

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL062419\
 Data File : VL033940.D
 Acq On : 24 Jun 2019 17:18
 Operator : SY/AP
 Sample : K3481-08
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

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

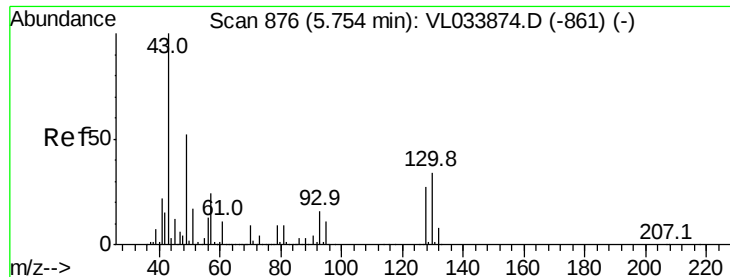
Quant Time: Jun 25 03:38:58 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL060719AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Jun 07 08:53:27 2019
 QLast Update : Fri Jun 07 08:53:27 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.74	49	948239	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.27	114	2392895	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.21	117	2401035	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.54	95	1930399	9.79	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	97.90%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.07	85	52100	0.339 ppbv	97
3) Chlorodifluoromethane	3.01	51	258269	2.314 ppbv #	90
4) Chloromethane	3.17	50	39996	0.628 ppbv #	88
7) Chloroethane	3.59	64	1286	0.055 ppbv	89
9) Propene	3.04	41	25293	0.606 ppbv #	82
11) Trichlorofluoromethane	3.99	101	42554	0.214 ppbv	94
12) 1,1,2-Trichlorotrifluoroet	4.54	101	9150	0.068 ppbv	95
13) Ethanol	3.64	45	153838	11.320 ppbv	99
15) Acetone	3.89	43	803048	5.807 ppbv	99
17) tert-Butyl alcohol	4.35	59	63511	0.587 ppbv	100
19) Isopropyl Alcohol	4.02	45	115457	1.461 ppbv #	1
20) Methylene Chloride	4.39	84	132706	2.461 ppbv	97
21) Allyl Chloride	4.39	41	5021	0.064 ppbv #	68
23) Vinyl Acetate	5.13	43	52575	0.327 ppbv #	1
25) Ethyl Acetate	5.76	43	154581	0.734 ppbv #	79
26) Hexane	5.76	57	210388	2.194 ppbv #	41
34) 2-Butanone	5.32	43	110175	0.816 ppbv	94
35) Carbon Tetrachloride	7.11	117	8051	0.044 ppbv #	75
36) Benzene	6.98	78	34121	0.187 ppbv	96
39) 1,2-Dichloropropane	7.27	63	572542	8.116 ppbv #	25
41) Tetrahydrofuran	6.10	42	3128	0.046 ppbv #	67
44) 2,2,4-Trimethylpentane	7.97	57	29136	0.090 ppbv #	53
53) Toluene	9.92	91	3198555	15.813 ppbv	98
58) Ethyl Benzene	12.83	91	1413939	5.223 ppbv	97
59) m/p-Xylene	13.09	91	5009912	20.352 ppbv	97
60) o-Xylene	13.82	91	1546176	6.083 ppbv	98
64) n-propylbenzene	15.70	120	2657	0.030 ppbv #	1
73) 1,3,5-Trimethylbenzene	16.13	105	15395	0.054 ppbv #	82
74) 1,2,4-Trimethylbenzene	16.89	105	45722	0.139 ppbv #	76

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.74 min Scan# 871

Delta R.T. -0.02 min

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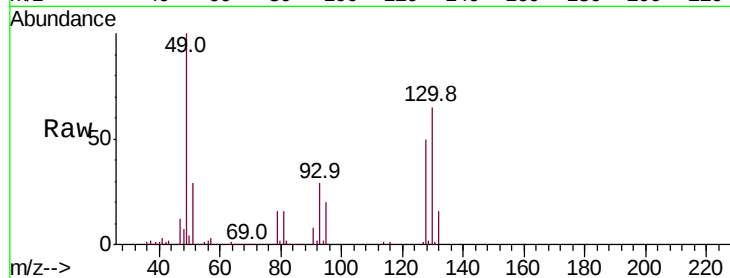
Tot Ion: 49 Resp: 948239

Ion Ratio Lower Upper

49 100

128 52.4 25.5 76.5

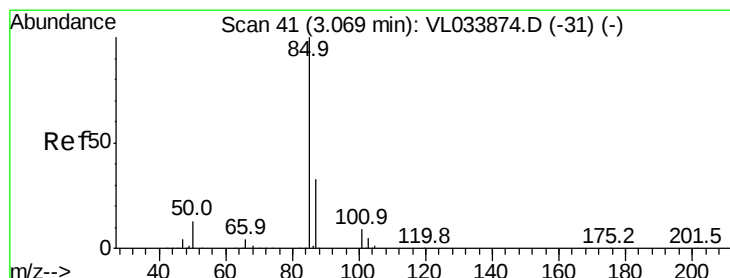
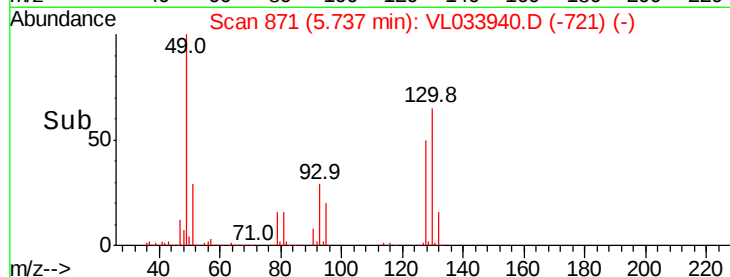
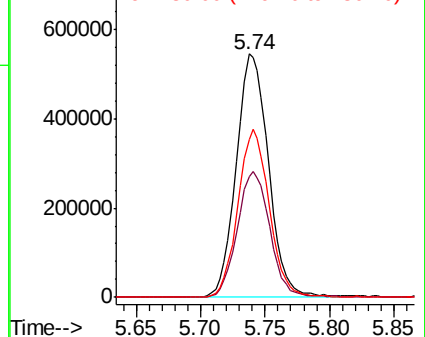
130 67.5 32.5 97.4



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: 0.339 ppbv

RT: 3.07 min Scan# 41

Delta R.T. -0.00 min

Lab File: VL033940.D

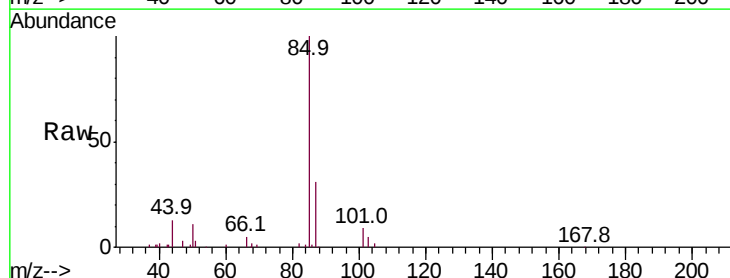
Acq: 24 Jun 2019 17:18

Tgt Ion: 85 Resp: 52100

Ion Ratio Lower Upper

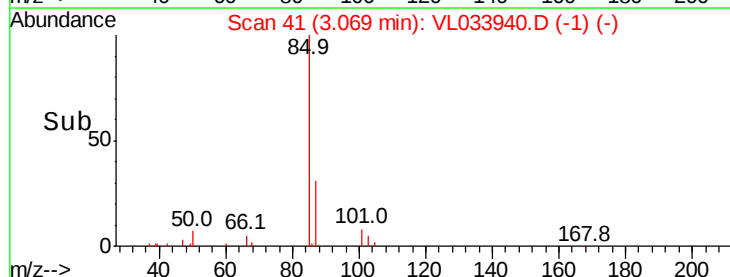
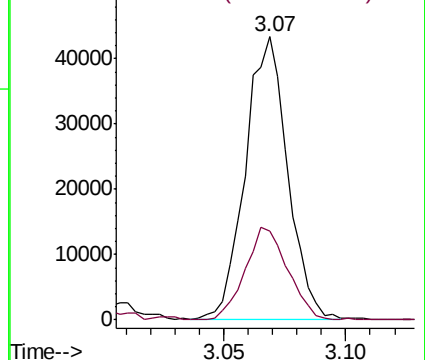
85 100

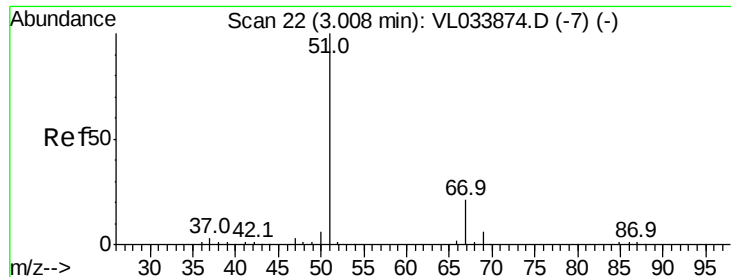
87 31.3 26.6 40.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

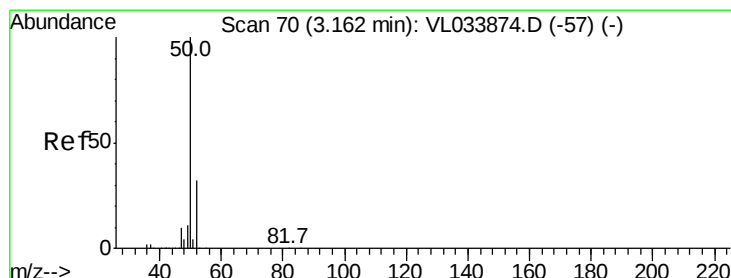
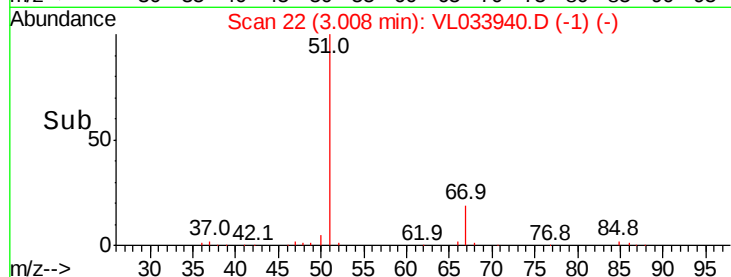
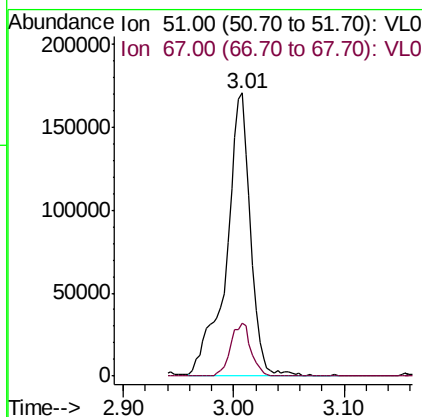
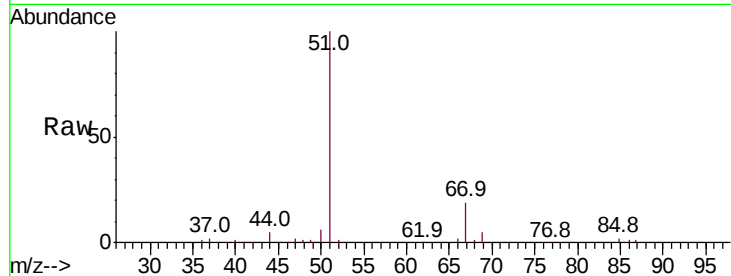




#3
Chlorodifluoromethane
Concen: 2.314 ppbv
RT: 3.01 min Scan# 22
Delta R.T. -0.00 min
Lab File: VL033940.D
Acq: 24 Jun 2019 17:18

