

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL051220\
 Data File : VL034996.D
 Acq On : 12 May 2020 20:58
 Operator : SY/AP
 Sample : L2567-04DL2 40
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1DL2

Quant Time: May 13 01:12:08 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL050620AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed May 06 14:49:39 2020
 QLast Update : Wed May 06 14:49:39 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1058202	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.17	114	2498835	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.10	117	2325927	10.00	ppbv	-0.02

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev(Min)
68) 1-Bromo-4-Fluorobenzene	14.44	95	1899337	10.09	ppbv	-0.02	
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.90%	

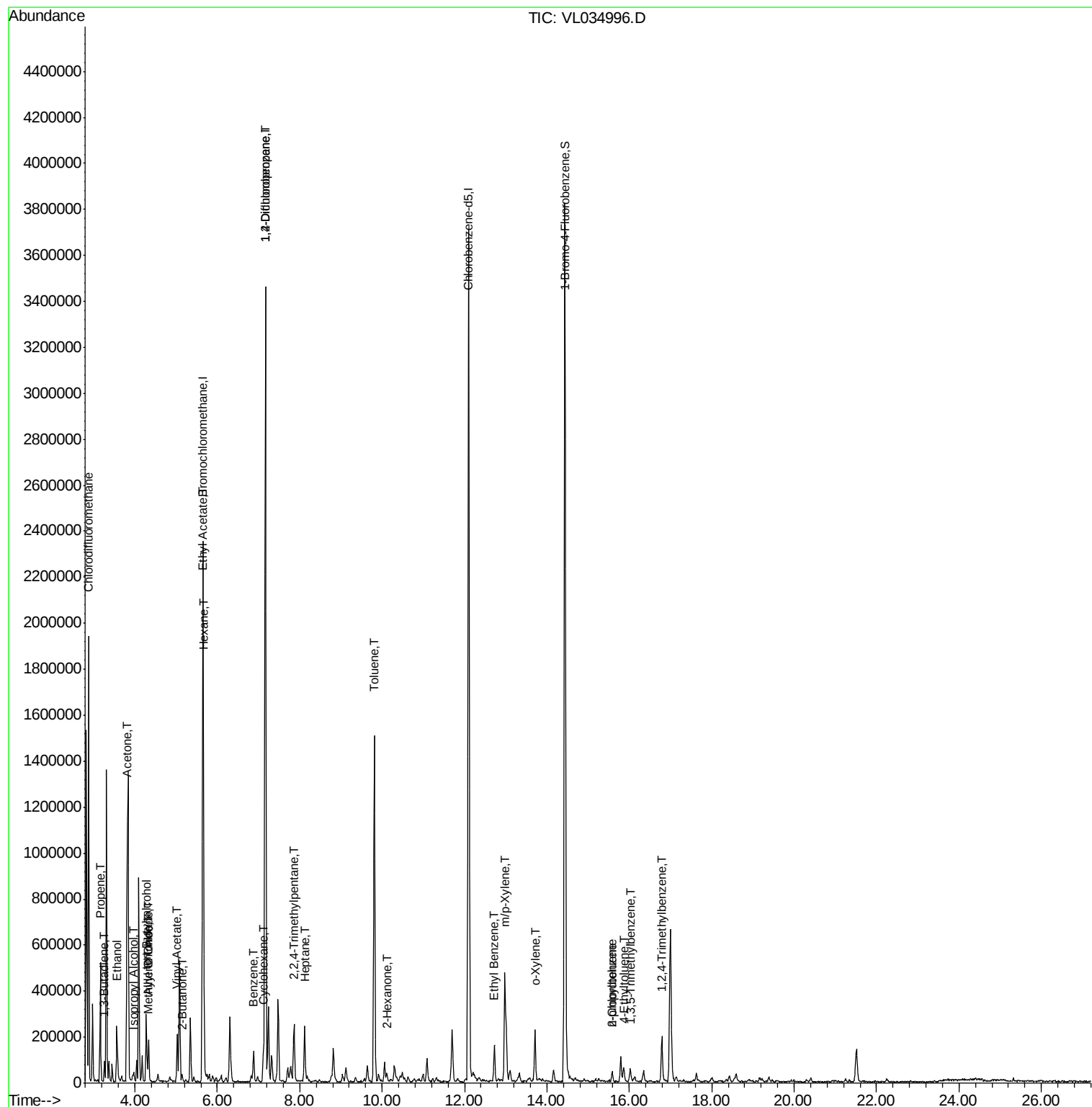
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
3) Chlorodifluoromethane	2.87	51	182190	1.508	ppbv #	59
9) Propene	3.16	41	138985	2.651	ppbv	97
10) Heptane	8.12	43	100556	0.766	ppbv	94
13) Ethanol	3.57	45	252561	14.599	ppbv	99
15) Acetone	3.81	43	1444027	10.322	ppbv #	88
16) 1,3-Butadiene	3.27	39	6023	0.100	ppbv #	60
17) tert-Butyl alcohol	4.28	59	13990	0.112	ppbv #	71
19) Isopropyl Alcohol	3.95	45	6966	0.075	ppbv #	94
20) Methylene Chloride	4.31	84	14663	0.317	ppbv	84
21) Allyl Chloride	4.34	41	27590	0.349	ppbv #	54
23) Vinyl Acetate	5.02	43	65731	0.371	ppbv #	1
25) Ethyl Acetate	5.66	43	154937	0.659	ppbv #	80
26) Hexane	5.67	57	203609	1.999	ppbv #	43
30) Cyclohexane	7.11	84	11225	0.143	ppbv #	1
34) 2-Butanone	5.14	43	6479	0.042	ppbv #	1
36) Benzene	6.88	78	45486	0.221	ppbv	93
39) 1,2-Dichloropropane	7.17	63	673644	8.157	ppbv #	24
44) 2,2,4-Trimethylpentane	7.86	57	183110	0.500	ppbv #	81
51) 2-Hexanone	10.12	43	6674	0.039	ppbv #	29
53) Toluene	9.81	91	1122801	5.141	ppbv	99
58) Ethyl Benzene	12.73	91	127779	0.444	ppbv	94
59) m/p-Xylene	12.98	91	476074	1.881	ppbv #	57
60) o-Xylene	13.71	91	165932	0.664	ppbv	99
64) n-propylbenzene	15.57	120	2150	0.022	ppbv #	1
71) 2-Chlorotoluene	15.58	91	40614	0.144	ppbv #	45
72) 4-Ethyltoluene	15.85	105	16700	0.060	ppbv #	55
73) 1,3,5-Trimethylbenzene	16.02	105	35793	0.132	ppbv	89
74) 1,2,4-Trimethylbenzene	16.79	105	137503	0.465	ppbv #	76

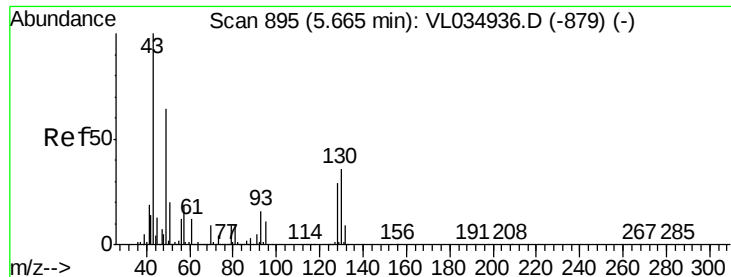
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Wed May 06 14:49:39 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 889

Delta R.T. -0.02 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

Instrument :

MSVOA_L

ClientSampleId :

IA-1DL2

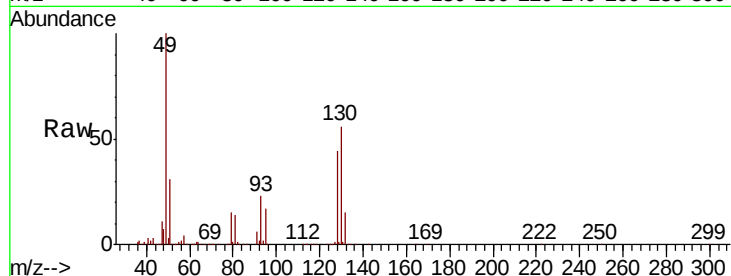
Tot Ion: 49 Resp: 1058202

Ion Ratio Lower Upper

49 100

128 44.6 22.1 66.5

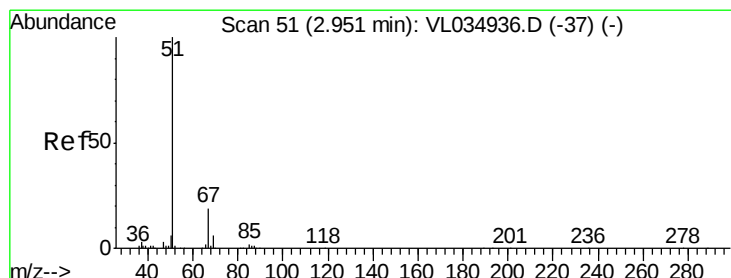
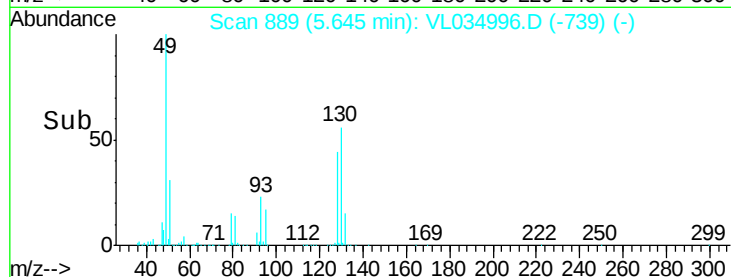
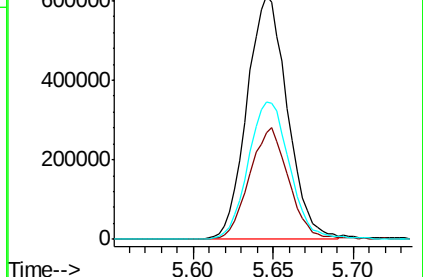
130 58.3 29.1 87.3



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



#3

Chlorodifluoromethane

Concen: 1.508 ppbv

RT: 2.87 min Scan# 26

Delta R.T. -0.08 min

Lab File: VL034996.D

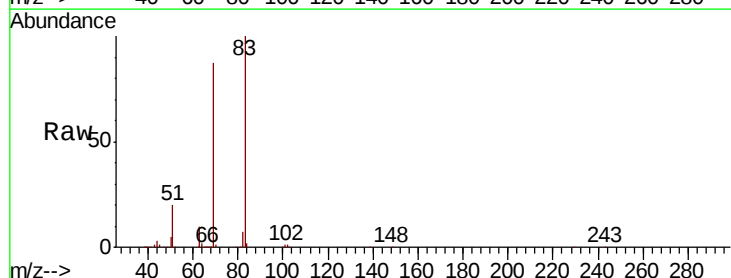
Acq: 12 May 2020 20:58

Tgt Ion: 51 Resp: 182190

Ion Ratio Lower Upper

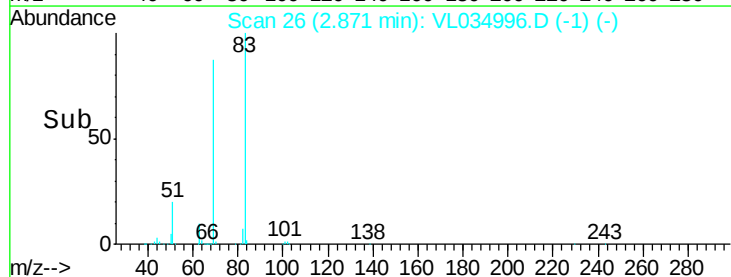
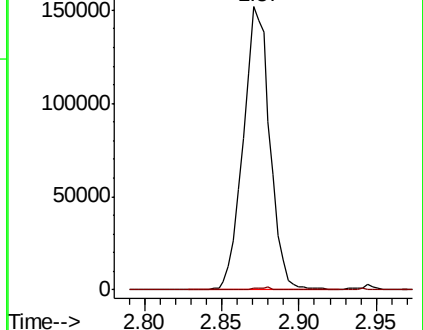
51 100

