

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111820\
 Data File : VL035989.D
 Acq On : 19 Nov 2020 1:24
 Operator : SY/AP
 Sample : L4781-05
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA4

Quant Time: Nov 19 08:13:51 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL110320AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Nov 04 02:40:06 2020
 QLast Update : Wed Nov 04 02:40:06 2020
 Response via : Initial Calibration

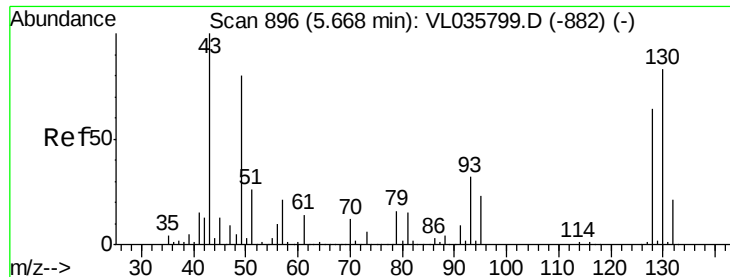
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.63	49	1077300	10.00	ppbv	-0.04
33) 1,4-Difluorobenzene	7.13	114	3823035	10.00	ppbv	-0.05
55) Chlorobenzene-d5	12.04	117	3514895	10.00	ppbv	-0.05

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.37	95	2645494	10.59	ppbv	-0.05
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.02	85	51437	0.254	ppbv	94
3) Chlorodifluoromethane	2.96	51	75361	0.584	ppbv #	86
4) Chloromethane	3.11	50	34266	0.547	ppbv	98
9) Propene	2.99	41	48830	1.034	ppbv	87
10) Heptane	8.08	43	4905	0.038	ppbv #	44
11) Trichlorofluoromethane	3.92	101	74142	0.291	ppbv	93
12) 1,1,2-Trichlorotrifluoroet	4.45	101	6796	0.036	ppbv #	1
13) Ethanol	3.57	45	1064688	103.933	ppbv	95
15) Acetone	3.82	43	558118	4.846	ppbv	92
16) 1,3-Butadiene	3.29	39	4008	0.081	ppbv #	10
19) Isopropyl Alcohol	3.94	45	270925	3.828	ppbv #	91
20) Methylene Chloride	4.31	84	159399	1.966	ppbv	93
23) Vinyl Acetate	5.02	43	12719	0.079	ppbv #	1
25) Ethyl Acetate	5.65	43	201096	0.886	ppbv #	81
26) Hexane	5.65	57	265180	2.119	ppbv #	51
29) Chloroform	5.71	83	31357	0.127	ppbv	99
34) 2-Butanone	5.21	43	24105	0.194	ppbv	93
35) Carbon Tetrachloride	6.98	117	14663	0.072	ppbv	97
36) Benzene	6.84	78	74610	0.263	ppbv	94
39) 1,2-Dichloropropane	7.13	63	781976	8.172	ppbv #	30
41) Tetrahydrofuran	5.65	42	99072	1.405	ppbv #	36
44) 2,2,4-Trimethylpentane	7.83	57	41429	0.110	ppbv #	61
52) Tetrachloroethene	11.18	164	13761	0.102	ppbv	86
53) Toluene	9.76	91	941443	2.745	ppbv	97
60) o-Xylene	13.65	91	20075	0.057	ppbv	89

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.63 min Scan# 883

Delta R.T. -0.04 min

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ClientSampleId :

IA4

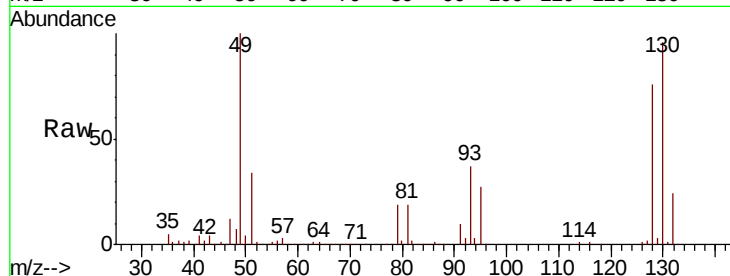
Tot Ion: 49 Resp: 1077300

Ion Ratio Lower Upper

49 100

128 78.2 41.5 124.6

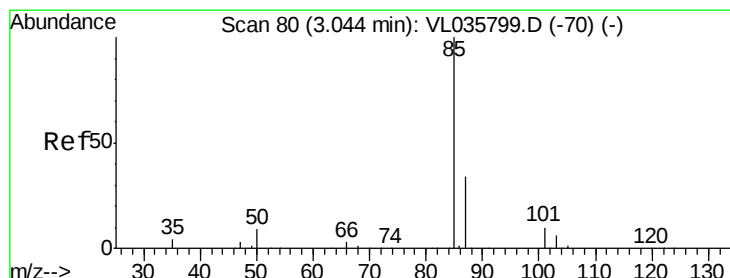
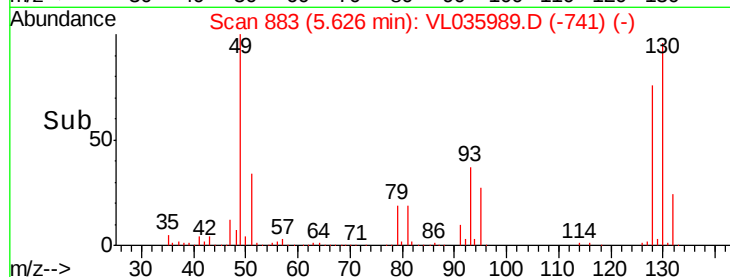
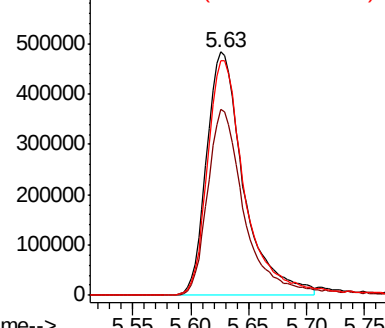
130 99.7 53.7 161.1



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: 0.254 ppbv

RT: 3.02 min Scan# 72

Delta R.T. -0.03 min

Lab File: VL035989.D

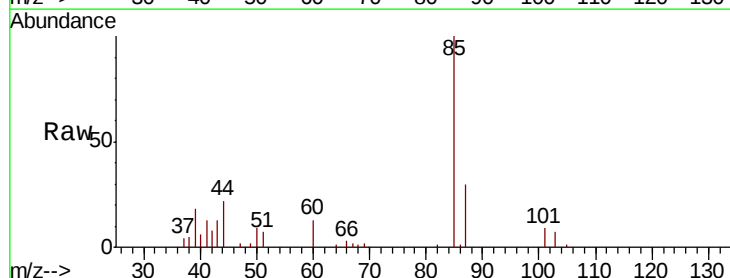
Acq: 19 Nov 2020 1:24

Tgt Ion: 85 Resp: 51437

Ion Ratio Lower Upper

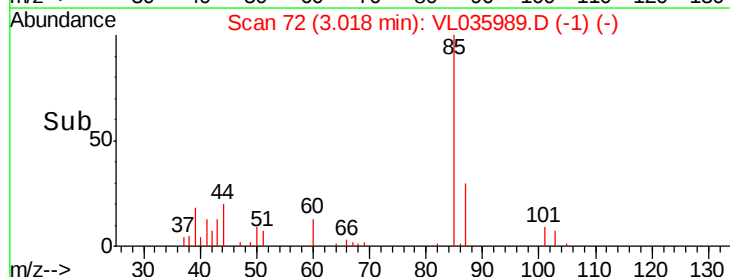
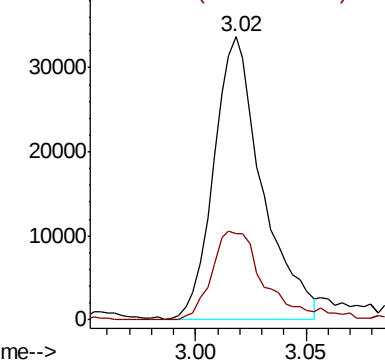
85 100

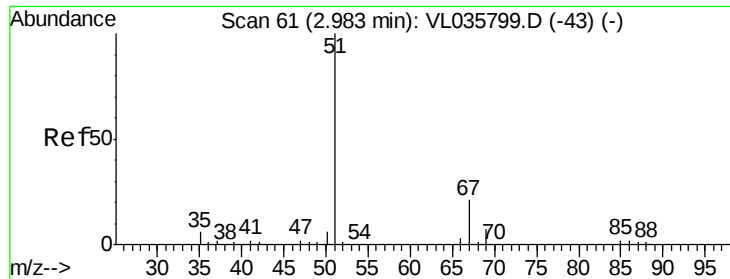
87 30.5 27.1 40.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.584 ppbv

RT: 2.96 min Scan# 54

Delta R.T. -0.02 min

Lab File: VL035989.D

Acq: 19 Nov 2020 1:24

Instrument :

MSVOA_L

ClientSampleId :

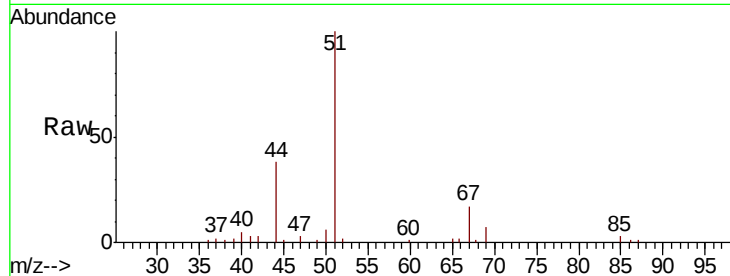
IA4

Tot Ion: 51 Resp: 75361

Ion Ratio Lower Upper

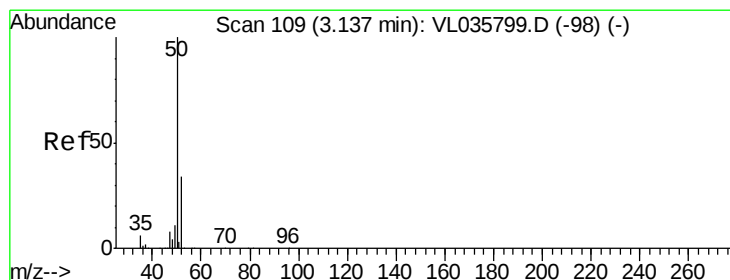
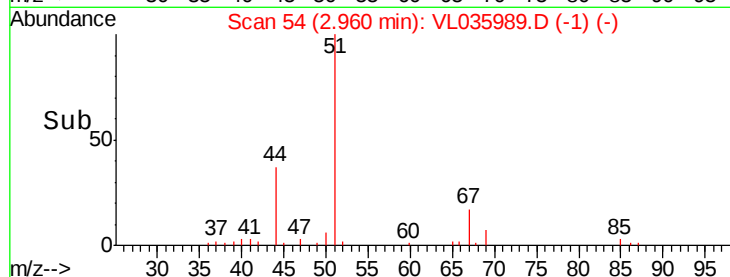
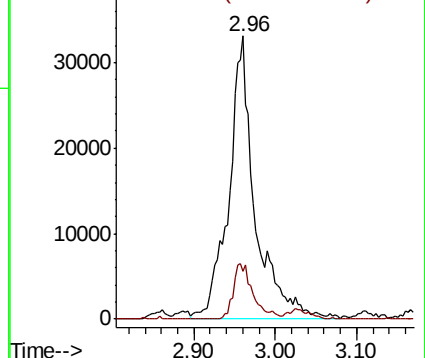
51 100

