

Data File : VL034591.D
Acq On : 4 Feb 2020 22:32
Operator : SY/AP
Sample : L1358-01
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
1A-1

Quant Time: Feb 05 05:46:14 2020
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL013020AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LThu Jan 30 17:16:44 2020
QLast Update : Thu Jan 30 17:16:44 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	903338	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	1859056	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.13	117	1798059	10.00	ppbv	0.01

System Monitoring Compounds
68) 1-Bromo-4-Fluorobenzene 14.46 95 1602571 10.55 ppbv 0.00
Spiked Amount 10.000 Range 65 - 135 Recovery = 105.50%

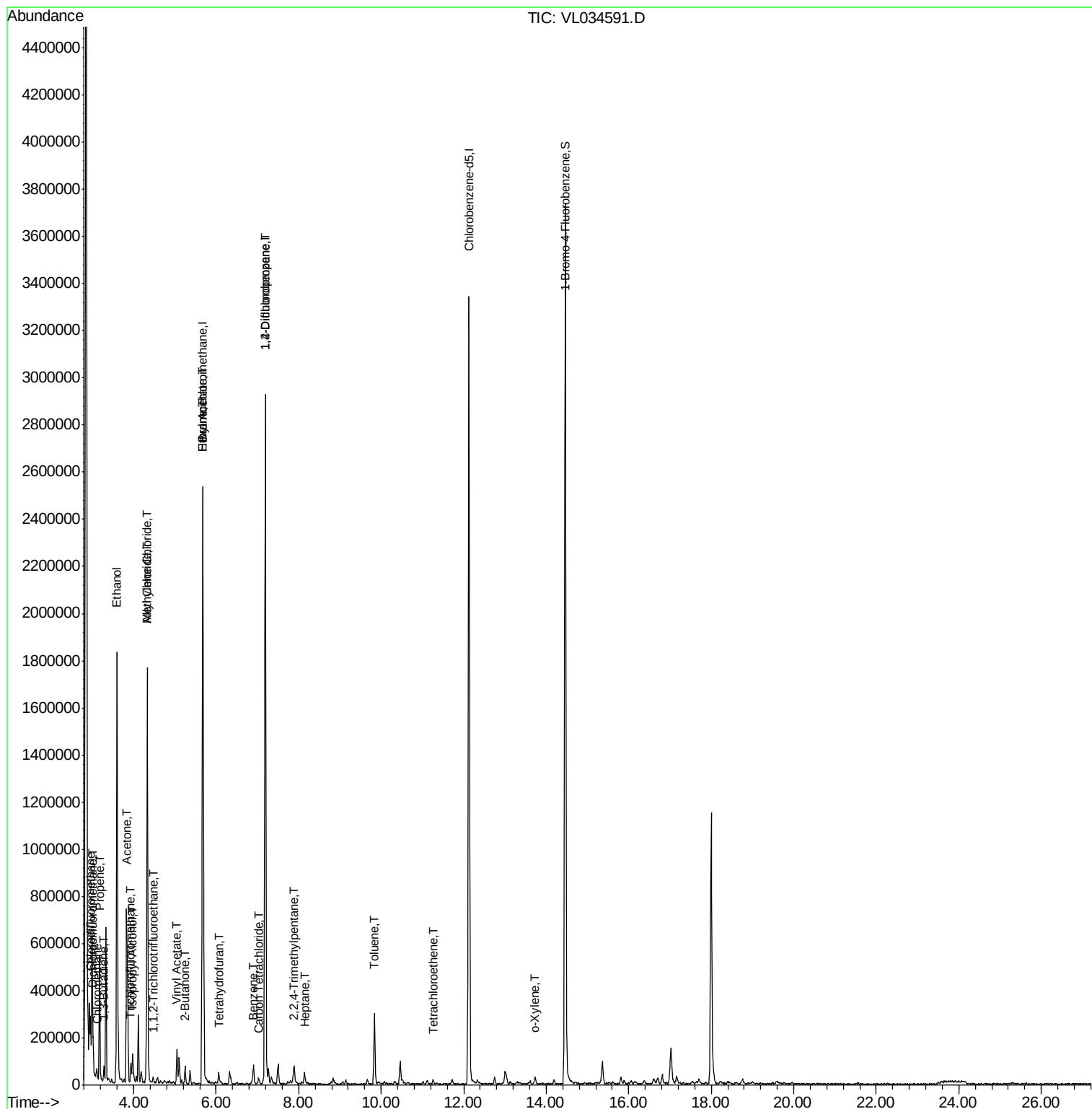
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.02	85	106586	0.536	ppbv #	84
3) Chlorodifluoromethane	2.95	51	303145	2.777	ppbv #	78
4) Chloromethane	3.11	50	25000	0.374	ppbv	96
9) Propene	3.18	41	121656	2.863	ppbv	97
10) Heptane	8.14	43	8340	0.078	ppbv #	26
11) Trichlorofluoromethane	3.93	101	47629	0.264	ppbv	98
12) 1,1,2-Trichlorotrifluoroet	4.47	101	8988	0.076	ppbv	89
13) Ethanol	3.60	45	1807274	158.759	ppbv	99
15) Acetone	3.83	43	803294	6.051	ppbv	94
16) 1,3-Butadiene	3.28	39	10553	0.200	ppbv #	8
19) Isopropyl Alcohol	3.97	45	126371	1.631	ppbv #	90
20) Methylene Chloride	4.33	84	567102	11.218	ppbv	96
21) Allyl Chloride	4.33	41	27772	0.337	ppbv #	44
23) Vinyl Acetate	5.06	43	19079	0.126	ppbv #	1
25) Ethyl Acetate	5.68	43	354018	1.647	ppbv #	87
26) Hexane	5.68	57	338339	3.758	ppbv #	51
34) 2-Butanone	5.25	43	77894	0.577	ppbv	95
35) Carbon Tetrachloride	7.03	117	7574	0.043	ppbv #	91
36) Benzene	6.91	78	24162	0.146	ppbv	96
39) 1,2-Dichloropropane	7.19	63	558308	8.146	ppbv #	20
41) Tetrahydrofuran	6.06	42	6340	0.090	ppbv #	36
44) 2,2,4-Trimethylpentane	7.89	57	36665	0.122	ppbv #	29
52) Tetrachloroethene	11.26	164	1993	0.030	ppbv #	38
53) Toluene	9.83	91	180128	0.992	ppbv	100
60) o-Xylene	13.74	91	9477	0.044	ppbv #	36

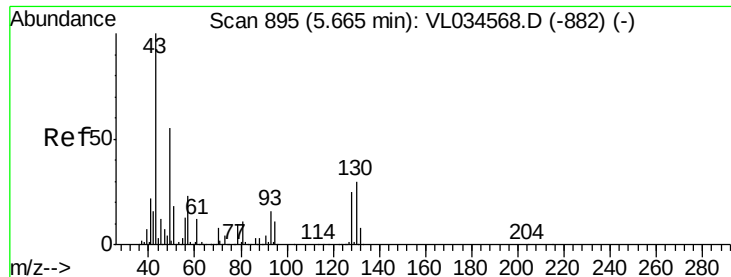
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 896

Delta R.T. 0.00 min

Lab File: VL034591.D

Acq: 4 Feb 2020 22:32

Instrument :

MSVOA_L

ClientSampleId :

1A-1

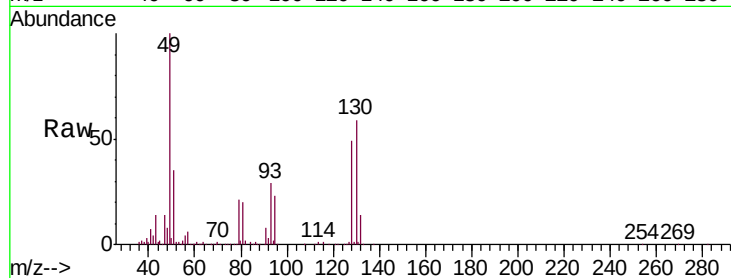
Tgt Ion: 49 Resp: 903338

Ion Ratio Lower Upper

49 100

128 46.1 22.7 68.1

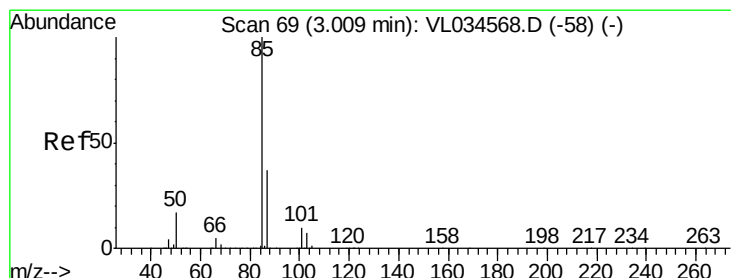
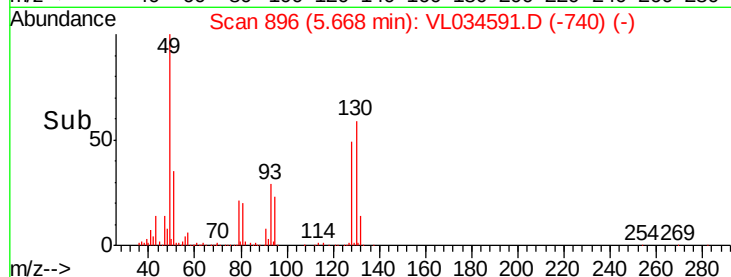
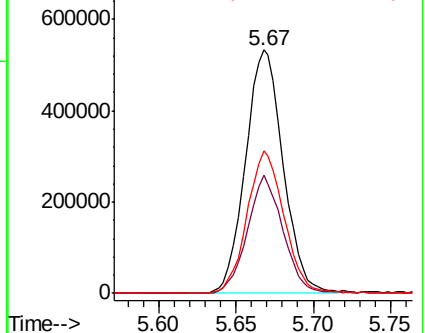
130 58.2 28.6 85.8



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.536 ppbv

RT: 3.02 min Scan# 71

Delta R.T. 0.01 min

Lab File: VL034591.D

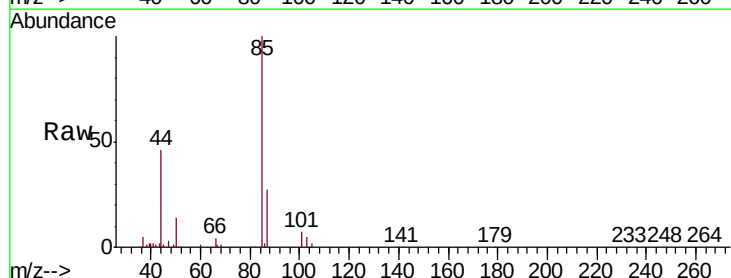
Acq: 4 Feb 2020 22:32

Tgt Ion: 85 Resp: 106586

Ion Ratio Lower Upper

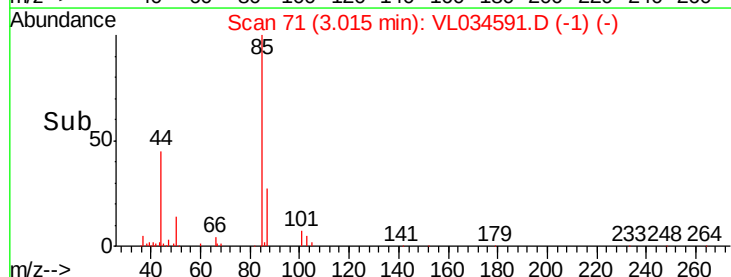
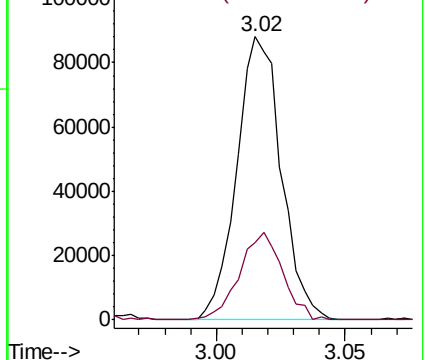
85 100

