

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL031620\
 Data File : VL034890.D
 Acq On : 16 Mar 2020 14:41
 Operator : SY/AP
 Sample : L1924-01
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-03

Quant Time: Mar 17 04:26:10 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL030920AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Mar 09 16:42:53 2020
 QLast Update : Mon Mar 09 16:42:53 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	942997	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	2041472	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.10	117	1972910	10.00	ppbv	-0.01

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.44	95	1625751	10.57	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.70%

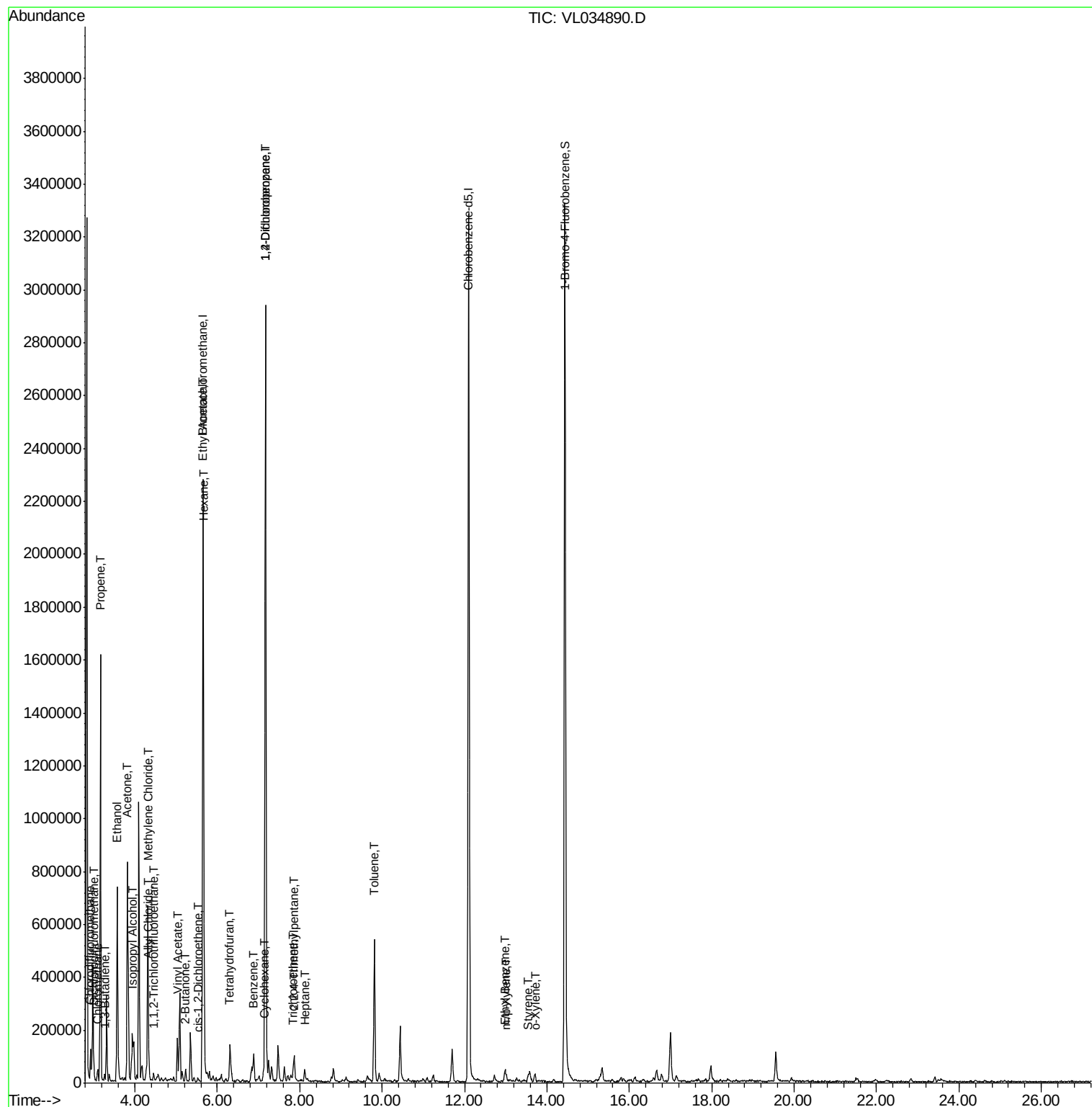
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.00	85	27975	0.217	ppbv 97
3) Chlorodifluoromethane	2.92	51	105819	1.005	ppbv # 75
4) Chloromethane	3.10	50	32126	0.540	ppbv 98
9) Propene	3.16	41	423921	8.429	ppbv 95
10) Heptane	8.12	43	12205	0.099	ppbv # 66
12) 1,1,2-Trichlorotrifluoroet	4.45	101	3817	0.040	ppbv # 1
13) Ethanol	3.57	45	685983	44.864	ppbv 95
15) Acetone	3.81	43	866561	7.090	ppbv 96
16) 1,3-Butadiene	3.26	39	4930	0.089	ppbv # 9
19) Isopropyl Alcohol	3.94	45	197287	2.556	ppbv # 44
20) Methylene Chloride	4.31	84	211187	5.465	ppbv 99
21) Allyl Chloride	4.34	41	5201	0.066	ppbv # 1
23) Vinyl Acetate	5.04	43	59243	0.328	ppbv # 1
25) Ethyl Acetate	5.66	43	244027	1.121	ppbv # 94
26) Hexane	5.67	57	211472	2.255	ppbv # 55
30) Cyclohexane	7.12	84	3936	0.050	ppbv # 1
31) cis-1,2-Dichloroethene	5.53	61	4760	0.050	ppbv # 90
34) 2-Butanone	5.23	43	47721	0.352	ppbv 97
36) Benzene	6.88	78	74718	0.411	ppbv 93
38) Trichloroethene	7.83	130	4888	0.071	ppbv # 54
39) 1,2-Dichloropropane	7.17	63	552986	7.670	ppbv # 23
41) Tetrahydrofuran	6.29	42	3597	0.049	ppbv # 40
44) 2,2,4-Trimethylpentane	7.86	57	51628	0.168	ppbv # 56
53) Toluene	9.81	91	384631	1.830	ppbv 100
58) Ethyl Benzene	12.99	91	32286	0.121	ppbv 91
59) m/p-Xylene	13.01	91	6845	0.031	ppbv # 30
60) o-Xylene	13.72	91	10601	0.049	ppbv 68
61) Styrene	13.55	104	7601	0.050	ppbv # 24

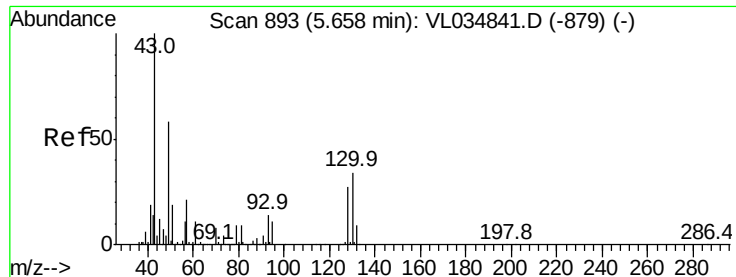
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. -0.01 min

Lab File: VL034890.D

Acq: 16 Mar 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

IA-03

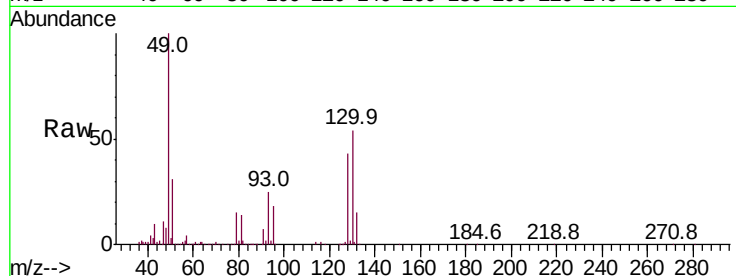
Tot Ion: 49 Resp: 942997

Ion Ratio Lower Upper

49 100

128 44.8 23.4 70.3

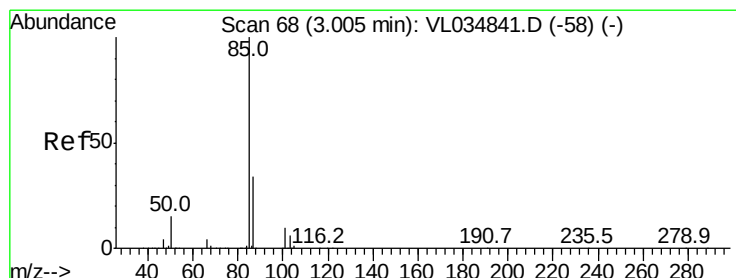
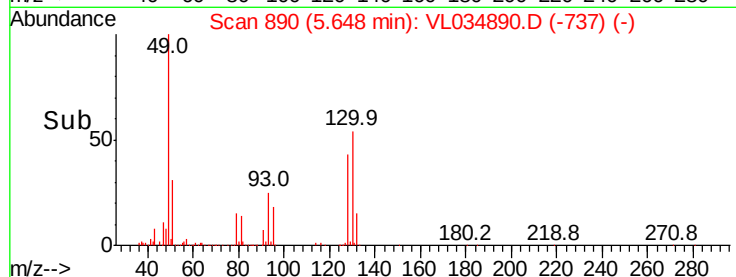
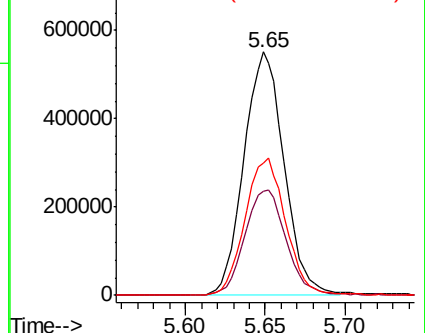
130 57.7 30.0 90.0



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: 0.217 ppbv

RT: 3.00 min Scan# 67

Delta R.T. -0.00 min

Lab File: VL034890.D

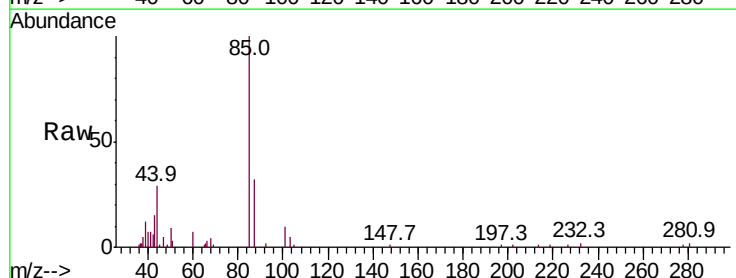
Acq: 16 Mar 2020 14:41

Tgt Ion: 85 Resp: 27975

Ion Ratio Lower Upper

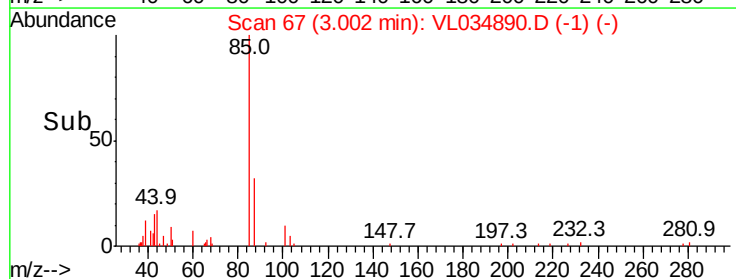
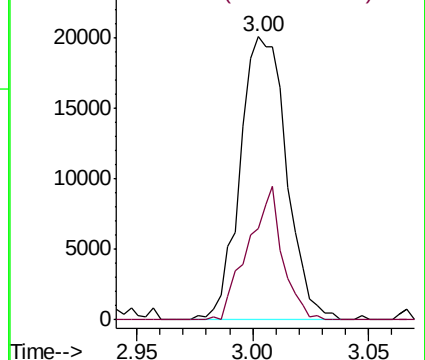
85 100

