

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL062419\
 Data File : VL033957.D
 Acq On : 25 Jun 2019 4:33
 Operator : SY/AP
 Sample : K3474-02DL 10X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 MIDDLE

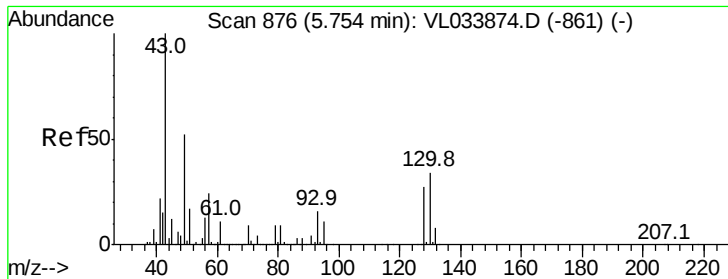
Quant Time: Jun 25 05:14:07 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL060719AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Jun 07 08:53:27 2019
 QLast Update : Fri Jun 07 08:53:27 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.74	49	942357	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.27	114	2260212	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.21	117	2388530	10.00	ppbv	-0.02

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev(Min)
68) 1-Bromo-4-Fluorobenzene	14.55	95	1865092	9.51	ppbv	-0.02	
Spiked Amount	10.000	Range	65 - 135	Recovery	=	95.10%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.07	85	11656	0.076	ppbv	91
4) Chloromethane	3.16	50	2373	0.038	ppbv #	81
7) Chloroethane	3.59	64	988	0.043	ppbv #	74
9) Propene	3.03	41	11585	0.279	ppbv	95
11) Trichlorofluoromethane	3.99	101	10644	0.054	ppbv	92
13) Ethanol	3.64	45	237283	17.569	ppbv	97
15) Acetone	3.89	43	268806	1.956	ppbv	91
16) 1,3-Butadiene	3.33	39	13774	0.263	ppbv #	11
18) 1,1-Dichloroethene	4.34	96	18196	0.323	ppbv	86
19) Isopropyl Alcohol	4.02	45	234566	2.988	ppbv #	98
20) Methylene Chloride	4.39	84	7738	0.144	ppbv	94
23) Vinyl Acetate	5.13	43	35607	0.223	ppbv #	88
24) 1,1-Dichloroethane	5.07	63	23919	0.193	ppbv	96
25) Ethyl Acetate	5.75	43	6312	0.030	ppbv #	83
26) Hexane	5.76	57	6689	0.070	ppbv #	52
32) 1,1,1-Trichloroethane	6.59	97	14147	0.090	ppbv	94
34) 2-Butanone	5.32	43	46802	0.367	ppbv	98
39) 1,2-Dichloropropane	7.26	63	564199	8.467	ppbv #	26
41) Tetrahydrofuran	6.15	42	42432	0.656	ppbv	97
53) Toluene	9.92	91	40430	0.212	ppbv	98
56) 1,1,1,2-Tetrachloroethane	11.81	131	22296	0.214	ppbv #	10
60) o-Xylene	13.82	91	9756	0.039	ppbv #	63
65) tert-Butylbenzene	17.10	119	243024	0.771	ppbv #	20
75) 1,3-Dichlorobenzene	17.13	146	33012	0.161	ppbv #	1

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.74 min Scan# 872

Delta R.T. -0.01 min

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MIDDLE

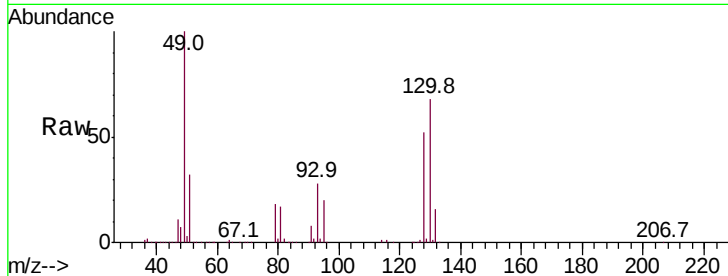
Tot Ion: 49 Resp: 942357

Ion Ratio Lower Upper

49 100

128 53.0 25.5 76.5

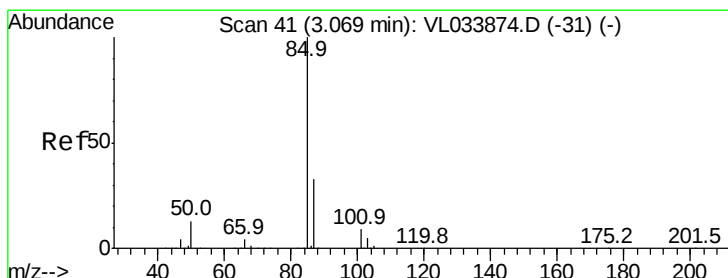
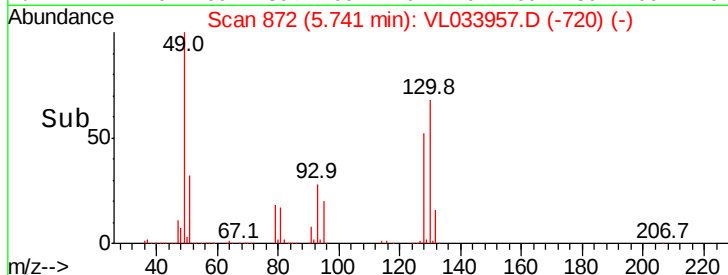
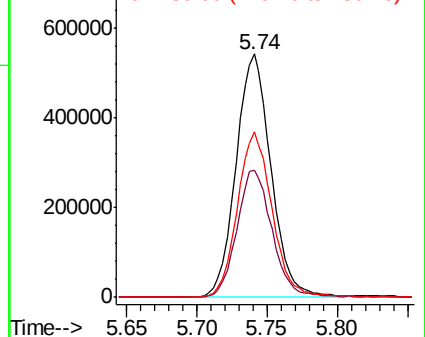
130 68.3 32.5 97.4



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: 0.076 ppbv

RT: 3.07 min Scan# 42

Delta R.T. 0.00 min

Lab File: VL033957.D

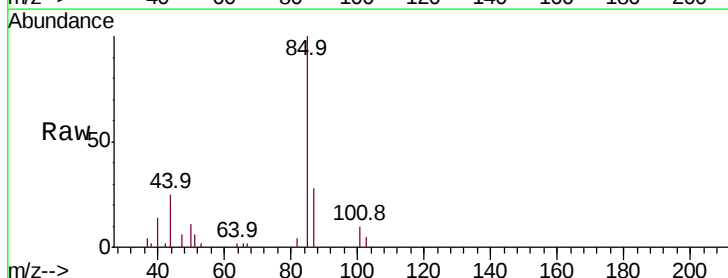
Acq: 25 Jun 2019 4:33

Tgt Ion: 85 Resp: 11656

Ion Ratio Lower Upper

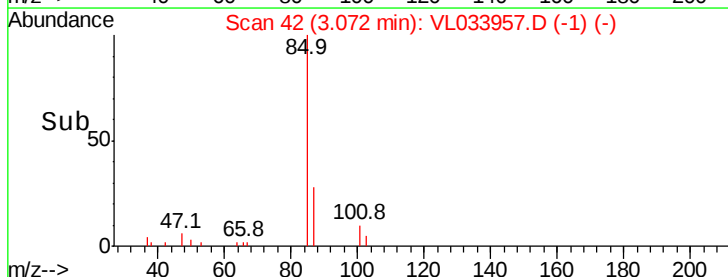
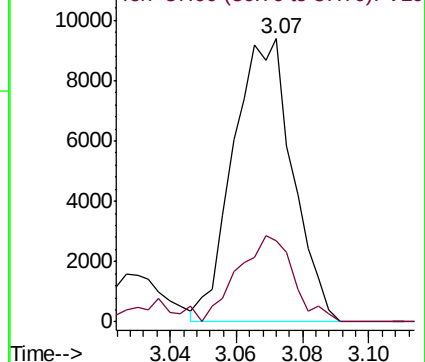
85 100

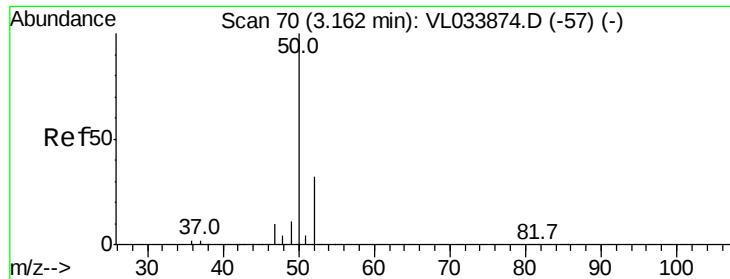
87 28.4 26.6 40.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#4

Chloromethane

Concen: 0.038 ppbv

RT: 3.16 min Scan# 69

Delta R.T. -0.00 min

Lab File: VL033957.D

Acq: 25 Jun 2019 4:33

Instrument :

MSVOA_L

ClientSampleId :

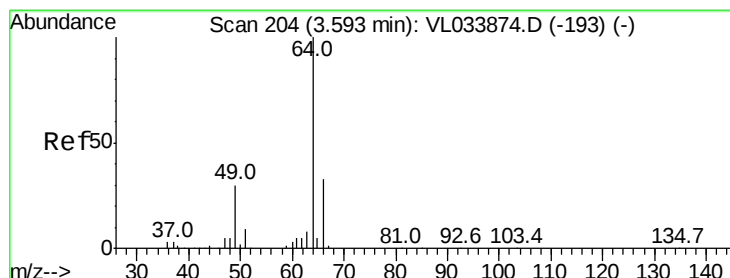
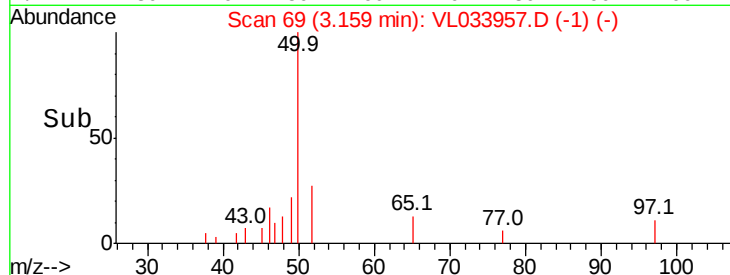
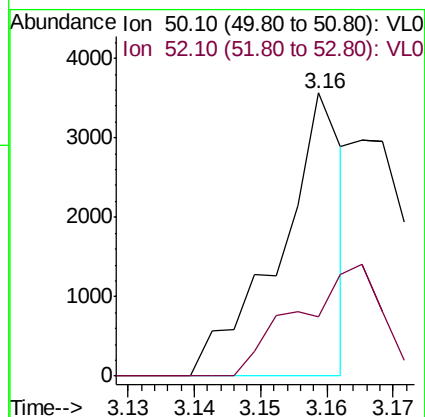
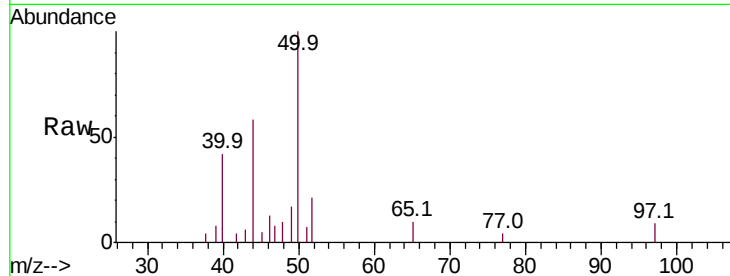
MIDDLE