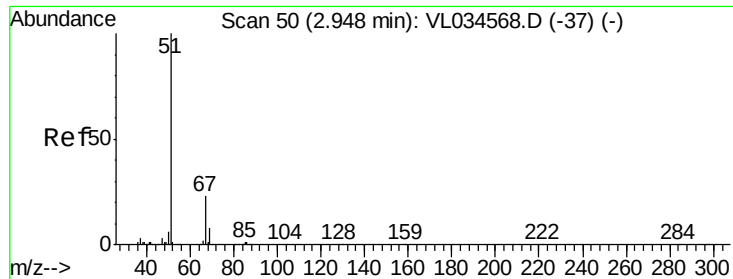
87 27.4 29.5 44.3#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 2.777 ppbv

RT: 2.95 min Scan# 52

Delta R.T. 0.01 min

Lab File: VL034591.D

Acq: 4 Feb 2020 22:32

Instrument :

MSVOA_L

ClientSampleId :

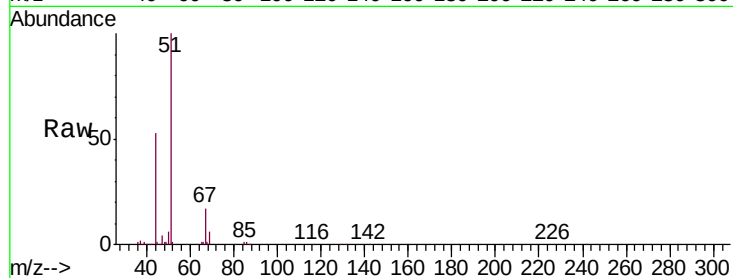
1A-1

Tgt Ion: 51 Resp: 303145

Ion Ratio Lower Upper

51 100

67 11.7 17.8 26.8#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

2.95

150000

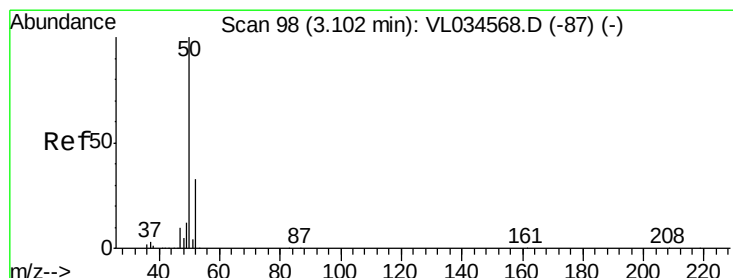
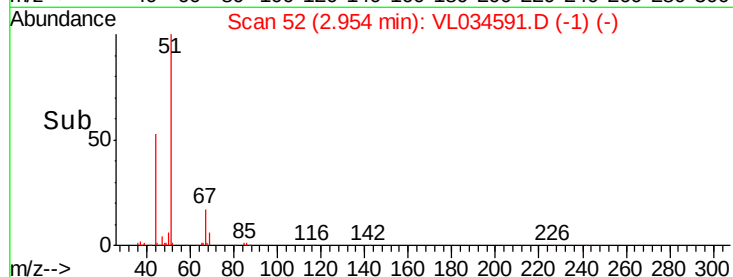
100000

50000

0

Time-->

2.90 3.00 3.10



#4

Chloromethane

Concen: 0.374 ppbv

RT: 3.11 min Scan# 100

Delta R.T. 0.01 min

Lab File: VL034591.D

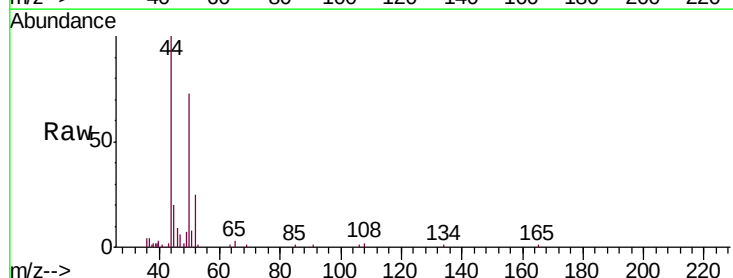
Acq: 4 Feb 2020 22:32

Tgt Ion: 50 Resp: 25000

Ion Ratio Lower Upper

50 100

52 31.1 26.6 39.8



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0

3.11

20000

15000

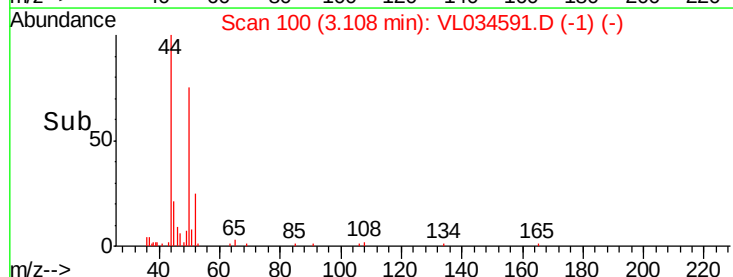
10000

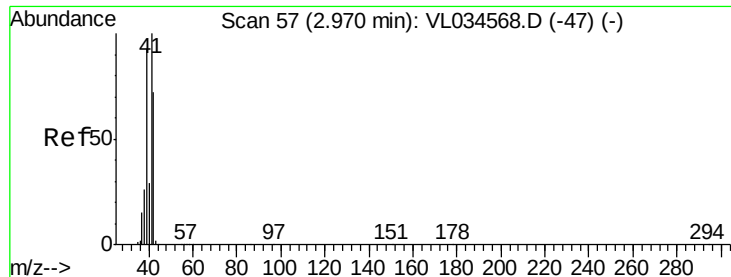
5000

0

Time-->

3.05 3.10 3.15





#9

Propene

Concen: 2.863 ppbv

RT: 3.18 min Scan# 121

Delta R.T. 0.21 min

Lab File: VL034591.D

Acq: 4 Feb 2020 22:32

Instrument :

MSVOA_L

ClientSampleId :

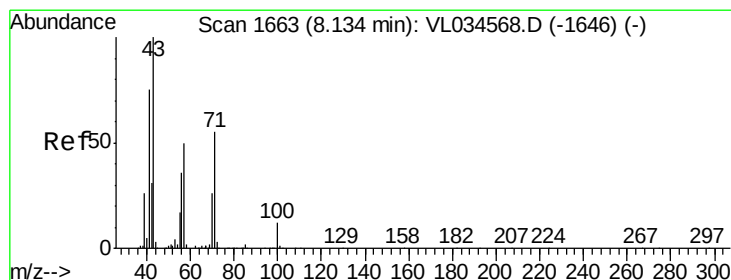
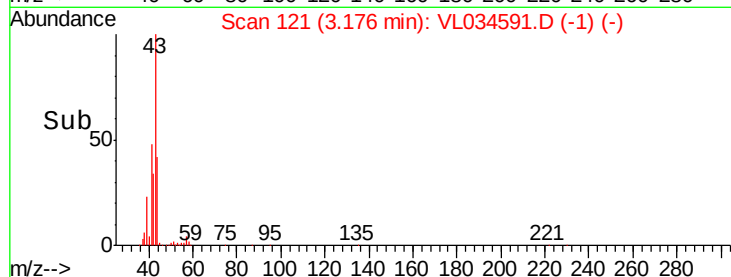
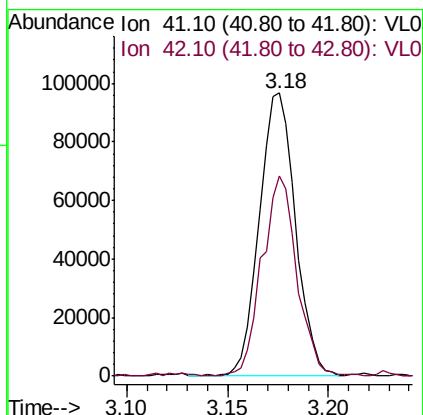
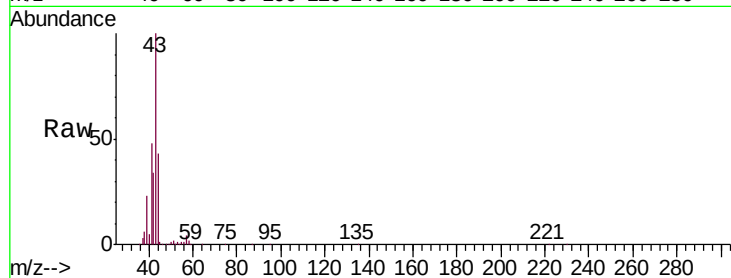
1A-1

Tgt Ion: 41 Resp: 121656

Ion Ratio Lower Upper

41 100

42 68.7 57.0 85.4



#10

Heptane

Concen: 0.078 ppbv

RT: 8.14 min Scan# 1666

Delta R.T. 0.01 min

Lab File: VL034591.D

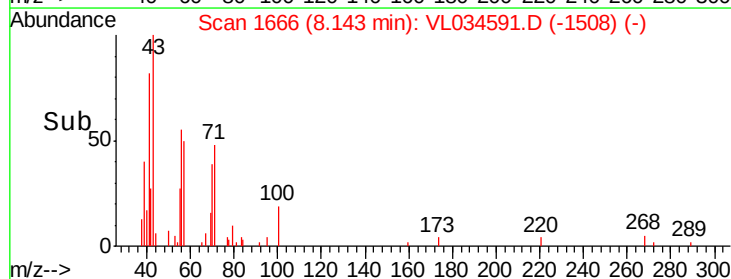
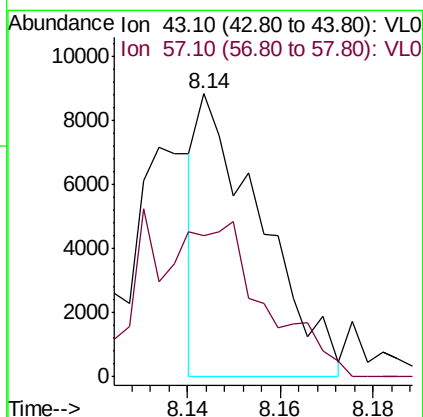
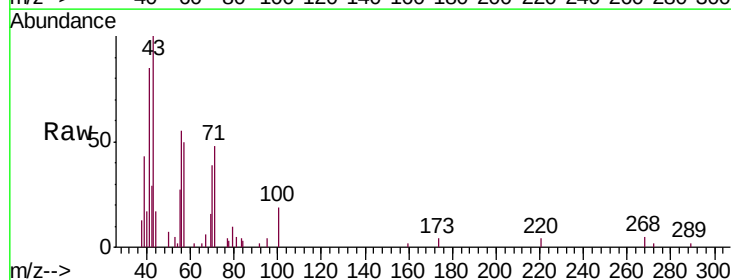
Acq: 4 Feb 2020 22:32