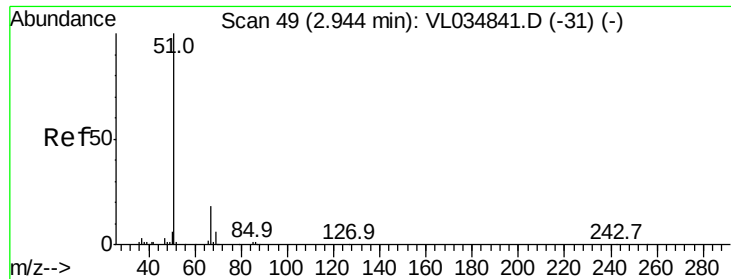
87 32.2 26.9 40.3



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 1.005 ppbv

RT: 2.92 min Scan# 41

Delta R.T. -0.03 min

Lab File: VL034890.D

Acq: 16 Mar 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

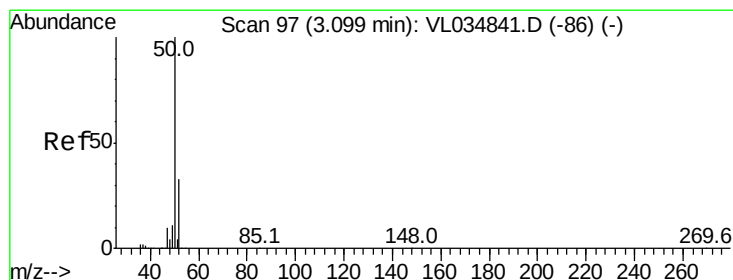
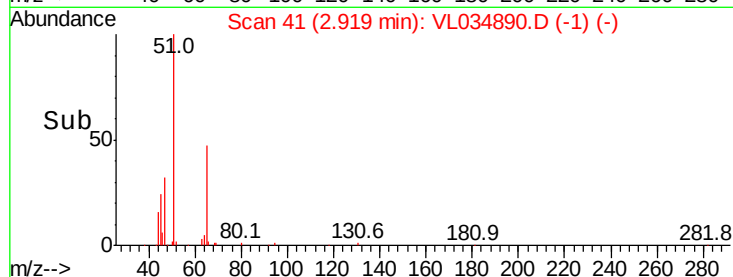
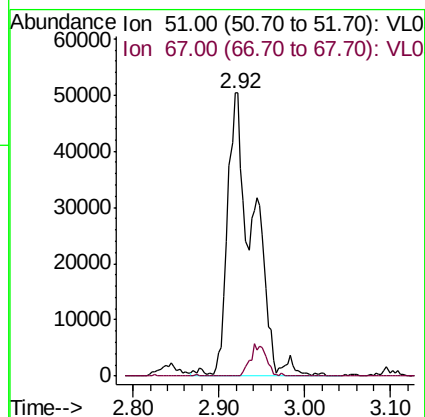
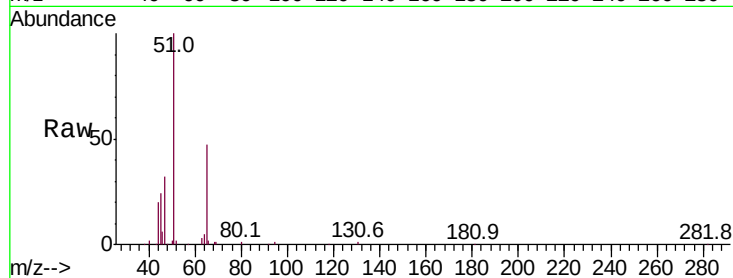
IA-03

Tot Ion: 51 Resp: 105819

Ion Ratio Lower Upper

51 100

67 6.8 14.3 21.5#



#4

Chloromethane

Concen: 0.540 ppbv

RT: 3.10 min Scan# 97

Delta R.T. 0.00 min

Lab File: VL034890.D

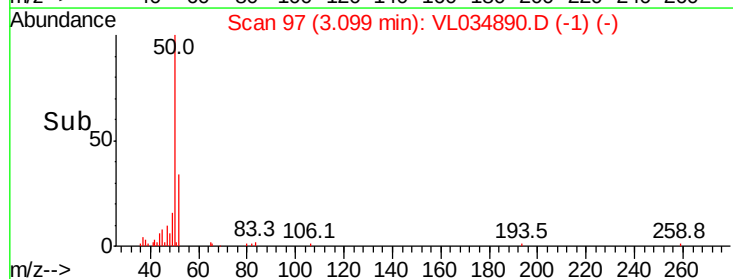
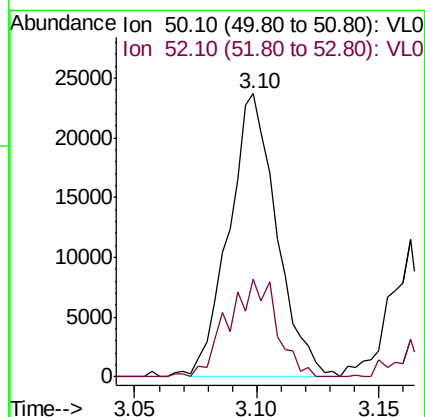
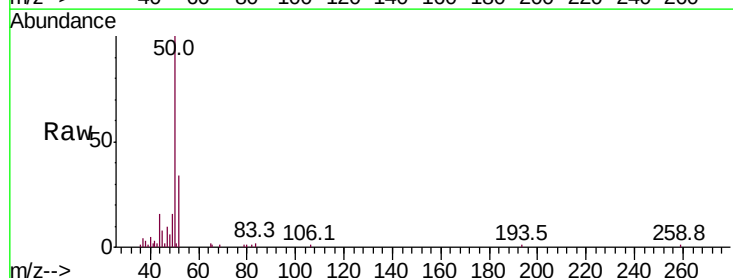
Acq: 16 Mar 2020 14:41

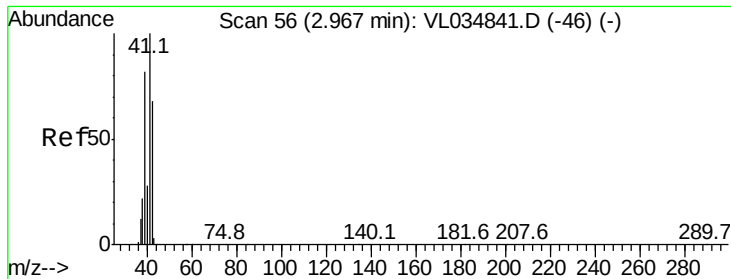
Tgt Ion: 50 Resp: 32126

Ion Ratio Lower Upper

50 100

52 34.4 26.8 40.2





#9

Propene

Concen: 8.429 ppbv

RT: 3.16 min Scan# 117

Delta R.T. 0.20 min

Lab File: VL034890.D

Acq: 16 Mar 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

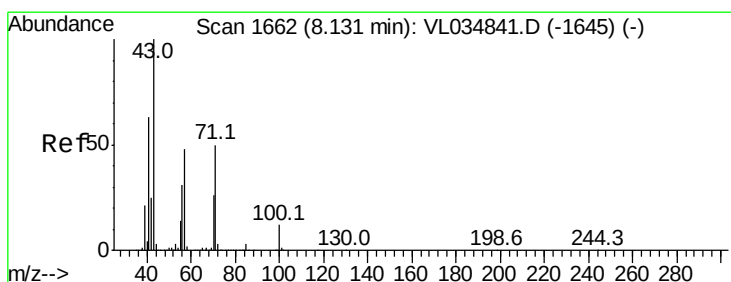
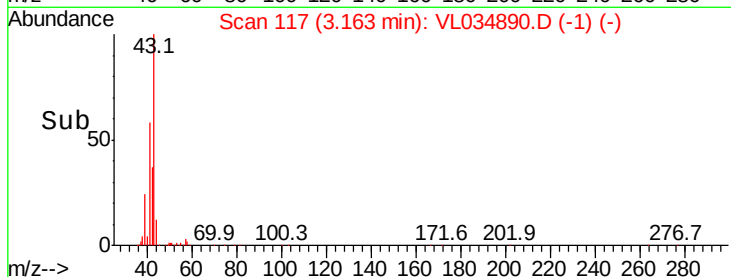
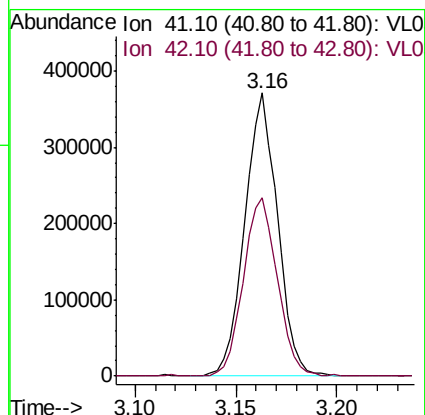
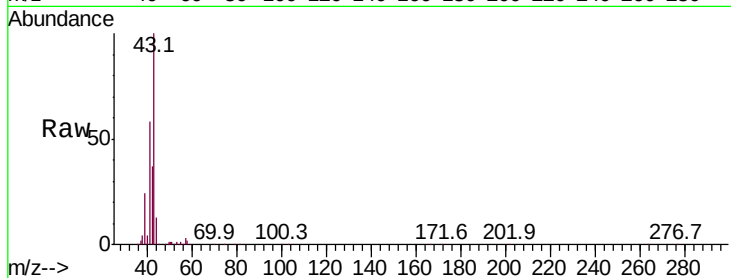
IA-03

Tot Ion: 41 Resp: 423921

Ion Ratio Lower Upper

41 100

42 65.3 55.2 82.8



#10

Heptane

Concen: 0.099 ppbv

RT: 8.12 min Scan# 1659

Delta R.T. -0.01 min

Lab File: VL034890.D

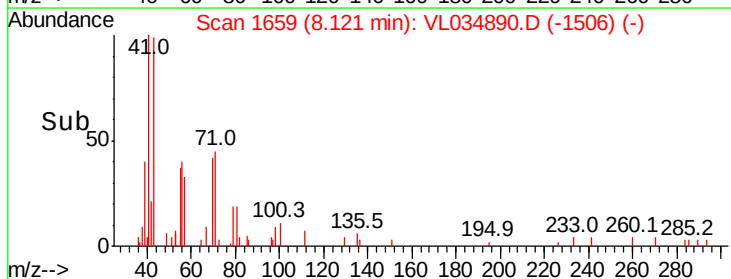
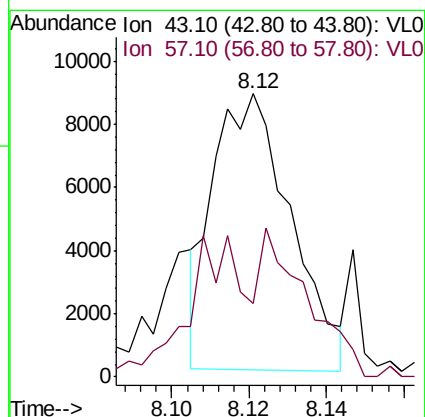
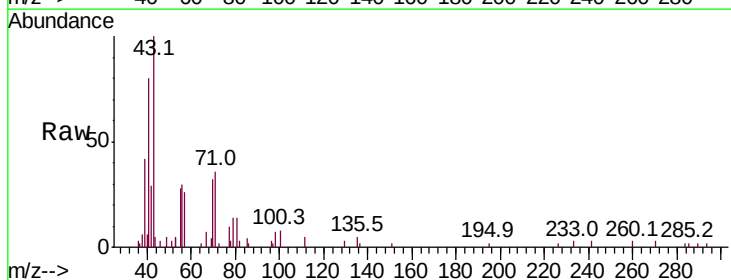
Acq: 16 Mar 2020 14:41

