

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL062419\
 Data File : VL033953.D
 Acq On : 25 Jun 2019 1:54
 Operator : SY/AP
 Sample : K3481-07DL 10X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

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

Quant Time: Jun 25 03:41:53 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	975434	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.27	114	2539133	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.21	117	2521736	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.55	95	2080584	10.04	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.40%

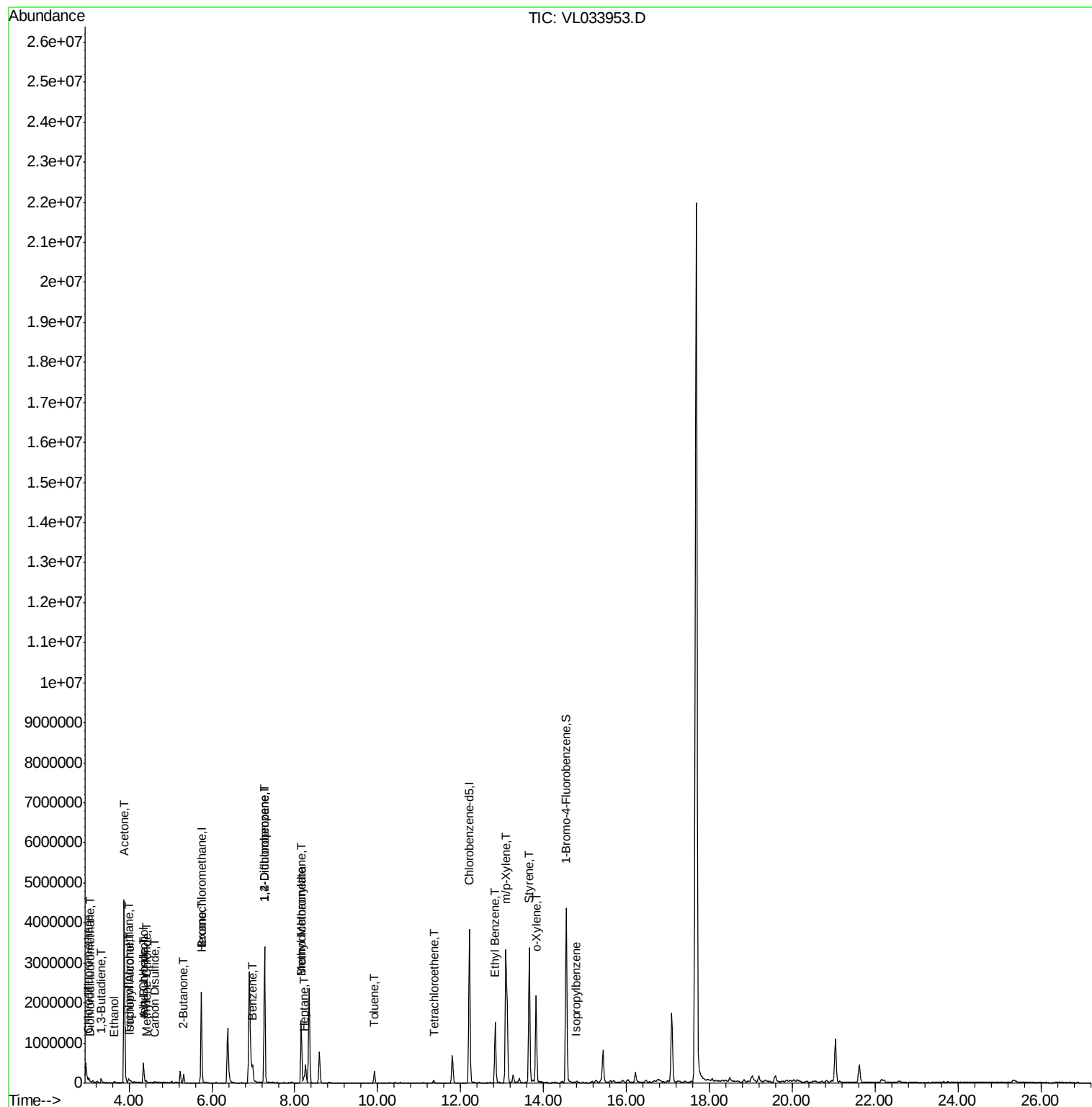
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.07	85	10858	0.069 ppbv	97
3) Chlorodifluoromethane	3.01	51	22416	0.195 ppbv #	88
10) Heptane	8.22	43	38634	0.356 ppbv #	1
11) Trichlorofluoromethane	3.99	101	55607	0.272 ppbv	85
13) Ethanol	3.65	45	22253	1.592 ppbv	100
15) Acetone	3.88	43	4629709	32.543 ppbv	95
16) 1,3-Butadiene	3.33	39	24366	0.450 ppbv #	12
17) tert-Butyl alcohol	4.35	59	428702	3.855 ppbv	98
19) Isopropyl Alcohol	4.02	45	57130	0.703 ppbv #	94
20) Methylene Chloride	4.40	84	9378	0.169 ppbv #	72
21) Allyl Chloride	4.35	41	135722	1.679 ppbv #	56
26) Hexane	5.76	57	8222	0.083 ppbv #	39
27) Carbon Disulfide	4.61	76	5254	0.038 ppbv #	1
34) 2-Butanone	5.32	43	255920	1.787 ppbv	97
36) Benzene	6.98	78	225556	1.163 ppbv	97
39) 1,2-Dichloropropane	7.27	63	599880	8.013 ppbv #	25
42) Bromodichloromethane	8.15	83	8519	0.044 ppbv #	26
43) Methyl Methacrylate	8.16	69	363431	5.010 ppbv #	69
52) Tetrachloroethene	11.34	164	10482	0.154 ppbv #	69
53) Toluene	9.92	91	232216	1.082 ppbv	99
58) Ethyl Benzene	12.83	91	1387663	4.881 ppbv	99
59) m/p-Xylene	13.09	91	3845225	14.873 ppbv	97
60) o-Xylene	13.82	91	1772969	6.642 ppbv	99
61) Styrene	13.66	104	2055029	11.896 ppbv	97
62) Isopropylbenzene	14.79	105	24717	0.069 ppbv #	79

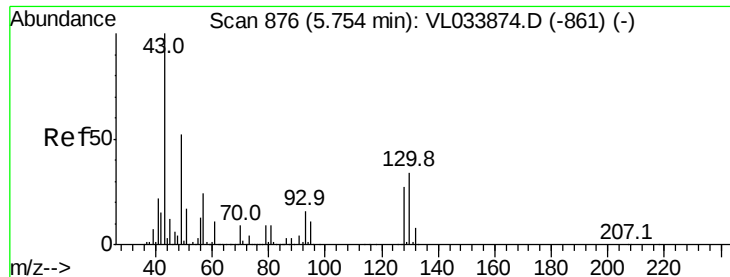
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Fri Jun 07 08:53:27 2019
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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.74 min Scan# 873

Delta R.T. -0.01 min

Lab File: VL033953.D

Acq: 25 Jun 2019 1:54

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-D-1DL

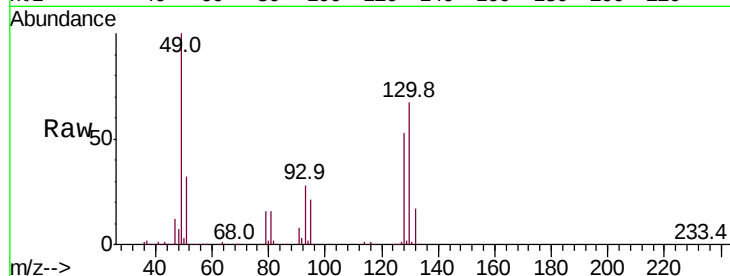
Tot Ion: 49 Resp: 975434

Ion Ratio Lower Upper

49 100

128 53.4 25.5 76.5

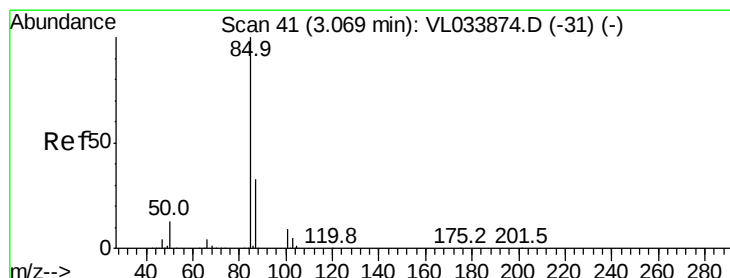
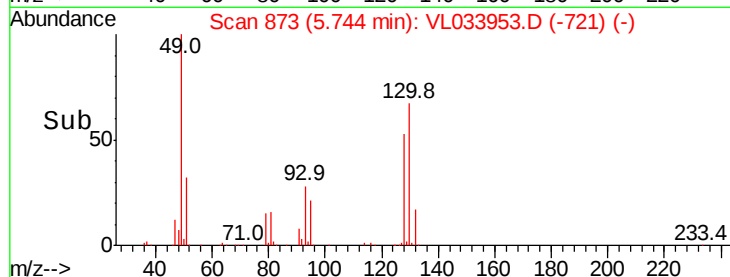
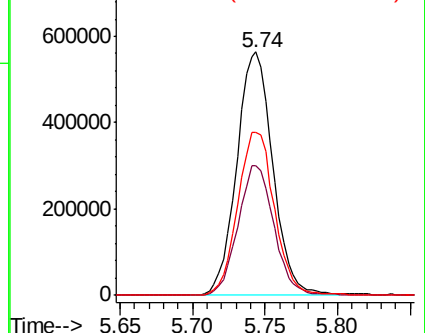
130 68.9 32.5 97.4



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.069 ppbv

RT: 3.07 min Scan# 41

Delta R.T. -0.00 min

Lab File: VL033953.D

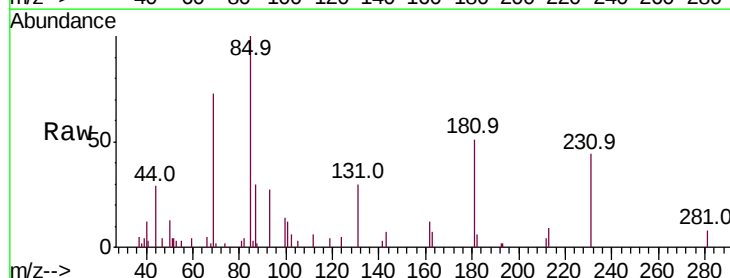
Acq: 25 Jun 2019 1:54

Tgt Ion: 85 Resp: 10858

Ion Ratio Lower Upper

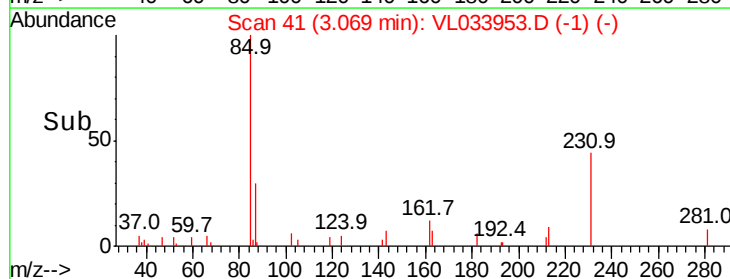
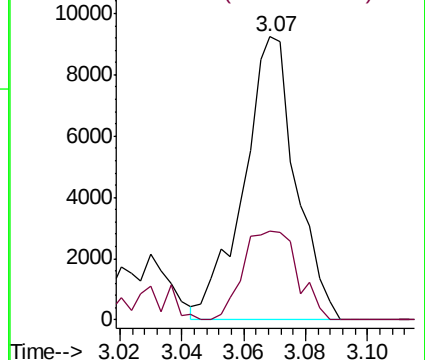
85 100

