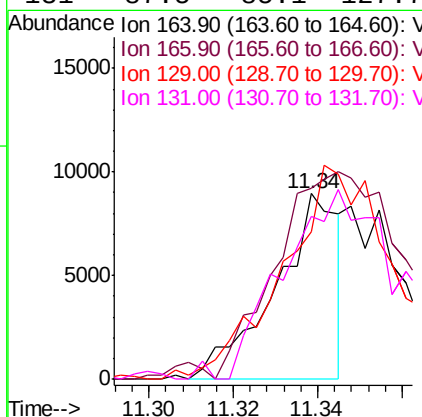
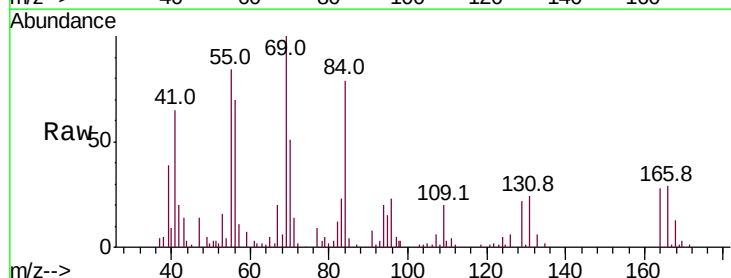
Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-A-2

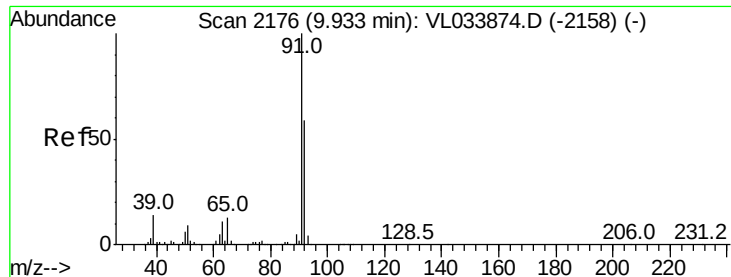
Tot Ion: 43 Resp: 135657
Ion Ratio Lower Upper
43 100
58 0.5 38.2 57.4#
98 0.0 0.2 0.2#



#52
Tetrachloroethene
Concen: 0.158 ppbv
RT: 11.34 min Scan# 2613
Delta R.T. -0.02 min
Lab File: VL033935.D
Acq: 24 Jun 2019 13:58

Tgt Ion:164 Resp: 9278
Ion Ratio Lower Upper
164 100
166 93.8 103.1 154.7#
129 77.5 83.9 125.9#
131 87.5 85.1 127.7





#53

Toluene

Concen: 1.104 ppbv

RT: 9.92 min Scan# 2171

Delta R.T. -0.02 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

Instrument :

MSVOA_L

ClientSampleId :

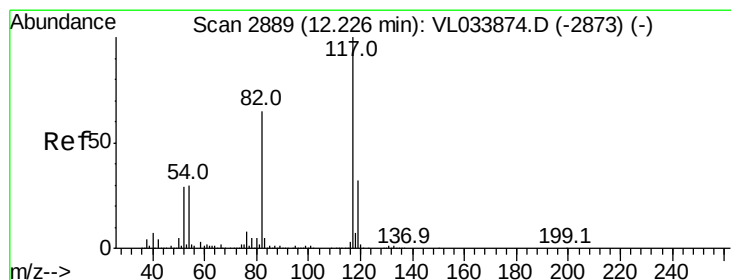
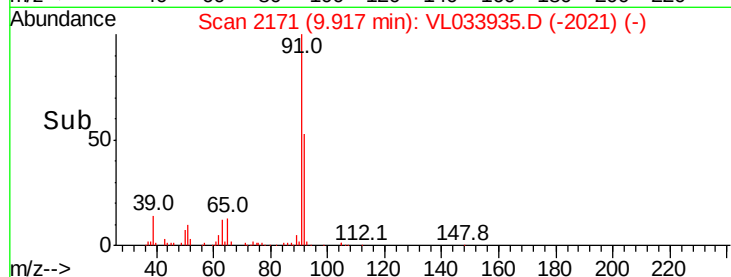
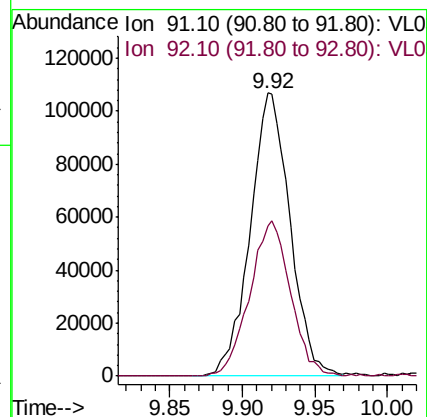
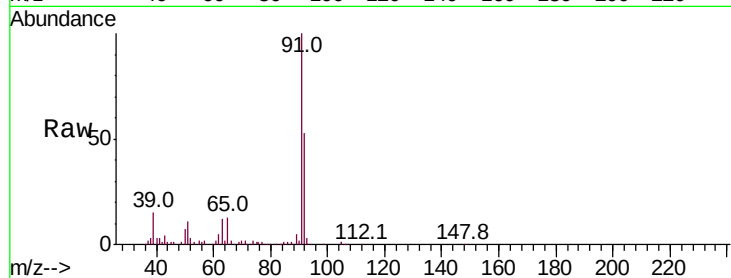
TZC-SSDS-AREA-A-2