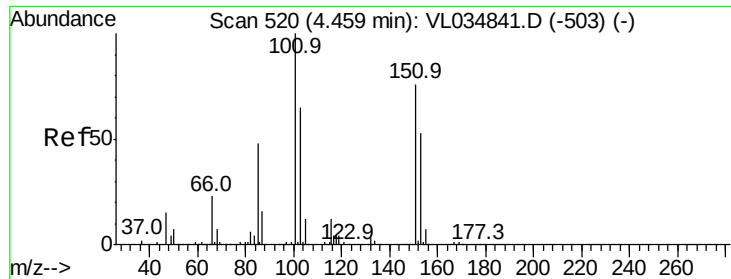
Tgt Ion: 43 Resp: 12205

Ion Ratio Lower Upper

43 100

57 73.0 39.7 59.5#





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.040 ppbv

RT: 4.45 min Scan# 517

Delta R.T. -0.01 min

Lab File: VL034890.D

Acq: 16 Mar 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

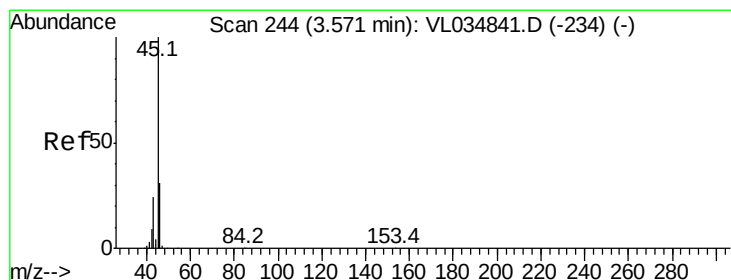
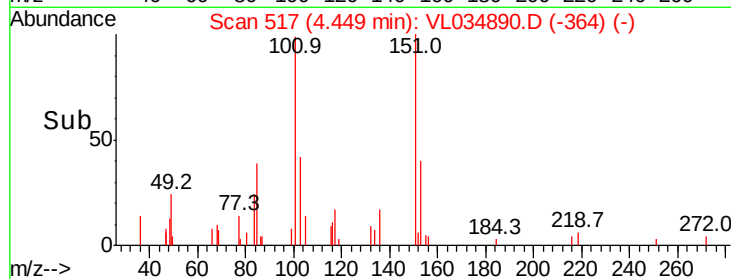
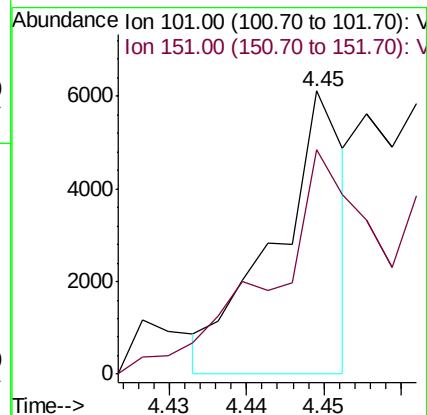
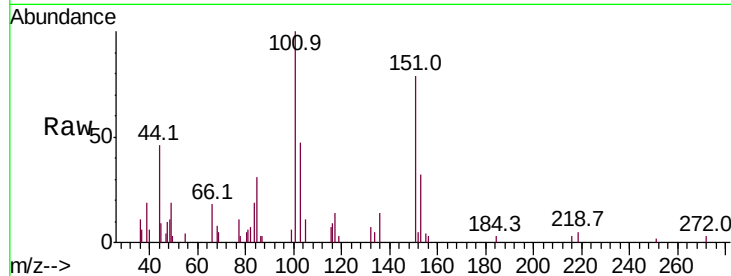
IA-03

Tot Ion:101 Resp: 3817

Ion Ratio Lower Upper

101 100

151 193.0 60.8 91.2#



#13

Ethanol

Concen: 44.864 ppbv

RT: 3.57 min Scan# 243

Delta R.T. -0.00 min

Lab File: VL034890.D

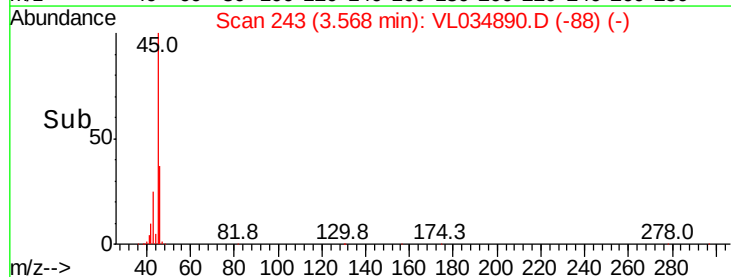
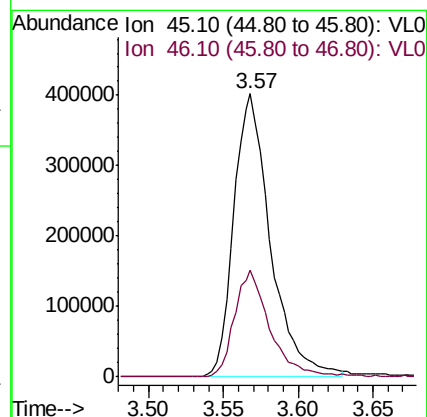
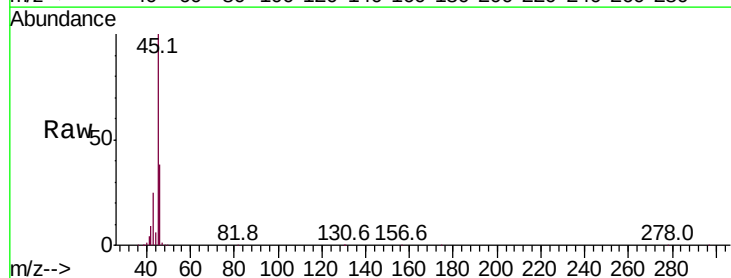
Acq: 16 Mar 2020 14:41

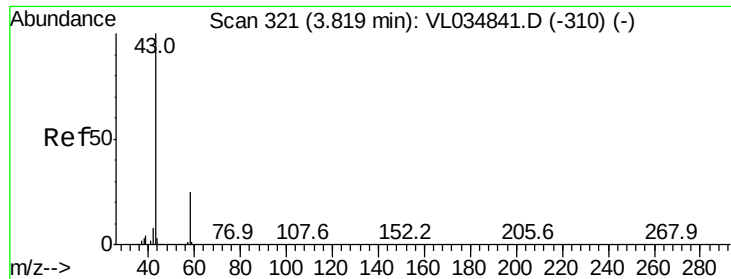
Tgt Ion: 45 Resp: 685983

Ion Ratio Lower Upper

45 100

46 36.6 16.0 64.0





#15

Acetone

Concen: 7.090 ppbv

RT: 3.81 min Scan# 319

Delta R.T. -0.01 min

Lab File: VL034890.D

Acq: 16 Mar 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

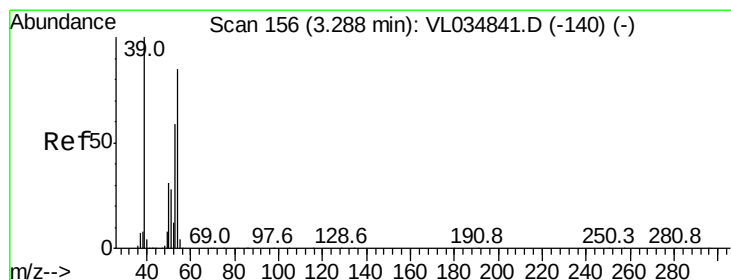
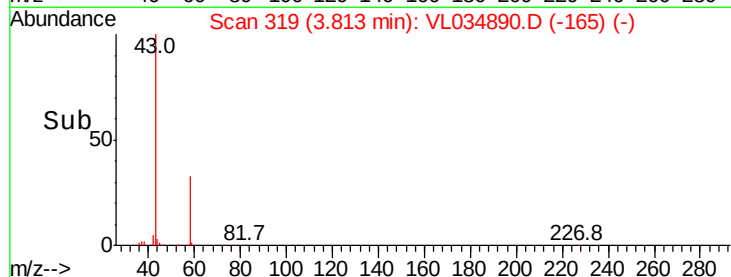
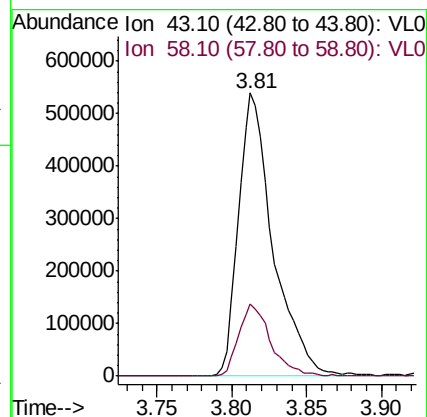
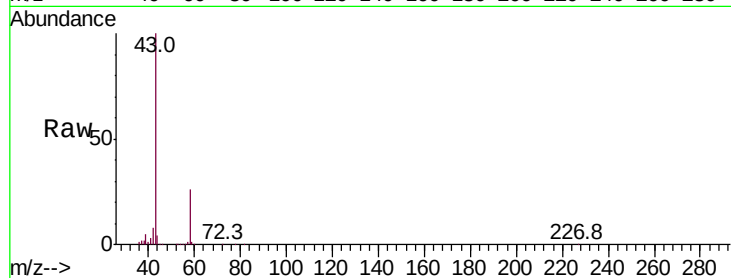
IA-03

Tot Ion: 43 Resp: 866561

Ion Ratio Lower Upper

43 100

58 24.1 21.0 31.6



#16

1,3-Butadiene

Concen: 0.089 ppbv

RT: 3.26 min Scan# 148

Delta R.T. -0.03 min

Lab File: VL034890.D

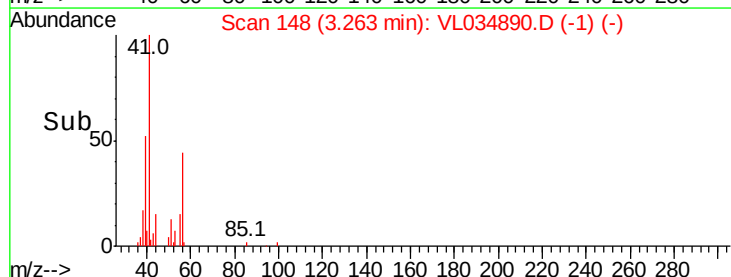
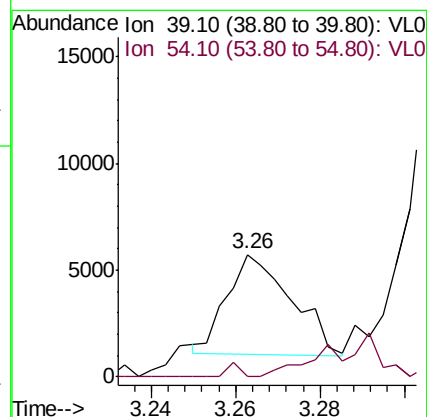
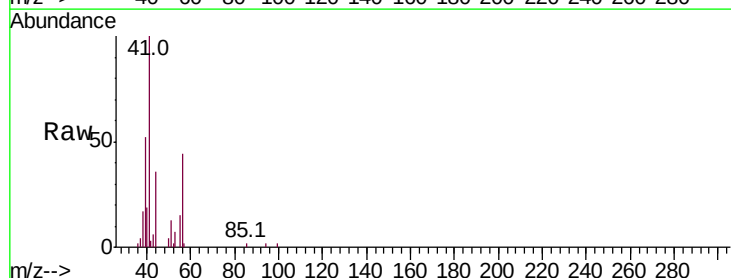
Acq: 16 Mar 2020 14:41

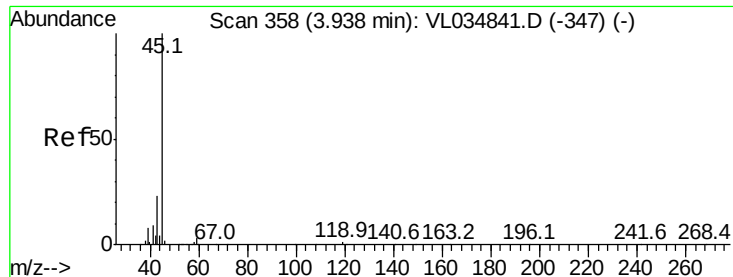
Tgt Ion: 39 Resp: 4930

Ion Ratio Lower Upper

39 100

54 0.0 65.0 97.6#





#19

Isopropyl Alcohol

Concen: 2.556 ppbv

RT: 3.94 min Scan# 359

Delta R.T. 0.00 min

Lab File: VL034890.D

Acq: 16 Mar 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

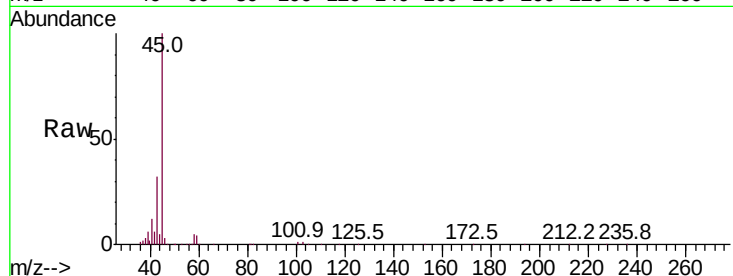
IA-03

Tot Ion: 45 Resp: 197287

Ion Ratio Lower Upper

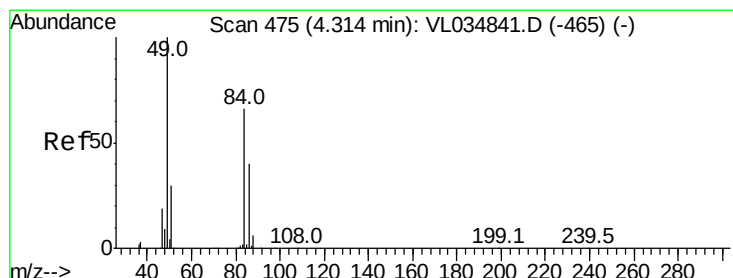
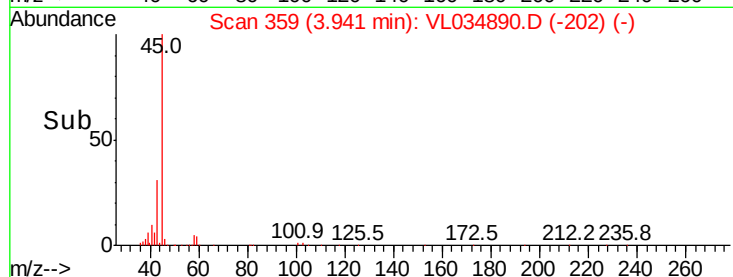
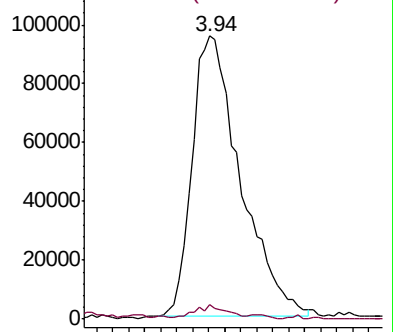
45 100