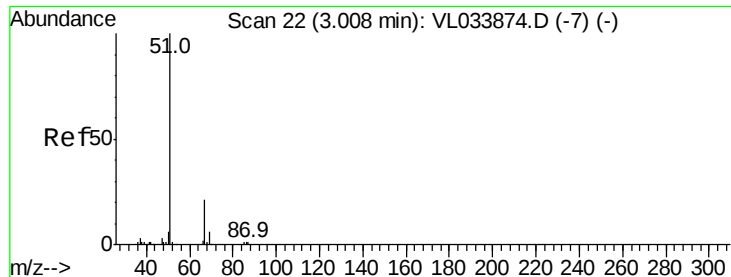
87 31.3 26.6 40.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

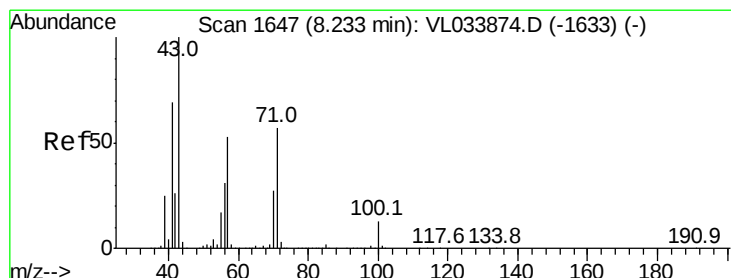
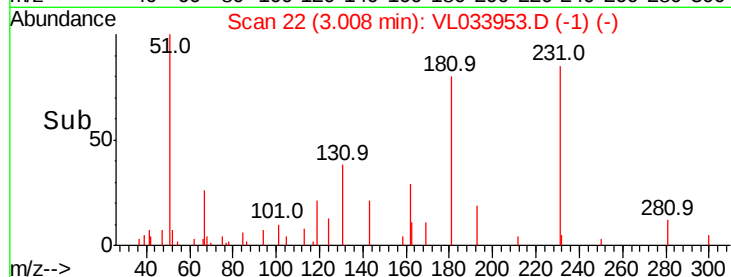
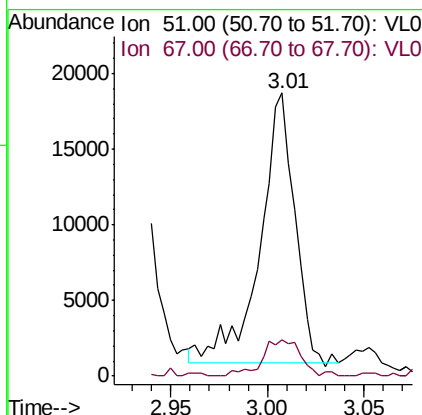
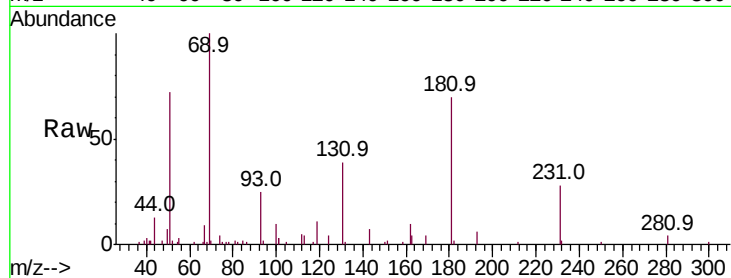




#3
Chlorodifluoromethane
Concen: 0.195 ppbv
RT: 3.01 min Scan# 22
Delta R.T. -0.00 min
Lab File: VL033953.D
Acq: 25 Jun 2019 1:54

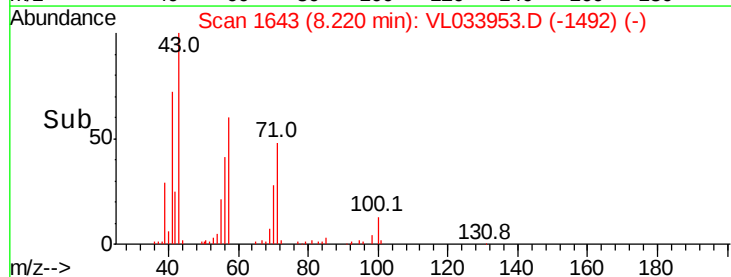
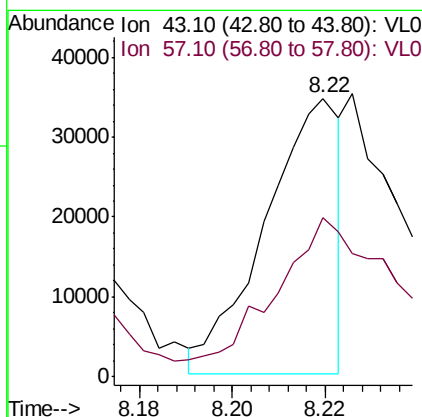
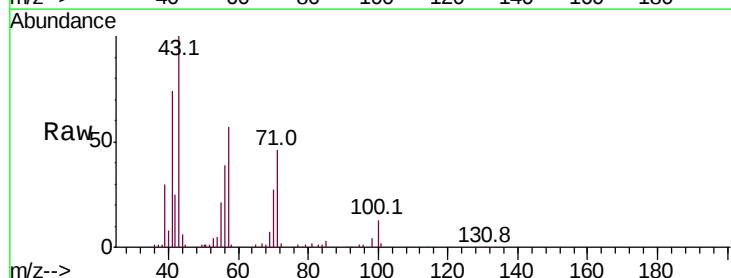
Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-D-1DL

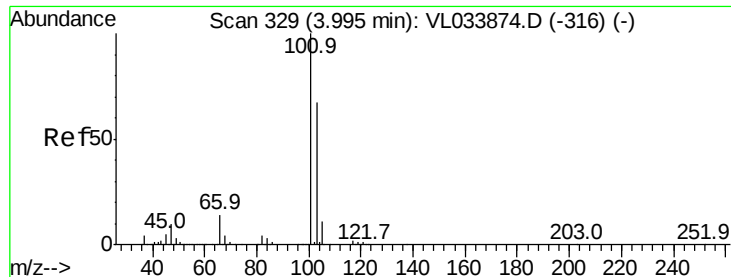
Tot Ion: 51 Resp: 22416
Ion Ratio Lower Upper
51 100
67 15.1 16.4 24.6#



#10
Heptane
Concen: 0.356 ppbv
RT: 8.22 min Scan# 1643
Delta R.T. -0.01 min
Lab File: VL033953.D
Acq: 25 Jun 2019 1:54

Tgt Ion: 43 Resp: 38634
Ion Ratio Lower Upper
43 100
57 129.5 41.7 62.5#





#11

Trichlorofluoromethane

Concen: 0.272 ppbv

RT: 3.99 min Scan# 328

Delta R.T. -0.00 min

Lab File: VL033953.D

Acq: 25 Jun 2019 1:54

Instrument :

MSVOA_L

ClientSampleId :

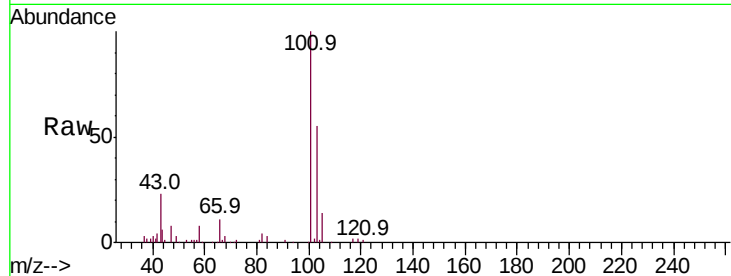
TZC-SSDS-AREA-D-1DL

Tot Ion:101 Resp: 55607

Ion Ratio Lower Upper

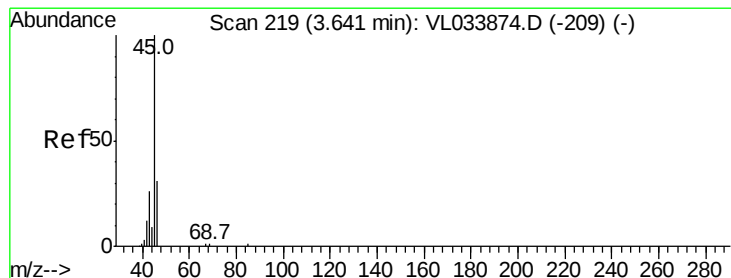
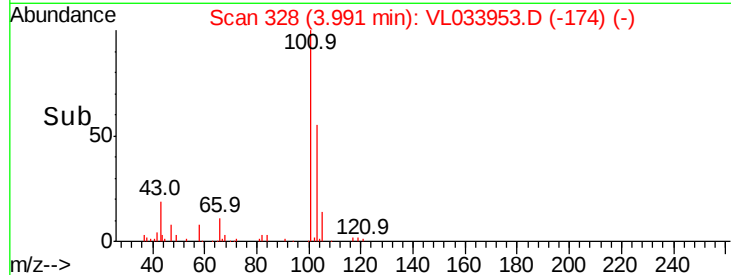
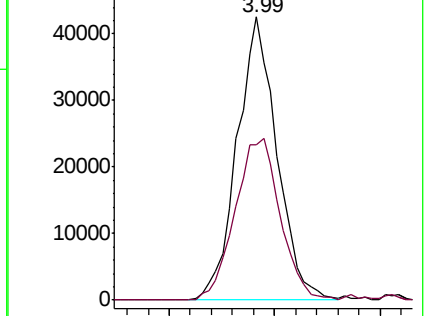
101 100

