

Data File : VL034707.D
Acq On : 27 Feb 2020 13:55
Operator : SY/AP
Sample : L1662-01
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
IAS-1-M-ELECT-RM

Quant Time: Feb 28 01:07:13 2020
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL022620AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Feb 26 06:58:15 2020
QLast Update : Wed Feb 26 06:58:15 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.68	49	948261	10.00	ppbv	0.01
33) 1,4-Difluorobenzene	7.20	114	1956733	10.00	ppbv	0.01
55) Chlorobenzene-d5	12.14	117	1878841	10.00	ppbv	0.02

System Monitoring Compounds
68) 1-Bromo-4-Fluorobenzene 14.47 95 1600041 10.39 ppbv 0.02
Spiked Amount 10.000 Range 65 - 135 Recovery = 103.90%

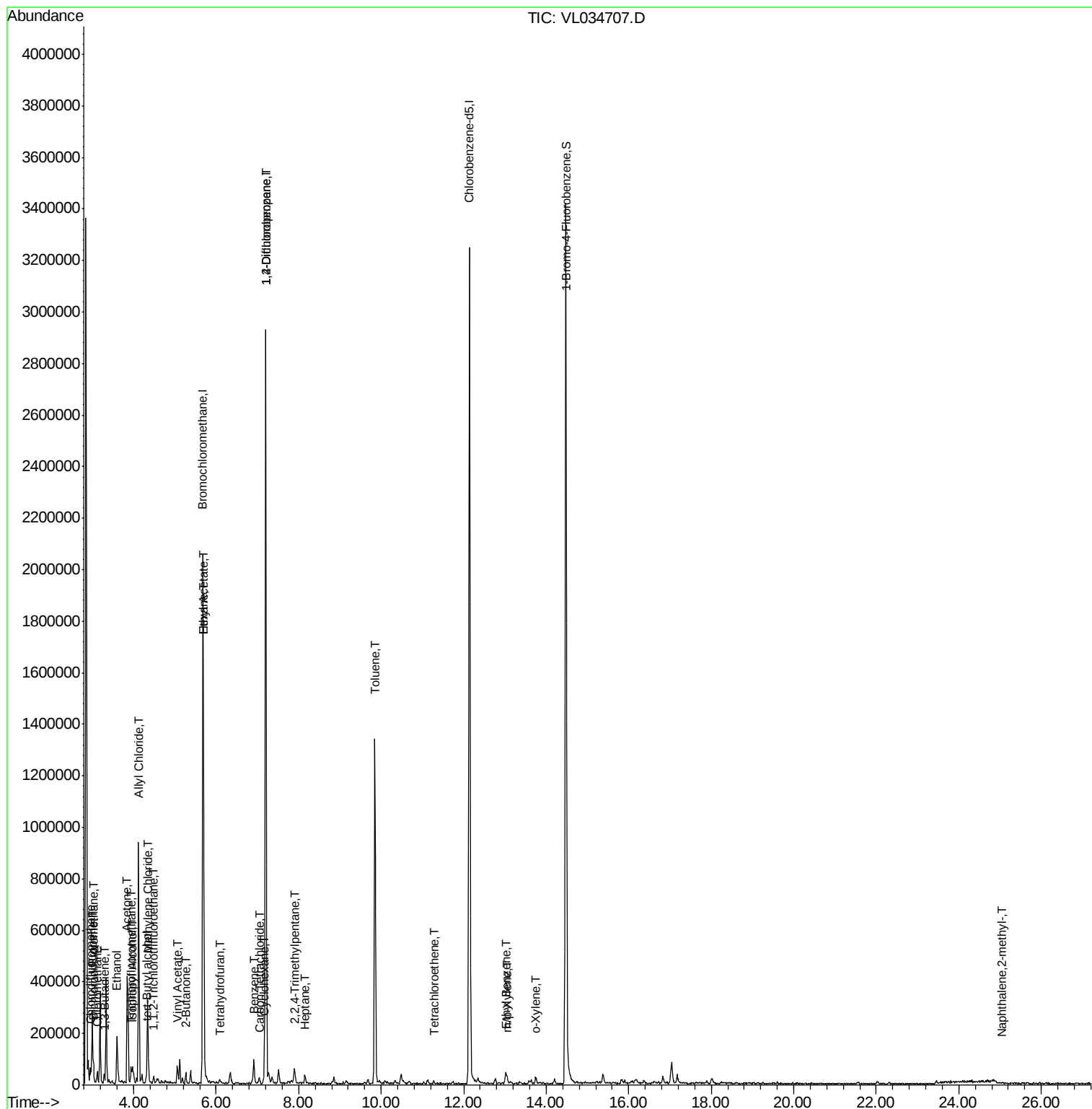
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.02	85	37843	0.253	ppbv	100
3) Chlorodifluoromethane	2.96	51	65606	0.641	ppbv #	80
4) Chloromethane	3.12	50	31530	0.550	ppbv	93
9) Propene	3.00	41	39820	0.931	ppbv	92
10) Heptane	8.16	43	4609	0.042	ppbv #	1
11) Trichlorofluoromethane	3.94	101	35940	0.274	ppbv	90
12) 1,1,2-Trichlorotrifluoroet	4.47	101	2890	0.031	ppbv #	15
13) Ethanol	3.59	45	204964	15.167	ppbv	100
15) Acetone	3.84	43	450704	4.171	ppbv	93
16) 1,3-Butadiene	3.30	39	1665	0.033	ppbv #	1
17) tert-Butyl alcohol	4.31	59	2853	0.034	ppbv #	71
19) Isopropyl Alcohol	3.97	45	60280	0.937	ppbv #	86
20) Methylene Chloride	4.34	84	106940	2.661	ppbv	91
21) Allyl Chloride	4.12	41	251652	3.520	ppbv #	53
23) Vinyl Acetate	5.07	43	6635	0.045	ppbv #	1
25) Ethyl Acetate	5.70	43	101775	0.532	ppbv #	81
26) Hexane	5.70	57	133024	1.509	ppbv #	42
30) Cyclohexane	7.16	84	2451	0.036	ppbv #	1
34) 2-Butanone	5.26	43	42078	0.342	ppbv	99
35) Carbon Tetrachloride	7.04	117	3958	0.030	ppbv #	51
36) Benzene	6.91	78	28879	0.171	ppbv #	91
39) 1,2-Dichloropropane	7.20	63	566904	8.431	ppbv #	24
41) Tetrahydrofuran	6.08	42	1435	0.022	ppbv #	1
44) 2,2,4-Trimethylpentane	7.90	57	11876	0.040	ppbv #	1
52) Tetrachloroethene	11.28	164	1511	0.024	ppbv #	27
53) Toluene	9.85	91	975218	5.425	ppbv	97
58) Ethyl Benzene	13.01	91	14122	0.062	ppbv	90
59) m/p-Xylene	13.06	91	5018	0.025	ppbv #	32
60) o-Xylene	13.76	91	6104	0.031	ppbv #	2
80) Naphthalene,2-methyl-	25.05	142	1570	0.025	ppbv #	60

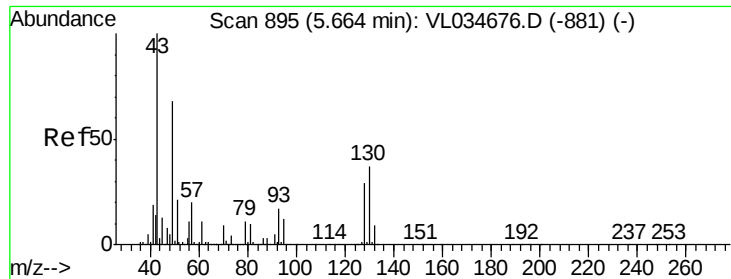
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.68 min Scan# 899

Delta R.T. 0.01 min

Lab File: VL034707.D

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Instrument :

MSVOA_L

ClientSampleId :

IAS-1-M-ELECT-RM

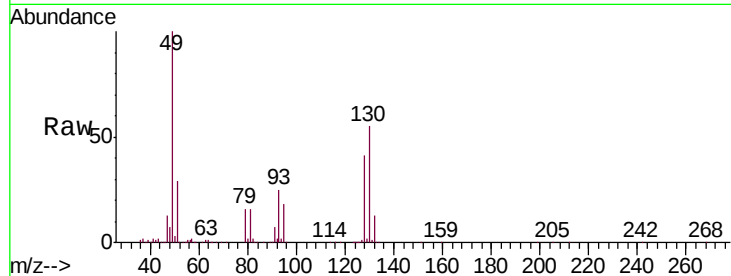
Tgt Ion: 49 Resp: 948261

Ion Ratio Lower Upper

49 100

128 42.8 21.6 65.0

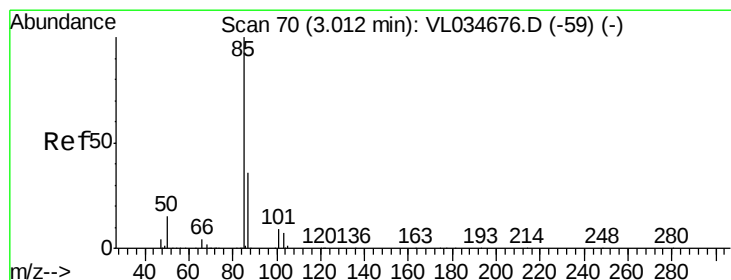
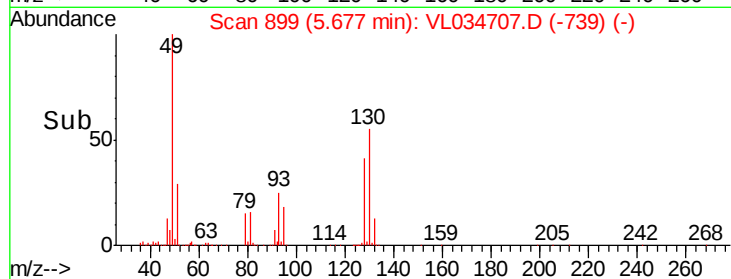
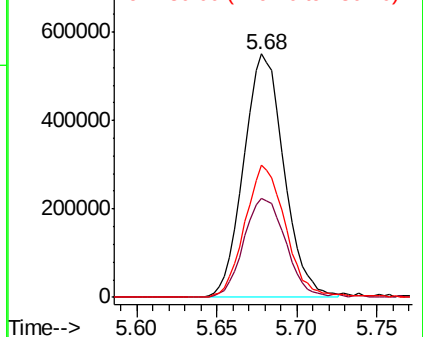
130 55.5 27.7 83.1



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: 0.253 ppbv

RT: 3.02 min Scan# 74

Delta R.T. 0.01 min

Lab File: VL034707.D

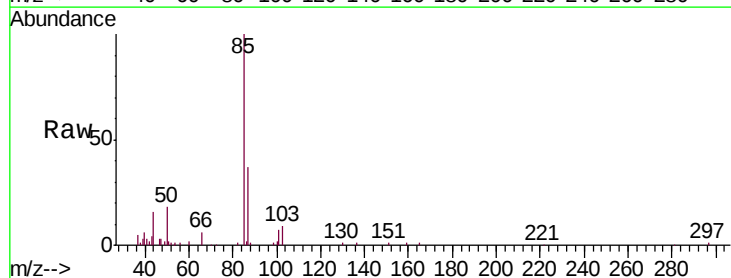
Acq: 27 Feb 2020 13:55

Tgt Ion: 85 Resp: 37843

Ion Ratio Lower Upper

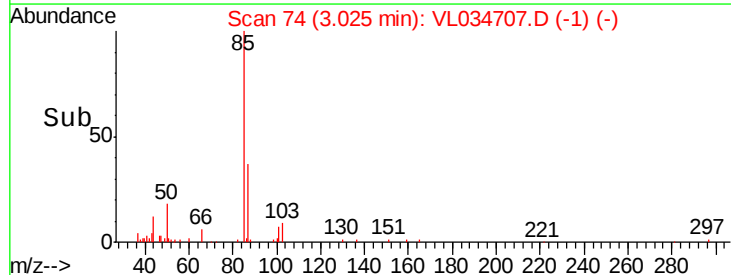
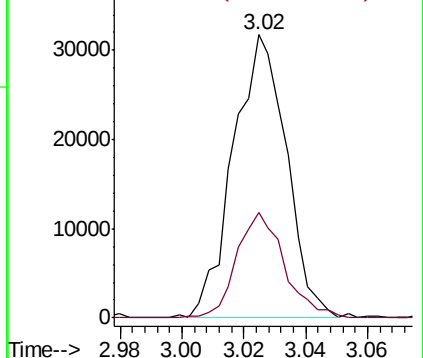
85 100

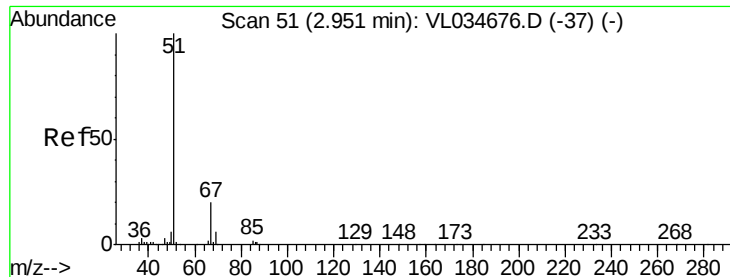
87 36.7 29.2 43.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.641 ppbv