58 4.4 30.5 45.7#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 5.465 ppbv

RT: 4.31 min Scan# 475

Delta R.T. 0.00 min

Lab File: VL034890.D

Acq: 16 Mar 2020 14:41

Tgt Ion: 84 Resp: 211187

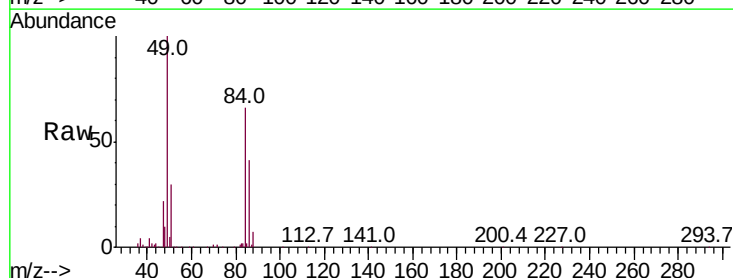
Ion Ratio Lower Upper

84 100

49 152.0 121.5 182.3

51 44.6 36.6 55.0

86 61.6 48.2 72.2

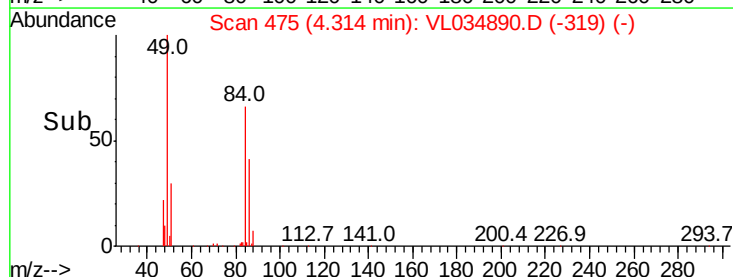
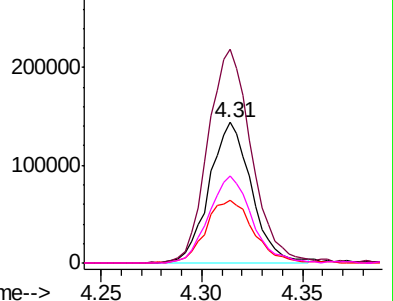


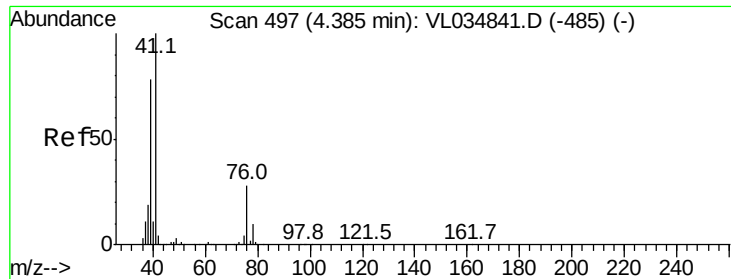
Abundance Ion 84.00 (83.70 to 84.70): VL0

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

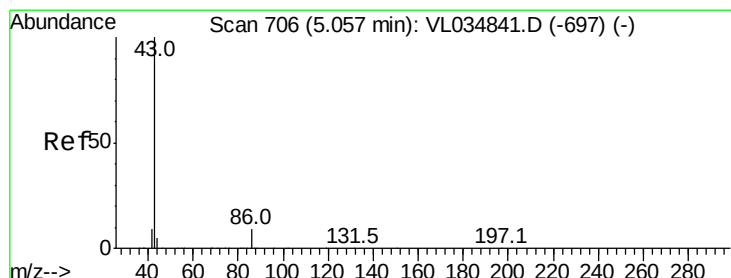
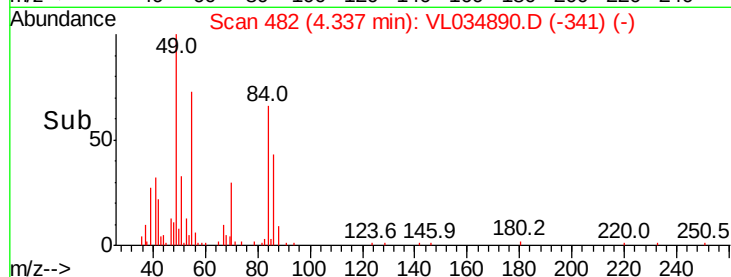
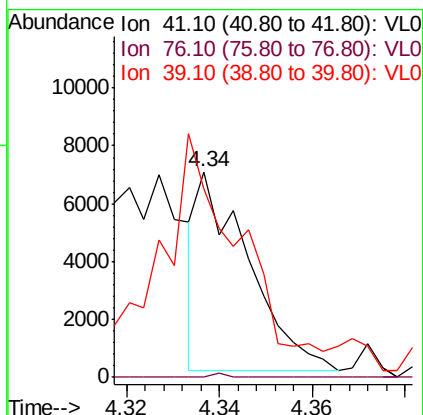
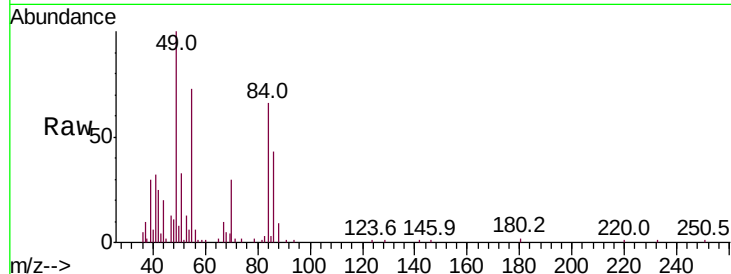




#21
Allvl Chloride
Concen: 0.066 ppbv
RT: 4.34 min Scan# 482
Delta R.T. -0.05 min
Lab File: VL034890.D
Acq: 16 Mar 2020 14:41

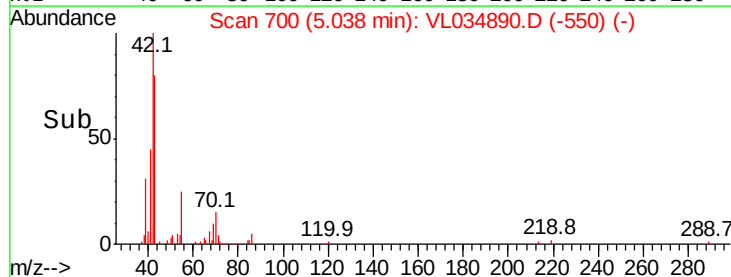
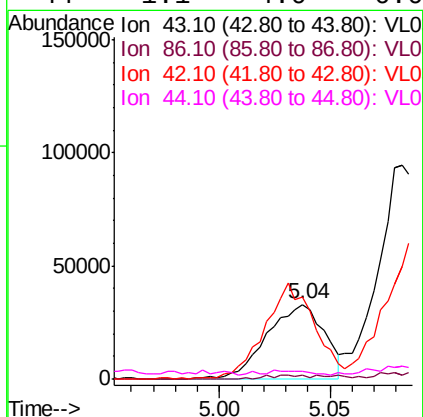
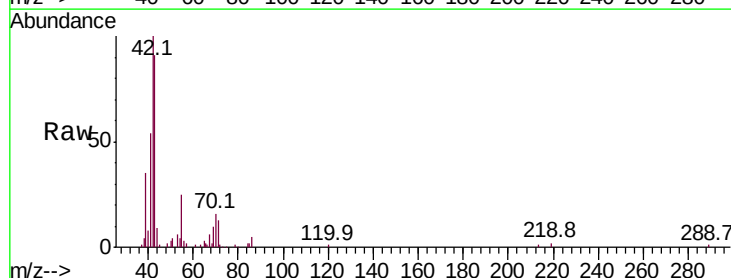
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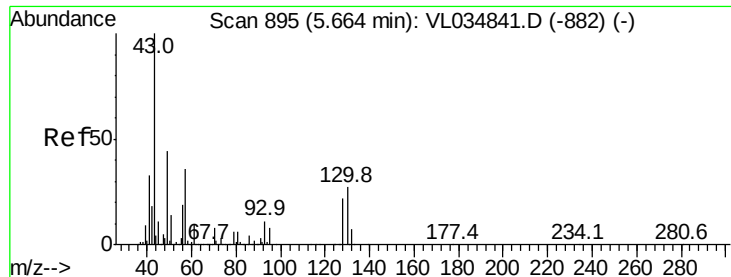
Tot Ion: 41 Resp: 5201
Ion Ratio Lower Upper
41 100
76 0.0 22.2 33.2#
39 207.1 62.6 93.8#



#23
Vinyl Acetate
Concen: 0.328 ppbv
RT: 5.04 min Scan# 700
Delta R.T. -0.02 min
Lab File: VL034890.D
Acq: 16 Mar 2020 14:41

Tgt Ion: 43 Resp: 59243
Ion Ratio Lower Upper
43 100
86 5.5 6.3 9.5#
42 109.6 7.8 11.8#
44 1.1 4.0 6.0#

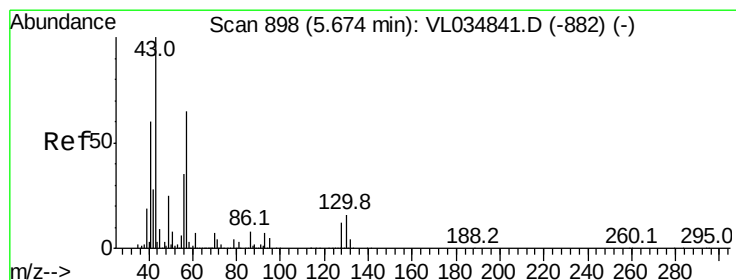
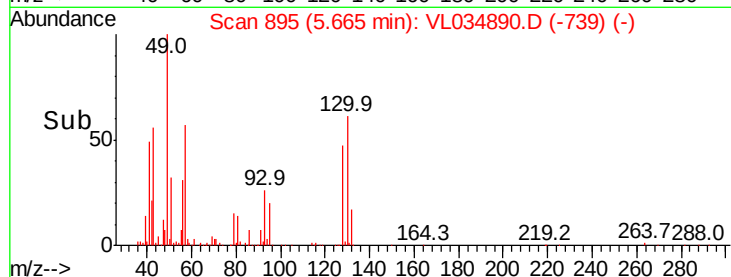
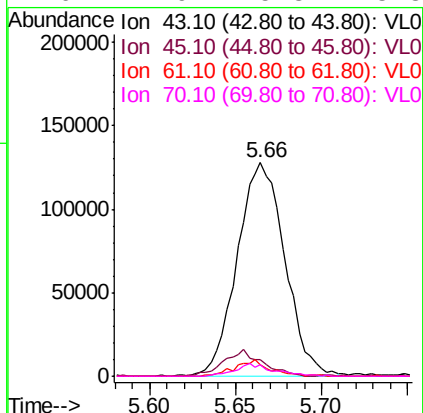
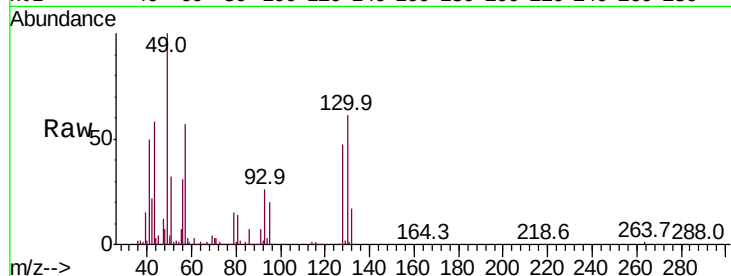