67 14.5 17.0 25.4#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.547 ppbv

RT: 3.11 min Scan# 100

Delta R.T. -0.03 min

Lab File: VL035989.D

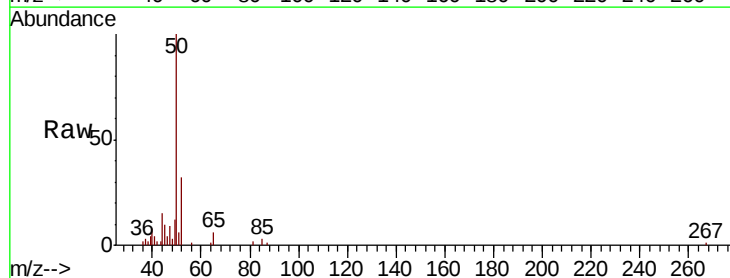
Acq: 19 Nov 2020 1:24

Tgt Ion: 50 Resp: 34266

Ion Ratio Lower Upper

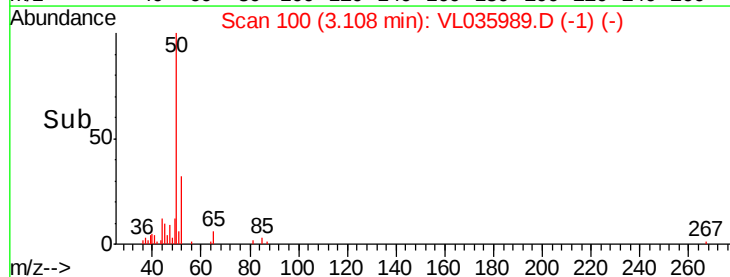
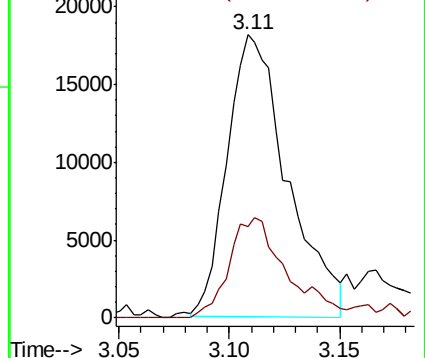
50 100

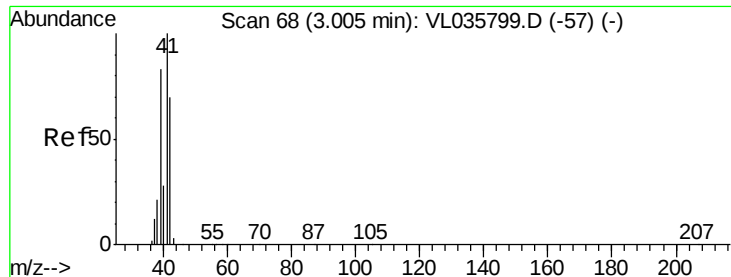
52 32.8 27.1 40.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 1.034 ppbv

RT: 2.99 min Scan# 63

Delta R.T. -0.02 min

Lab File: VL035989.D

Acq: 19 Nov 2020 1:24

Instrument :

MSVOA_L

ClientSampled :

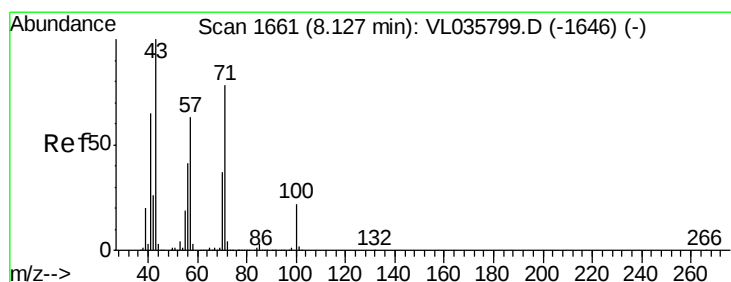
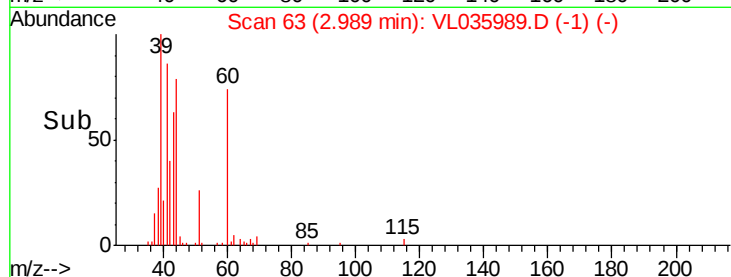
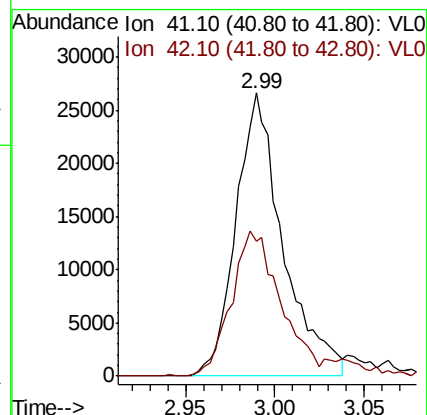
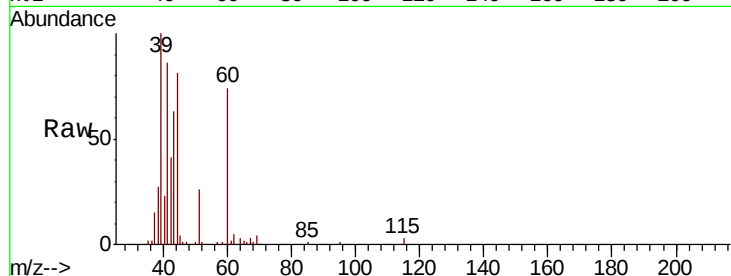
IA4

Tot Ion: 41 Resp: 48830

Ion Ratio Lower Upper

41 100

42 59.5 56.2 84.4



#10

Heptane

Concen: 0.038 ppbv

RT: 8.08 min Scan# 1646

Delta R.T. -0.05 min

Lab File: VL035989.D

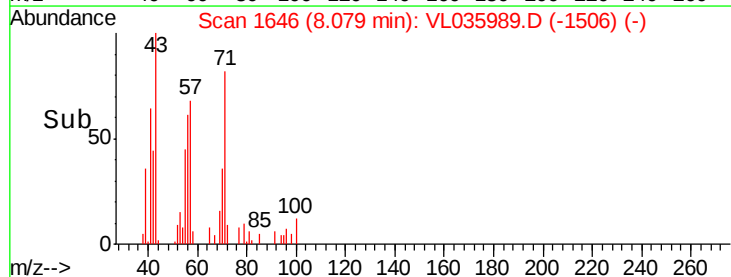
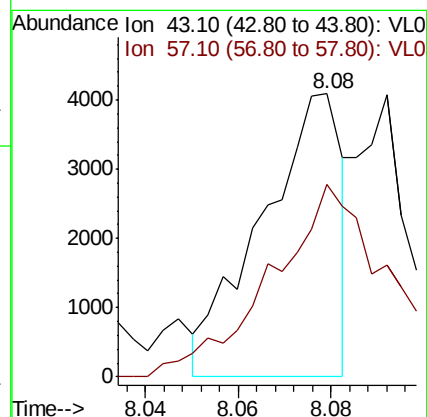
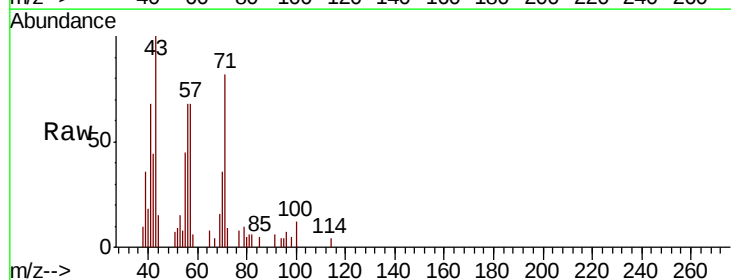
Acq: 19 Nov 2020 1:24

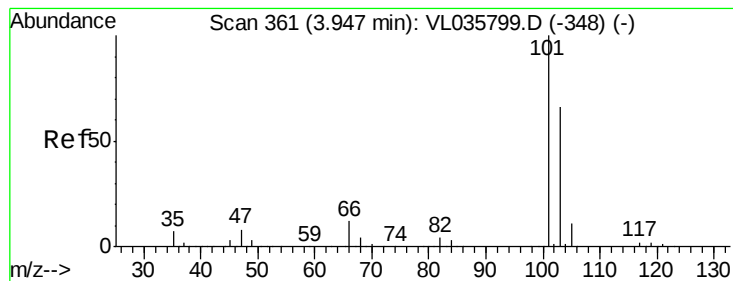
Tgt Ion: 43 Resp: 4905

Ion Ratio Lower Upper

43 100

57 105.9 50.0 75.0#





#11

Trichlorofluoromethane

Concen: 0.291 ppbv

RT: 3.92 min Scan# 352

Delta R.T. -0.03 min

Lab File: VL035989.D

Acq: 19 Nov 2020 1:24

Instrument :

MSVOA_L

ClientSampleId :

