

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL120219\
 Data File : VL034432.D
 Acq On : 2 Dec 2019 18:50
 Operator : SY/AP
 Sample : K6068-03DL 10X
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV-3DL

Quant Time: Dec 03 02:51:09 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL111919AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Nov 19 14:15:35 2019
 QLast Update : Tue Nov 19 14:15:35 2019
 Response via : Initial Calibration

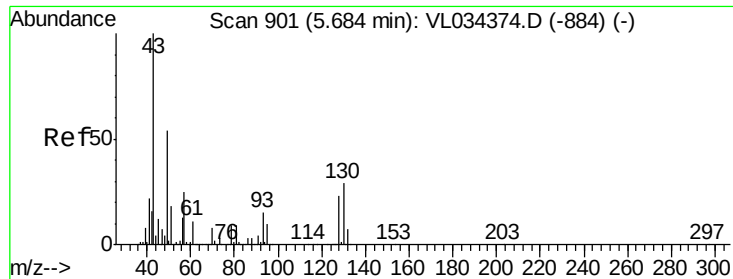
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.69	49	909623	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.21	114	1835481	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.15	117	1798541	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.48	95	1506041	9.95	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.50%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.02	85	69822	0.424	ppbv	90
3) Chlorodifluoromethane	2.96	51	20481	0.180	ppbv	96
7) Chloroethane	3.55	64	1245	0.055	ppbv #	42
8) Dichlorotetrafluoroethane	3.02	85	69822	0.472	ppbv #	18
9) Propene	3.18	41	27022	0.536	ppbv	90
13) Ethanol	3.60	45	85822	6.115	ppbv	88
15) Acetone	3.85	43	267220	2.052	ppbv	98
16) 1,3-Butadiene	3.29	39	55705	0.982	ppbv #	16
17) tert-Butyl alcohol	3.97	59	39741	0.363	ppbv	96
19) Isopropyl Alcohol	3.97	45	1150439	13.779	ppbv #	98
20) Methylene Chloride	4.35	84	23346	0.505	ppbv #	96
22) trans-1,2-Dichloroethene	4.90	96	23057	0.481	ppbv	97
23) Vinyl Acetate	5.08	43	14467	0.085	ppbv #	14
24) 1,1-Dichloroethane	5.02	63	16494	0.126	ppbv #	93
26) Hexane	5.71	57	19640	0.197	ppbv #	51
27) Carbon Disulfide	4.97	76	158421	1.456	ppbv #	75
29) Chloroform	5.77	83	246480	1.524	ppbv	99
30) Cyclohexane	7.16	84	2541	0.034	ppbv #	1
31) cis-1,2-Dichloroethene	5.56	61	641274	6.213	ppbv	97
32) 1,1,1-Trichloroethane	6.54	97	229174	1.511	ppbv	95
34) 2-Butanone	5.27	43	43714	0.289	ppbv	95
36) Benzene	6.92	78	15127	0.082	ppbv #	75
38) Trichloroethene	7.88	130	6698667	88.964	ppbv	93
39) 1,2-Dichloropropane	7.86	63	10715	0.152	ppbv #	1
42) Bromodichloromethane	7.87	83	42145	0.247	ppbv	92
52) Tetrachloroethene	11.28	164	1327541	16.722	ppbv	97
53) Toluene	9.86	91	90786	0.436	ppbv	99

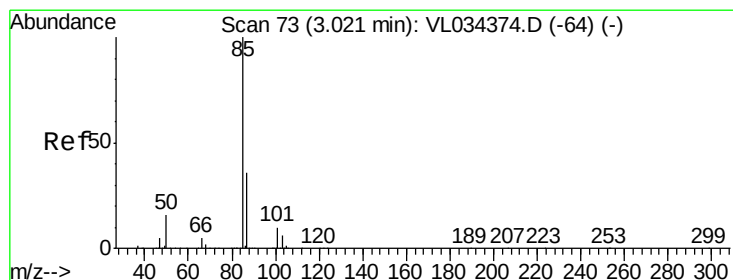
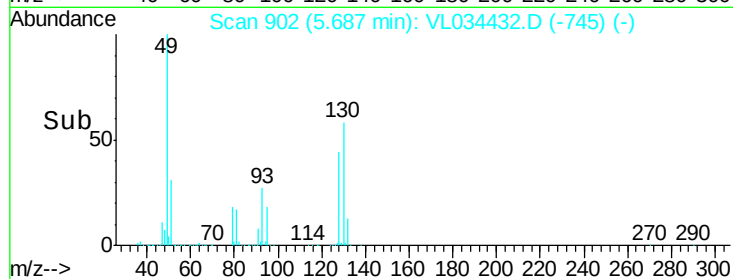
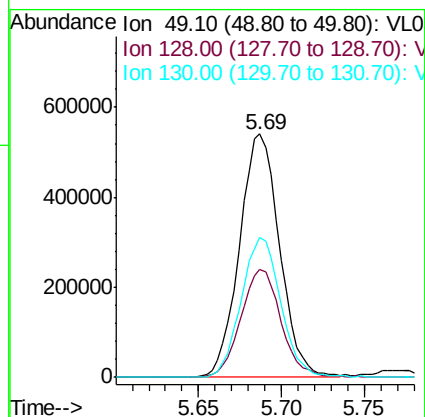
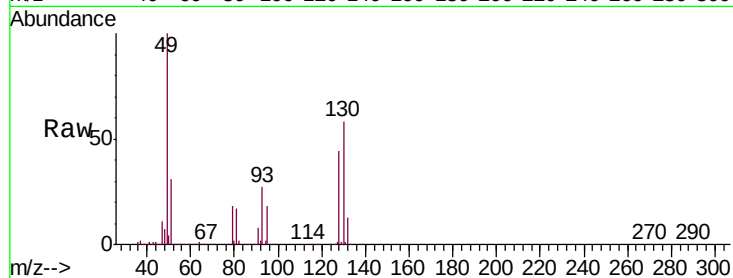
(#) = qualifier out of range (m) = manual integration (+) = signals summed



#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.69 min Scan# 902
 Delta R.T. 0.00 min
 Lab File: VL034432.D
 Acq: 2 Dec 2019 18:50

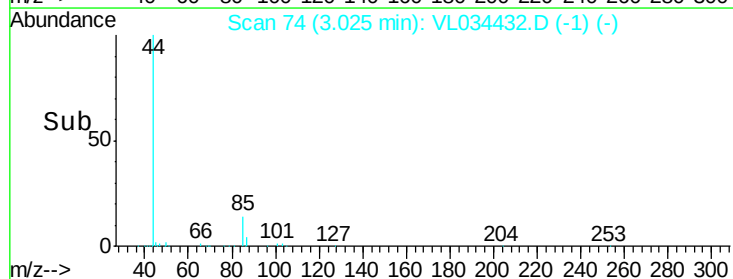
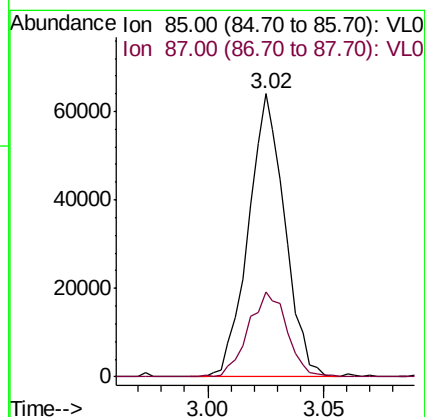
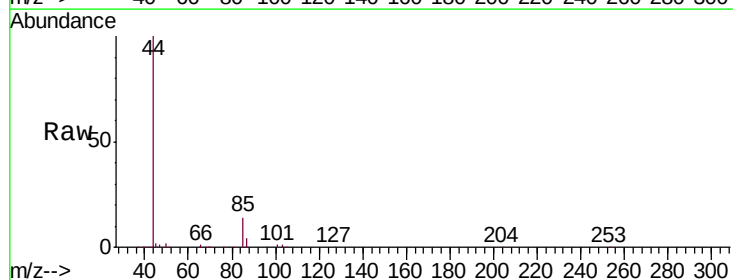
Instrument :
 MSVOA_L
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 SV-3DL

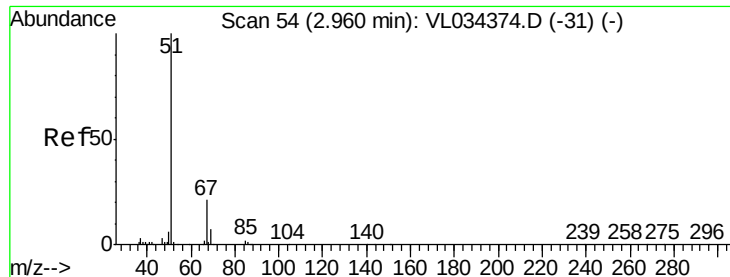
Tgt Ion: 49 Resp: 909623
 Ion Ratio Lower Upper
 49 100
 128 44.8 21.8 65.3
 130 57.3 28.0 84.0



#2
 Dichlorodifluoromethane
 Concen: 0.424 ppbv
 RT: 3.02 min Scan# 74
 Delta R.T. 0.00 min
 Lab File: VL034432.D
 Acq: 2 Dec 2019 18:50

Tgt Ion: 85 Resp: 69822
 Ion Ratio Lower Upper
 85 100
 87 29.9 28.5 42.7





#3

Chlorodifluoromethane

Concen: 0.180 ppbv

RT: 2.96 min Scan# 54

Delta R.T. 0.00 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Instrument :

MSVOA_L

ClientSampleId :

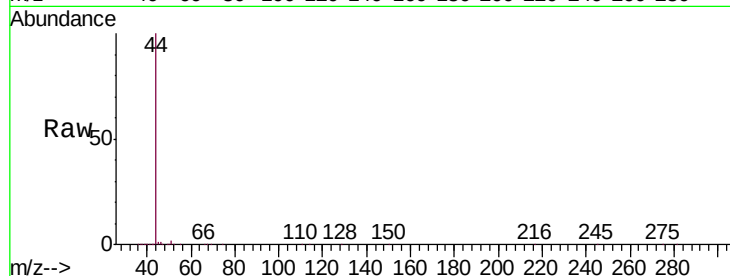
SV-3DL

Tgt Ion: 51 Resp: 20481

Ion Ratio Lower Upper

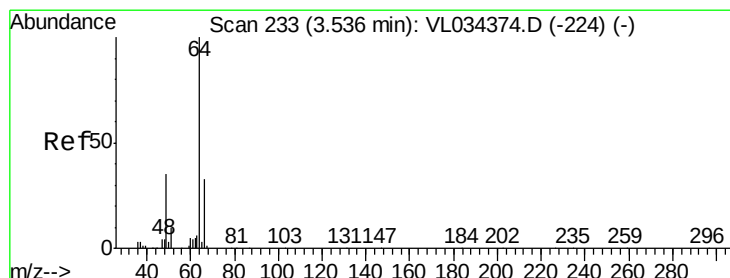
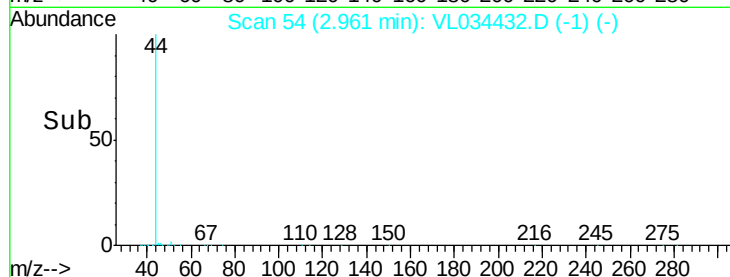
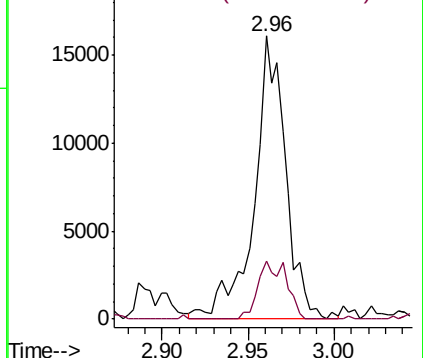
51 100