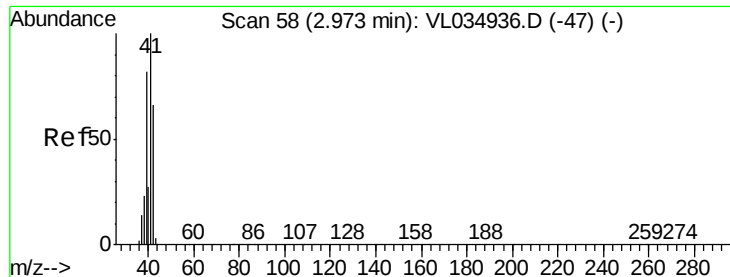
67 0.6 15.0 22.6#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#9

Propene

Concen: 2.651 ppbv

RT: 3.16 min Scan# 115

Delta R.T. 0.18 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

Instrument :

MSVOA_L

ClientSampleId :

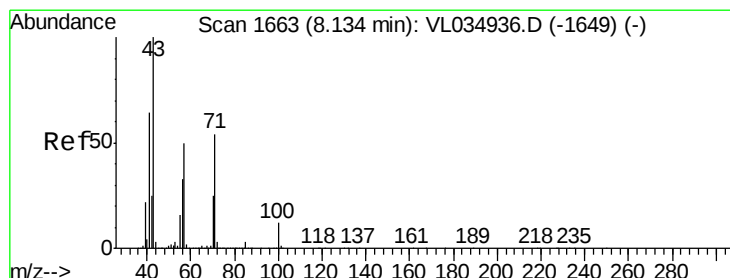
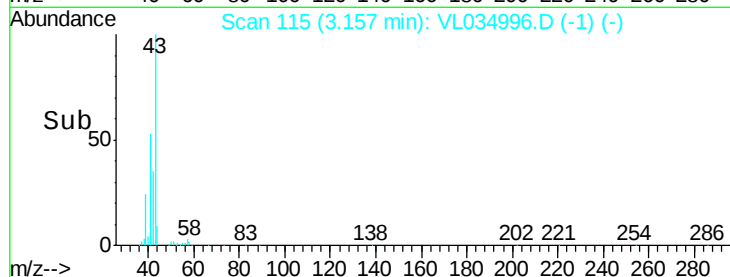
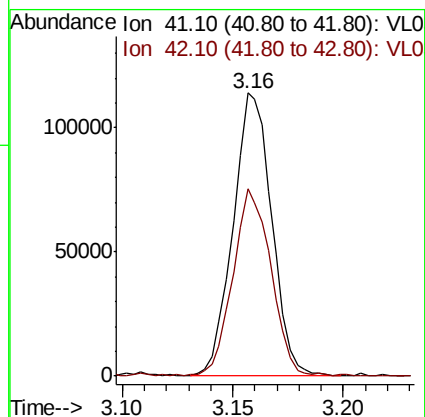
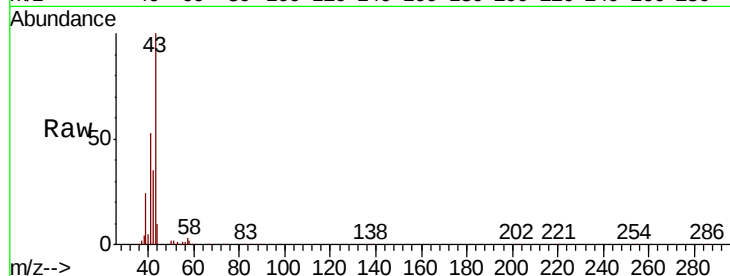
IA-1DL2

Tot Ion: 41 Resp: 138985

Ion Ratio Lower Upper

41 100

42 65.4 54.5 81.7



#10

Heptane

Concen: 0.766 ppbv

RT: 8.12 min Scan# 1658

Delta R.T. -0.02 min

Lab File: VL034996.D

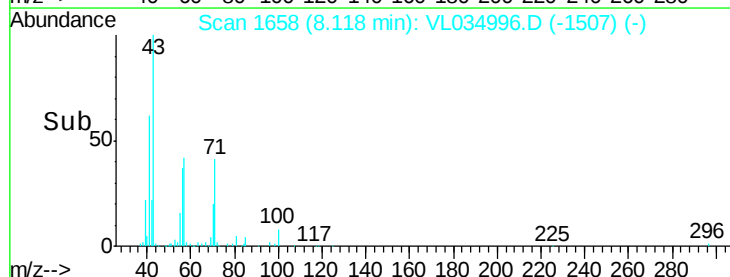
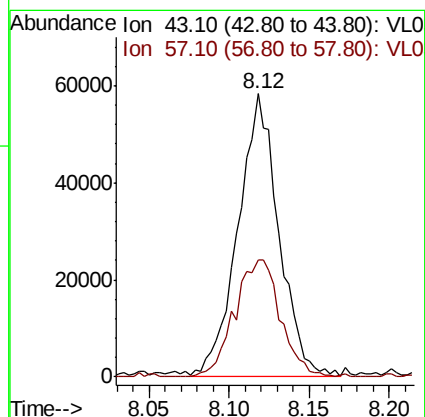
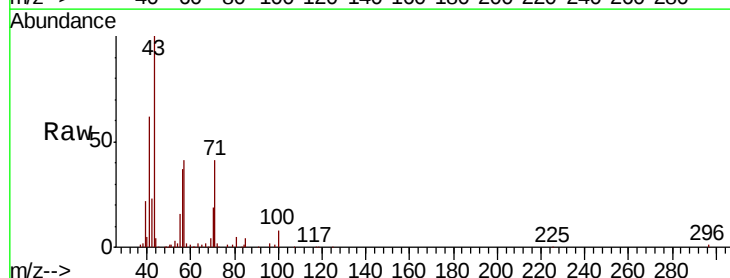
Acq: 12 May 2020 20:58

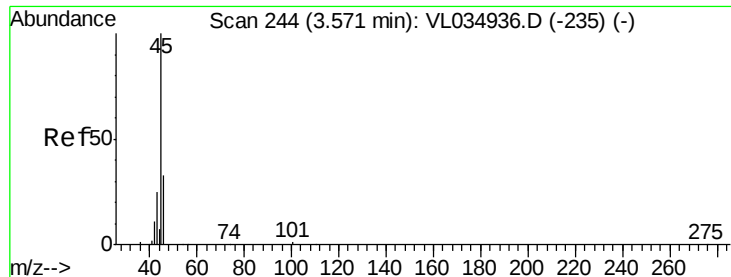
Tgt Ion: 43 Resp: 100556

Ion Ratio Lower Upper

43 100

57 47.0 41.1 61.7





#13

Ethanol

Concen: 14.599 ppbv

RT: 3.57 min Scan# 242

Delta R.T. -0.01 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

Instrument :

MSVOA_L

ClientSampleId :

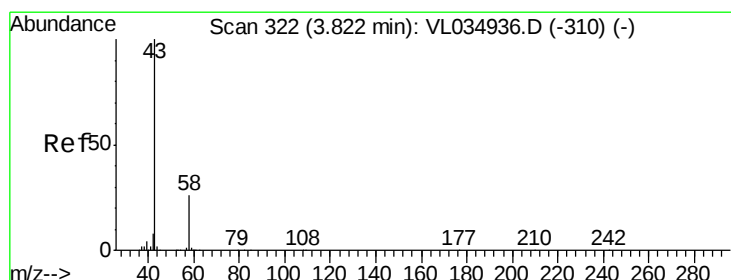
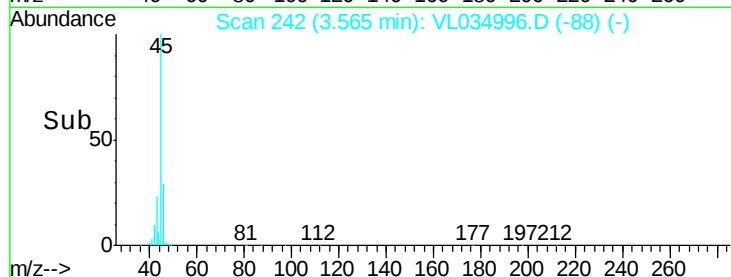
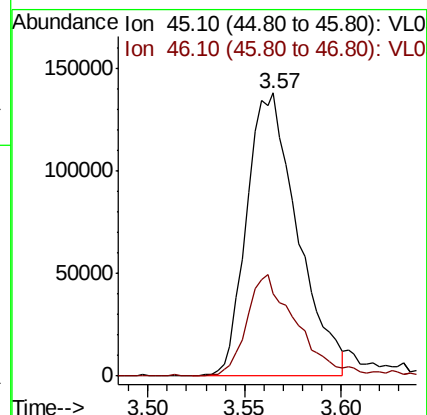
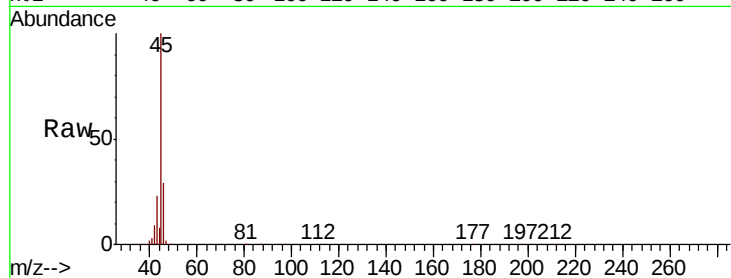
IA-1DL2

Tot Ion: 45 Resp: 252561

Ion Ratio Lower Upper

45 100

46 36.5 14.3 57.3



#15

Acetone

Concen: 10.322 ppbv

RT: 3.81 min Scan# 318

Delta R.T. -0.01 min

Lab File: VL034996.D

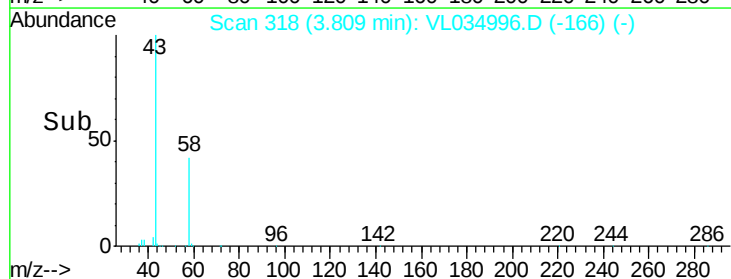
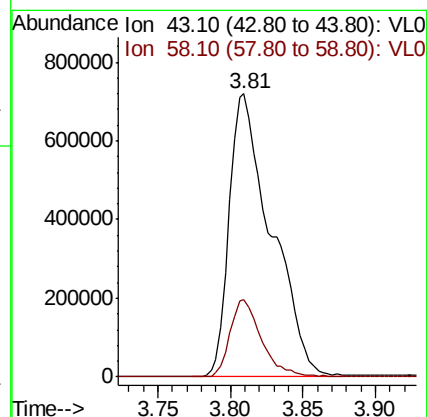
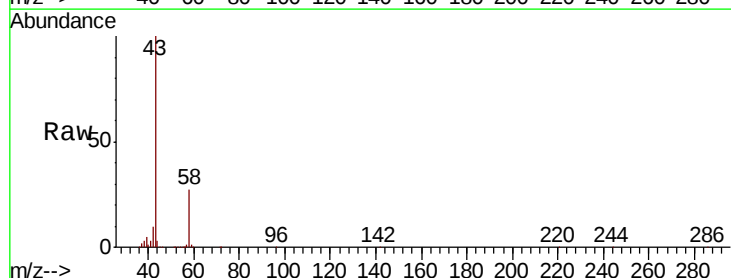
Acq: 12 May 2020 20:58