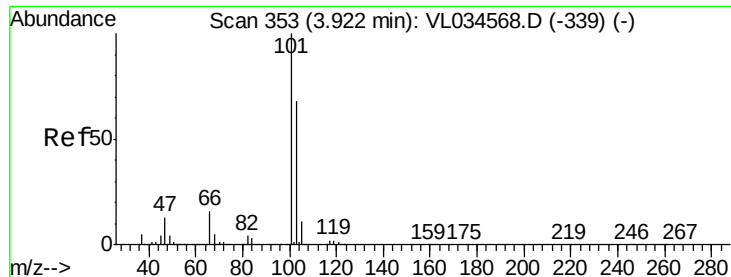
Tgt Ion: 43 Resp: 8340

Ion Ratio Lower Upper

43 100

57 0.0 41.2 61.8#





#11

Trichlorofluoromethane

Concen: 0.264 ppbv

RT: 3.93 min Scan# 356

Delta R.T. 0.01 min

Lab File: VL034591.D

Acq: 4 Feb 2020 22:32

Instrument :

MSVOA_L

ClientSampleId :

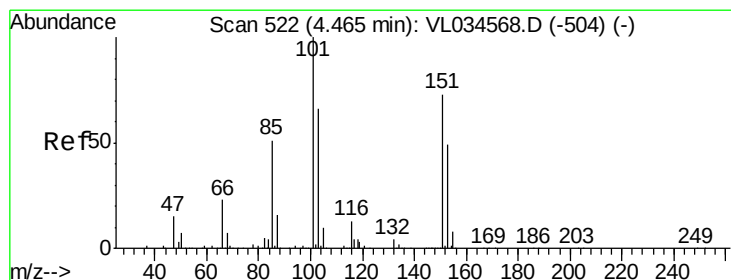
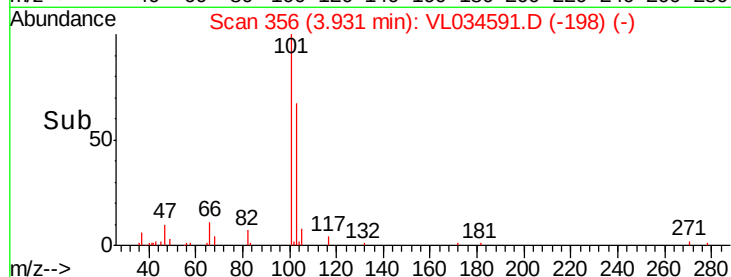
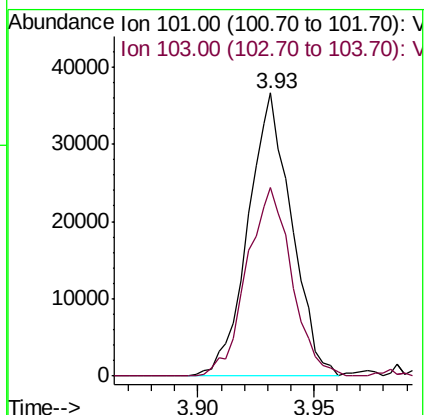
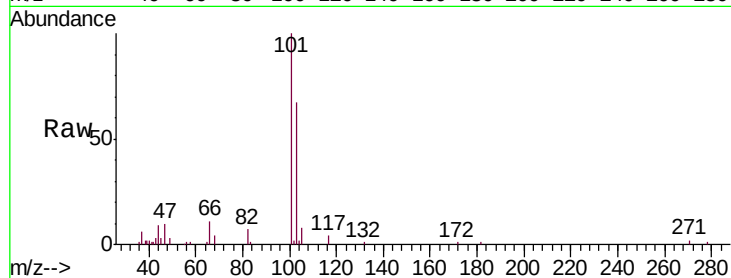
1A-1

Tgt Ion:101 Resp: 47629

Ion Ratio Lower Upper

101 100

103 66.8 54.4 81.6



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.076 ppbv

RT: 4.47 min Scan# 525

Delta R.T. 0.01 min

Lab File: VL034591.D

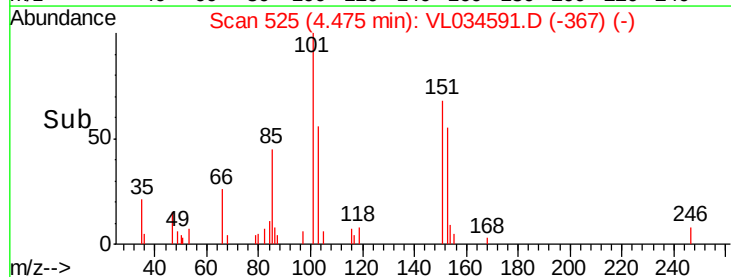
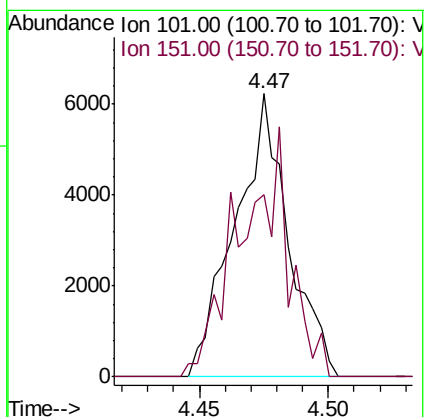
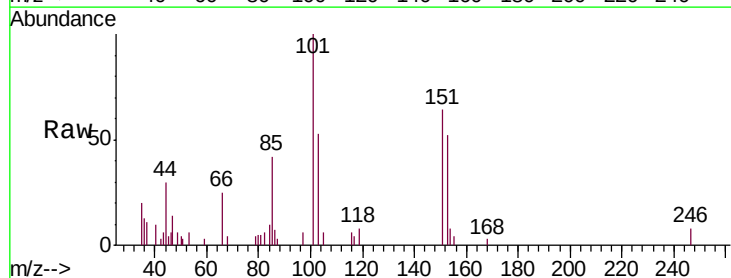
Acq: 4 Feb 2020 22:32

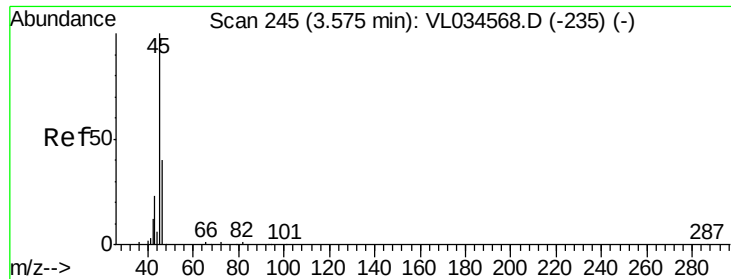
Tgt Ion:101 Resp: 8988

Ion Ratio Lower Upper

101 100

151 80.8 57.0 85.6

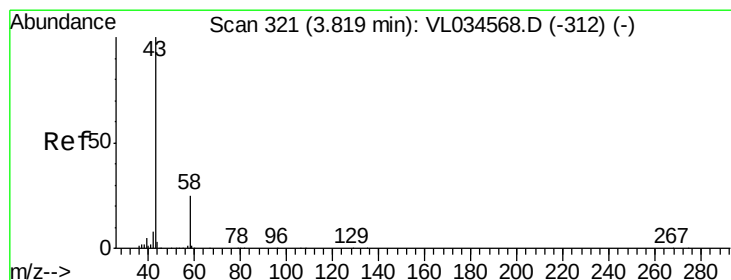
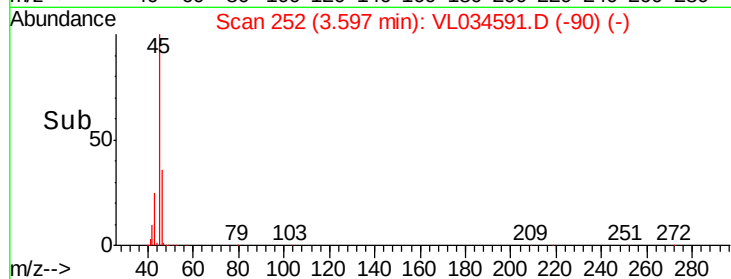
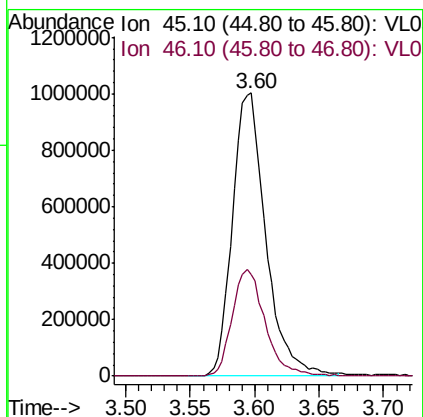
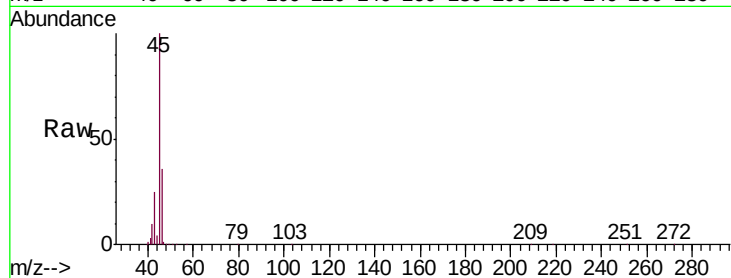




#13
Ethanol
Concen: 158.759 ppbv
RT: 3.60 min Scan# 252
Delta R.T. 0.02 min
Lab File: VL034591.D
Acq: 4 Feb 2020 22:32

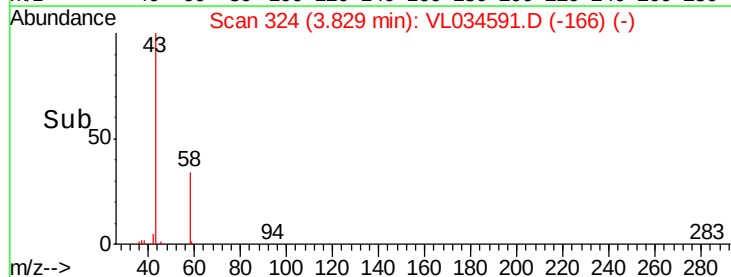
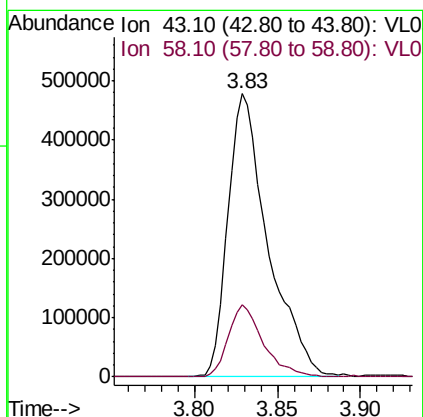
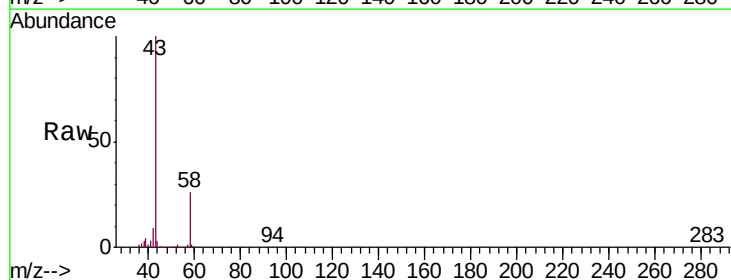
Instrument :
MSVOA_L
ClientSampleId :
1A-1