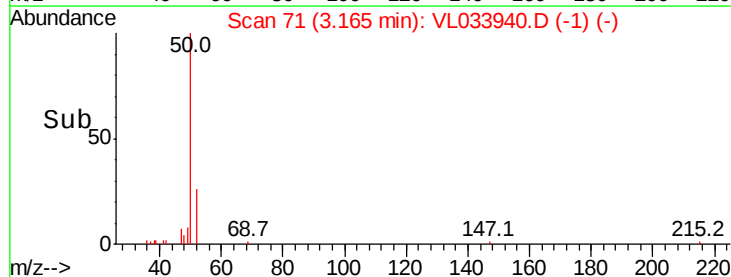
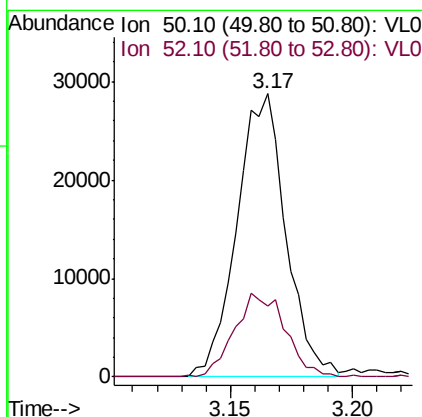
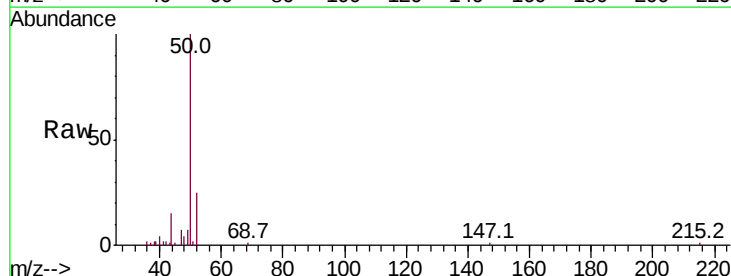
Instrument :
MSVOA_L
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TZC-SSDS-AREA-D-2

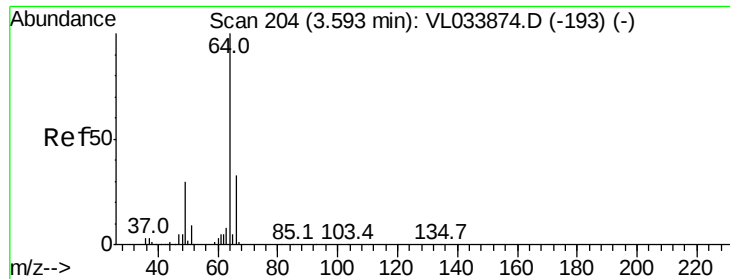
Tot Ion: 51 Resp: 258269
Ion Ratio Lower Upper
51 100
67 16.0 16.4 24.6#



#4
Chloromethane
Concen: 0.628 ppbv
RT: 3.17 min Scan# 71
Delta R.T. 0.00 min
Lab File: VL033940.D
Acq: 24 Jun 2019 17:18

Tgt Ion: 50 Resp: 39996
Ion Ratio Lower Upper
50 100
52 25.0 25.4 38.0#





#7

Chloroethane

Concen: 0.055 ppbv

RT: 3.59 min Scan# 202

Delta R.T. -0.01 min

Lab File: VL033940.D

Acq: 24 Jun 2019 17:18

Instrument :

MSVOA_L

ClientSampleId :

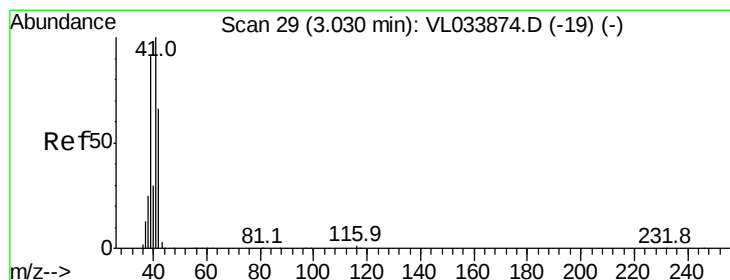
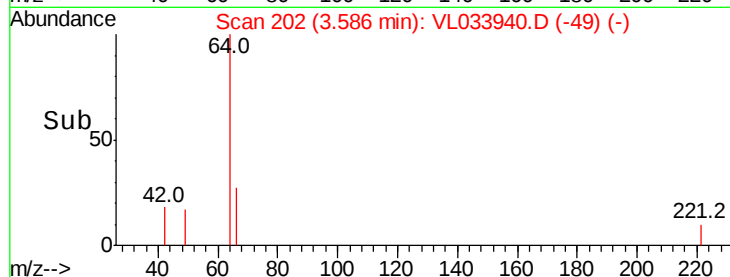
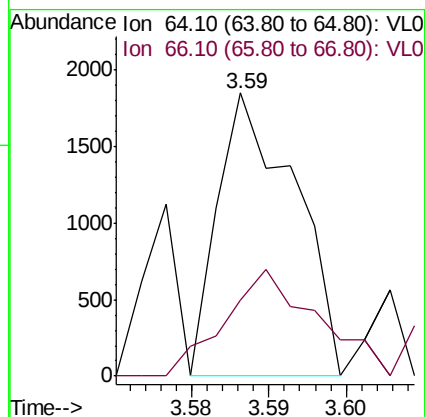
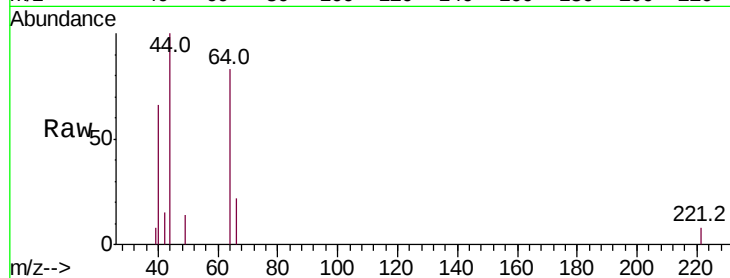
TZC-SSDS-AREA-D-2

Tot Ion: 64 Resp: 1286

Ion Ratio Lower Upper

64 100

66 27.1 26.7 40.1



#9

Propene

Concen: 0.606 ppbv

RT: 3.04 min Scan# 31

Delta R.T. 0.01 min

Lab File: VL033940.D

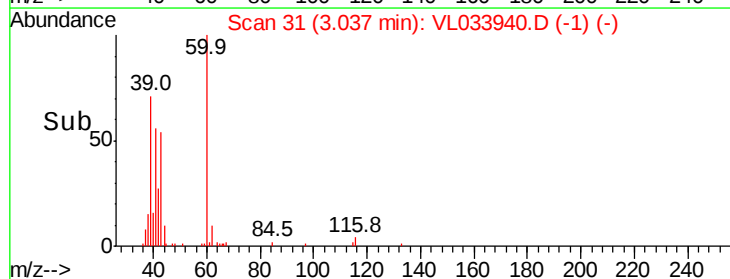
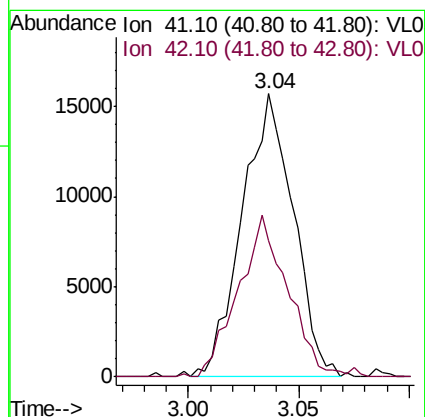
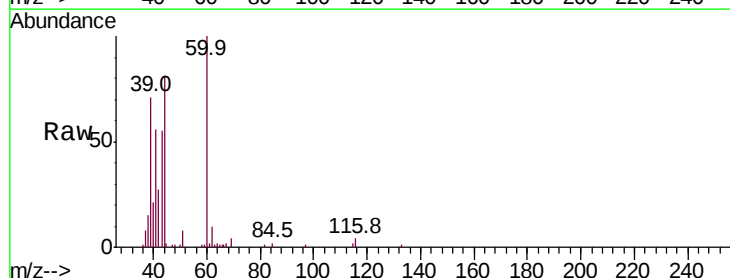
Acq: 24 Jun 2019 17:18

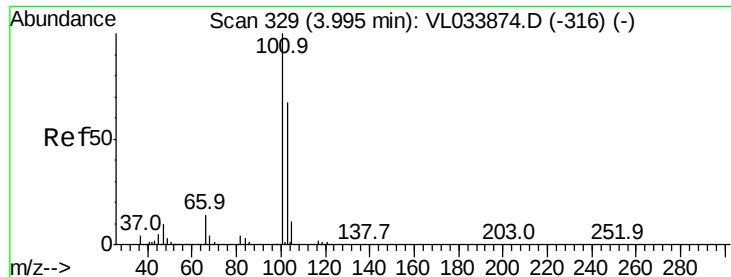
Tgt Ion: 41 Resp: 25293

Ion Ratio Lower Upper

41 100

42 55.7 56.3 84.5#





#11

Trichlorofluoromethane

Concen: 0.214 ppbv

RT: 3.99 min Scan# 328

Delta R.T. -0.00 min

Lab File: VL033940.D

Acq: 24 Jun 2019 17:18

Instrument :

MSVOA_L

ClientSampleId :

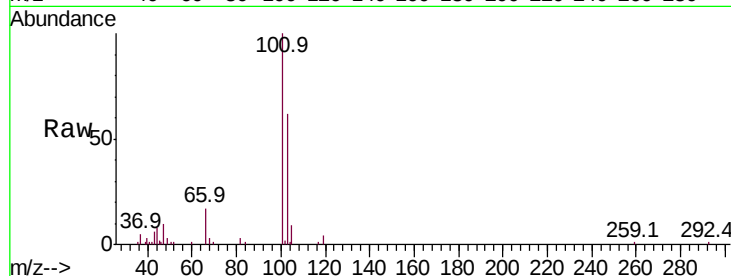
TZC-SSDS-AREA-D-2

Tot Ion:101 Resp: 42554

Ion Ratio Lower Upper

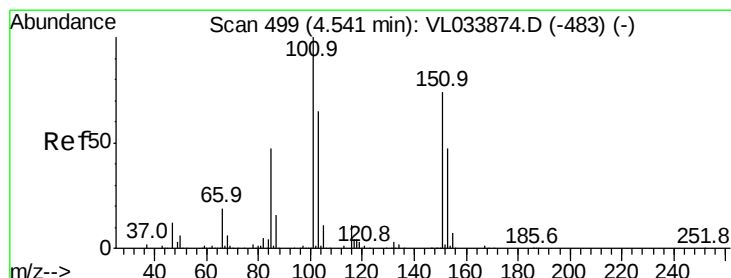
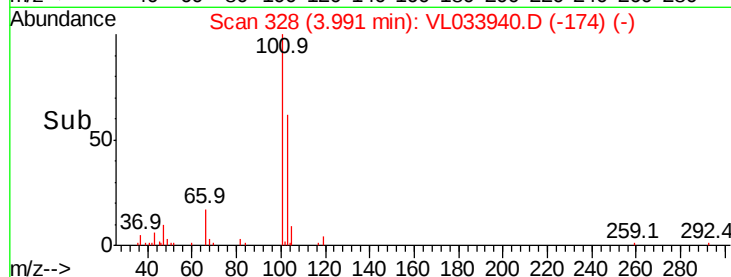
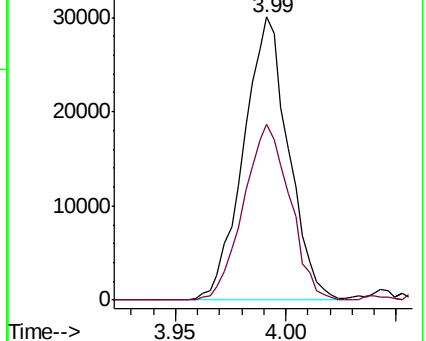
101 100

