

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL031620\
 Data File : VL034893.D
 Acq On : 16 Mar 2020 16:45
 Operator : SY/AP
 Sample : L1924-03
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Mar 17 04:26:38 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	901714	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	1983805	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.10	117	1944802	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.44	95	1589571	10.48	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.80%

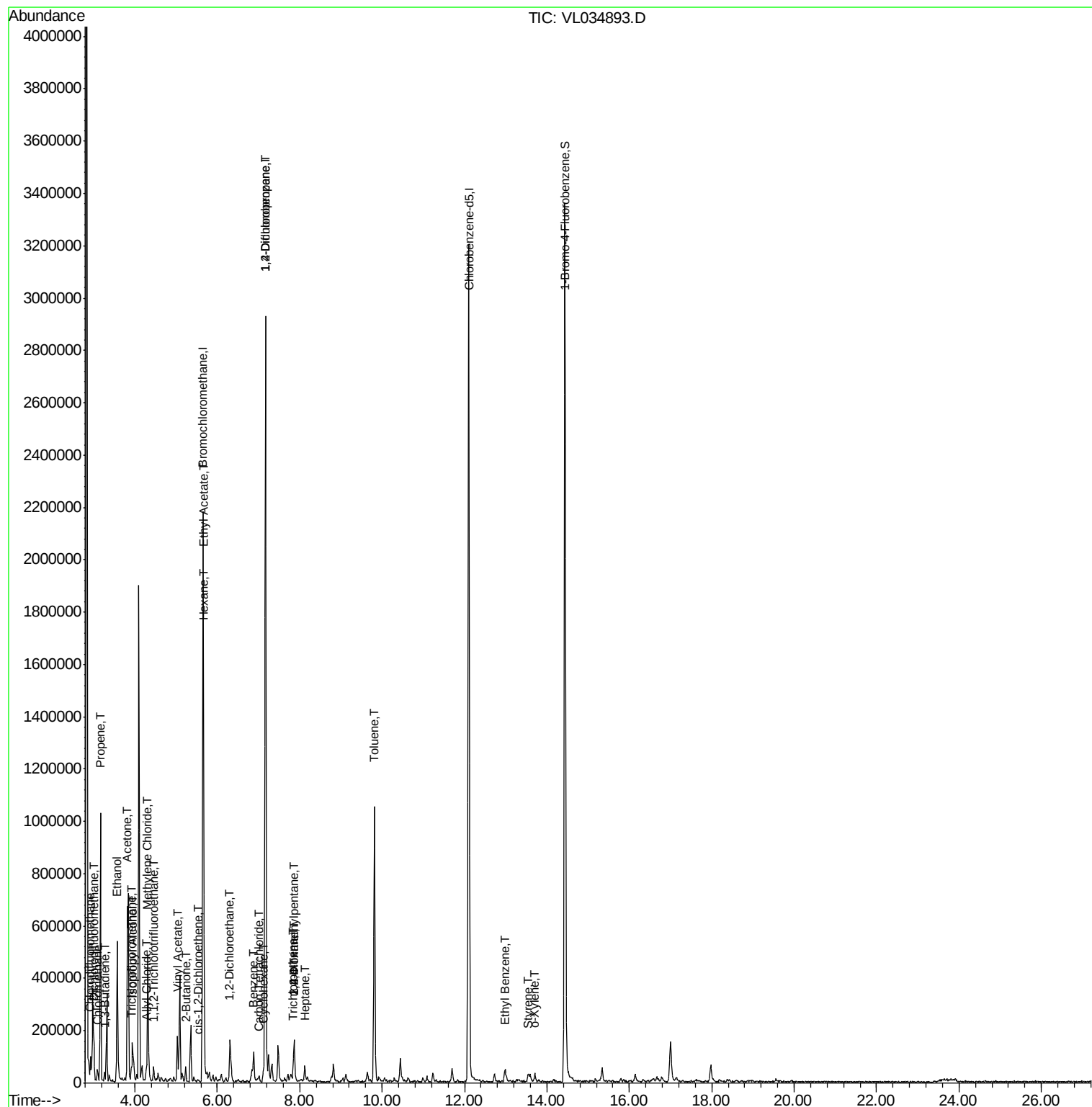
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.01	85	82368	0.667	ppbv 94
3) Chlorodifluoromethane	2.92	51	84100	0.835	ppbv # 79
4) Chloromethane	3.10	50	29363	0.516	ppbv # 84
9) Propene	3.16	41	267453	5.561	ppbv 97
10) Heptane	8.12	43	12076	0.102	ppbv # 37
11) Trichlorofluoromethane	3.91	101	37803	0.288	ppbv 92
12) 1,1,2-Trichlorotrifluoroet	4.46	101	16969	0.185	ppbv 96
13) Ethanol	3.57	45	535639	36.635	ppbv 93
15) Acetone	3.82	43	776119	6.641	ppbv # 89
16) 1,3-Butadiene	3.27	39	3585	0.068	ppbv 83
19) Isopropyl Alcohol	3.94	45	153917	2.085	ppbv # 42
20) Methylene Chloride	4.31	84	151932	4.112	ppbv 96
21) Allyl Chloride	4.27	41	11103	0.148	ppbv 95
23) Vinyl Acetate	5.03	43	65327	0.378	ppbv # 1
25) Ethyl Acetate	5.67	43	220264	1.058	ppbv # 94
26) Hexane	5.67	57	185879	2.073	ppbv # 56
30) Cyclohexane	7.11	84	4817	0.064	ppbv # 1
31) cis-1,2-Dichloroethene	5.53	61	2800	0.031	ppbv # 43
34) 2-Butanone	5.23	43	53022	0.402	ppbv 98
35) Carbon Tetrachloride	7.01	117	8107	0.066	ppbv 88
36) Benzene	6.88	78	72620	0.411	ppbv # 92
37) 1,2-Dichloroethane	6.29	62	4705	0.047	ppbv # 81
38) Trichloroethene	7.83	130	4435	0.066	ppbv # 60
39) 1,2-Dichloropropane	7.17	63	539833	7.705	ppbv # 23
40) 1,4-Dioxane	7.87	88	1846	0.070	ppbv # 1
44) 2,2,4-Trimethylpentane	7.86	57	112515	0.377	ppbv # 81
53) Toluene	9.81	91	766118	3.752	ppbv 98
58) Ethyl Benzene	12.98	91	21008	0.080	ppbv 97
60) o-Xylene	13.72	91	8634	0.040	ppbv # 31
61) Styrene	13.54	104	5848	0.039	ppbv # 1