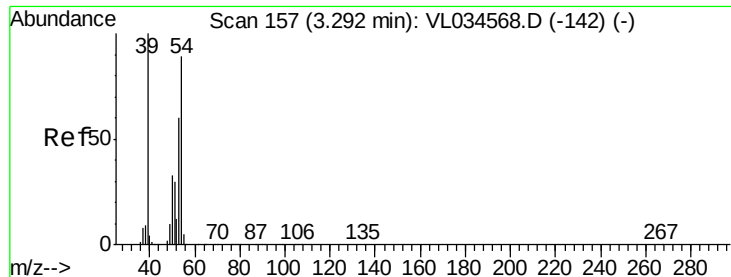
Tgt Ion: 45 Resp: 1807274
Ion Ratio Lower Upper
45 100
46 37.5 14.8 59.2



#15
Acetone
Concen: 6.051 ppbv
RT: 3.83 min Scan# 324
Delta R.T. 0.01 min
Lab File: VL034591.D
Acq: 4 Feb 2020 22:32

Tgt Ion: 43 Resp: 803294
Ion Ratio Lower Upper
43 100
58 22.4 20.3 30.5

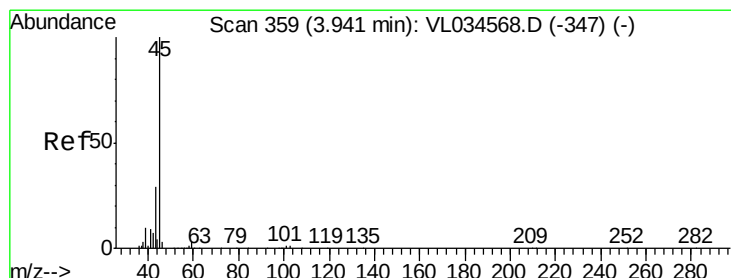
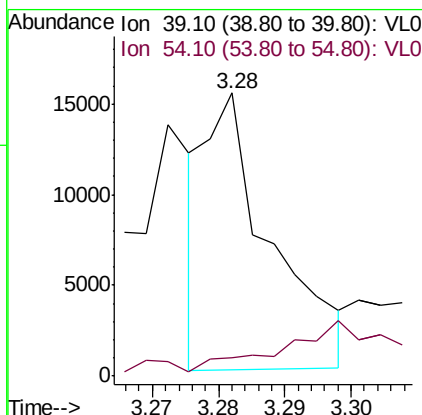
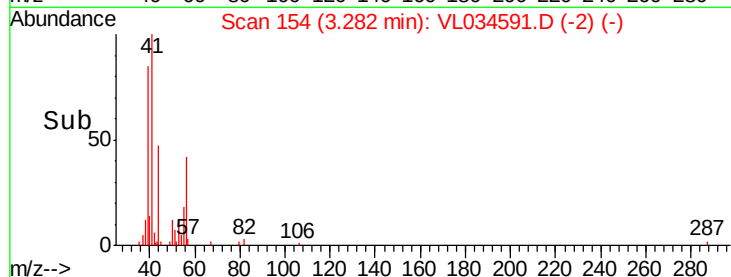
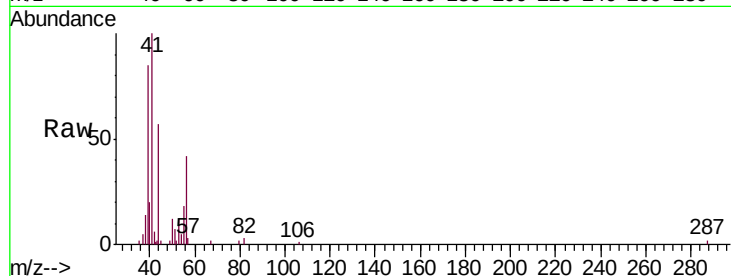




#16
1,3-Butadiene
Concen: 0.200 ppbv
RT: 3.28 min Scan# 154
Delta R.T. -0.01 min
Lab File: VL034591.D
Acq: 4 Feb 2020 22:32

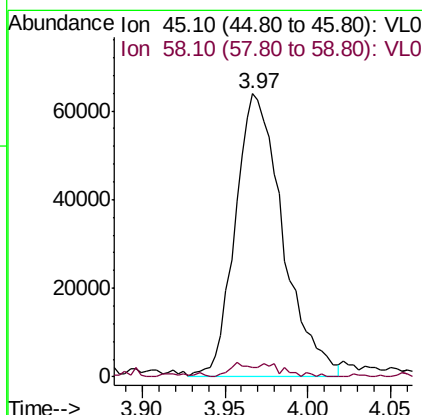
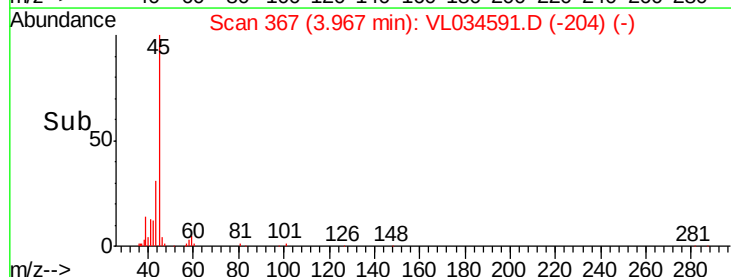
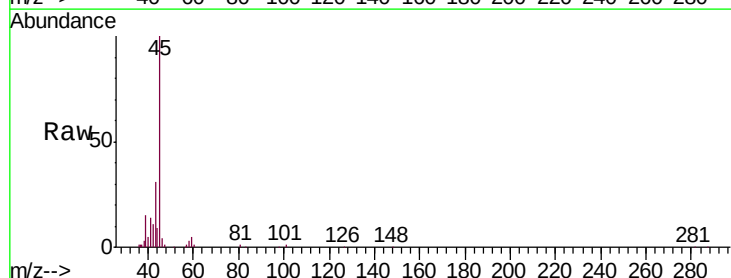
Instrument :
MSVOA_L
ClientSampleId :
1A-1

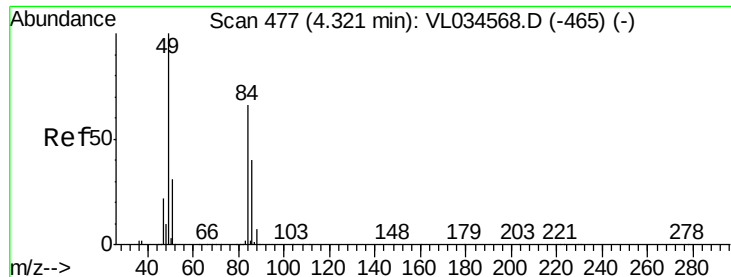
Tgt Ion: 39 Resp: 10553
Ion Ratio Lower Upper
39 100
54 0.0 66.7 100.1#



#19
Isopropyl Alcohol
Concen: 1.631 ppbv
RT: 3.97 min Scan# 367
Delta R.T. 0.03 min
Lab File: VL034591.D
Acq: 4 Feb 2020 22:32

Tgt Ion: 45 Resp: 126371
Ion Ratio Lower Upper
45 100
58 5.5 1.7 2.5#

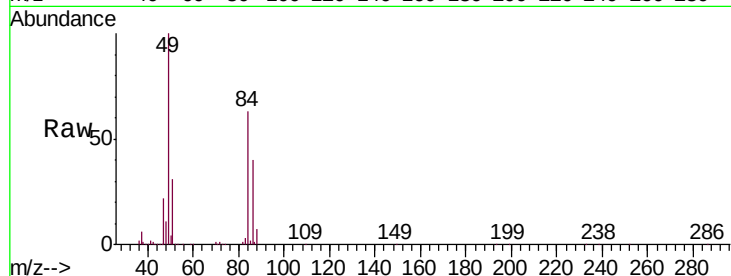




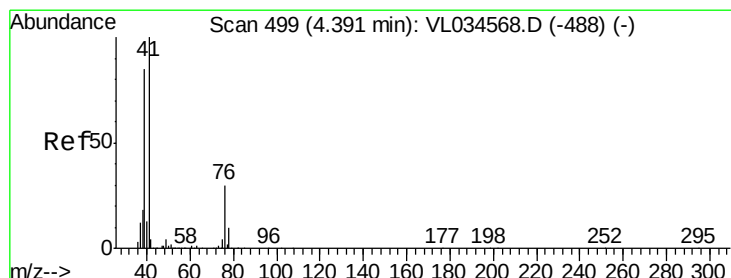
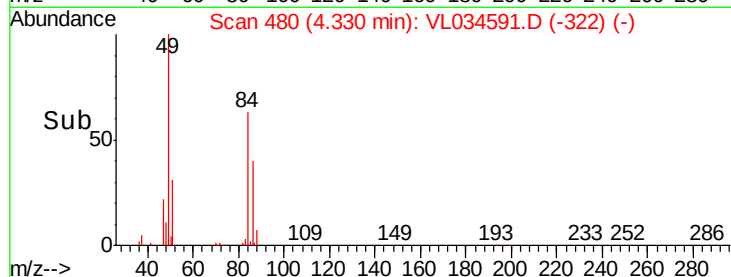
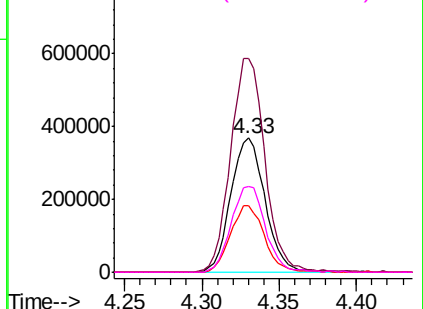
#20
Methylene Chloride
Concen: 11.218 ppbv
RT: 4.33 min Scan# 480
Delta R.T. 0.01 min
Lab File: VL034591.D
Acq: 4 Feb 2020 22:32

Instrument :
MSVOA_L
ClientSampleId :
1A-1

Tgt Ion:	84	Resp:	567102
Ion	Ratio	Lower	Upper
84	100		
49	159.2	122.4	183.6
51	49.9	38.6	57.8
86	64.1	49.0	73.6