#25
Ethyl Acetate
Concen: 1.121 ppbv
RT: 5.66 min Scan# 895
Delta R.T. 0.00 min
Lab File: VL034890.D
Acq: 16 Mar 2020 14:41

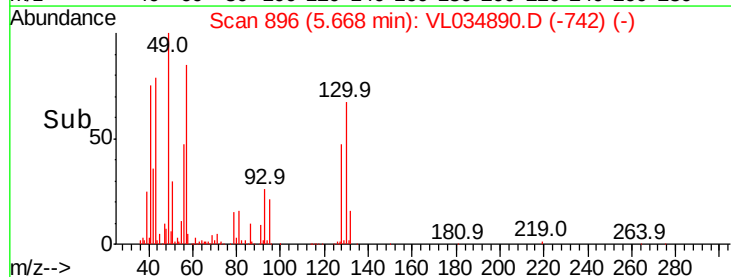
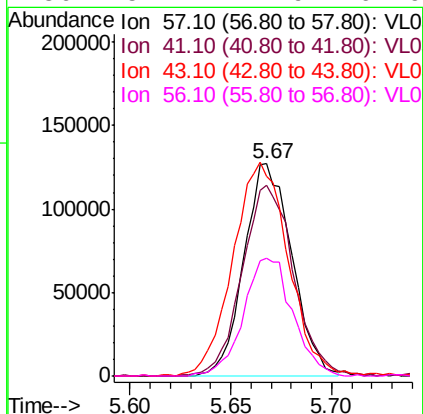
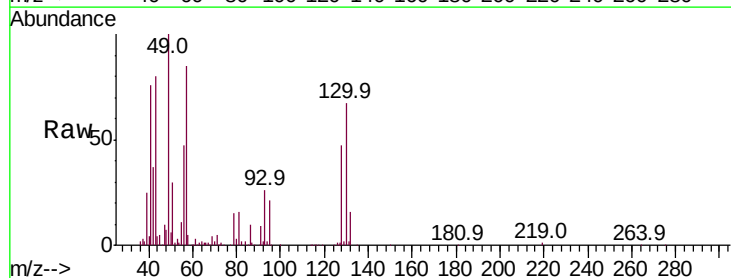
Instrument :
MSVOA_L
ClientSampleId :
IA-03

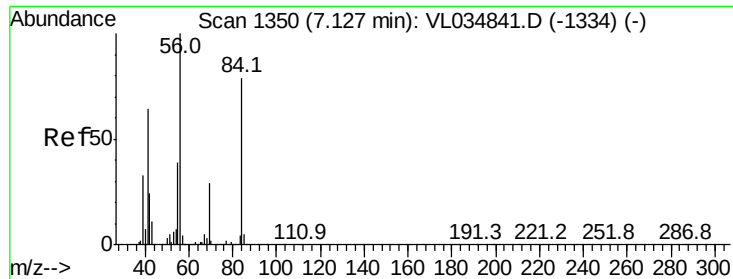
Tot Ion:	43	Resp:	244027
Ion	Ratio	Lower	Upper
43	100		
45	10.3	8.2	12.2
61	5.9	7.8	11.6#
70	4.9	5.8	8.8#



#26
Hexane
Concen: 2.255 ppbv
RT: 5.67 min Scan# 896
Delta R.T. -0.01 min
Lab File: VL034890.D
Acq: 16 Mar 2020 14:41

Tgt Ion:	57	Resp:	211472
Ion	Ratio	Lower	Upper
57	100		
41	97.0	72.6	109.0
43	116.9	183.8	275.6#
56	57.2	41.9	62.9

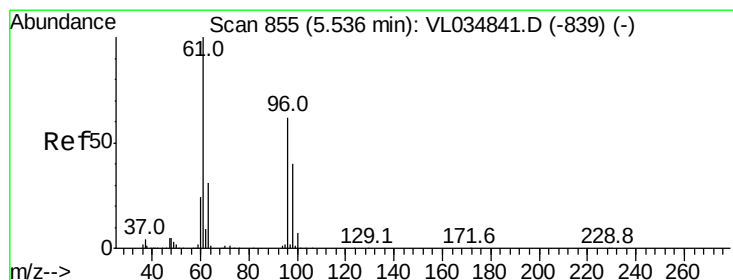
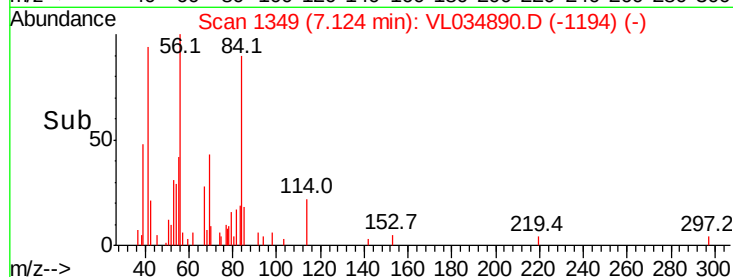
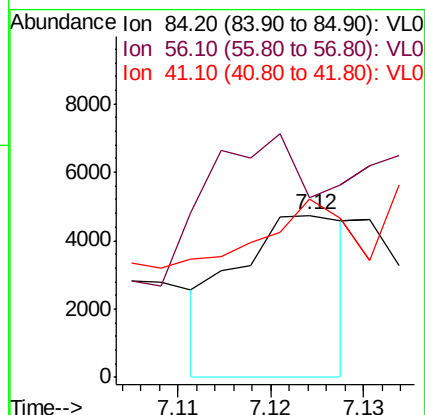
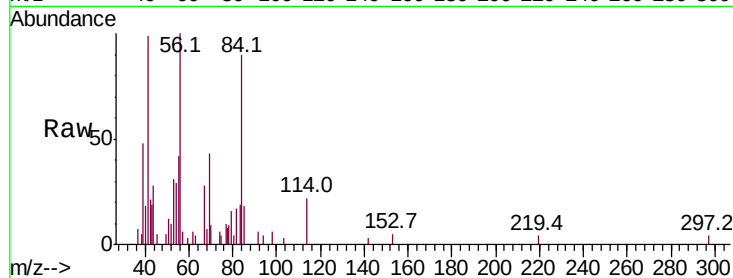




#30
Cyclohexane
Concen: 0.050 ppbv
RT: 7.12 min Scan# 1349
Delta R.T. -0.00 min
Lab File: VL034890.D
Acq: 16 Mar 2020 14:41

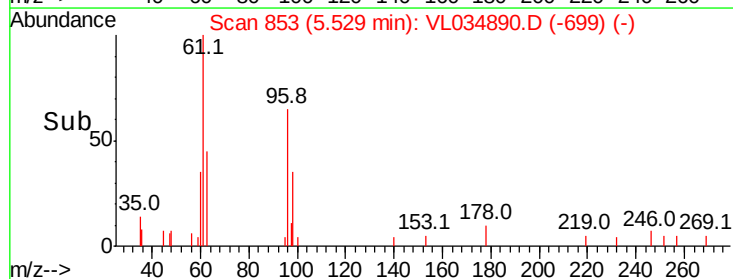
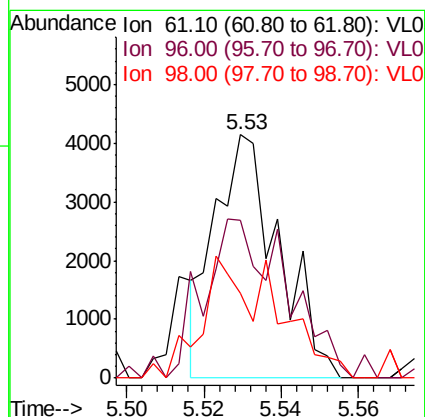
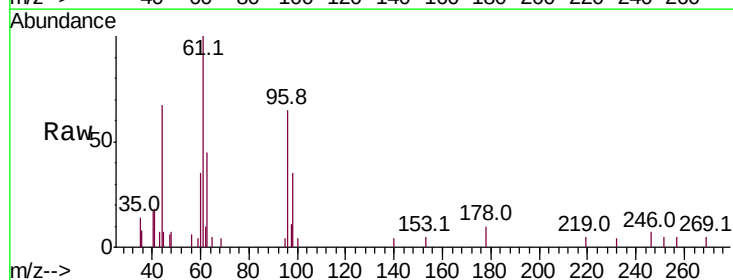
Instrument :
MSVOA_L
ClientSampleId :
IA-03

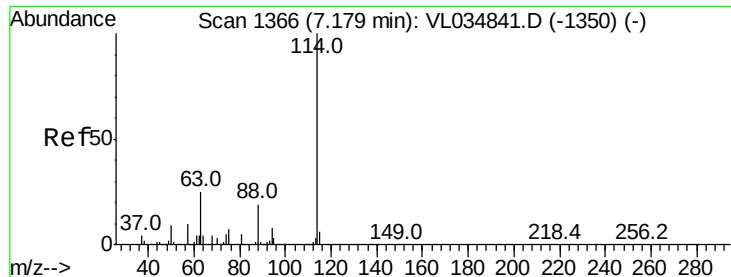
Tot Ion: 84 Resp: 3936
Ion Ratio Lower Upper
84 100
56 0.0 110.5 165.7#
41 0.0 68.2 102.4#



#31
cis-1,2-Dichloroethene
Concen: 0.050 ppbv
RT: 5.53 min Scan# 853
Delta R.T. -0.01 min
Lab File: VL034890.D
Acq: 16 Mar 2020 14:41

Tgt Ion: 61 Resp: 4760
Ion Ratio Lower Upper
61 100
96 59.6 49.8 74.8
98 28.0 32.2 48.4#

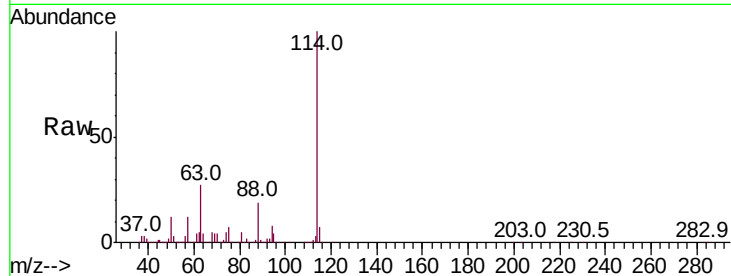




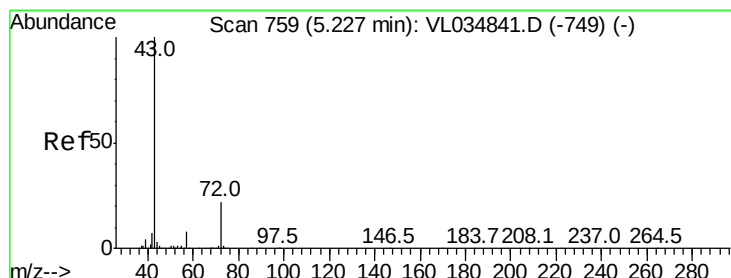
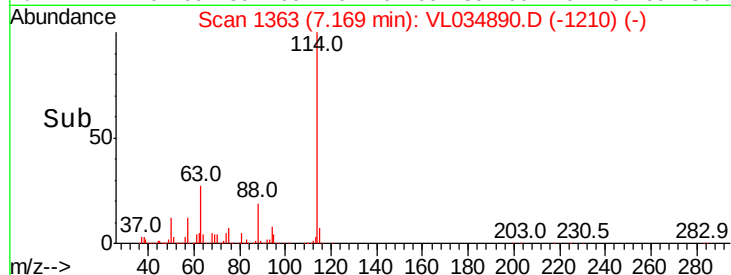
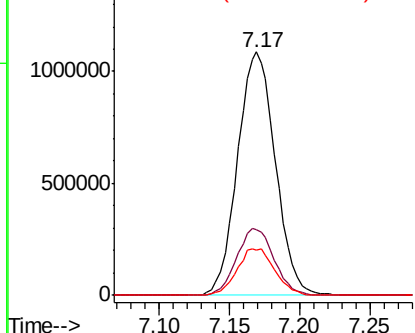
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17 min Scan# 1363
 Delta R.T. -0.01 min
 Lab File: VL034890.D
 Acq: 16 Mar 2020 14:41