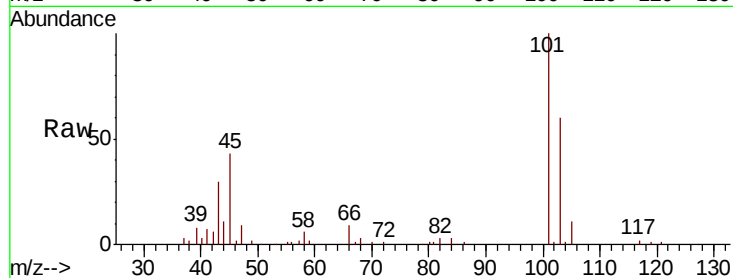
IA4

Tot Ion:101 Resp: 74142

Ion Ratio Lower Upper

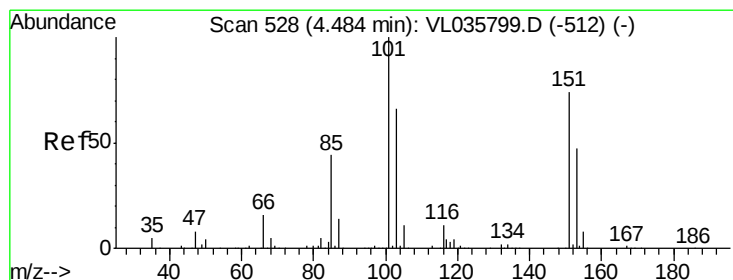
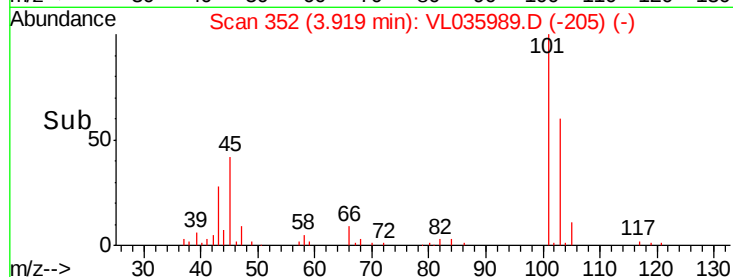
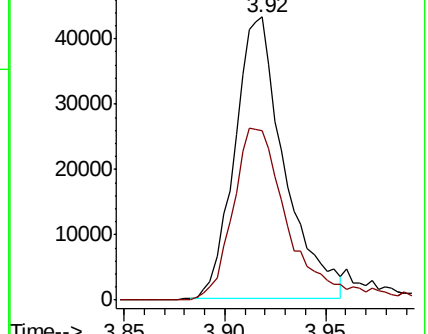
101 100

103 60.4 53.0 79.4



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.036 ppbv

RT: 4.45 min Scan# 518

Delta R.T. -0.03 min

Lab File: VL035989.D

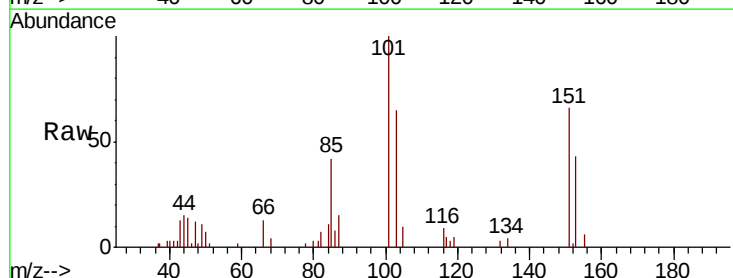
Acq: 19 Nov 2020 1:24

Tgt Ion:101 Resp: 6796

Ion Ratio Lower Upper

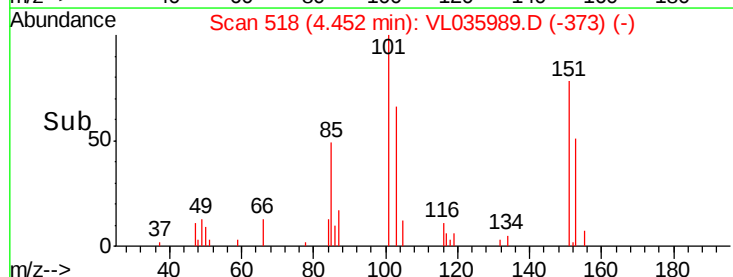
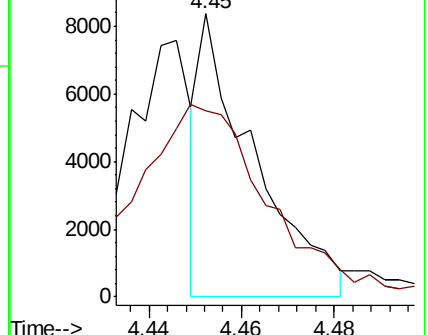
101 100

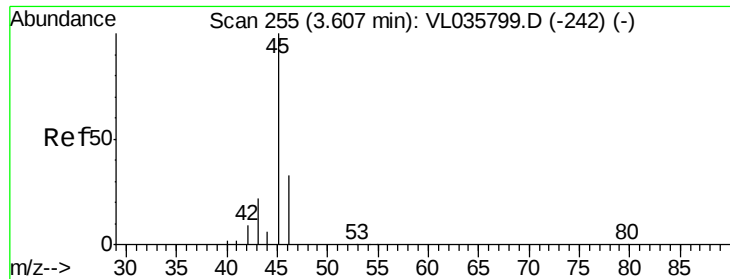
151 169.3 58.9 88.3#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 103.933 ppbv

RT: 3.57 min Scan# 244

Delta R.T. -0.04 min

Lab File: VL035989.D

Acq: 19 Nov 2020 1:24

Instrument :

MSVOA_L

ClientSampleId :

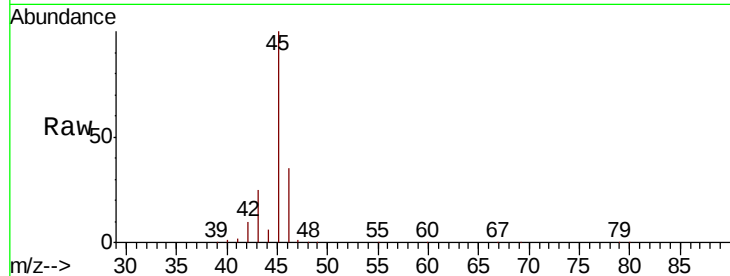
IA4

Tot Ion: 45 Resp: 1064688

Ion Ratio Lower Upper

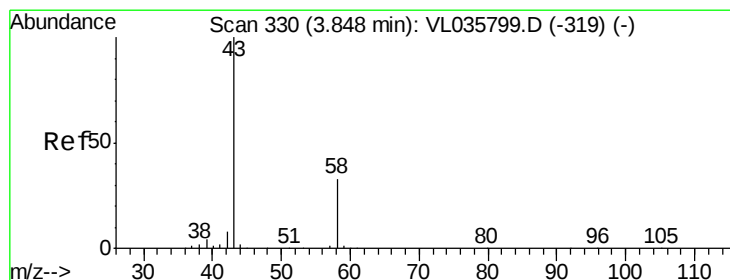
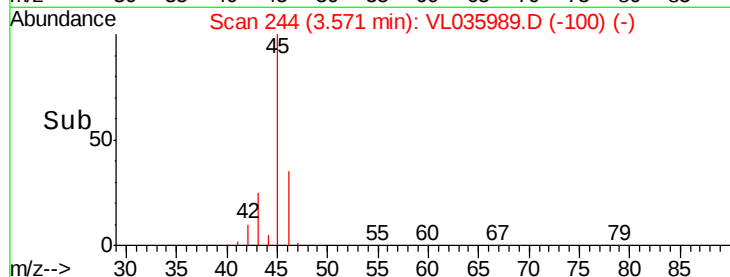
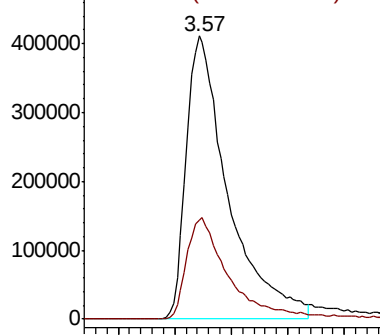
45 100

46 37.5 16.1 64.5



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0



#15

Acetone

Concen: 4.846 ppbv

RT: 3.82 min Scan# 321

Delta R.T. -0.03 min

Lab File: VL035989.D

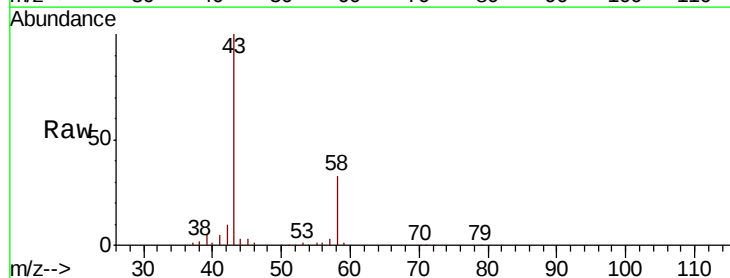
Acq: 19 Nov 2020 1:24

Tgt Ion: 43 Resp: 558118

Ion Ratio Lower Upper

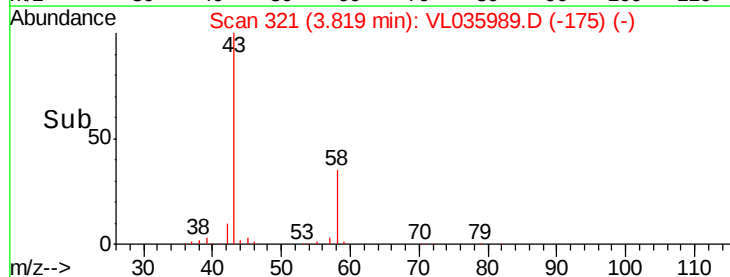
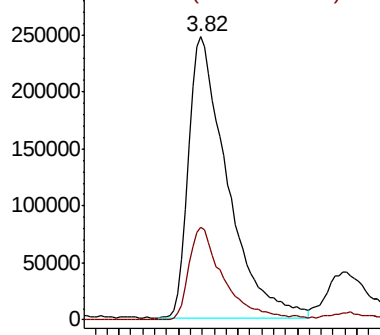
43 100