67 18.3 16.2 24.2



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#7

Chloroethane

Concen: 0.055 ppbv

RT: 3.55 min Scan# 236

Delta R.T. 0.01 min

Lab File: VL034432.D

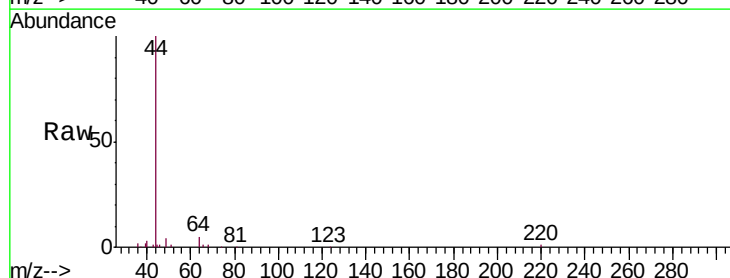
Acq: 2 Dec 2019 18:50

Tgt Ion: 64 Resp: 1245

Ion Ratio Lower Upper

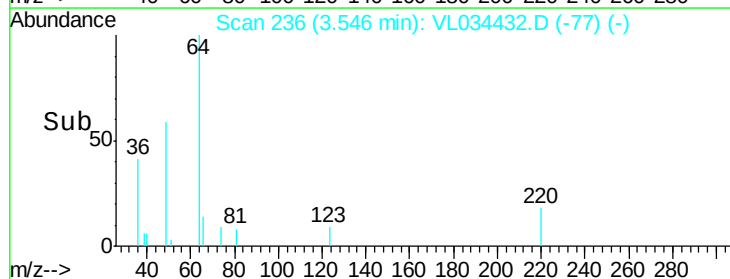
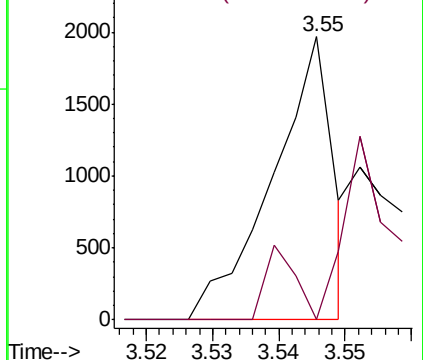
64 100

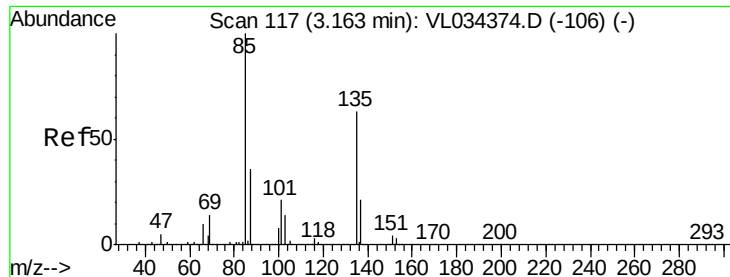
66 0.0 26.0 39.0#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0





#8

Dichlorotetrafluoroethane

Concen: 0.472 ppbv

RT: 3.02 min Scan# 74

Delta R.T. -0.14 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Instrument :

MSVOA_L

ClientSampleId :

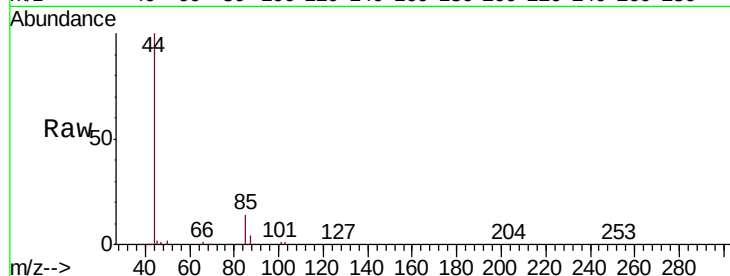
SV-3DL

Tgt Ion: 85 Resp: 69822

Ion Ratio Lower Upper

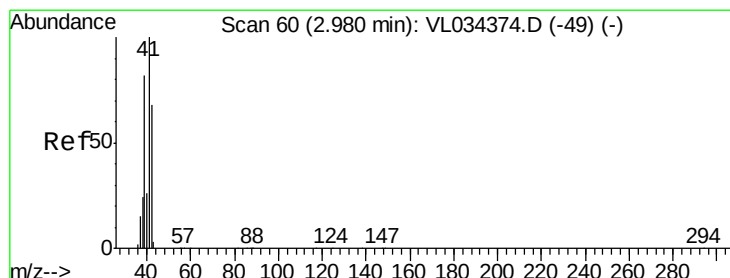
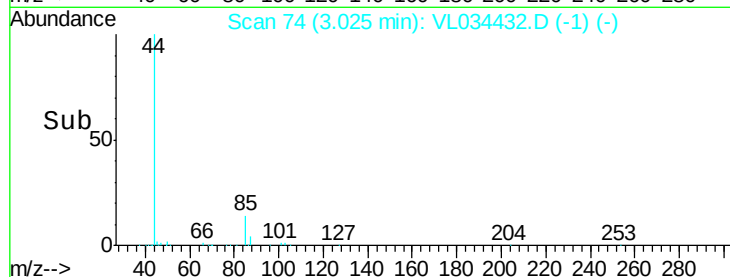
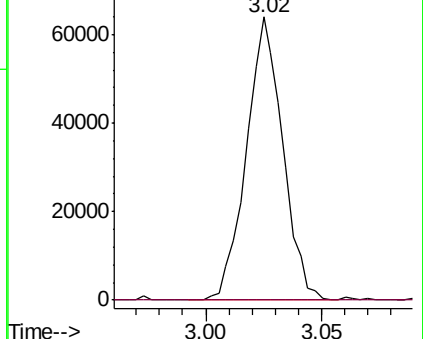
85 100

135 0.0 51.1 76.7#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V



#9

Propene

Concen: 0.536 ppbv

RT: 3.18 min Scan# 123

Delta R.T. 0.20 min

Lab File: VL034432.D

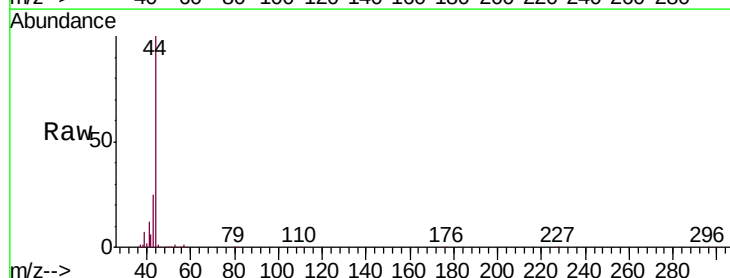
Acq: 2 Dec 2019 18:50

Tgt Ion: 41 Resp: 27022

Ion Ratio Lower Upper

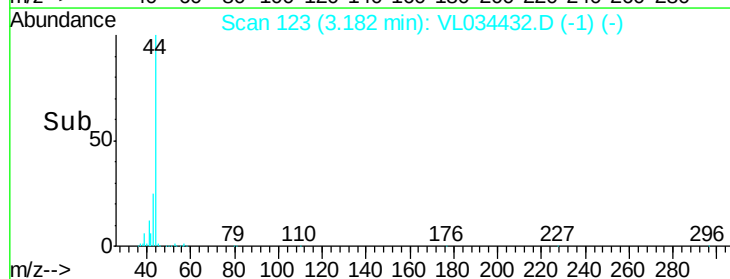
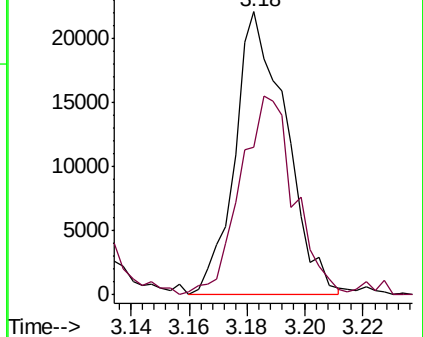
41 100

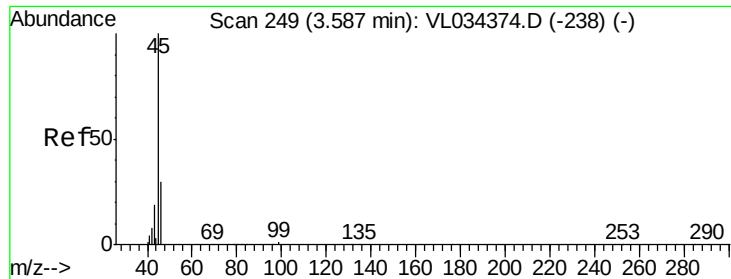
42 76.4 54.6 82.0



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

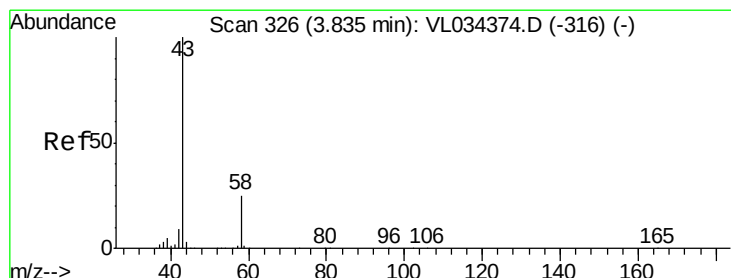
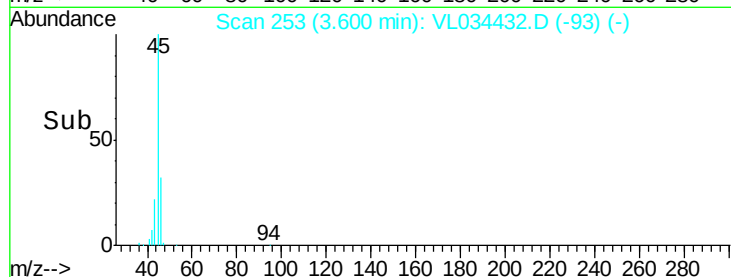
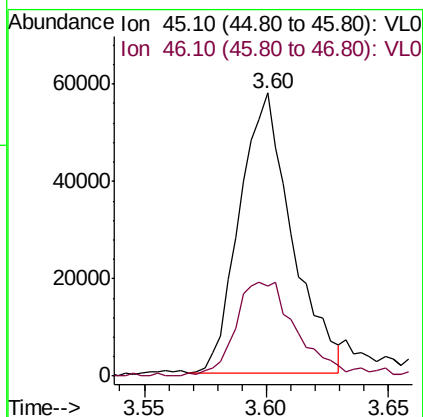
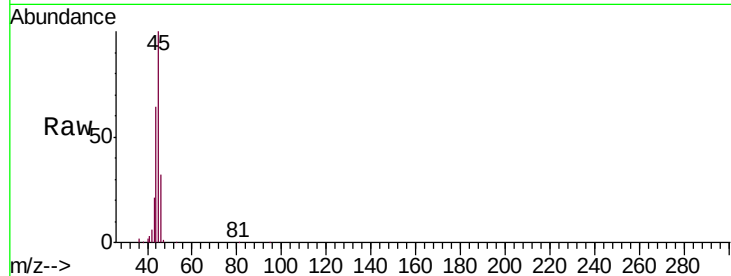