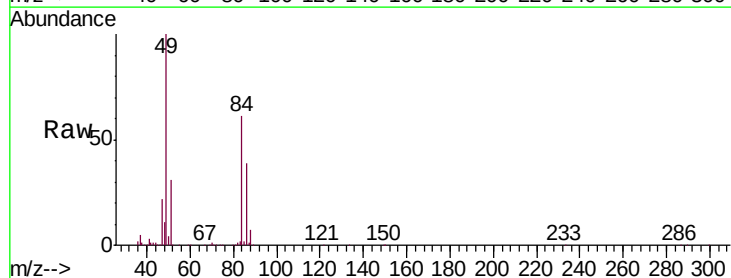


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

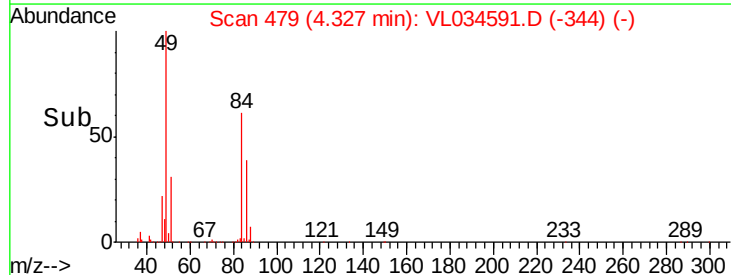
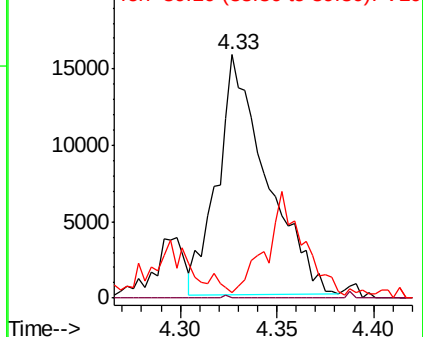


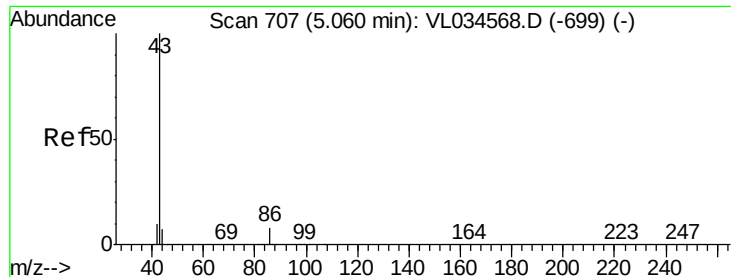
#21
Allyl Chloride
Concen: 0.337 ppbv
RT: 4.33 min Scan# 479
Delta R.T. -0.06 min
Lab File: VL034591.D
Acq: 4 Feb 2020 22:32

Tgt Ion:	41	Resp:	27772
Ion	Ratio	Lower	Upper
41	100		
76	0.0	24.2	36.2#
39	34.1	68.3	102.5#



Abundance Ion 41.10 (40.80 to 41.80): VL0
Ion 76.10 (75.80 to 76.80): VL0
Ion 39.10 (38.80 to 39.80): VL0

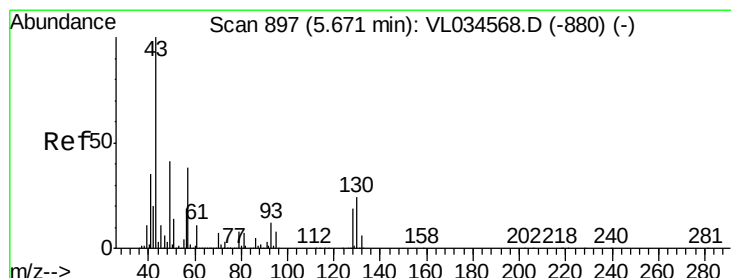
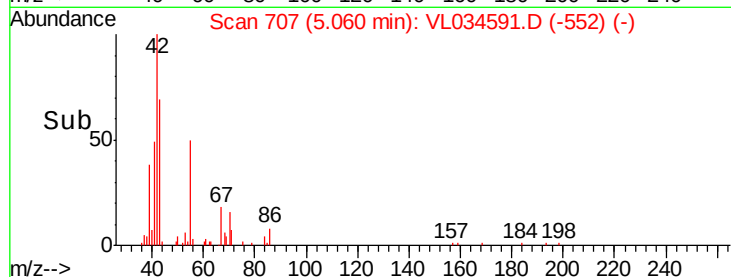
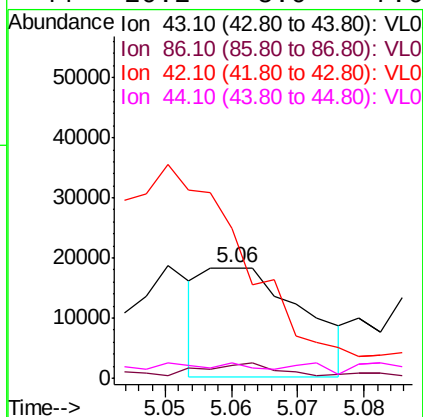
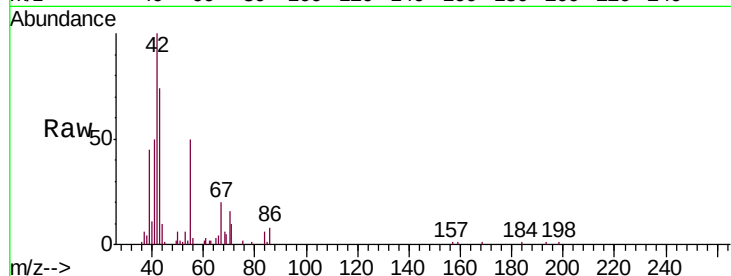




#23
 Vinyl Acetate
 Concen: 0.126 ppbv
 RT: 5.06 min Scan# 707
 Delta R.T. -0.00 min
 Lab File: VL034591.D
 Acq: 4 Feb 2020 22:32

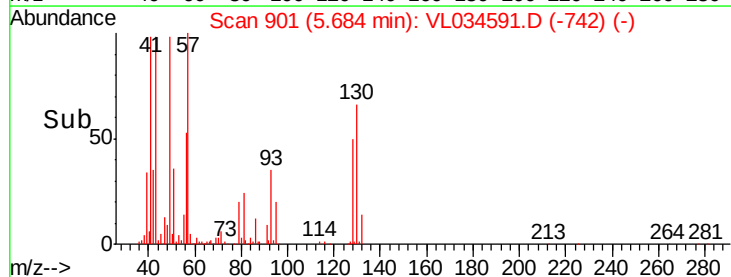
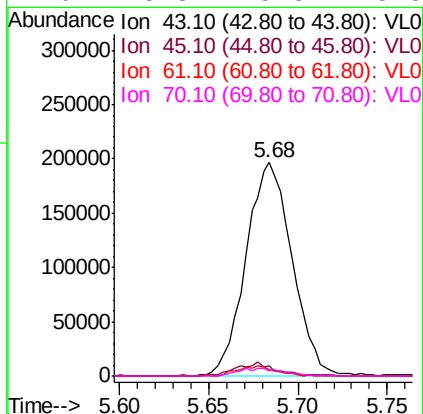
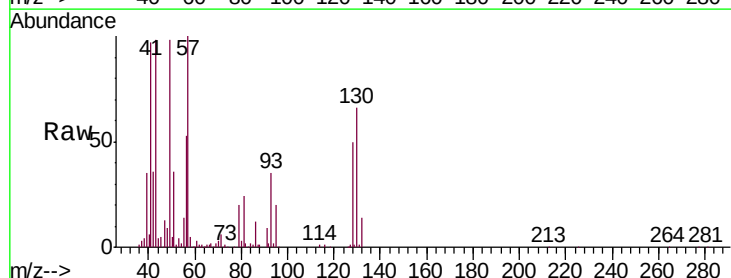
Instrument :
 MSVOA_L
 ClientSampled :
 1A-1

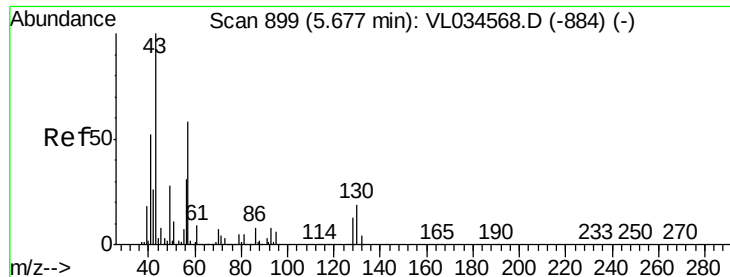
Tgt Ion:	43	Resp:	19079
Ion	Ratio	Lower	Upper
43	100		
86	14.1	5.9	8.9#
42	207.4	8.8	13.2#
44	20.2	5.0	7.6#



#25
 Ethyl Acetate
 Concen: 1.647 ppbv
 RT: 5.68 min Scan# 901
 Delta R.T. 0.01 min
 Lab File: VL034591.D
 Acq: 4 Feb 2020 22:32

Tgt Ion:	43	Resp:	354018
Ion	Ratio	Lower	Upper
43	100		
45	5.5	8.5	12.7#
61	4.0	7.8	11.6#
70	3.8	5.8	8.8#

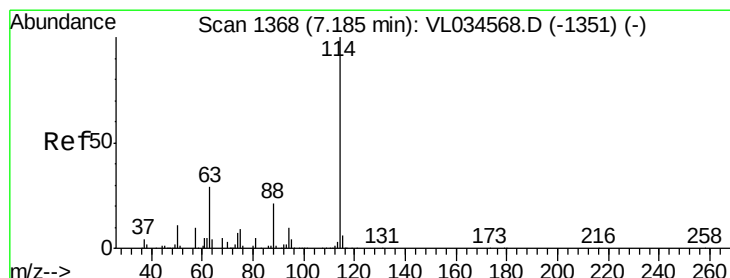
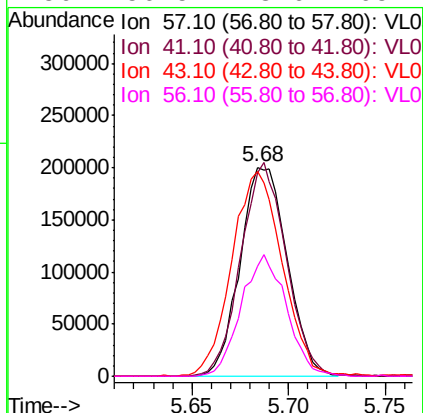
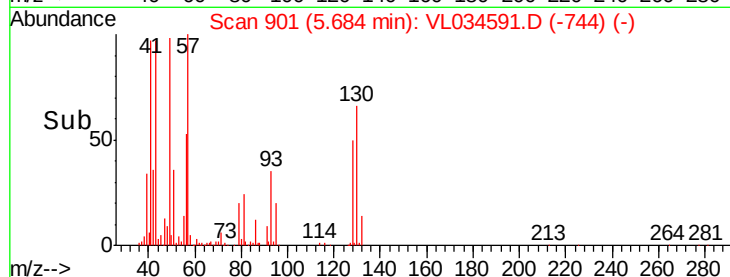
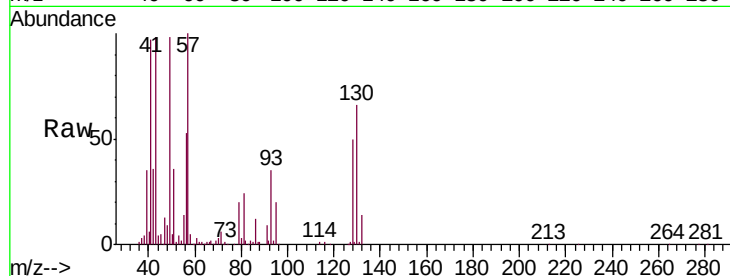