Tot Ion: 91 Resp: 204189

Ion Ratio Lower Upper

91 100

92 56.6 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: VL033935.D

Acq: 24 Jun 2019 13:58

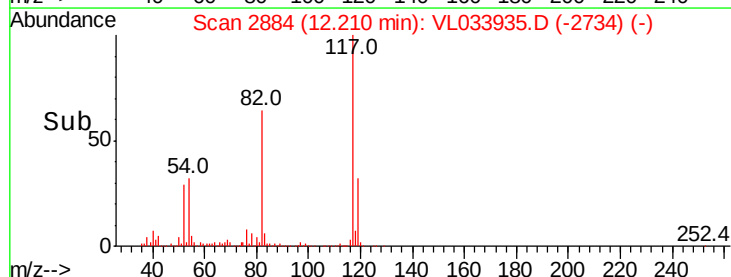
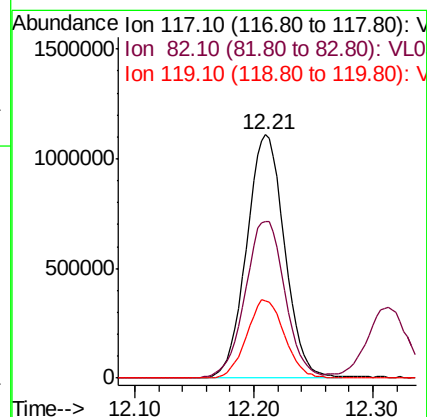
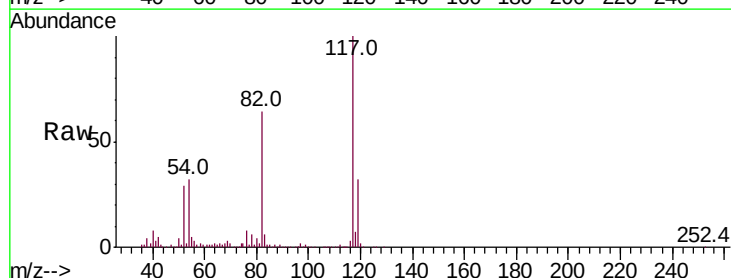
Tgt Ion: 117 Resp: 2452396