103 62.3 53.6 80.4



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.068 ppbv

RT: 4.54 min Scan# 498

Delta R.T. -0.00 min

Lab File: VL033940.D

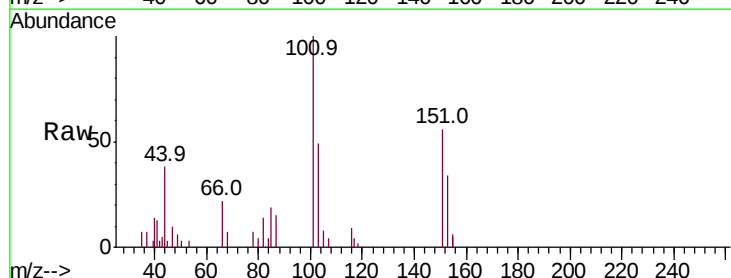
Acq: 24 Jun 2019 17:18

Tgt Ion:101 Resp: 9150

Ion Ratio Lower Upper

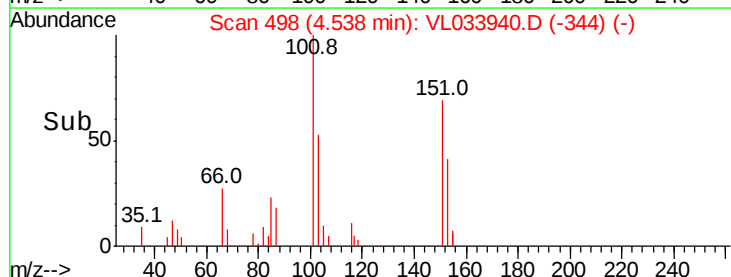
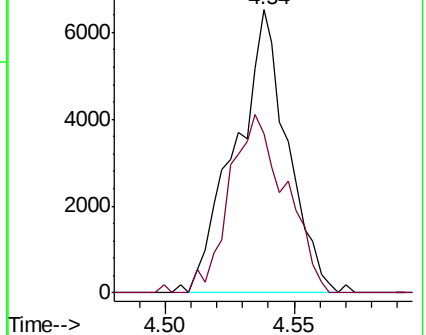
101 100

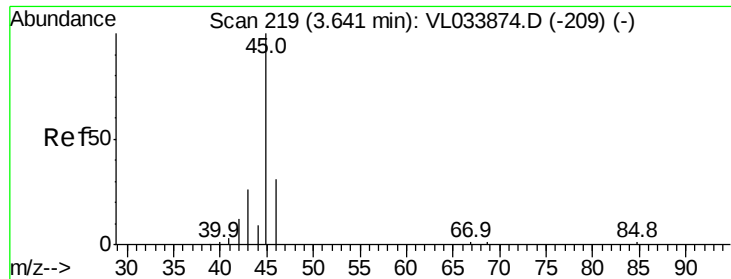
151 68.9 58.6 87.8



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 11.320 ppbv

RT: 3.64 min Scan# 219

Delta R.T. -0.00 min

Lab File: VL033940.D

Acq: 24 Jun 2019 17:18

Instrument :

MSVOA_L

ClientSampleId :

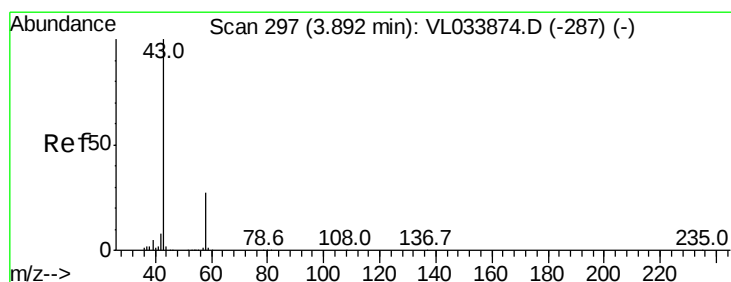
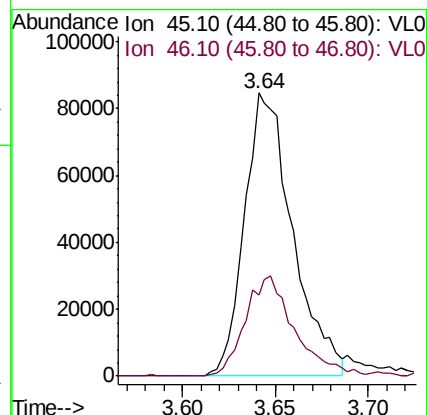
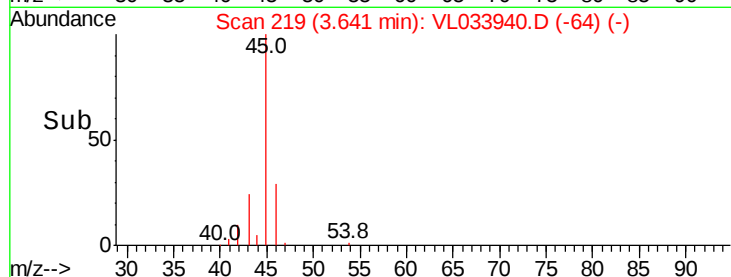
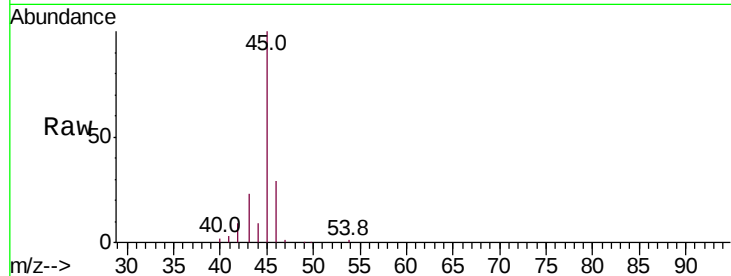
TZC-SSDS-AREA-D-2

Tot Ion: 45 Resp: 153838

Ion Ratio Lower Upper

45 100

46 37.4 15.3 61.1



#15

Acetone

Concen: 5.807 ppbv

RT: 3.89 min Scan# 296

Delta R.T. -0.00 min

Lab File: VL033940.D

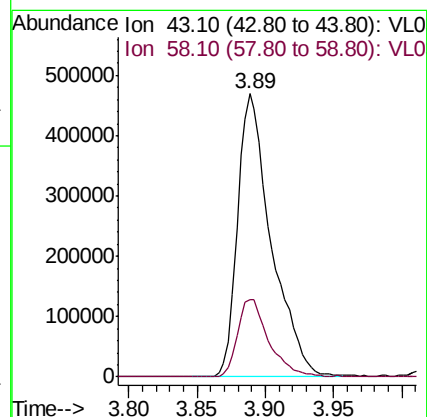
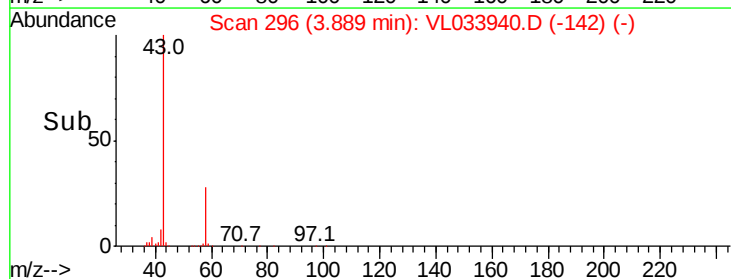
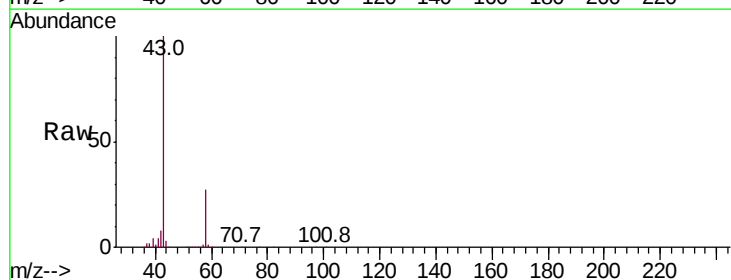
Acq: 24 Jun 2019 17:18

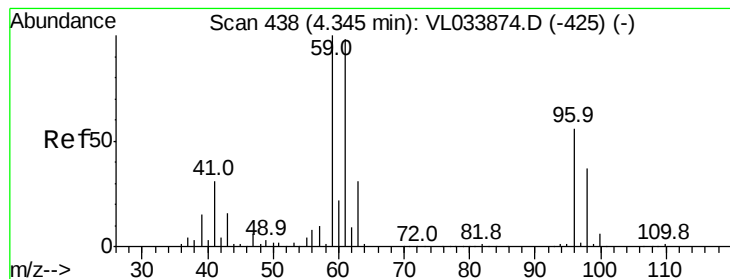
Tgt Ion: 43 Resp: 803048

Ion Ratio Lower Upper

43 100

58 25.8 21.3 31.9





#17

tert-Butyl alcohol

Concen: 0.587 ppbv

RT: 4.35 min Scan# 441

Delta R.T. 0.01 min

Lab File: VL033940.D

Acq: 24 Jun 2019 17:18

Instrument :

MSVOA_L

ClientSampleId :

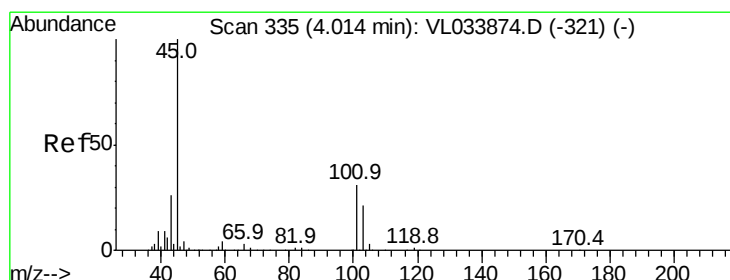
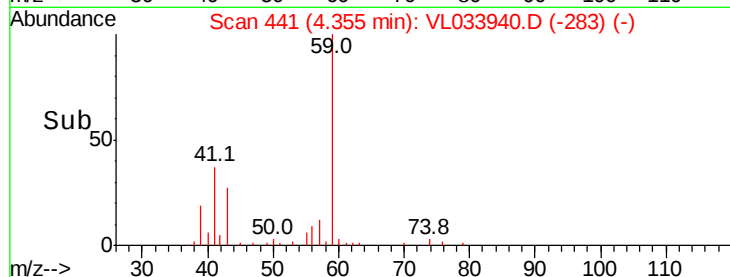
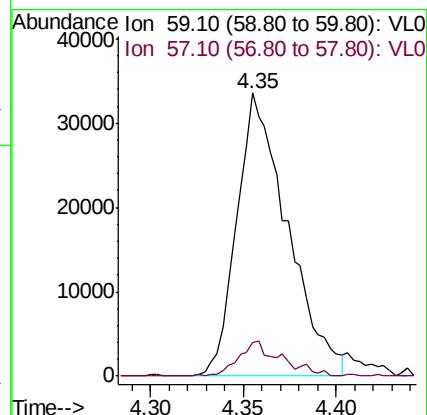
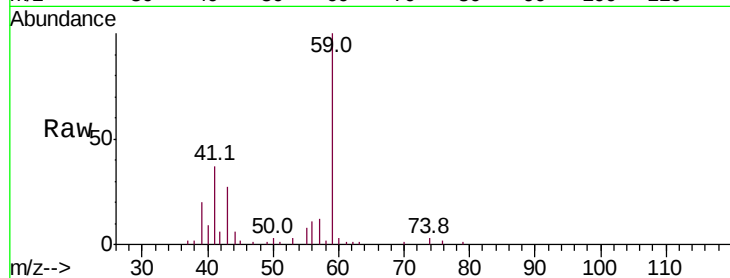
TZC-SSDS-AREA-D-2

Tot Ion: 59 Resp: 63511

Ion Ratio Lower Upper

59 100

57 10.6 8.4 12.6



#19

Isopropyl Alcohol

Concen: 1.461 ppbv

RT: 4.02 min Scan# 338

Delta R.T. 0.01 min

Lab File: VL033940.D

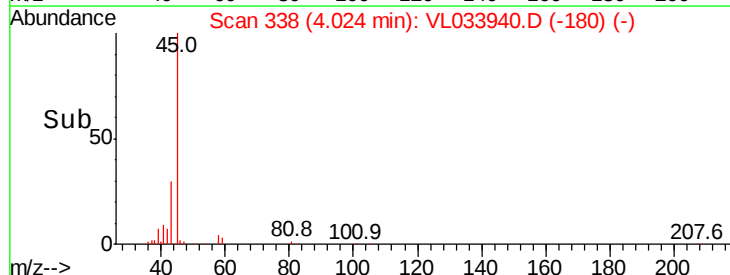
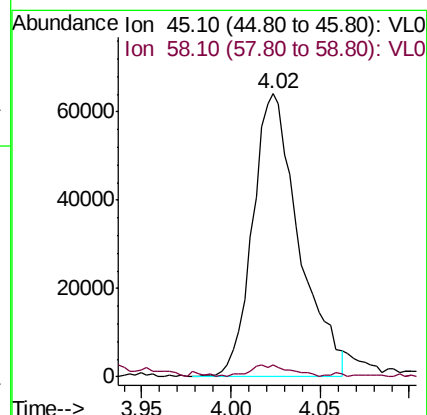
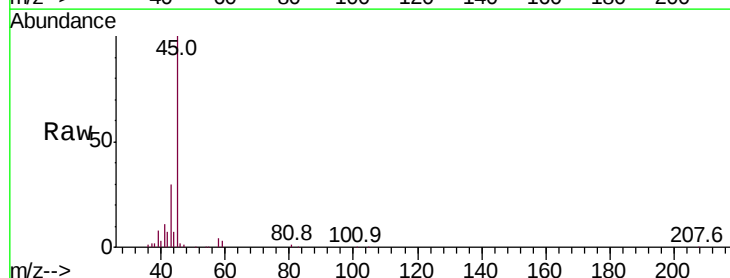
Acq: 24 Jun 2019 17:18