Tot Ion: 50 Resp: 2373

Ion Ratio Lower Upper

50 100

52 20.9 25.4 38.0#



#7

Chloroethane

Concen: 0.043 ppbv

RT: 3.59 min Scan# 202

Delta R.T. -0.01 min

Lab File: VL033957.D

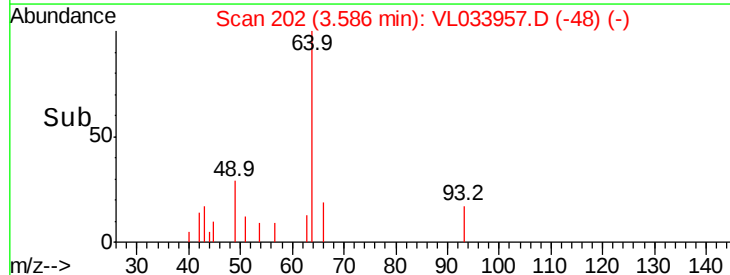
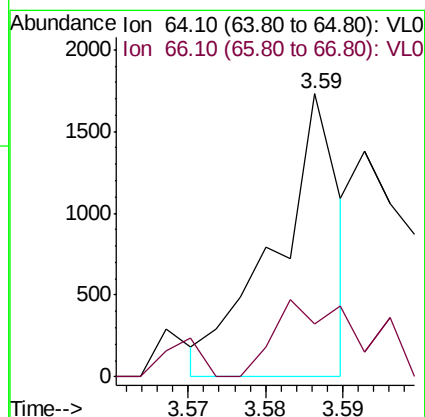
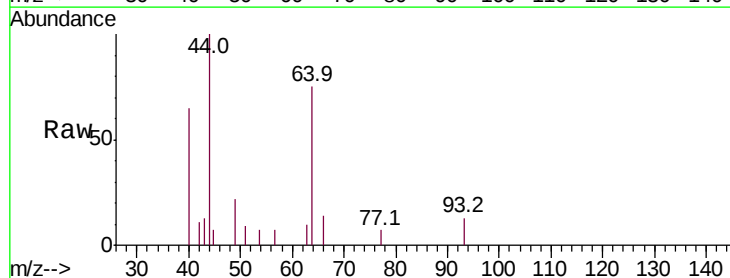
Acq: 25 Jun 2019 4:33

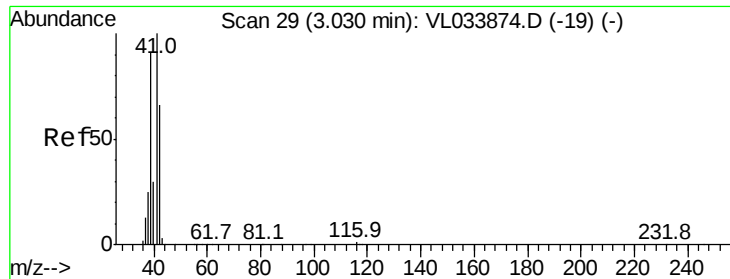
Tgt Ion: 64 Resp: 988

Ion Ratio Lower Upper

64 100

66 18.7 26.7 40.1#





#9

Propene

Concen: 0.279 ppbv

RT: 3.03 min Scan# 30

Delta R.T. 0.00 min

Lab File: VL033957.D

Acq: 25 Jun 2019 4:33

Instrument :

MSVOA_L

ClientSampleId :

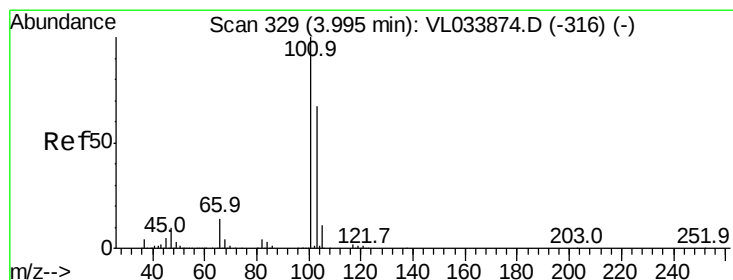
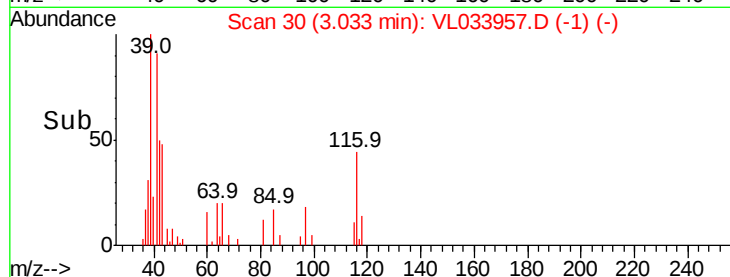
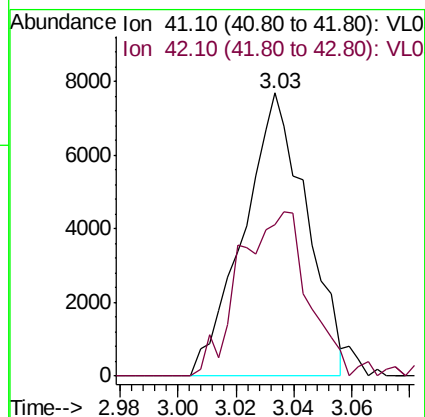
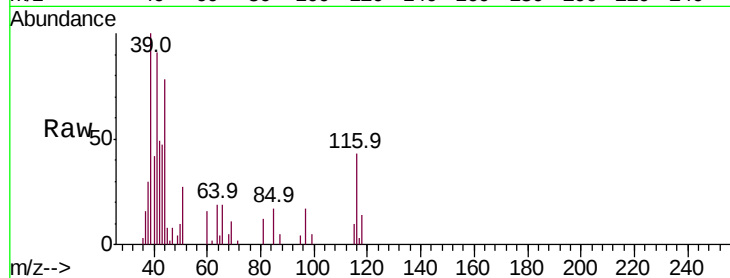
MIDDLE

Tot Ion: 41 Resp: 11585

Ion Ratio Lower Upper

41 100

42 66.1 56.3 84.5



#11

Trichlorofluoromethane

Concen: 0.054 ppbv

RT: 3.99 min Scan# 329

Delta R.T. 0.00 min

Lab File: VL033957.D

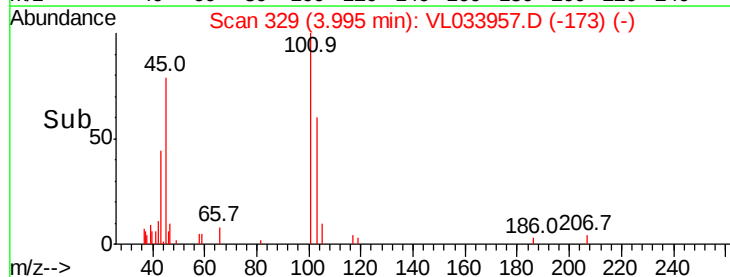
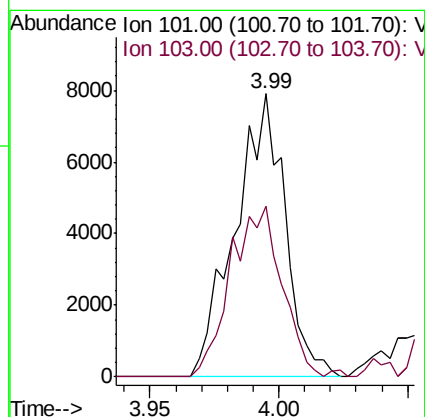
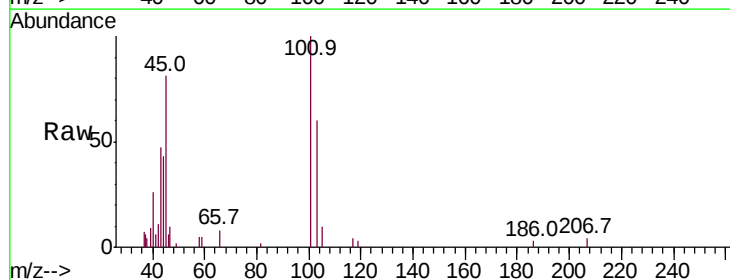
Acq: 25 Jun 2019 4:33