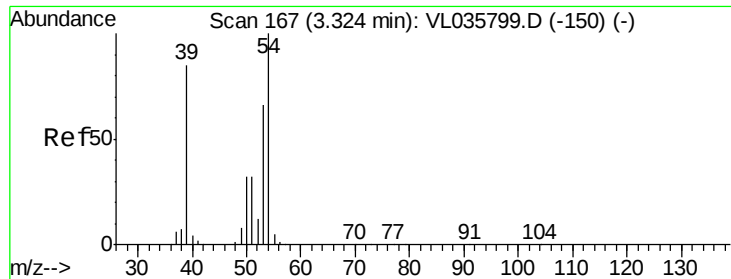
58 29.9 27.5 41.3



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

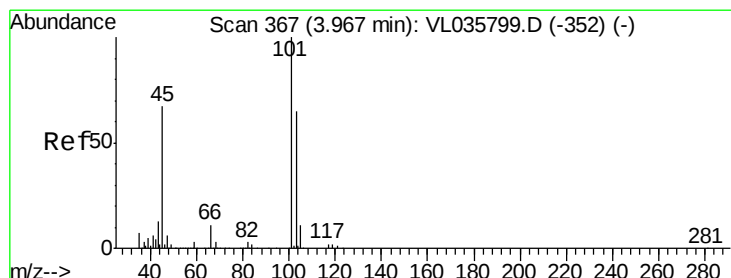
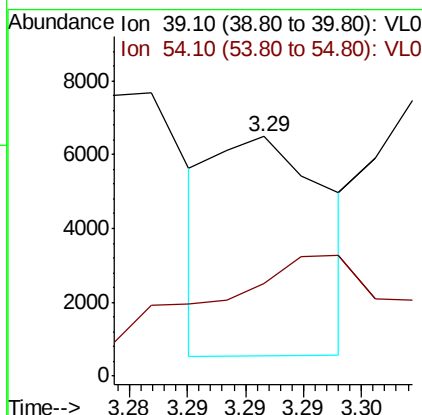
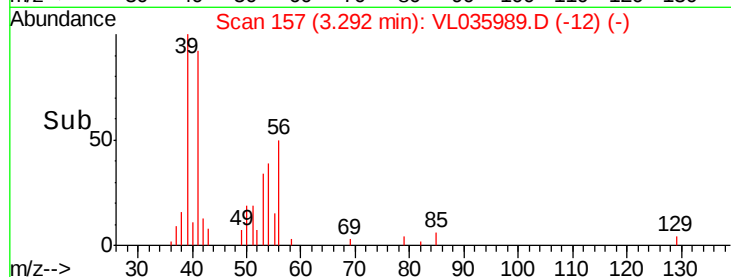
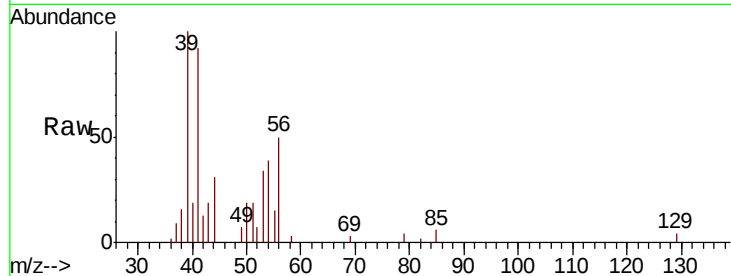




#16
 1,3-Butadiene
 Concen: 0.081 ppbv
 RT: 3.29 min Scan# 157
 Delta R.T. -0.03 min
 Lab File: VL035989.D
 Acq: 19 Nov 2020 1:24

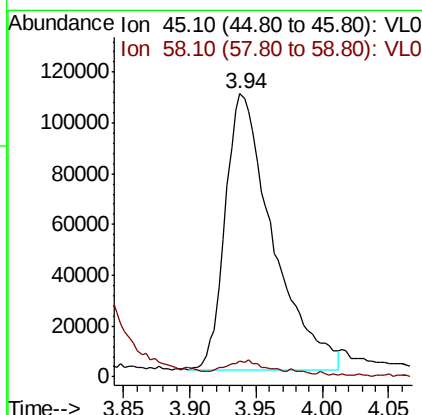
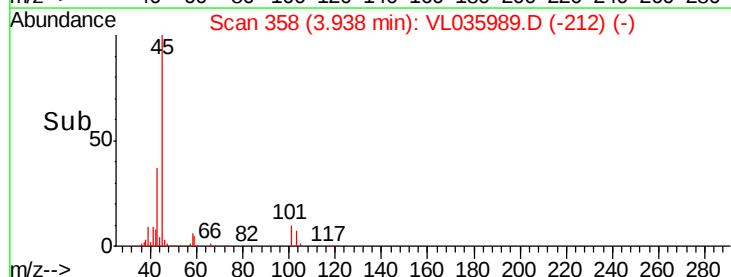
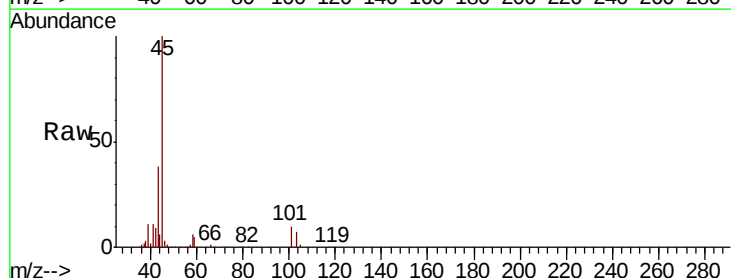
Instrument :
 MSVOA_L
 ClientSampled :
 IA4

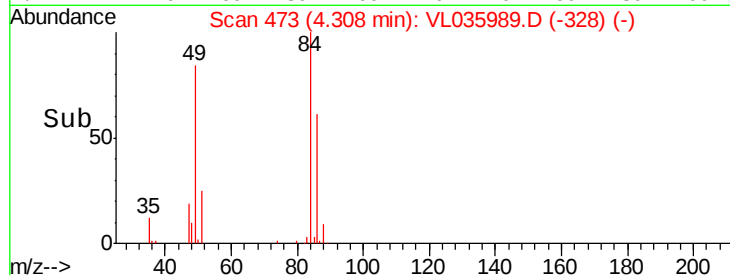
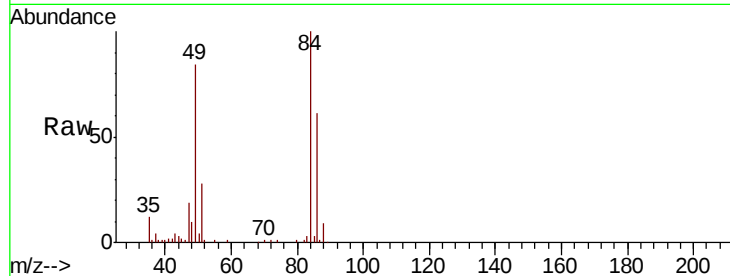
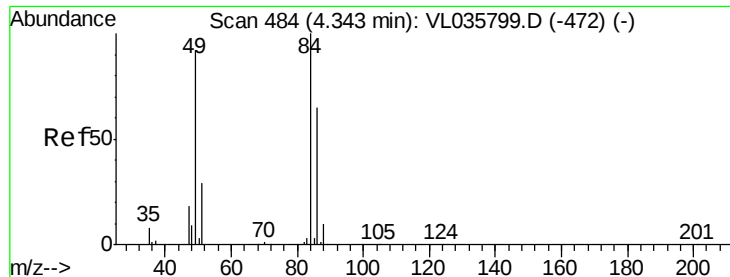
Tot Ion: 39 Resp: 4008
 Ion Ratio Lower Upper
 39 100
 54 203.6 87.1 130.7#



#19
 Isopropyl Alcohol
 Concen: 3.828 ppbv
 RT: 3.94 min Scan# 358
 Delta R.T. -0.03 min
 Lab File: VL035989.D
 Acq: 19 Nov 2020 1:24

Tgt Ion: 45 Resp: 270925
 Ion Ratio Lower Upper
 45 100
 58 6.1 2.6 3.8#

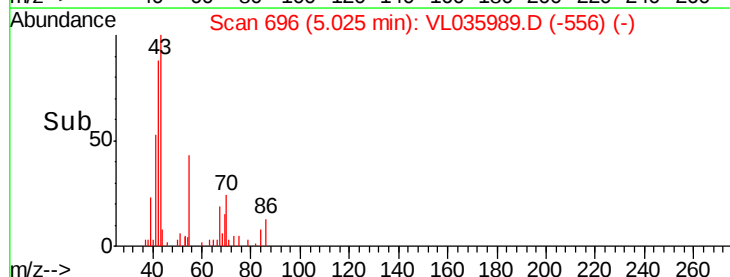
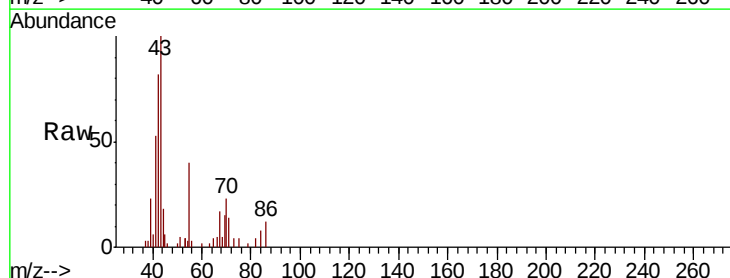
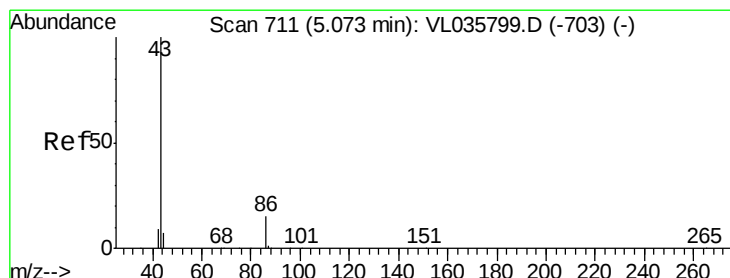
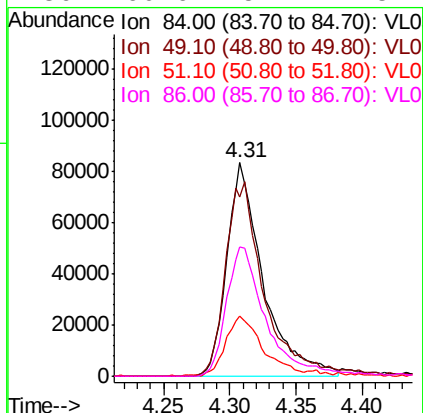




#20
Methvlene Chloride
Concen: 1.966 ppbv
RT: 4.31 min Scan# 473
Delta R.T. -0.04 min
Lab File: VL035989.D
Acq: 19 Nov 2020 1:24

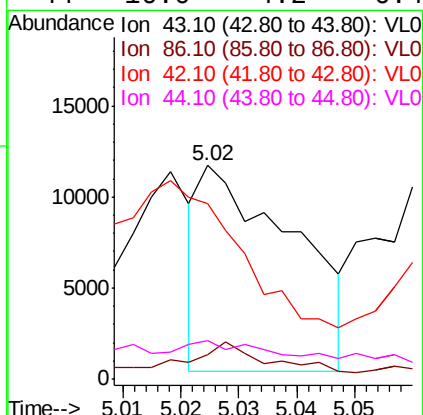
Instrument :
MSVOA_L
ClientSampleId :
IA4