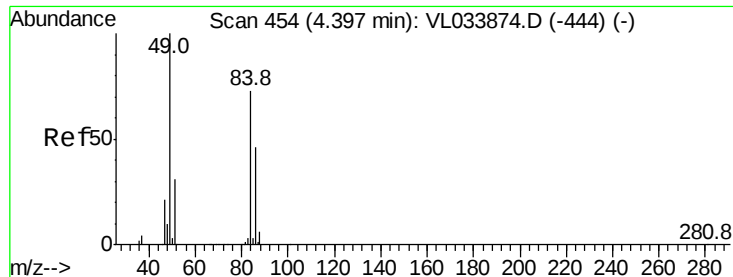
Tgt Ion: 45 Resp: 115457

Ion Ratio Lower Upper

45 100

58 179.8 1.8 2.6#

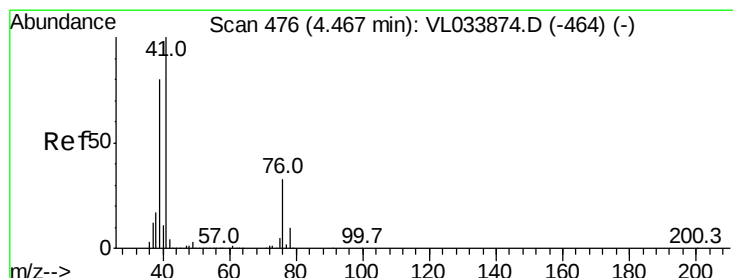
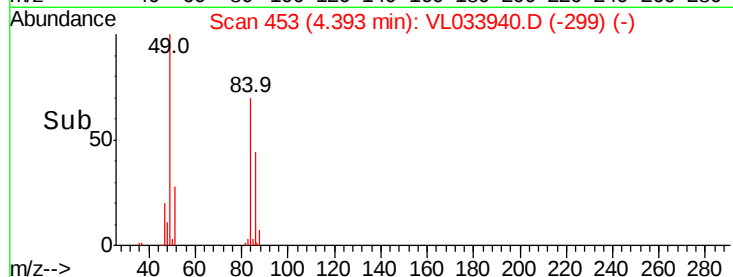
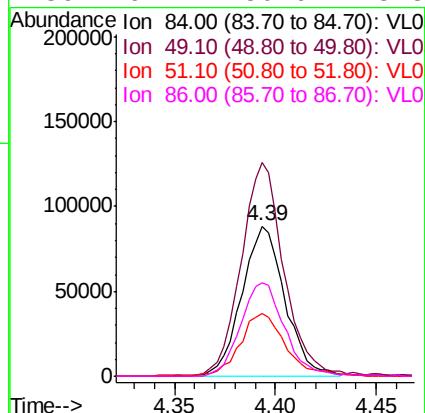
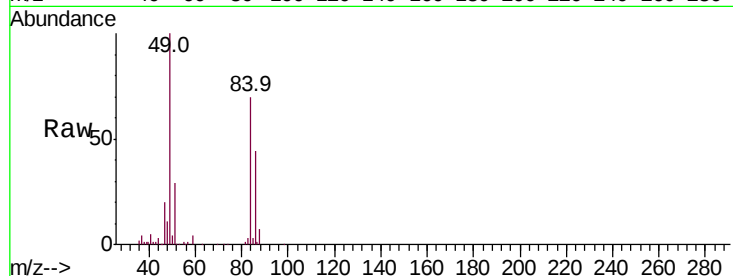




#20
Methylene Chloride
Concen: 2.461 ppbv
RT: 4.39 min Scan# 453
Delta R.T. -0.00 min
Lab File: VL033940.D
Acq: 24 Jun 2019 17:18

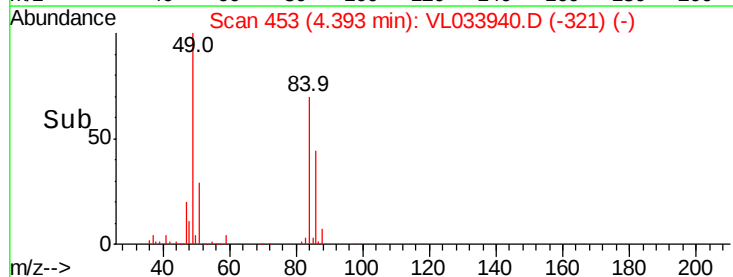
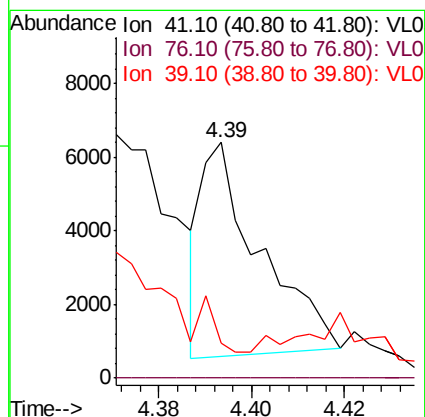
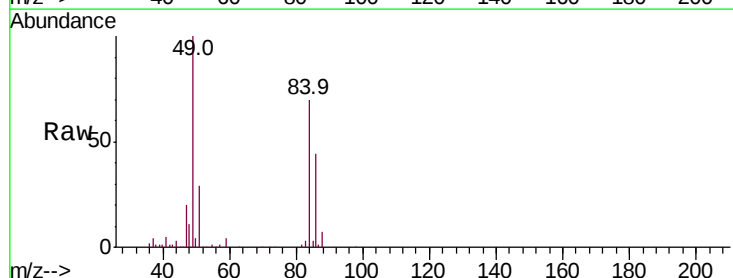
Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-D-2

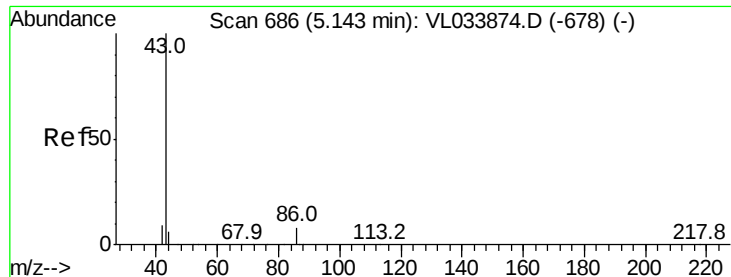
Tot Ion: 84 Resp: 132706
Ion Ratio Lower Upper
84 100
49 141.2 110.0 165.0
51 40.8 34.6 51.8
86 62.1 50.6 75.8



#21
Allyl Chloride
Concen: 0.064 ppbv
RT: 4.39 min Scan# 453
Delta R.T. -0.07 min
Lab File: VL033940.D
Acq: 24 Jun 2019 17:18

Tgt Ion: 41 Resp: 5021
Ion Ratio Lower Upper
41 100
76 0.0 26.6 39.8#
39 62.9 65.2 97.8#

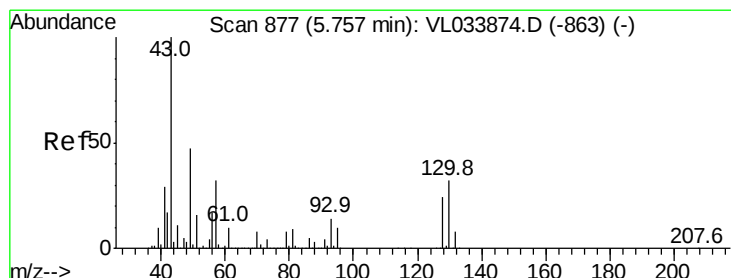
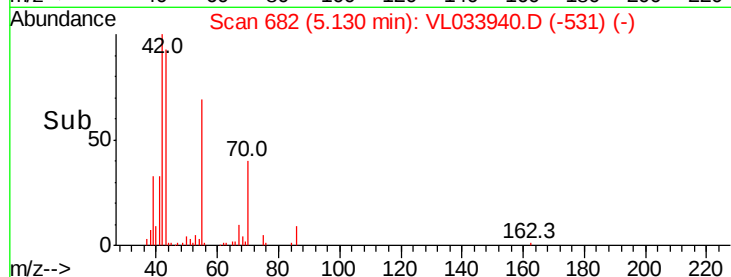
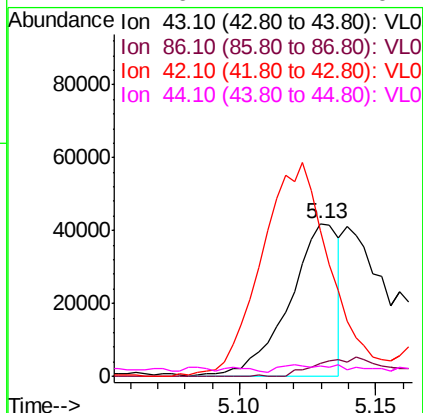
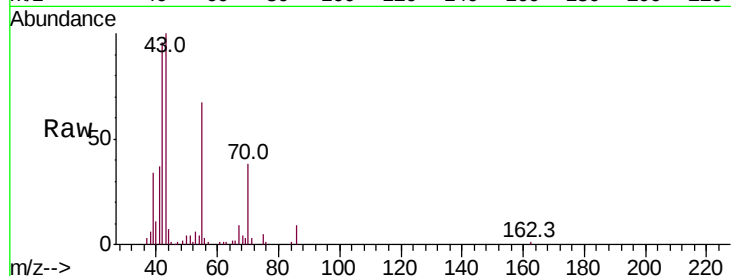




#23
 Vinyl Acetate
 Concen: 0.327 ppbv
 RT: 5.13 min Scan# 682
 Delta R.T. -0.01 min
 Lab File: VL033940.D
 Acq: 24 Jun 2019 17:18

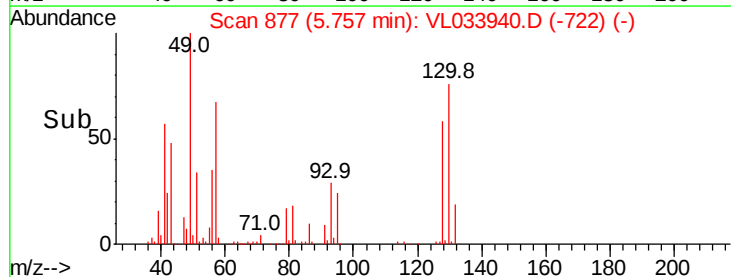
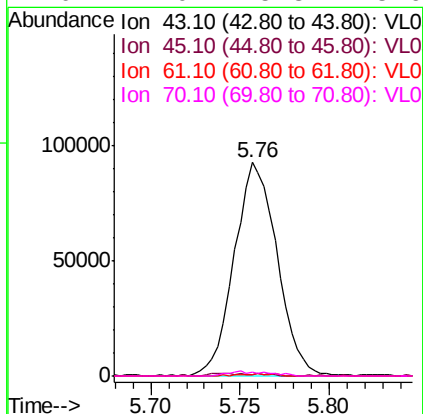
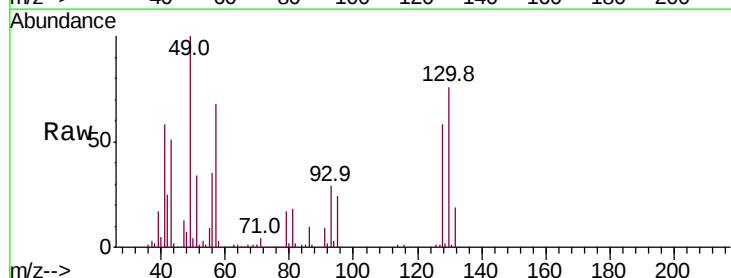
Instrument :
 MSVOA_L
 ClientSampleId :
 TZC-SSDS-AREA-D-2