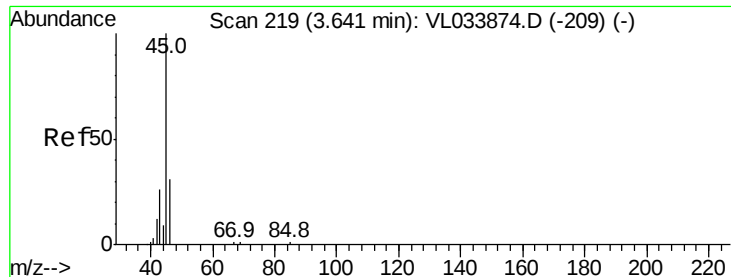
Tgt Ion: 101 Resp: 10644

Ion Ratio Lower Upper

101 100

103 60.3 53.6 80.4

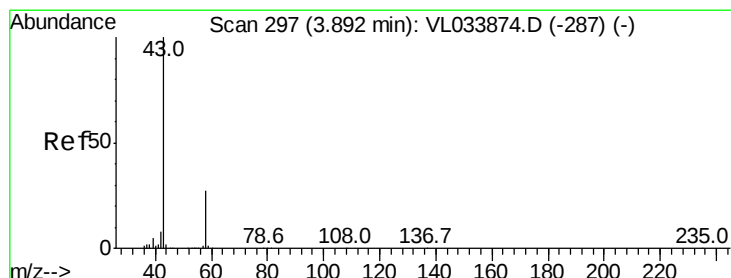
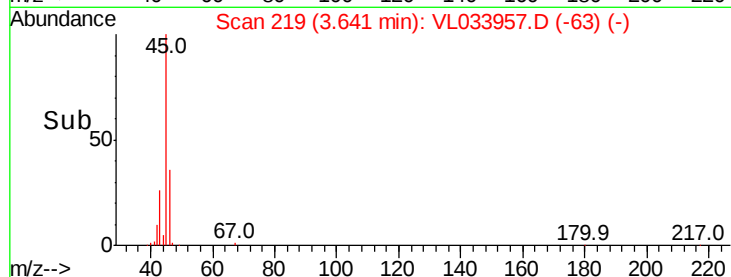
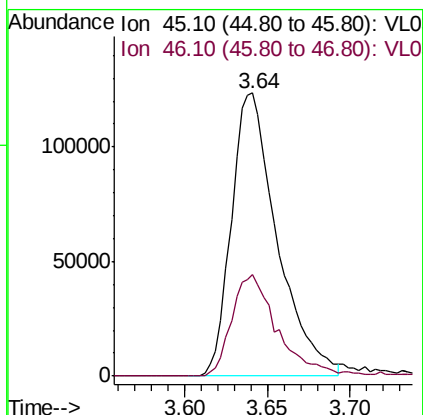
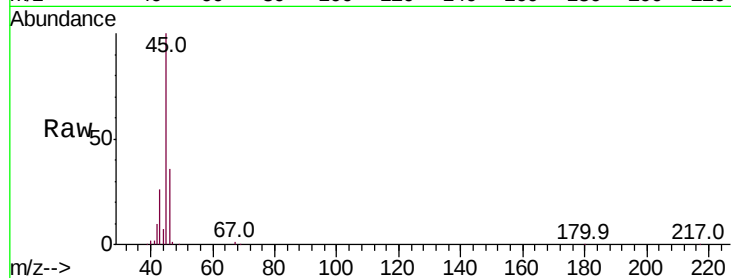




#13
Ethanol
Concen: 17.569 ppbv
RT: 3.64 min Scan# 219
Delta R.T. 0.00 min
Lab File: VL033957.D
Acq: 25 Jun 2019 4:33

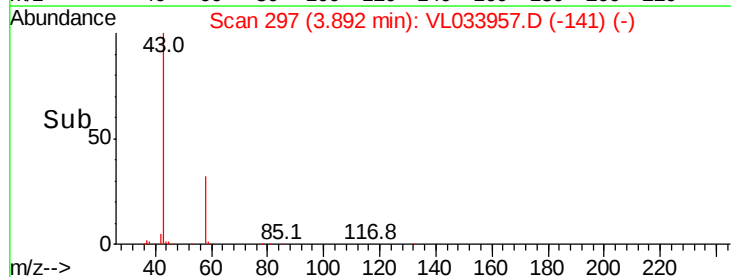
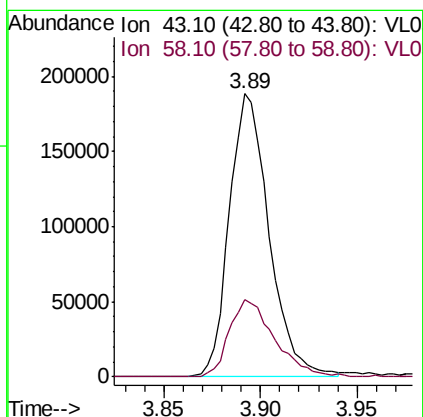
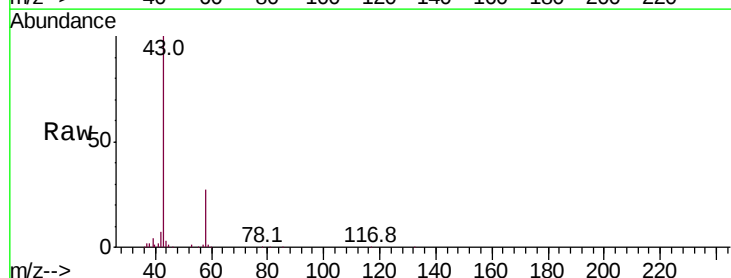
Instrument :
MSVOA_L
ClientSampleId :
MIDDLE

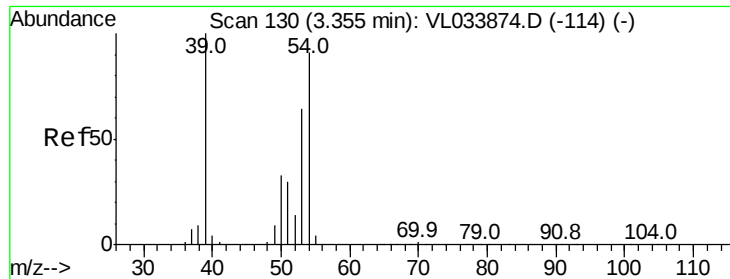
Tot Ion: 45 Resp: 237283
Ion Ratio Lower Upper
45 100
46 36.5 15.3 61.1



#15
Acetone
Concen: 1.956 ppbv
RT: 3.89 min Scan# 297
Delta R.T. -0.00 min
Lab File: VL033957.D
Acq: 25 Jun 2019 4:33

Tgt Ion: 43 Resp: 268806
Ion Ratio Lower Upper
43 100
58 31.2 21.3 31.9

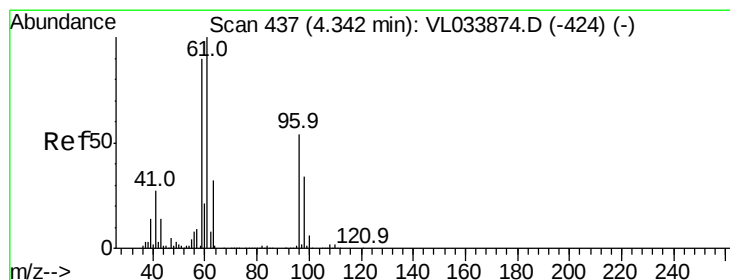
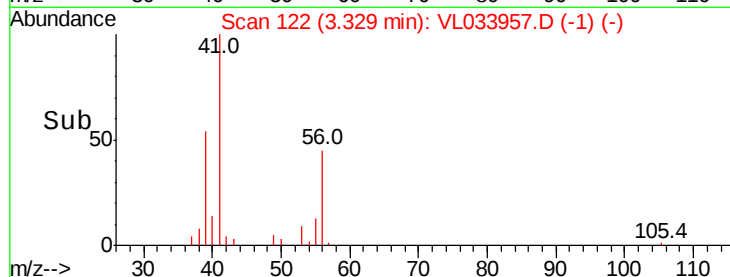
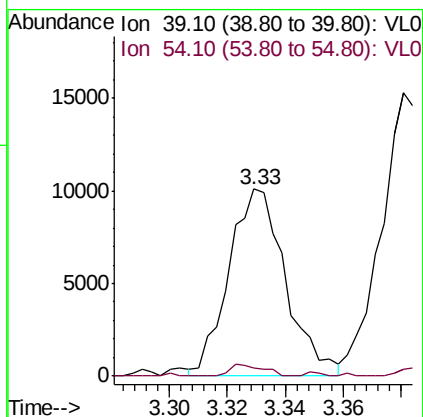
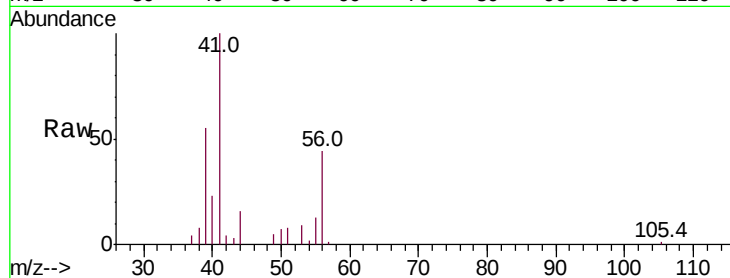




#16
 1,3-Butadiene
 Concen: 0.263 ppbv
 RT: 3.33 min Scan# 122
 Delta R.T. -0.03 min
 Lab File: VL033957.D
 Acq: 25 Jun 2019 4:33

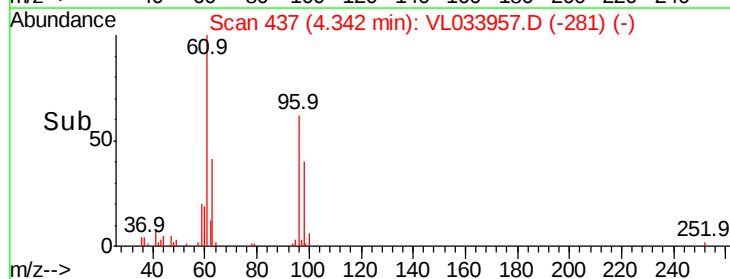
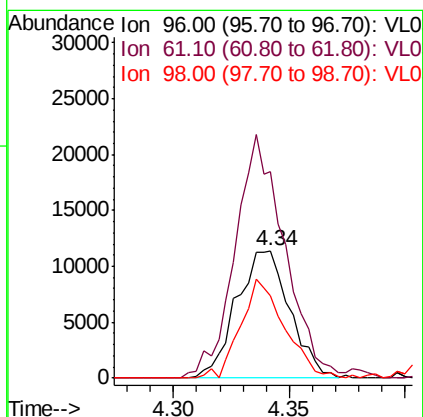
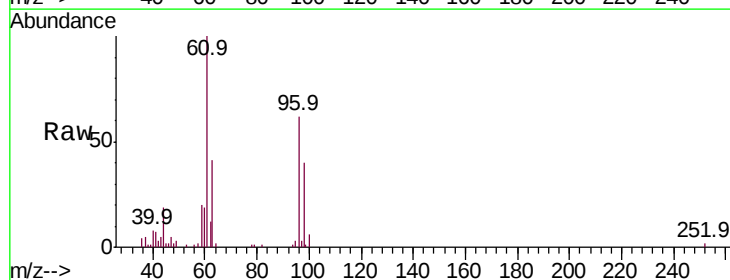
Instrument :
 MSVOA_L
 ClientSampleID :
 MIDDLE