RT: 2.96 min Scan# 55

Delta R.T. 0.01 min

Lab File: VL034707.D

Acq: 27 Feb 2020 13:55

Instrument :

MSVOA_L

ClientSampleId :

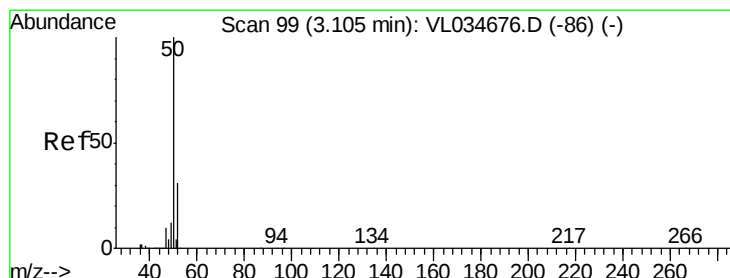
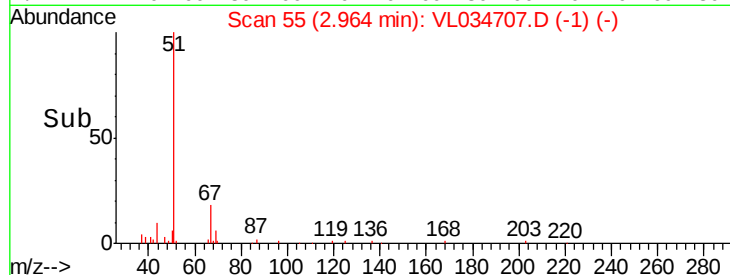
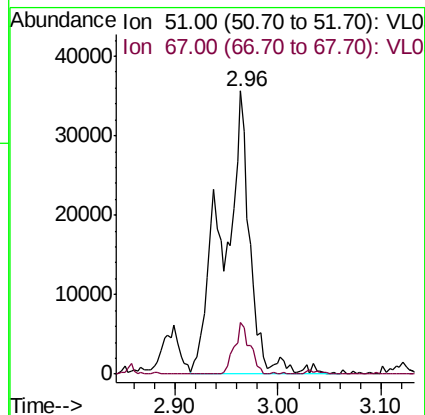
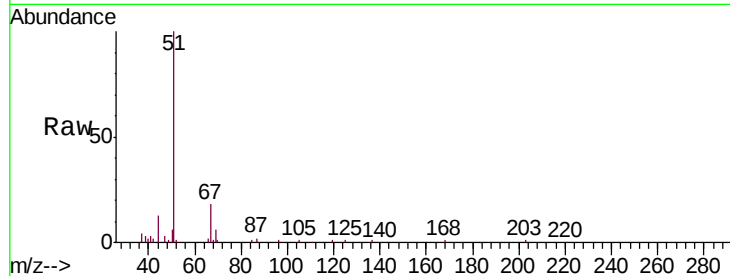
IAS-1-M-ELECT-RM

Tgt Ion: 51 Resp: 65606

Ion Ratio Lower Upper

51 100

67 10.4 15.5 23.3#



#4

Chloromethane

Concen: 0.550 ppbv

RT: 3.12 min Scan# 103

Delta R.T. 0.01 min

Lab File: VL034707.D

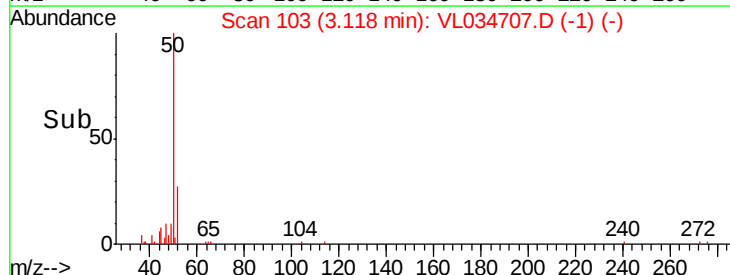
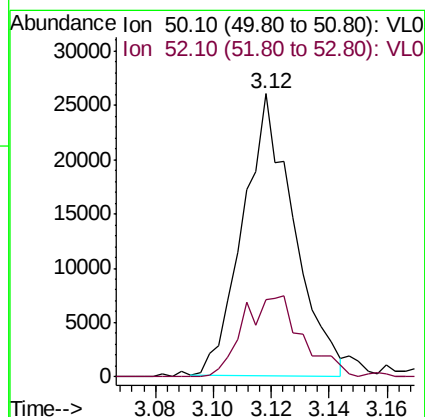
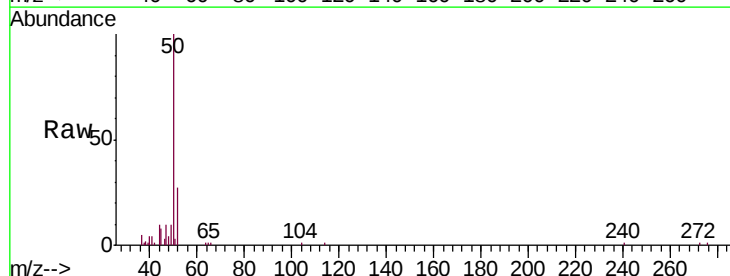
Acq: 27 Feb 2020 13:55

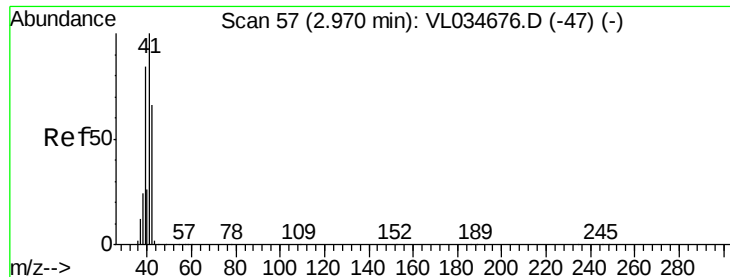
Tgt Ion: 50 Resp: 31530

Ion Ratio Lower Upper

50 100

52 27.6 25.0 37.4





#9

Propene

Concen: 0.931 ppbv

RT: 3.00 min Scan# 65

Delta R.T. 0.03 min

Lab File: VL034707.D

Acq: 27 Feb 2020 13:55

Instrument :

MSVOA_L

ClientSampleId :

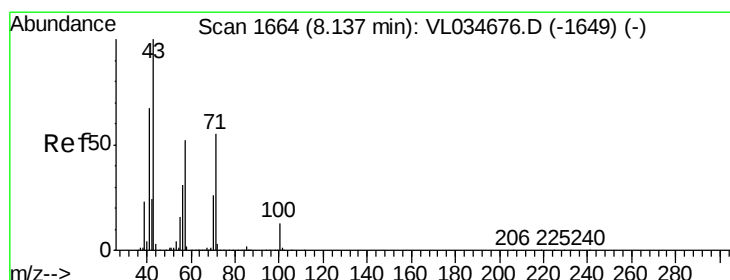
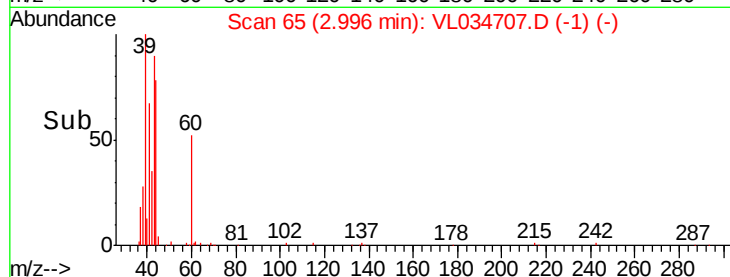
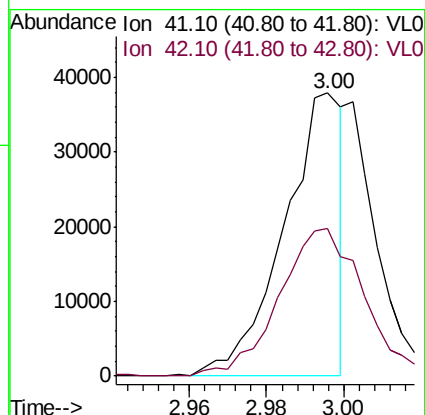
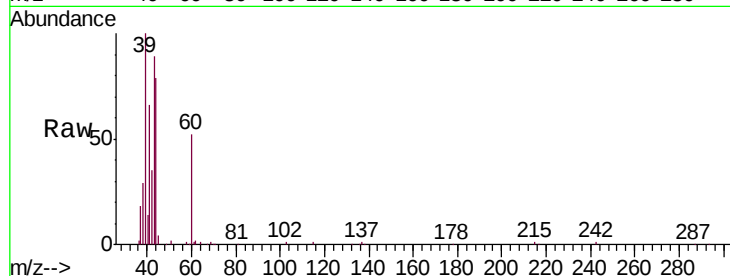
IAS-1-M-ELECT-RM

Tgt Ion: 41 Resp: 39820

Ion Ratio Lower Upper

41 100

42 75.1 54.9 82.3



#10

Heptane

Concen: 0.042 ppbv

RT: 8.16 min Scan# 1670

Delta R.T. 0.02 min

Lab File: VL034707.D

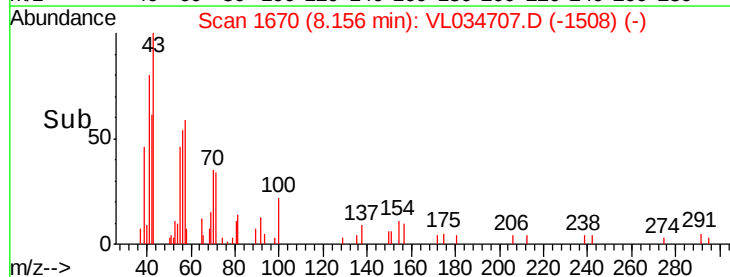
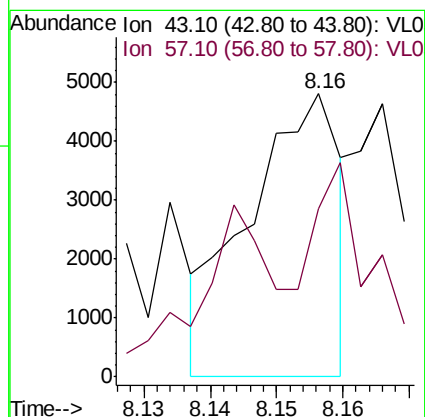
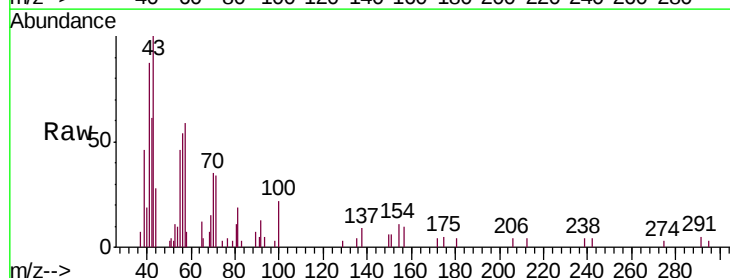
Acq: 27 Feb 2020 13:55

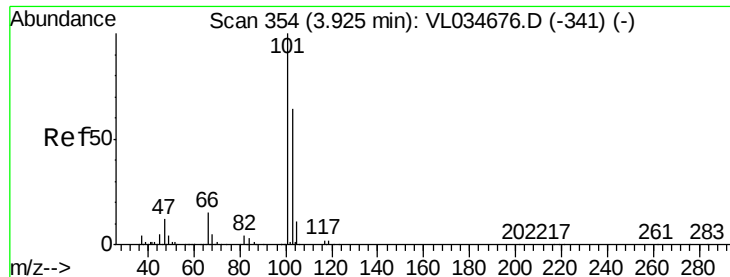
Tgt Ion: 43 Resp: 4609

Ion Ratio Lower Upper

43 100

57 120.1 41.0 61.6#

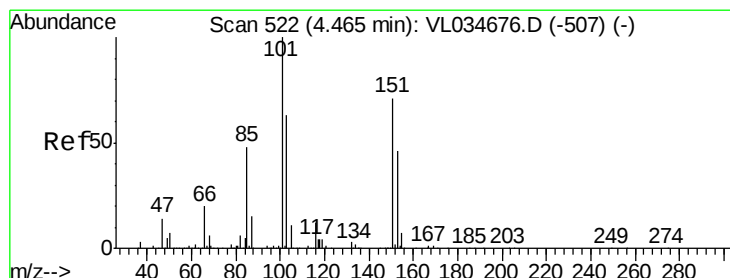
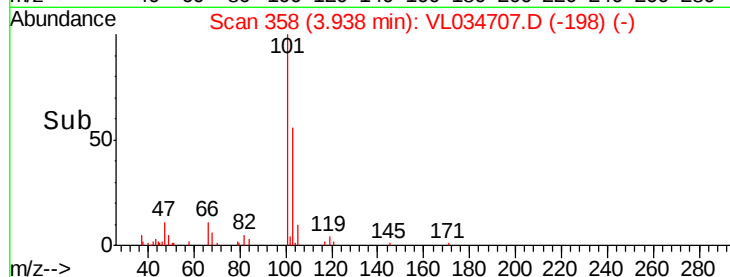
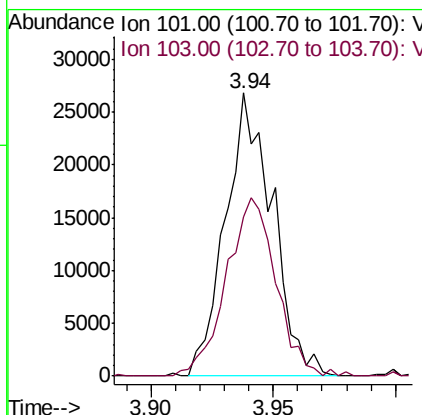
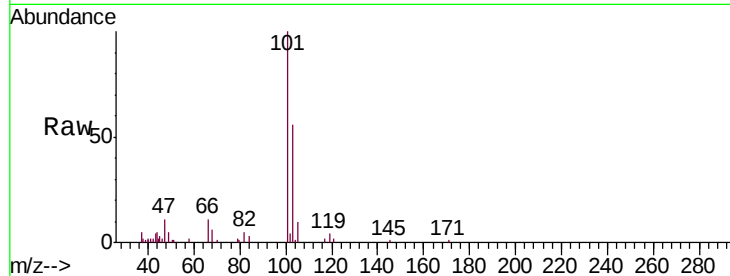