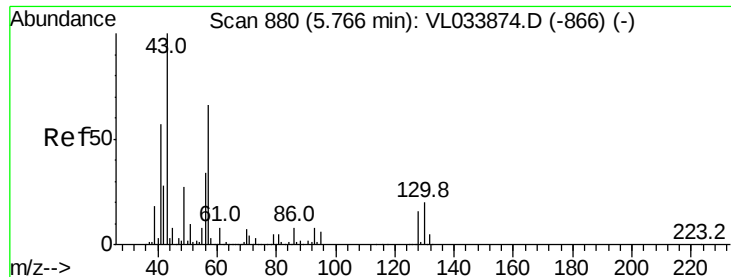
Tot Ion:	43	Resp:	52575
Ion	Ratio	Lower	Upper
43	100		
86	8.7	5.8	8.8
42	94.7	7.8	11.8#
44	1.6	4.2	6.4#



#25
 Ethyl Acetate
 Concen: 0.734 ppbv
 RT: 5.76 min Scan# 877
 Delta R.T. -0.00 min
 Lab File: VL033940.D
 Acq: 24 Jun 2019 17:18

Tgt Ion:	43	Resp:	154581
Ion	Ratio	Lower	Upper
43	100		
45	2.0	7.9	11.9#
61	0.9	7.8	11.6#
70	2.0	5.8	8.6#

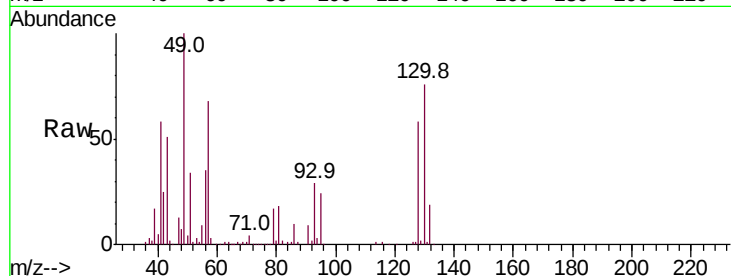




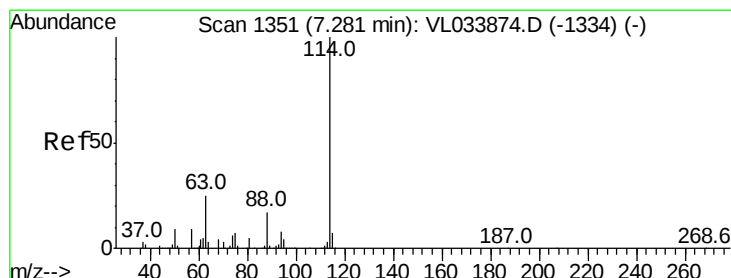
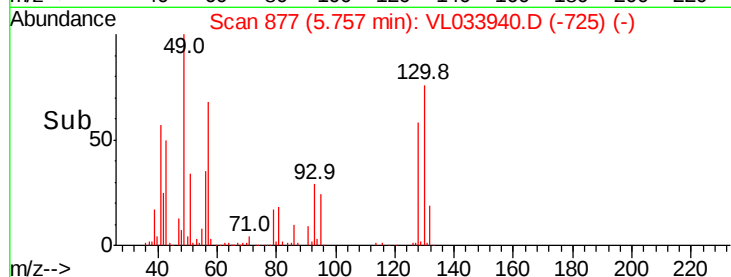
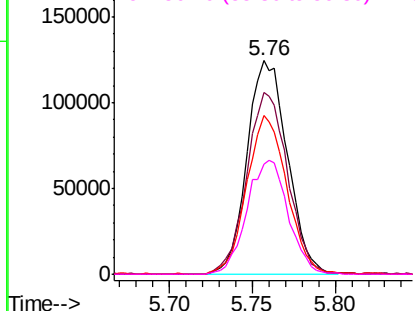
#26
Hexane
Concen: 2.194 ppbv
RT: 5.76 min Scan# 877
Delta R.T. -0.01 min
Lab File: VL033940.D
Acq: 24 Jun 2019 17:18

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

Tot Ion: 57 Resp: 210388
Ion Ratio Lower Upper
57 100
41 86.8 71.4 107.2
43 74.7 183.7 275.5#
56 54.8 42.7 64.1

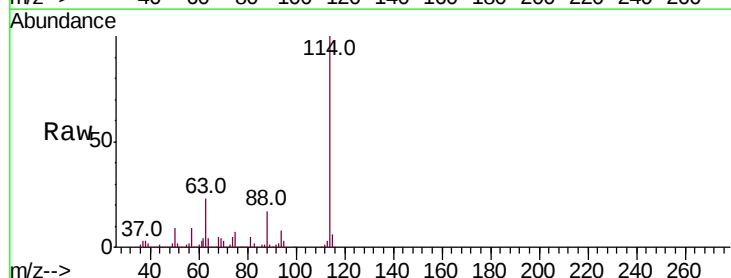


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

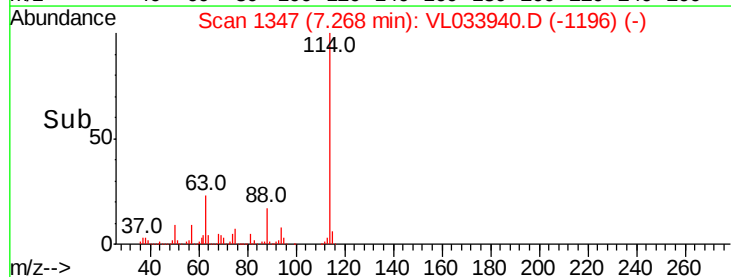
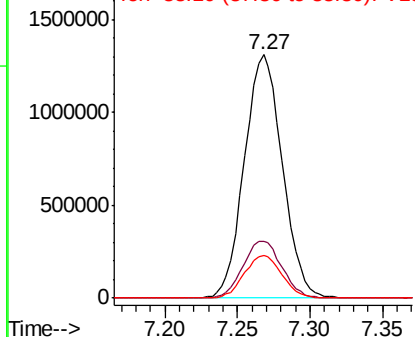


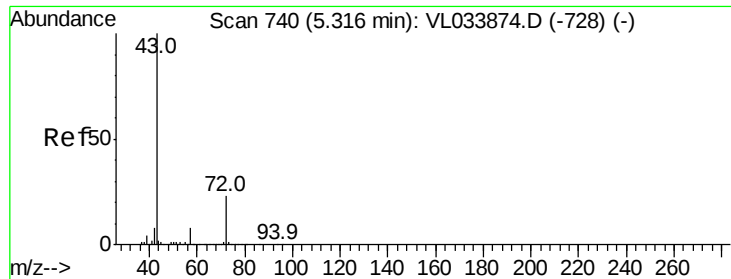
#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.27 min Scan# 1347
Delta R.T. -0.01 min
Lab File: VL033940.D
Acq: 24 Jun 2019 17:18

Tgt Ion: 114 Resp: 2392895
Ion Ratio Lower Upper
114 100
63 24.1 21.1 31.7
88 17.6 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

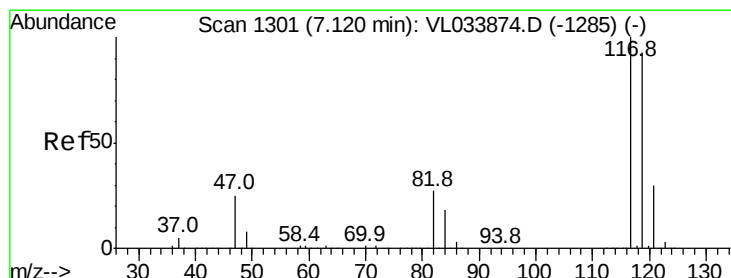
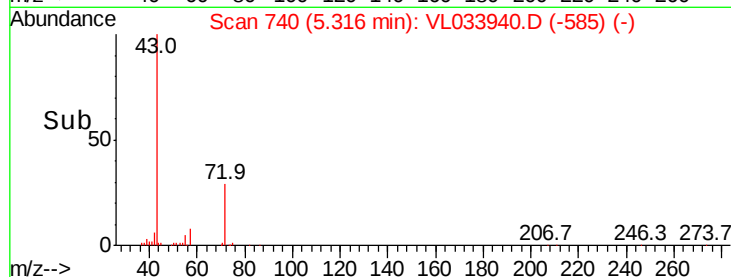
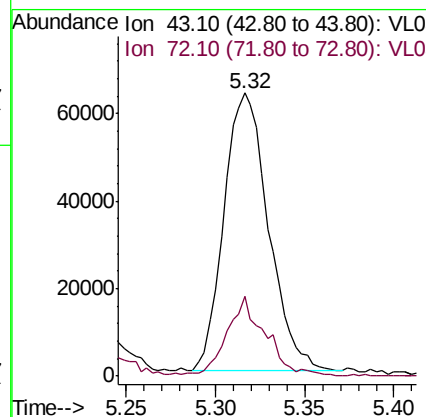
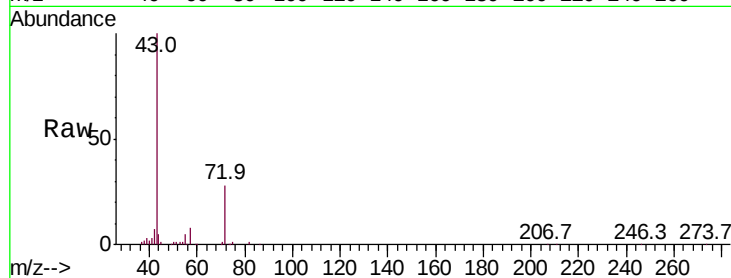




#34
2-Butanone
Concen: 0.816 ppbv
RT: 5.32 min Scan# 740
Delta R.T. -0.00 min
Lab File: VL033940.D
Acq: 24 Jun 2019 17:18

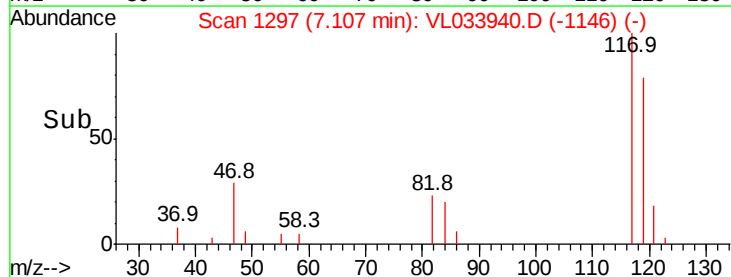
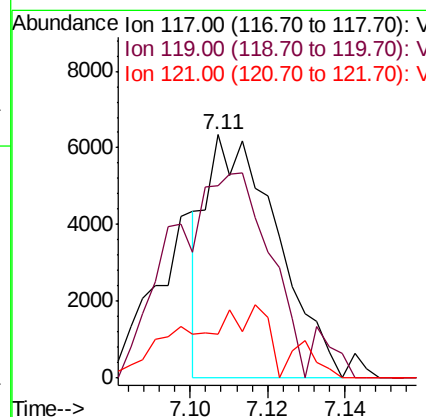
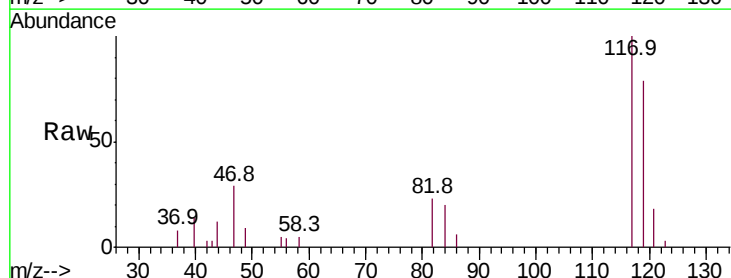
Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-D-2