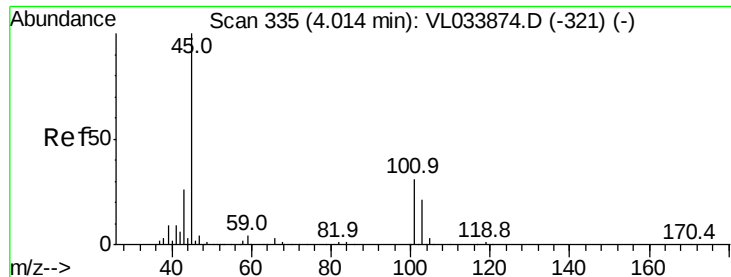
Tot Ion: 39 Resp: 13774
 Ion Ratio Lower Upper
 39 100
 54 4.3 68.6 103.0#



#18
 1,1-Dichloroethene
 Concen: 0.323 ppbv
 RT: 4.34 min Scan# 437
 Delta R.T. -0.00 min
 Lab File: VL033957.D
 Acq: 25 Jun 2019 4:33

Tgt Ion: 96 Resp: 18196
 Ion Ratio Lower Upper
 96 100
 61 158.3 147.0 220.6
 98 64.8 49.4 74.0



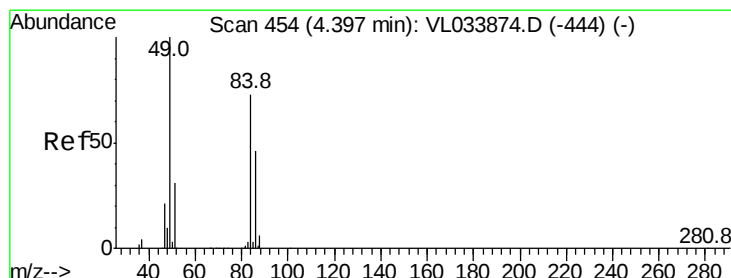
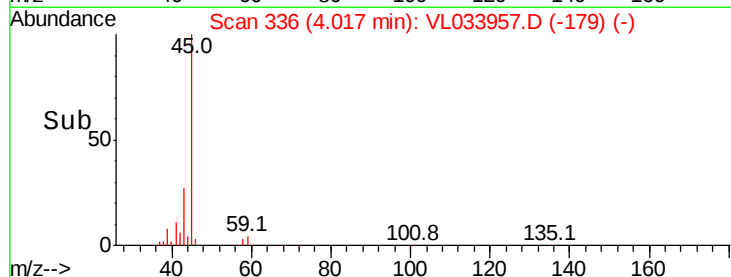
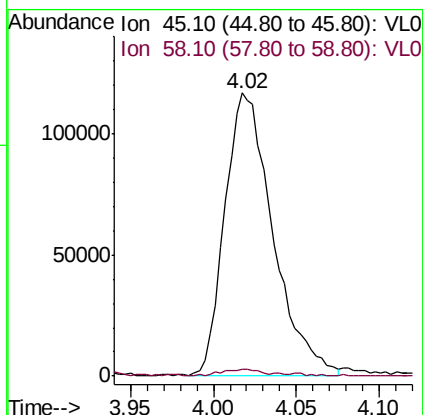
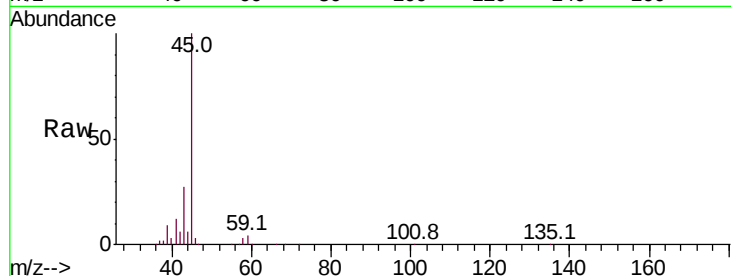


#19

Isopropyl Alcohol
 Concen: 2.988 ppbv
 RT: 4.02 min Scan# 336
 Delta R.T. 0.00 min
 Lab File: VL033957.D
 Acq: 25 Jun 2019 4:33

Instrument :
 MSVOA_L
 ClientSampleId :
 MIDDLE

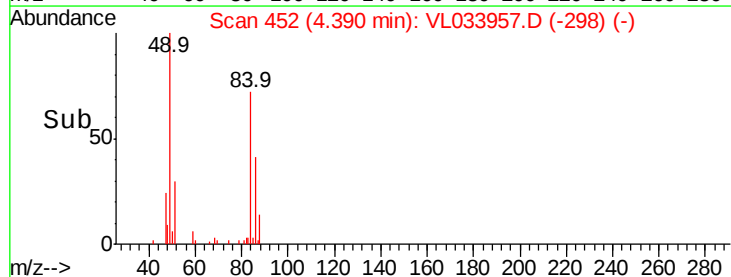
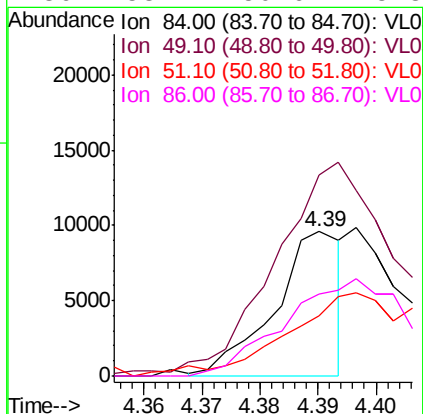
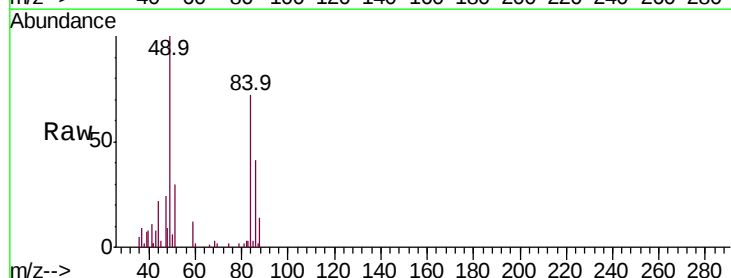
Tot Ion: 45 Resp: 234566
 Ion Ratio Lower Upper
 45 100
 58 2.8 1.8 2.6#

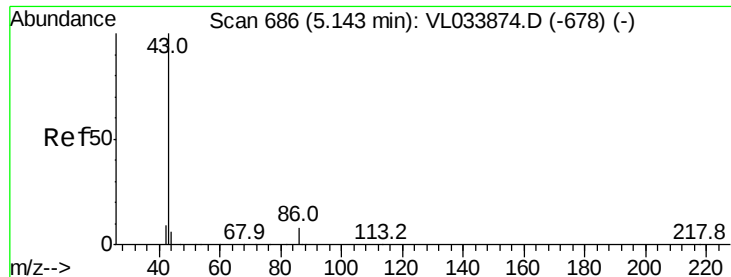


#20

Methylene Chloride
 Concen: 0.144 ppbv
 RT: 4.39 min Scan# 452
 Delta R.T. -0.01 min
 Lab File: VL033957.D
 Acq: 25 Jun 2019 4:33

Tgt Ion: 84 Resp: 7738
 Ion Ratio Lower Upper
 84 100
 49 132.6 110.0 165.0
 51 34.8 34.6 51.8
 86 58.1 50.6 75.8





#23

Vinyl Acetate

Concen: 0.223 ppbv

RT: 5.13 min Scan# 681

Delta R.T. -0.02 min

Lab File: VL033957.D

Acq: 25 Jun 2019 4:33

Instrument :

MSVOA_L

ClientSampleId :

MIDDLE

Tot Ion: 43 Resp: 35607

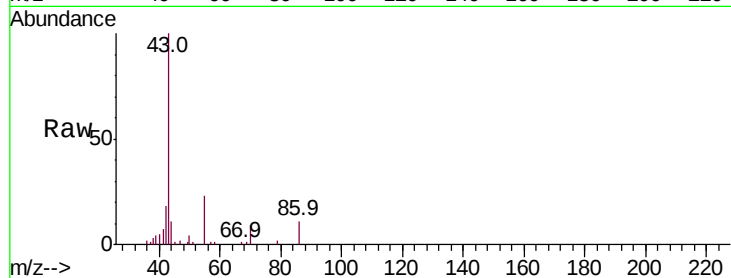
Ion Ratio Lower Upper

43 100

86 10.9 5.8 8.8#

42 16.2 7.8 11.8#

44 4.4 4.2 6.4

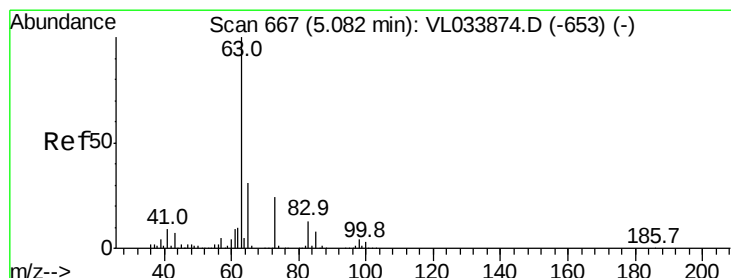
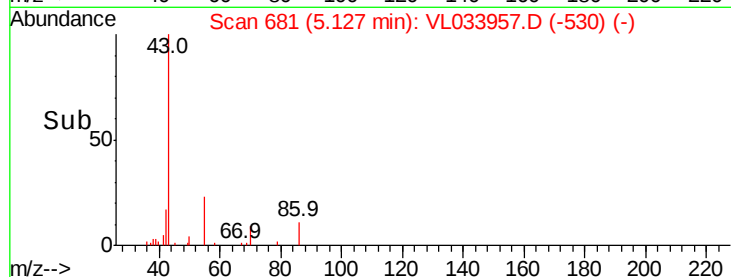
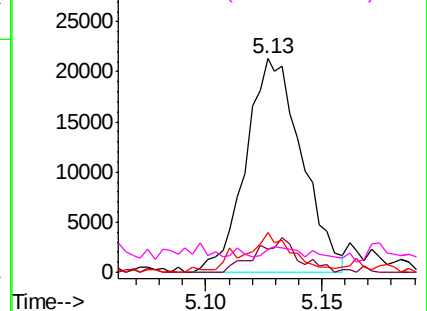