#11
 Trichlorofluoromethane
 Concen: 0.274 ppbv
 RT: 3.94 min Scan# 358
 Delta R.T. 0.01 min
 Lab File: VL034707.D
 Acq: 27 Feb 2020 13:55

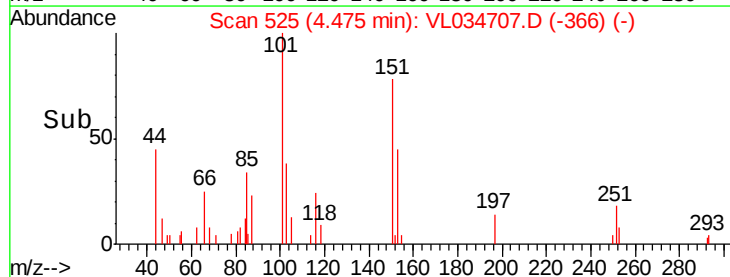
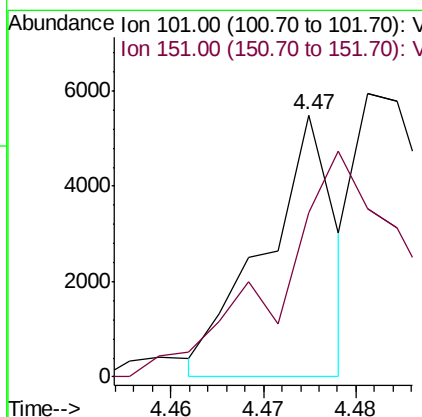
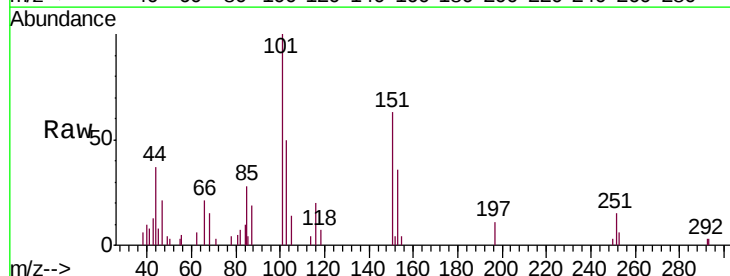
Instrument :
 MSVOA_L
 ClientSampleId :
 IAS-1-M-ELECT-RM

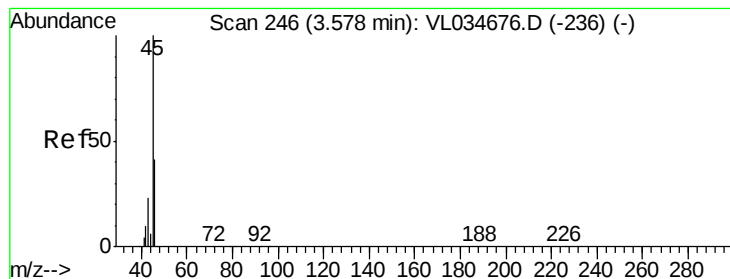
Tgt Ion:101 Resp: 35940
 Ion Ratio Lower Upper
 101 100
 103 56.3 51.2 76.8



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.031 ppbv
 RT: 4.47 min Scan# 525
 Delta R.T. 0.01 min
 Lab File: VL034707.D
 Acq: 27 Feb 2020 13:55

Tgt Ion:101 Resp: 2890
 Ion Ratio Lower Upper
 101 100
 151 0.0 55.8 83.6#





#13

Ethanol

Concen: 15.167 ppbv

RT: 3.59 min Scan# 250

Delta R.T. 0.01 min

Lab File: VL034707.D

Acq: 27 Feb 2020 13:55

Instrument :

MSVOA_L

ClientSampleId :

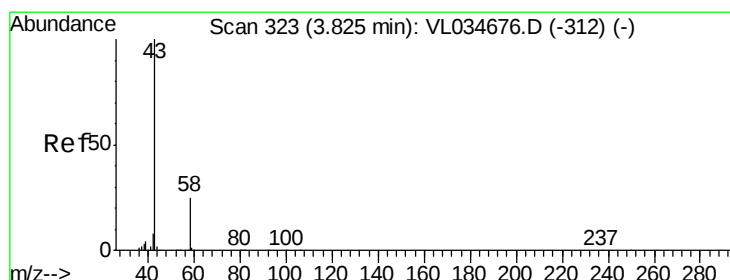
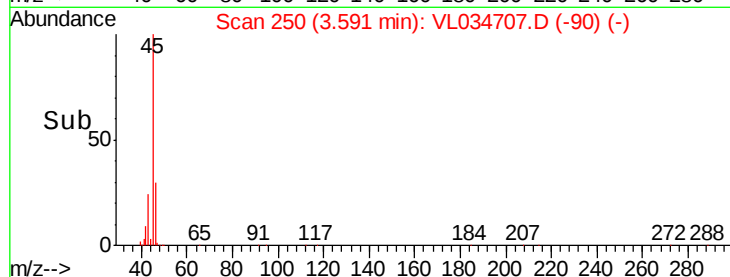
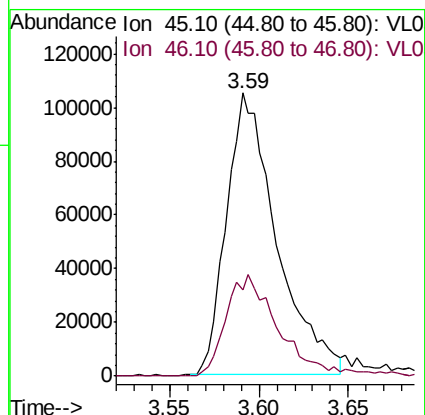
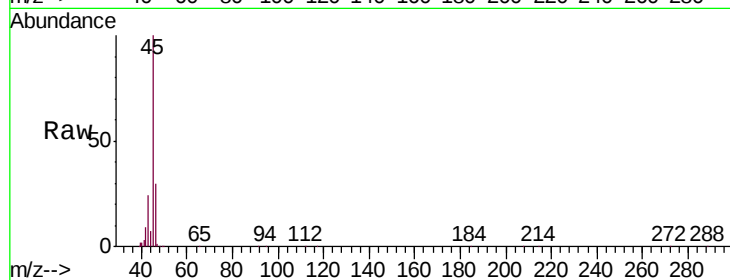
IAS-1-M-ELECT-RM

Tgt Ion: 45 Resp: 204964

Ion Ratio Lower Upper

45 100

46 38.2 15.4 61.4



#15

Acetone

Concen: 4.171 ppbv

RT: 3.84 min Scan# 328

Delta R.T. 0.02 min

Lab File: VL034707.D

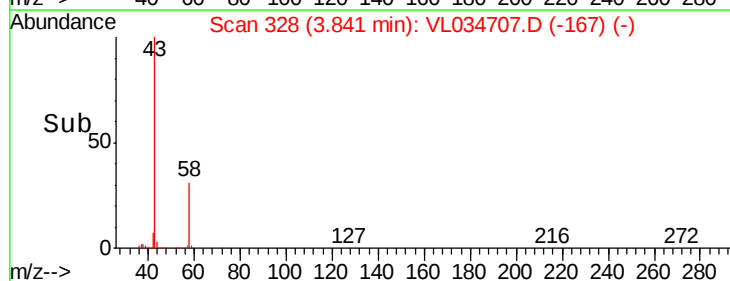
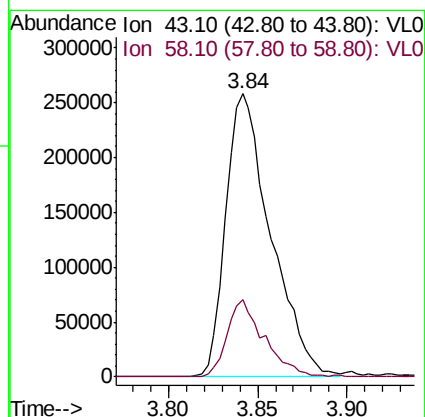
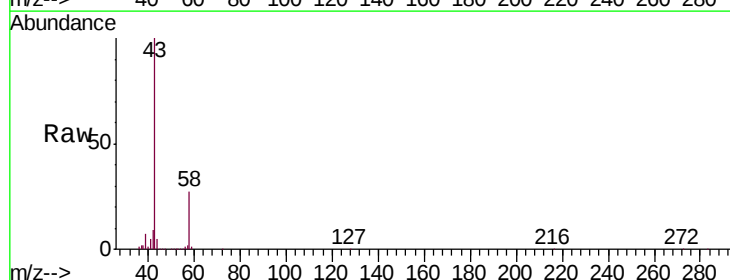
Acq: 27 Feb 2020 13:55

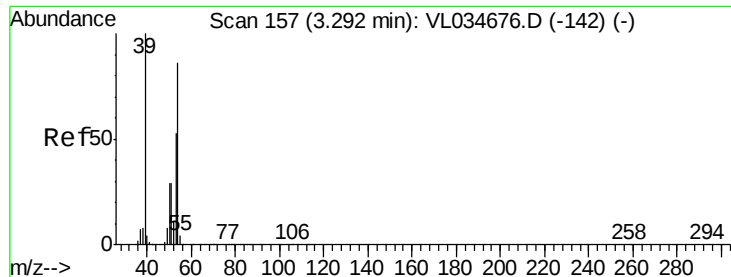
Tgt Ion: 43 Resp: 450704

Ion Ratio Lower Upper

43 100

58 23.0 21.4 32.0

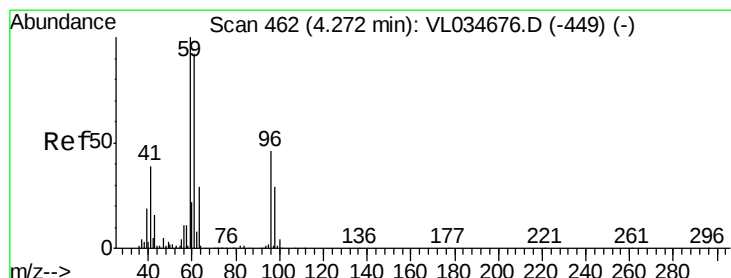
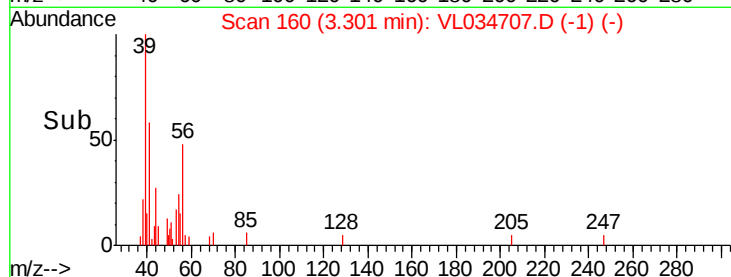
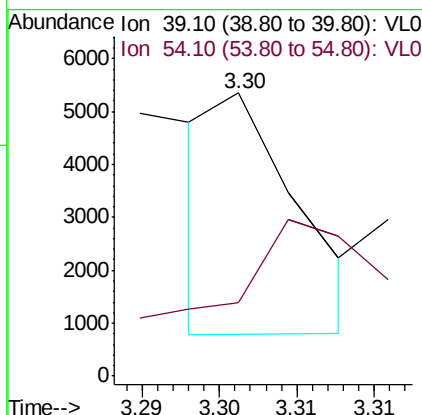
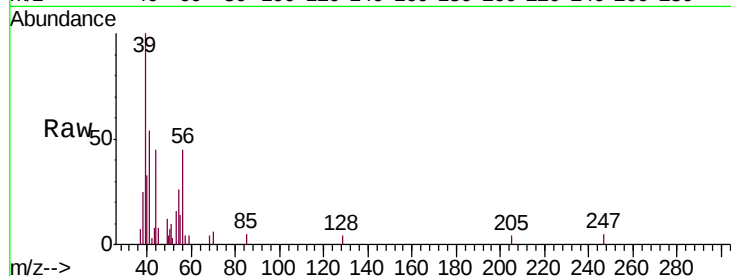