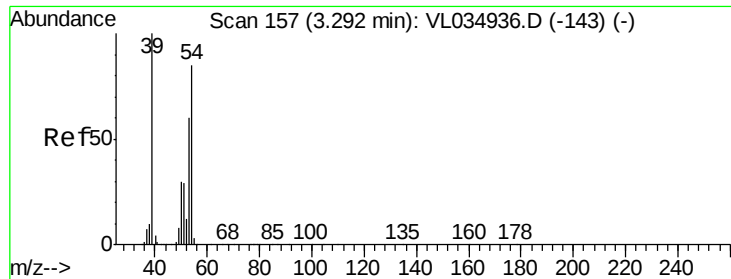
Tgt Ion: 43 Resp: 1444027

Ion Ratio Lower Upper

43 100

58 20.7 21.7 32.5#

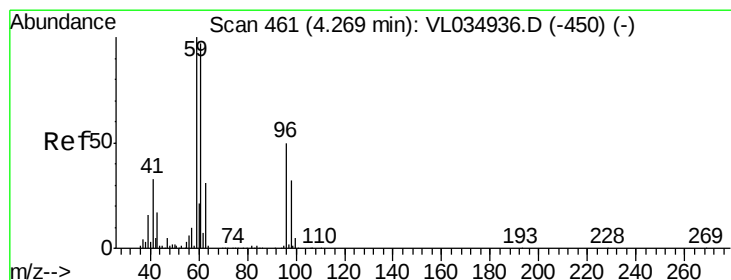
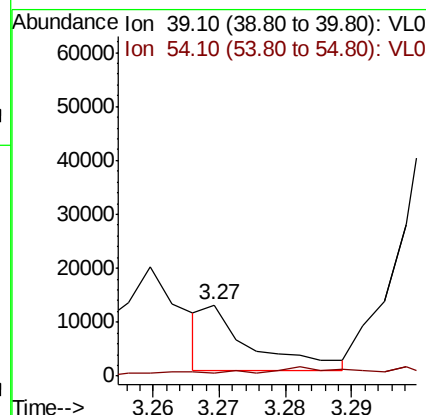
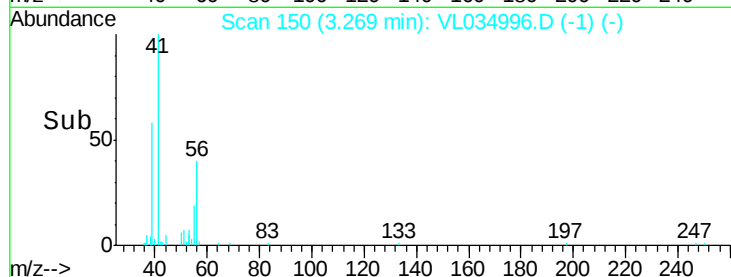
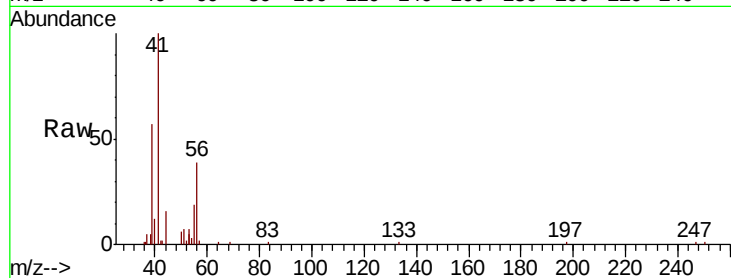




#16
1,3-Butadiene
Concen: 0.100 ppbv
RT: 3.27 min Scan# 150
Delta R.T. -0.02 min
Lab File: VL034996.D
Acq: 12 May 2020 20:58

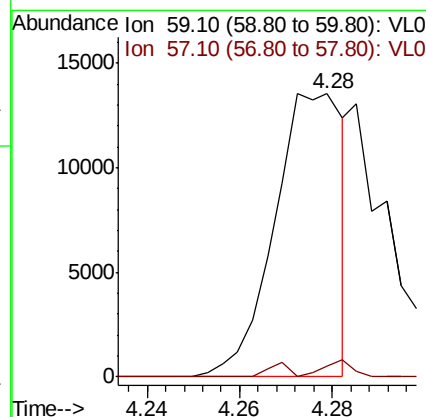
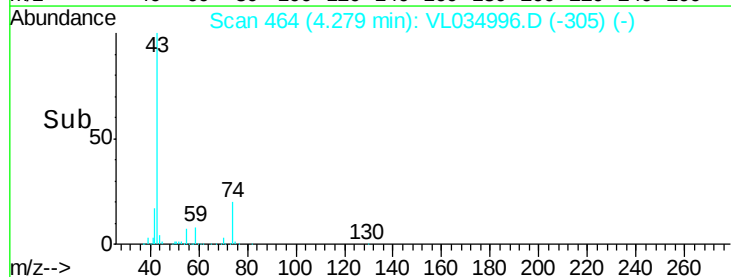
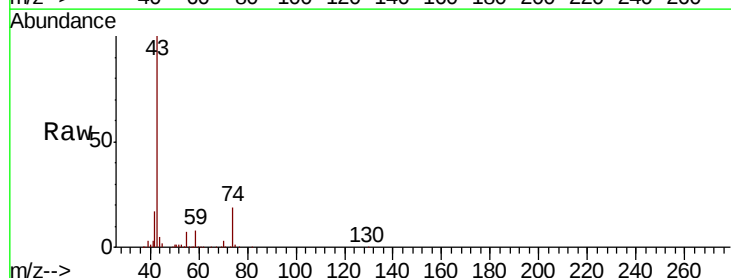
Instrument :
MSVOA_L
ClientSampleId :
IA-1DL2

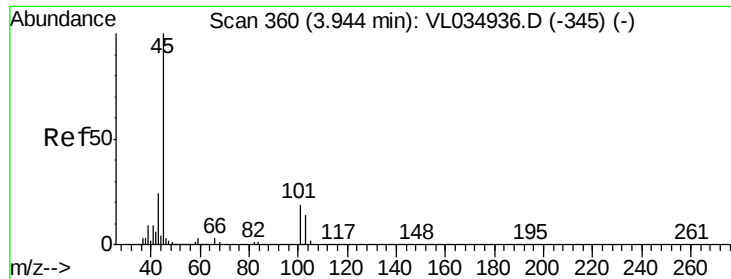
Tot Ion: 39 Resp: 6023
Ion Ratio Lower Upper
39 100
54 46.8 66.6 100.0#



#17
tert-Butyl alcohol
Concen: 0.112 ppbv
RT: 4.28 min Scan# 464
Delta R.T. 0.01 min
Lab File: VL034996.D
Acq: 12 May 2020 20:58

Tgt Ion: 59 Resp: 13990
Ion Ratio Lower Upper
59 100
57 0.0 8.7 13.1#





#19

Isopropyl Alcohol

Concen: 0.075 ppbv

RT: 3.95 min Scan# 362

Delta R.T. 0.01 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

Instrument :

MSVOA_L

ClientSampleId :

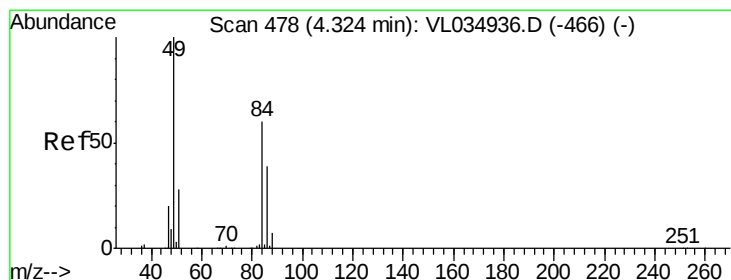
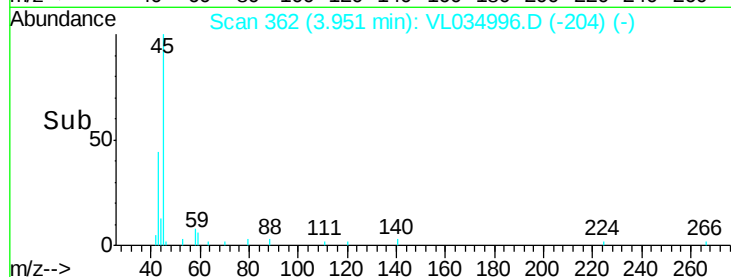
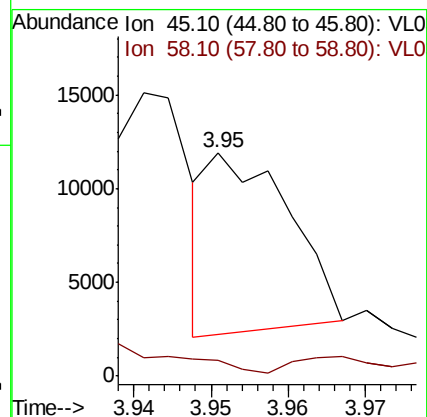
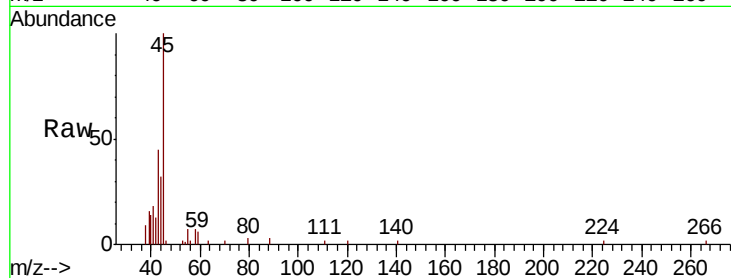
IA-1DL2

Tot Ion: 45 Resp: 6966

Ion Ratio Lower Upper

45 100

58 0.0 1.7 2.5#



#20

Methylene Chloride

Concen: 0.317 ppbv

RT: 4.31 min Scan# 474

Delta R.T. -0.01 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

Tgt Ion: 84 Resp: 14663

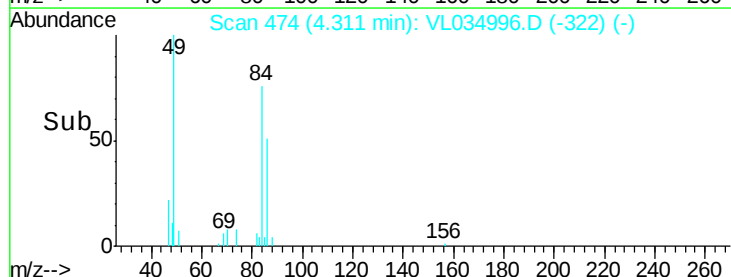
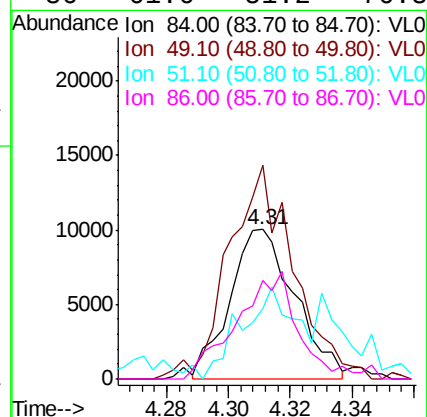
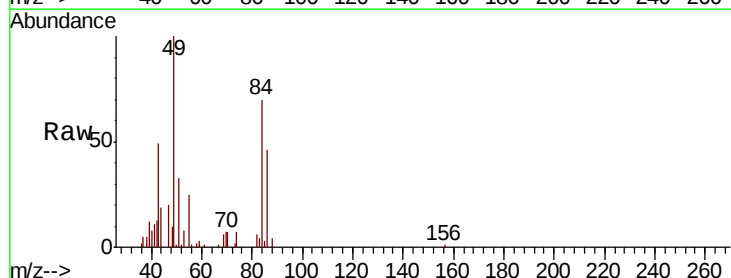
Ion Ratio Lower Upper

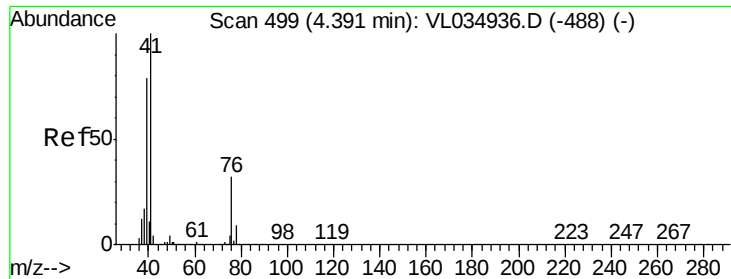
84 100

49 136.6 132.5 198.7

51 40.2 38.4 57.6

86 61.6 51.2 76.8





#21

Allvl Chloride

Concen: 0.349 ppbv

RT: 4.34 min Scan# 482

Delta R.T. -0.05 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

Instrument :

MSVOA_L

ClientSampled :