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#24

1,1-Dichloroethane

Concen: 0.193 ppbv

RT: 5.07 min Scan# 664

Delta R.T. -0.01 min

Lab File: VL033957.D

Acq: 25 Jun 2019 4:33

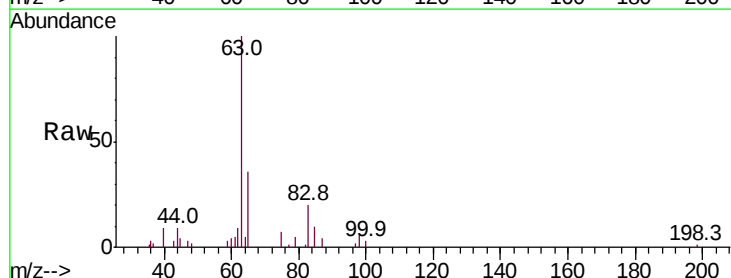
Tgt Ion: 63 Resp: 23919

Ion Ratio Lower Upper

63 100

98 5.9 2.2 6.6

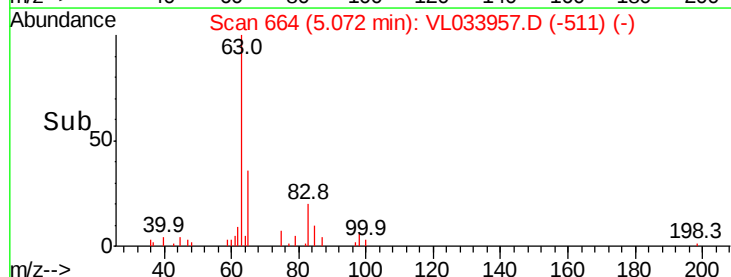
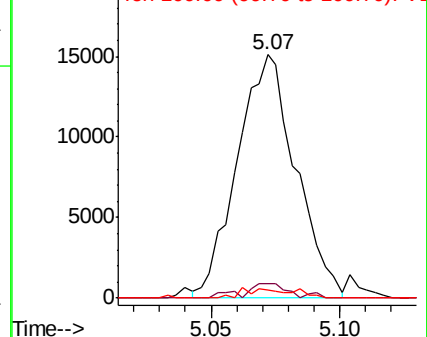
100 3.3 1.3 3.8

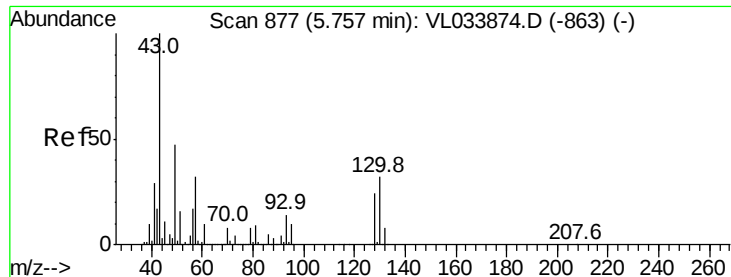


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

Ion 100.00 (99.70 to 100.70): VL0





#25

Ethyl Acetate

Concen: 0.030 ppbv

RT: 5.75 min Scan# 875

Delta R.T. -0.01 min

Lab File: VL033957.D

Acq: 25 Jun 2019 4:33

Instrument :

MSVOA_L

ClientSampleId :

MIDDLE

Tot Ion: 43 Resp: 6312

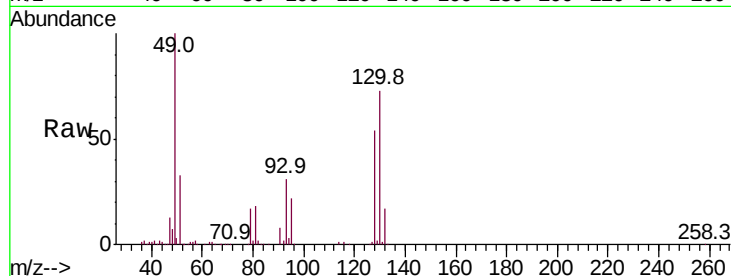
Ion Ratio Lower Upper

43 100

45 14.1 7.9 11.9#

61 0.0 7.8 11.6#

70 11.4 5.8 8.6#

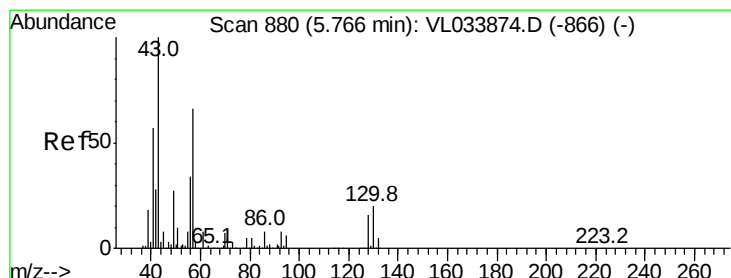
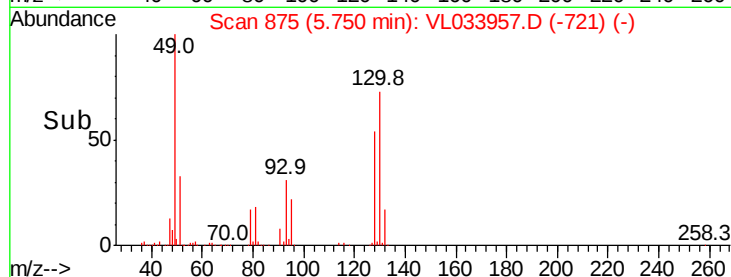
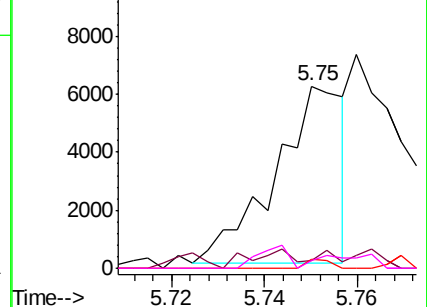


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.070 ppbv

RT: 5.76 min Scan# 877

Delta R.T. -0.01 min

Lab File: VL033957.D

Acq: 25 Jun 2019 4:33

Tgt Ion: 57 Resp: 6689

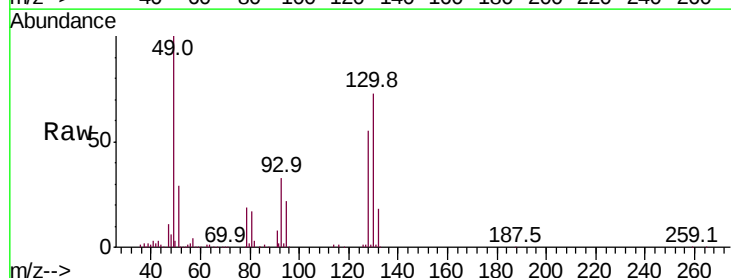
Ion Ratio Lower Upper

57 100

41 199.3 71.4 107.2#

43 211.9 183.7 275.5

56 119.6 42.7 64.1#

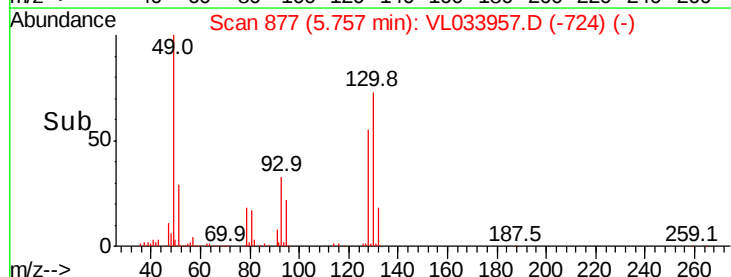
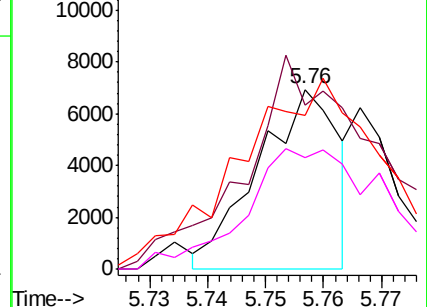


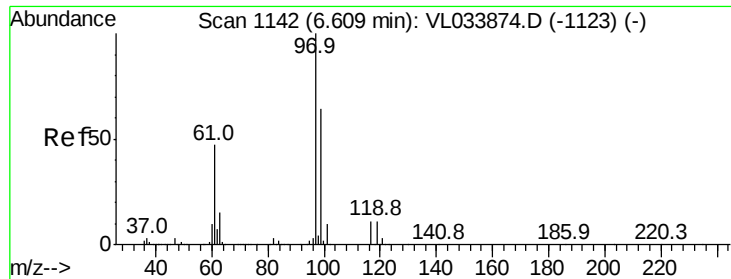
Abundance Ion 57.10 (56.80 to 57.80): VL0

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





#32

1,1,1-Trichloroethane

Concen: 0.090 ppbv

RT: 6.59 min Scan# 1137

Delta R.T. -0.02 min

Lab File: VL033957.D

Acq: 25 Jun 2019 4:33

Instrument :

MSVOA_L

ClientSampleId :

MIDDLE

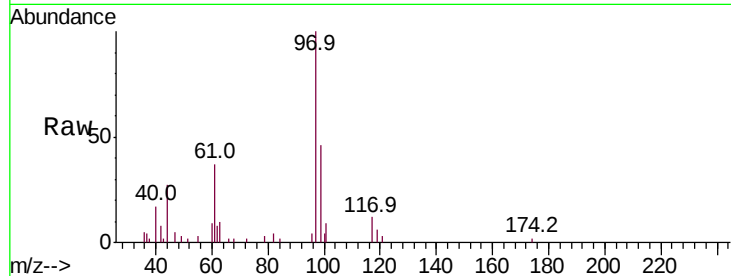
Tot Ion: 97 Resp: 14147

Ion Ratio Lower Upper

97 100

99 61.7 51.7 77.5

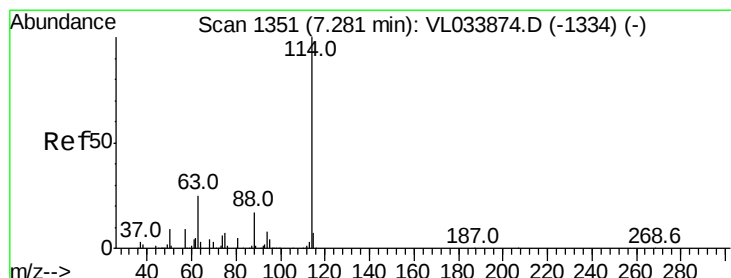
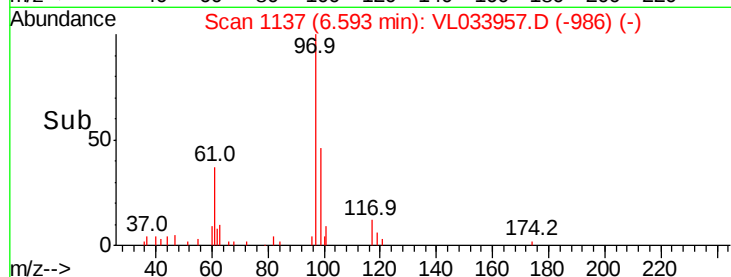
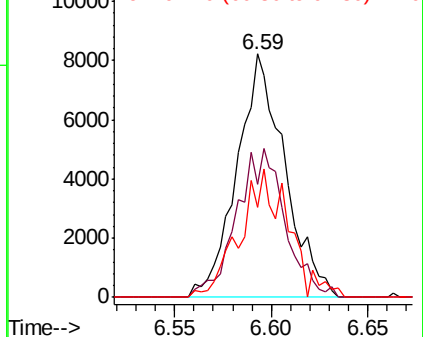
61 53.1 37.7 56.5