#16
 1,3-Butadiene
 Concen: 0.033 ppbv
 RT: 3.30 min Scan# 160
 Delta R.T. 0.01 min
 Lab File: VL034707.D
 Acq: 27 Feb 2020 13:55

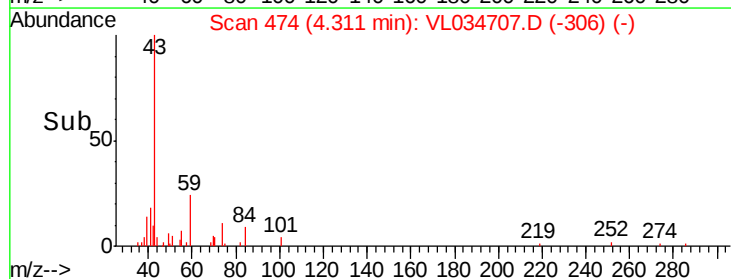
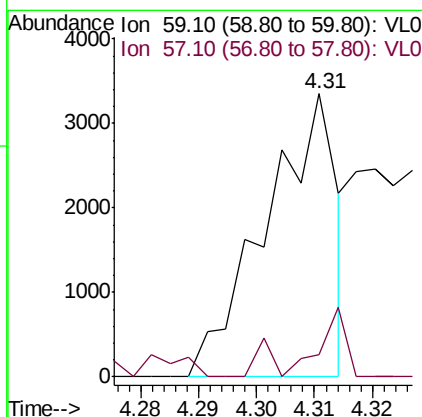
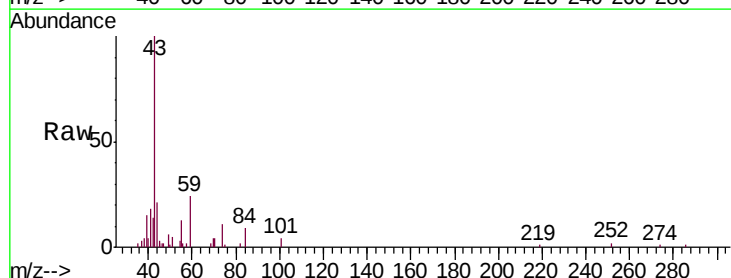
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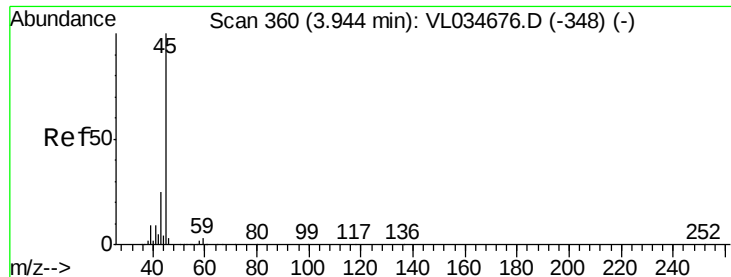
Tgt Ion: 39 Resp: 1665
 Ion Ratio Lower Upper
 39 100
 54 283.6 67.0 100.6#



#17
 tert-Butyl alcohol
 Concen: 0.034 ppbv
 RT: 4.31 min Scan# 474
 Delta R.T. 0.04 min
 Lab File: VL034707.D
 Acq: 27 Feb 2020 13:55

Tgt Ion: 59 Resp: 2853
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.8 13.2#





#19

Isopropyl Alcohol

Concen: 0.937 ppbv

RT: 3.97 min Scan# 369

Delta R.T. 0.03 min

Lab File: VL034707.D

Acq: 27 Feb 2020 13:55

Instrument :

MSVOA_L

ClientSampleId :

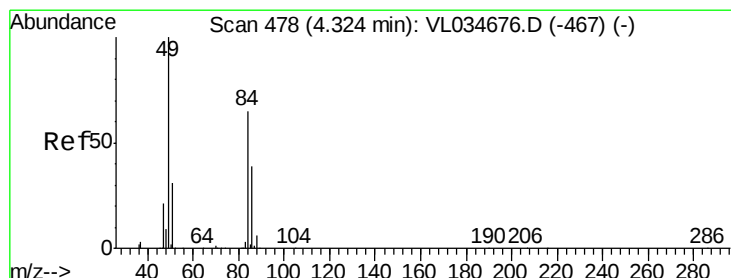
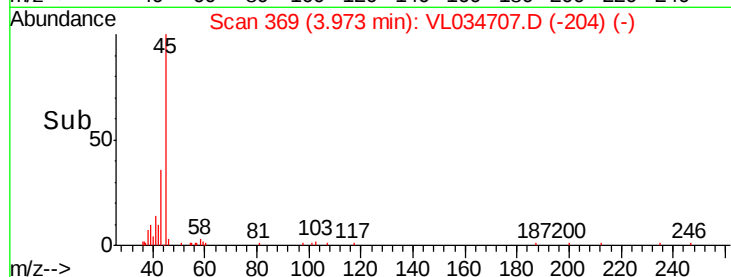
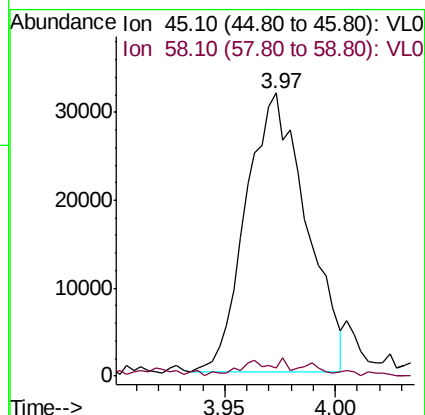
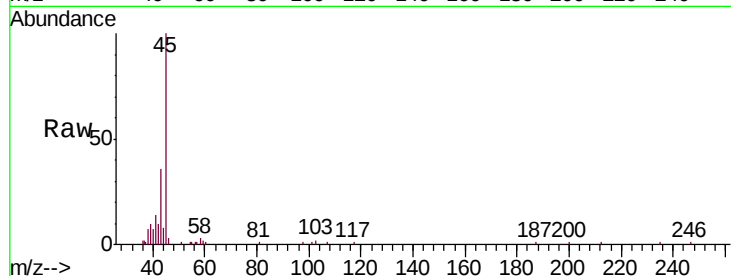
IAS-1-M-ELECT-RM

Tgt Ion: 45 Resp: 60280

Ion Ratio Lower Upper

45 100

58 7.2 1.8 2.6#



#20

Methylene Chloride

Concen: 2.661 ppbv

RT: 4.34 min Scan# 483

Delta R.T. 0.02 min

Lab File: VL034707.D

Acq: 27 Feb 2020 13:55

Tgt Ion: 84 Resp: 106940

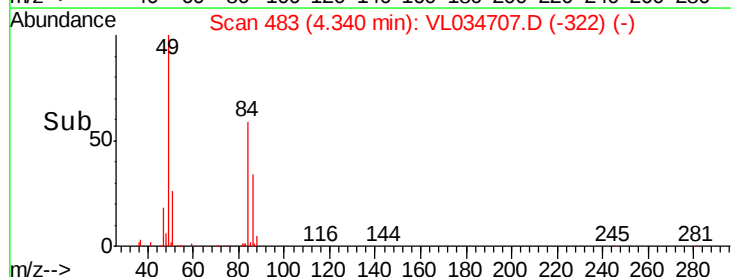
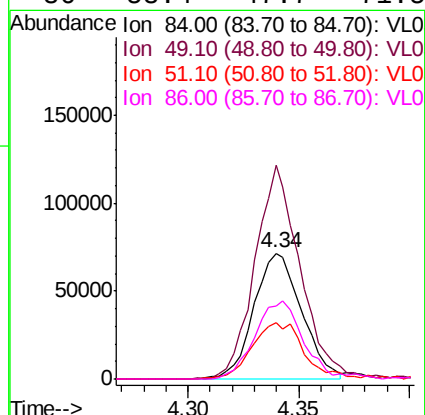
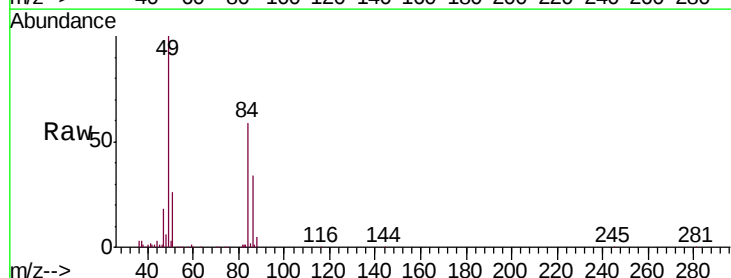
Ion Ratio Lower Upper

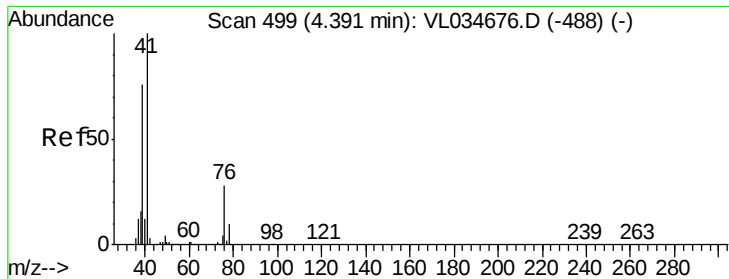
84 100

49 169.5 122.8 184.2

51 44.4 38.6 58.0

86 58.4 47.7 71.5

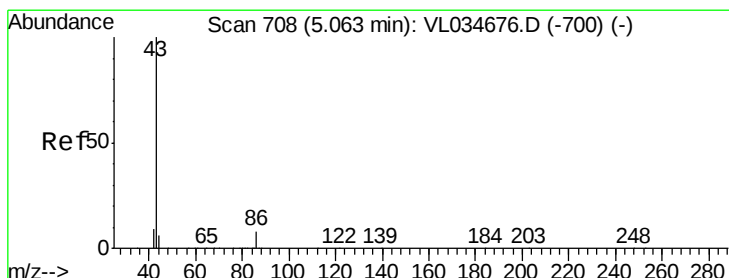
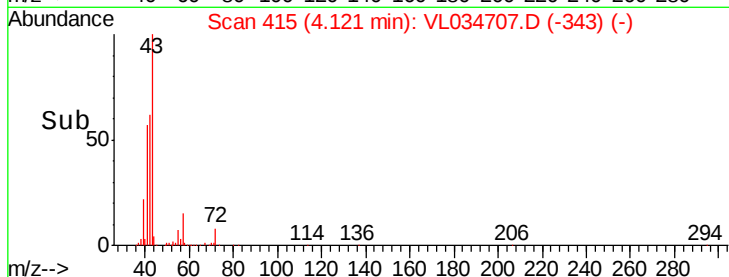
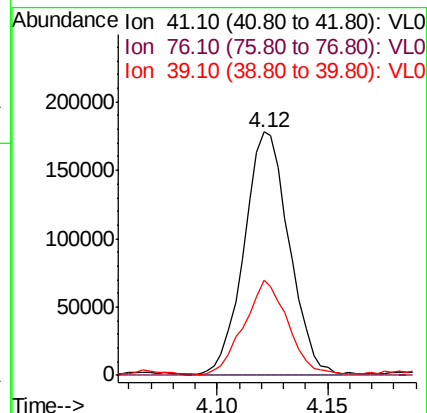
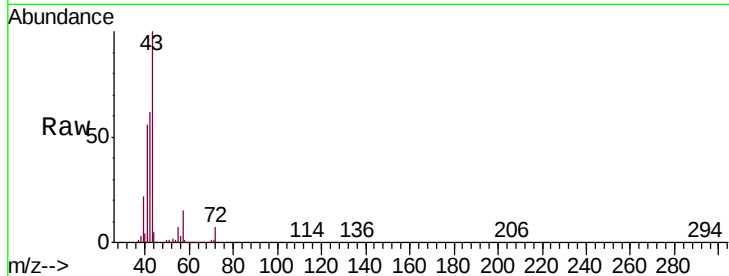




#21
 Allyl Chloride
 Concen: 3.520 ppbv
 RT: 4.12 min Scan# 415
 Delta R.T. -0.27 min
 Lab File: VL034707.D
 Acq: 27 Feb 2020 13:55

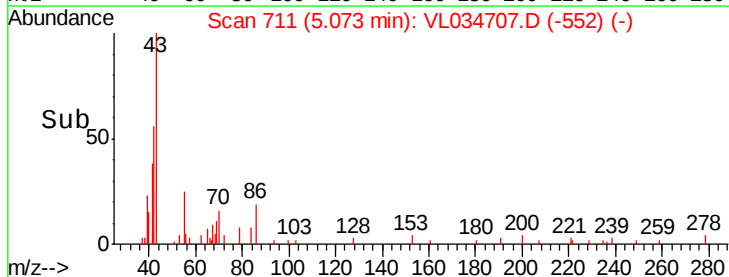
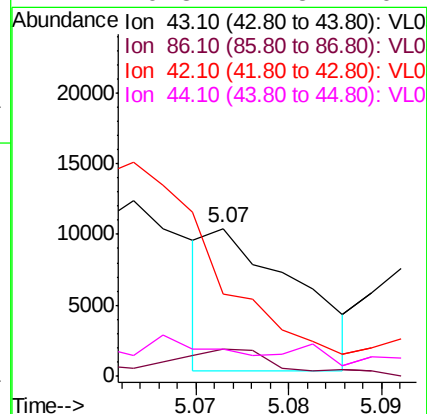
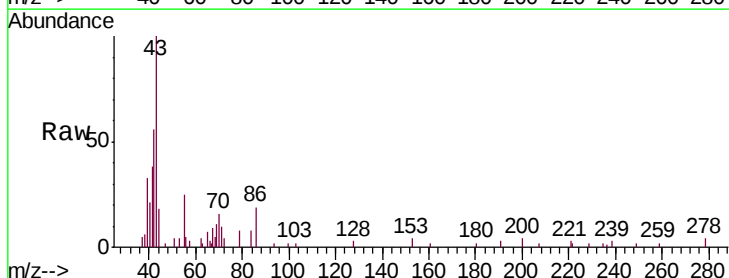
Instrument :
 MSVOA_L
 ClientSampleId :
 IAS-1-M-ELECT-RM