IA-1DL2

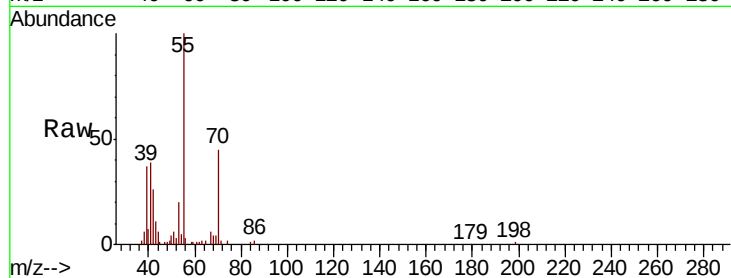
Tot Ion: 41 Resp: 27590

Ion Ratio Lower Upper

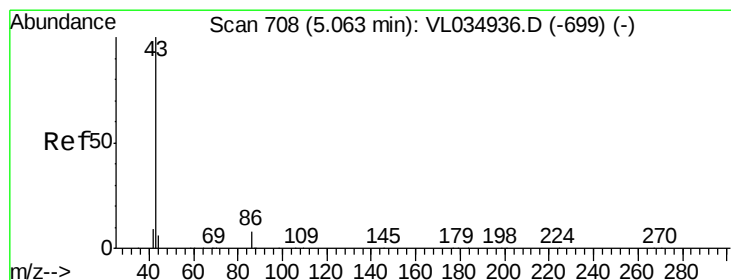
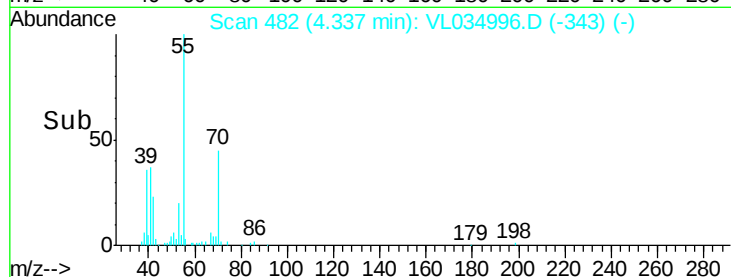
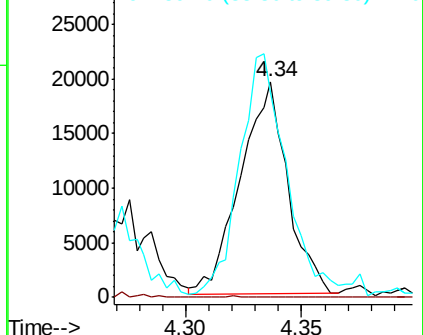
41 100

76 0.1 23.6 35.4#

39 114.6 61.9 92.9#



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: 0.371 ppbv

RT: 5.02 min Scan# 696

Delta R.T. -0.04 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

Tgt Ion: 43 Resp: 65731

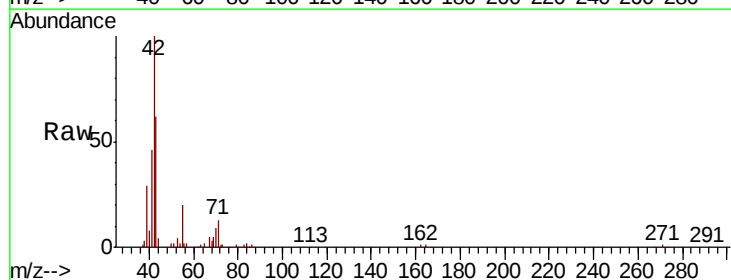
Ion Ratio Lower Upper

43 100

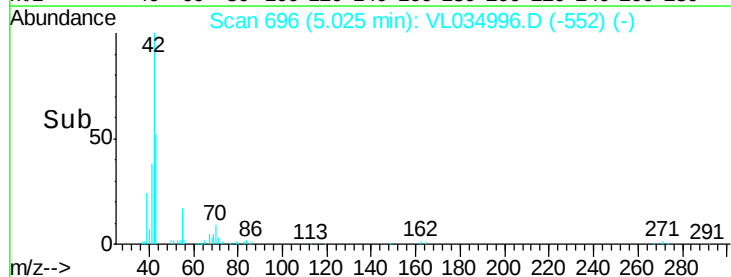
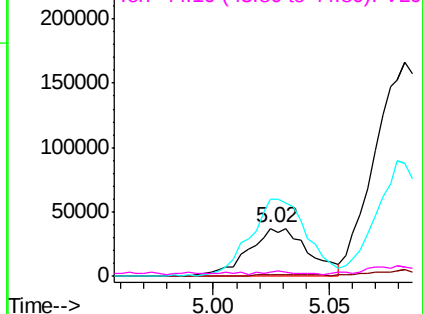
86 2.0 5.5 8.3#

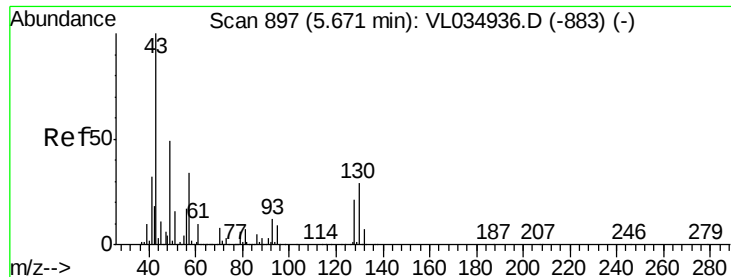
42 160.8 8.0 12.0#

44 0.0 4.5 6.7#



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 86.10 (85.80 to 86.80): VL0
Ion 42.10 (41.80 to 42.80): VL0
Ion 44.10 (43.80 to 44.80): VL0

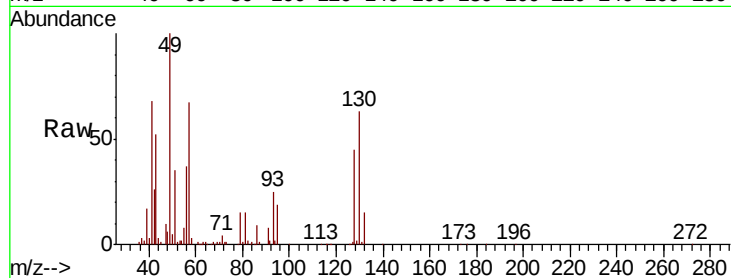




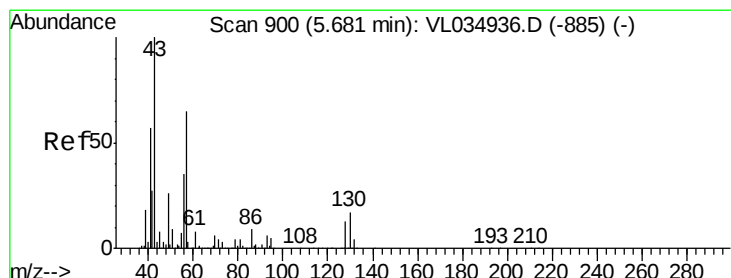
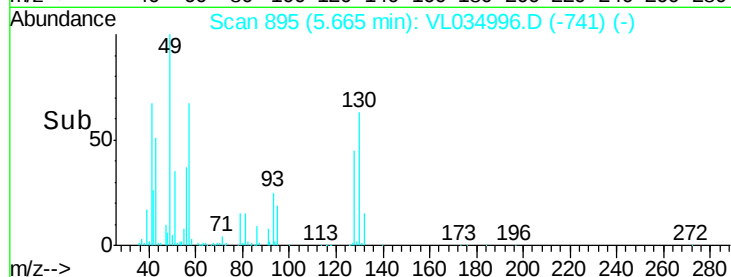
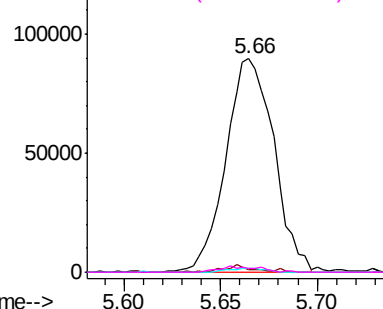
#25
Ethyl Acetate
Concen: 0.659 ppbv
RT: 5.66 min Scan# 895
Delta R.T. -0.01 min
Lab File: VL034996.D
Acq: 12 May 2020 20:58

Instrument :
MSVOA_L
ClientSampleID :
IA-1DL2

Tot Ion:	43	Resp:	154937
Ion	Ratio	Lower	Upper
43	100		
45	2.3	8.1	12.1#
61	1.4	7.8	11.8#
70	2.3	6.0	9.0#

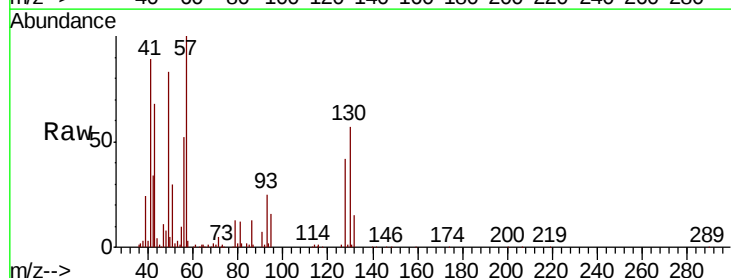


Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0

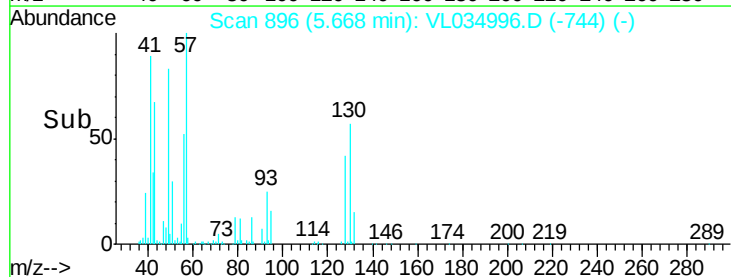
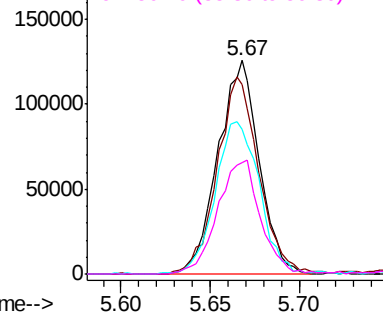


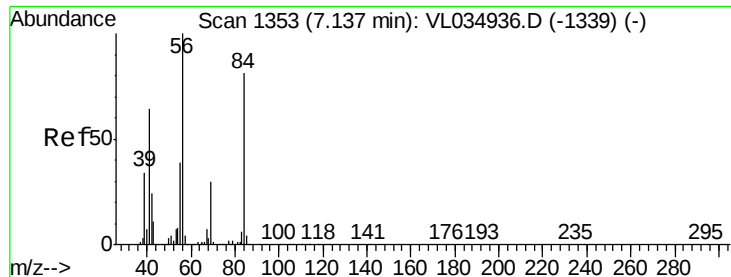
#26
Hexane
Concen: 1.999 ppbv
RT: 5.67 min Scan# 896
Delta R.T. -0.01 min
Lab File: VL034996.D
Acq: 12 May 2020 20:58

Tgt Ion:	57	Resp:	203609
Ion	Ratio	Lower	Upper
57	100		
41	93.4	72.7	109.1
43	76.9	182.1	273.1#
56	55.3	42.2	63.2



Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

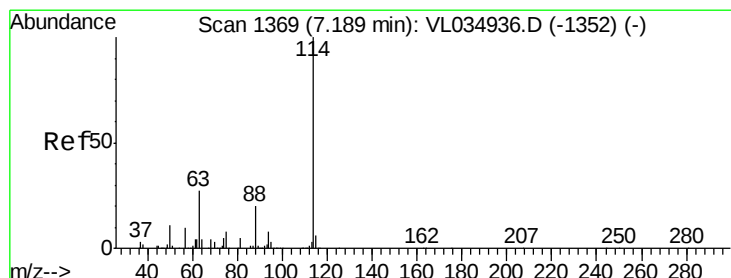
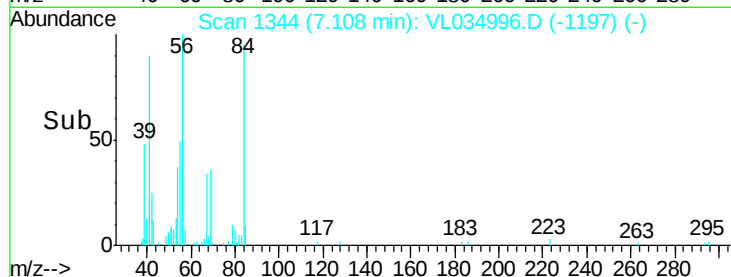
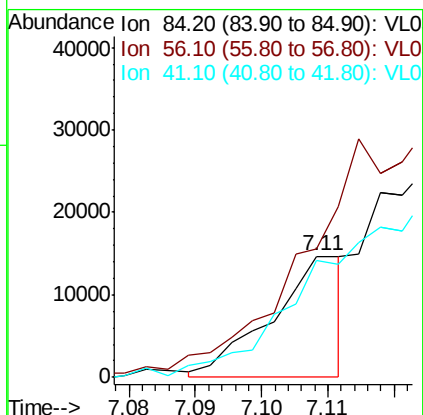
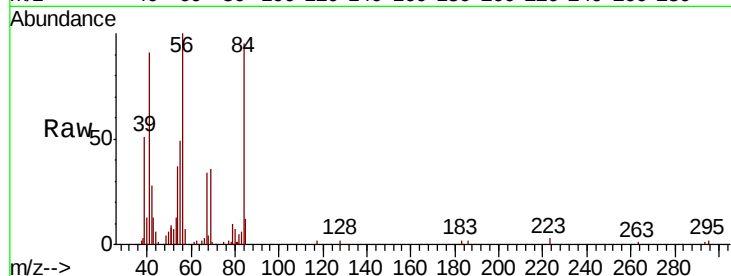




#30
Cyclohexane
Concen: 0.143 ppbv
RT: 7.11 min Scan# 1344
Delta R.T. -0.03 min
Lab File: VL034996.D
Acq: 12 May 2020 20:58

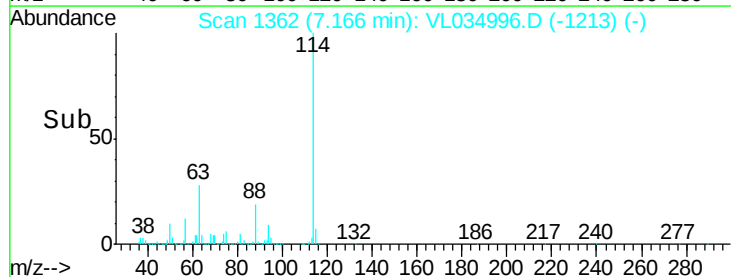
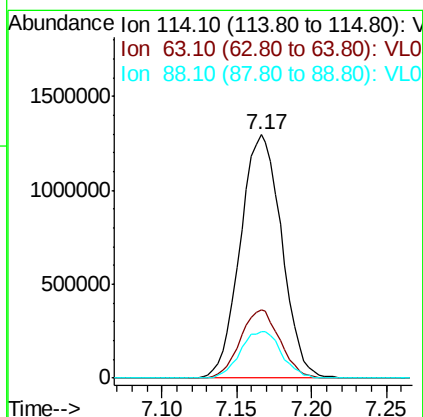
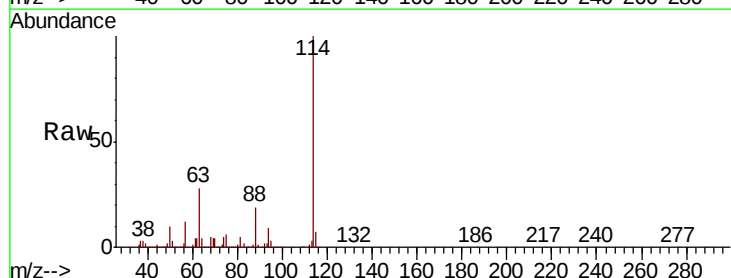
Instrument :
MSVOA_L
ClientSampleId :
IA-1DL2

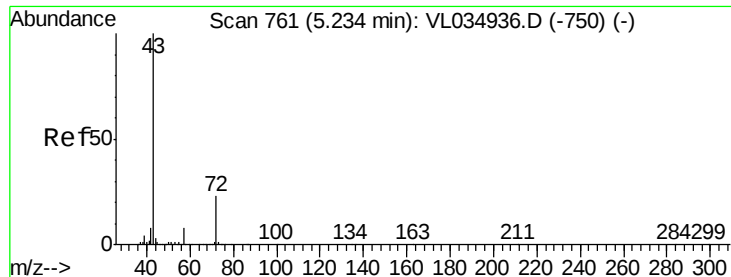
Tot Ion: 84 Resp: 11225
Ion Ratio Lower Upper
84 100
56 0.0 111.4 167.2#
41 0.0 66.7 100.1#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.17 min Scan# 1362
Delta R.T. -0.02 min
Lab File: VL034996.D
Acq: 12 May 2020 20:58

Tgt Ion: 114 Resp: 2498835
Ion Ratio Lower Upper
114 100
63 27.1 22.2 33.4
88 19.2 15.5 23.3

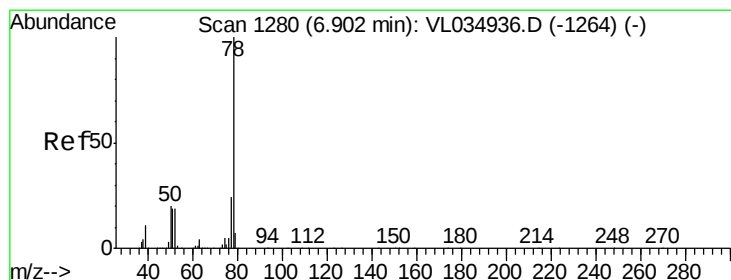
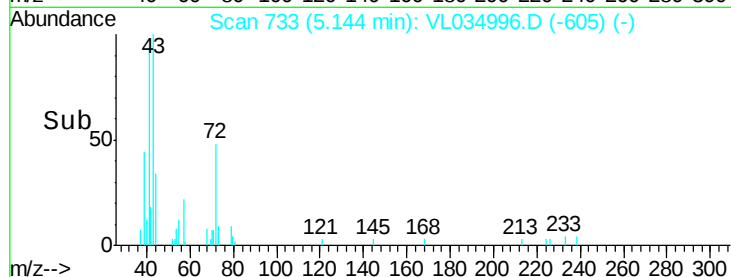
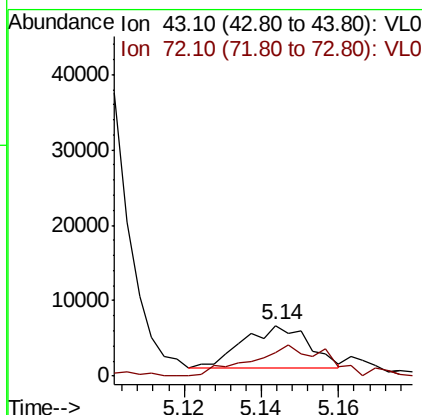
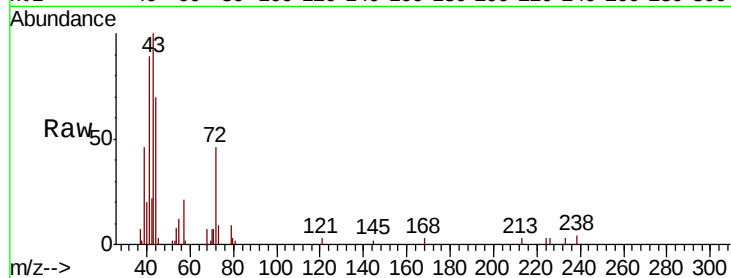




#34
2-Butanone
Concen: 0.042 ppbv
RT: 5.14 min Scan# 733
Delta R.T. -0.09 min
Lab File: VL034996.D
Acq: 12 May 2020 20:58

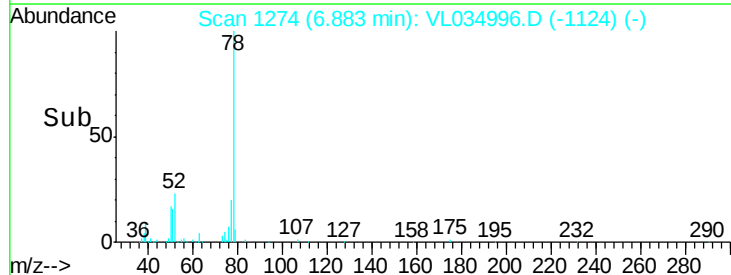
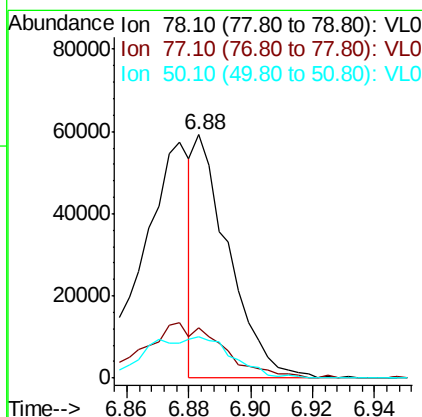
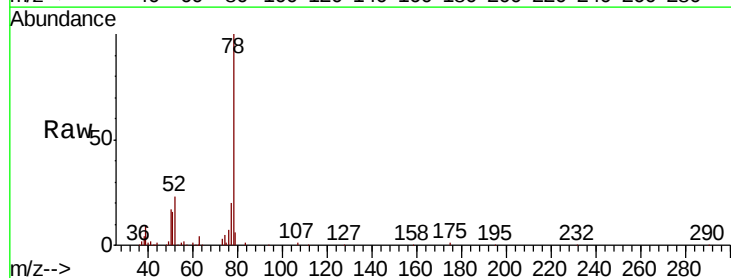
Instrument :
MSVOA_L
ClientSampleId :
IA-1DL2

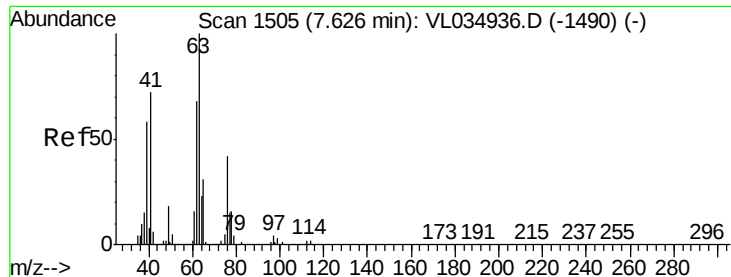
Tot Ion: 43 Resp: 6479
Ion Ratio Lower Upper
43 100
72 90.3 18.0 27.0#



#36
Benzene
Concen: 0.221 ppbv
RT: 6.88 min Scan# 1274
Delta R.T. -0.02 min
Lab File: VL034996.D
Acq: 12 May 2020 20:58

Tgt Ion: 78 Resp: 45486
Ion Ratio Lower Upper
78 100
77 20.4 19.0 28.6
50 16.4 15.8 23.8





#39

1,2-Dichloropropane

Concen: 8.157 ppbv

RT: 7.17 min Scan# 1362

Delta R.T. -0.46 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

Instrument :

MSVOA_L

ClientSampleId :

IA-1DL2

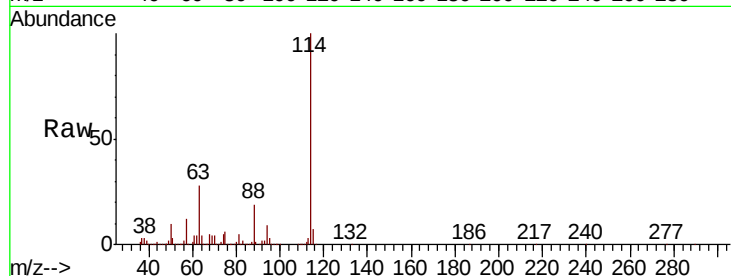
Tot Ion: 63 Resp: 673644

Ion Ratio Lower Upper

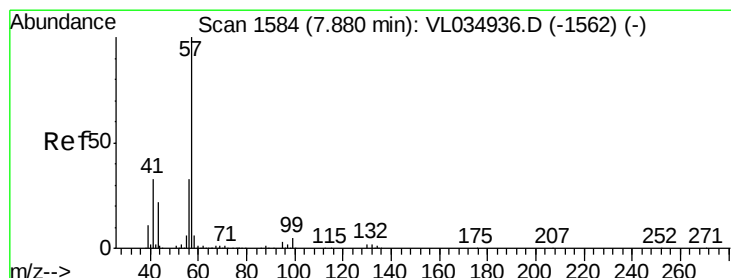
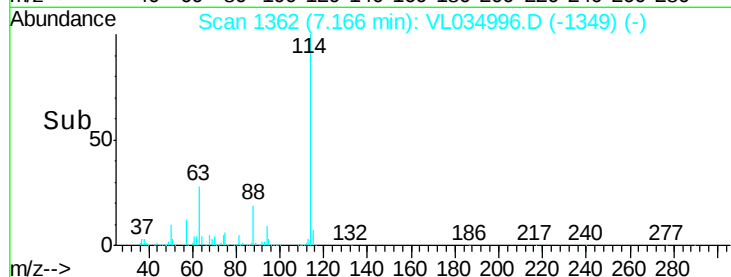
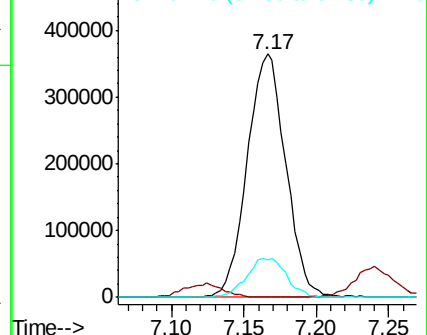
63 100