#26
Hexane
Concen: 3.758 ppbv
RT: 5.68 min Scan# 901
Delta R.T. 0.01 min
Lab File: VL034591.D
Acq: 4 Feb 2020 22:32

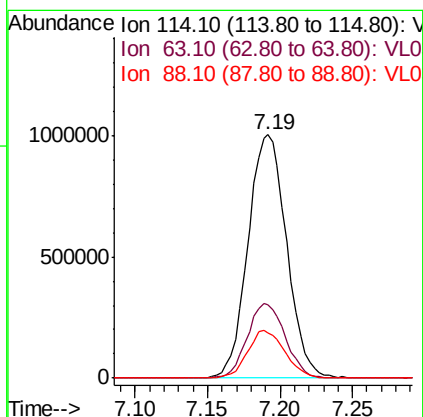
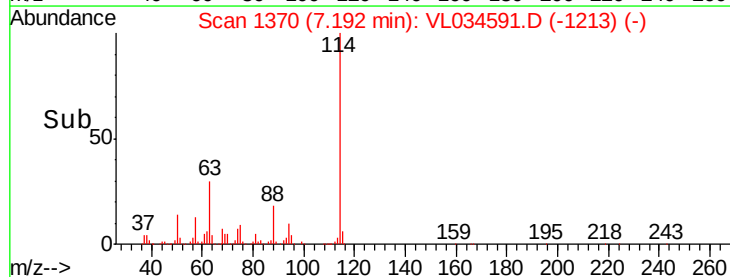
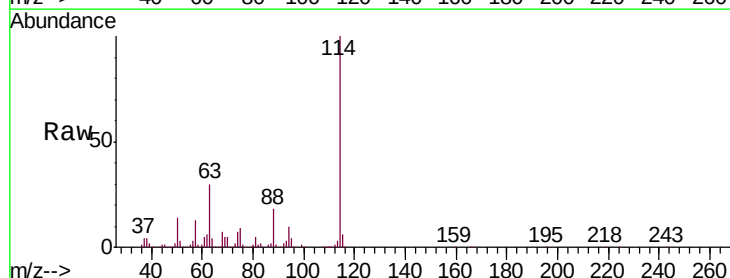
Instrument :
MSVOA_L
ClientSampleId :
1A-1

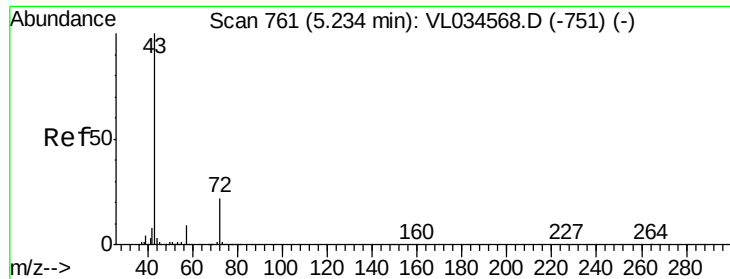
Tgt Ion: 57 Resp: 338339
Ion Ratio Lower Upper
57 100
41 99.3 76.2 114.2
43 106.3 189.9 284.9#
56 56.5 43.6 65.4



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.19 min Scan# 1370
Delta R.T. 0.01 min
Lab File: VL034591.D
Acq: 4 Feb 2020 22:32

Tgt Ion: 114 Resp: 1859056
Ion Ratio Lower Upper
114 100
63 30.1 24.1 36.1
88 19.0 15.9 23.9

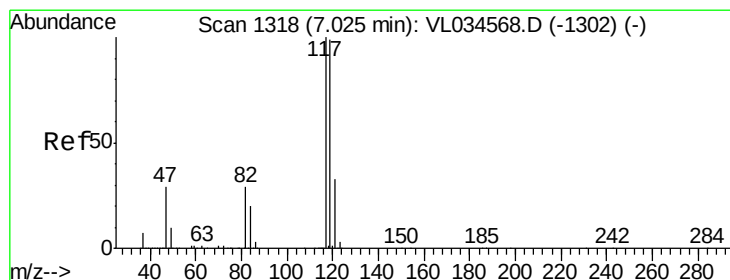
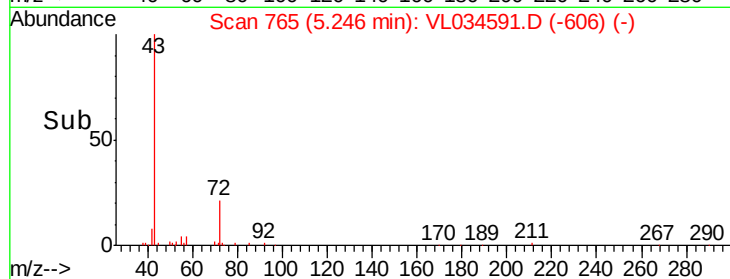
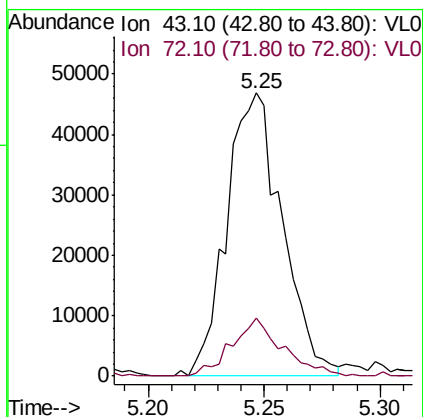
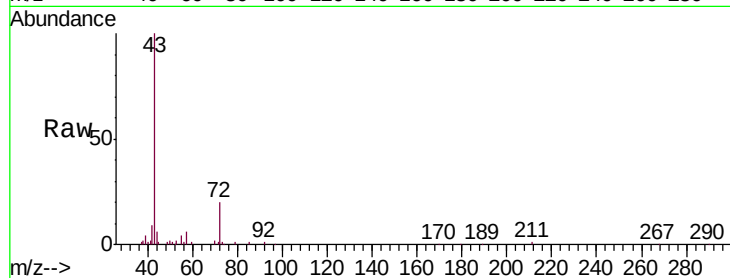




#34
 2-Butanone
 Concen: 0.577 ppbv
 RT: 5.25 min Scan# 765
 Delta R.T. 0.01 min
 Lab File: VL034591.D
 Acq: 4 Feb 2020 22:32

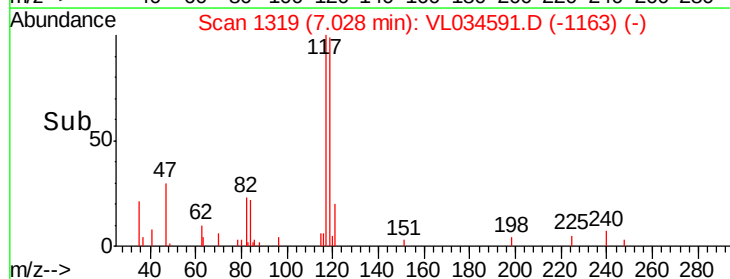
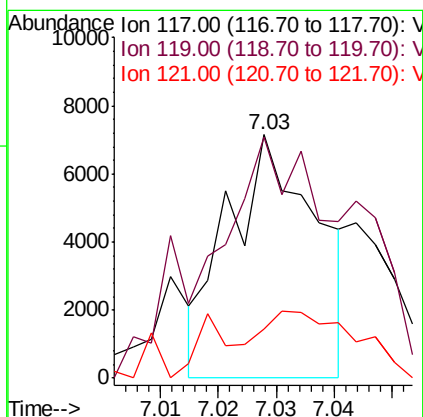
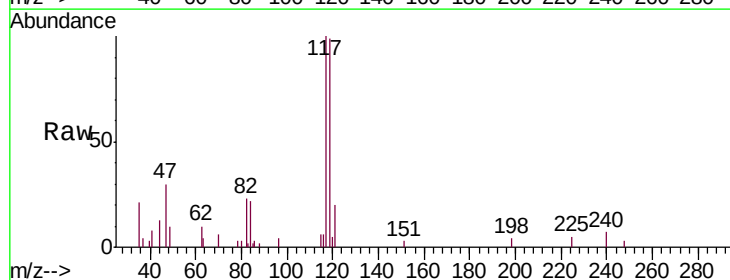
Instrument :
 MSVOA_L
 ClientSampled :
 1A-1

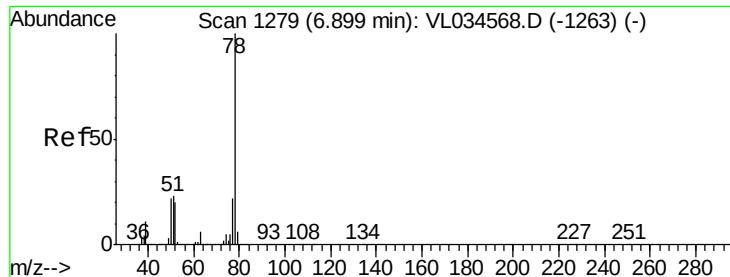
Tgt Ion: 43 Resp: 77894
 Ion Ratio Lower Upper
 43 100
 72 18.9 17.2 25.8



#35
 Carbon Tetrachloride
 Concen: 0.043 ppbv
 RT: 7.03 min Scan# 1319
 Delta R.T. 0.00 min
 Lab File: VL034591.D
 Acq: 4 Feb 2020 22:32

Tgt Ion: 117 Resp: 7574
 Ion Ratio Lower Upper
 117 100
 119 103.9 79.5 119.3
 121 20.3 26.2 39.2#





#36

Benzene

Concen: 0.146 ppbv

RT: 6.91 min Scan# 1281

Delta R.T. 0.01 min

Lab File: VL034591.D

Acq: 4 Feb 2020 22:32

Instrument :

MSVOA_L

ClientSampleId :