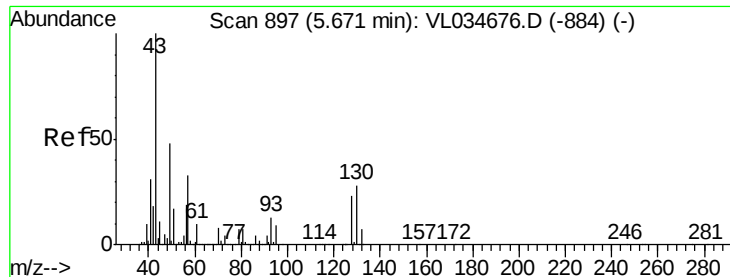
Tgt Ion: 41 Resp: 251652
 Ion Ratio Lower Upper
 41 100
 76 0.0 22.8 34.2#
 39 38.4 61.7 92.5#



#23
 Vinyl Acetate
 Concen: 0.045 ppbv
 RT: 5.07 min Scan# 711
 Delta R.T. 0.01 min
 Lab File: VL034707.D
 Acq: 27 Feb 2020 13:55

Tgt Ion: 43 Resp: 6635
 Ion Ratio Lower Upper
 43 100
 86 26.5 6.0 9.0#
 42 74.6 8.0 12.0#
 44 19.8 4.5 6.7#

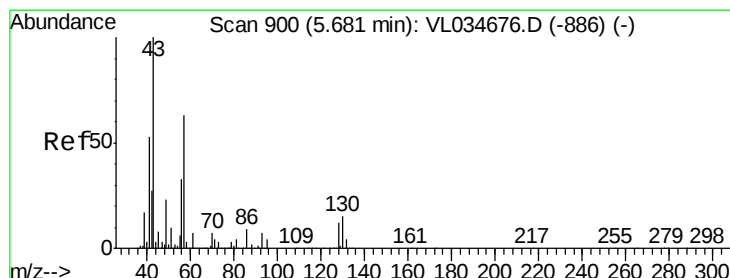
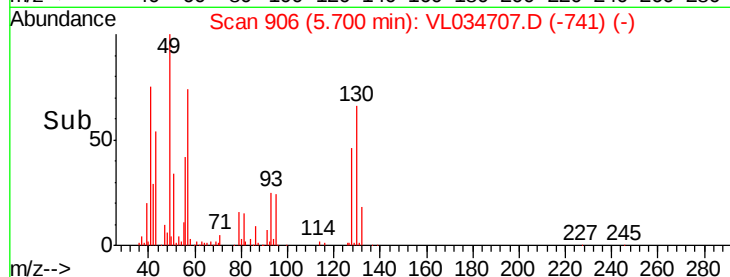
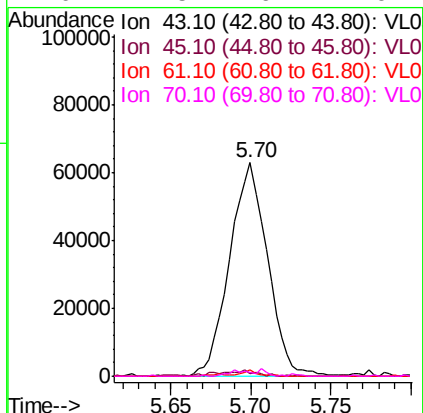
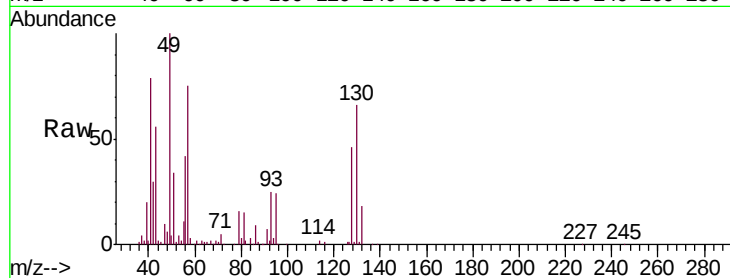




#25
Ethyl Acetate
Concen: 0.532 ppbv
RT: 5.70 min Scan# 906
Delta R.T. 0.03 min
Lab File: VL034707.D
Acq: 27 Feb 2020 13:55

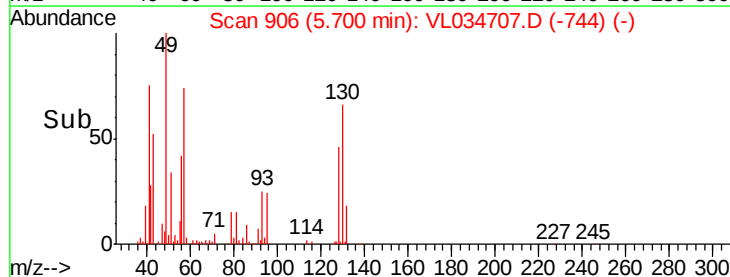
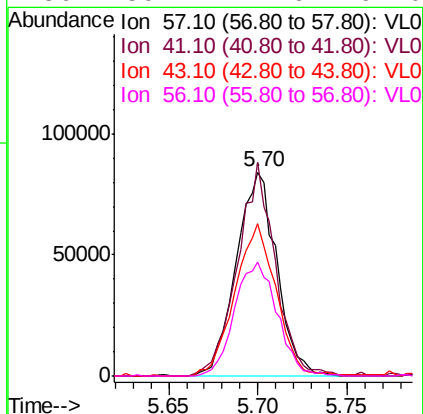
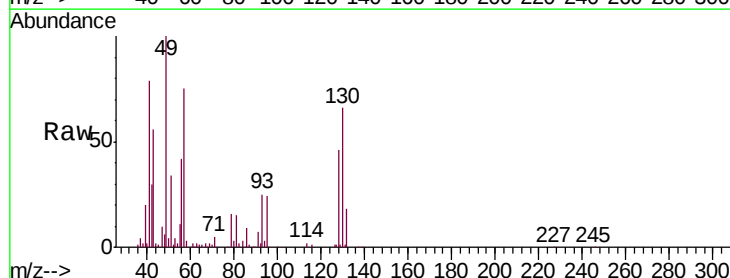
Instrument :
MSVOA_L
ClientSampleId :
IAS-1-M-ELECT-RM

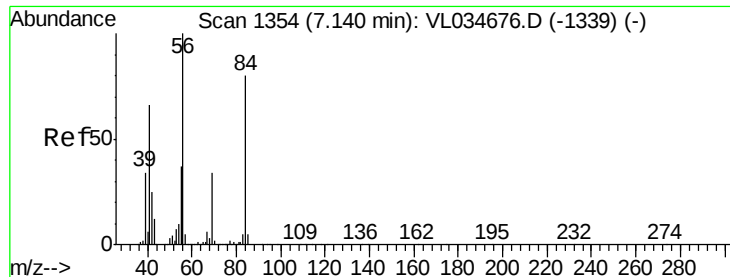
Tgt Ion:	43	Resp:	101775
Ion	Ratio	Lower	Upper
43	100		
45	3.2	8.2	12.4#
61	1.8	7.8	11.6#
70	2.5	6.1	9.1#



#26
Hexane
Concen: 1.509 ppbv
RT: 5.70 min Scan# 906
Delta R.T. 0.02 min
Lab File: VL034707.D
Acq: 27 Feb 2020 13:55

Tgt Ion:	57	Resp:	133024
Ion	Ratio	Lower	Upper
57	100		
41	98.0	70.3	105.5
43	77.3	177.0	265.4#
56	59.1	42.6	64.0

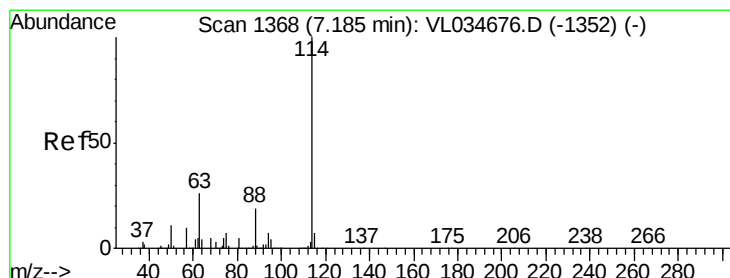
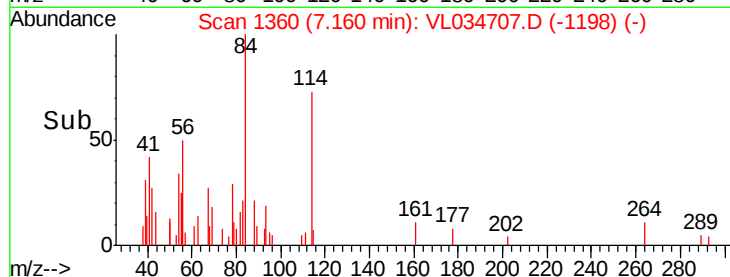
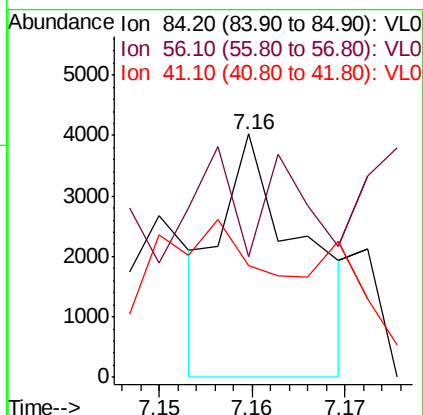
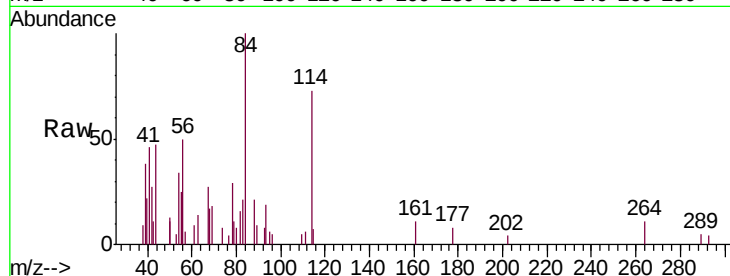




#30
Cyclohexane
Concen: 0.036 ppbv
RT: 7.16 min Scan# 1360
Delta R.T. 0.02 min
Lab File: VL034707.D
Acq: 27 Feb 2020 13:55

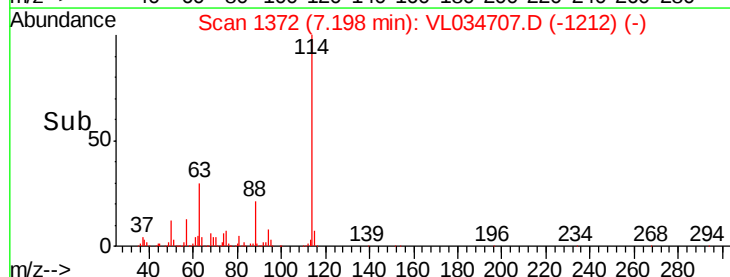
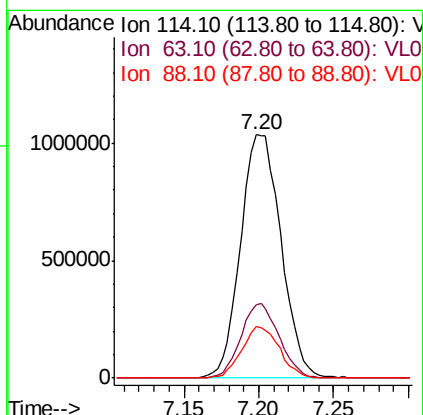
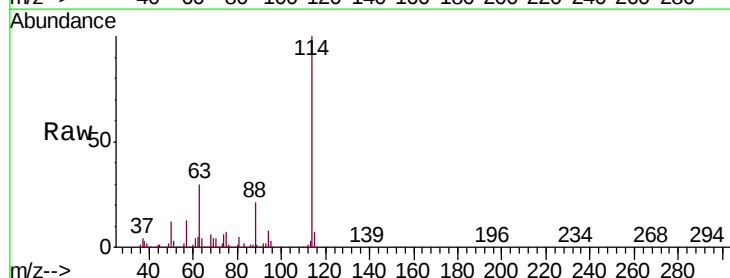
Instrument :
MSVOA_L
ClientSampleId :
IAS-1-M-ELECT-RM