103 54.9 53.6 80.4



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#13

Ethanol

Concen: 1.592 ppbv

RT: 3.65 min Scan# 222

Delta R.T. 0.01 min

Lab File: VL033953.D

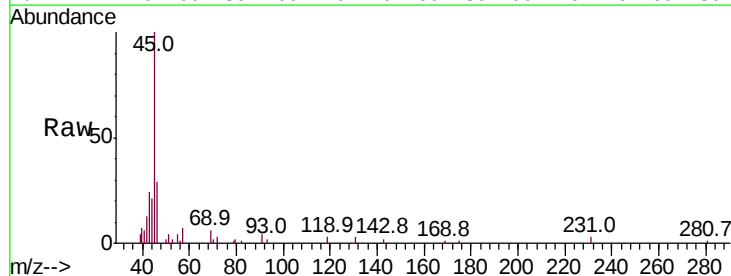
Acq: 25 Jun 2019 1:54

Tgt Ion: 45 Resp: 22253

Ion Ratio Lower Upper

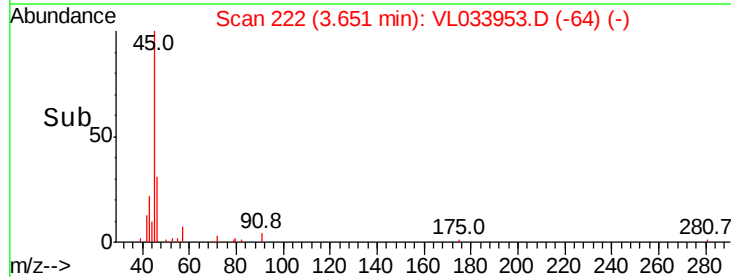
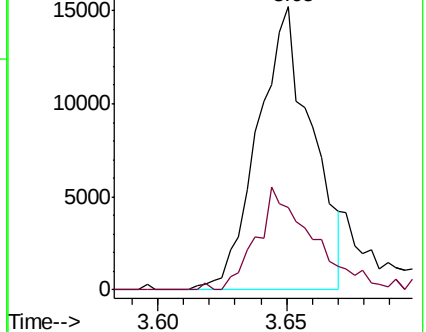
45 100

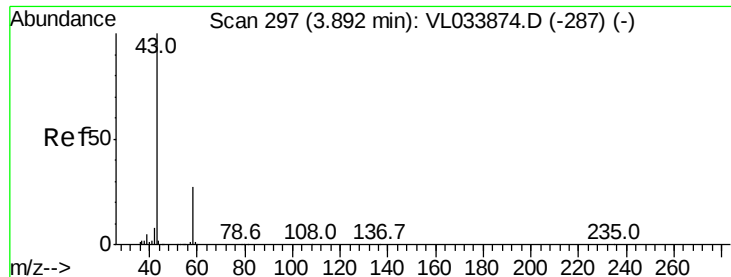
46 38.3 15.3 61.1



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 32.543 ppbv

RT: 3.88 min Scan# 294

Delta R.T. -0.01 min

Lab File: VL033953.D

Acq: 25 Jun 2019 1:54

Instrument :

MSVOA_L

ClientSampleId :

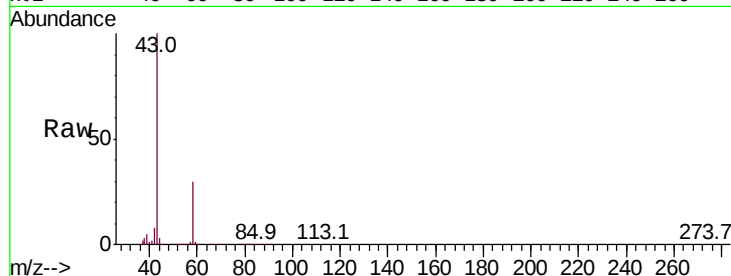
TZC-SSDS-AREA-D-1DL

Tot Ion: 43 Resp: 4629709

Ion Ratio Lower Upper

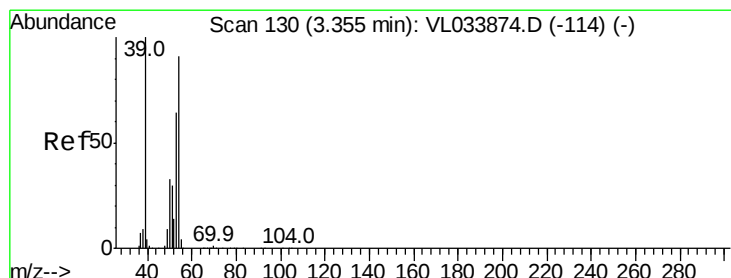
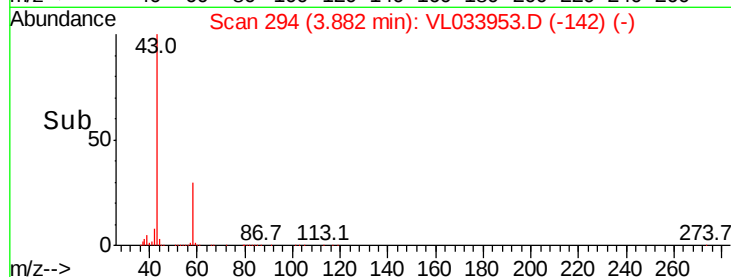
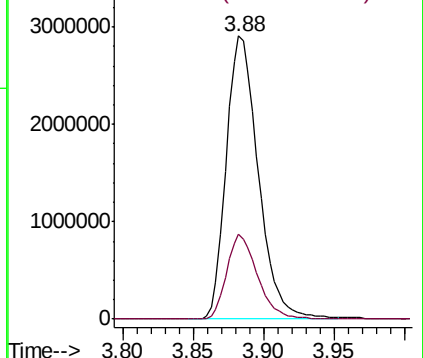
43 100

58 29.0 21.3 31.9



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.450 ppbv

RT: 3.33 min Scan# 122

Delta R.T. -0.03 min

Lab File: VL033953.D

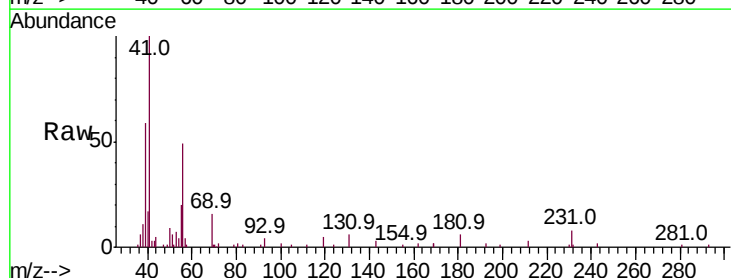
Acq: 25 Jun 2019 1:54

Tgt Ion: 39 Resp: 24366

Ion Ratio Lower Upper

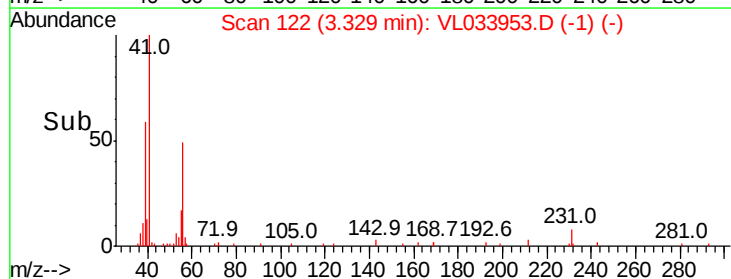
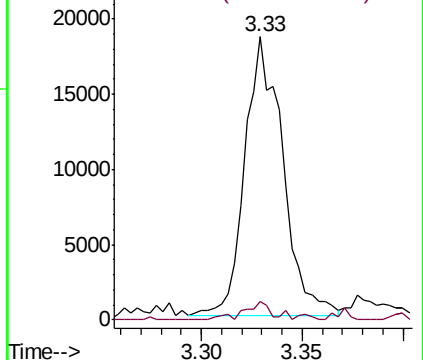
39 100

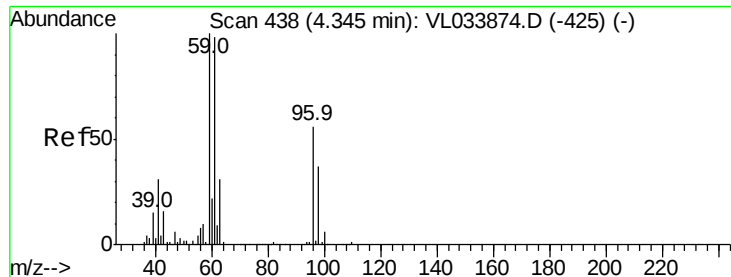
54 5.0 68.6 103.0#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0



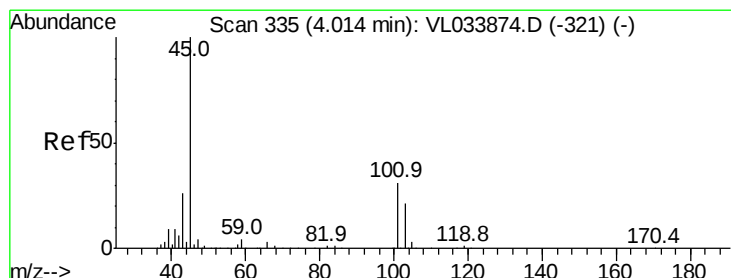
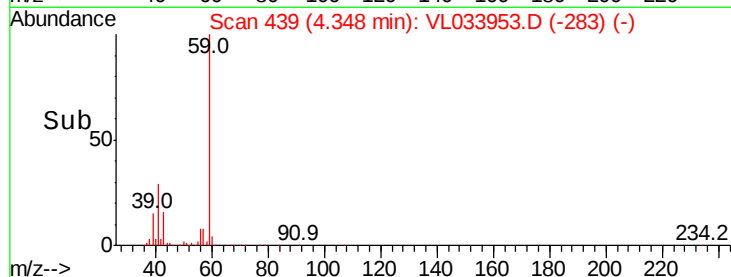
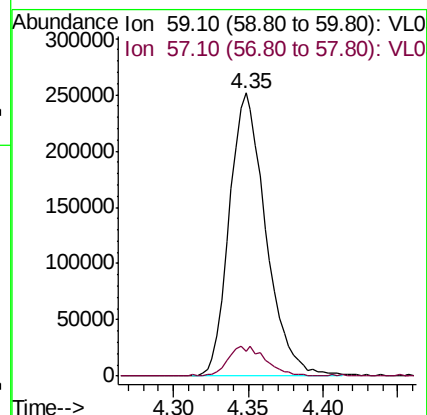
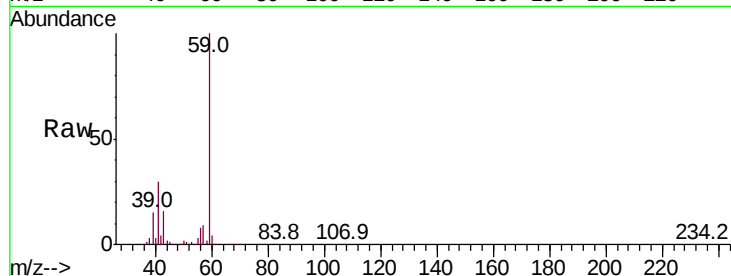


#17

tert-Butyl alcohol
Concen: 3.855 ppbv
RT: 4.35 min Scan# 439
Delta R.T. 0.00 min
Lab File: VL033953.D
Acq: 25 Jun 2019 1:54