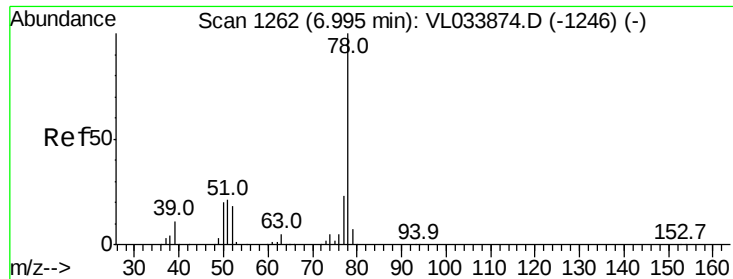
Tot Ion: 43 Resp: 110175
Ion Ratio Lower Upper
43 100
72 25.3 17.9 26.9



#35
Carbon Tetrachloride
Concen: 0.044 ppbv
RT: 7.11 min Scan# 1297
Delta R.T. -0.01 min
Lab File: VL033940.D
Acq: 24 Jun 2019 17:18

Tgt Ion: 117 Resp: 8051
Ion Ratio Lower Upper
117 100
119 68.6 74.6 111.8#
121 17.8 24.0 36.0#





#36

Benzene

Concen: 0.187 ppbv

RT: 6.98 min Scan# 1257

Delta R.T. -0.02 min

Lab File: VL033940.D

Acq: 24 Jun 2019 17:18

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-D-2

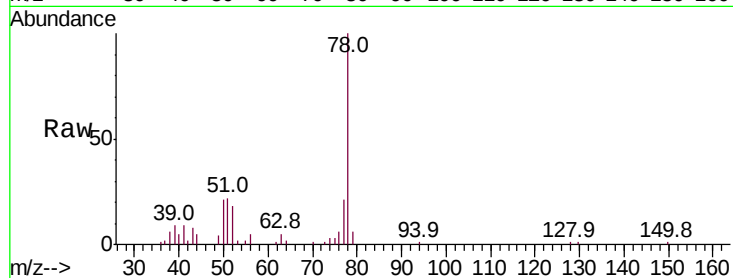
Tot Ion: 78 Resp: 34121

Ion Ratio Lower Upper

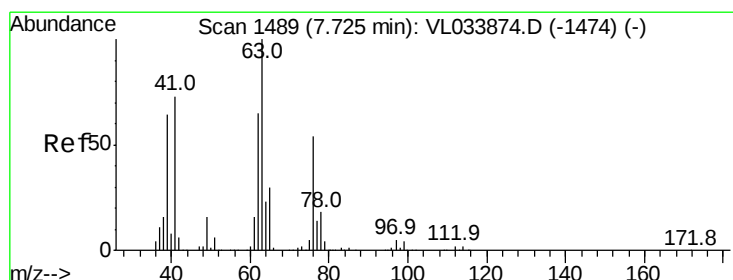
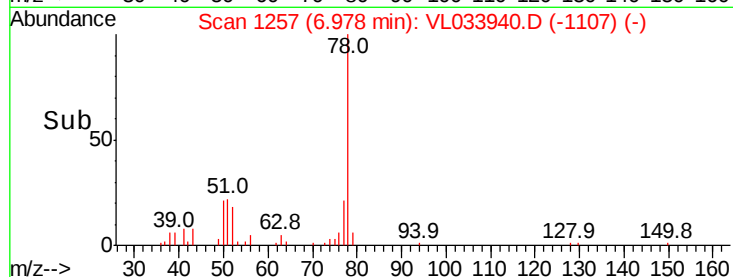
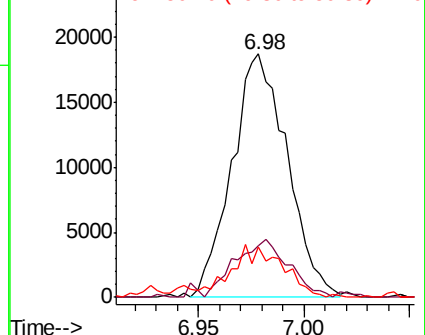
78 100

77 19.1 18.2 27.2

50 19.6 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: 8.116 ppbv

RT: 7.27 min Scan# 1347

Delta R.T. -0.46 min

Lab File: VL033940.D

Acq: 24 Jun 2019 17:18

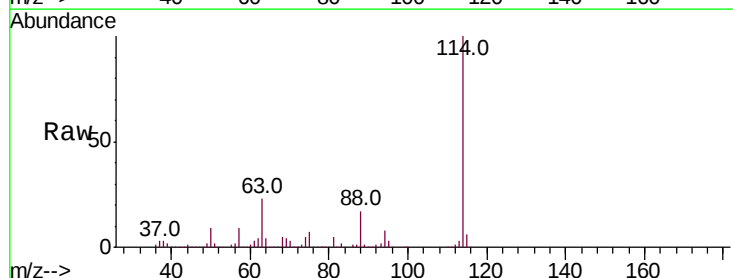
Tgt Ion: 63 Resp: 572542

Ion Ratio Lower Upper

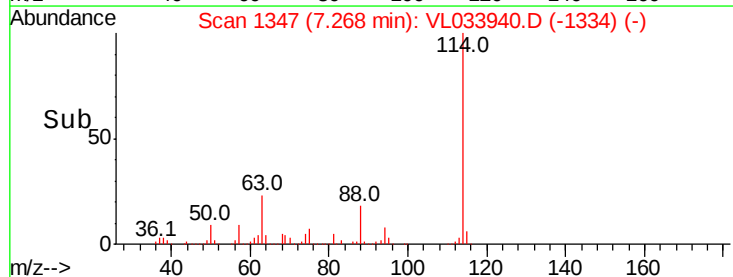
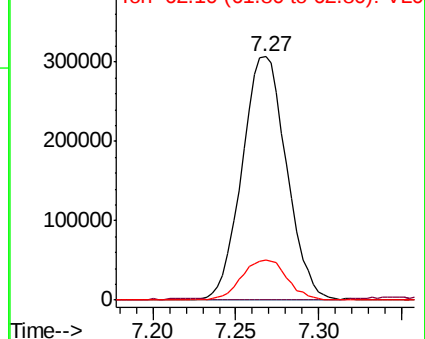
63 100

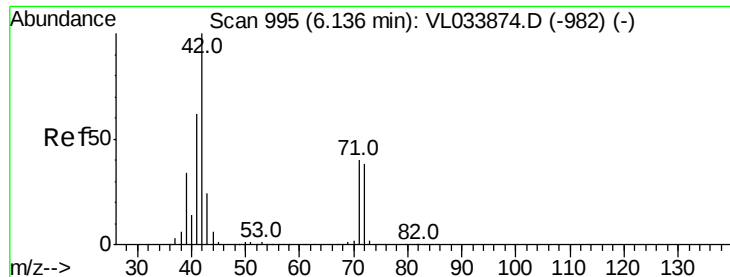
41 0.0 58.7 88.1#

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





#41

Tetrahydrofuran

Concen: 0.046 ppbv

RT: 6.10 min Scan# 985

Delta R.T. -0.03 min

Lab File: VL033940.D

Acq: 24 Jun 2019 17:18

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-D-2

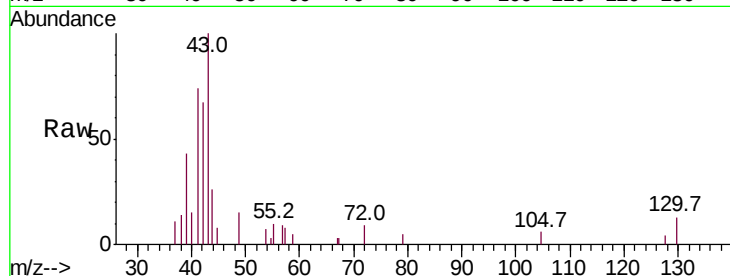
Tot Ion: 42 Resp: 3128

Ion Ratio Lower Upper

42 100

72 79.3 32.2 48.4#

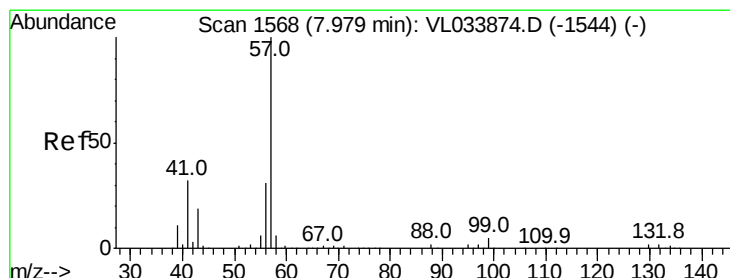
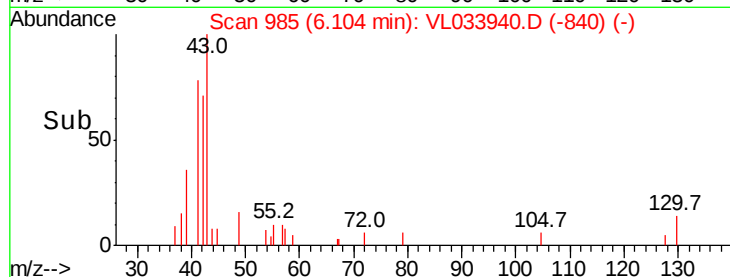
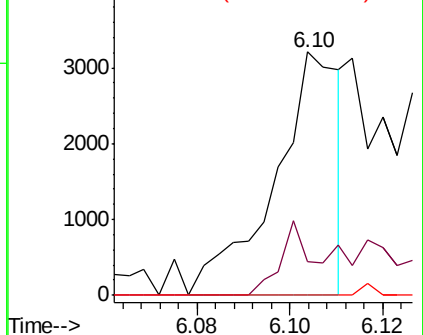
71 40.8 31.7 47.5



Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.090 ppbv

RT: 7.97 min Scan# 1565

Delta R.T. -0.01 min

Lab File: VL033940.D

Acq: 24 Jun 2019 17:18

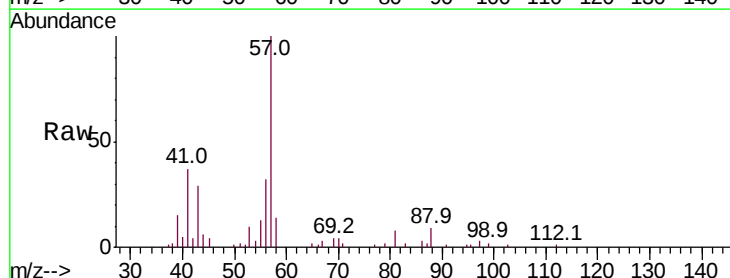
Tgt Ion: 57 Resp: 29136

Ion Ratio Lower Upper

57 100

41 65.8 26.1 39.1#

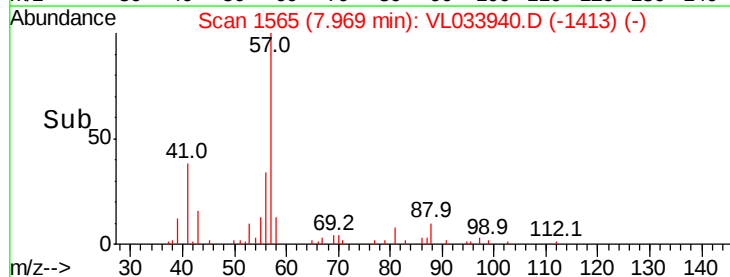
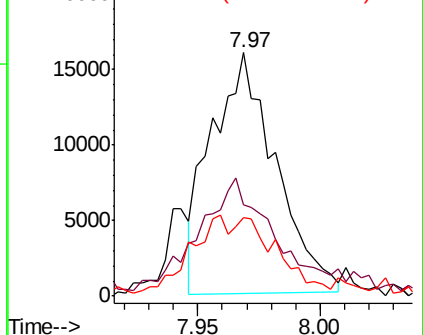
56 49.4 24.6 36.8#

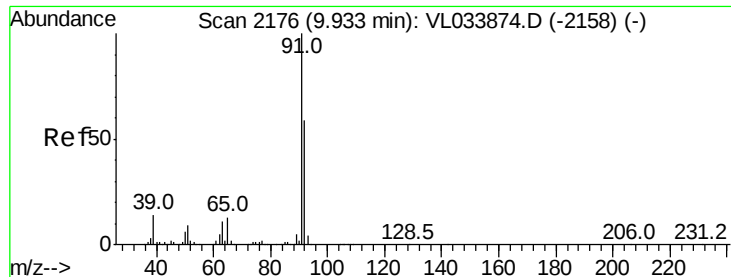


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





#53

Toluene

Concen: 15.813 ppbv

RT: 9.92 min Scan# 2171

Delta R.T. -0.02 min

Lab File: VL033940.D

Acq: 24 Jun 2019 17:18

Instrument :