41 0.0 57.8 86.8#

62 15.2 54.2 81.2#



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



#44

2,2,4-Trimethylpentane

Concen: 0.500 ppbv

RT: 7.86 min Scan# 1578

Delta R.T. -0.02 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

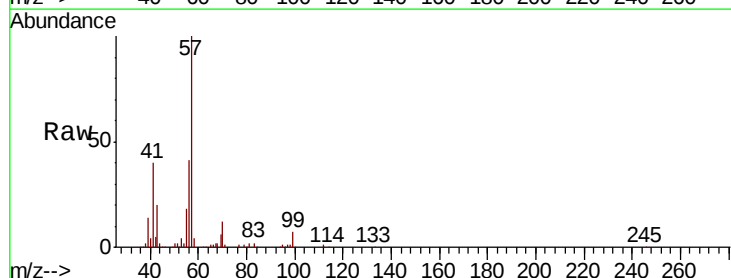
Tgt Ion: 57 Resp: 183110

Ion Ratio Lower Upper

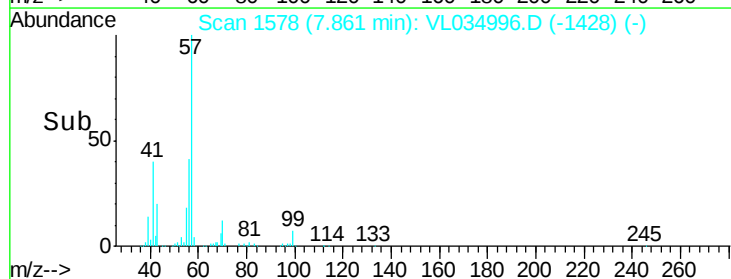
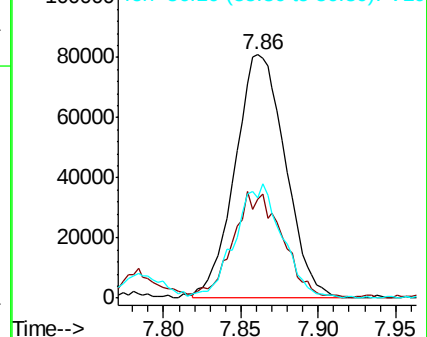
57 100

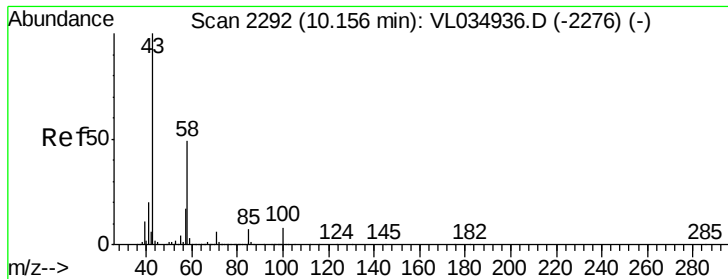
41 41.4 26.4 39.6#

56 44.5 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





#51

2-Hexanone

Concen: 0.039 ppbv

RT: 10.12 min Scan# 2280

Delta R.T. -0.04 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

Instrument :

MSVOA_L

ClientSampleId :

IA-1DL2

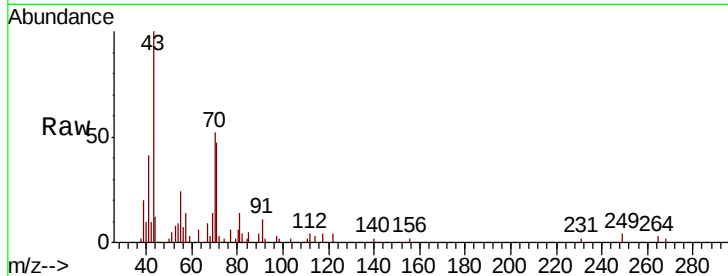
Tot Ion: 43 Resp: 6674

Ion Ratio Lower Upper

43 100

58 0.0 39.1 58.7#

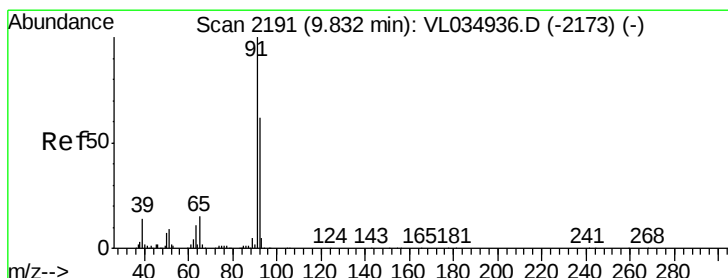
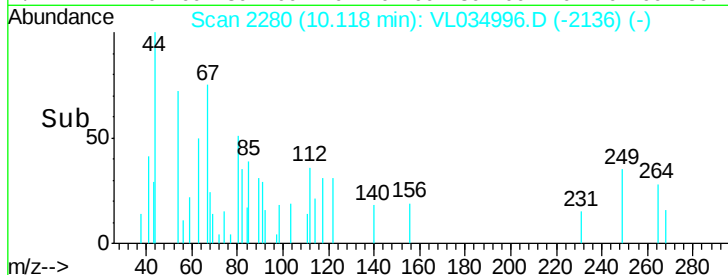
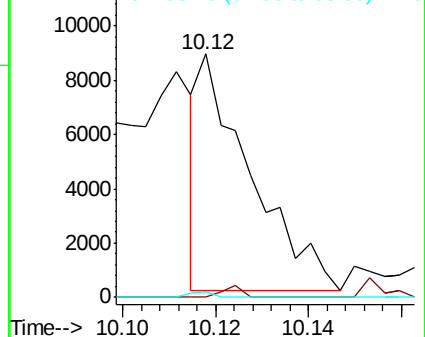
98 1.0 0.3 0.5#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

Ion 98.20 (97.90 to 98.90): VL0



#53

Toluene

Concen: 5.141 ppbv

RT: 9.81 min Scan# 2184

Delta R.T. -0.02 min

Lab File: VL034996.D

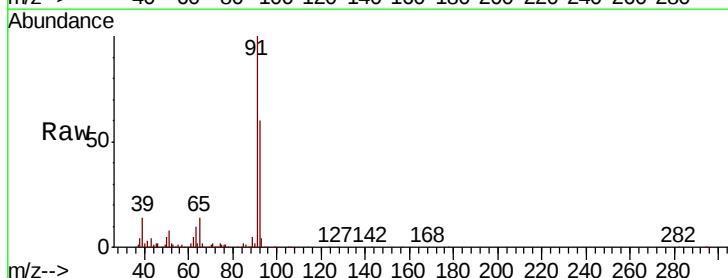
Acq: 12 May 2020 20:58

Tgt Ion: 91 Resp: 1122801

Ion Ratio Lower Upper

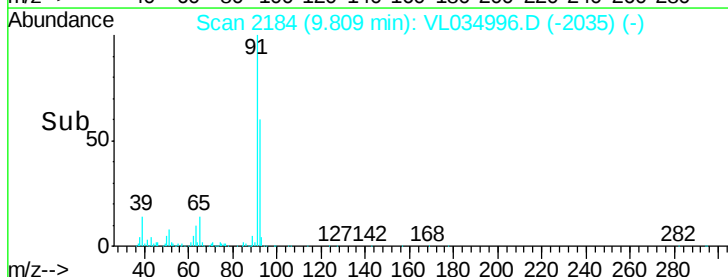
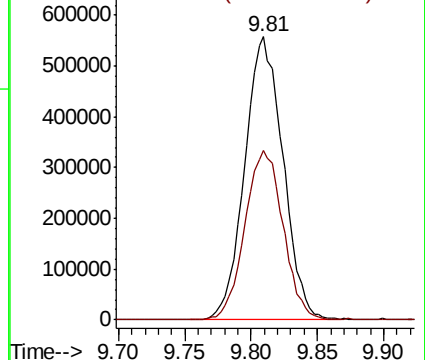
91 100

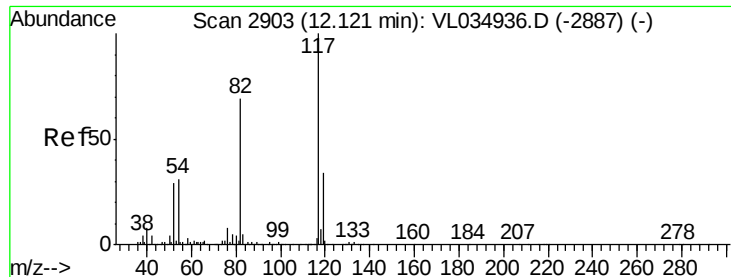
92 59.7 48.6 73.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

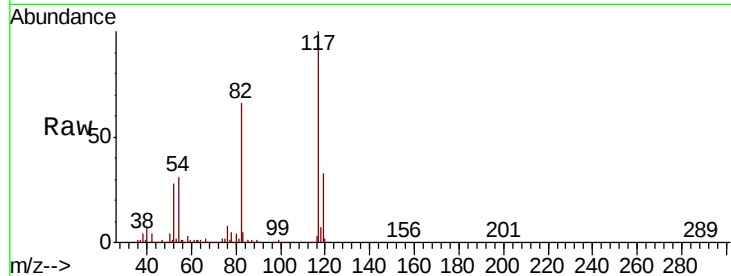




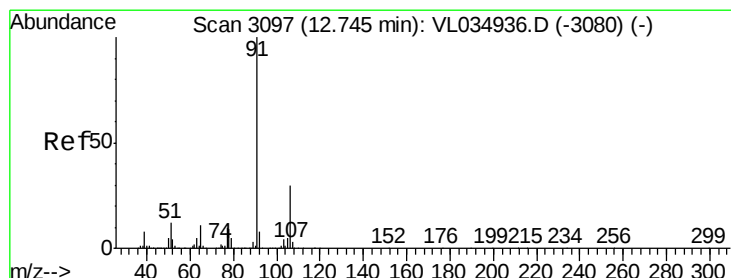
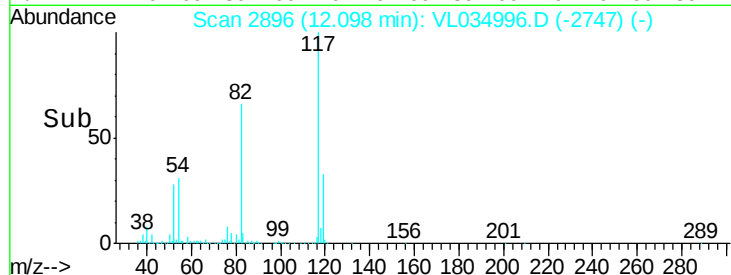
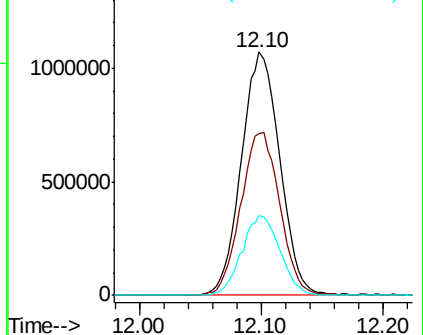
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.10 min Scan# 2896
Delta R.T. -0.02 min
Lab File: VL034996.D
Acq: 12 May 2020 20:58