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

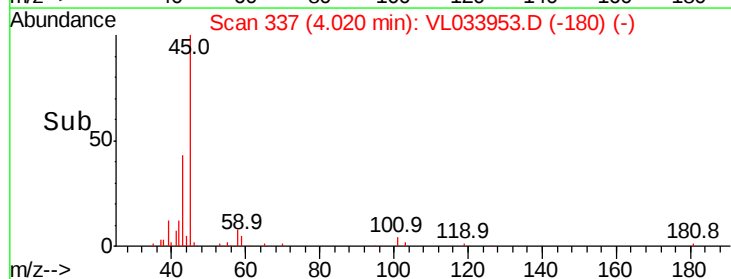
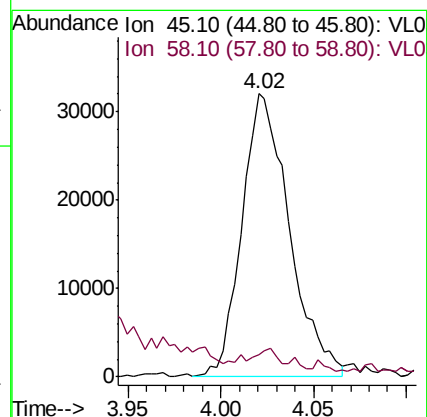
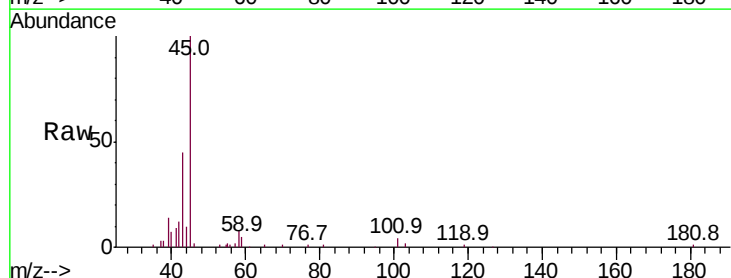
Tot Ion: 59 Resp: 428702
Ion Ratio Lower Upper
59 100
57 11.1 8.4 12.6

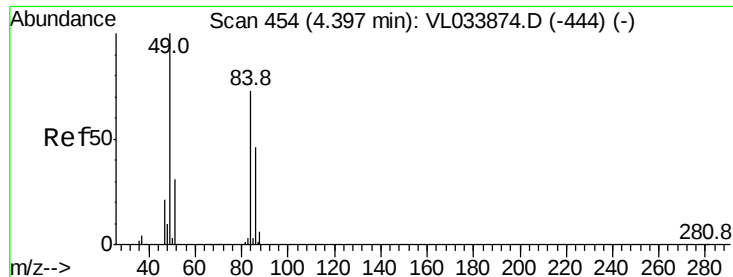


#19

Isopropyl Alcohol
Concen: 0.703 ppbv
RT: 4.02 min Scan# 337
Delta R.T. 0.01 min
Lab File: VL033953.D
Acq: 25 Jun 2019 1:54

Tgt Ion: 45 Resp: 57130
Ion Ratio Lower Upper
45 100
58 0.0 1.8 2.6#

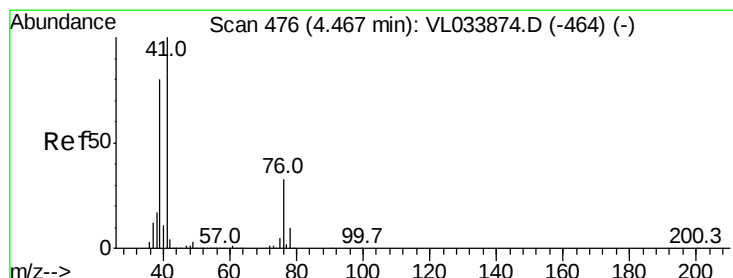
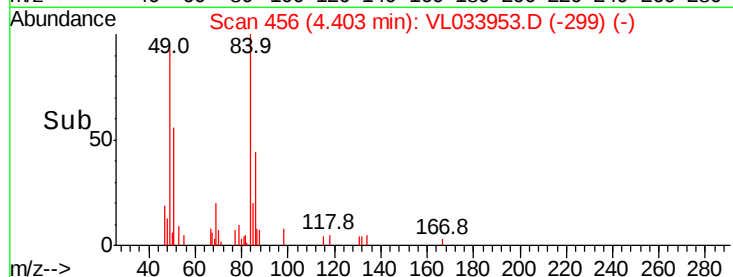
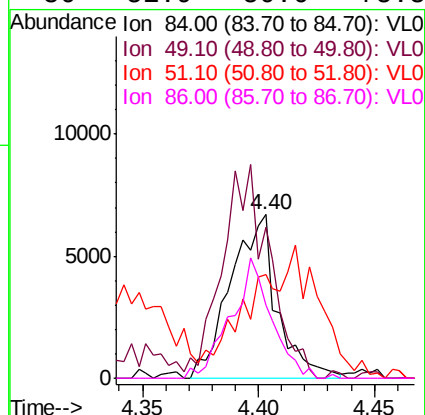
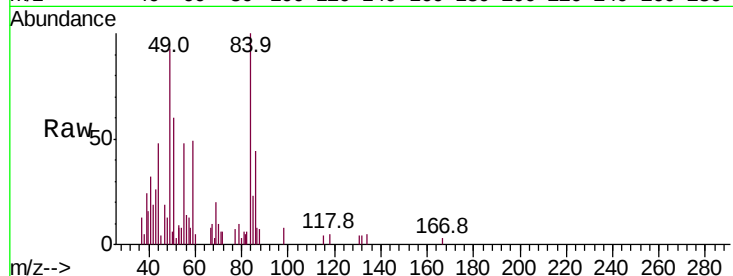




#20
Methylene Chloride
Concen: 0.169 ppbv
RT: 4.40 min Scan# 456
Delta R.T. 0.01 min
Lab File: VL033953.D
Acq: 25 Jun 2019 1:54

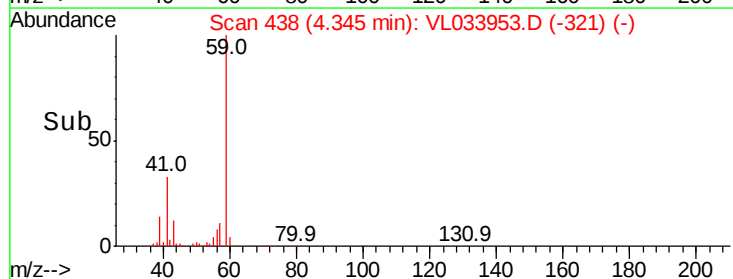
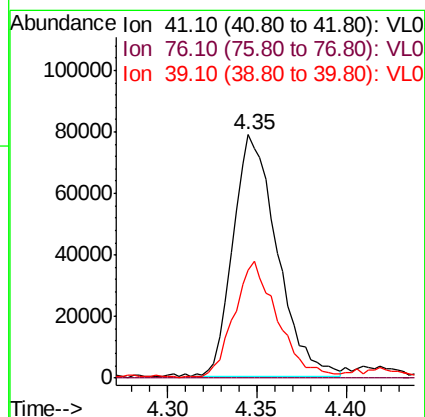
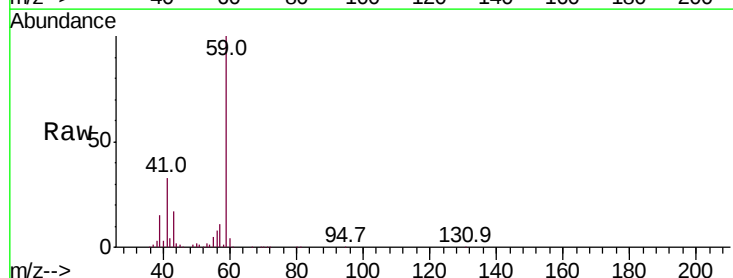
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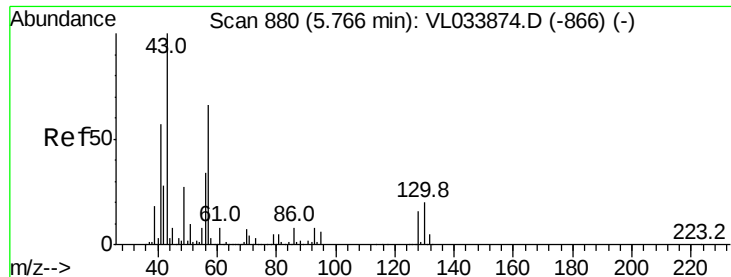
Tot Ion:	84	Resp:	9378
Ion	Ratio	Lower	Upper
84	100		
49	89.3	110.0	165.0#
51	48.6	34.6	51.8
86	51.9	50.6	75.8



#21
Allyl Chloride
Concen: 1.679 ppbv
RT: 4.35 min Scan# 438
Delta R.T. -0.12 min
Lab File: VL033953.D
Acq: 25 Jun 2019 1:54

Tgt Ion:	41	Resp:	135722
Ion	Ratio	Lower	Upper
41	100		
76	0.0	26.6	39.8#
39	47.2	65.2	97.8#

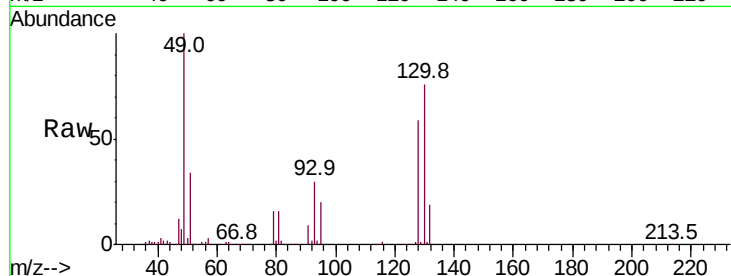




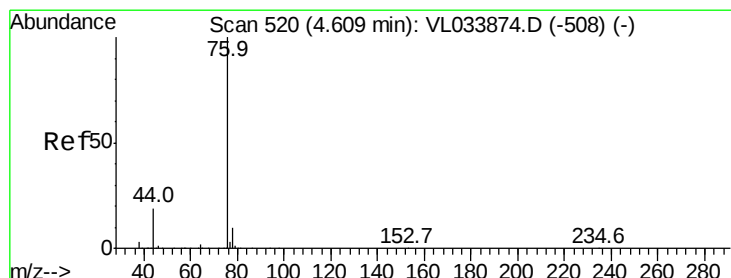
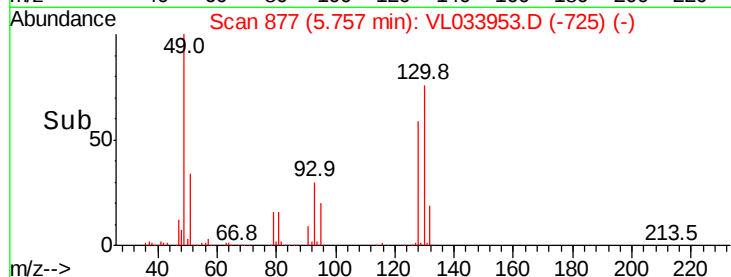
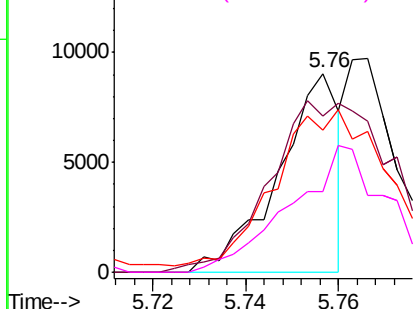
#26
Hexane
Concen: 0.083 ppbv
RT: 5.76 min Scan# 877
Delta R.T. -0.01 min
Lab File: VL033953.D
Acq: 25 Jun 2019 1:54