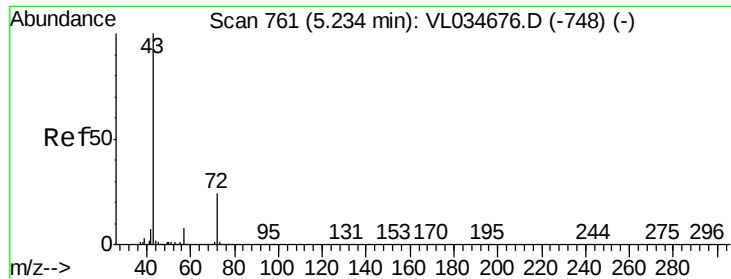
Tgt Ion: 84 Resp: 2451
Ion Ratio Lower Upper
84 100
56 0.0 113.4 170.2#
41 249.0 68.2 102.4#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.20 min Scan# 1372
Delta R.T. 0.01 min
Lab File: VL034707.D
Acq: 27 Feb 2020 13:55

Tgt Ion: 114 Resp: 1956733
Ion Ratio Lower Upper
114 100
63 29.1 22.9 34.3
88 19.8 15.8 23.6

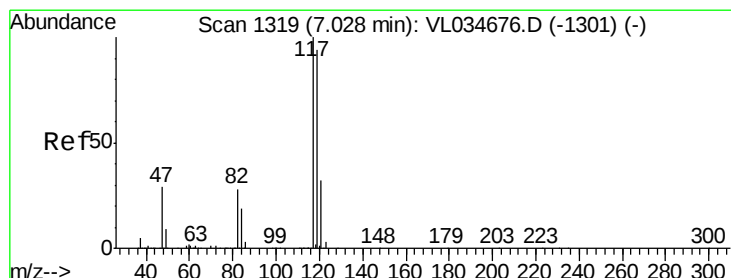
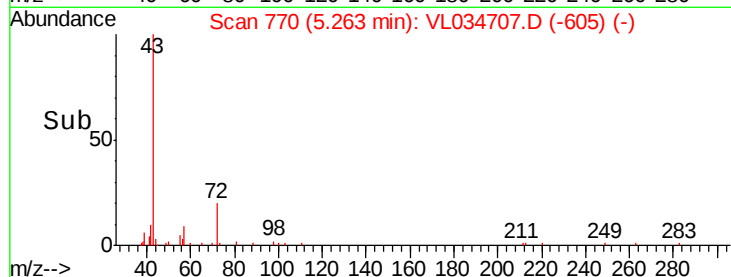
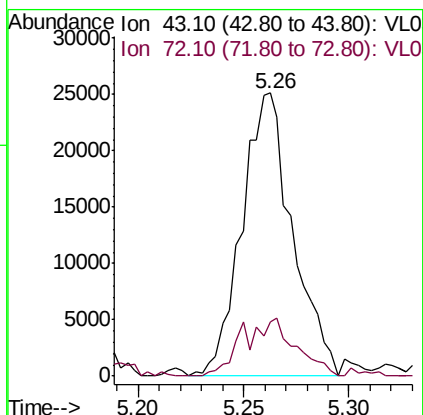
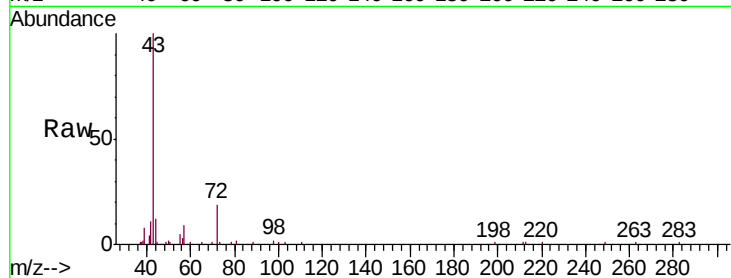




#34
2-Butanone
Concen: 0.342 ppbv
RT: 5.26 min Scan# 770
Delta R.T. 0.03 min
Lab File: VL034707.D
Acq: 27 Feb 2020 13:55

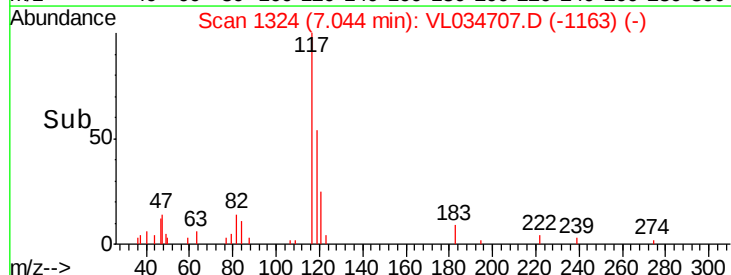
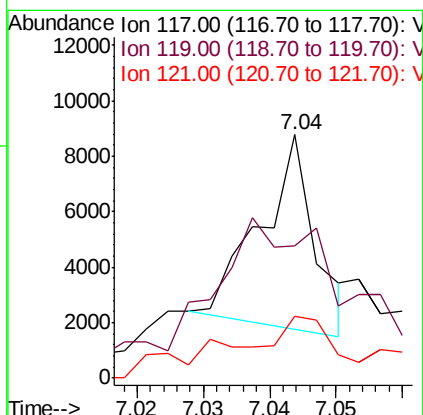
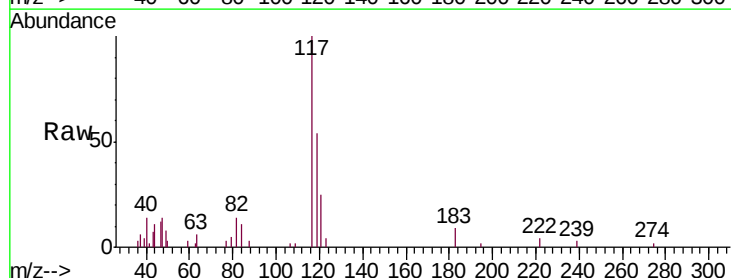
Instrument :
MSVOA_L
ClientSampleId :
IAS-1-M-ELECT-RM

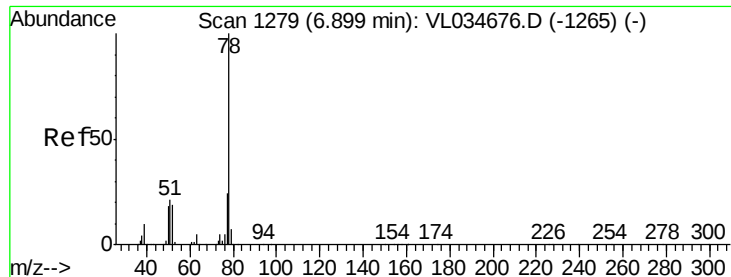
Tgt Ion: 43 Resp: 42078
Ion Ratio Lower Upper
43 100
72 22.3 18.2 27.2



#35
Carbon Tetrachloride
Concen: 0.030 ppbv
RT: 7.04 min Scan# 1324
Delta R.T. 0.02 min
Lab File: VL034707.D
Acq: 27 Feb 2020 13:55

Tgt Ion: 117 Resp: 3958
Ion Ratio Lower Upper
117 100
119 34.1 75.5 113.3#
121 27.1 25.4 38.0





#36

Benzene

Concen: 0.171 ppbv

RT: 6.91 min Scan# 1282

Delta R.T. 0.01 min

Lab File: VL034707.D

Acq: 27 Feb 2020 13:55

Instrument :

MSVOA_L

ClientSampleId :

IAS-1-M-ELECT-RM

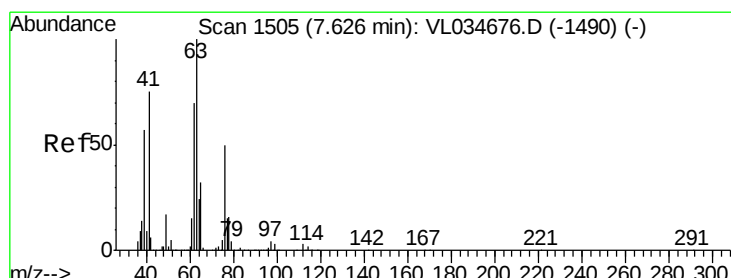
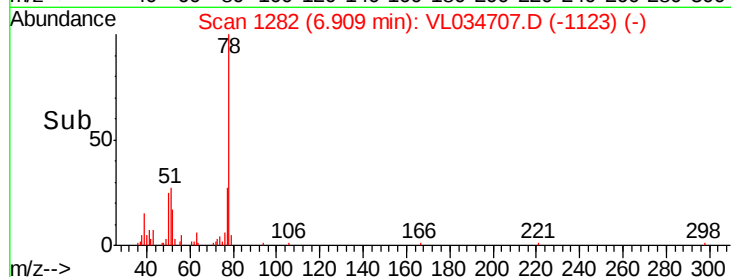
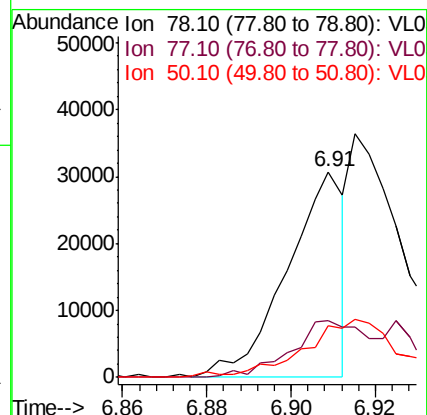
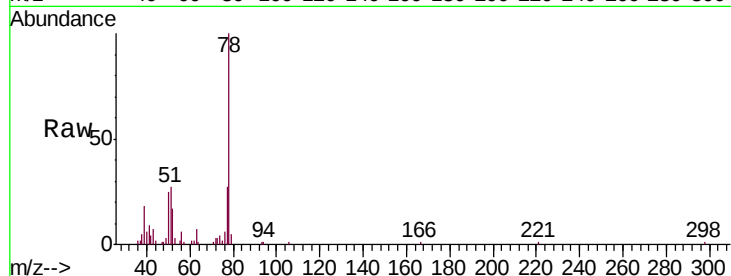
Tgt Ion: 78 Resp: 28879

Ion Ratio Lower Upper

78 100

77 27.4 19.5 29.3

50 24.5 14.6 21.8#



#39

1,2-Dichloropropane

Concen: 8.431 ppbv

RT: 7.20 min Scan# 1373

Delta R.T. -0.42 min

Lab File: VL034707.D

Acq: 27 Feb 2020 13:55

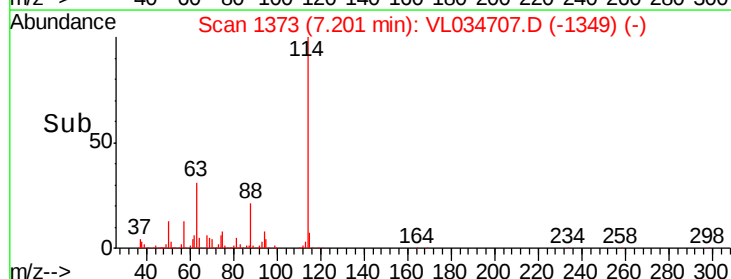
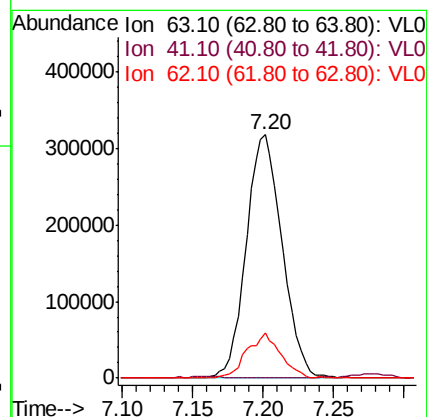
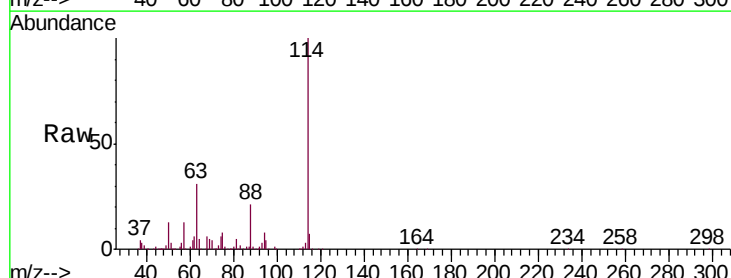
Tgt Ion: 63 Resp: 566904

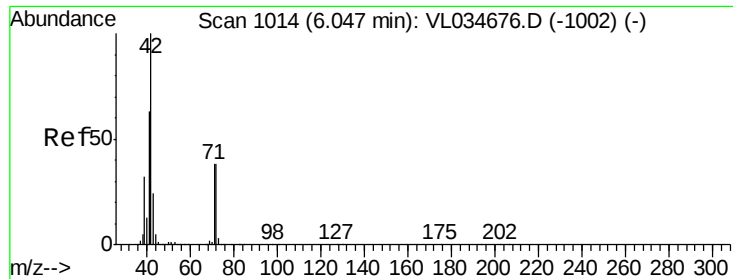
Ion Ratio Lower Upper

63 100

41 0.0 60.2 90.4#

62 18.5 56.3 84.5#





#41

Tetrahydrofuran

Concen: 0.022 ppbv

RT: 6.08 min Scan# 1024

Delta R.T. 0.03 min

Lab File: VL034707.D

Acq: 27 Feb 2020 13:55

Instrument :

MSVOA_L

ClientSampleId :