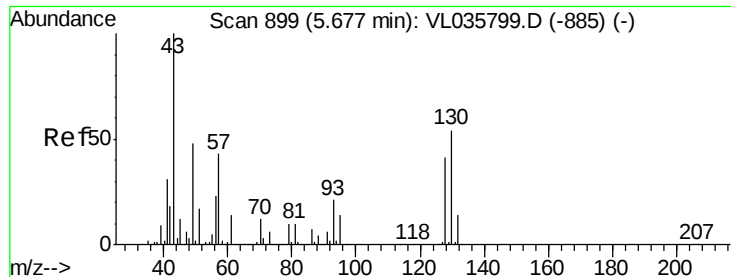
Tot Ion:	84	Resp:	159399
Ion	Ratio	Lower	Upper
84	100		
49	83.9	73.8	110.8
51	27.4	23.0	34.4
86	60.6	52.1	78.1



#23
Vinyl Acetate
Concen: 0.079 ppbv
RT: 5.02 min Scan# 696
Delta R.T. -0.05 min
Lab File: VL035989.D
Acq: 19 Nov 2020 1:24

Tgt Ion:	43	Resp:	12719
Ion	Ratio	Lower	Upper
43	100		
86	15.8	9.8	14.6#
42	114.5	8.1	12.1#
44	16.0	4.2	6.4#

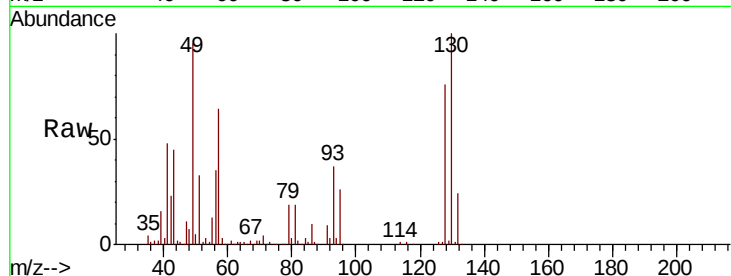




#25
Ethyl Acetate
Concen: 0.886 ppbv
RT: 5.65 min Scan# 889
Delta R.T. -0.03 min
Lab File: VL035989.D
Acq: 19 Nov 2020 1:24

Instrument :
MSVOA_L
ClientSampleId :
IA4

Tot Ion:	43	Resp:	201096
Ion	Ratio	Lower	Upper
43	100		
45	4.2	8.5	12.7#
61	3.8	10.7	16.1#
70	4.9	8.6	12.8#



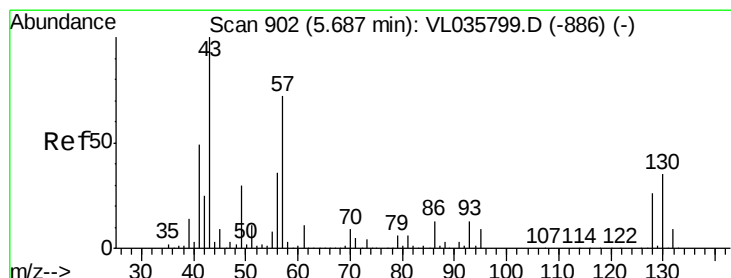
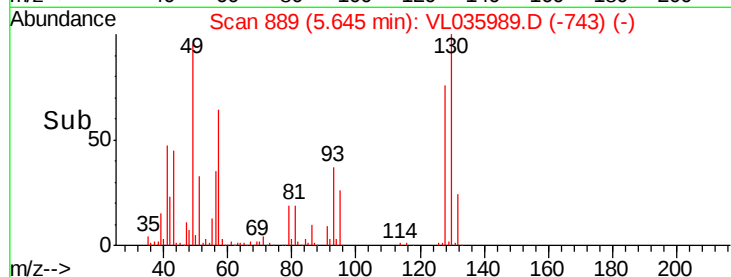
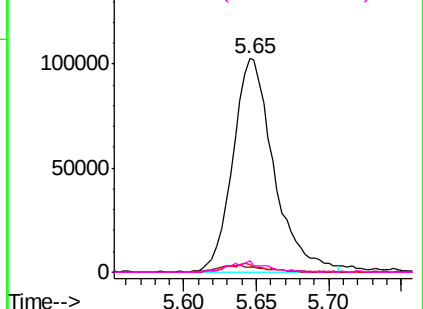
Abundance

Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

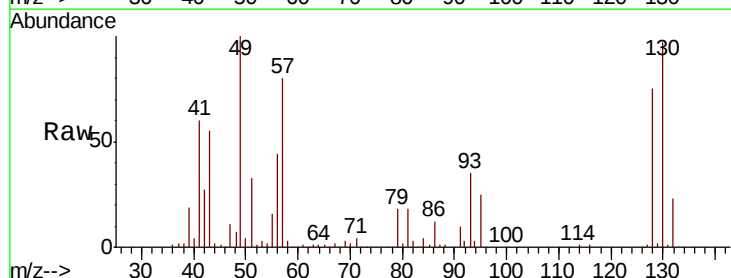
Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0



#26
Hexane
Concen: 2.119 ppbv
RT: 5.65 min Scan# 890
Delta R.T. -0.04 min
Lab File: VL035989.D
Acq: 19 Nov 2020 1:24

Tgt Ion:	57	Resp:	265180
Ion	Ratio	Lower	Upper
57	100		
41	82.3	58.9	88.3
43	77.6	150.2	225.2#
56	59.7	42.4	63.6



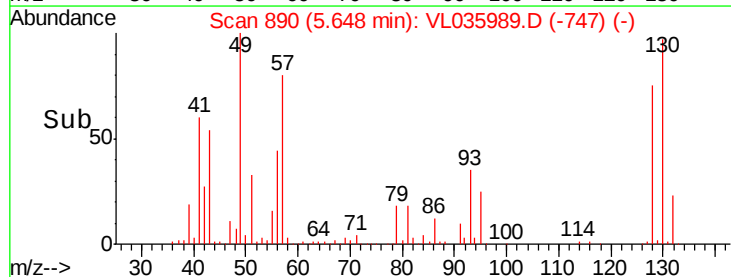
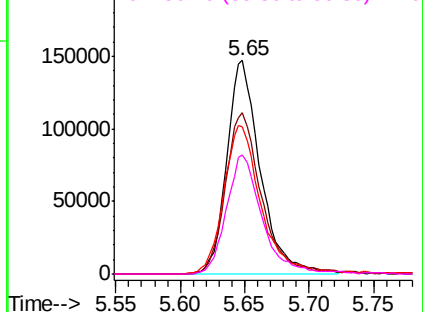
Abundance

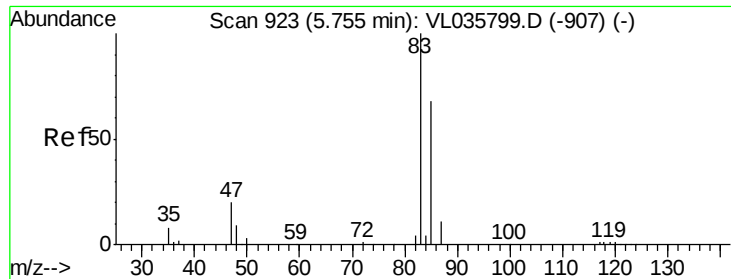
Ion 57.10 (56.80 to 57.80): VL0

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

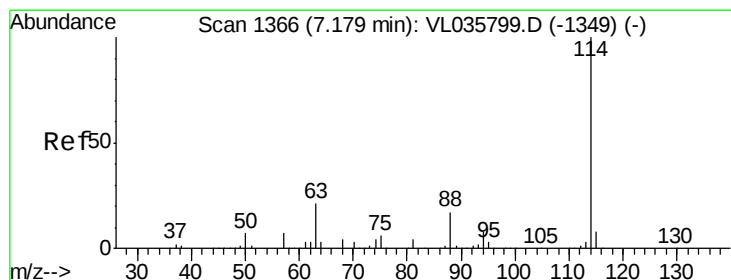
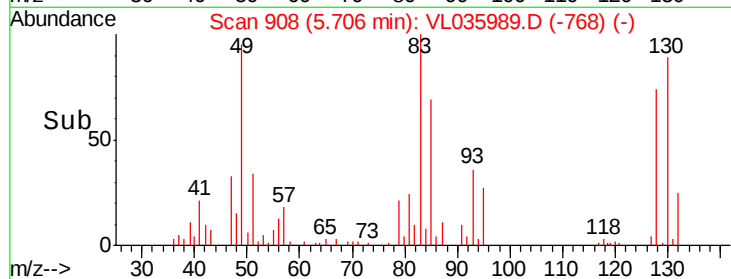
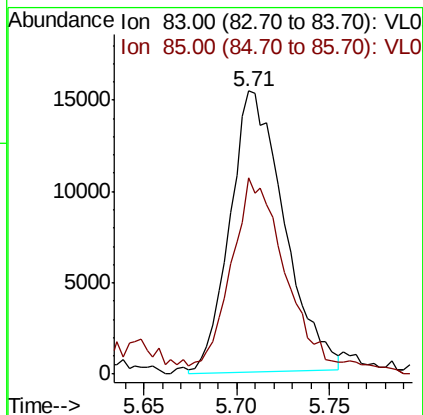
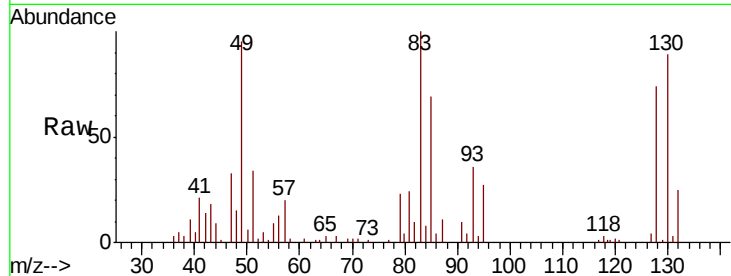




#29
Chloroform
Concen: 0.127 ppbv
RT: 5.71 min Scan# 908
Delta R.T. -0.05 min
Lab File: VL035989.D
Acq: 19 Nov 2020 1:24