MSVOA_L

ClientSampleId :

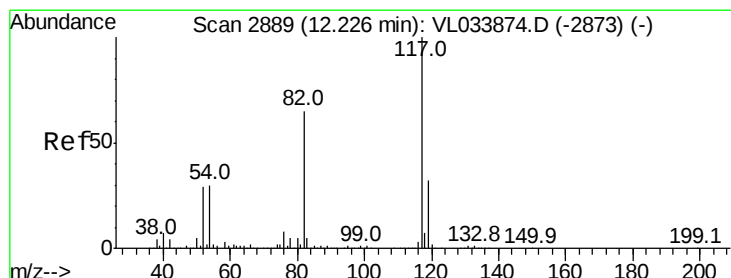
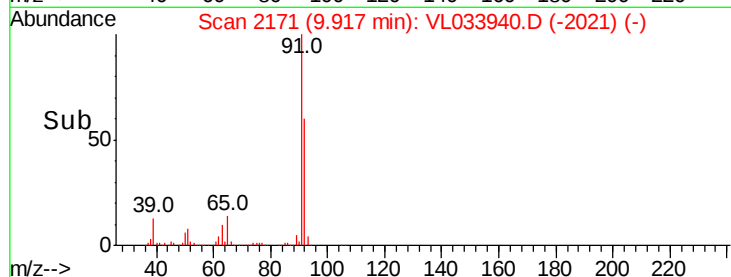
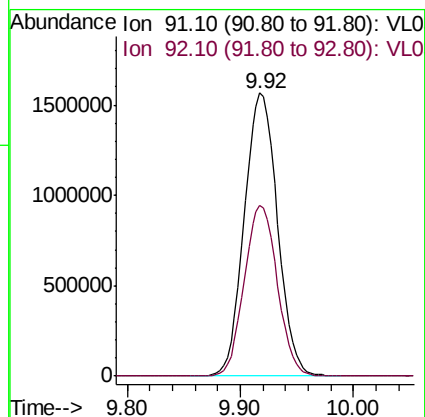
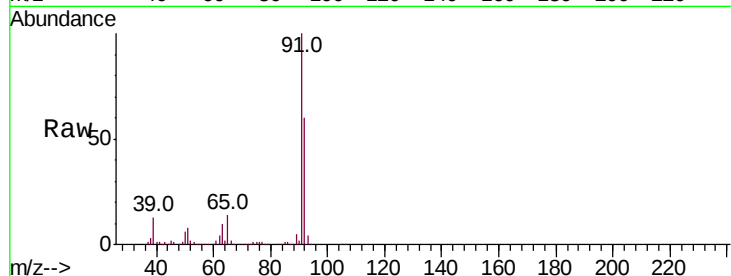
TZC-SSDS-AREA-D-2

Tot Ion: 91 Resp: 3198555

Ion Ratio Lower Upper

91 100

92 60.3 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: VL033940.D

Acq: 24 Jun 2019 17:18

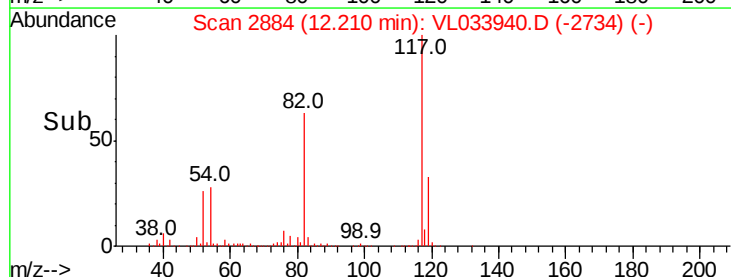
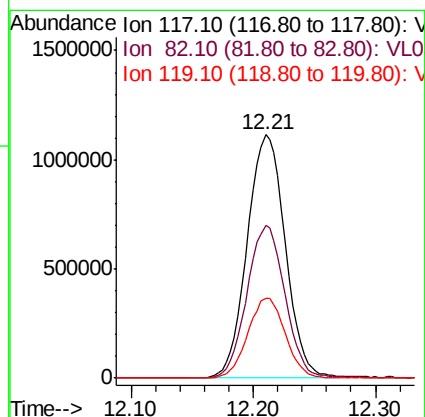
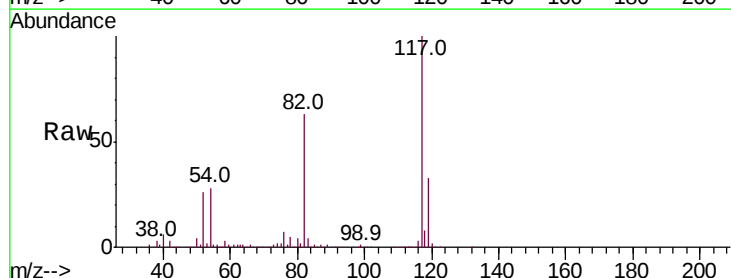
Tgt Ion: 117 Resp: 2401035

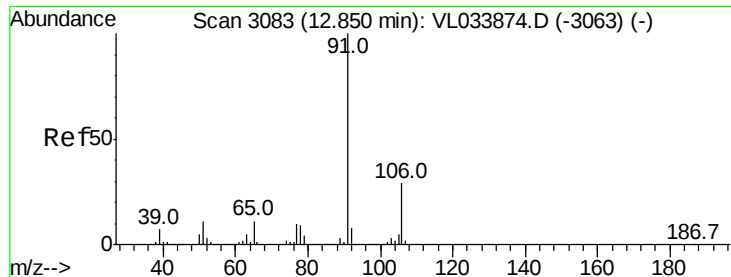
Ion Ratio Lower Upper

117 100

82 63.3 50.2 75.2

119 32.6 24.8 37.2





#58

Ethyl Benzene

Concen: 5.223 ppbv

RT: 12.83 min Scan# 3078

Delta R.T. -0.02 min

Lab File: VL033940.D

Acq: 24 Jun 2019 17:18

Instrument :

MSVOA_L

ClientSampleId :

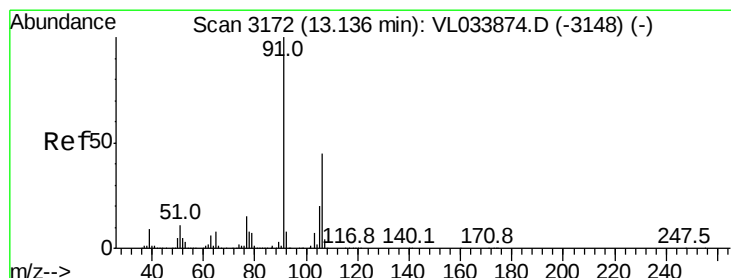
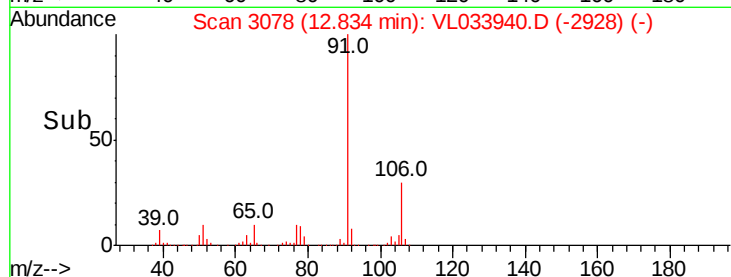
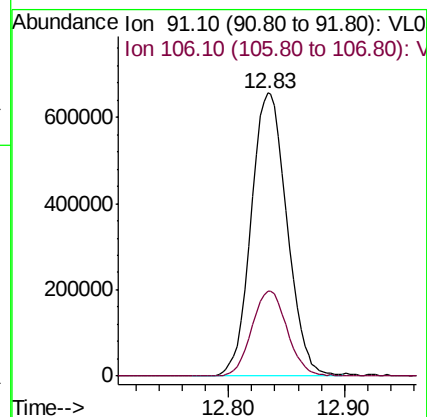
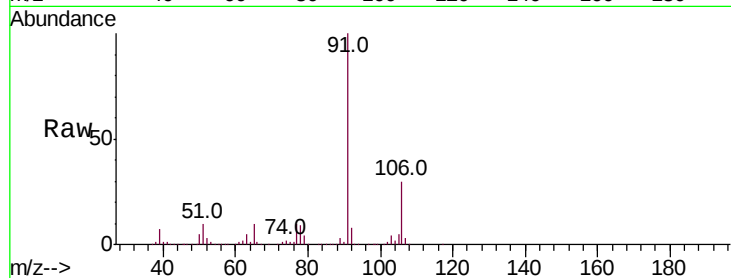
TZC-SSDS-AREA-D-2

Tot Ion: 91 Resp: 1413939

Ion Ratio Lower Upper

91 100

106 30.2 23.0 34.6



#59

m/p-Xylene

Concen: 20.352 ppbv

RT: 13.09 min Scan# 3159

Delta R.T. -0.04 min

Lab File: VL033940.D

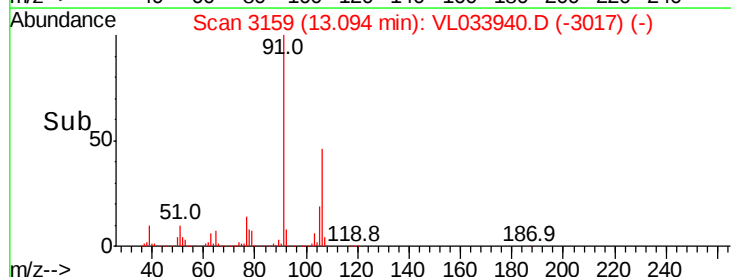
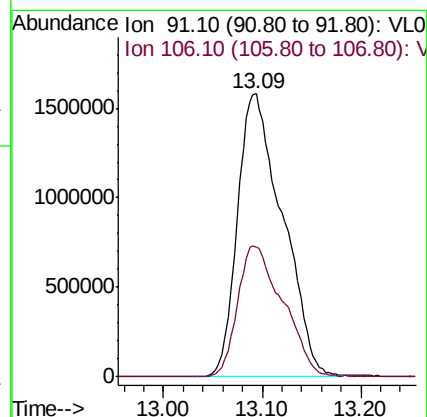
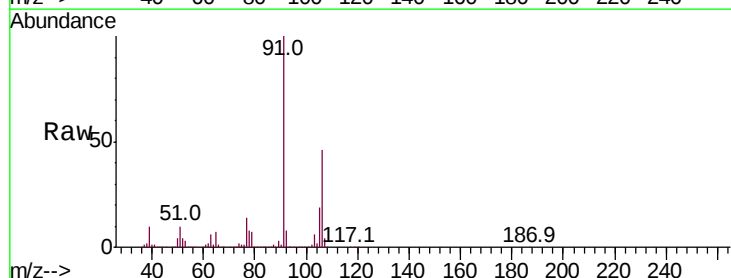
Acq: 24 Jun 2019 17:18

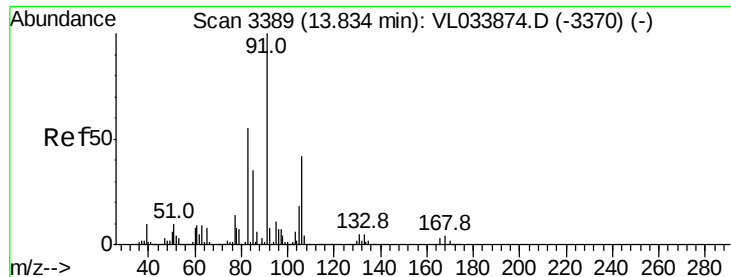
Tgt Ion: 91 Resp: 5009912

Ion Ratio Lower Upper

91 100

106 46.7 35.8 53.8





#60

o-Xylene

Concen: 6.083 ppbv

RT: 13.82 min Scan# 3385

Delta R.T. -0.01 min

Lab File: VL033940.D

Acq: 24 Jun 2019 17:18

Instrument :