#13
Ethanol
Concen: 6.115 ppbv
RT: 3.60 min Scan# 253
Delta R.T. 0.01 min
Lab File: VL034432.D
Acq: 2 Dec 2019 18:50

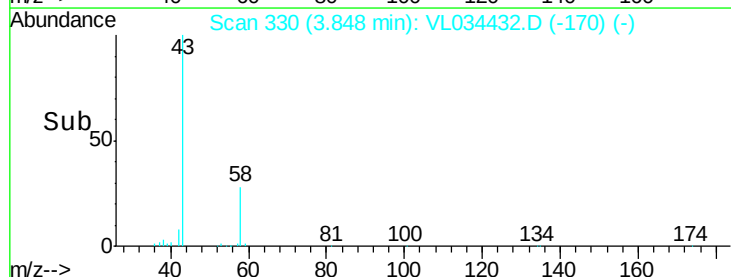
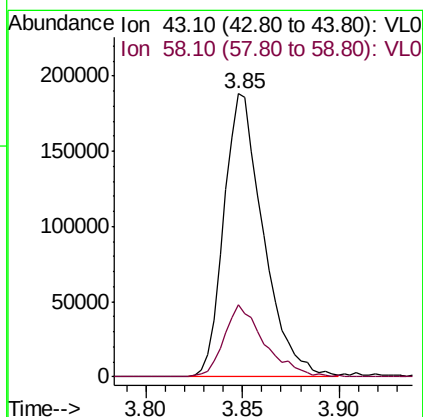
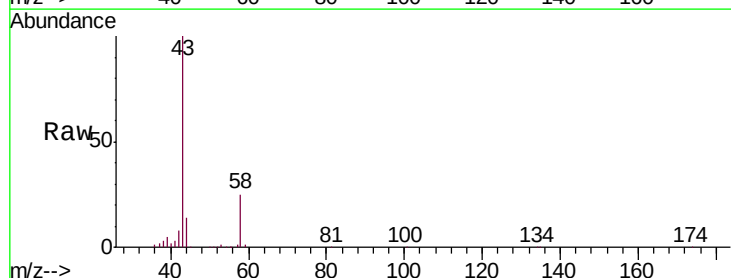
Instrument :
MSVOA_L
ClientSampleId :
SV-3DL

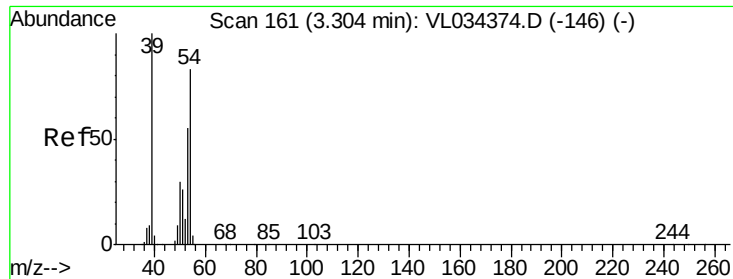
Tgt Ion: 45 Resp: 85822
Ion Ratio Lower Upper
45 100
46 41.6 13.8 55.4



#15
Acetone
Concen: 2.052 ppbv
RT: 3.85 min Scan# 330
Delta R.T. 0.01 min
Lab File: VL034432.D
Acq: 2 Dec 2019 18:50

Tgt Ion: 43 Resp: 267220
Ion Ratio Lower Upper
43 100
58 26.2 20.2 30.4

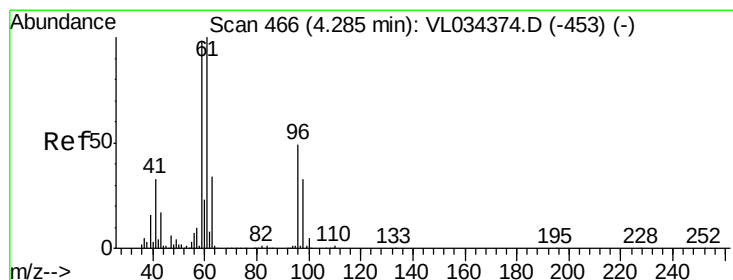
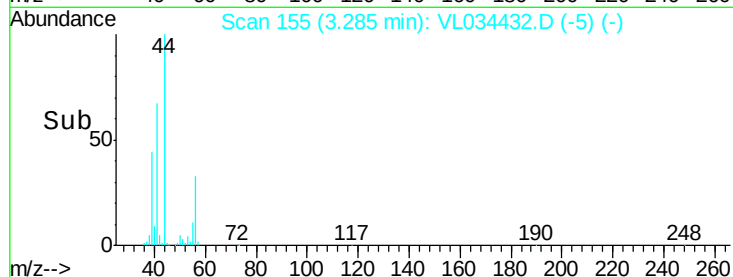
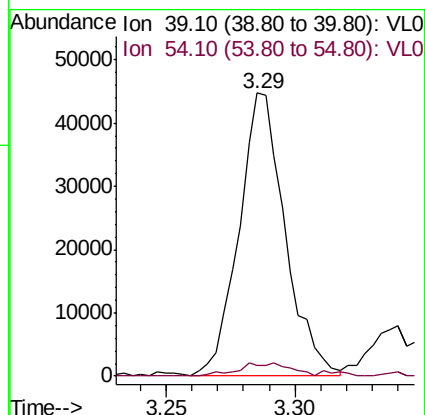
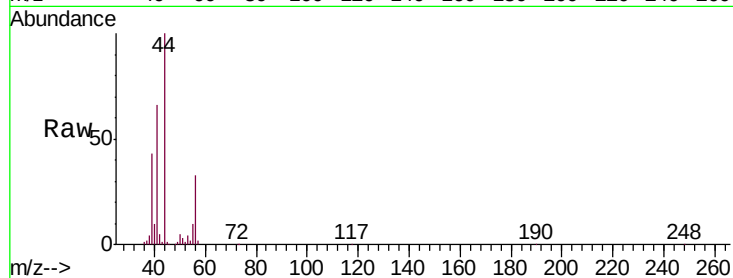




#16
1,3-Butadiene
Concen: 0.982 ppbv
RT: 3.29 min Scan# 155
Delta R.T. -0.02 min
Lab File: VL034432.D
Acq: 2 Dec 2019 18:50

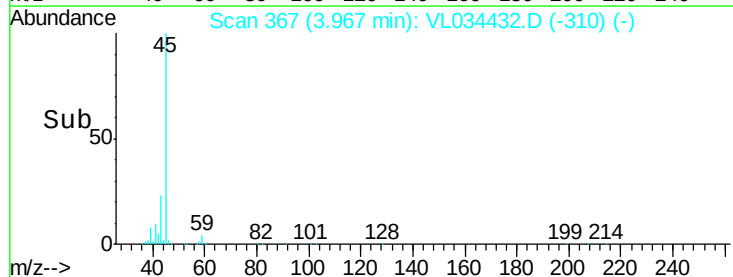
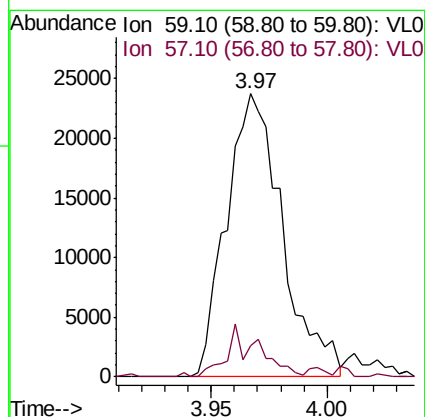
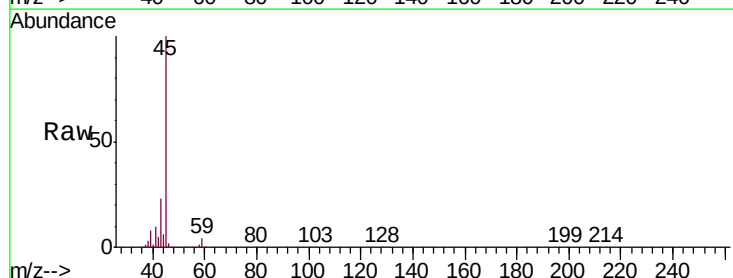
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MSVOA_L
ClientSampleId :
SV-3DL

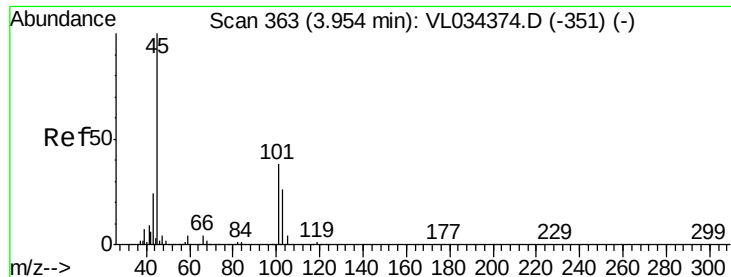
Tgt Ion: 39 Resp: 55705
Ion Ratio Lower Upper
39 100
54 6.7 64.7 97.1#



#17
tert-Butyl alcohol
Concen: 0.363 ppbv
RT: 3.97 min Scan# 367
Delta R.T. -0.32 min
Lab File: VL034432.D
Acq: 2 Dec 2019 18:50

Tgt Ion: 59 Resp: 39741
Ion Ratio Lower Upper
59 100
57 12.7 8.8 13.2





#19

Isopropyl Alcohol

Concen: 13.779 ppbv

RT: 3.97 min Scan# 367

Delta R.T. 0.01 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Instrument :

MSVOA_L

ClientSampleId :

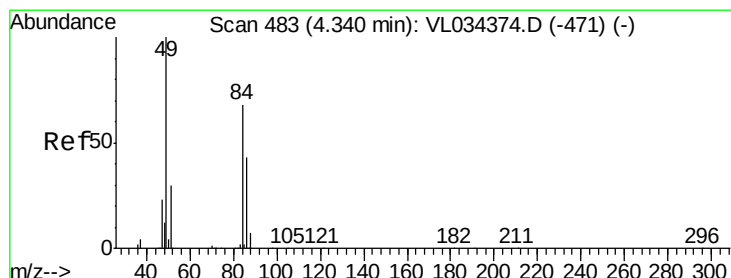
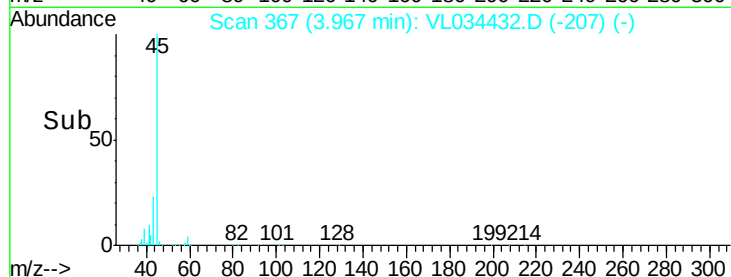
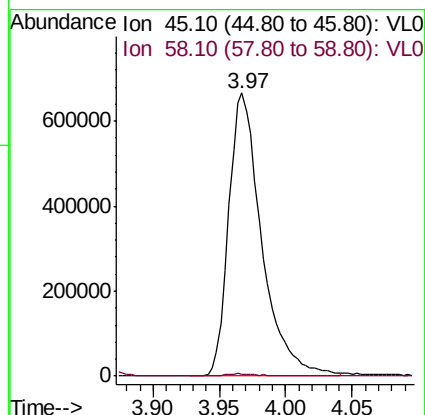
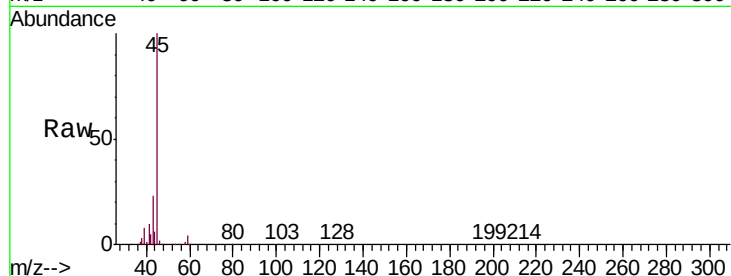
SV-3DL