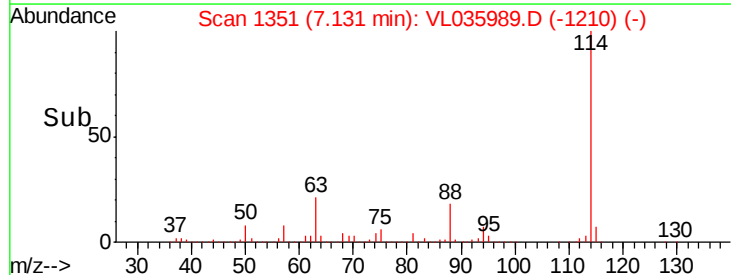
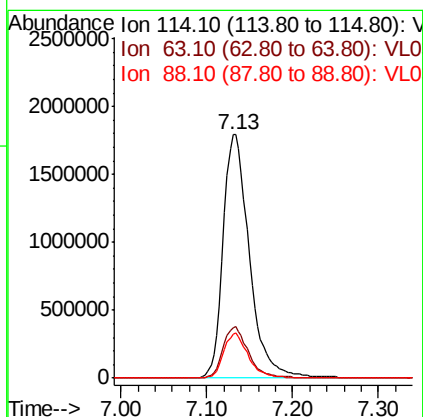
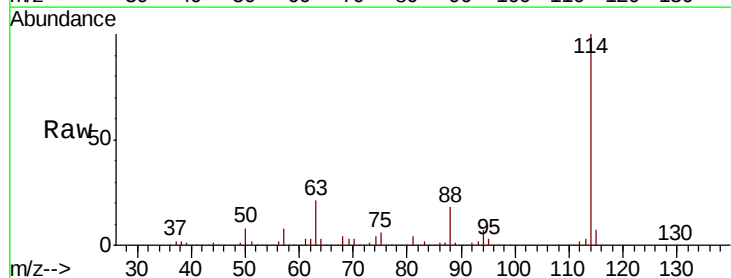
Instrument :
MSVOA_L
ClientSampled :
IA4

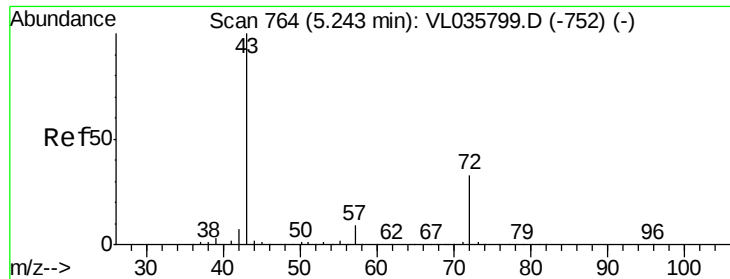
Tot Ion: 83 Resp: 31357
Ion Ratio Lower Upper
83 100
85 67.4 54.6 81.8



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.13 min Scan# 1351
Delta R.T. -0.05 min
Lab File: VL035989.D
Acq: 19 Nov 2020 1:24

Tgt Ion: 114 Resp: 3823035
Ion Ratio Lower Upper
114 100
63 20.7 16.1 24.1
88 17.4 13.7 20.5

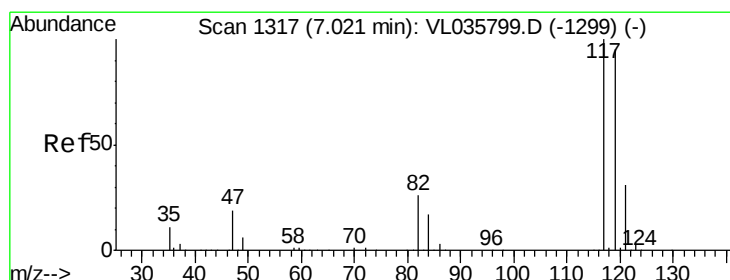
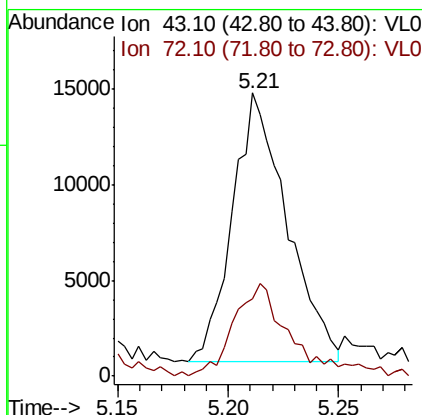
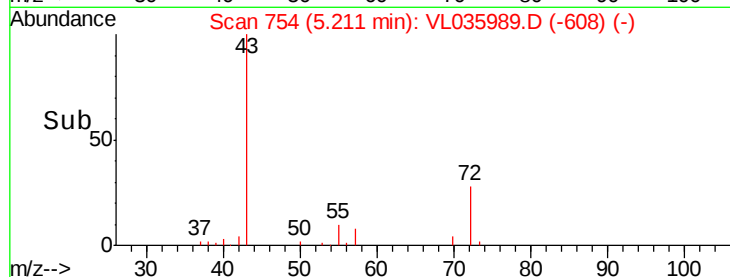
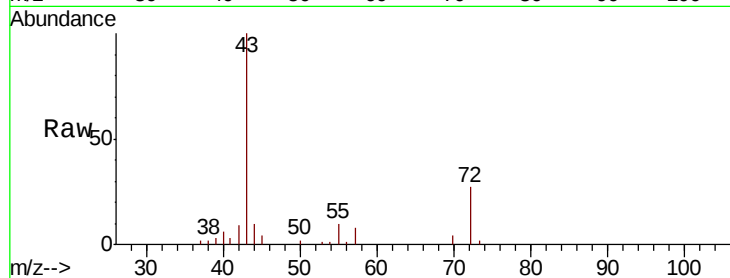




#34
 2-Butanone
 Concen: 0.194 ppbv
 RT: 5.21 min Scan# 754
 Delta R.T. -0.03 min
 Lab File: VL035989.D
 Acq: 19 Nov 2020 1:24

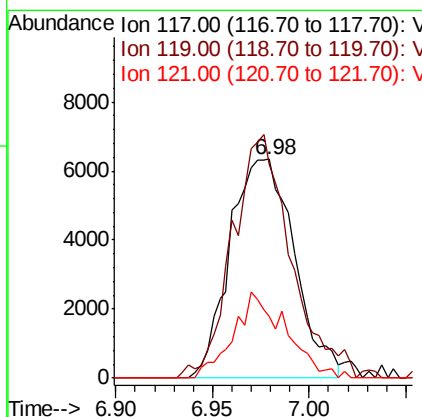
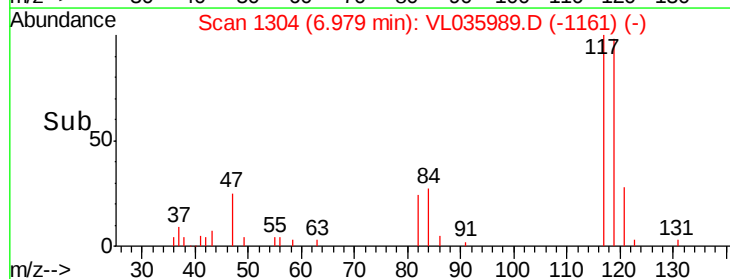
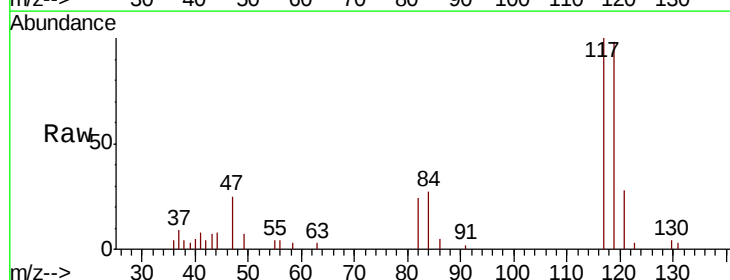
Instrument :
 MSVOA_L
 ClientSampleId :
 IA4

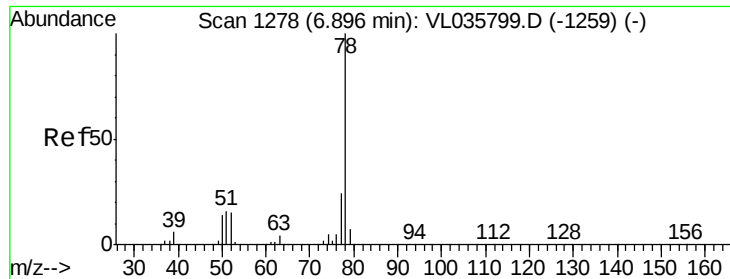
Tot Ion: 43 Resp: 24105
 Ion Ratio Lower Upper
 43 100
 72 36.9 26.5 39.7



#35
 Carbon Tetrachloride
 Concen: 0.072 ppbv
 RT: 6.98 min Scan# 1304
 Delta R.T. -0.04 min
 Lab File: VL035989.D
 Acq: 19 Nov 2020 1:24

Tgt Ion: 117 Resp: 14663
 Ion Ratio Lower Upper
 117 100
 119 92.1 75.6 113.4
 121 28.4 25.1 37.7





#36

Benzene

Concen: 0.263 ppbv

RT: 6.84 min Scan# 1262

Delta R.T. -0.05 min

Lab File: VL035989.D

Acq: 19 Nov 2020 1:24

Instrument :

MSVOA_L

ClientSampleId :

IA4

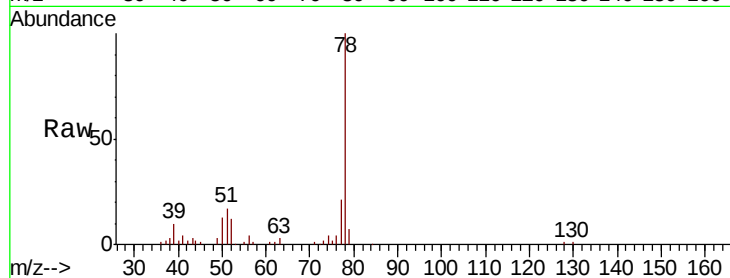
Tot Ion: 78 Resp: 74610

Ion Ratio Lower Upper

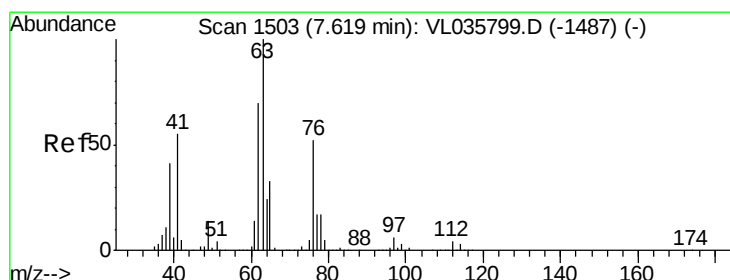
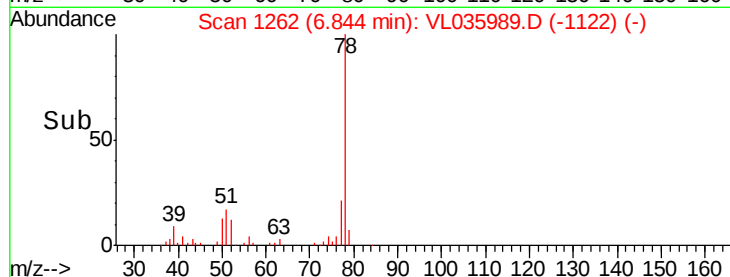
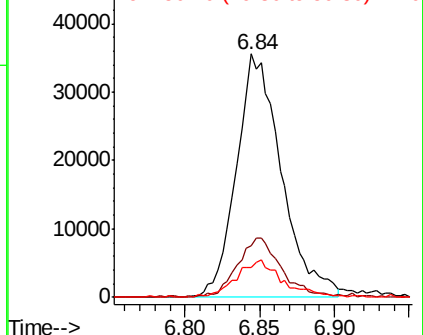
78 100