Instrument :
MSVOA_L
ClientSampleId :
IA-1DL2

Tot Ion:117 Resp: 2325927
Ion Ratio Lower Upper
117 100
82 68.0 53.1 79.7
119 32.8 26.7 40.1

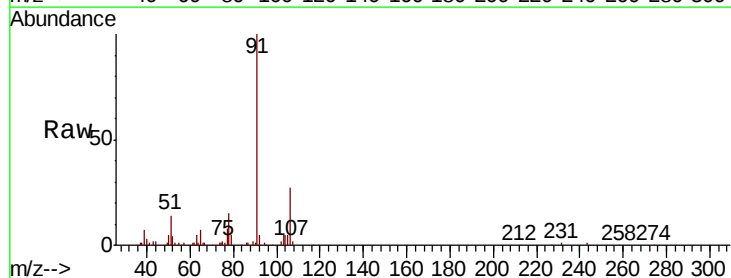


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

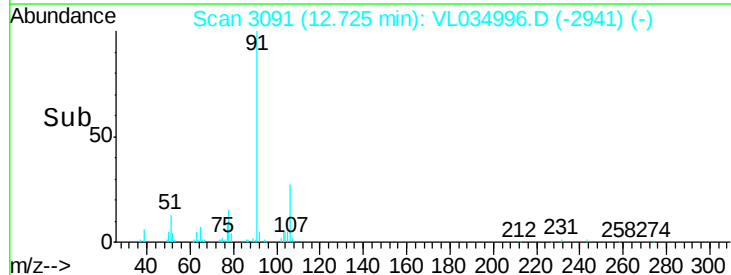
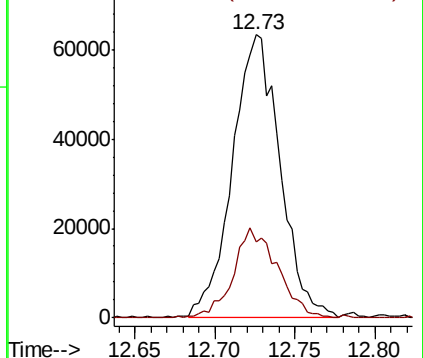


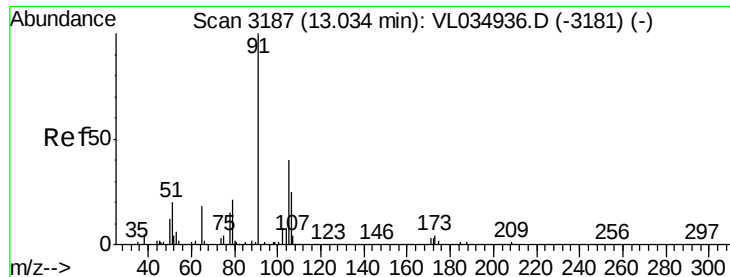
#58
Ethyl Benzene
Concen: 0.444 ppbv
RT: 12.73 min Scan# 3091
Delta R.T. -0.02 min
Lab File: VL034996.D
Acq: 12 May 2020 20:58

Tgt Ion: 91 Resp: 127779
Ion Ratio Lower Upper
91 100
106 27.1 24.2 36.4



Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V





#59

m/p-Xylene

Concen: 1.881 ppbv

RT: 12.98 min Scan# 3170

Delta R.T. -0.05 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

Instrument :

MSVOA_L

ClientSampleId :

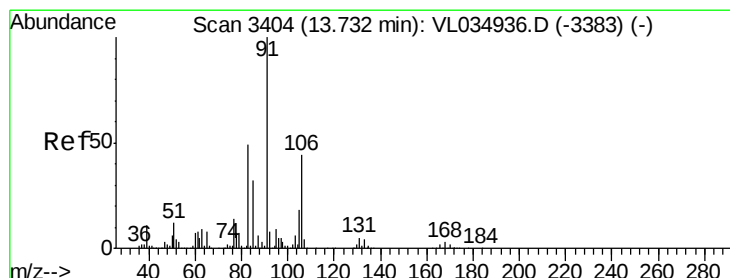
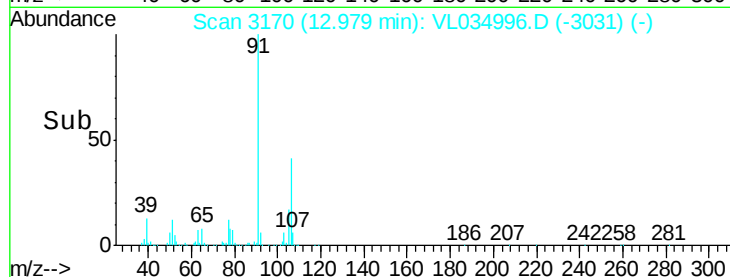
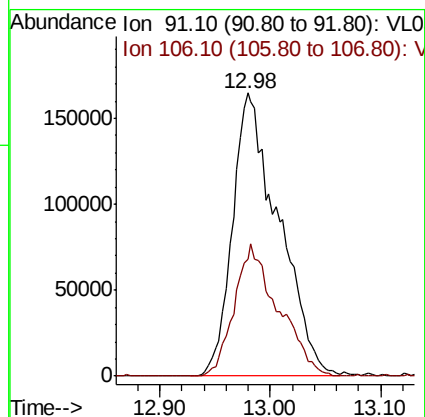
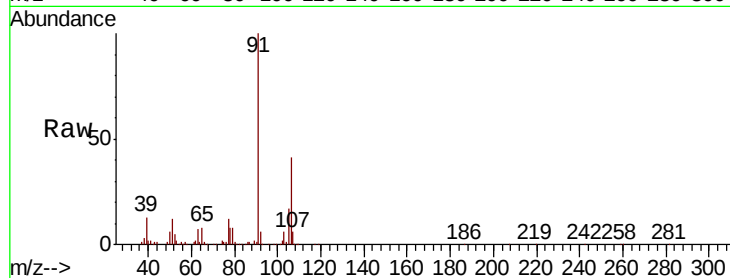
IA-1DL2

Tot Ion: 91 Resp: 476074

Ion Ratio Lower Upper

91 100

106 44.3 66.0 99.0#



#60

o-Xylene

Concen: 0.664 ppbv

RT: 13.71 min Scan# 3396

Delta R.T. -0.03 min

Lab File: VL034996.D

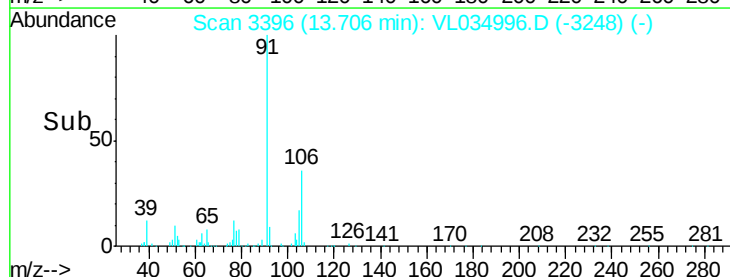
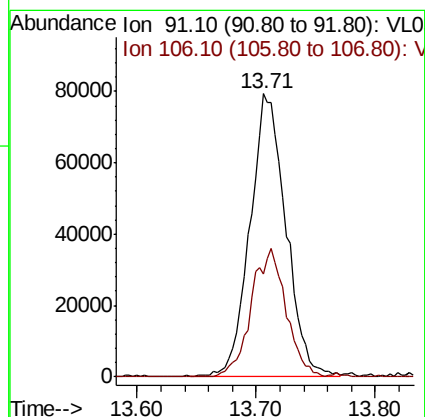
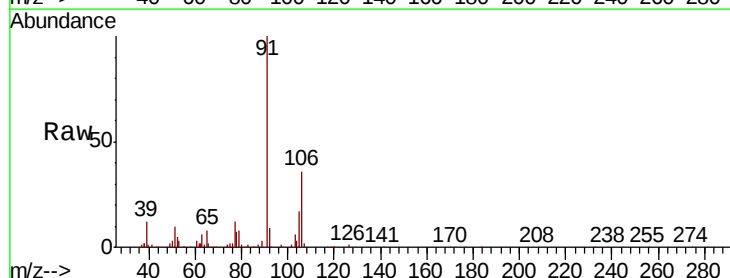
Acq: 12 May 2020 20:58

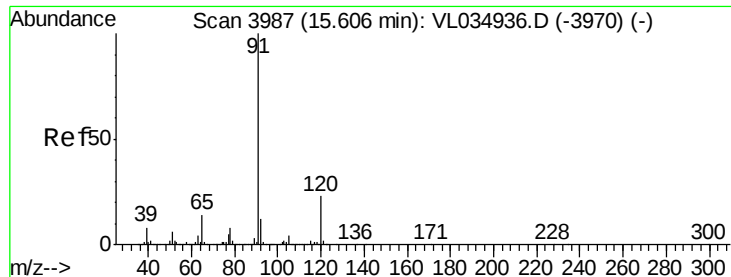
Tgt Ion: 91 Resp: 165932

Ion Ratio Lower Upper

91 100

106 44.2 21.9 65.5





#64

n-propylbenzene

Concen: 0.022 ppbv

RT: 15.57 min Scan# 3977

Delta R.T. -0.03 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

Instrument :

MSVOA_L

ClientSampleId :

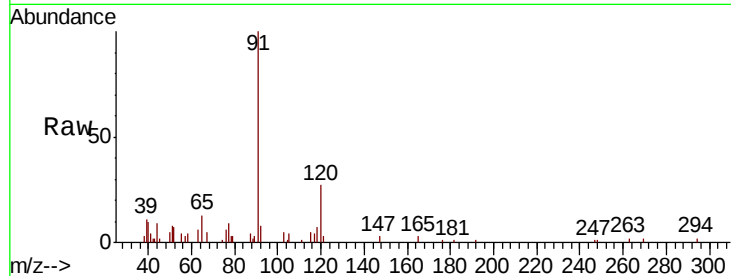
IA-1DL2

Tot Ion:120 Resp: 2150

Ion Ratio Lower Upper

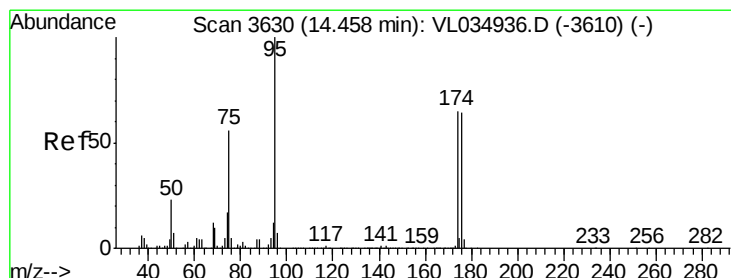
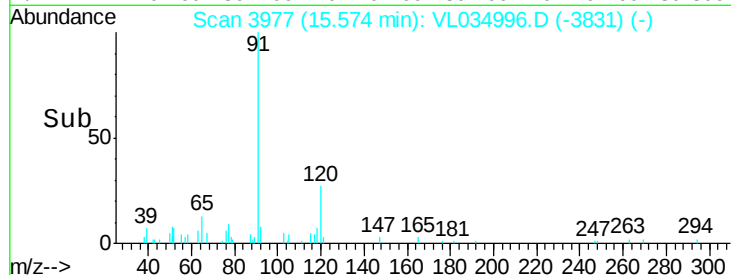
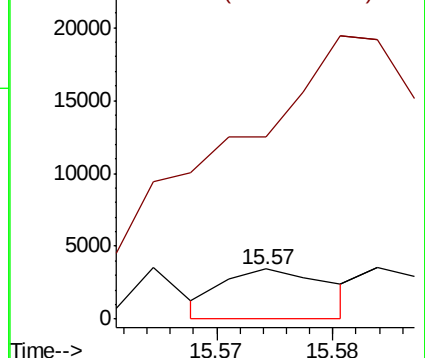
120 100