1A-1

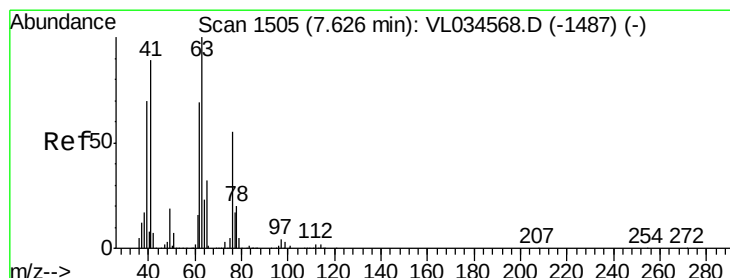
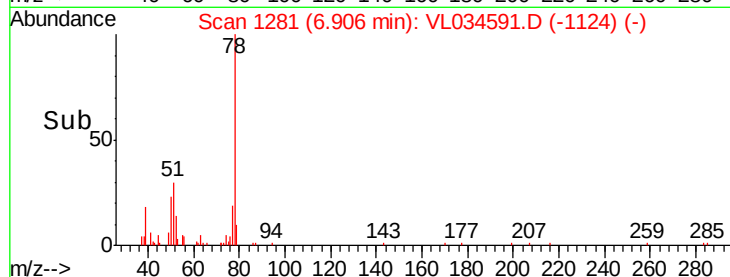
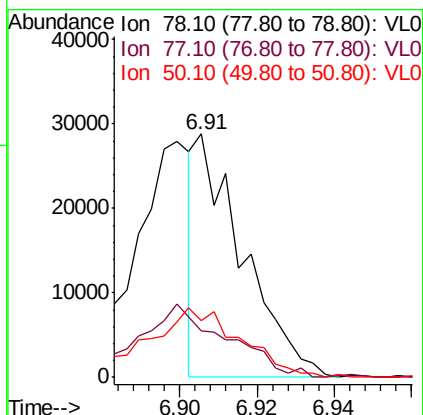
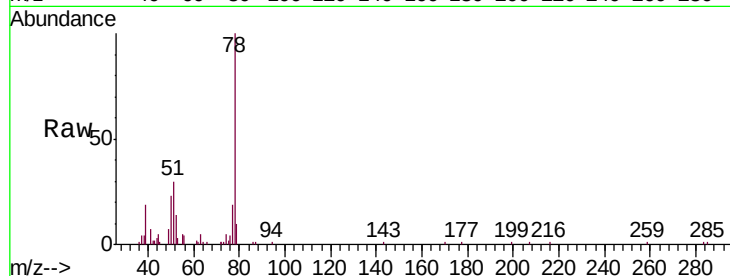
Tgt Ion: 78 Resp: 24162

Ion Ratio Lower Upper

78 100

77 18.2 17.3 25.9

50 22.1 17.4 26.2



#39

1,2-Dichloropropane

Concen: 8.146 ppbv

RT: 7.19 min Scan# 1369

Delta R.T. -0.44 min

Lab File: VL034591.D

Acq: 4 Feb 2020 22:32

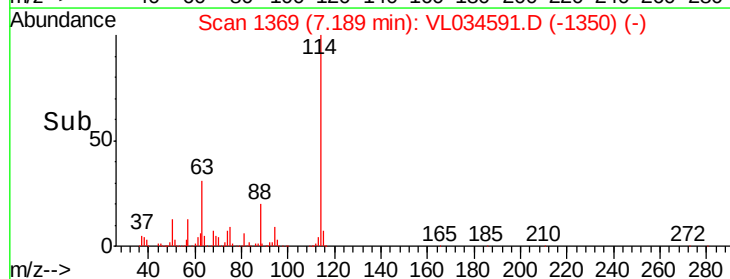
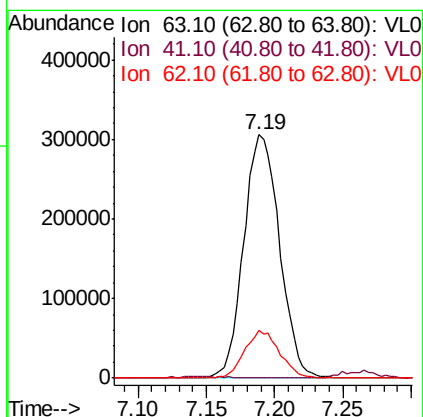
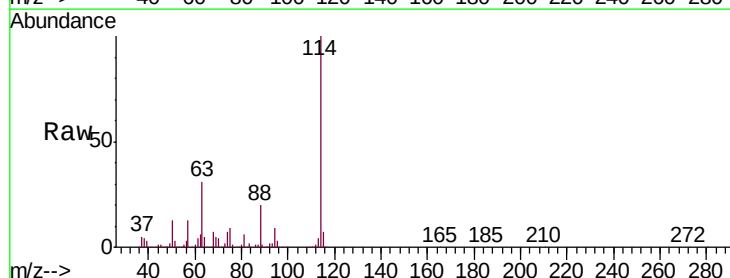
Tgt Ion: 63 Resp: 558308

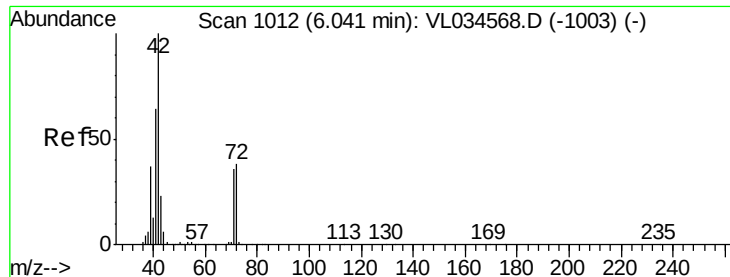
Ion Ratio Lower Upper

63 100

41 0.0 71.0 106.4#

62 19.6 55.4 83.0#





#41

Tetrahydrofuran

Concen: 0.090 ppbv

RT: 6.06 min Scan# 1017

Delta R.T. 0.02 min

Lab File: VL034591.D

Acq: 4 Feb 2020 22:32

Instrument :

MSVOA_L

ClientSampleId :

1A-1

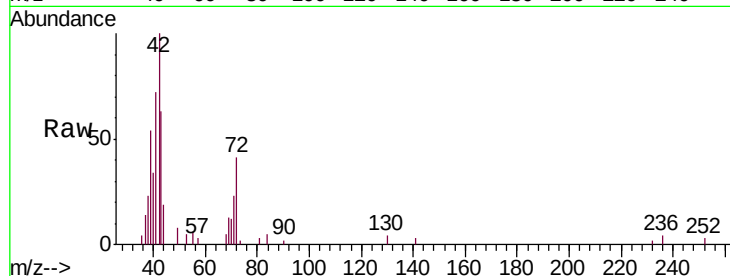
Tgt Ion: 42 Resp: 6340

Ion Ratio Lower Upper

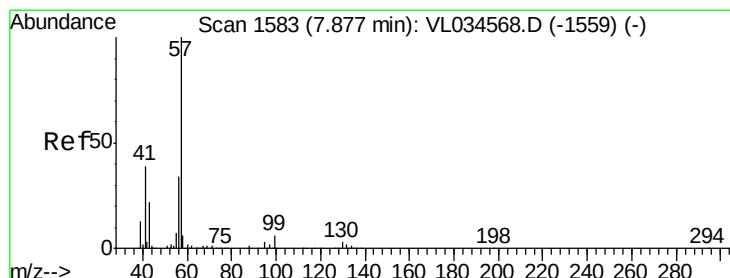
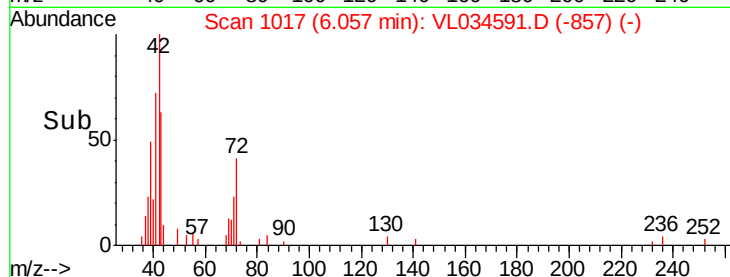
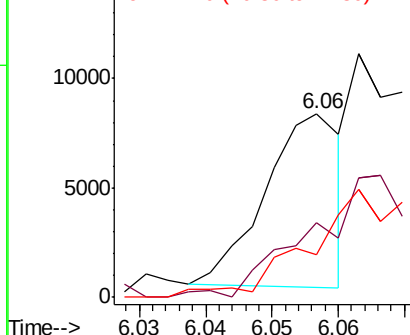
42 100

72 0.0 31.8 47.8#

71 0.0 30.2 45.4#



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: 0.122 ppbv

RT: 7.89 min Scan# 1587

Delta R.T. 0.01 min

Lab File: VL034591.D

Acq: 4 Feb 2020 22:32

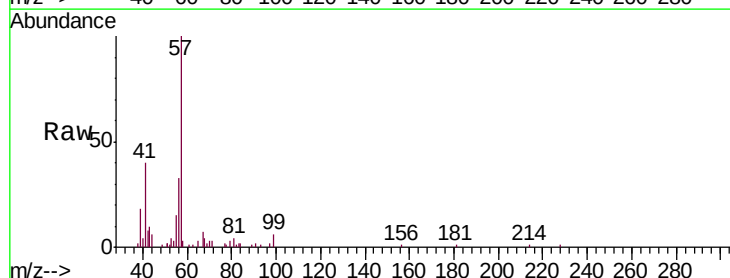
Tgt Ion: 57 Resp: 36665

Ion Ratio Lower Upper

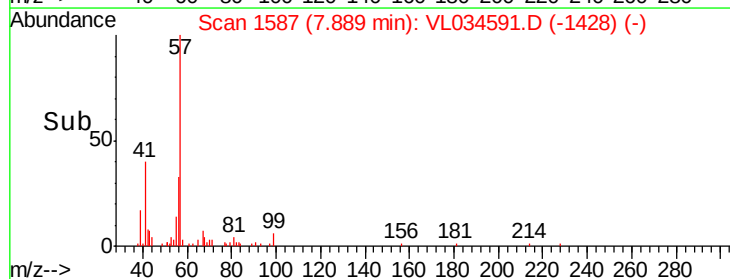
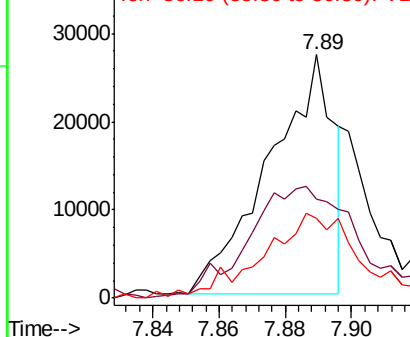
57 100

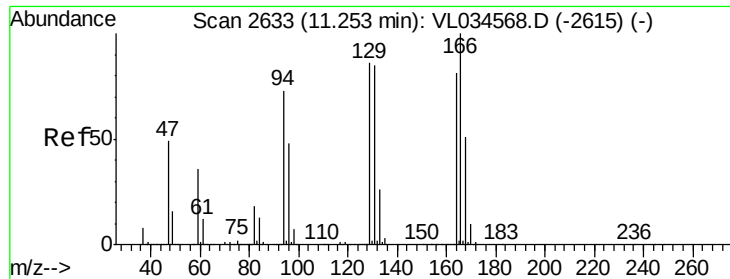
41 89.0 28.9 43.3#

56 59.4 25.5 38.3#



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: 0.030 ppbv

RT: 11.26 min Scan# 2636

Delta R.T. 0.01 min

Lab File: VL034591.D

Acq: 4 Feb 2020 22:32

Instrument :

MSVOA_L

ClientSampled :