77 21.0 19.3 28.9

50 12.5 11.4 17.2



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: 8.172 ppbv

RT: 7.13 min Scan# 1352

Delta R.T. -0.49 min

Lab File: VL035989.D

Acq: 19 Nov 2020 1:24

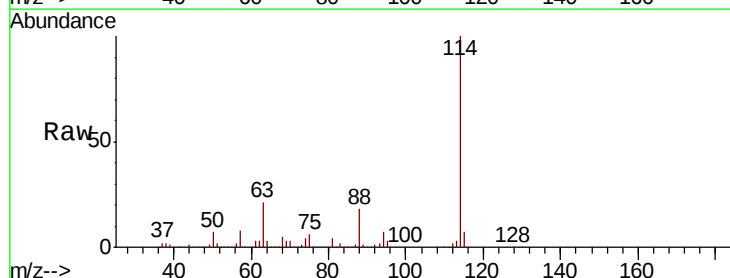
Tgt Ion: 63 Resp: 781976

Ion Ratio Lower Upper

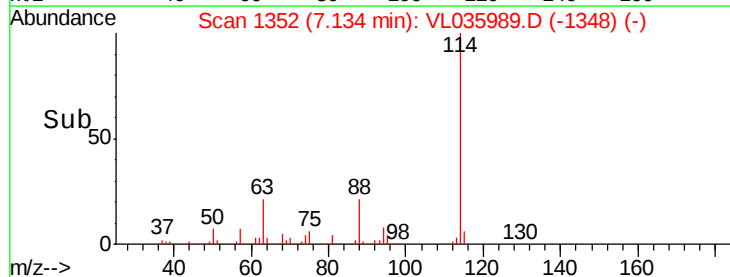
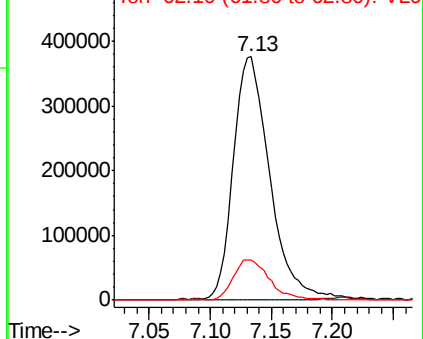
63 100

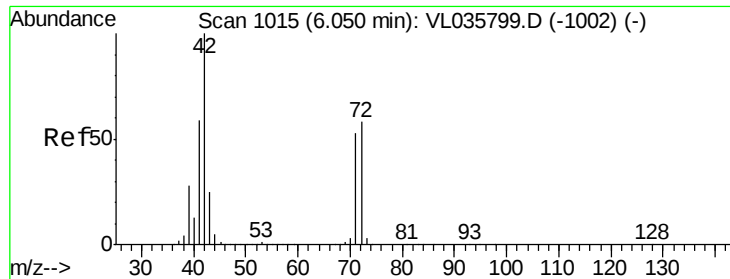
41 0.0 43.8 65.6#

62 16.5 56.2 84.2#



Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 62.10 (61.80 to 62.80): VL0





#41

Tetrahydrofuran

Concen: 1.405 ppbv

RT: 5.65 min Scan# 889

Delta R.T. -0.41 min

Lab File: VL035989.D

Acq: 19 Nov 2020 1:24

Instrument :

MSVOA_L

ClientSampleId :

IA4

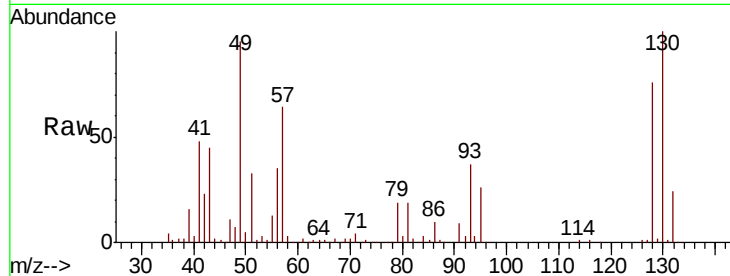
Tot Ion: 42 Resp: 99072

Ion Ratio Lower Upper

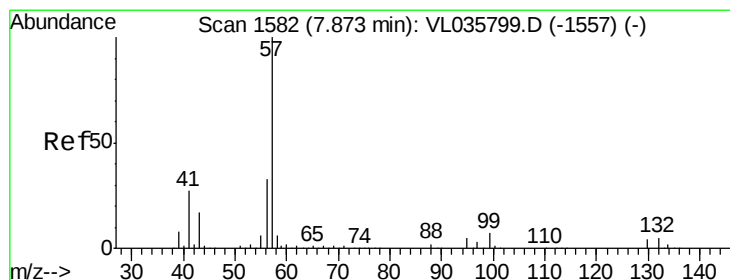
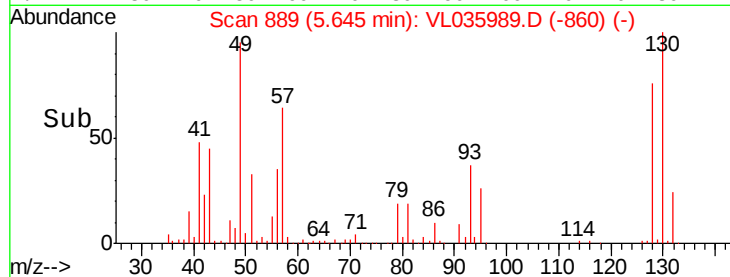
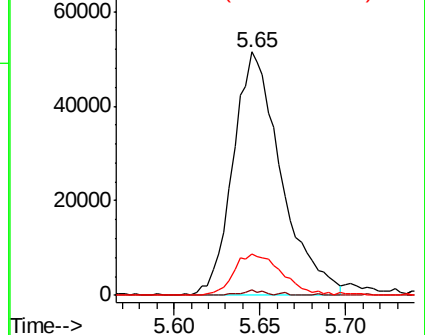
42 100

72 1.2 45.4 68.0#

71 17.7 43.4 65.2#



Abundance Ion 42.10 (41.80 to 42.80): VL0
Ion 72.10 (71.80 to 72.80): VL0
Ion 71.10 (70.80 to 71.80): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.110 ppbv

RT: 7.83 min Scan# 1568

Delta R.T. -0.05 min

Lab File: VL035989.D

Acq: 19 Nov 2020 1:24

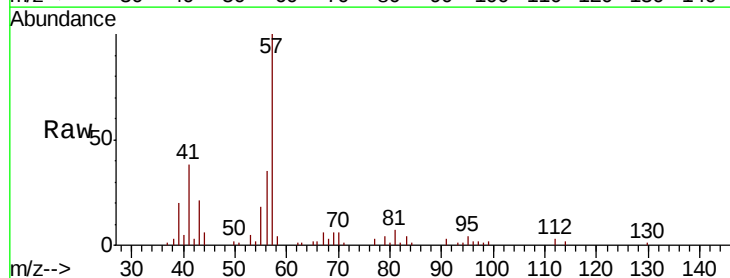
Tgt Ion: 57 Resp: 41429

Ion Ratio Lower Upper

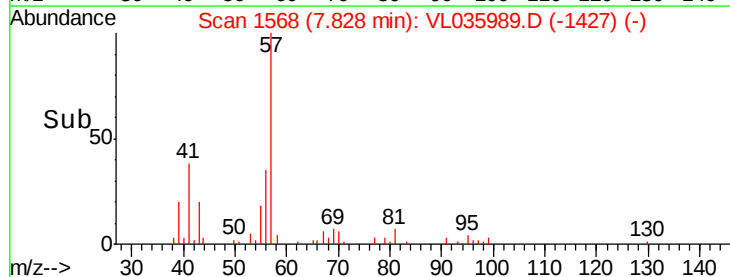
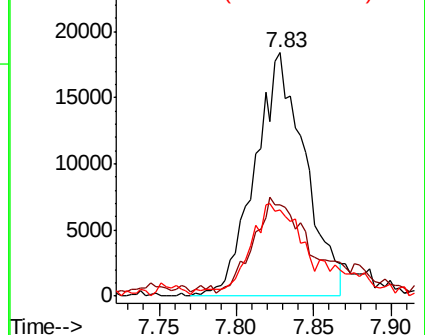
57 100

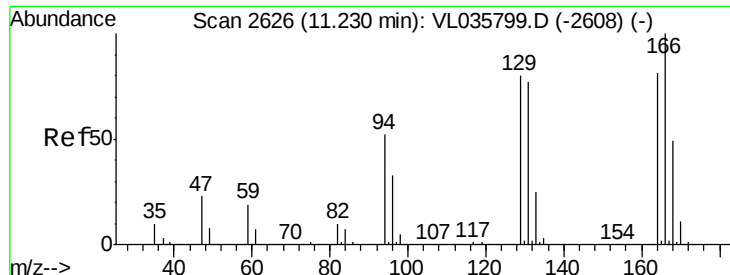
41 49.7 21.0 31.4#

56 50.2 25.4 38.0#



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





#52

Tetrachloroethene

Concen: 0.102 ppbv

RT: 11.18 min Scan# 2610

Delta R.T. -0.05 min

Lab File: VL035989.D

Acq: 19 Nov 2020 1:24

Instrument :

MSVOA_L

ClientSampleId :