Tgt Ion: 45 Resp: 1150439

Ion Ratio Lower Upper

45 100

58 0.9 1.3 1.9#



#20

Methylene Chloride

Concen: 0.505 ppbv

RT: 4.35 min Scan# 486

Delta R.T. 0.01 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Tgt Ion: 84 Resp: 23346

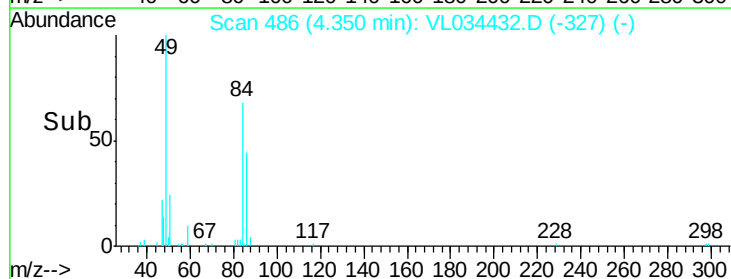
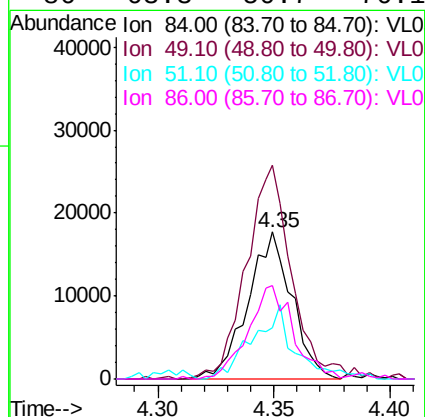
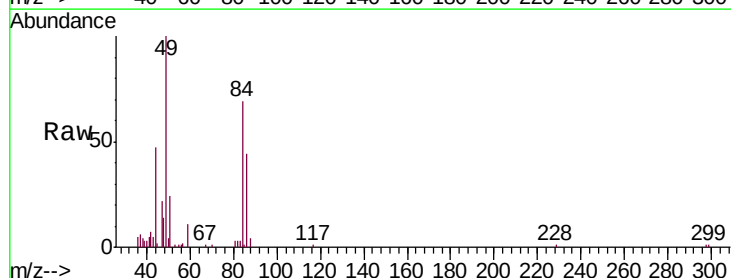
Ion Ratio Lower Upper

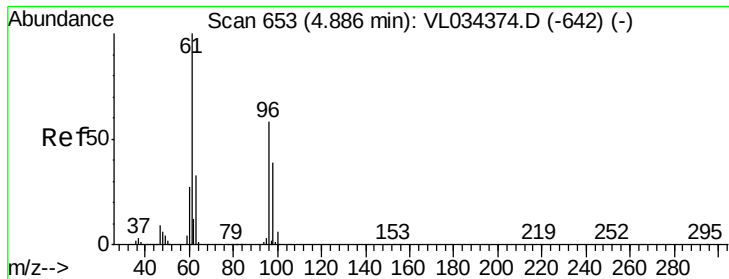
84 100

49 144.3 116.8 175.2

51 32.5 35.6 53.4#

86 63.3 50.7 76.1





#22

trans-1,2-Dichloroethene

Concen: 0.481 ppbv

RT: 4.90 min Scan# 656

Delta R.T. 0.01 min

Lab File: VL034432.D

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SV-3DL

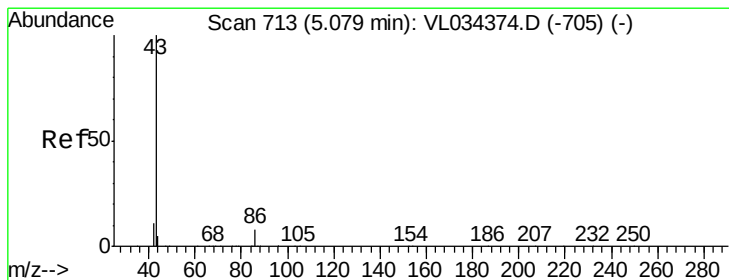
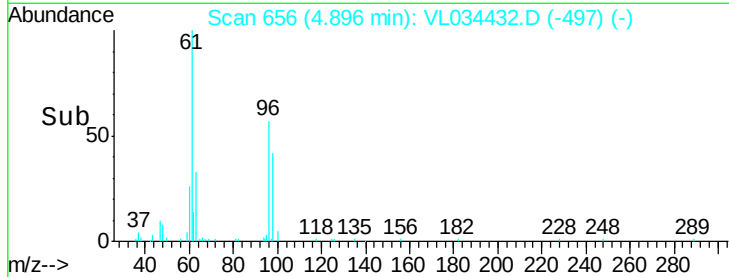
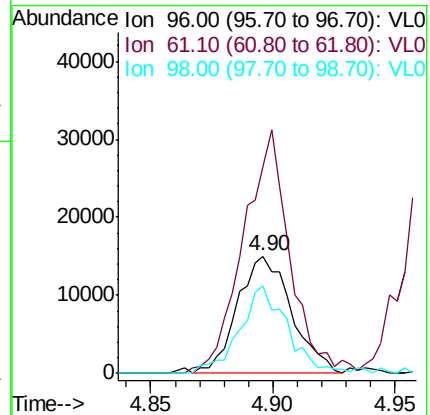
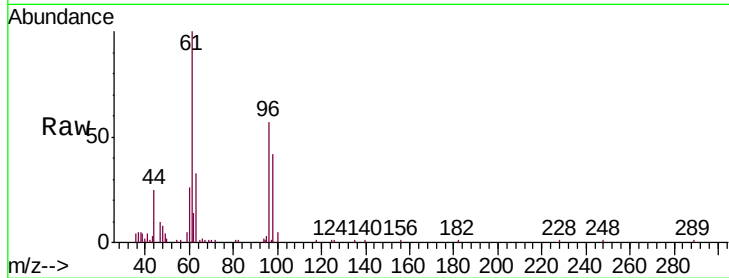
Tgt Ion: 96 Resp: 23057

Ion Ratio Lower Upper

96 100

61 171.8 137.9 206.9

98 74.8 53.5 80.3



#23

Vinyl Acetate

Concen: 0.085 ppbv

RT: 5.08 min Scan# 713

Delta R.T. 0.00 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Tgt Ion: 43 Resp: 14467

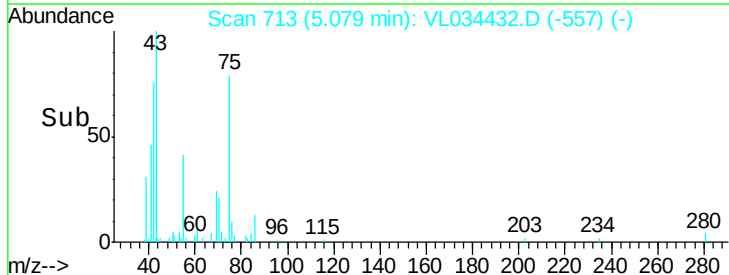
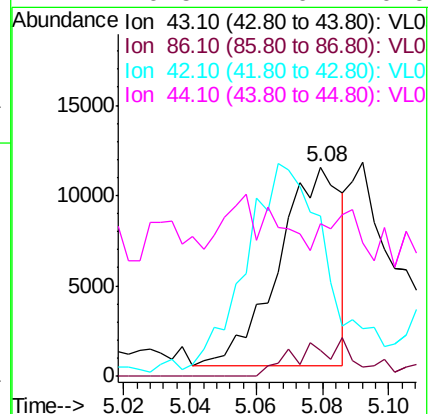
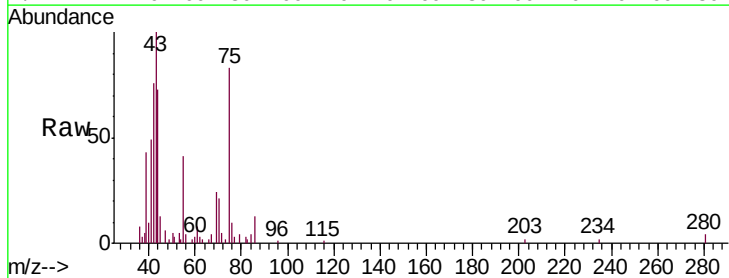
Ion Ratio Lower Upper

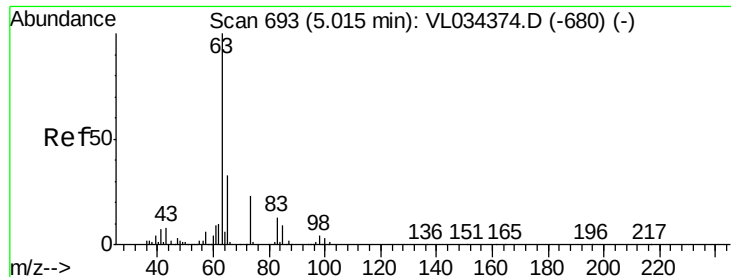
43 100

86 13.2 5.8 8.6#

42 74.4 8.9 13.3#

44 6.5 4.0 6.0#





#24

1,1-Dichloroethane

Concen: 0.126 ppbv

RT: 5.02 min Scan# 695

Delta R.T. 0.01 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

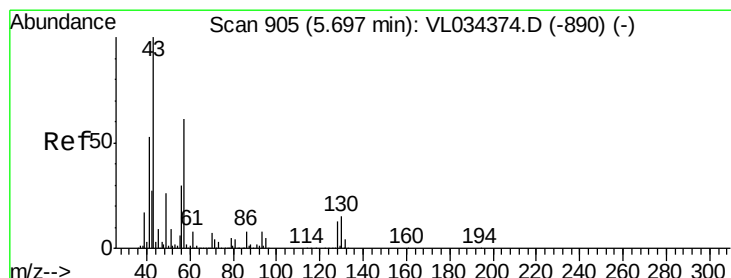
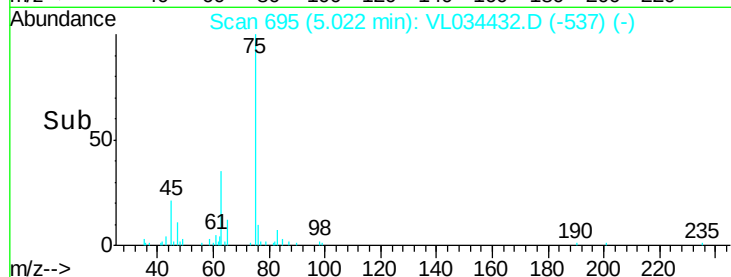
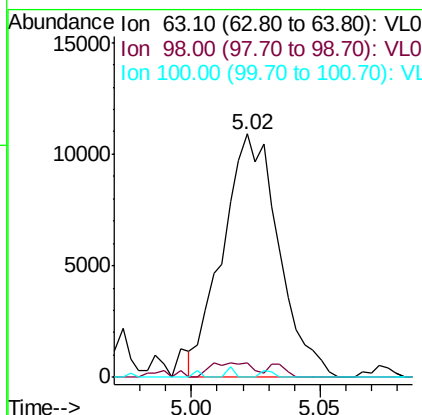
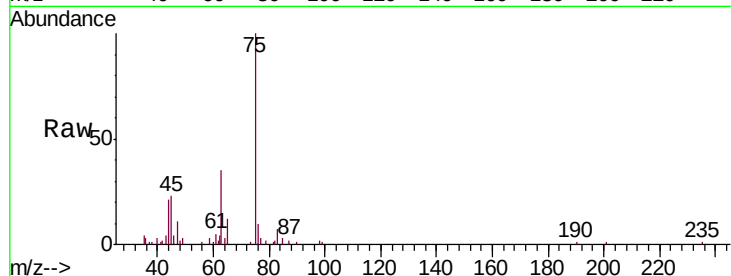
Instrument :