IAS-1-M-ELECT-RM

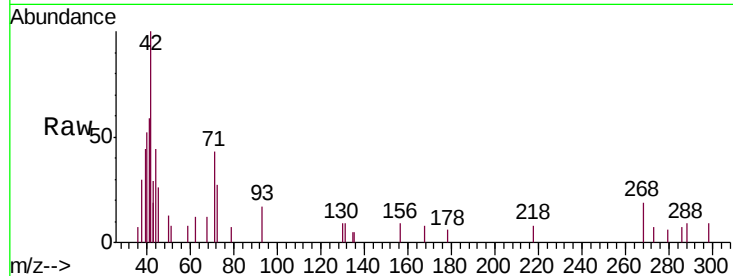
Tgt Ion: 42 Resp: 1435

Ion Ratio Lower Upper

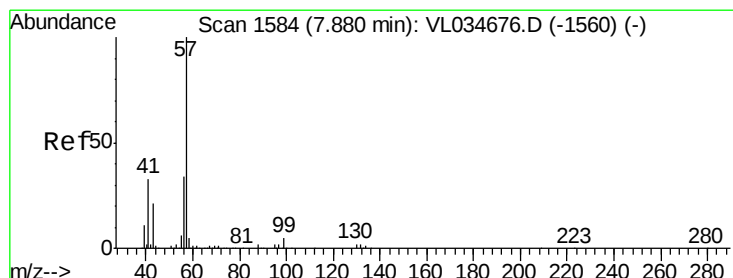
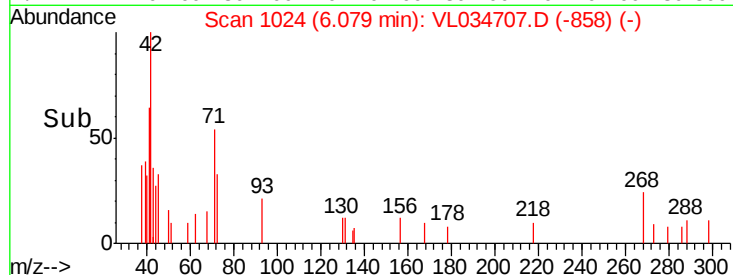
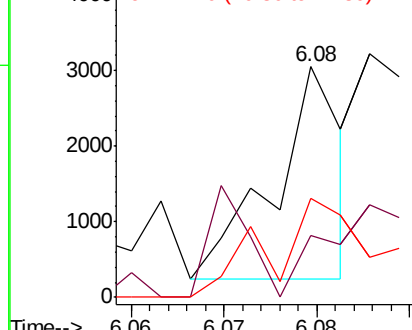
42 100

72 145.7 31.7 47.5#

71 0.0 30.7 46.1#



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: 0.040 ppbv

RT: 7.90 min Scan# 1591

Delta R.T. 0.02 min

Lab File: VL034707.D

Acq: 27 Feb 2020 13:55

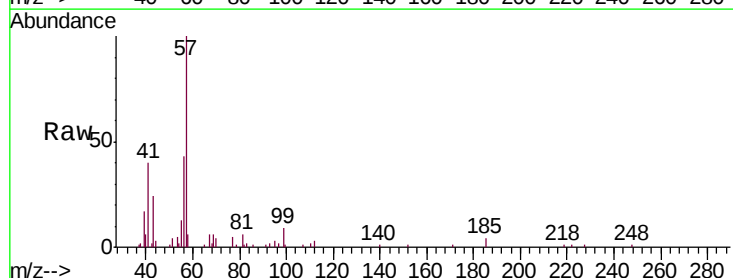
Tgt Ion: 57 Resp: 11876

Ion Ratio Lower Upper

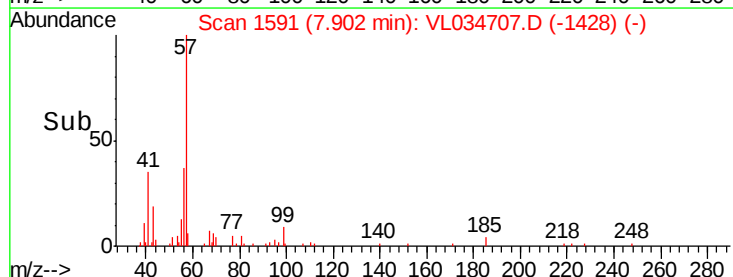
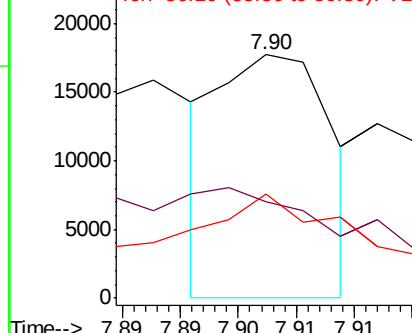
57 100

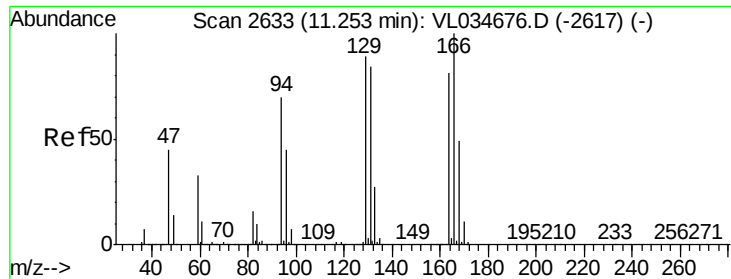
41 169.2 26.0 39.0#

56 140.3 25.6 38.4#



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: 0.024 ppbv

RT: 11.28 min Scan# 2640

Delta R.T. 0.02 min

Lab File: VL034707.D

Acq: 27 Feb 2020 13:55

Instrument :

MSVOA_L

ClientSampleId :

IAS-1-M-ELECT-RM

Tgt Ion:164 Resp: 1511

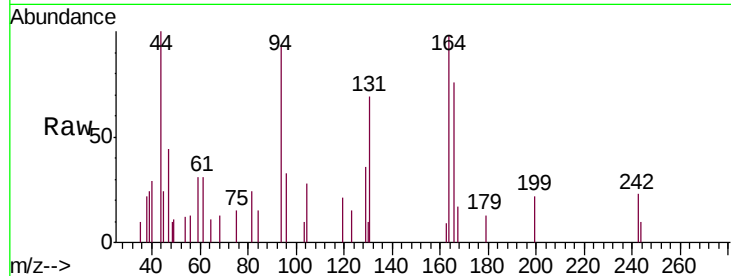
Ion Ratio Lower Upper

164 100

166 14.6 99.2 148.8#

129 0.0 88.0 132.0#

131 92.3 83.7 125.5

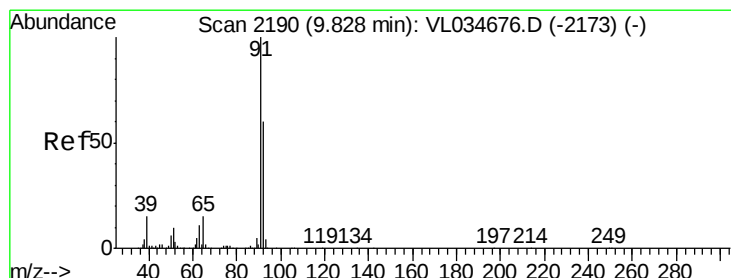
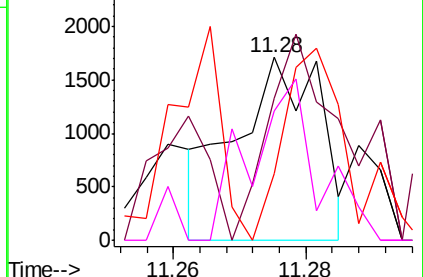
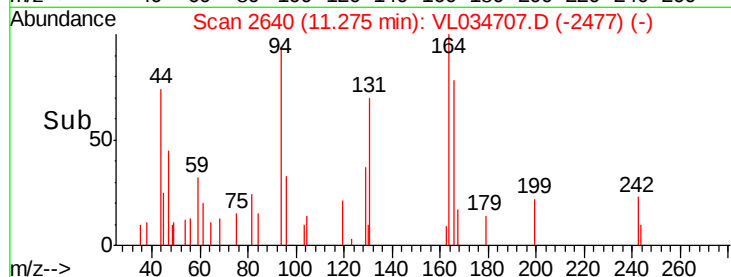


Abundance Ion 163.90 (163.60 to 164.60): V

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: 5.425 ppbv

RT: 9.85 min Scan# 2196

Delta R.T. 0.02 min

Lab File: VL034707.D

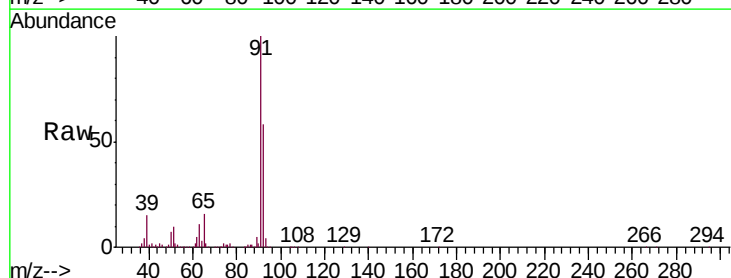
Acq: 27 Feb 2020 13:55

Tgt Ion: 91 Resp: 975218

Ion Ratio Lower Upper

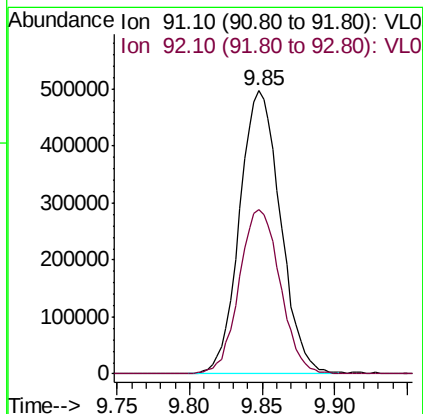
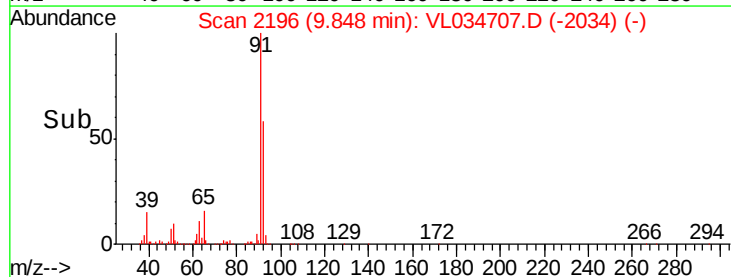
91 100

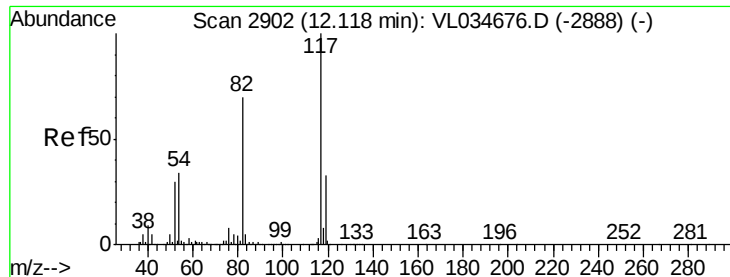
92 58.3 48.5 72.7



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

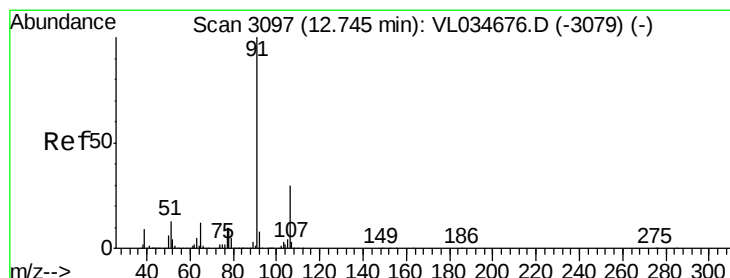
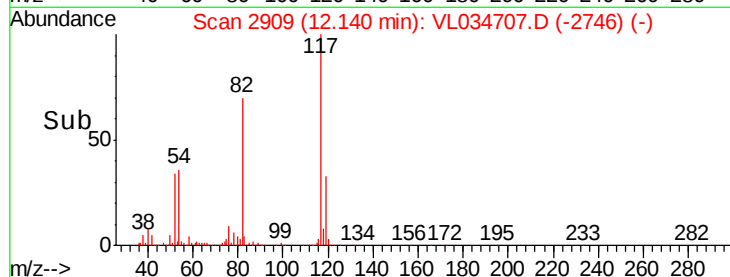
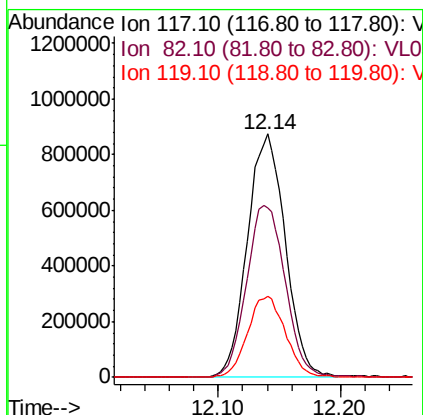
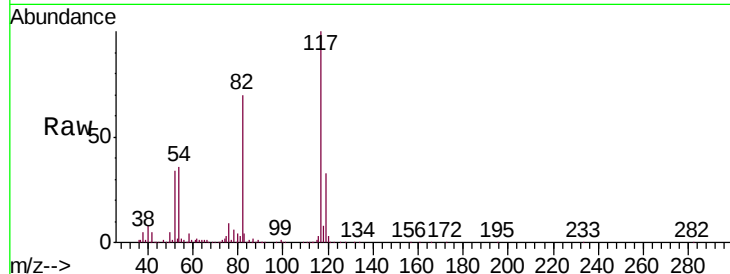