IA4

Tot Ion:164 Resp: 13761

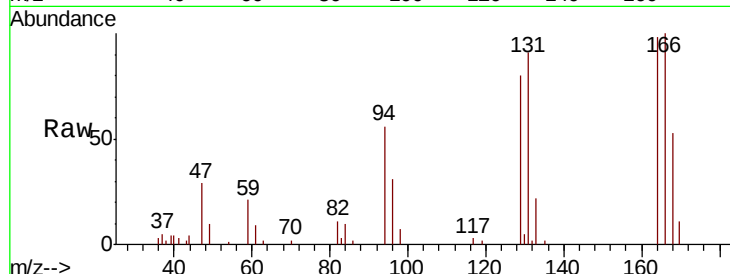
Ion Ratio Lower Upper

164 100

166 102.1 99.3 148.9

129 81.6 79.3 118.9

131 92.8 76.5 114.7

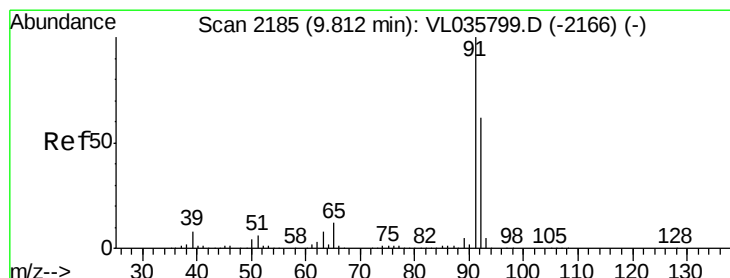
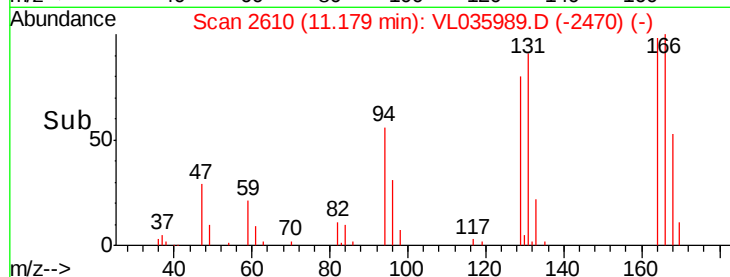
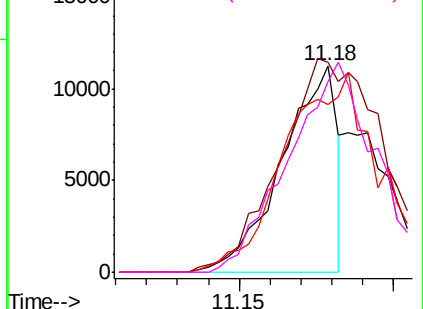


Abundance Ion 163.90 (163.60 to 164.60): V

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: 2.745 ppbv

RT: 9.76 min Scan# 2169

Delta R.T. -0.05 min

Lab File: VL035989.D

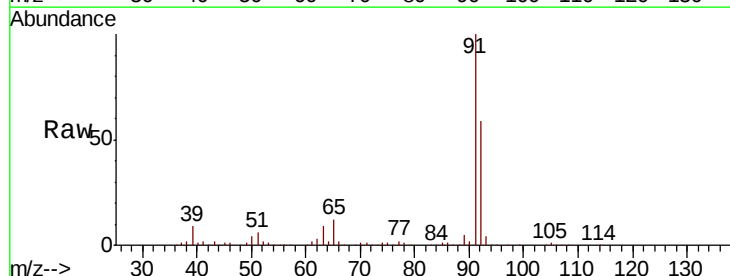
Acq: 19 Nov 2020 1:24

Tgt Ion: 91 Resp: 941443

Ion Ratio Lower Upper

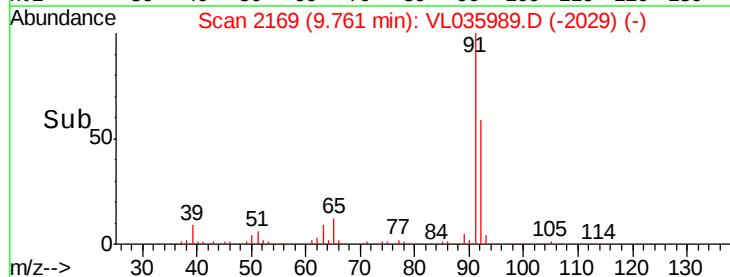
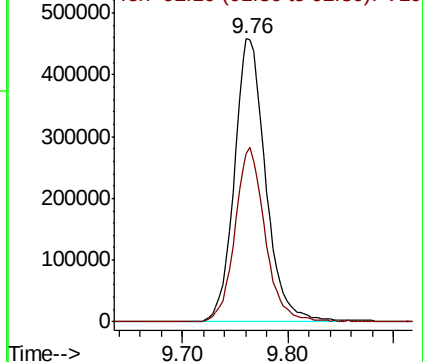
91 100

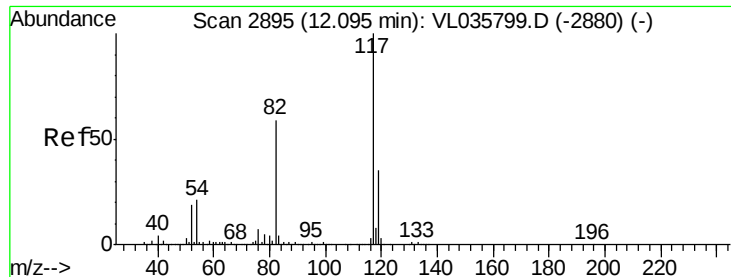
92 60.0 49.8 74.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

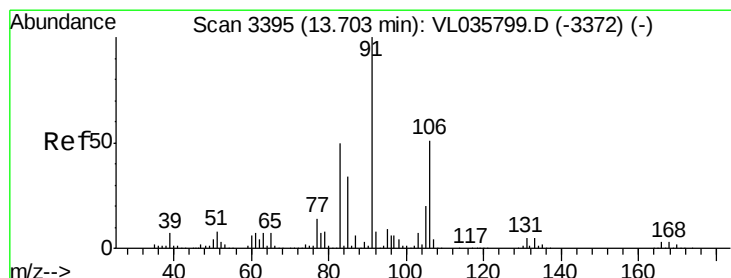
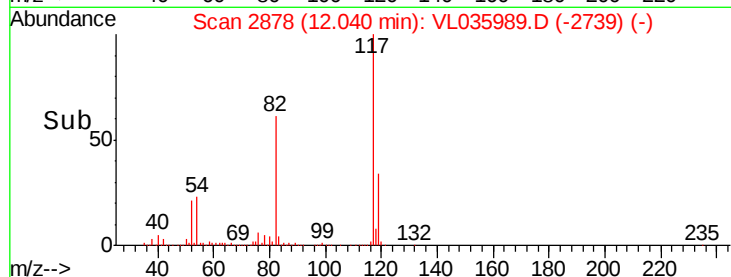
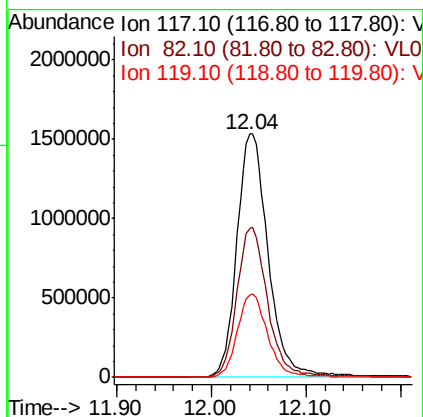
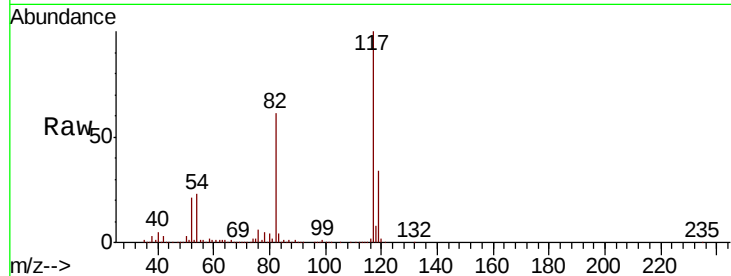




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.04 min Scan# 2878
Delta R.T. -0.05 min
Lab File: VL035989.D
Acq: 19 Nov 2020 1:24

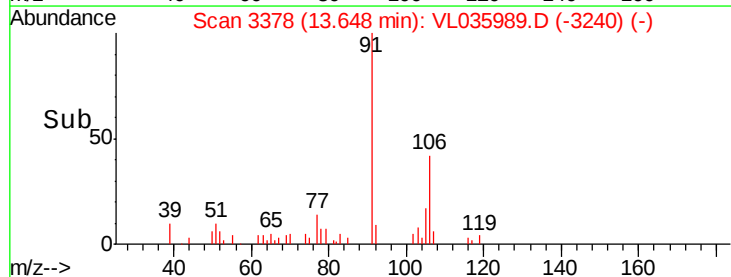
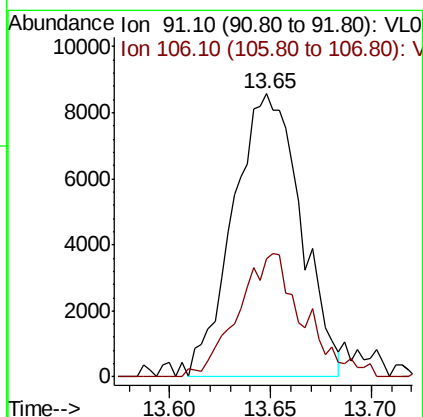
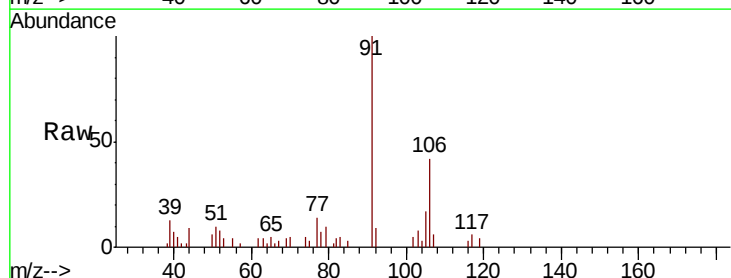
Instrument :
MSVOA_L
ClientSampleId :
IA4

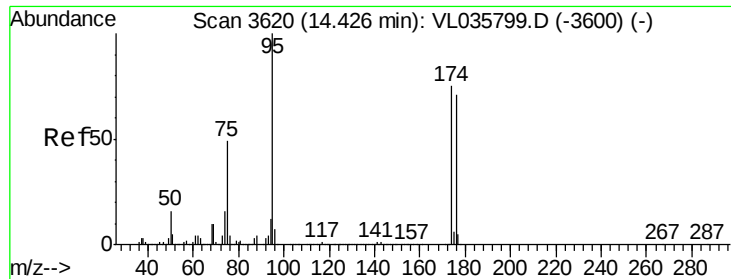
Tot Ion:117 Resp: 3514895
Ion Ratio Lower Upper
117 100
82 61.7 50.6 76.0
119 34.2 52.6 78.8#



#60
o-Xylene
Concen: 0.057 ppbv
RT: 13.65 min Scan# 3378
Delta R.T. -0.05 min
Lab File: VL035989.D
Acq: 19 Nov 2020 1:24

Tgt Ion: 91 Resp: 20075
Ion Ratio Lower Upper
91 100
106 42.1 24.8 74.4





#68

1-Bromo-4-Fluorobenzene

Concen: 10.594 ppbv

RT: 14.37 min Scan# 3604

Delta R.T. -0.05 min

Lab File: VL035989.D

Acq: 19 Nov 2020 1:24

Instrument :

MSVOA_L

ClientSampleId :

IA4

Tot Ion: 95 Resp: 2645494

Ion Ratio Lower Upper

95 100

174 70.3 59.8 89.6

175 4.9 4.3 6.5