MSVOA_L

ClientSampleId :

SV-3DL

Tgt Ion:	63	Resp:	16494
Ion	Ratio	Lower	Upper
63	100		
98	5.8	1.9	5.7#
100	0.0	1.4	4.0#



#26

Hexane

Concen: 0.197 ppbv

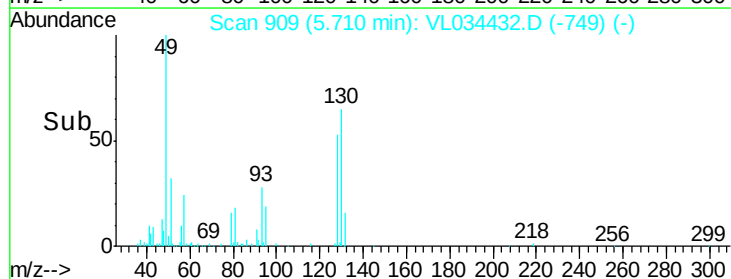
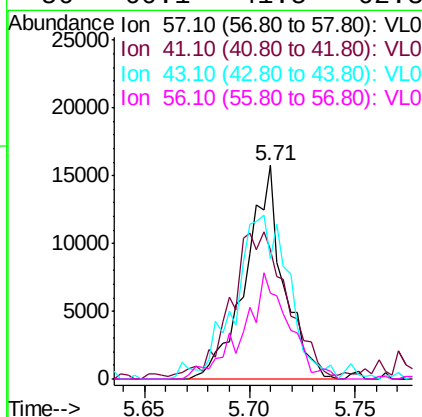
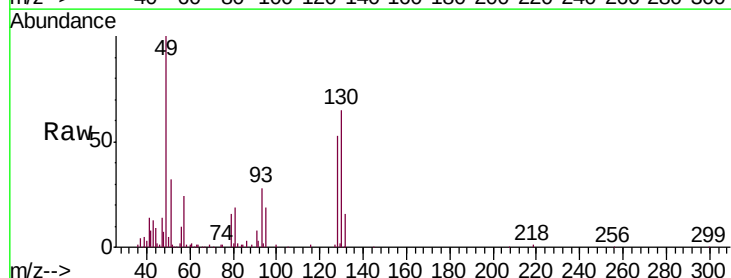
RT: 5.71 min Scan# 909

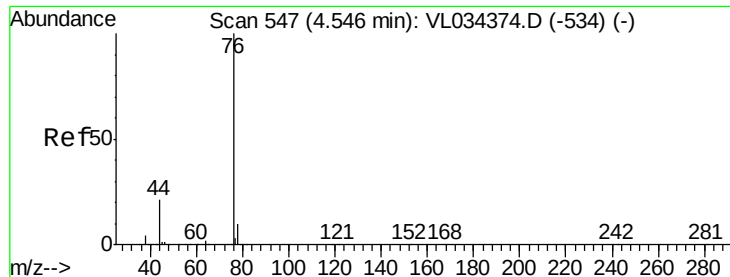
Delta R.T. 0.01 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Tgt Ion:	57	Resp:	19640
Ion	Ratio	Lower	Upper
57	100		
41	106.2	75.0	112.4
43	112.6	186.6	279.8#
56	60.1	41.5	62.3





#27

Carbon Disulfide

Concen: 1.456 ppbv

RT: 4.97 min Scan# 678

Delta R.T. 0.42 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Instrument :

MSVOA_L

ClientSampleId :

SV-3DL

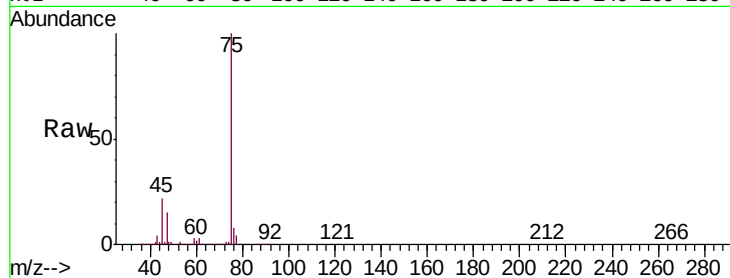
Tgt Ion: 76 Resp: 158421

Ion Ratio Lower Upper

76 100

44 9.7 17.0 25.4#

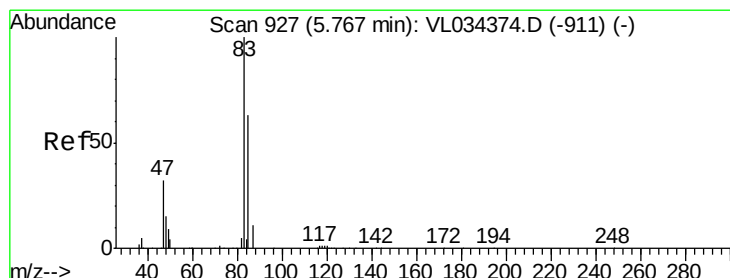
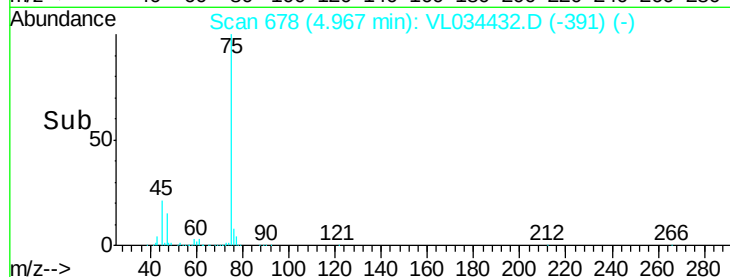
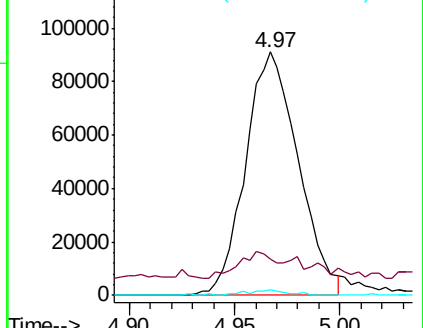
78 0.0 7.6 11.4#



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



#29

Chloroform

Concen: 1.524 ppbv

RT: 5.77 min Scan# 927

Delta R.T. 0.00 min

Lab File: VL034432.D

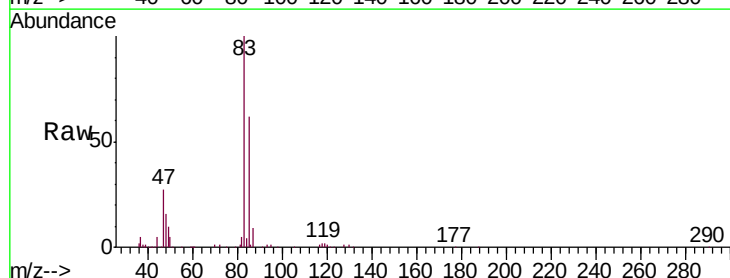
Acq: 2 Dec 2019 18:50

Tgt Ion: 83 Resp: 246480

Ion Ratio Lower Upper

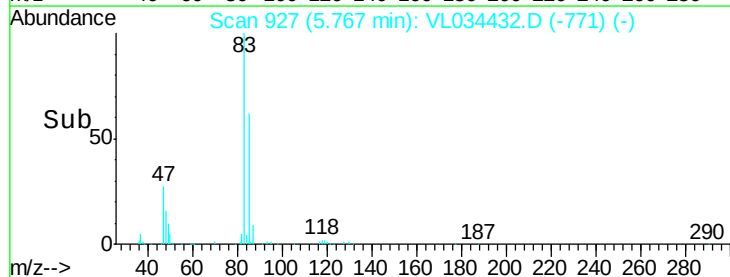
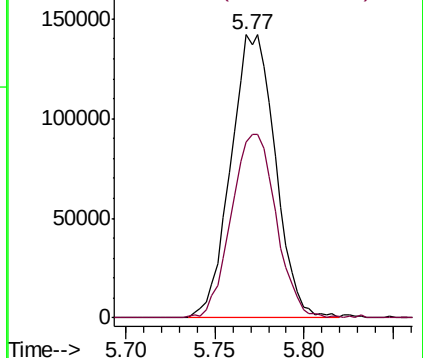
83 100

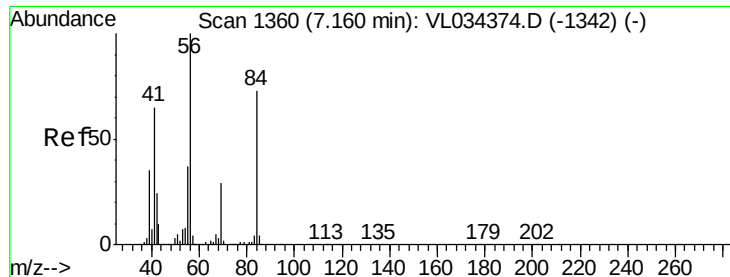
85 61.9 50.4 75.6



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0





#30

Cyclohexane

Concen: 0.034 ppbv

RT: 7.16 min Scan# 1360

Delta R.T. 0.00 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Instrument :

MSVOA_L

ClientSampleId :