MSVOA_L

ClientSampleId :

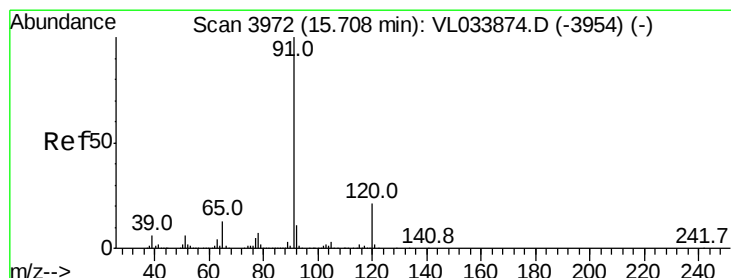
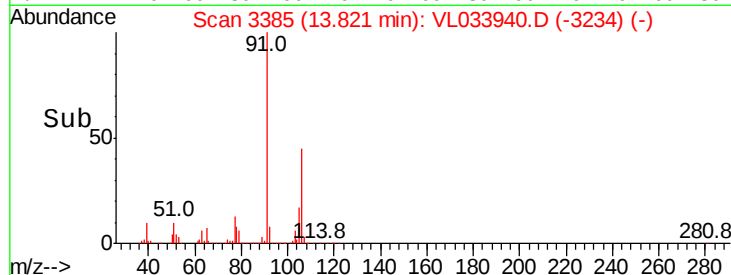
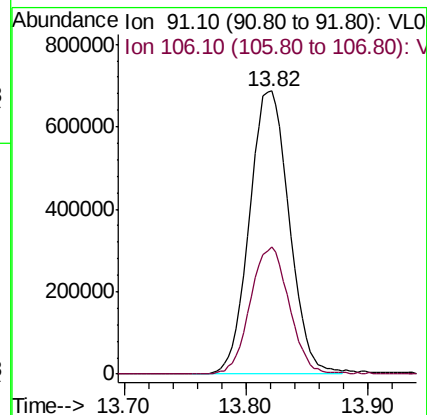
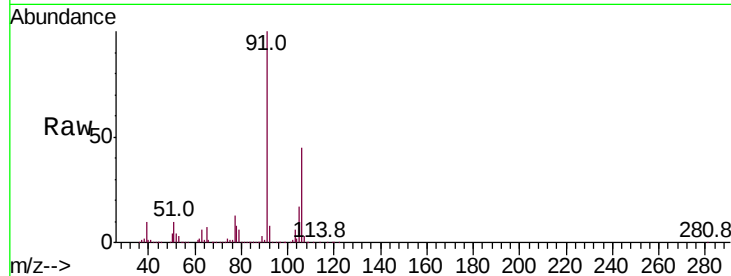
TZC-SSDS-AREA-D-2

Tot Ion: 91 Resp: 1546176

Ion Ratio Lower Upper

91 100

106 44.6 21.7 65.1



#64

n-propylbenzene

Concen: 0.030 ppbv

RT: 15.70 min Scan# 3969

Delta R.T. -0.01 min

Lab File: VL033940.D

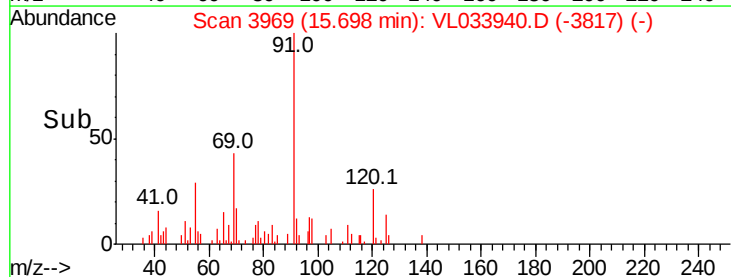
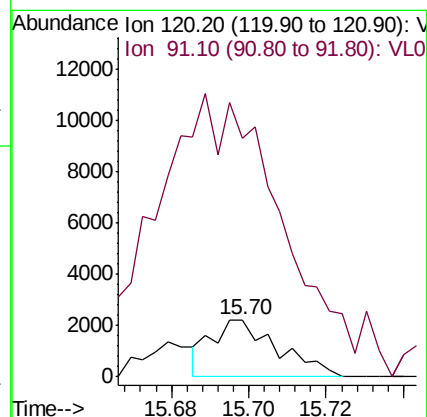
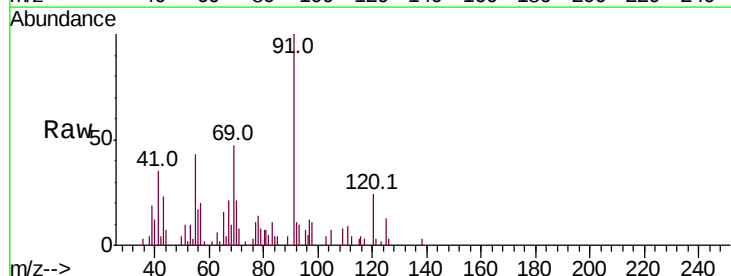
Acq: 24 Jun 2019 17:18

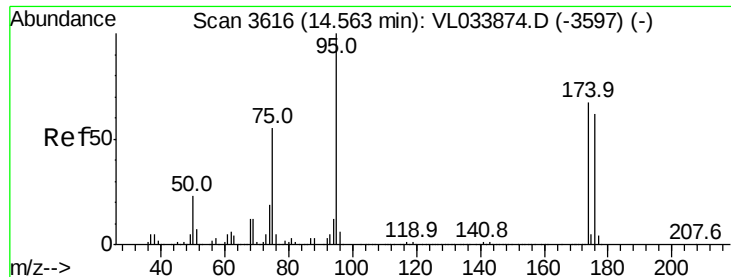
Tgt Ion:120 Resp: 2657

Ion Ratio Lower Upper

120 100

91 1057.5 387.0 580.6#

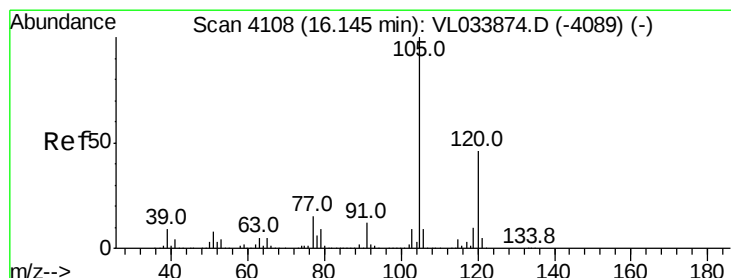
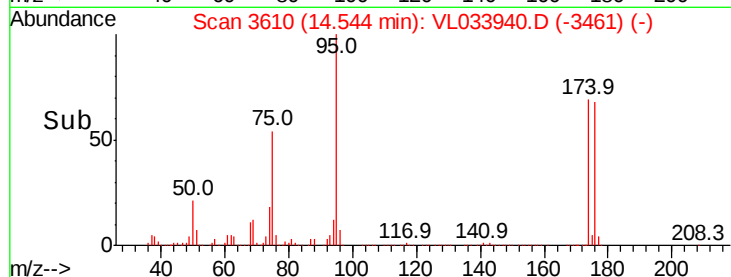
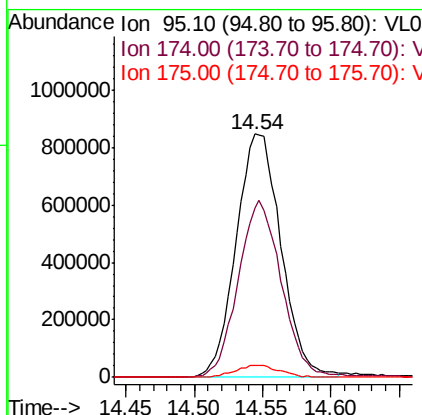
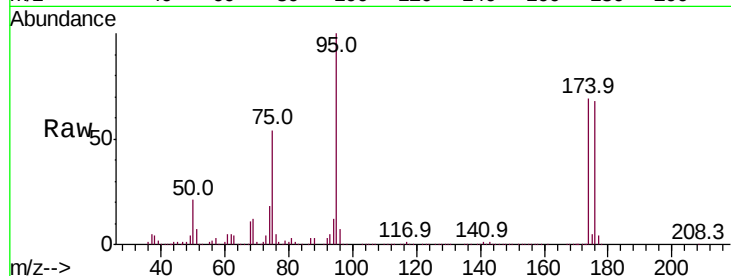




#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.788 ppbv
 RT: 14.54 min Scan# 3610
 Delta R.T. -0.02 min
 Lab File: VL033940.D
 Acq: 24 Jun 2019 17:18

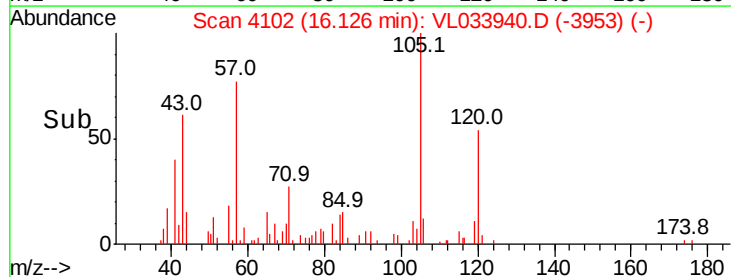
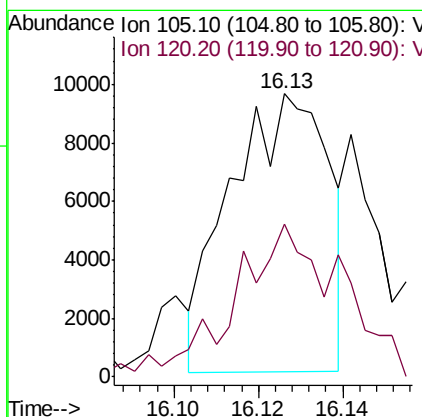
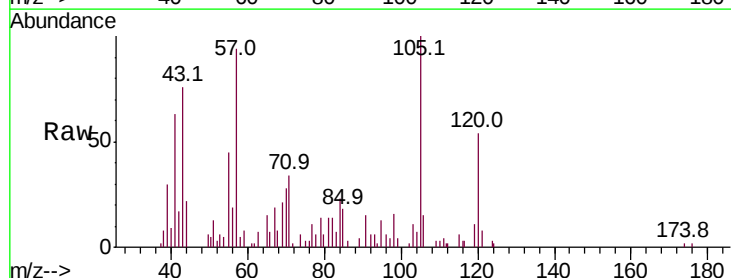
Instrument :
 MSVOA_L
 ClientSampleId :
 TZC-SSDS-AREA-D-2

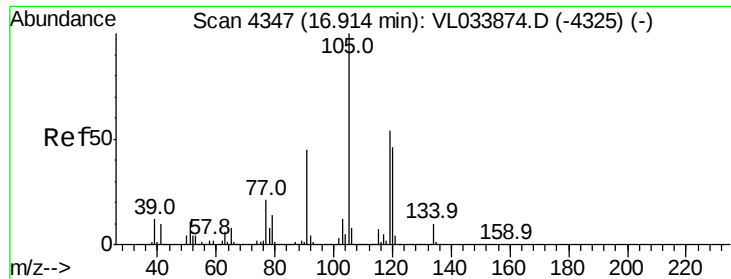
Tot Ion: 95 Resp: 1930399
 Ion Ratio Lower Upper
 95 100
 174 71.2 54.0 81.0
 175 5.1 3.8 5.8



#73
 1,3,5-Trimethylbenzene
 Concen: 0.054 ppbv
 RT: 16.13 min Scan# 4102
 Delta R.T. -0.02 min
 Lab File: VL033940.D
 Acq: 24 Jun 2019 17:18

Tgt Ion:105 Resp: 15395
 Ion Ratio Lower Upper
 105 100
 120 58.2 37.1 55.7#





#74
 1,2,4-Trimethylbenzene
 Concen: 0.139 ppbv
 RT: 16.89 min Scan# 4341
 Delta R.T. -0.02 min
 Lab File: VL033940.D
 Acq: 24 Jun 2019 17:18

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

Tot Ion:105 Resp: 45722
 Ion Ratio Lower Upper
 105 100
 120 39.7 36.7 55.1
 91 14.9 35.8 53.8#
 77 16.1 16.9 25.3#