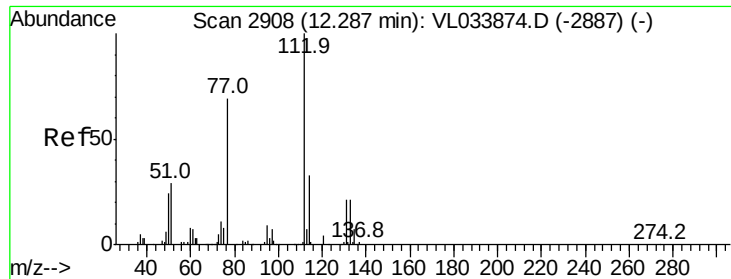
Ion Ratio Lower Upper

117 100

82 67.7 50.2 75.2

119 32.4 24.8 37.2

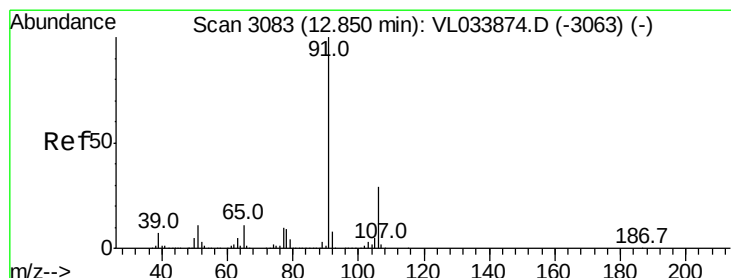
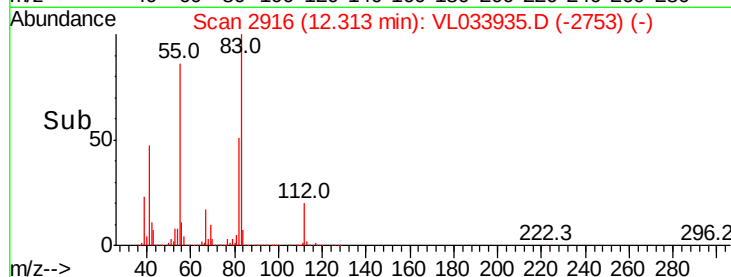
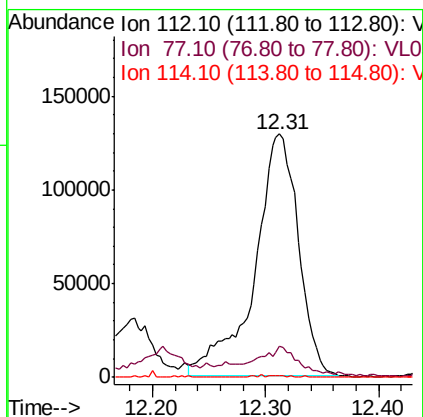
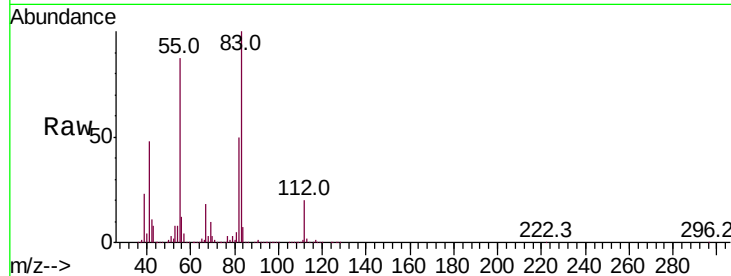




#57
Chlorobenzene
Concen: 1.895 ppbv
RT: 12.31 min Scan# 2916
Delta R.T. 0.03 min
Lab File: VL033935.D
Acq: 24 Jun 2019 13:58

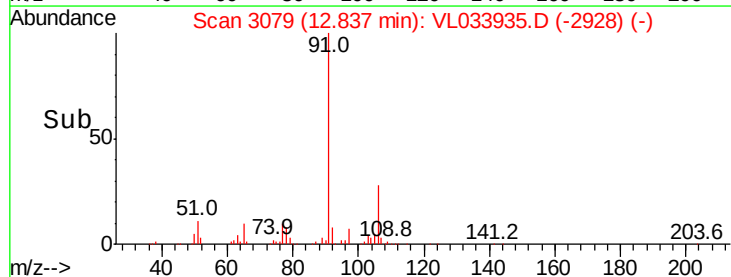
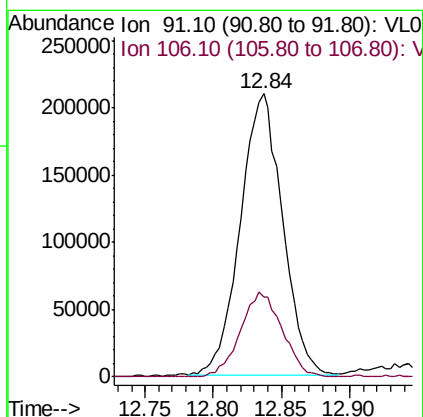
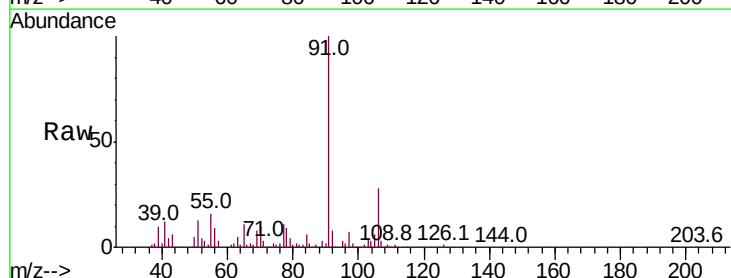
Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-A-2