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

Tot Ion: 57 Resp: 8222
Ion Ratio Lower Upper
57 100
41 182.7 71.4 107.2#
43 159.1 183.7 275.5#
56 104.7 42.7 64.1#

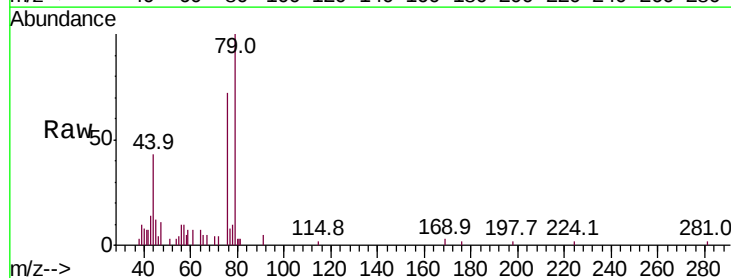


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

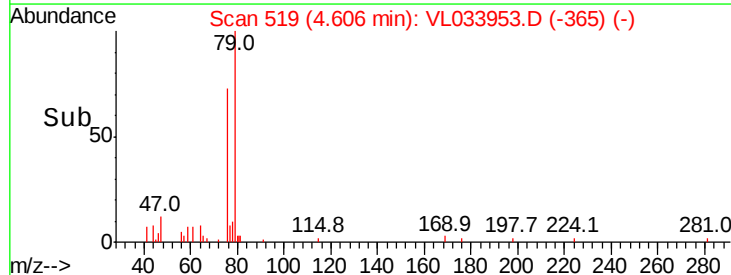
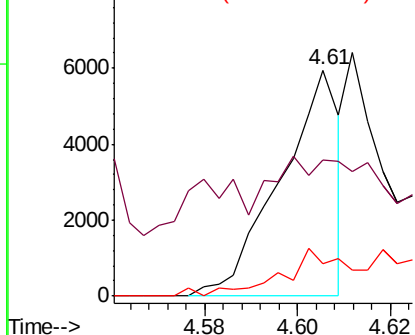


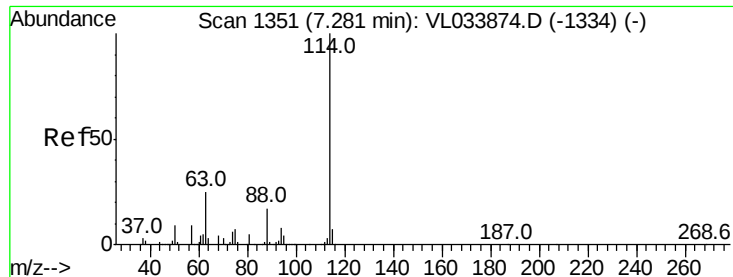
#27
Carbon Disulfide
Concen: 0.038 ppbv
RT: 4.61 min Scan# 519
Delta R.T. -0.00 min
Lab File: VL033953.D
Acq: 25 Jun 2019 1:54

Tgt Ion: 76 Resp: 5254
Ion Ratio Lower Upper
76 100
44 91.8 14.4 21.6#
78 48.2 7.5 11.3#



Abundance Ion 76.00 (75.70 to 76.70): VL0
Ion 44.10 (43.80 to 44.80): VL0
Ion 78.00 (77.70 to 78.70): VL0

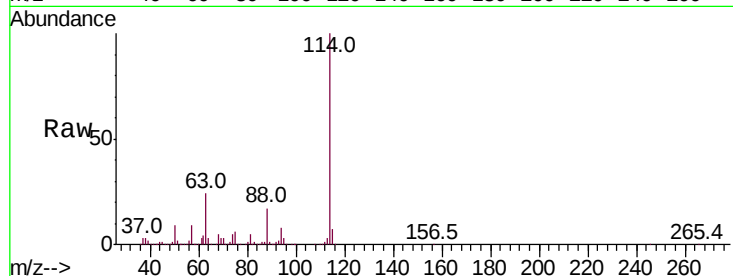




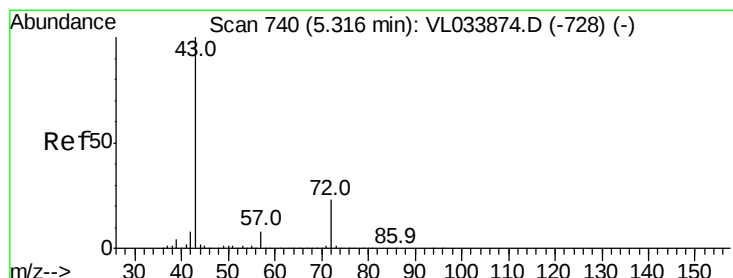
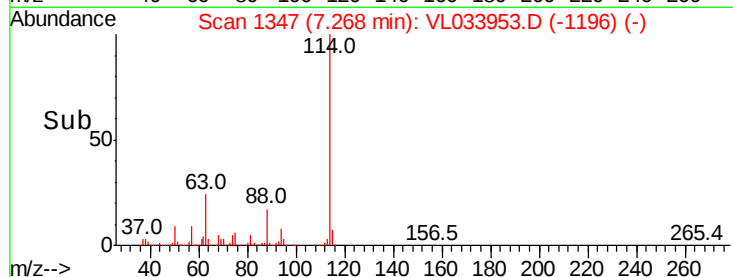
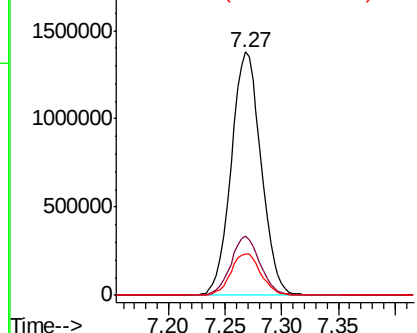
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.27 min Scan# 1347
 Delta R.T. -0.01 min
 Lab File: VL033953.D
 Acq: 25 Jun 2019 1:54

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

Tot Ion:114 Resp: 2539133
 Ion Ratio Lower Upper
 114 100
 63 23.8 21.1 31.7
 88 17.2 14.2 21.4

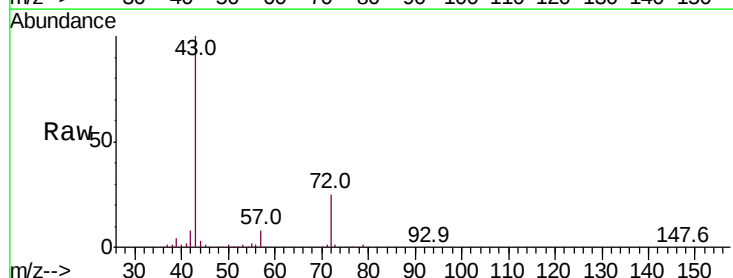


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

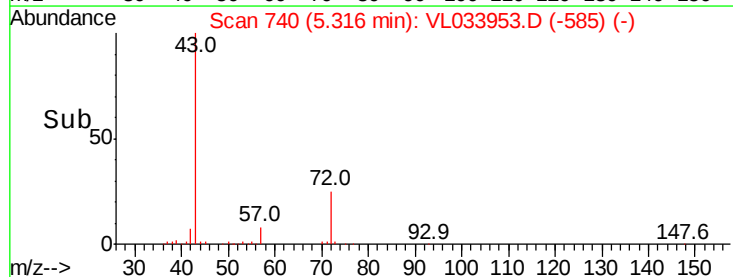
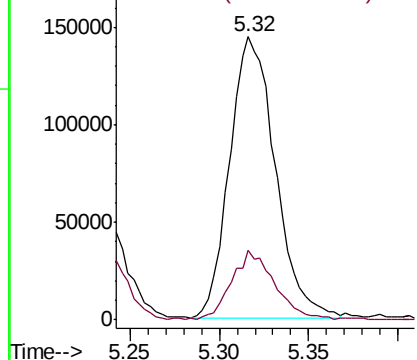


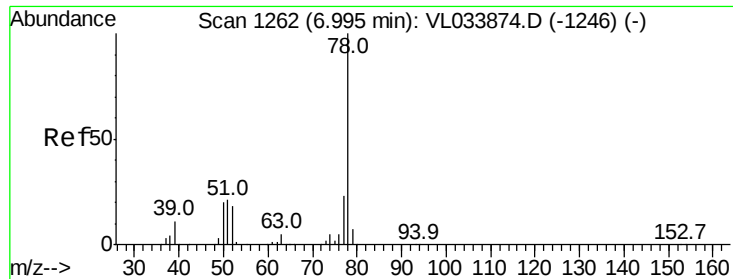
#34
 2-Butanone
 Concen: 1.787 ppbv
 RT: 5.32 min Scan# 740
 Delta R.T. -0.00 min
 Lab File: VL033953.D
 Acq: 25 Jun 2019 1:54

Tgt Ion: 43 Resp: 255920
 Ion Ratio Lower Upper
 43 100
 72 23.7 17.9 26.9



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





#36

Benzene

Concen: 1.163 ppbv

RT: 6.98 min Scan# 1257

Delta R.T. -0.02 min

Lab File: VL033953.D

Acq: 25 Jun 2019 1:54

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-D-1DL

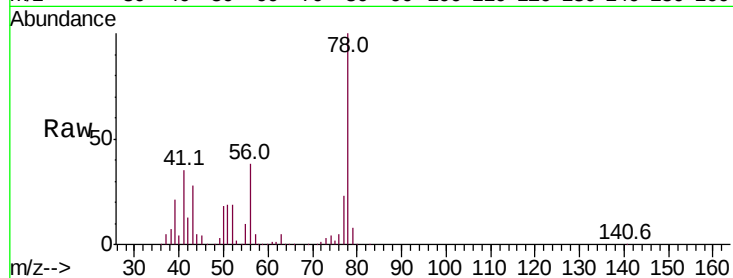
Tot Ion: 78 Resp: 225556

Ion Ratio Lower Upper

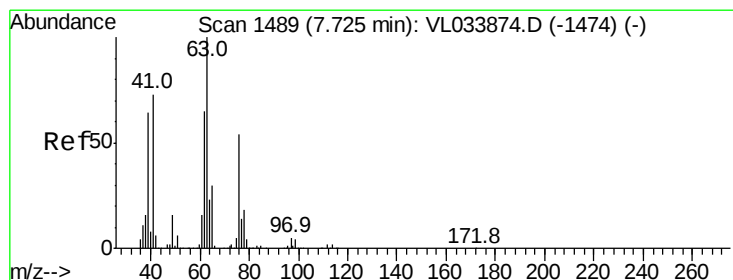
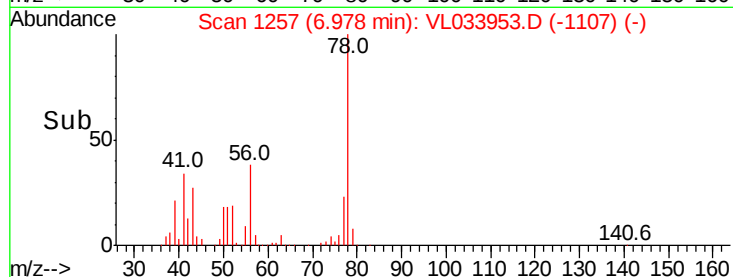
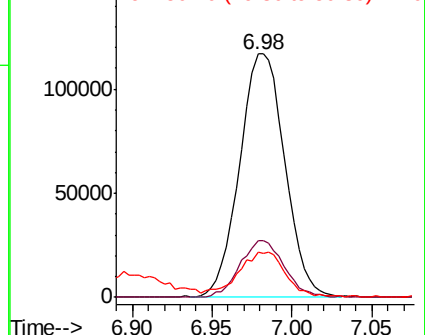
78 100