Instrument :
 MSVOA_L
 ClientSampleID :
 IA-03

Tot Ion:114 Resp: 2041472
 Ion Ratio Lower Upper
 114 100
 63 27.3 20.6 31.0
 88 19.3 15.0 22.6

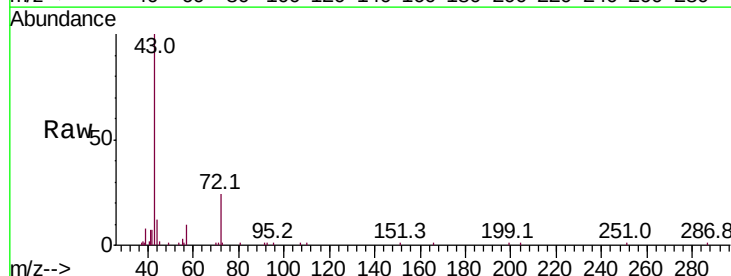


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

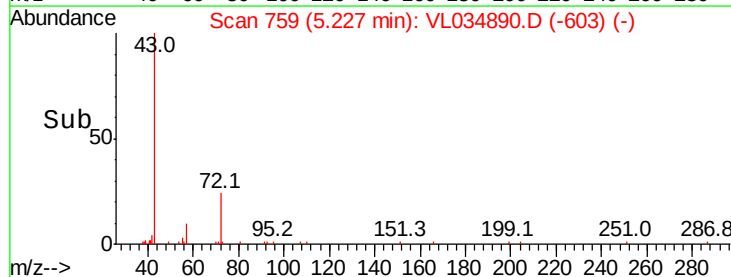
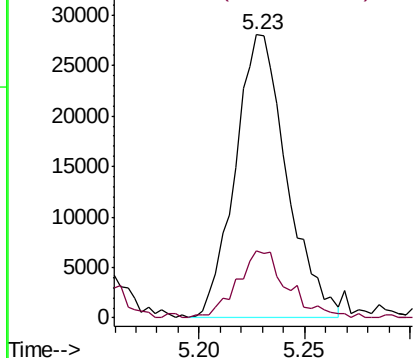


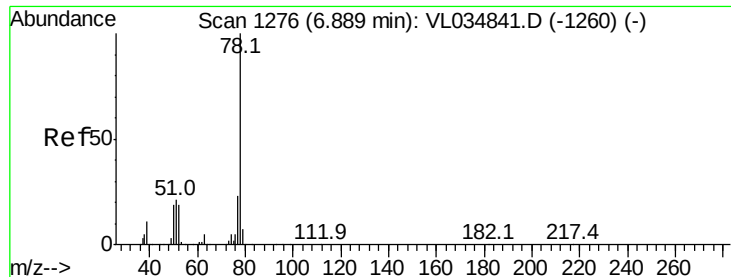
#34
 2-Butanone
 Concen: 0.352 ppbv
 RT: 5.23 min Scan# 759
 Delta R.T. 0.00 min
 Lab File: VL034890.D
 Acq: 16 Mar 2020 14:41

Tgt Ion: 43 Resp: 47721
 Ion Ratio Lower Upper
 43 100
 72 23.4 17.6 26.4



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.411 ppbv

RT: 6.88 min Scan# 1273

Delta R.T. -0.01 min

Lab File: VL034890.D

Acq: 16 Mar 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

IA-03

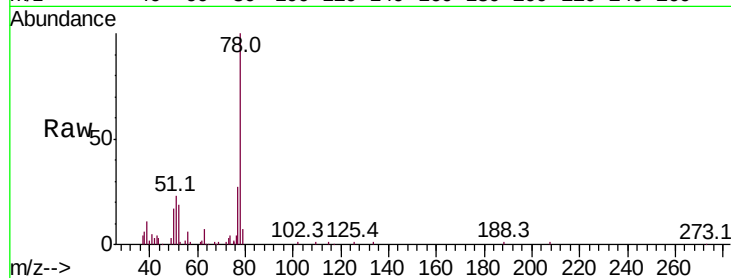
Tot Ion: 78 Resp: 74718

Ion Ratio Lower Upper

78 100

77 26.7 18.2 27.2

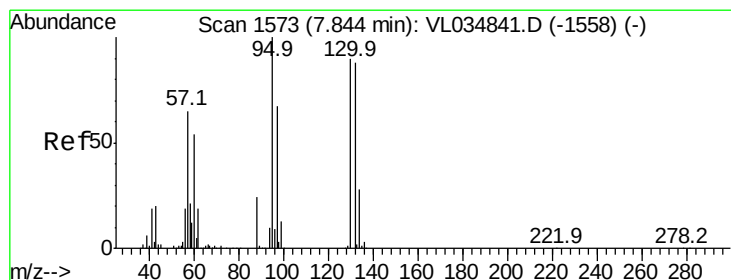
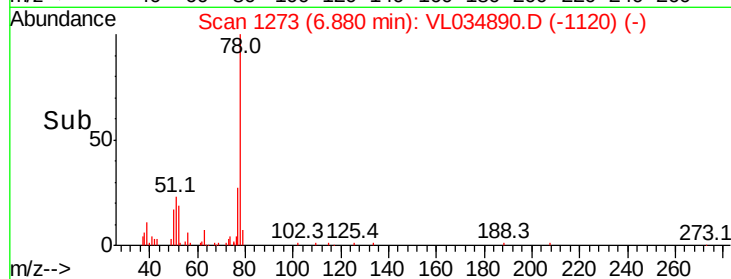
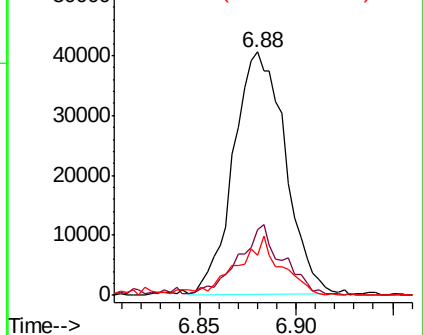
50 16.8 15.2 22.8



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



#38

Trichloroethene

Concen: 0.071 ppbv

RT: 7.83 min Scan# 1569

Delta R.T. -0.01 min

Lab File: VL034890.D

Acq: 16 Mar 2020 14:41

Tgt Ion:130 Resp: 4888

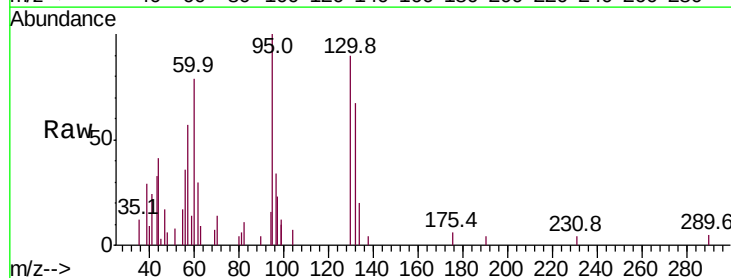
Ion Ratio Lower Upper

130 100

95 88.2 88.5 132.7#

132 50.8 78.0 117.0#

97 4.1 59.3 88.9#

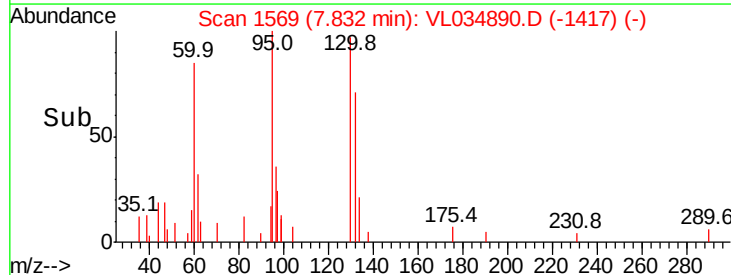
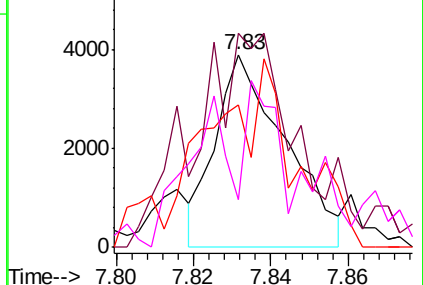


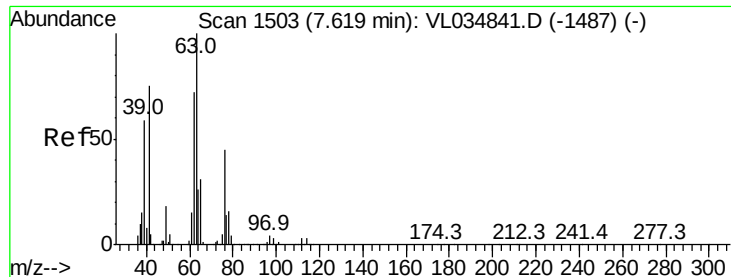
Abundance Ion 130.00 (129.70 to 130.70): V

Ion 95.00 (94.70 to 95.70): VL0

Ion 132.00 (131.70 to 132.70): V

Ion 97.00 (96.70 to 97.70): VL0





#39

1,2-Dichloropropane

Concen: 7.670 ppbv

RT: 7.17 min Scan# 1362

Delta R.T. -0.45 min

Lab File: VL034890.D

Acq: 16 Mar 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

IA-03

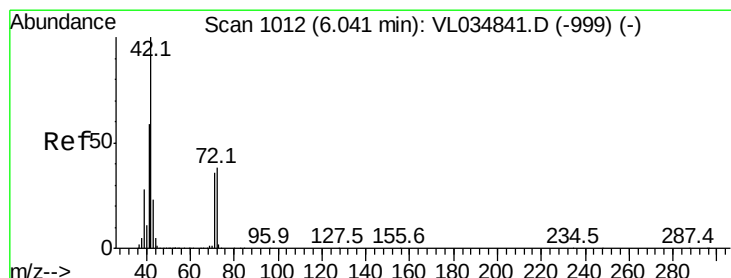
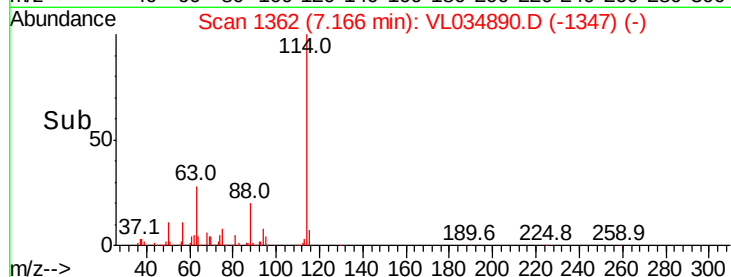
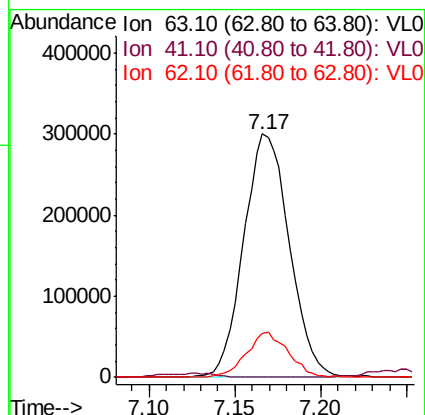
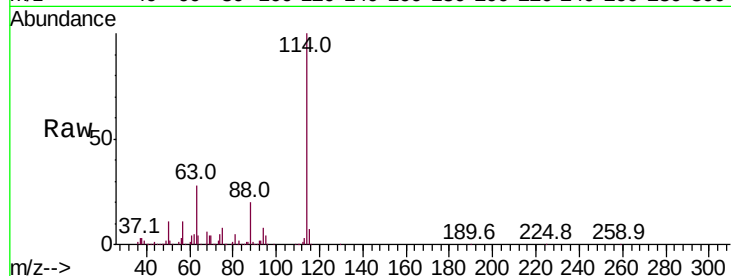
Tot Ion: 63 Resp: 552986