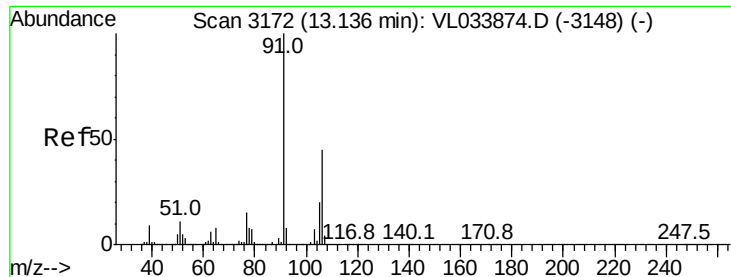
Tot Ion:112 Resp: 348071
Ion Ratio Lower Upper
112 100
77 10.5 55.8 83.6#
114 0.7 29.8 36.4#



#58
Ethyl Benzene
Concen: 1.634 ppbv
RT: 12.84 min Scan# 3079
Delta R.T. -0.01 min
Lab File: VL033935.D
Acq: 24 Jun 2019 13:58

Tgt Ion: 91 Resp: 451654
Ion Ratio Lower Upper
91 100
106 28.2 23.0 34.6

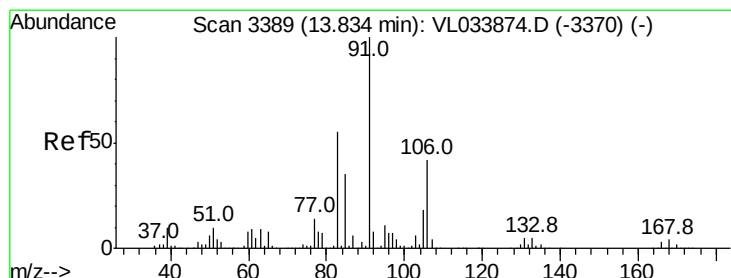
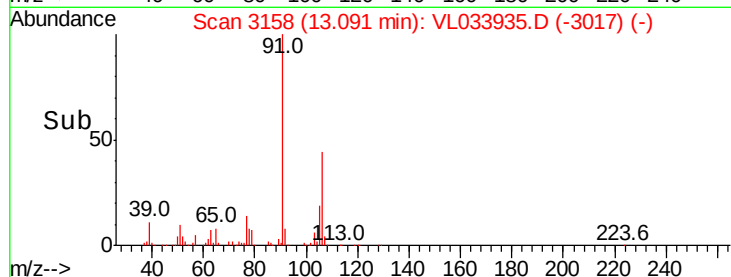
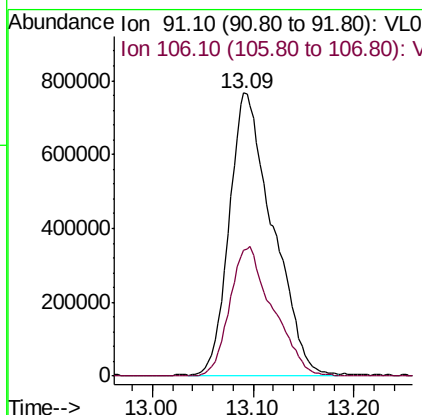
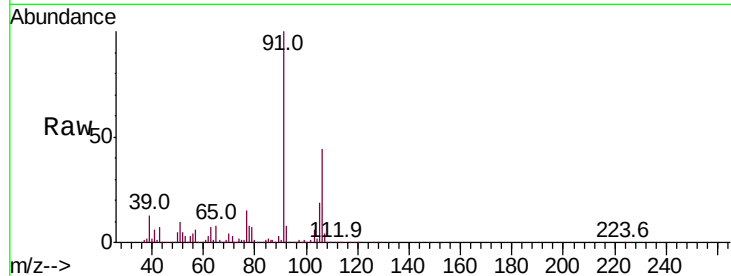