77 22.8 18.2 27.2

50 17.4 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: 8.013 ppbv

RT: 7.27 min Scan# 1347

Delta R.T. -0.46 min

Lab File: VL033953.D

Acq: 25 Jun 2019 1:54

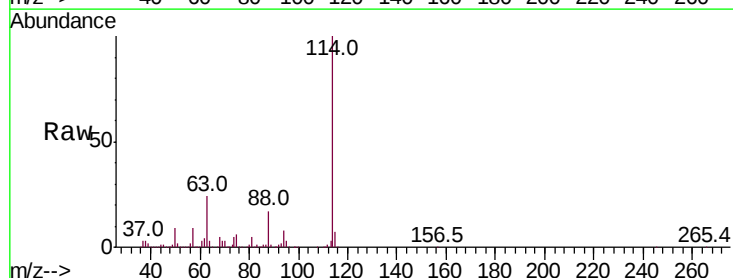
Tgt Ion: 63 Resp: 599880

Ion Ratio Lower Upper

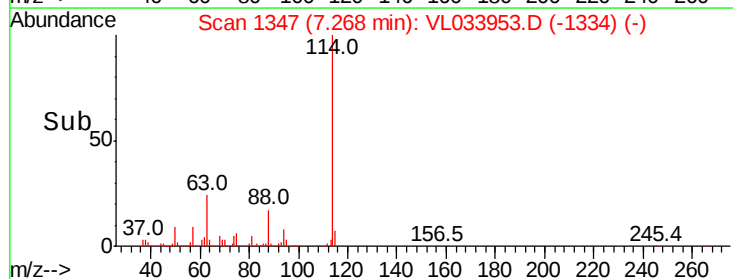
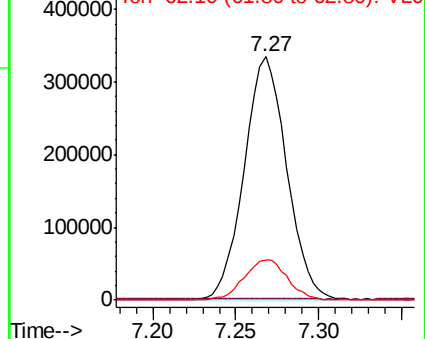
63 100

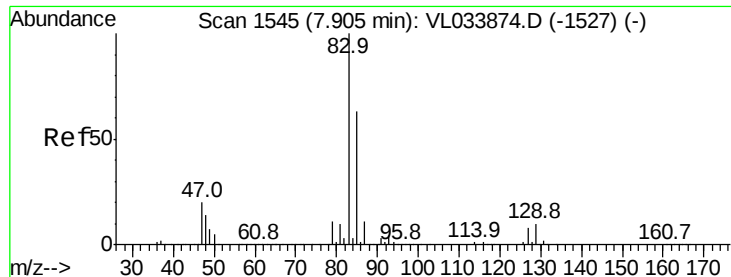
41 0.0 58.7 88.1#

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





#42

Bromodichloromethane

Concen: 0.044 ppbv

RT: 8.15 min Scan# 1621

Delta R.T. 0.24 min

Lab File: VL033953.D

Acq: 25 Jun 2019 1:54

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-D-1DL

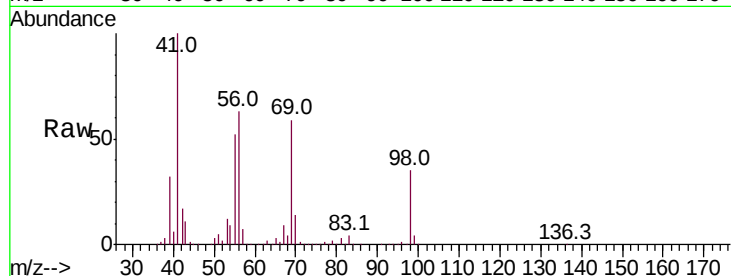
Tot Ion: 83 Resp: 8519

Ion Ratio Lower Upper

83 100

85 0.0 50.2 75.2#

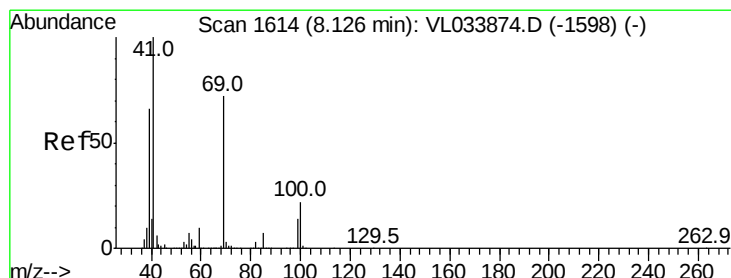
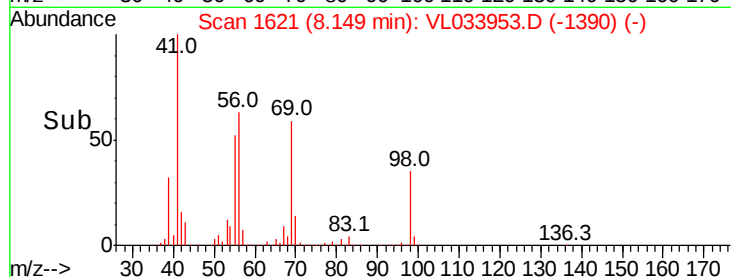
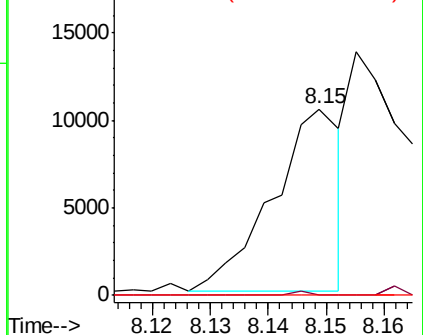
127 0.0 6.5 9.7#



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0

Ion 126.90 (126.60 to 127.60): VL0



#43

Methyl Methacrylate

Concen: 5.010 ppbv

RT: 8.16 min Scan# 1623

Delta R.T. 0.03 min

Lab File: VL033953.D

Acq: 25 Jun 2019 1:54

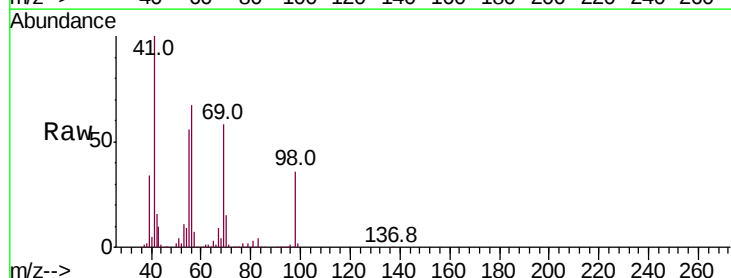
Tgt Ion: 69 Resp: 363431

Ion Ratio Lower Upper

69 100

41 174.7 114.3 171.5#

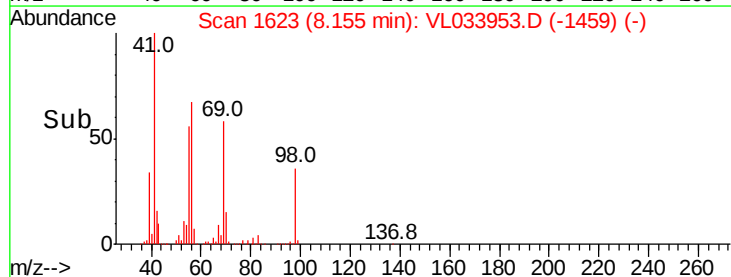
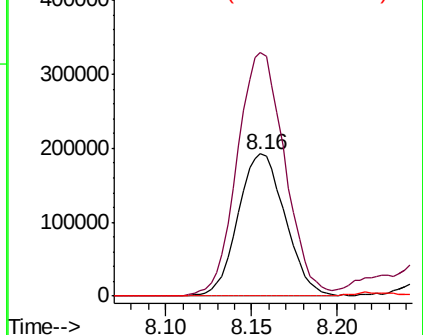
100 0.2 24.8 37.2#

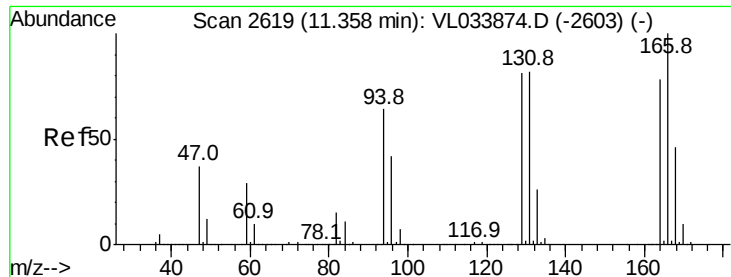


Abundance Ion 69.10 (68.80 to 69.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 100.10 (99.80 to 100.80): VL0