1A-1

Tgt Ion:164 Resp: 1993

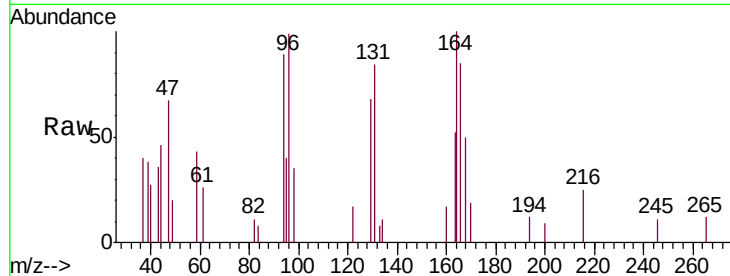
Ion Ratio Lower Upper

164 100

166 59.8 99.0 148.4#

129 17.7 85.3 127.9#

131 59.7 84.2 126.2#

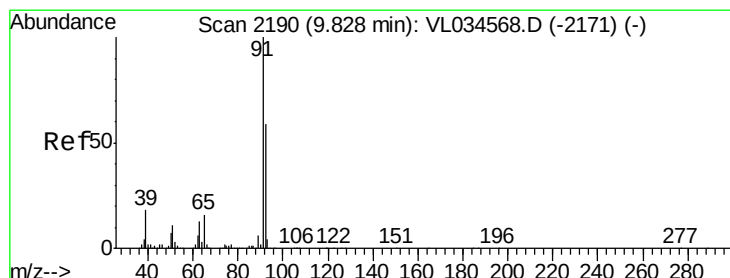
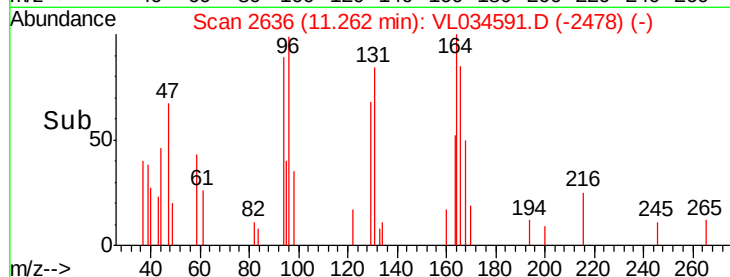
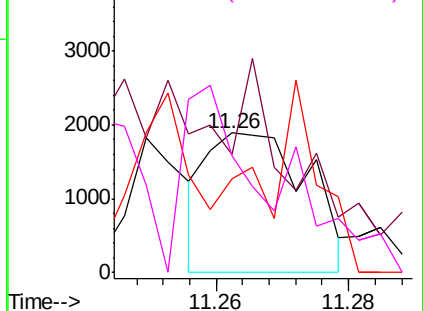


Abundance Ion 163.90 (163.60 to 164.60): V

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: 0.992 ppbv

RT: 9.83 min Scan# 2192

Delta R.T. 0.01 min

Lab File: VL034591.D

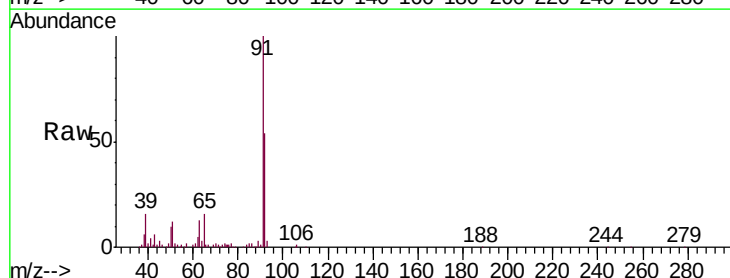
Acq: 4 Feb 2020 22:32

Tgt Ion: 91 Resp: 180128

Ion Ratio Lower Upper

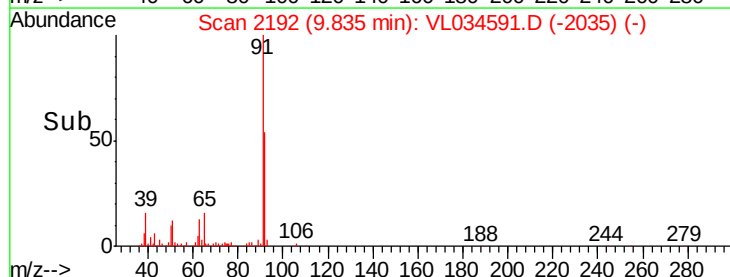
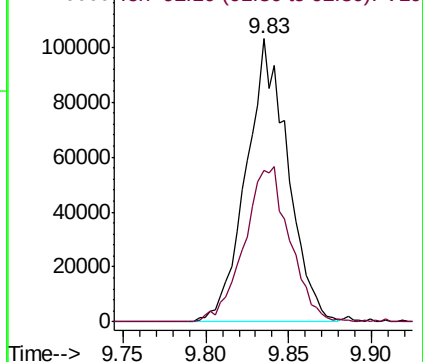
91 100

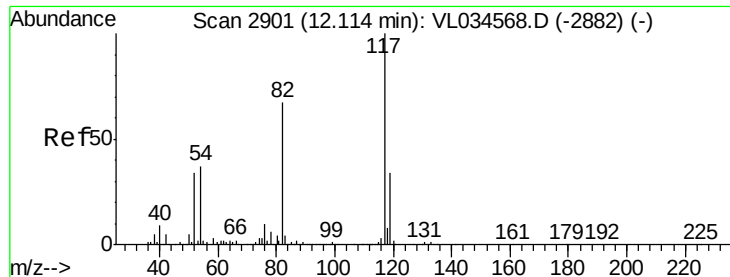
92 60.0 48.2 72.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

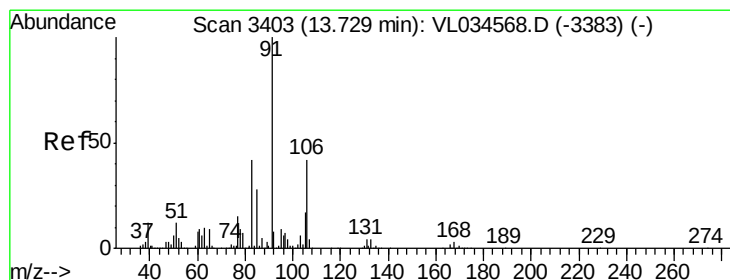
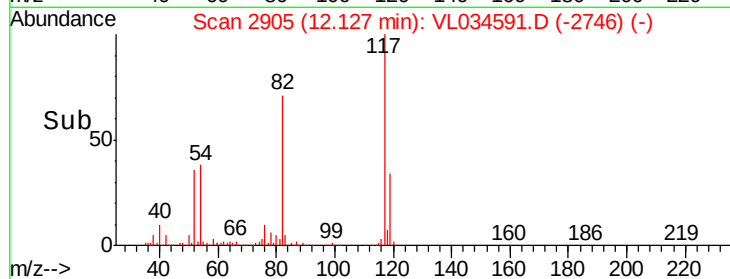
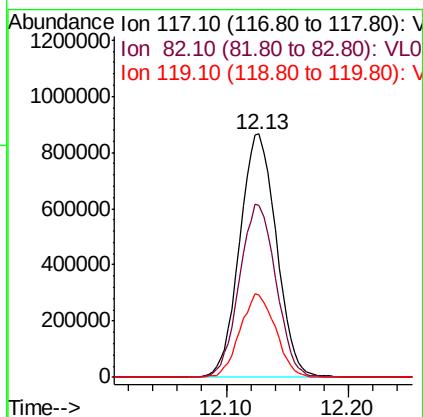
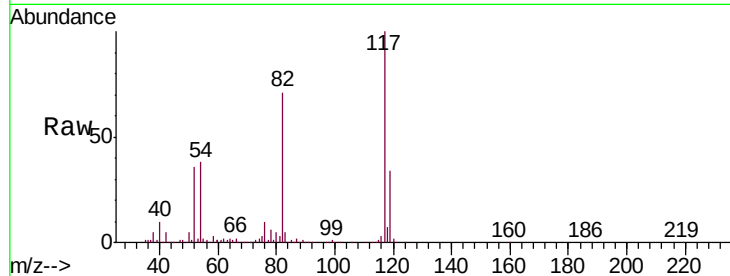




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.13 min Scan# 2905
Delta R.T. 0.01 min
Lab File: VL034591.D
Acq: 4 Feb 2020 22:32

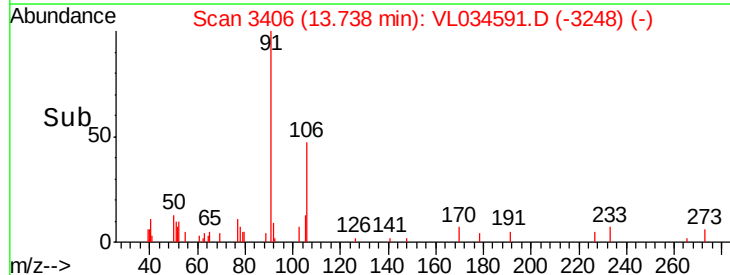
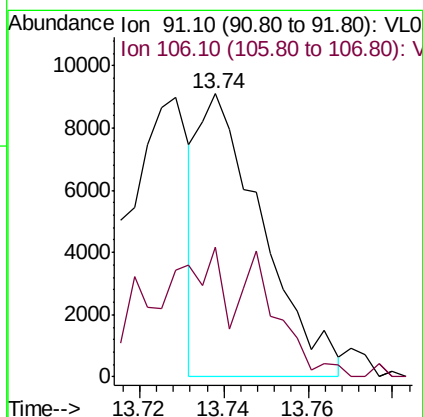
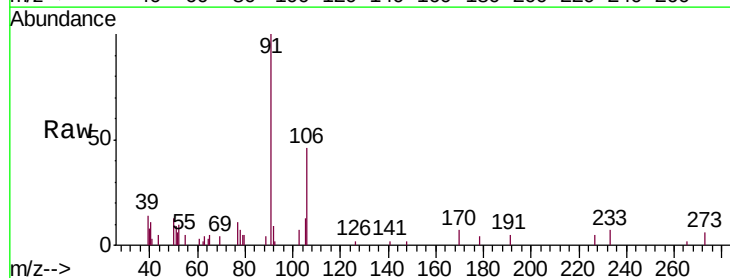
Instrument :
MSVOA_L
ClientSampleId :
1A-1

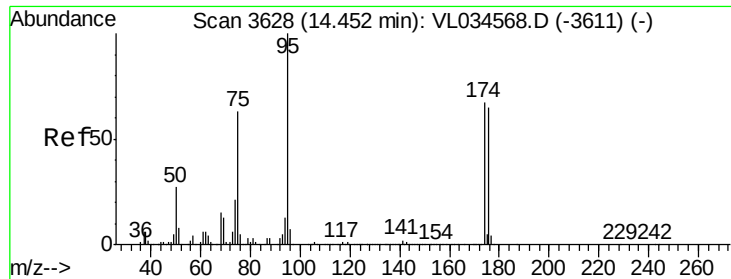
Tgt Ion: 117 Resp: 1798059
Ion Ratio Lower Upper
117 100
82 71.1 54.2 81.4
119 33.3 26.1 39.1



#60
o-Xylene
Concen: 0.044 ppbv
RT: 13.74 min Scan# 3406
Delta R.T. 0.01 min
Lab File: VL034591.D
Acq: 4 Feb 2020 22:32

Tgt Ion: 91 Resp: 9477
Ion Ratio Lower Upper
91 100
106 84.2 21.6 65.0#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.546 ppbv

RT: 14.46 min Scan# 3631

Delta R.T. 0.01 min

Lab File: VL034591.D

Acq: 4 Feb 2020 22:32

Instrument :

MSVOA_L

ClientSampleId :

1A-1

Tgt Ion: 95 Resp: 1602571

Ion Ratio Lower Upper

95 100

174 63.4 52.3 78.5

175 4.6 3.8 5.6