#59
m/p-Xylene
Concen: 9.071 ppbv
RT: 13.09 min Scan# 3158
Delta R.T. -0.05 min
Lab File: VL033935.D
Acq: 24 Jun 2019 13:58

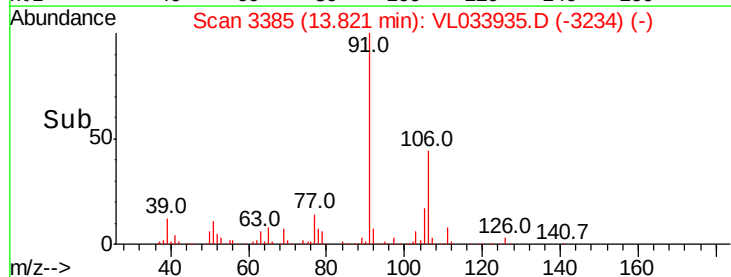
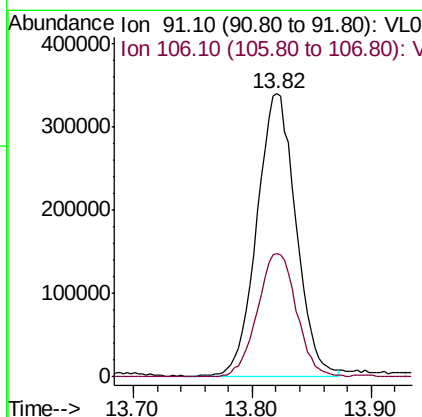
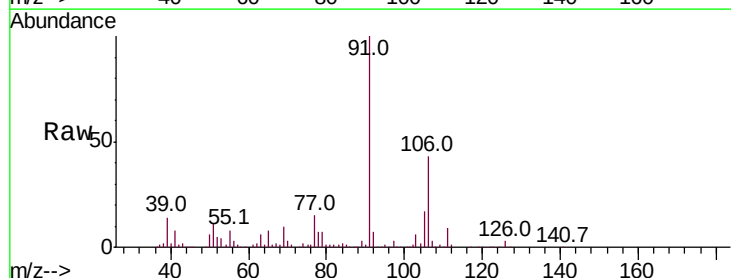
Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-A-2

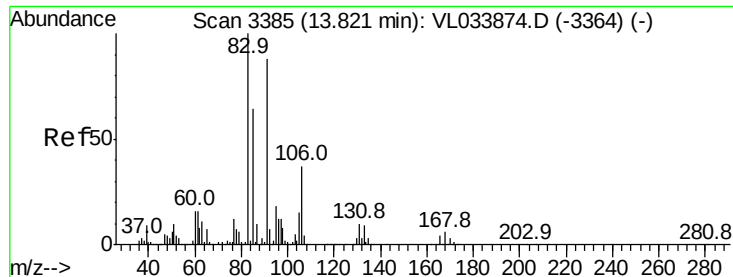
Tot Ion: 91 Resp: 2280735
Ion Ratio Lower Upper
91 100
106 46.0 35.8 53.8



#60
o-Xylene
Concen: 2.953 ppbv
RT: 13.82 min Scan# 3385
Delta R.T. -0.01 min
Lab File: VL033935.D
Acq: 24 Jun 2019 13:58