#52

Tetrachloroethene

Concen: 0.154 ppbv

RT: 11.34 min Scan# 2615

Delta R.T. -0.01 min

Lab File: VL033953.D

Acq: 25 Jun 2019 1:54

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-D-1DL

Tot Ion:164 Resp: 10482

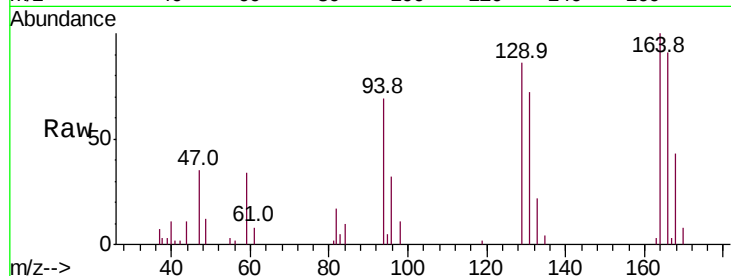
Ion Ratio Lower Upper

164 100

166 88.3 103.1 154.7#

129 81.6 83.9 125.9#

131 70.3 85.1 127.7#

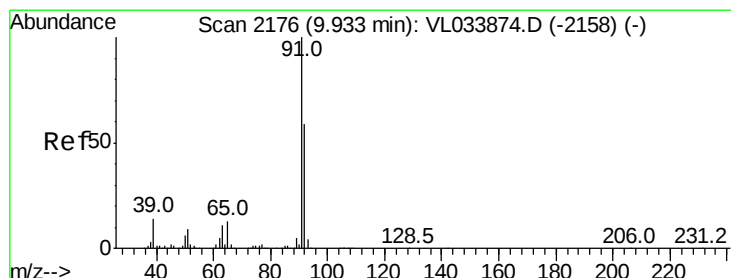
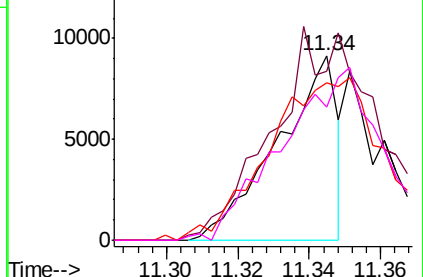
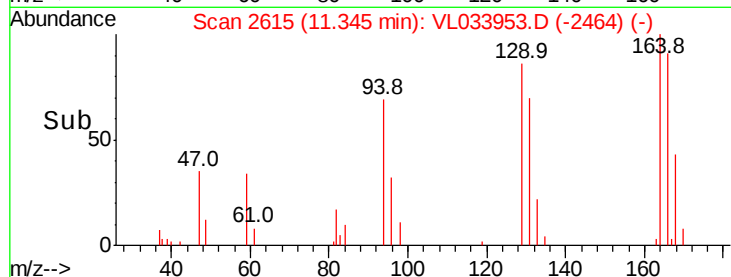


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 1.082 ppbv

RT: 9.92 min Scan# 2172

Delta R.T. -0.01 min

Lab File: VL033953.D

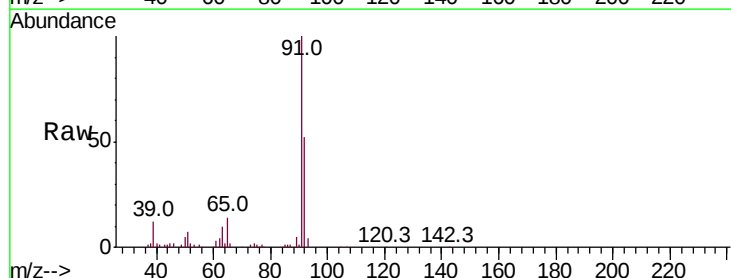
Acq: 25 Jun 2019 1:54

Tgt Ion: 91 Resp: 232216

Ion Ratio Lower Upper

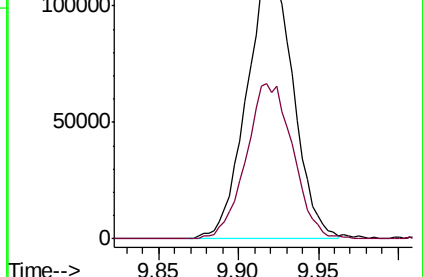
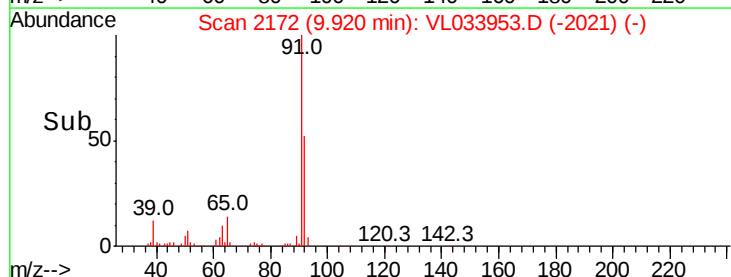
91 100

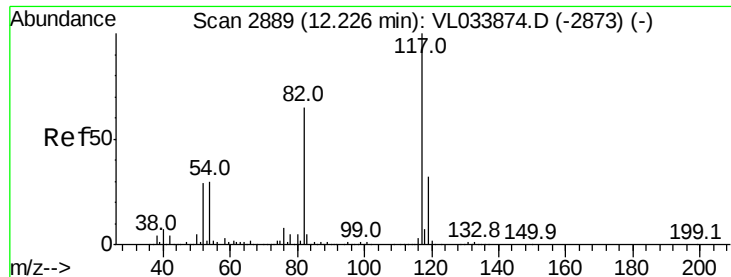
92 58.2 47.0 70.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.21 min Scan# 2884

Delta R.T. -0.02 min

Lab File: VL033953.D

Acq: 25 Jun 2019 1:54

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-D-1DL

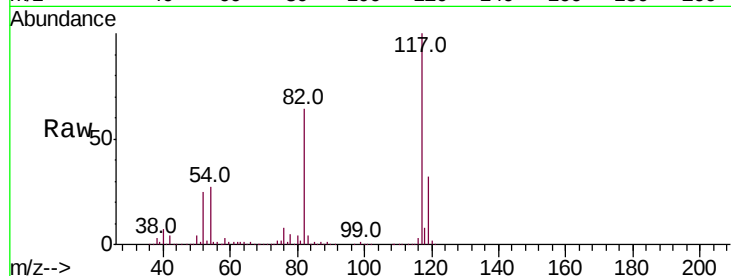
Tot Ion:117 Resp: 2521736

Ion Ratio Lower Upper

117 100

82 63.2 50.2 75.2

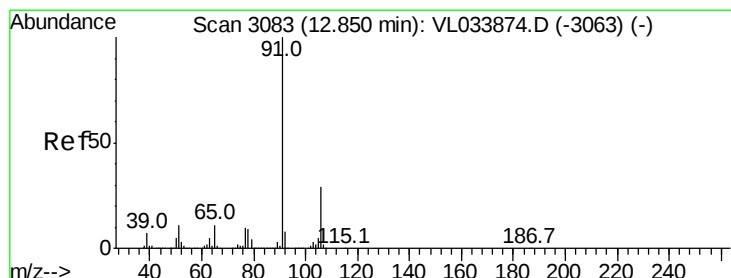
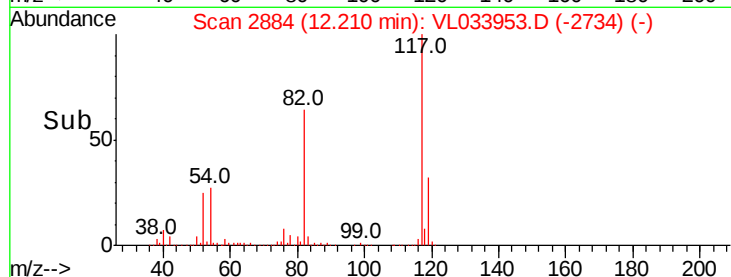
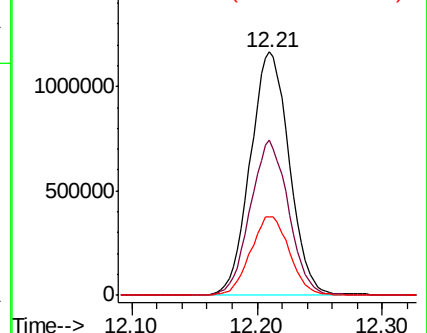
119 32.6 24.8 37.2



Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V



#58

Ethyl Benzene

Concen: 4.881 ppbv

RT: 12.83 min Scan# 3078

Delta R.T. -0.02 min

Lab File: VL033953.D

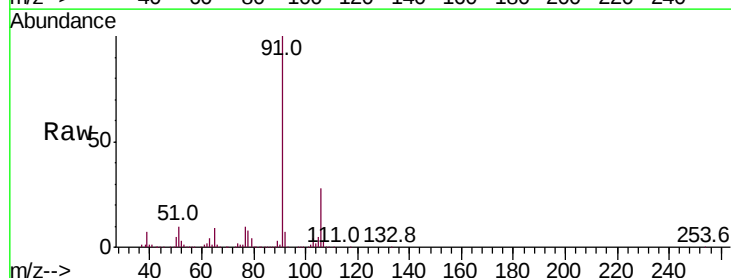
Acq: 25 Jun 2019 1:54

Tgt Ion: 91 Resp: 1387663

Ion Ratio Lower Upper

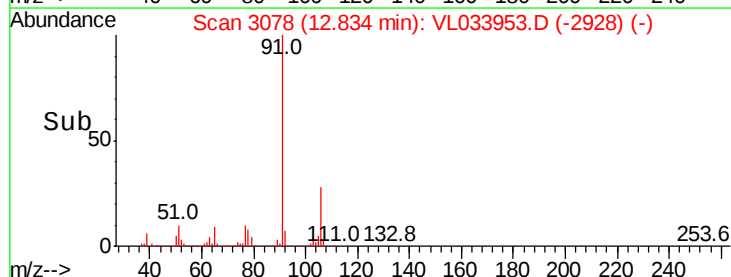
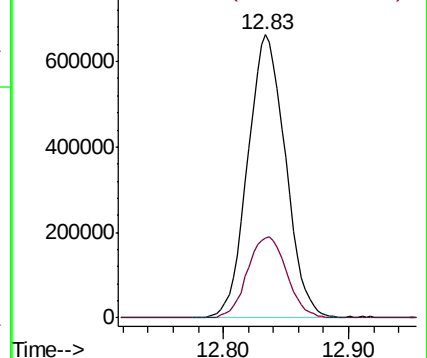
91 100

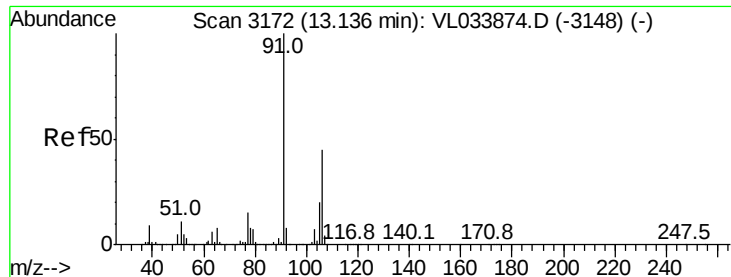
106 28.3 23.0 34.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





#59

m/p-Xylene

Concen: 14.873 ppbv

RT: 13.09 min Scan# 3158

Delta R.T. -0.05 min

Lab File: VL033953.D

Acq: 25 Jun 2019 1:54

Instrument :

MSVOA_L

ClientSampleId :