Abundance Ion 97.00 (96.70 to 97.70): VL0

Ion 99.00 (98.70 to 99.70): VL0

Ion 61.10 (60.80 to 61.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.27 min Scan# 1347

Delta R.T. -0.01 min

Lab File: VL033957.D

Acq: 25 Jun 2019 4:33

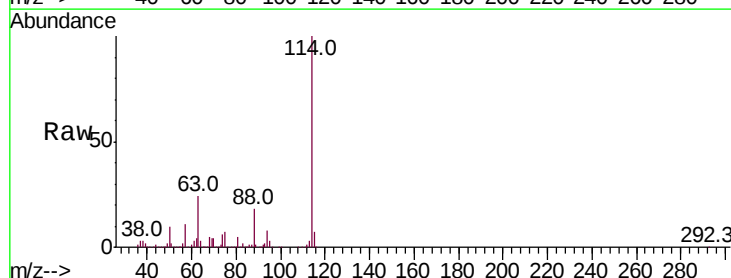
Tgt Ion: 114 Resp: 2260212

Ion Ratio Lower Upper

114 100

63 25.1 21.1 31.7

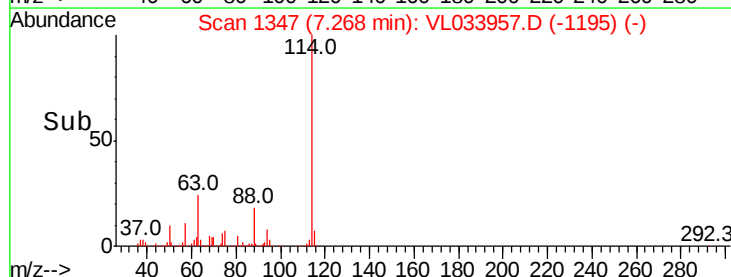
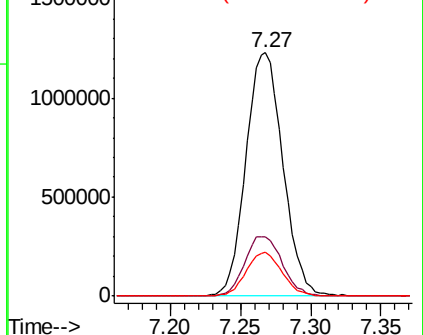
88 17.5 14.2 21.4

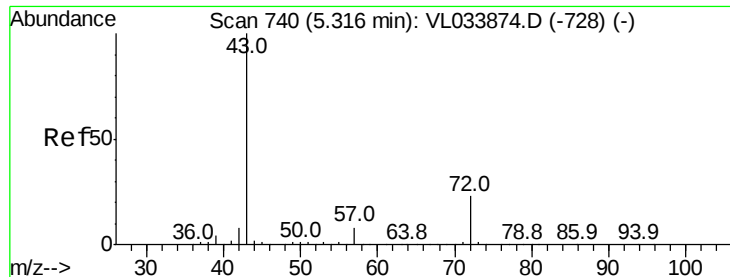


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0

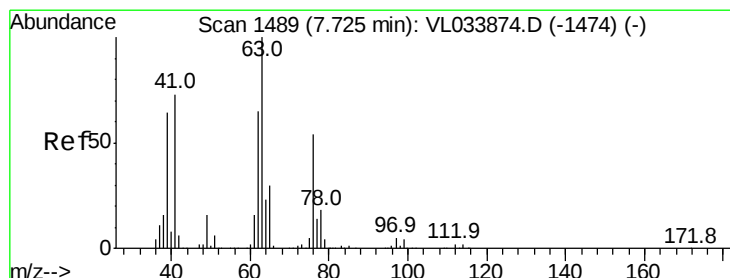
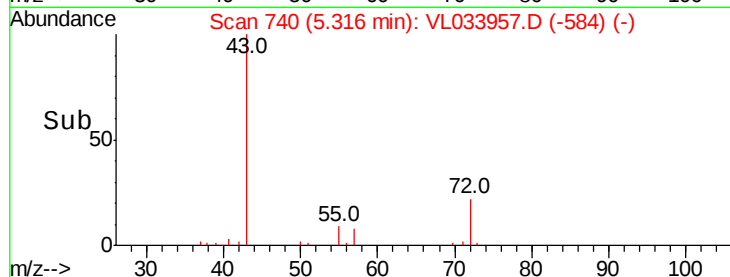
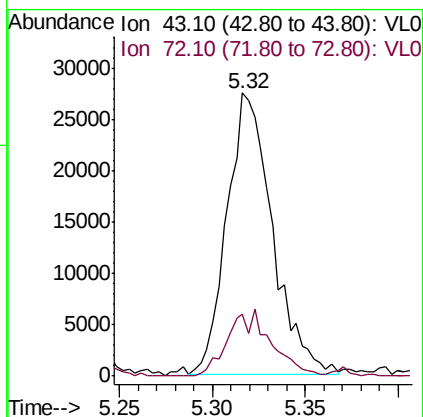
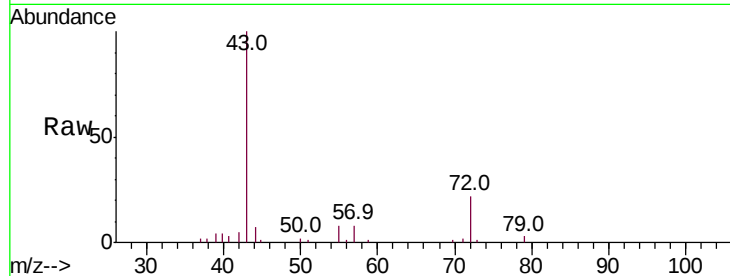




#34
2-Butanone
Concen: 0.367 ppbv
RT: 5.32 min Scan# 740
Delta R.T. -0.00 min
Lab File: VL033957.D
Acq: 25 Jun 2019 4:33

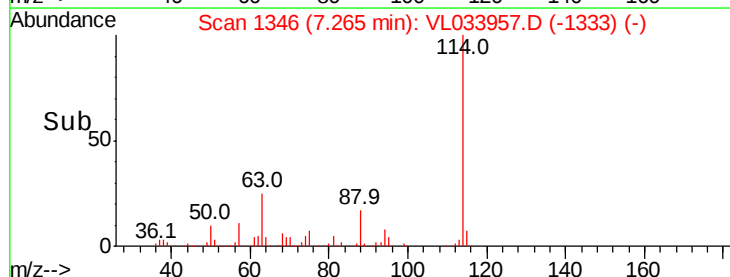
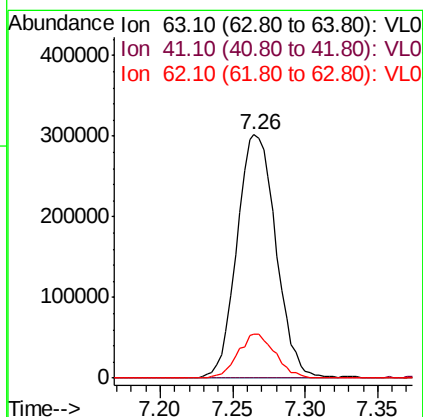
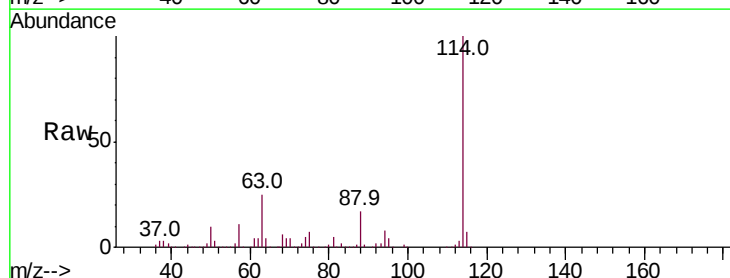
Instrument :
MSVOA_L
ClientSampleId :
MIDDLE

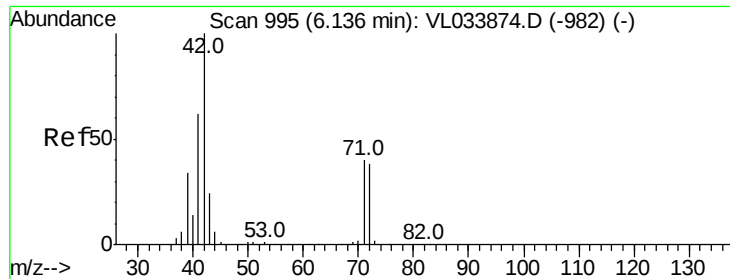
Tot Ion: 43 Resp: 46802
Ion Ratio Lower Upper
43 100
72 23.5 17.9 26.9



#39
1,2-Dichloropropane
Concen: 8.467 ppbv
RT: 7.26 min Scan# 1346
Delta R.T. -0.46 min
Lab File: VL033957.D
Acq: 25 Jun 2019 4:33

Tgt Ion: 63 Resp: 564199
Ion Ratio Lower Upper
63 100
41 0.1 58.7 88.1#
62 18.1 51.9 77.9#





#41

Tetrahydrofuran

Concen: 0.656 ppbv

RT: 6.15 min Scan# 998

Delta R.T. 0.01 min

Lab File: VL033957.D

Acq: 25 Jun 2019 4:33

Instrument :

MSVOA_L

ClientSampleId :