Tgt Ion: 91 Resp: 766573
Ion Ratio Lower Upper
91 100
106 44.4 21.7 65.1





#63

1,1,2,2-Tetrachloroethane

Concen: 0.087 ppbv

RT: 13.79 min Scan# 3377

Delta R.T. -0.03 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-A-2

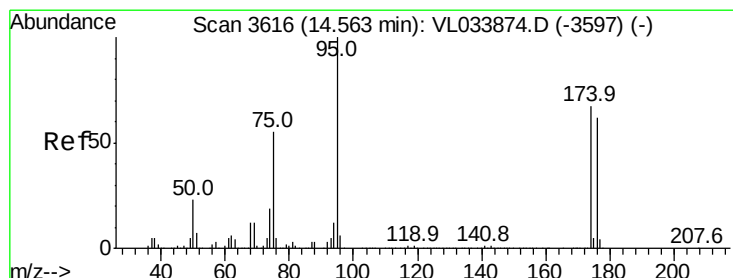
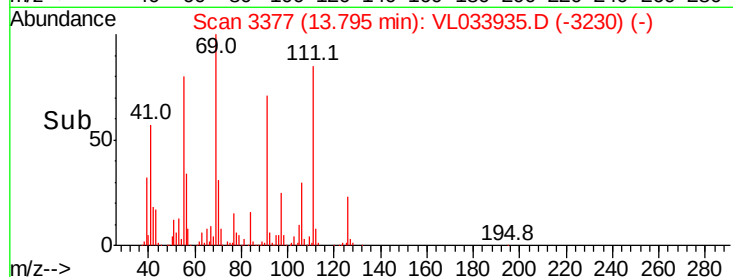
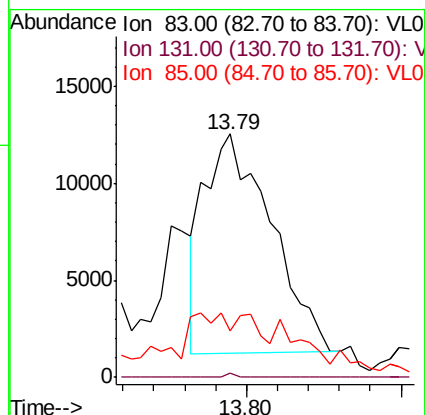
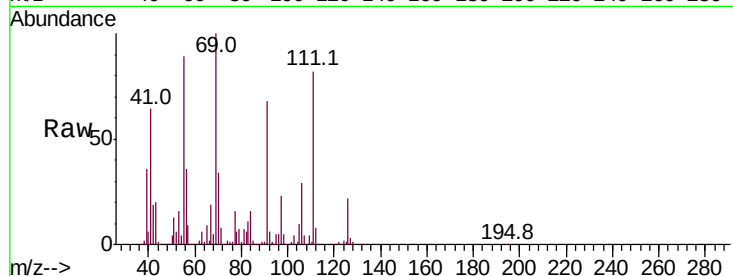
Tot Ion: 83 Resp: 16957

Ion Ratio Lower Upper

83 100

131 0.3 4.8 14.4#

85 0.0 32.1 96.3#



#68

1-Bromo-4-Fluorobenzene

Concen: 10.399 ppbv

RT: 14.55 min Scan# 3611

Delta R.T. -0.02 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

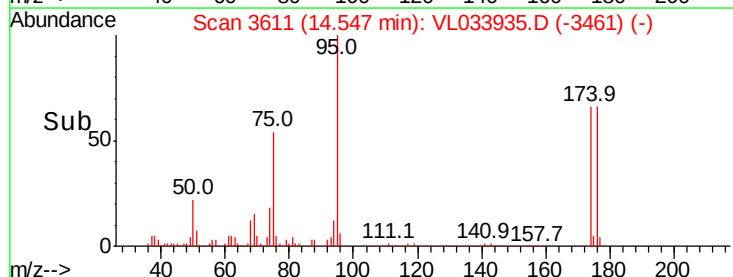
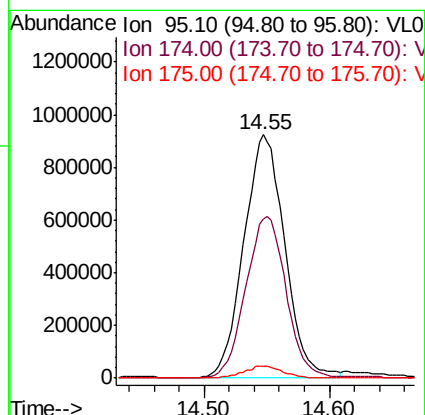
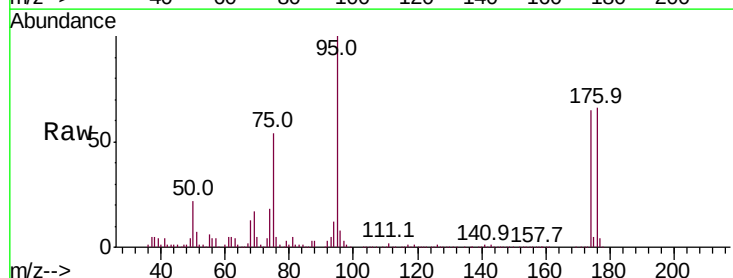
Tgt Ion: 95 Resp: 2094760