91 0.0 373.5 560.3#



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0



#68

1-Bromo-4-Fluorobenzene

Concen: 10.088 ppbv

RT: 14.44 min Scan# 3624

Delta R.T. -0.02 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

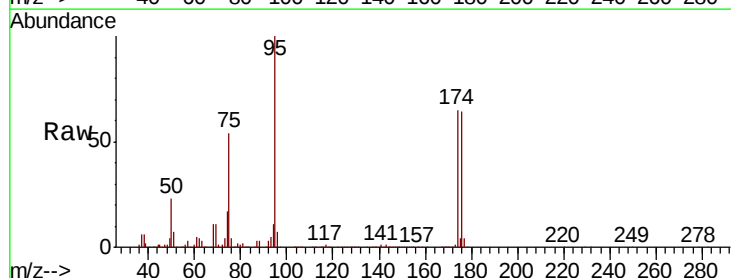
Tgt Ion: 95 Resp: 1899337

Ion Ratio Lower Upper

95 100

174 65.5 51.5 77.3

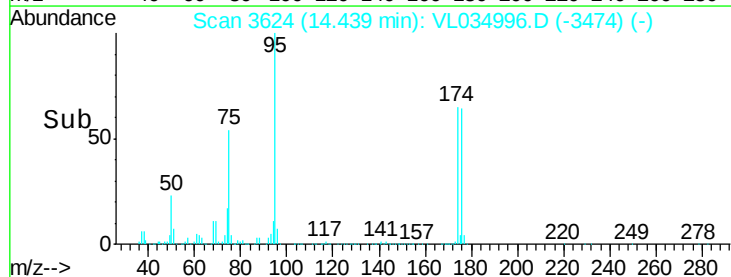
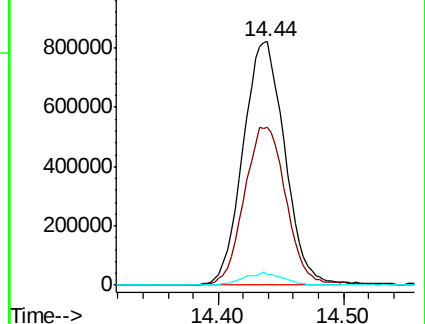
175 4.9 3.8 5.8

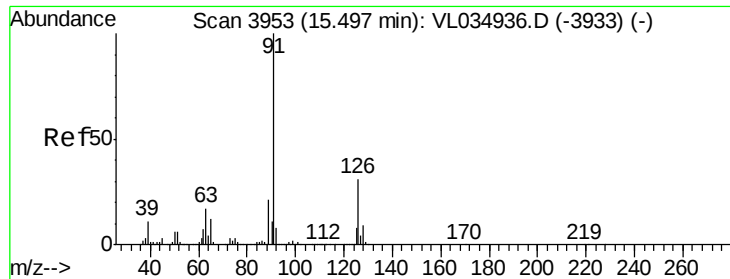


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

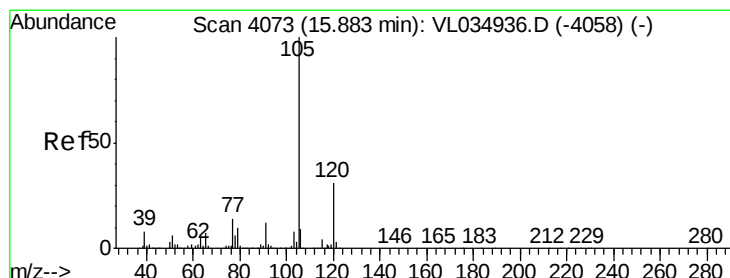
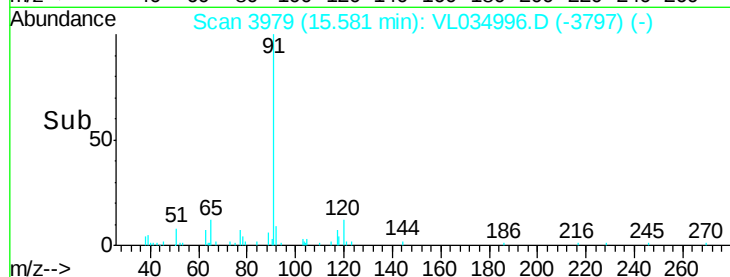
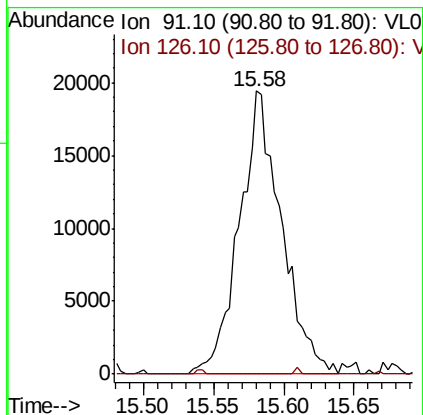
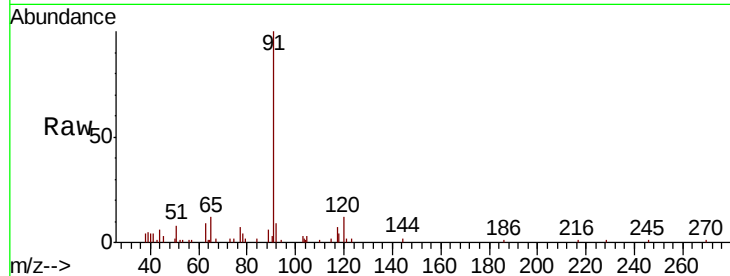




#71
 2-Chlorotoluene
 Concen: 0.144 ppbv
 RT: 15.58 min Scan# 3979
 Delta R.T. 0.08 min
 Lab File: VL034996.D
 Acq: 12 May 2020 20:58

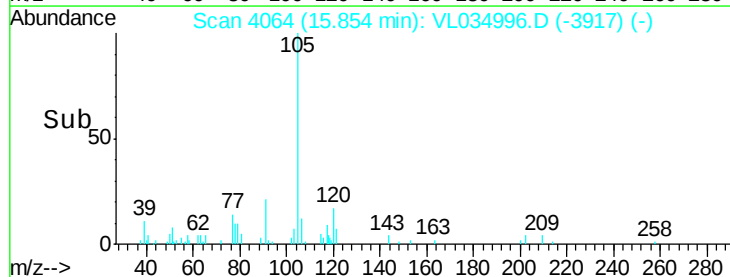
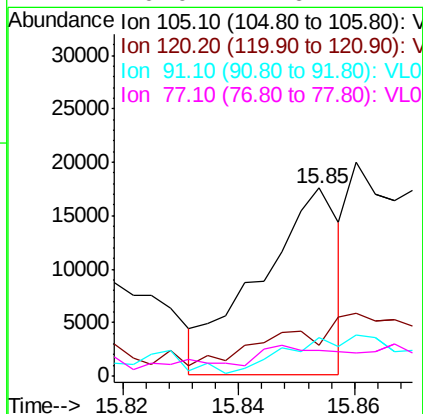
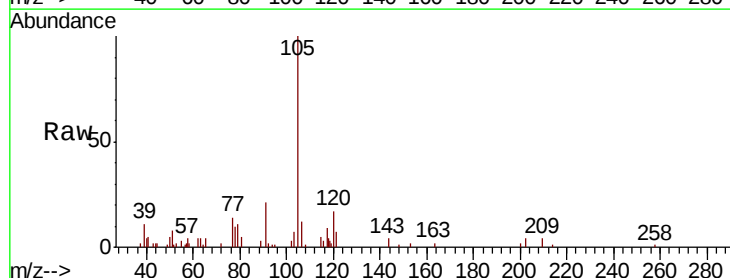
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1DL2

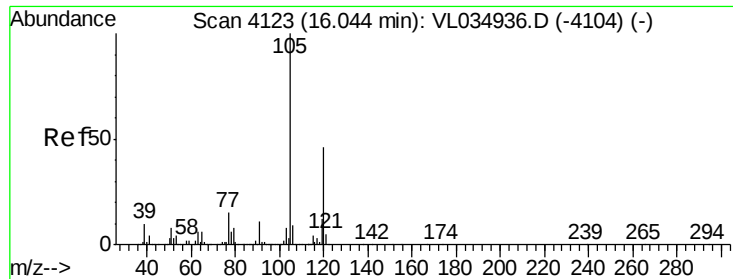
Tot Ion: 91 Resp: 40614
 Ion Ratio Lower Upper
 91 100
 126 0.3 12.0 47.8#



#72
 4-Ethyltoluene
 Concen: 0.060 ppbv
 RT: 15.85 min Scan# 4064
 Delta R.T. -0.03 min
 Lab File: VL034996.D
 Acq: 12 May 2020 20:58

Tgt Ion:105 Resp: 16700
 Ion Ratio Lower Upper
 105 100
 120 0.0 23.8 35.8#
 91 0.0 10.6 15.8#
 77 0.0 11.6 17.4#





#73

1,3,5-Trimethylbenzene

Concen: 0.132 ppbv

RT: 16.02 min Scan# 4116

Delta R.T. -0.02 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

Instrument :

MSVOA_L

ClientSampleId :

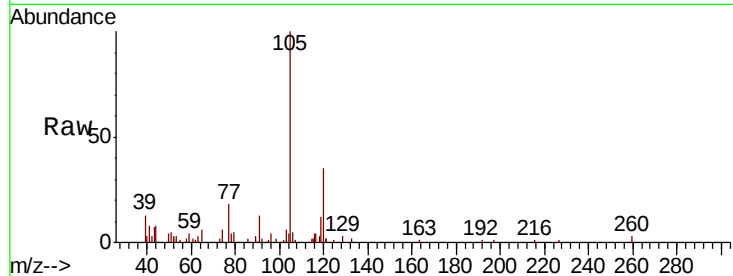
IA-1DL2

Tot Ion:105 Resp: 35793

Ion Ratio Lower Upper

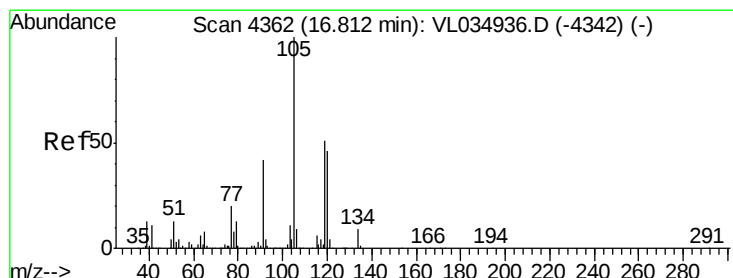
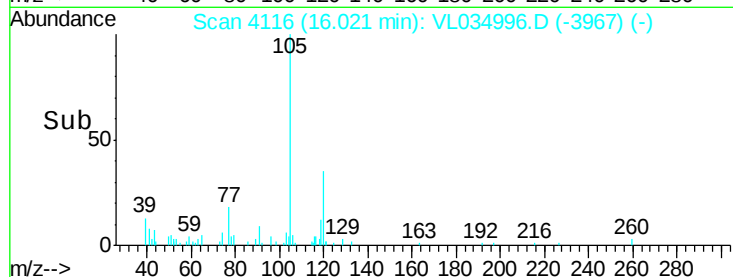
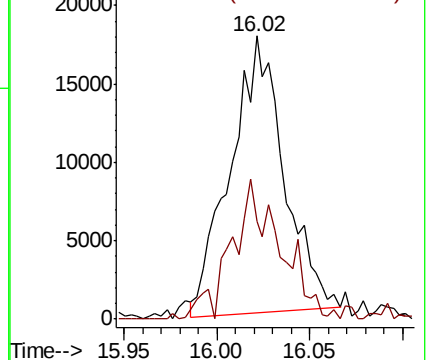
105 100

120 38.0 36.4 54.6



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#74

1,2,4-Trimethylbenzene

Concen: 0.465 ppbv

RT: 16.79 min Scan# 4355

Delta R.T. -0.02 min

Lab File: VL034996.D

Acq: 12 May 2020 20:58

Tgt Ion:105 Resp: 137503

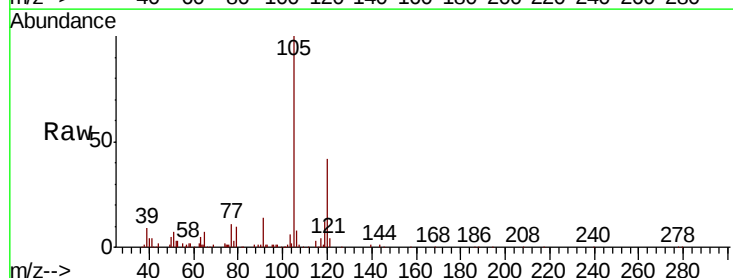
Ion Ratio Lower Upper

105 100

120 42.9 36.8 55.2

91 14.2 35.4 53.0#

77 11.5 16.2 24.2#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