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.14 min Scan# 2909
Delta R.T. 0.02 min
Lab File: VL034707.D
Acq: 27 Feb 2020 13:55

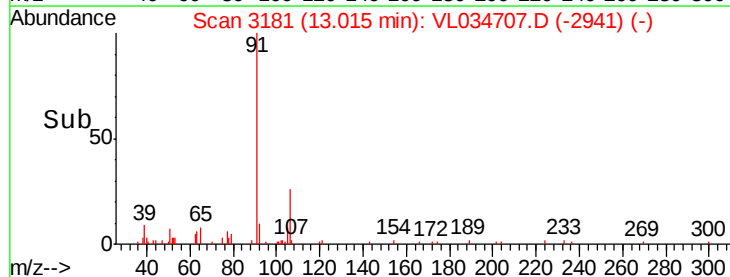
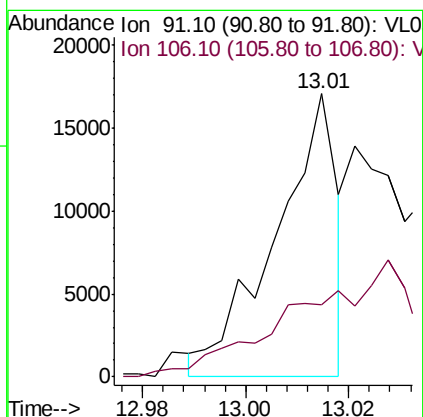
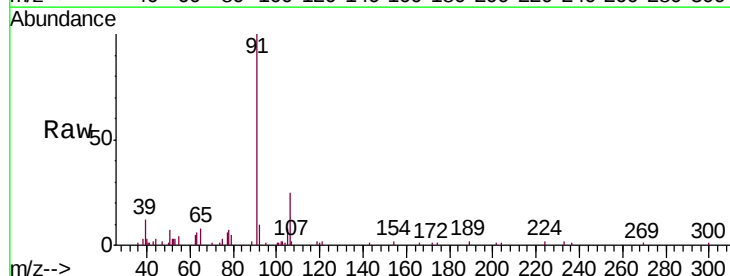
Instrument :
MSVOA_L
ClientSampleId :
IAS-1-M-ELECT-RM

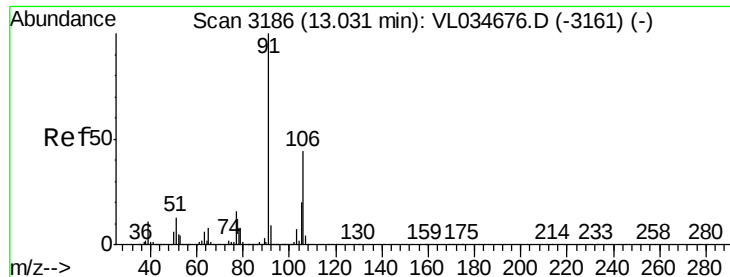
Tgt Ion: 117 Resp: 1878841
Ion Ratio Lower Upper
117 100
82 72.8 54.1 81.1
119 33.4 27.6 41.4



#58
Ethyl Benzene
Concen: 0.062 ppbv
RT: 13.01 min Scan# 3181
Delta R.T. 0.27 min
Lab File: VL034707.D
Acq: 27 Feb 2020 13:55

Tgt Ion: 91 Resp: 14122
Ion Ratio Lower Upper
91 100
106 24.5 24.0 36.0





#59

m/p-Xylene

Concen: 0.025 ppbv

RT: 13.06 min Scan# 3195

Delta R.T. 0.03 min

Lab File: VL034707.D

Acq: 27 Feb 2020 13:55

Instrument :

MSVOA_L

ClientSampleId :

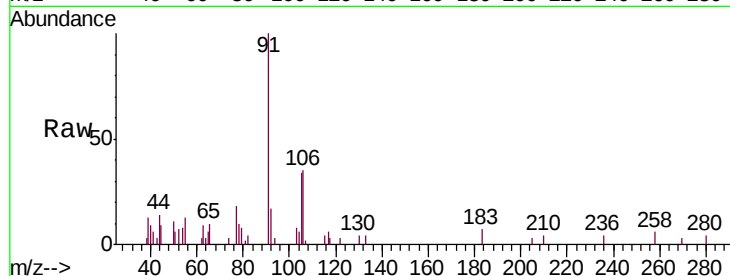
IAS-1-M-ELECT-RM

Tgt Ion: 91 Resp: 5018

Ion Ratio Lower Upper

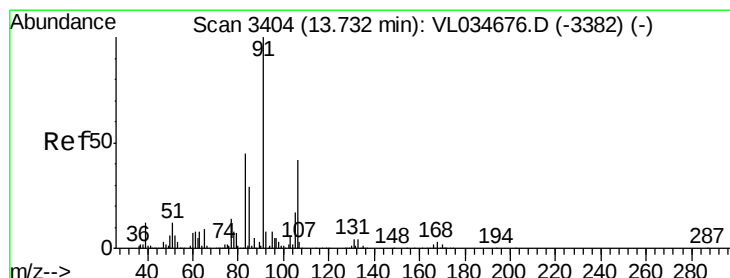
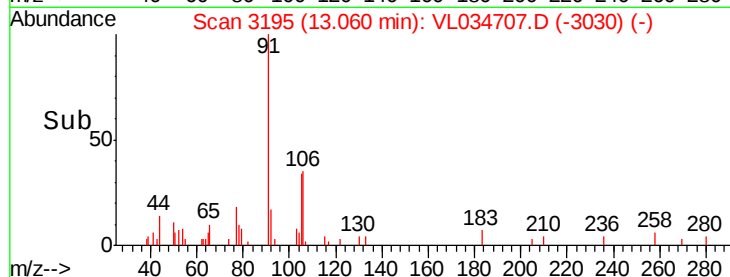
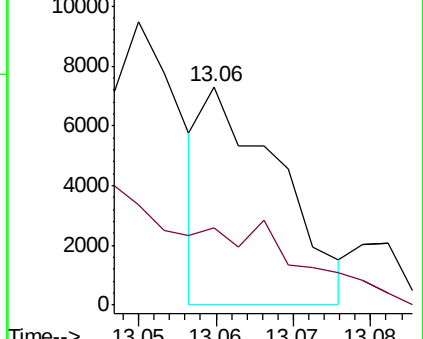
91 100

106 0.0 35.6 53.4#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#60

o-Xylene

Concen: 0.031 ppbv

RT: 13.76 min Scan# 3412

Delta R.T. 0.03 min

Lab File: VL034707.D

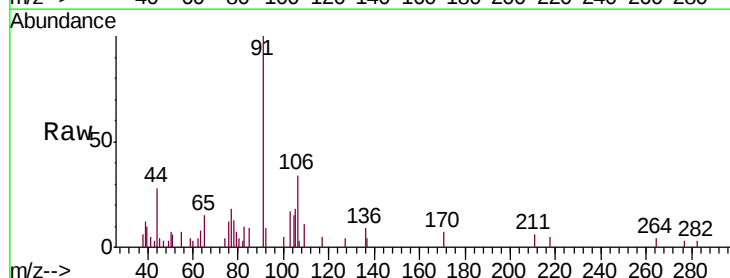
Acq: 27 Feb 2020 13:55

Tgt Ion: 91 Resp: 6104

Ion Ratio Lower Upper

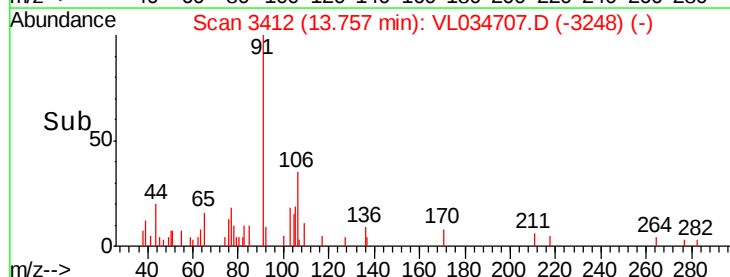
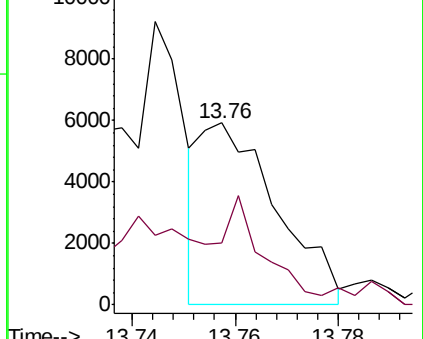
91 100

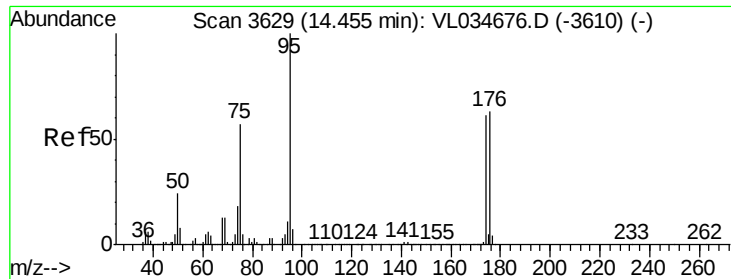
106 107.1 21.9 65.5#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

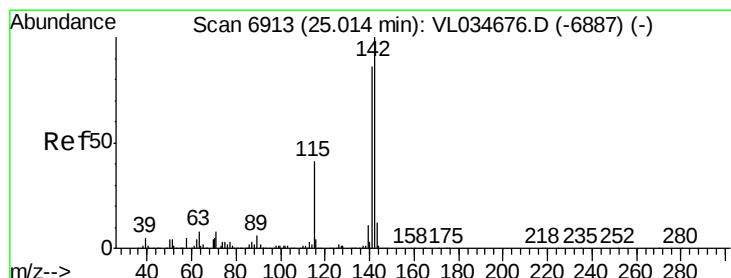
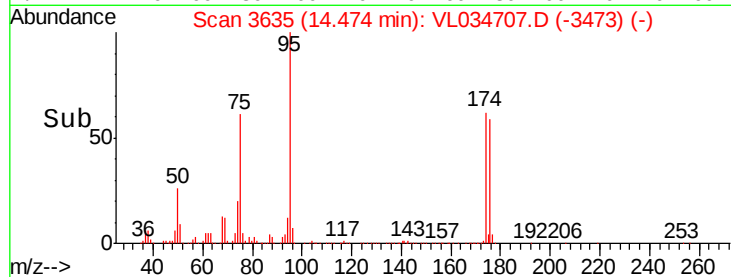
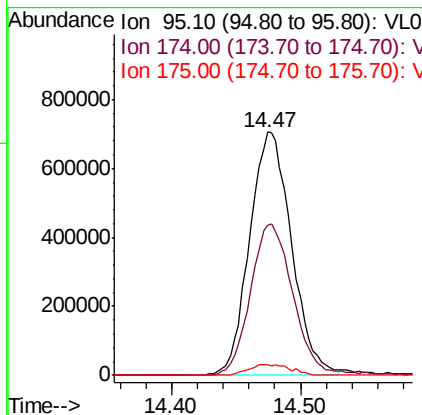
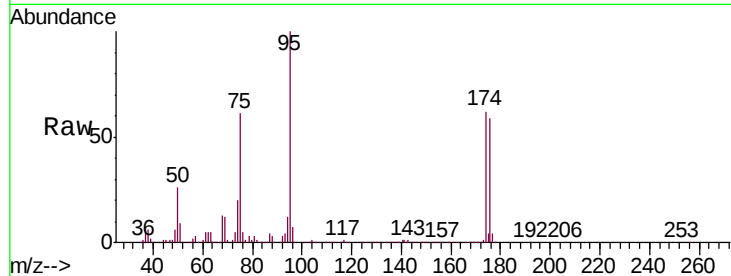




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.386 ppbv
 RT: 14.47 min Scan# 3635
 Delta R.T. 0.02 min
 Lab File: VL034707.D
 Acq: 27 Feb 2020 13:55

Instrument :
 MSVOA_L
 ClientSampleId :
 IAS-1-M-ELECT-RM

Tgt Ion: 95 Resp: 1600041
 Ion Ratio Lower Upper
 95 100
 174 63.8 50.7 76.1
 175 4.6 3.9 5.9



#80
 Naphthalene, 2-methyl-
 Concen: 0.025 ppbv
 RT: 25.05 min Scan# 6925
 Delta R.T. 0.04 min
 Lab File: VL034707.D
 Acq: 27 Feb 2020 13:55

Tgt Ion: 142 Resp: 1570
 Ion Ratio Lower Upper
 142 100
 141 127.2 66.5 99.7#
 115 26.2 30.6 46.0#