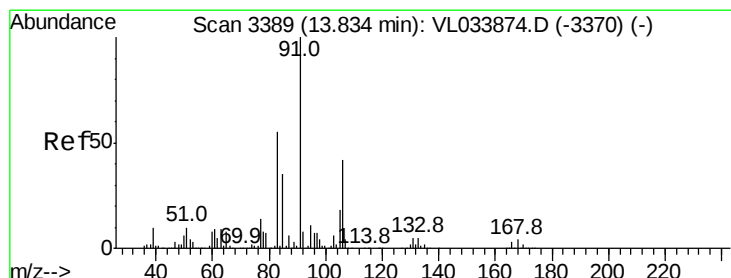
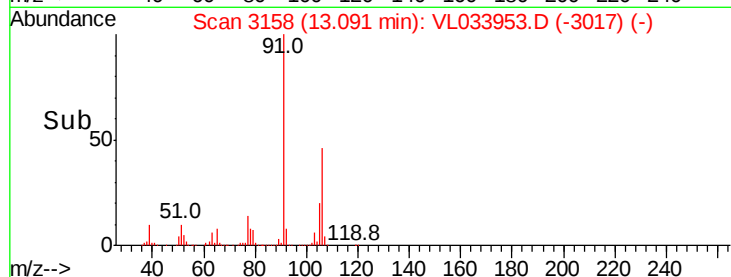
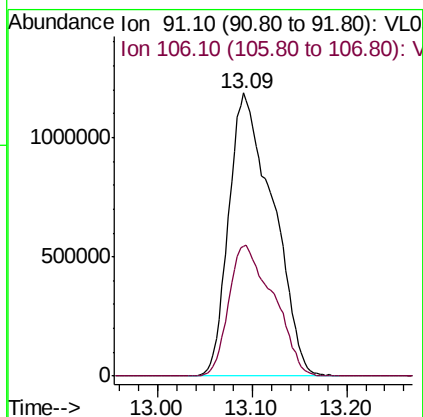
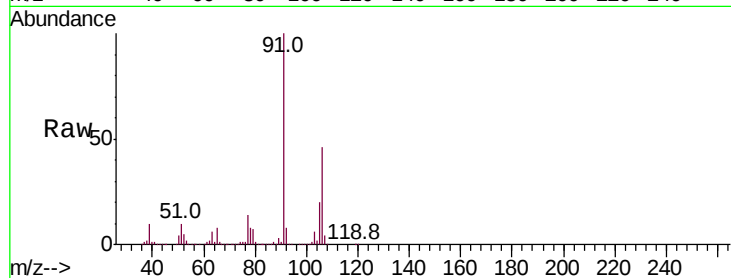
TZC-SSDS-AREA-D-1DL

Tot Ion: 91 Resp: 3845225

Ion Ratio Lower Upper

91 100

106 46.9 35.8 53.8



#60

o-Xylene

Concen: 6.642 ppbv

RT: 13.82 min Scan# 3385

Delta R.T. -0.01 min

Lab File: VL033953.D

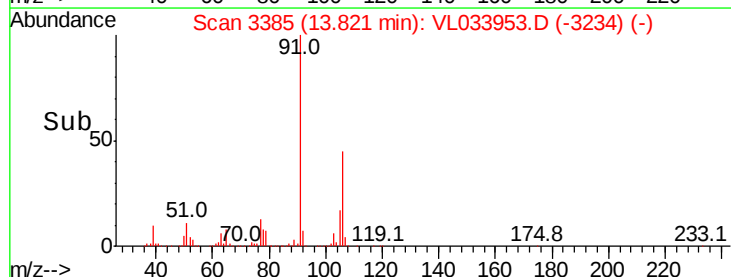
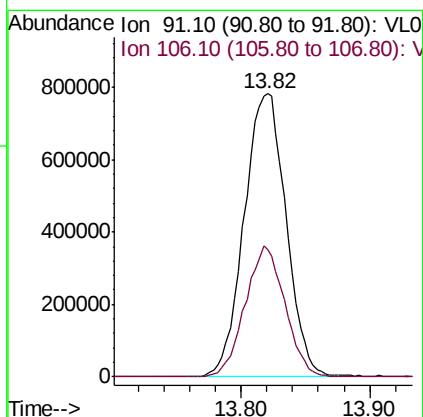
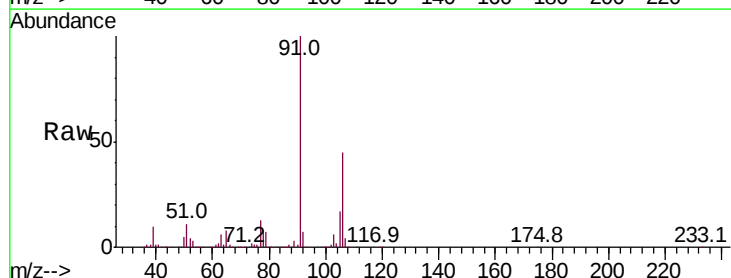
Acq: 25 Jun 2019 1:54

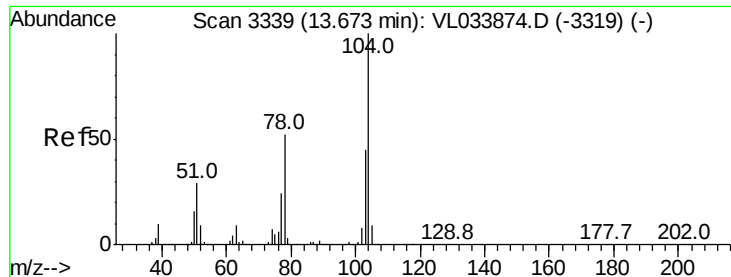
Tgt Ion: 91 Resp: 1772969

Ion Ratio Lower Upper

91 100

106 44.0 21.7 65.1





#61

Stvrene

Concen: 11.896 ppbv

RT: 13.66 min Scan# 3334

Delta R.T. -0.02 min

Lab File: VL033953.D

Acq: 25 Jun 2019 1:54

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-D-1DL

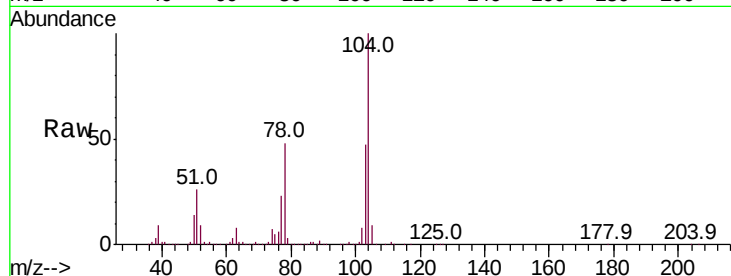
Tot Ion:104 Resp: 2055029

Ion Ratio Lower Upper

104 100

78 50.8 43.4 65.0

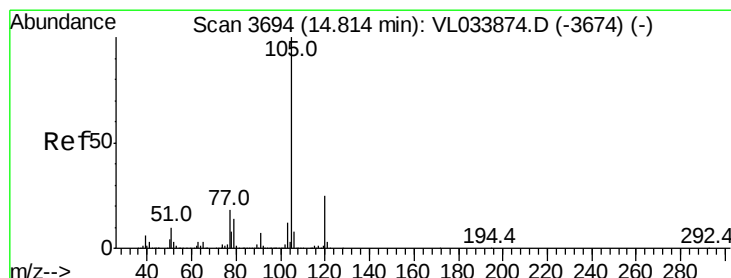
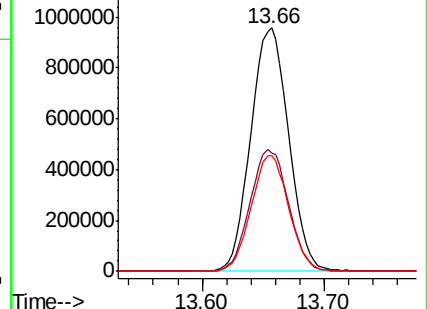
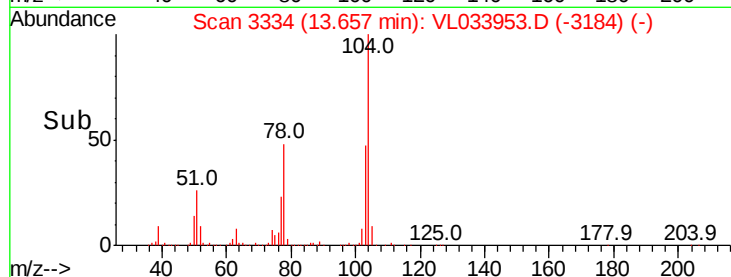
103 46.9 37.6 56.4



Abundance Ion 104.10 (103.80 to 104.80): V

Ion 78.10 (77.80 to 78.80): VL0

Ion 103.10 (102.80 to 103.80): V



#62

Isopropylbenzene

Concen: 0.069 ppbv

RT: 14.79 min Scan# 3687

Delta R.T. -0.02 min

Lab File: VL033953.D

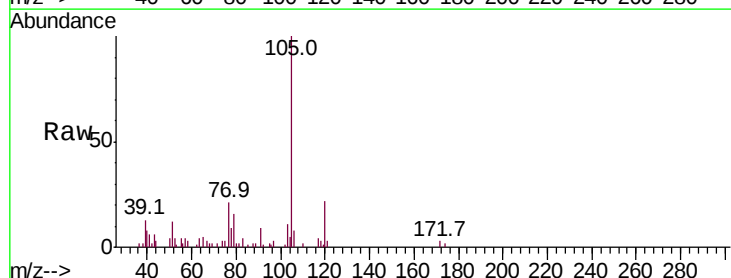
Acq: 25 Jun 2019 1:54

Tgt Ion:105 Resp: 24717

Ion Ratio Lower Upper

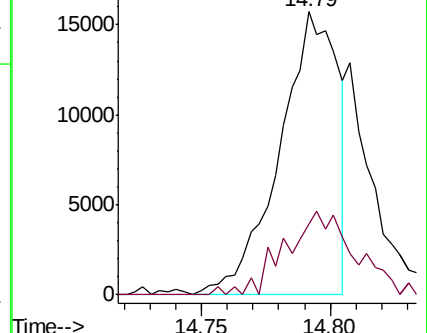
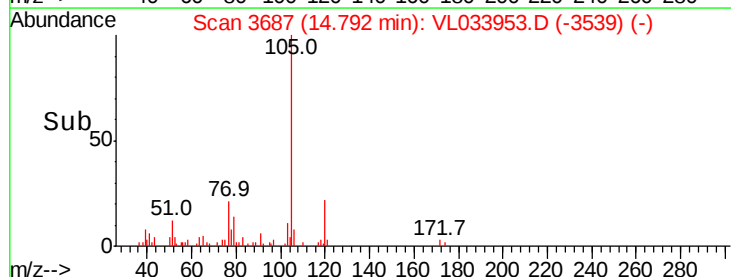
105 100

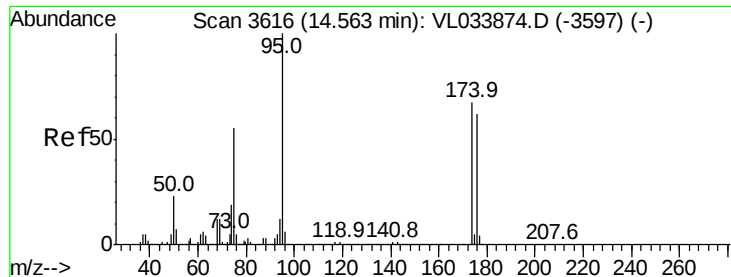
120 35.8 20.3 30.5#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#68

1-Bromo-4-Fluorobenzene

Concen: 10.045 ppbv

RT: 14.55 min Scan# 3611

Delta R.T. -0.02 min

Lab File: VL033953.D

Acq: 25 Jun 2019 1:54

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-D-1DL

Tot Ion: 95 Resp: 2080584

Ion Ratio Lower Upper

95 100

174 70.2 54.0 81.0

175 5.0 3.8 5.8