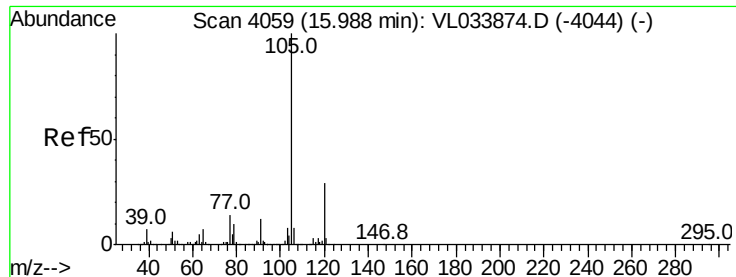
Ion Ratio Lower Upper

95 100

174 66.3 54.0 81.0

175 4.8 3.8 5.8





#72

4-Ethyltoluene

Concen: 0.056 ppbv

RT: 15.98 min Scan# 4057

Delta R.T. -0.01 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

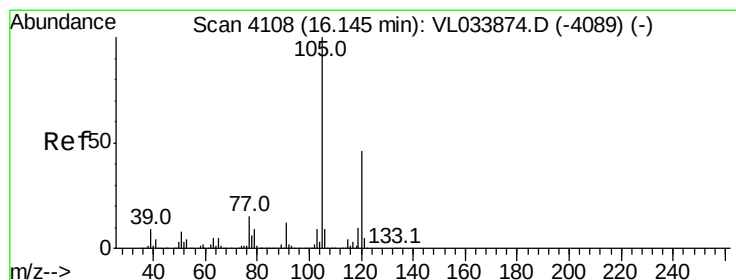
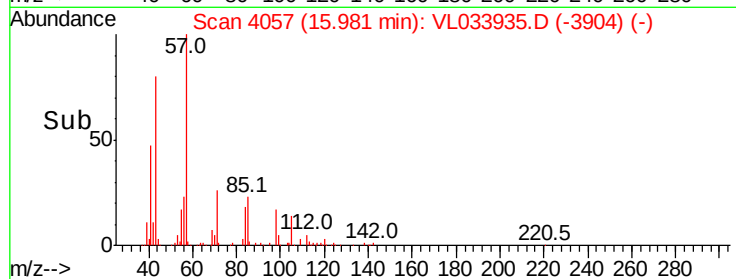
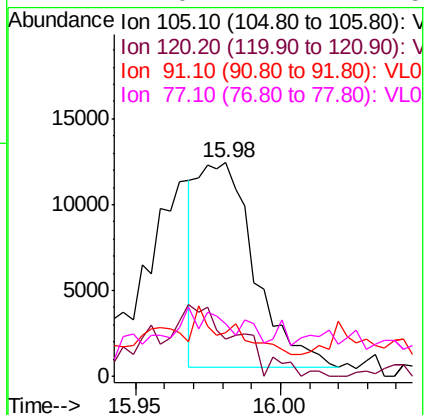
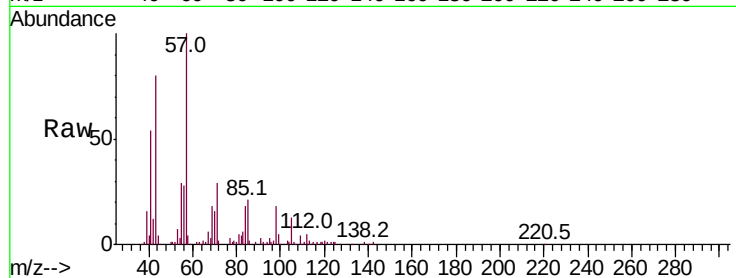
Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-A-2