MIDDLE

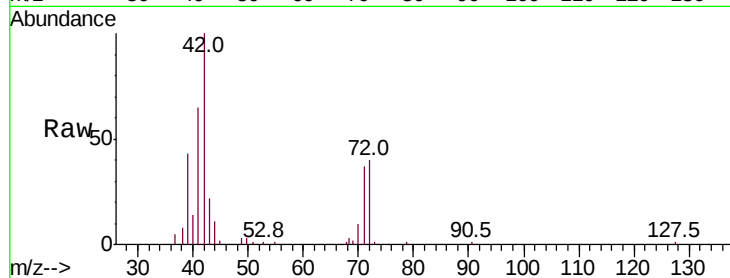
Tot Ion: 42 Resp: 42432

Ion Ratio Lower Upper

42 100

72 40.7 32.2 48.4

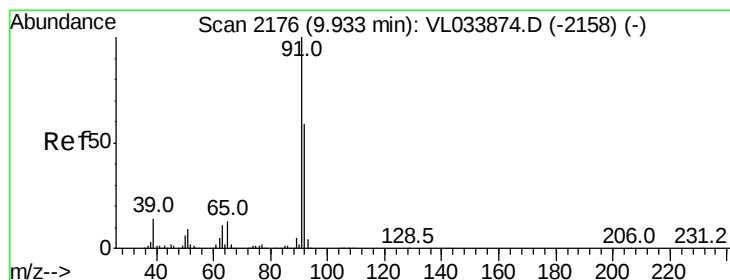
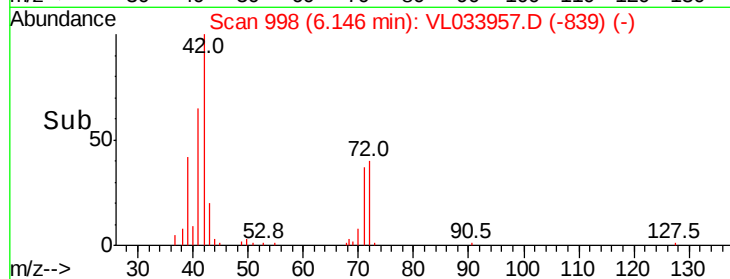
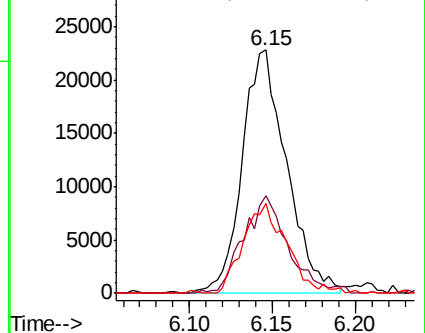
71 36.3 31.7 47.5



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



#53

Toluene

Concen: 0.212 ppbv

RT: 9.92 min Scan# 2173

Delta R.T. -0.01 min

Lab File: VL033957.D

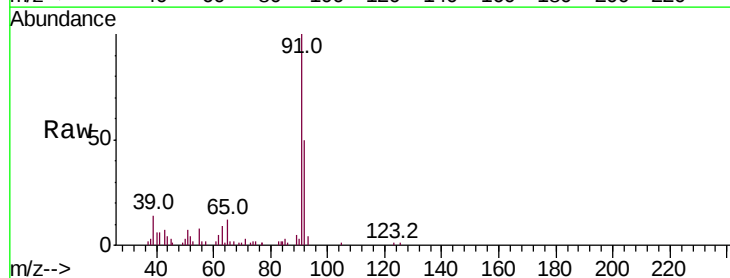
Acq: 25 Jun 2019 4:33

Tgt Ion: 91 Resp: 40430

Ion Ratio Lower Upper

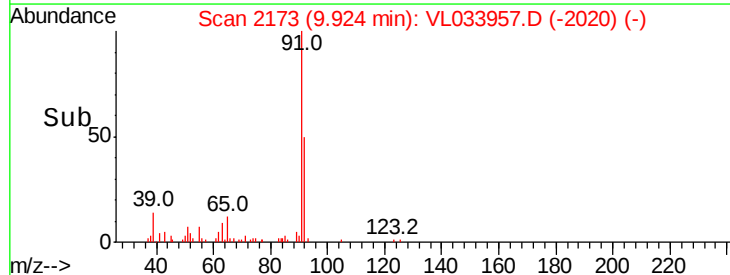
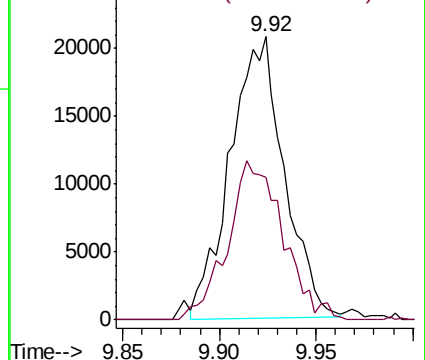
91 100

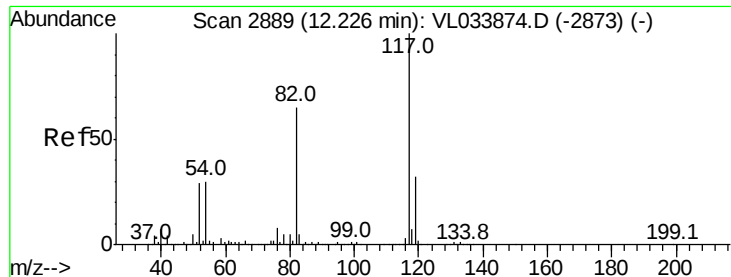
92 57.7 47.0 70.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

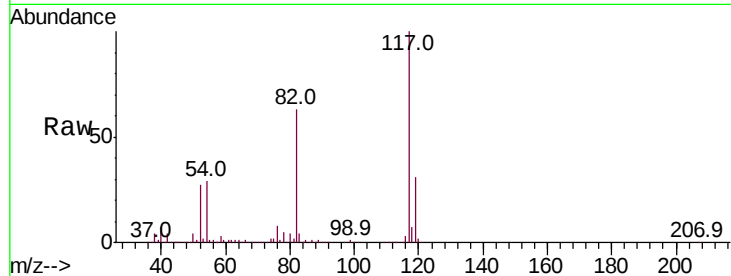




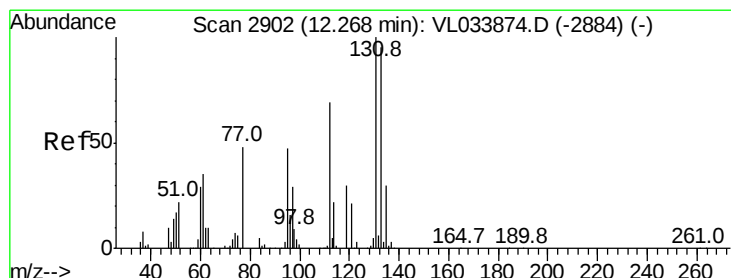
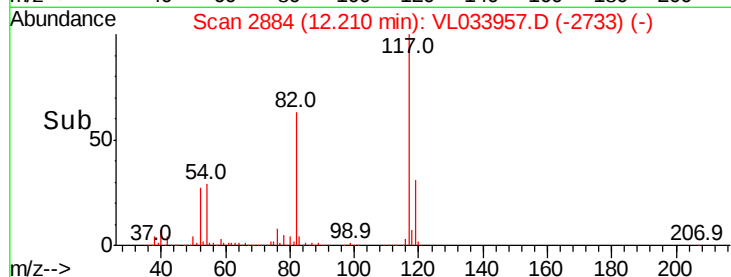
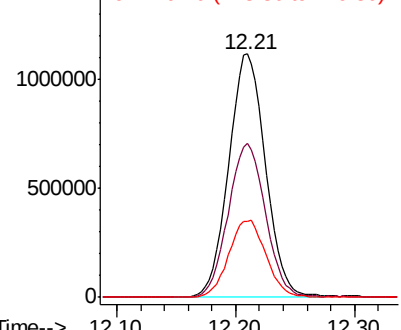
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.21 min Scan# 2884
Delta R.T. -0.02 min
Lab File: VL033957.D
Acq: 25 Jun 2019 4:33

Instrument :
MSVOA_L
ClientSampleId :
MIDDLE

Tot Ion:117 Resp: 2388530
Ion Ratio Lower Upper
117 100
82 64.3 50.2 75.2
119 32.3 24.8 37.2

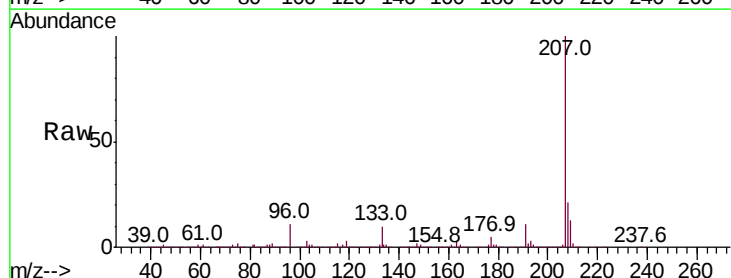


Abundance Ion 117.10 (116.80 to 117.80): V
1500000
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

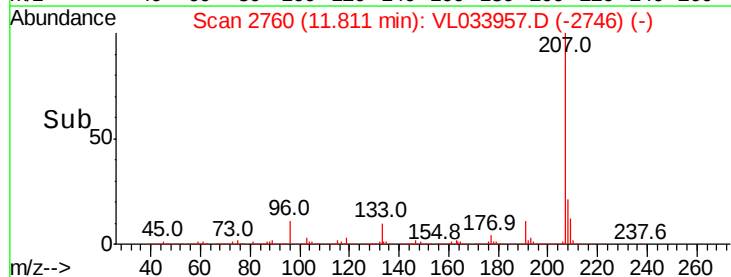
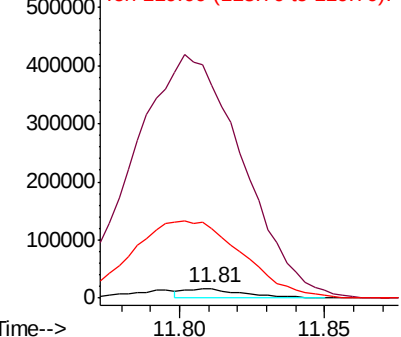