Ion Ratio Lower Upper

63 100

41 0.0 59.8 89.8#

62 17.9 57.6 86.4#



#41

Tetrahydrofuran

Concen: 0.049 ppbv

RT: 6.29 min Scan# 1090

Delta R.T. 0.25 min

Lab File: VL034890.D

Acq: 16 Mar 2020 14:41

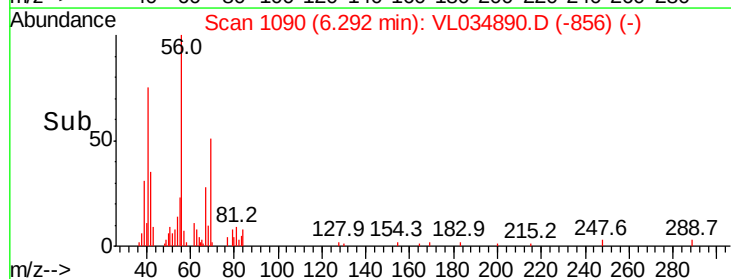
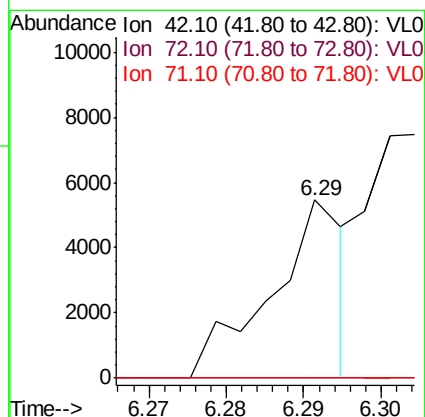
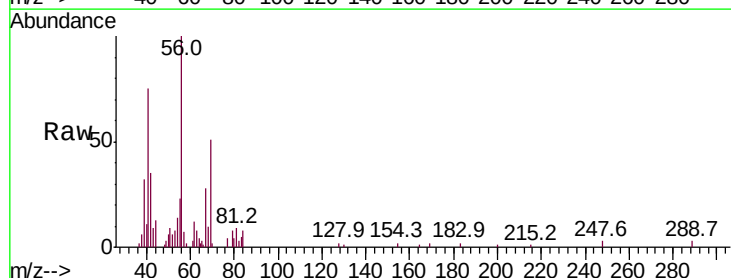
Tgt Ion: 42 Resp: 3597

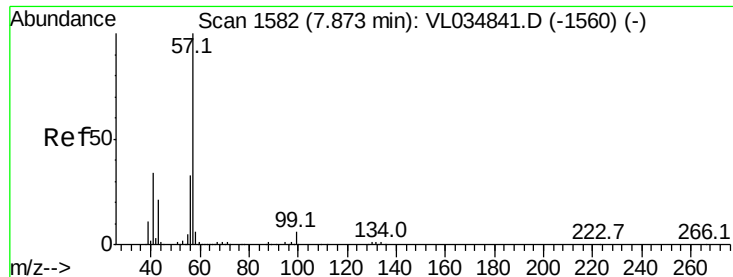
Ion Ratio Lower Upper

42 100

72 3.3 30.8 46.2#

71 0.0 30.1 45.1#

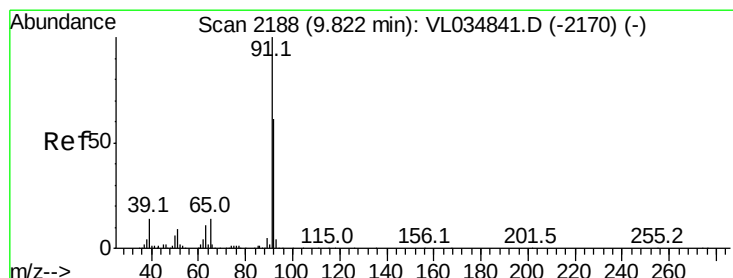
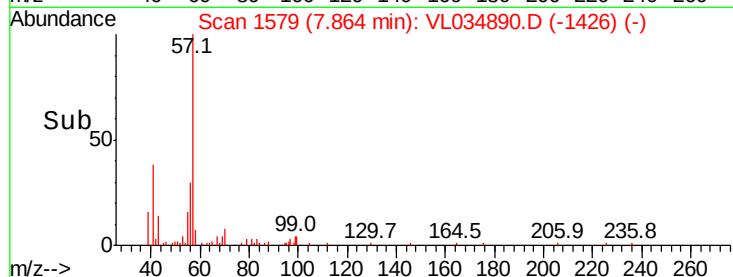
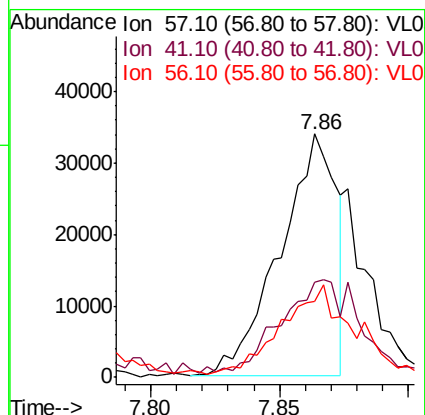
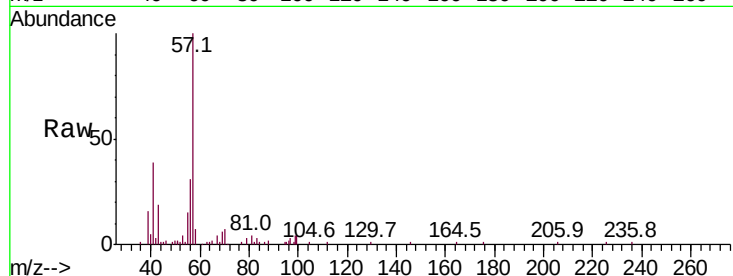




#44
 2,2,4-Trimethylpentane
 Concen: 0.168 ppbv
 RT: 7.86 min Scan# 1579
 Delta R.T. -0.01 min
 Lab File: VL034890.D
 Acq: 16 Mar 2020 14:41

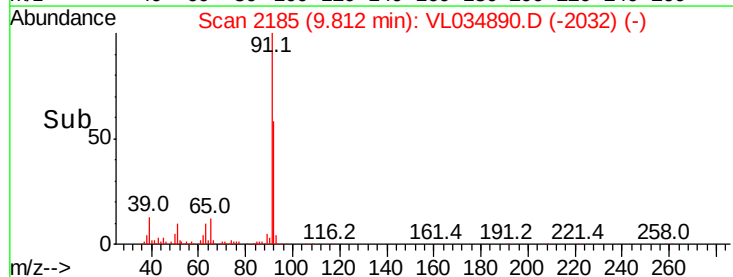
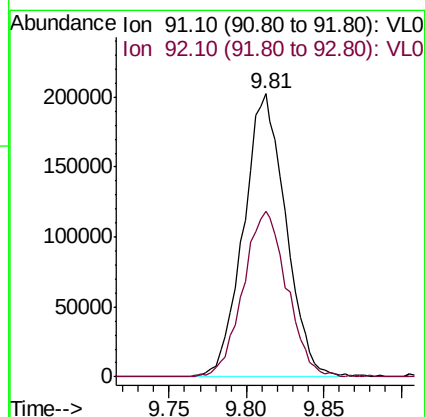
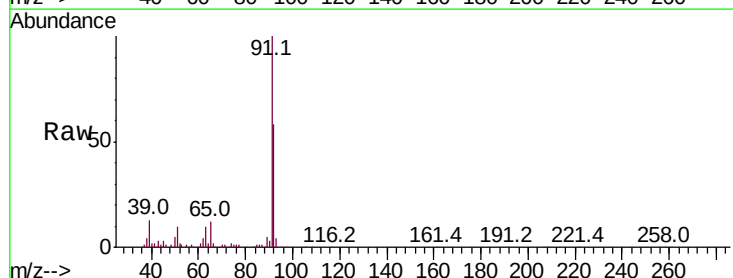
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-03

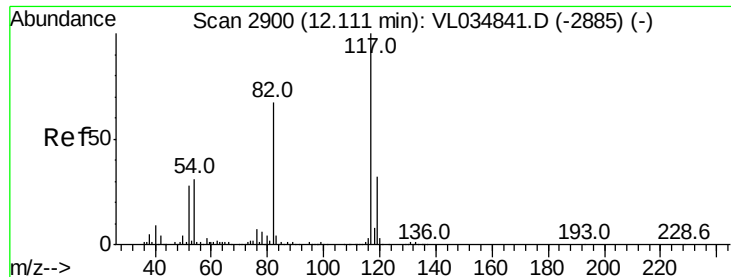
Tot Ion: 57 Resp: 51628
 Ion Ratio Lower Upper
 57 100
 41 61.5 26.2 39.4#
 56 51.1 25.0 37.4#



#53
 Toluene
 Concen: 1.830 ppbv
 RT: 9.81 min Scan# 2185
 Delta R.T. -0.01 min
 Lab File: VL034890.D
 Acq: 16 Mar 2020 14:41

Tgt Ion: 91 Resp: 384631
 Ion Ratio Lower Upper
 91 100
 92 60.4 48.6 72.8

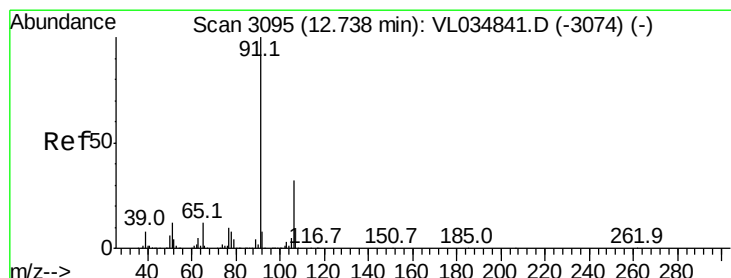
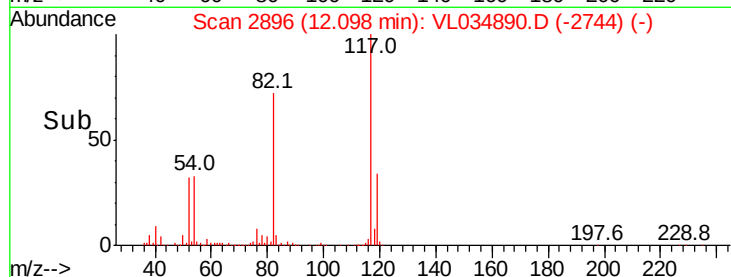
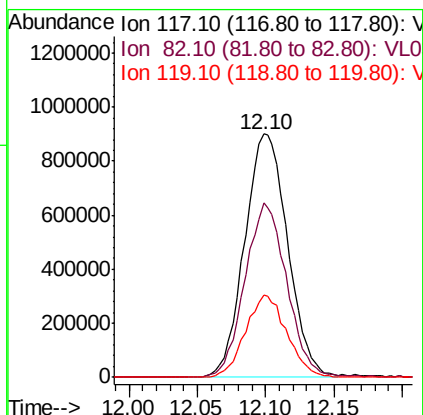
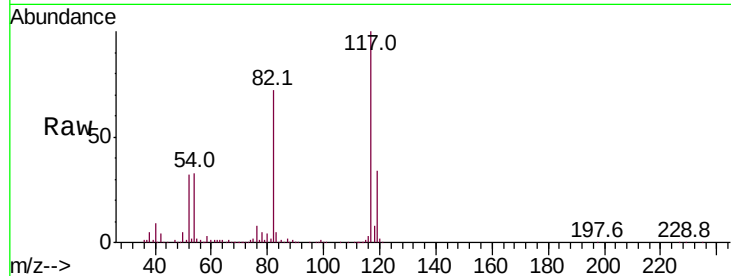




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.10 min Scan# 2896
Delta R.T. -0.01 min
Lab File: VL034890.D
Acq: 16 Mar 2020 14:41