Tot Ion:	105	Resp:	16401
Ion	Ratio	Lower	Upper
105	100		
120	47.0	23.5	35.3#
91	36.7	10.4	15.6#
77	42.0	11.7	17.5#



#73

1,3,5-Trimethylbenzene

Concen: 0.099 ppbv

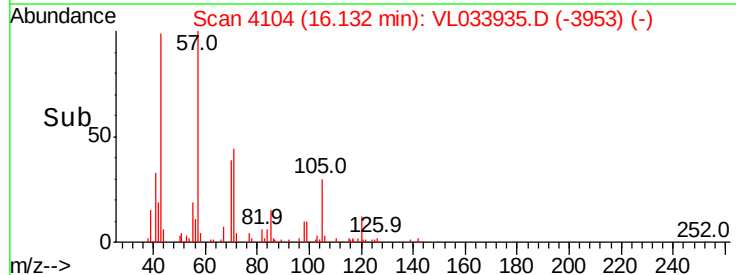
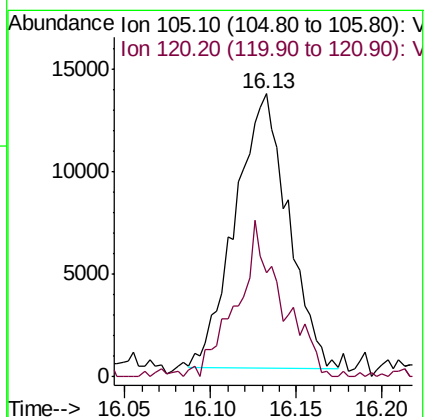
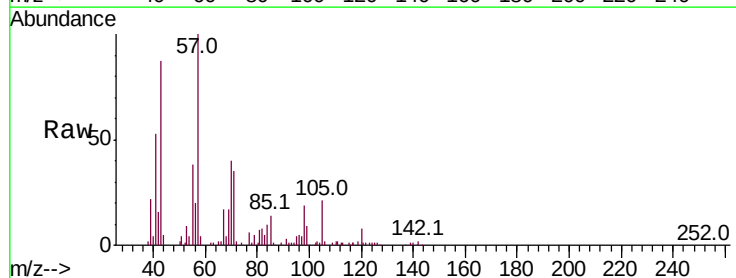
RT: 16.13 min Scan# 4104

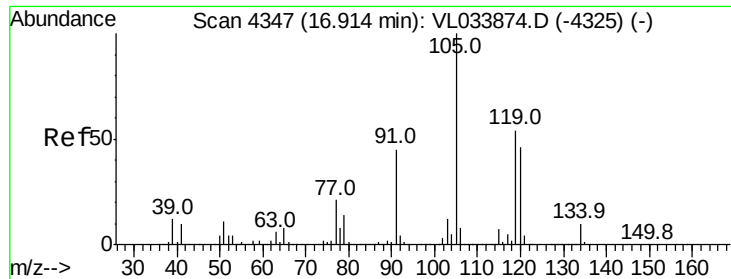
Delta R.T. -0.01 min

Lab File: VL033935.D

Acq: 24 Jun 2019 13:58

Tgt Ion:	105	Resp:	28727
Ion	Ratio	Lower	Upper
105	100		
120	41.6	37.1	55.7





#74
 1,2,4-Trimethylbenzene
 Concen: 0.258 ppbv
 RT: 16.89 min Scan# 4341
 Delta R.T. -0.02 min
 Lab File: VL033935.D
 Acq: 24 Jun 2019 13:58

Instrument :
 MSVOA_L
 ClientSampleId :
 TZC-SSDS-AREA-A-2

Tot Ion:	105	Resp:	86402
Ion Ratio	Lower	Upper	
105	100		
120	45.1	36.7	55.1
91	12.5	35.8	53.8#
77	21.4	16.9	25.3