SV-3DL

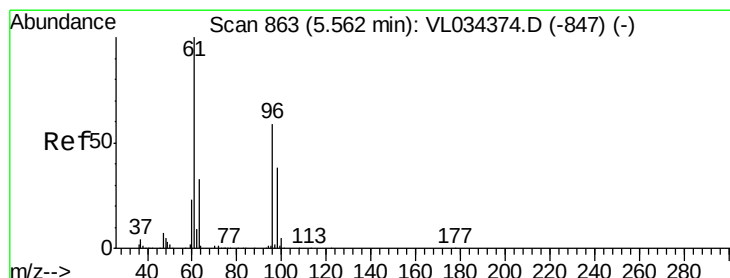
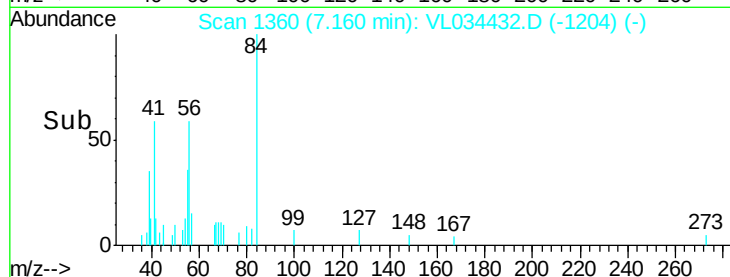
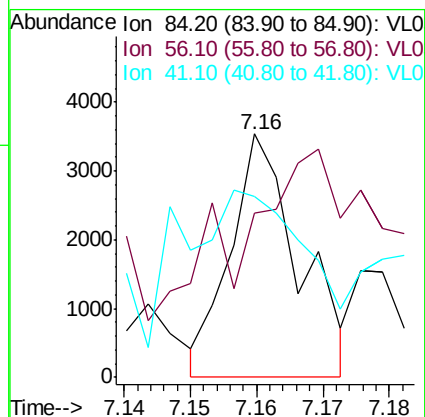
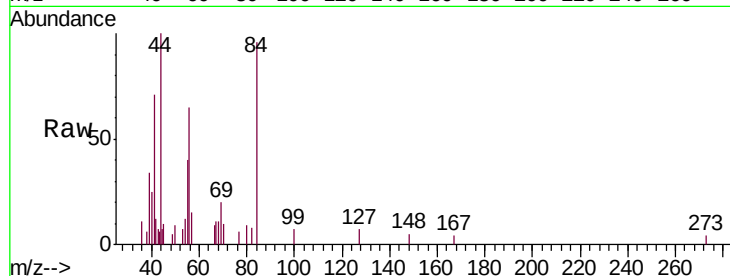
Tgt Ion: 84 Resp: 2541

Ion Ratio Lower Upper

84 100

56 0.0 112.6 169.0#

41 270.7 73.4 110.2#



#31

cis-1,2-Dichloroethene

Concen: 6.213 ppbv

RT: 5.56 min Scan# 864

Delta R.T. 0.00 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

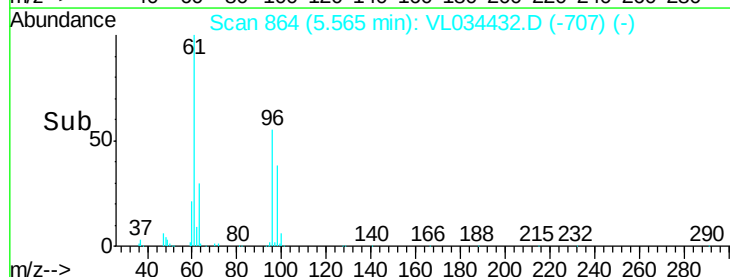
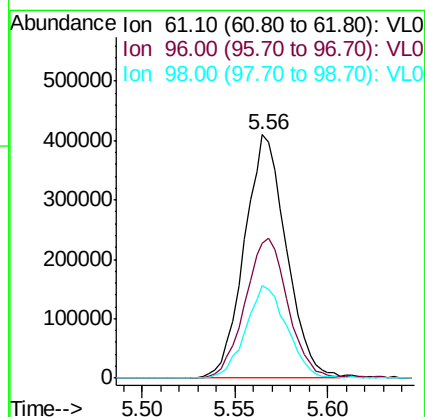
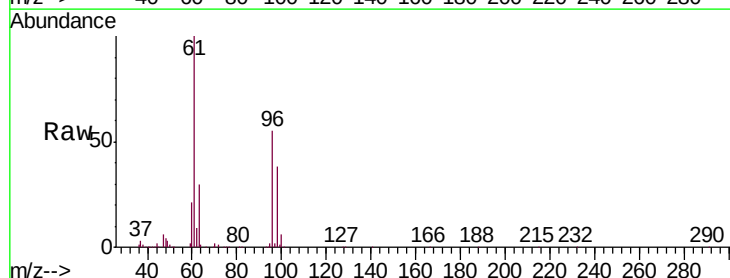
Tgt Ion: 61 Resp: 641274

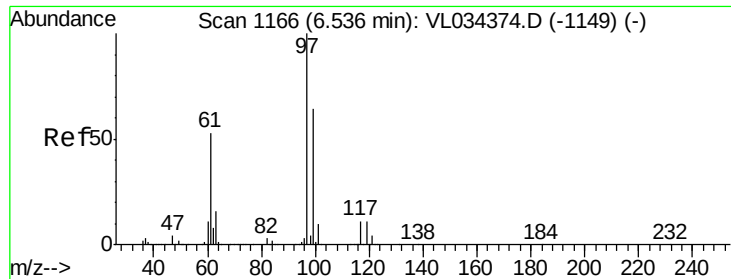
Ion Ratio Lower Upper

61 100

96 55.2 47.4 71.2

98 38.1 30.6 45.8





#32

1,1,1-Trichloroethane

Concen: 1.511 ppbv

RT: 6.54 min Scan# 1167

Delta R.T. 0.00 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Instrument :

MSVOA_L

ClientSampleId :

SV-3DL

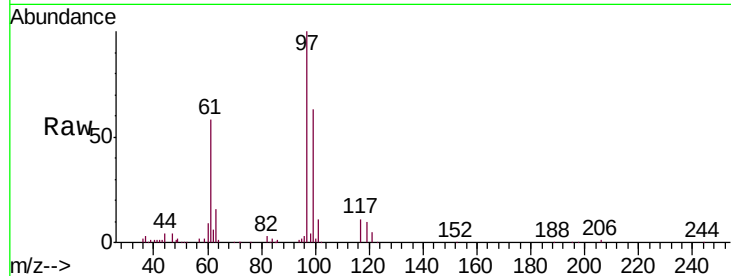
Tgt Ion: 97 Resp: 229174

Ion Ratio Lower Upper

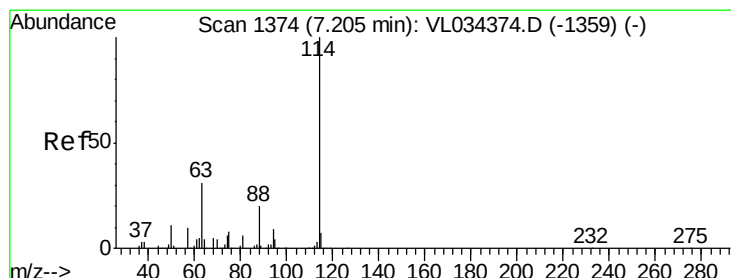
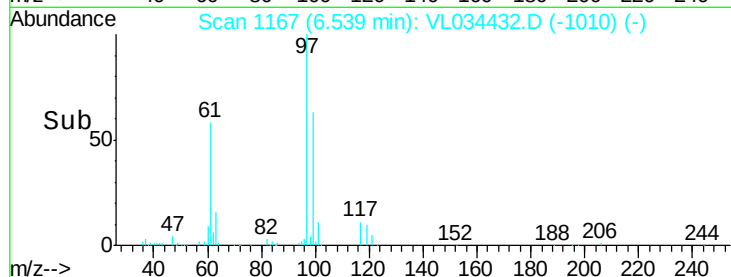
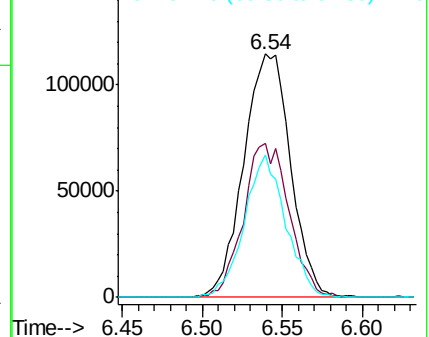
97 100

99 61.4 52.3 78.5

61 51.6 43.7 65.5



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: 7.21 min Scan# 1376

Delta R.T. 0.01 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

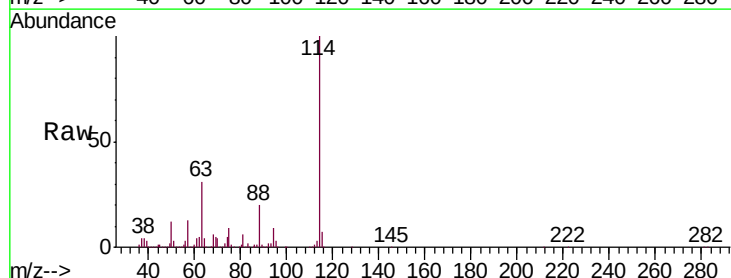
Tgt Ion: 114 Resp: 1835481

Ion Ratio Lower Upper

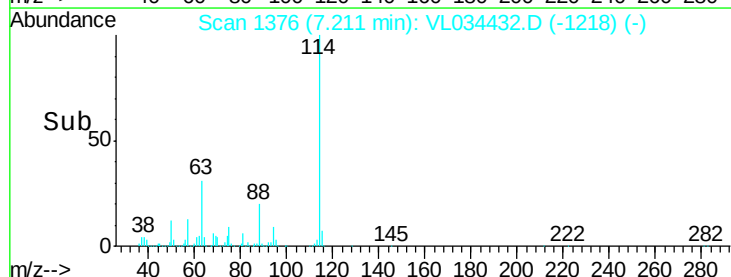
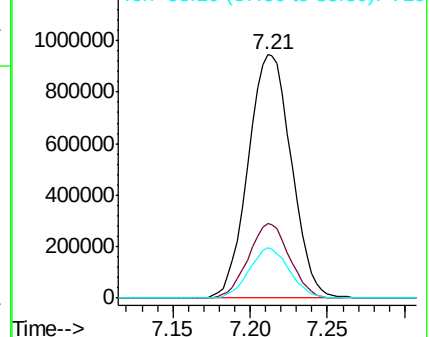
114 100

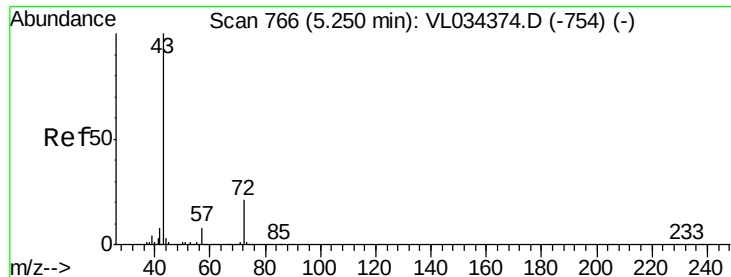
63 29.4 24.2 36.4

88 19.4 15.9 23.9



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

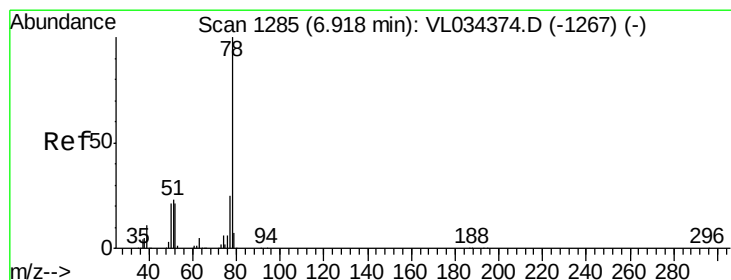
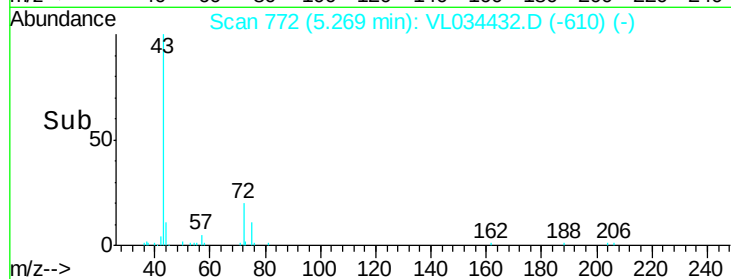
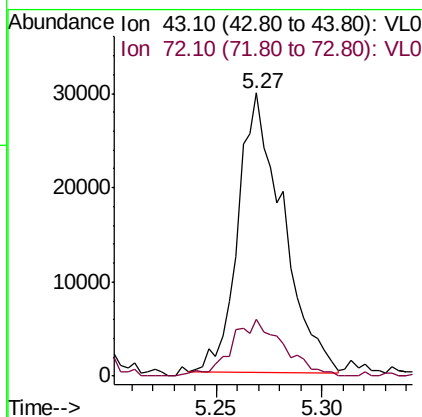
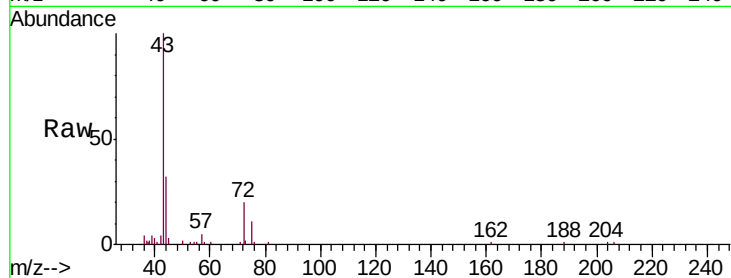