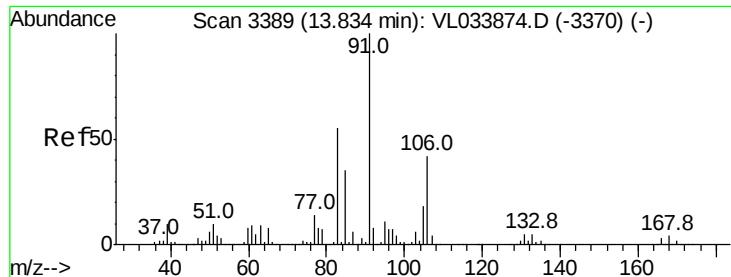
#56
1,1,1,2-Tetrachloroethane
Concen: 0.214 ppbv
RT: 11.81 min Scan# 2760
Delta R.T. -0.46 min
Lab File: VL033957.D
Acq: 25 Jun 2019 4:33

Tgt Ion:131 Resp: 22296
Ion Ratio Lower Upper
131 100
133 0.0 76.5 114.7#
119 0.0 42.6 64.0#



Abundance Ion 131.00 (130.70 to 131.70): V
500000
Ion 133.00 (132.70 to 133.70): V
Ion 119.00 (118.70 to 119.70): V

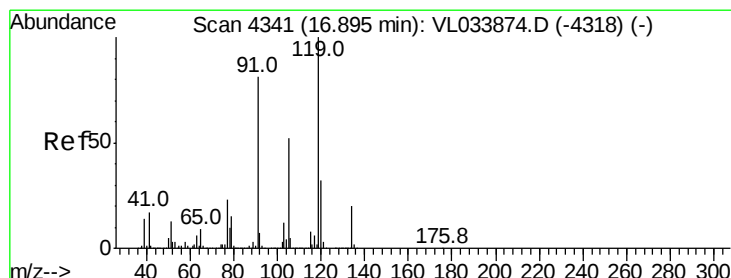
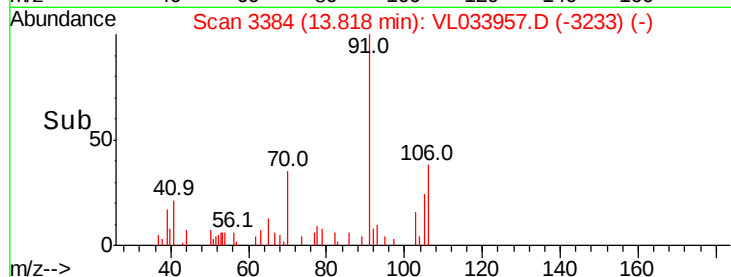
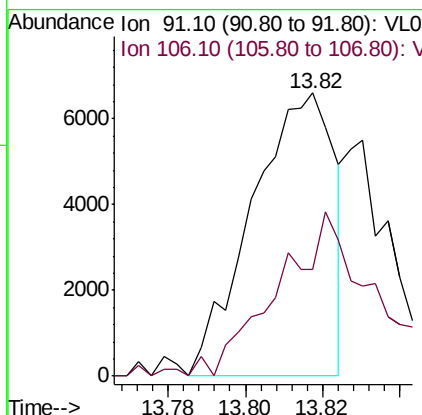
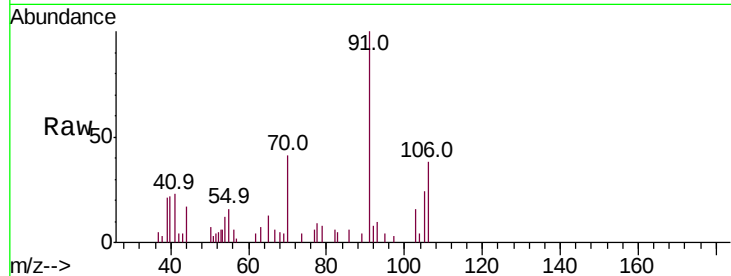




#60
o-Xylene
Concen: 0.039 ppbv
RT: 13.82 min Scan# 3384
Delta R.T. -0.02 min
Lab File: VL033957.D
Acq: 25 Jun 2019 4:33

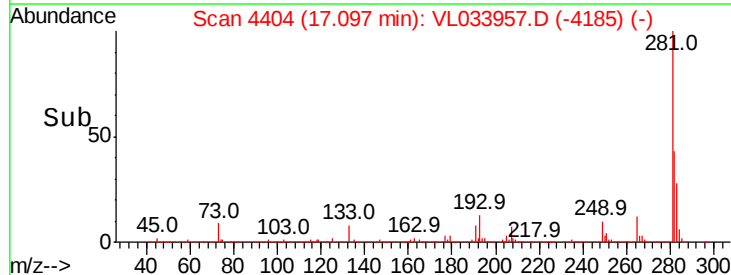
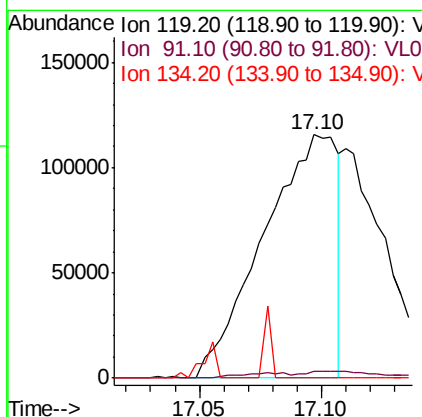
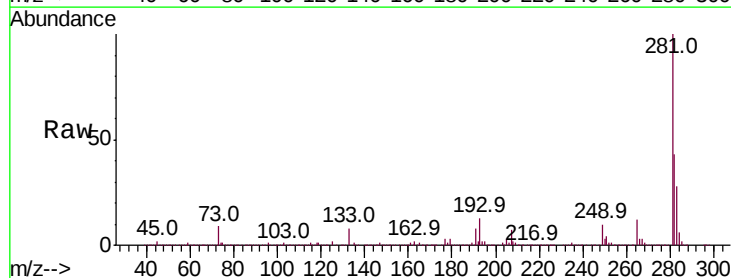
Instrument :
MSVOA_L
ClientSampled :
MIDDLE

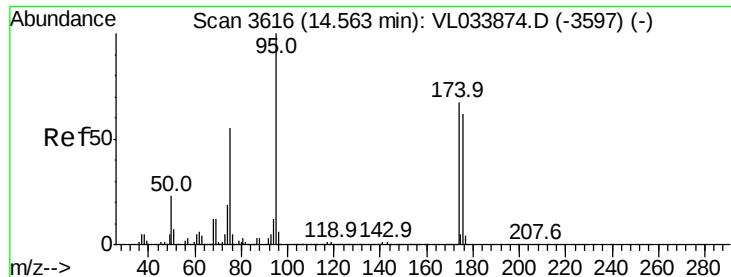
Tot Ion: 91 Resp: 9756
Ion Ratio Lower Upper
91 100
106 67.1 21.7 65.1#



#65
tert-Butylbenzene
Concen: 0.771 ppbv
RT: 17.10 min Scan# 4404
Delta R.T. 0.20 min
Lab File: VL033957.D
Acq: 25 Jun 2019 4:33

Tgt Ion: 119 Resp: 243024
Ion Ratio Lower Upper
119 100
91 1.1 66.6 100.0#
134 5.4 15.5 23.3#

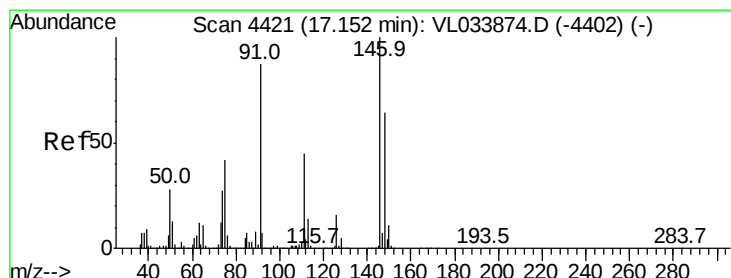
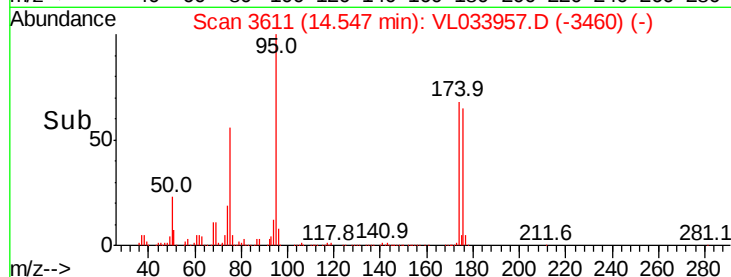
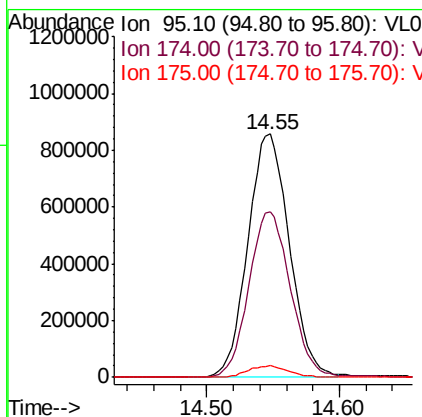
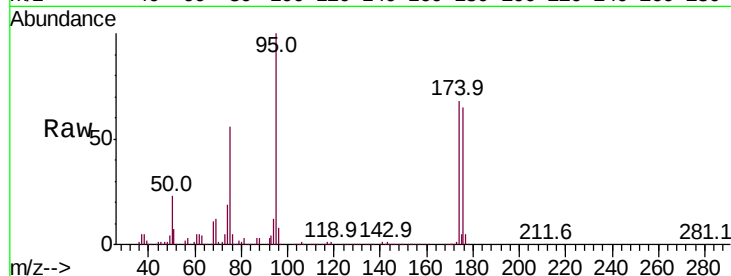




#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.507 ppbv
 RT: 14.55 min Scan# 3611
 Delta R.T. -0.02 min
 Lab File: VL033957.D
 Acq: 25 Jun 2019 4:33

Instrument :
 MSVOA_L
 ClientSampleId :
 MIDDLE

Tot Ion: 95 Resp: 1865092
 Ion Ratio Lower Upper
 95 100
 174 68.8 54.0 81.0
 175 4.8 3.8 5.8



#75
 1,3-Dichlorobenzene
 Concen: 0.161 ppbv
 RT: 17.13 min Scan# 4415
 Delta R.T. -0.02 min
 Lab File: VL033957.D
 Acq: 25 Jun 2019 4:33

Tgt Ion: 146 Resp: 33012
 Ion Ratio Lower Upper
 146 100
 111 0.0 22.8 68.3#
 148 265.5 32.2 96.6#