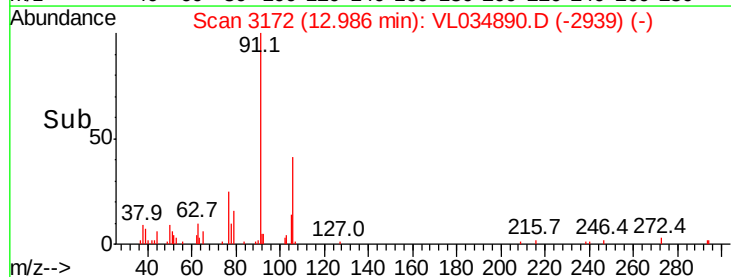
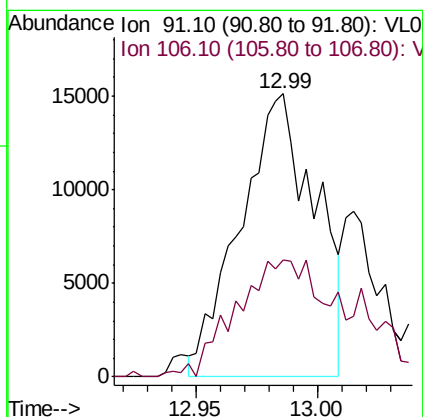
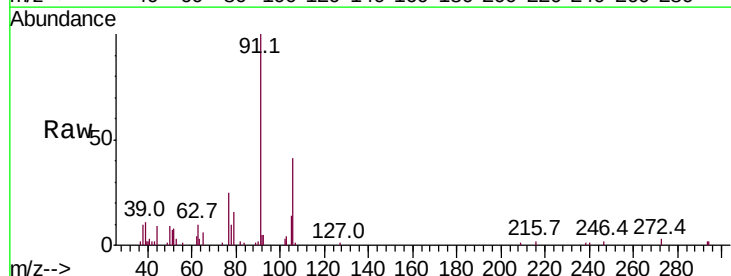
Instrument :
MSVOA_L
ClientSampleId :
IA-03

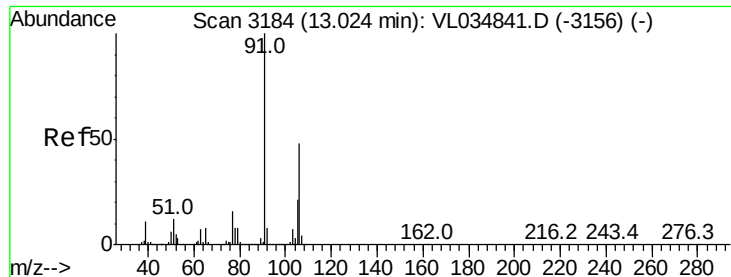
Tot Ion:117 Resp: 1972910
Ion Ratio Lower Upper
117 100
82 70.1 51.1 76.7
119 32.6 27.3 40.9



#58
Ethyl Benzene
Concen: 0.121 ppbv
RT: 12.99 min Scan# 3172
Delta R.T. 0.25 min
Lab File: VL034890.D
Acq: 16 Mar 2020 14:41

Tgt Ion: 91 Resp: 32286
Ion Ratio Lower Upper
91 100
106 37.5 25.8 38.6

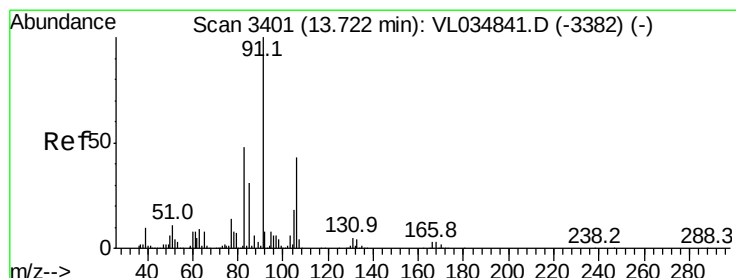
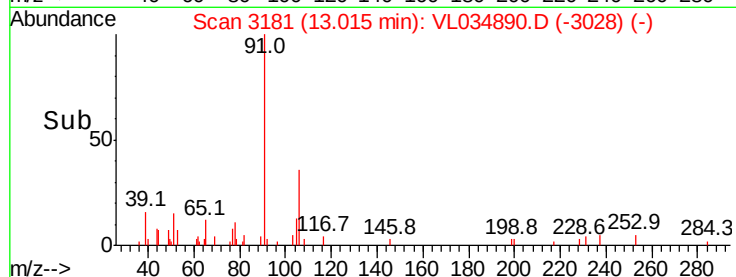
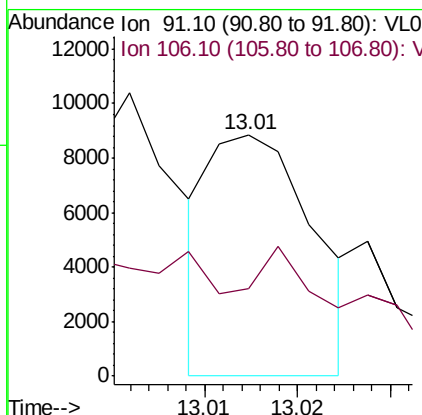
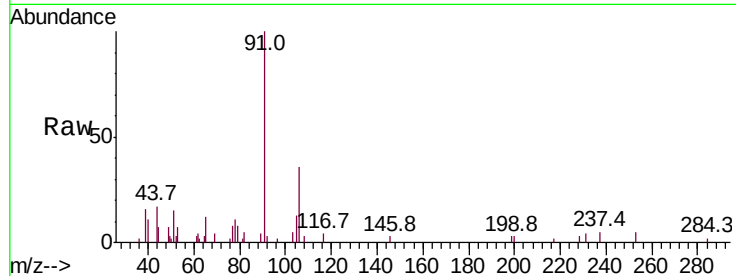




#59
m/p-Xylene
Concen: 0.031 ppbv
RT: 13.01 min Scan# 3181
Delta R.T. -0.01 min
Lab File: VL034890.D
Acq: 16 Mar 2020 14:41

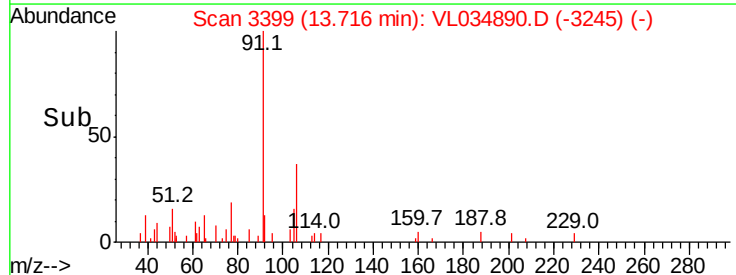
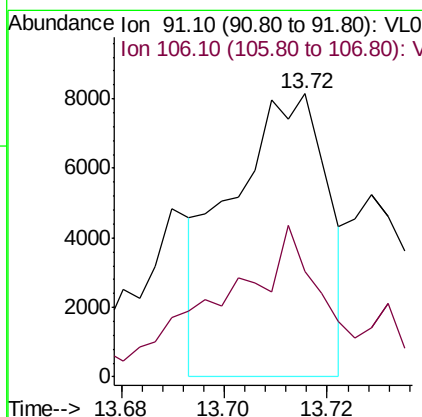
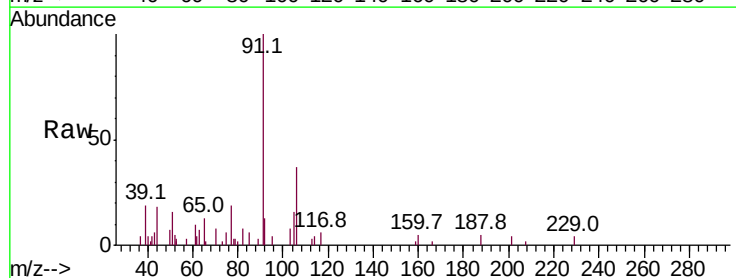
Instrument :
MSVOA_L
ClientSampled :
IA-03

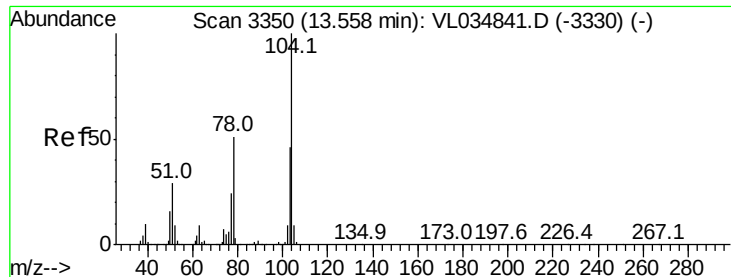
Tot Ion: 91 Resp: 6845
Ion Ratio Lower Upper
91 100
106 0.0 37.1 55.7#



#60
o-Xylene
Concen: 0.049 ppbv
RT: 13.72 min Scan# 3399
Delta R.T. -0.01 min
Lab File: VL034890.D
Acq: 16 Mar 2020 14:41

Tgt Ion: 91 Resp: 10601
Ion Ratio Lower Upper
91 100
106 65.8 22.5 67.5





#61

Stvrene

Concen: 0.050 ppbv

RT: 13.55 min Scan# 3348

Delta R.T. -0.01 min

Lab File: VL034890.D

Acq: 16 Mar 2020 14:41

Instrument :

MSVOA_L

ClientSampled :

IA-03

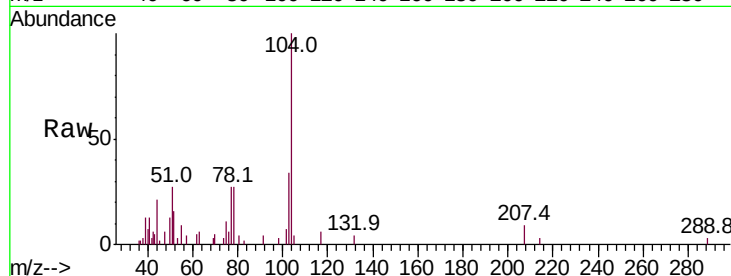
Tot Ion:104 Resp: 7601

Ion Ratio Lower Upper

104 100

78 109.0 41.8 62.6#

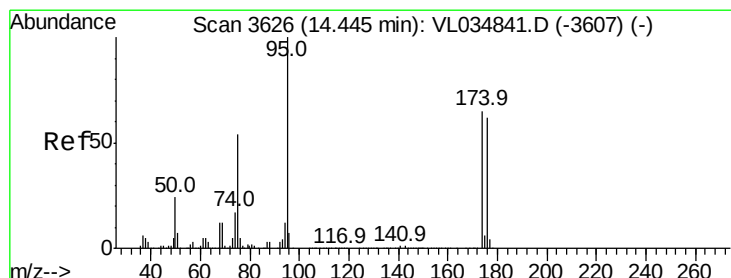
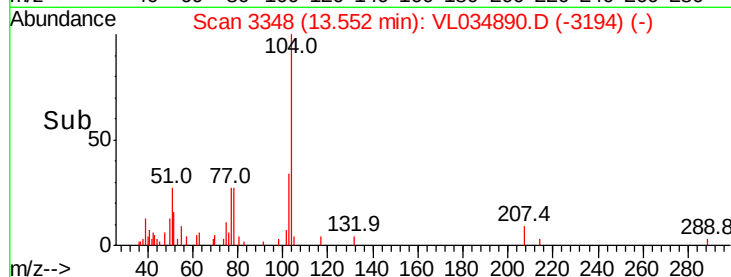
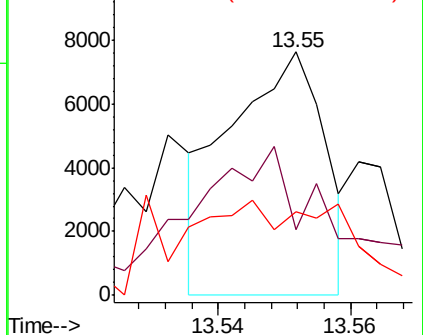
103 0.0 37.8 56.6#



Abundance Ion 104.10 (103.80 to 104.80): V

Ion 78.10 (77.80 to 78.80): VL0

Ion 103.10 (102.80 to 103.80): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.566 ppbv

RT: 14.44 min Scan# 3623

Delta R.T. -0.01 min

Lab File: VL034890.D

Acq: 16 Mar 2020 14:41

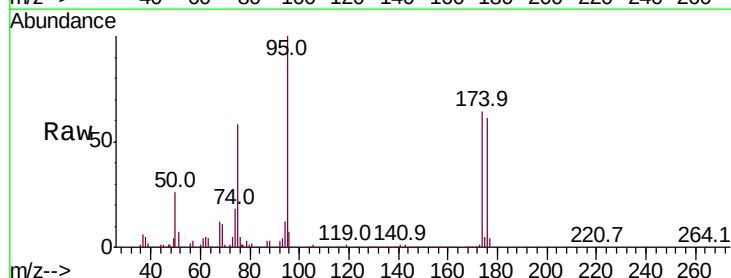
Tgt Ion: 95 Resp: 1625751

Ion Ratio Lower Upper

95 100

174 65.3 55.2 82.8

175 4.9 4.3 6.5



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