#34
 2-Butanone
 Concen: 0.289 ppbv
 RT: 5.27 min Scan# 772
 Delta R.T. 0.02 min
 Lab File: VL034432.D
 Acq: 2 Dec 2019 18:50

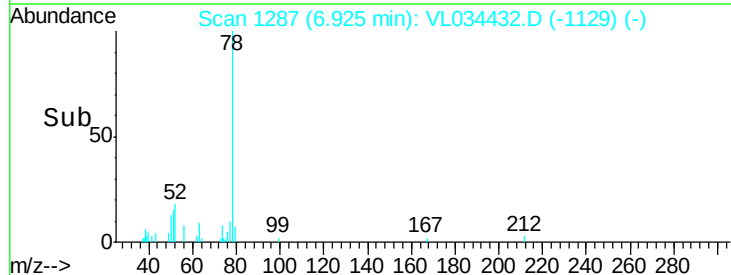
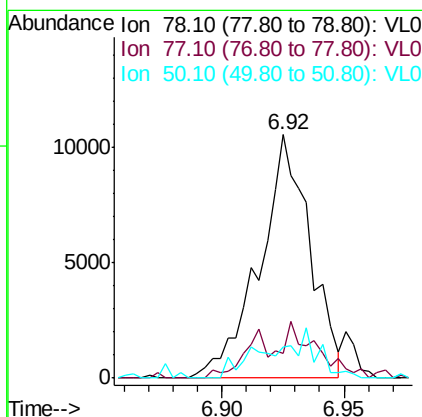
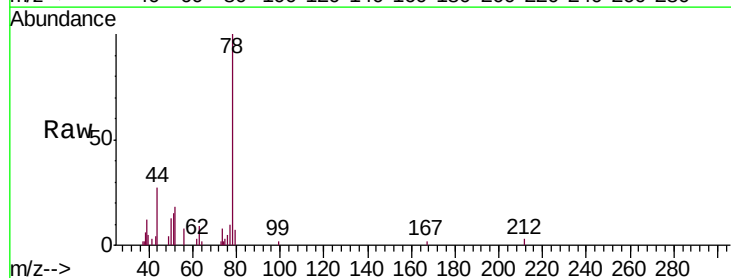
Instrument :
 MSVOA_L
 ClientSampleId :
 SV-3DL

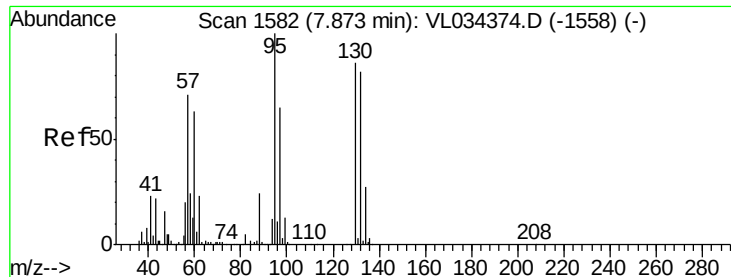
Tgt Ion: 43 Resp: 43714
 Ion Ratio Lower Upper
 43 100
 72 23.8 17.0 25.6



#36
 Benzene
 Concen: 0.082 ppbv
 RT: 6.92 min Scan# 1287
 Delta R.T. 0.01 min
 Lab File: VL034432.D
 Acq: 2 Dec 2019 18:50

Tgt Ion: 78 Resp: 15127
 Ion Ratio Lower Upper
 78 100
 77 10.2 20.2 30.4#
 50 12.7 17.1 25.7#





#38

Trichloroethene

Concen: 88.964 ppbv

RT: 7.88 min Scan# 1584

Delta R.T. 0.01 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Instrument :

MSVOA_L

ClientSampleId :

SV-3DL

Tgt Ion:130 Resp: 6698667

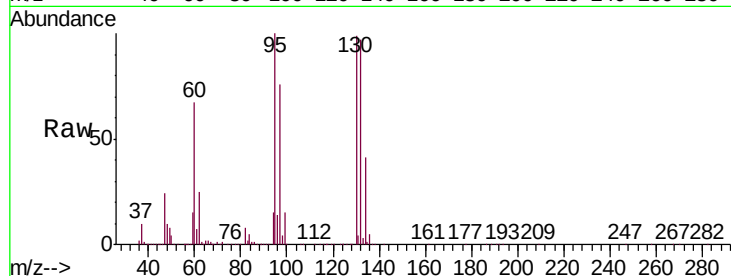
Ion Ratio Lower Upper

130 100

95 101.4 93.4 140.0

132 98.6 76.4 114.6

97 77.0 61.1 91.7

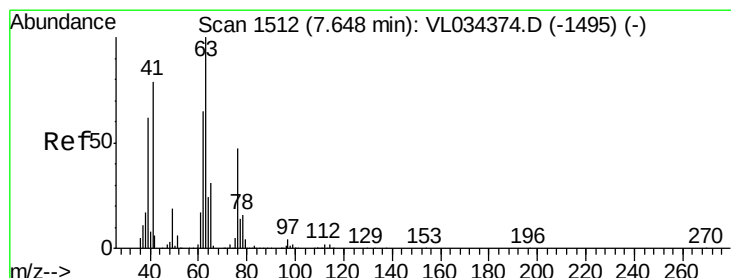
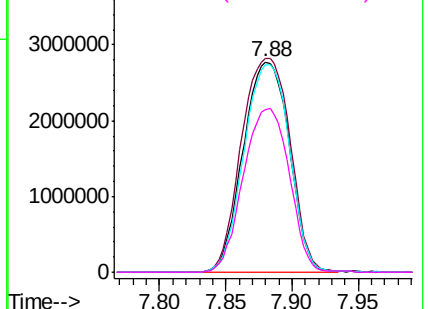
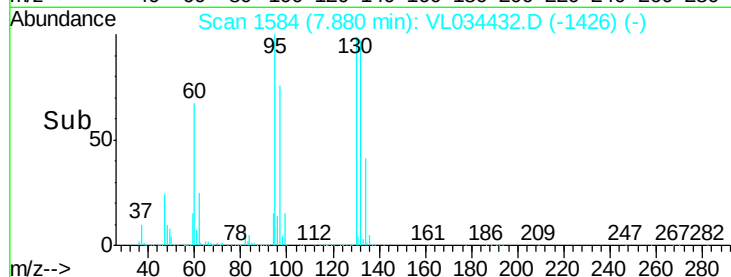


Abundance Ion 130.00 (129.70 to 130.70): V

Ion 95.00 (94.70 to 95.70): VL0

Ion 132.00 (131.70 to 132.70): V

Ion 97.00 (96.70 to 97.70): VL0



#39

1,2-Dichloropropane

Concen: 0.152 ppbv

RT: 7.86 min Scan# 1579

Delta R.T. 0.22 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

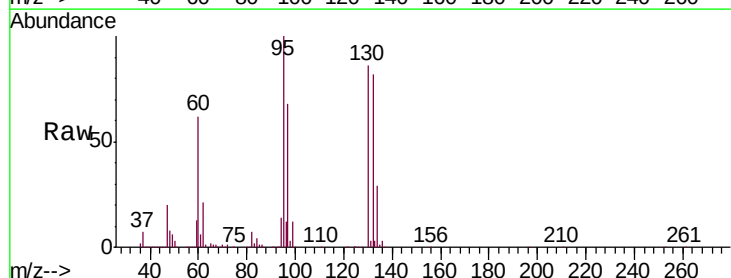
Tgt Ion: 63 Resp: 10715

Ion Ratio Lower Upper

63 100

41 9.5 63.1 94.7#

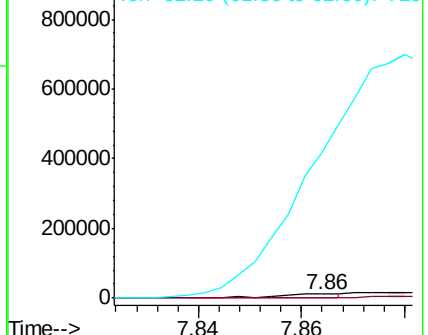
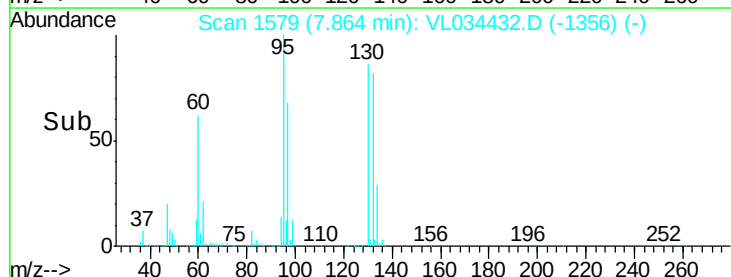
62 3493.9 52.3 78.5#

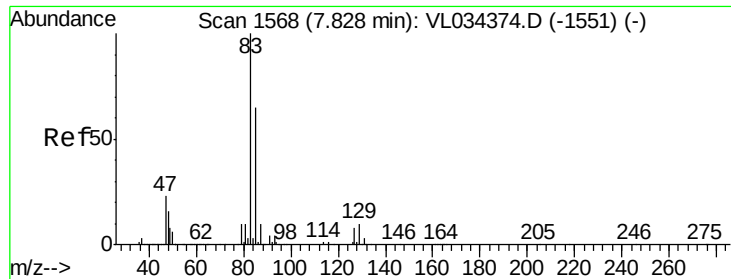


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#42

Bromodichloromethane

Concen: 0.247 ppbv

RT: 7.87 min Scan# 1581

Delta R.T. 0.04 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Instrument :

MSVOA_L

ClientSampleId :

SV-3DL

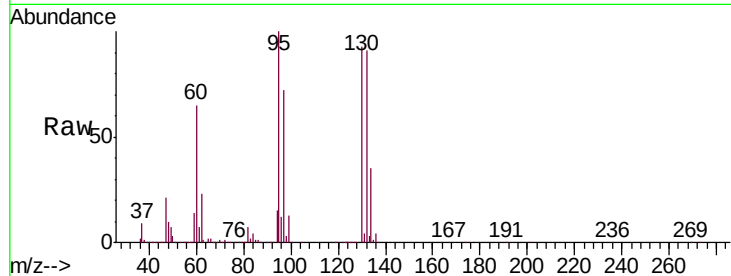
Tgt Ion: 83 Resp: 42145

Ion Ratio Lower Upper

83 100

85 58.6 52.3 78.5

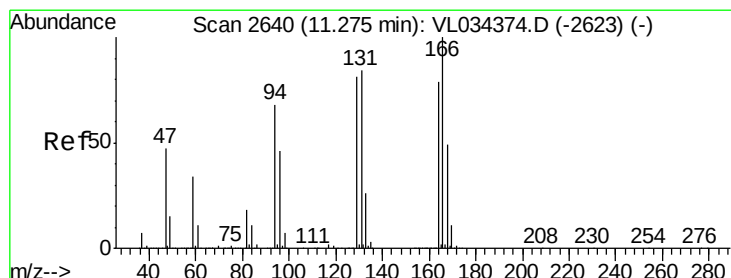
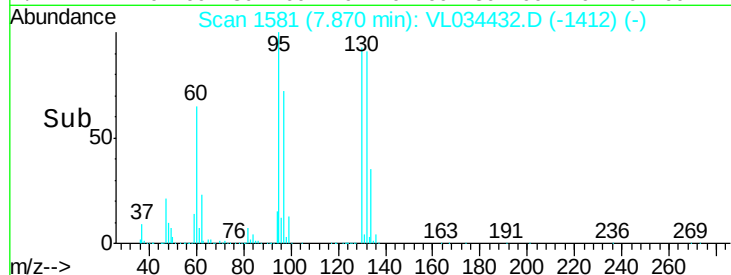
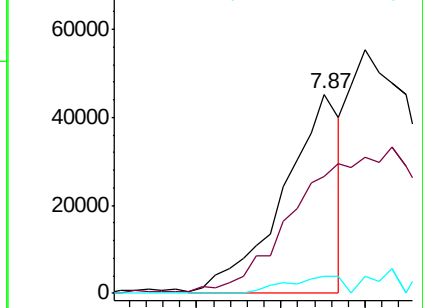
127 8.7 6.1 9.1



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): V



#52

Tetrachloroethene

Concen: 16.722 ppbv

RT: 11.28 min Scan# 2643

Delta R.T. 0.01 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Tgt Ion: 164 Resp: 1327541

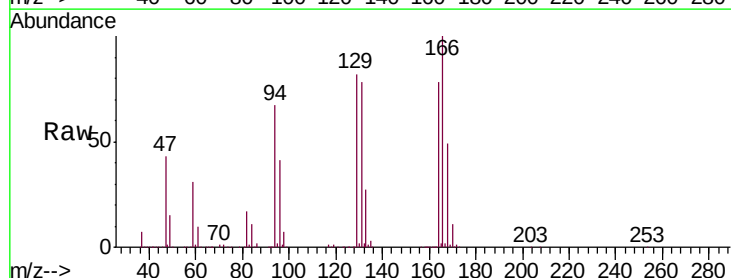
Ion Ratio Lower Upper

164 100

166 128.5 101.7 152.5

129 104.8 82.6 123.8

131 100.2 85.2 127.8

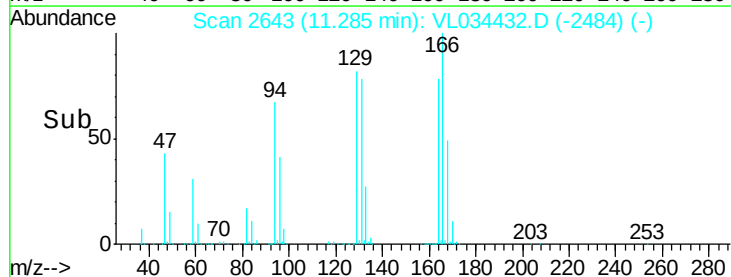
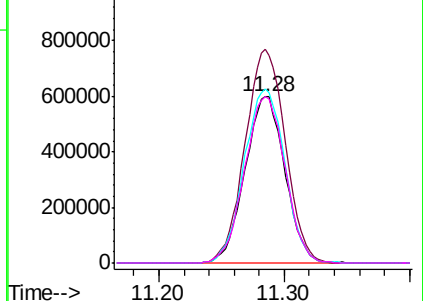


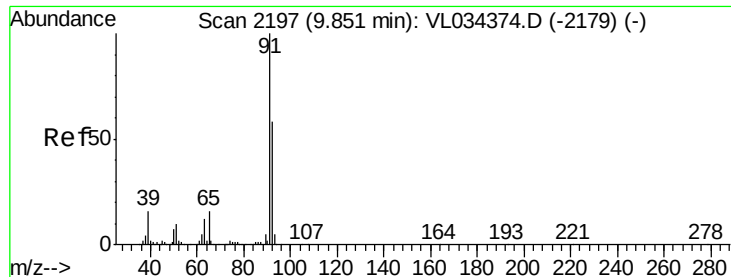
Abundance Ion 163.90 (163.60 to 164.60): V

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: 0.436 ppbv

RT: 9.86 min Scan# 2200

Delta R.T. 0.01 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Instrument :

MSVOA_L

ClientSampleId :

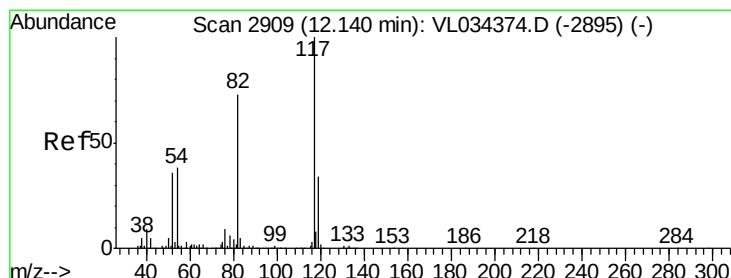
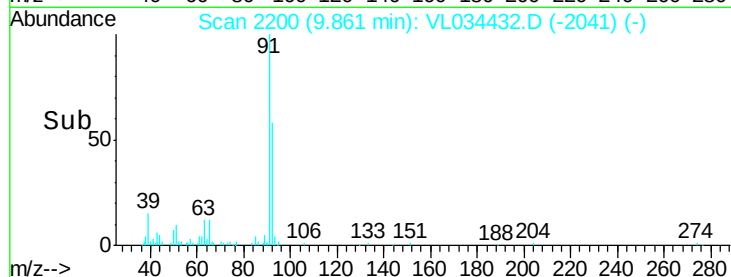
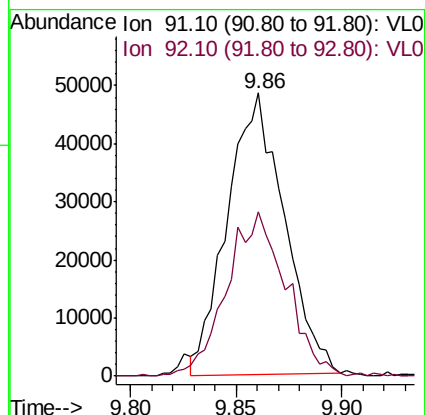
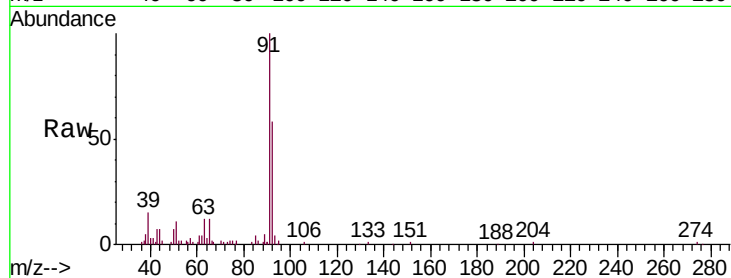
SV-3DL

Tgt Ion: 91 Resp: 90786

Ion Ratio Lower Upper

91 100

92 60.8 47.9 71.9



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.15 min Scan# 2912

Delta R.T. 0.01 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

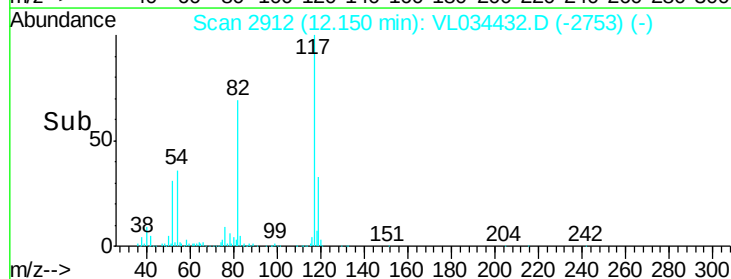
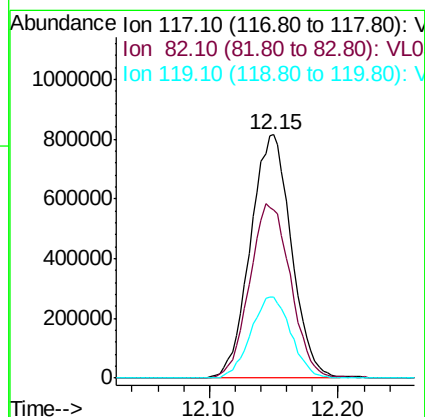
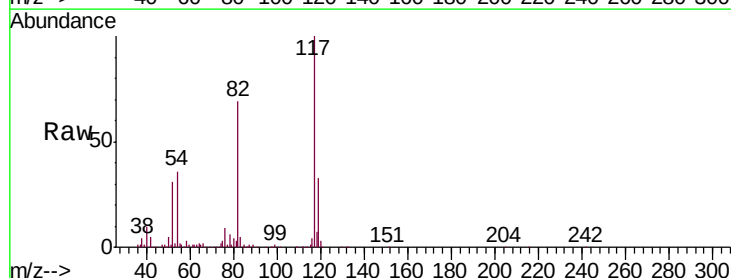
Tgt Ion: 117 Resp: 1798541

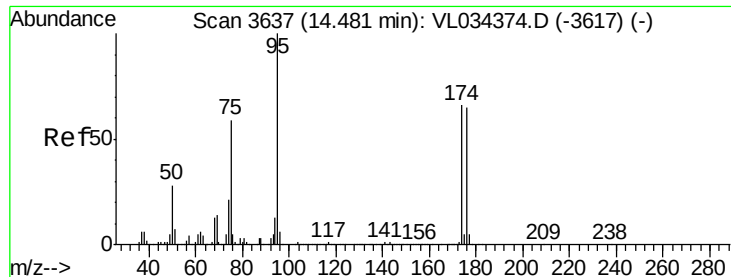
Ion Ratio Lower Upper

117 100

82 72.1 57.5 86.3

119 32.9 25.4 38.2





#68

1-Bromo-4-Fluorobenzene

Concen: 9.954 ppbv

RT: 14.48 min Scan# 3638

Delta R.T. 0.00 min

Lab File: VL034432.D

Acq: 2 Dec 2019 18:50

Instrument :

MSVOA_L

ClientSampleId :

SV-3DL

Tgt Ion: 95 Resp: 1506041

Ion Ratio Lower Upper

95 100

174 66.0 52.2 78.2

175 4.9 3.8 5.8