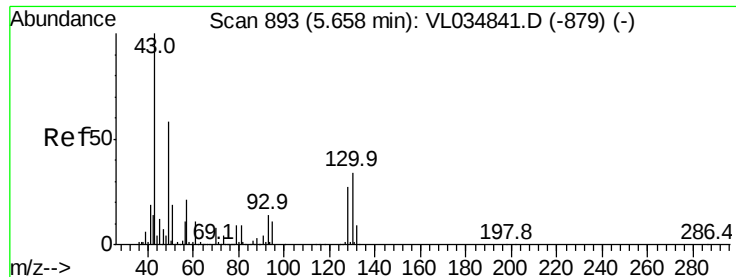
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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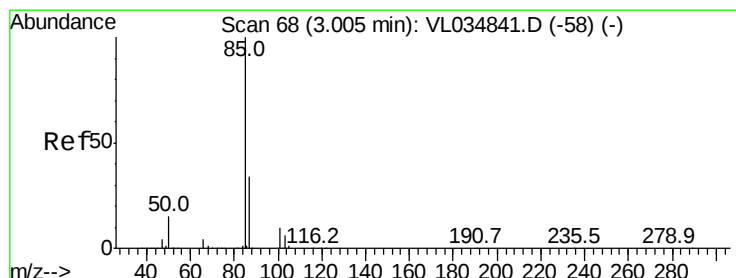
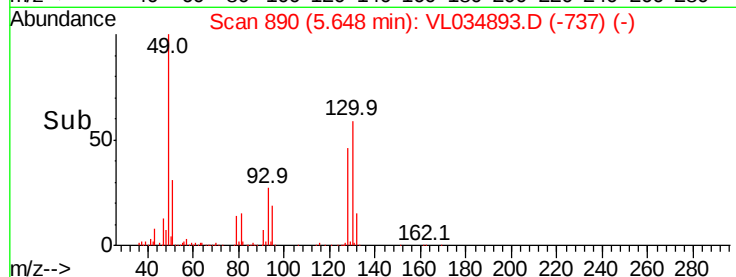
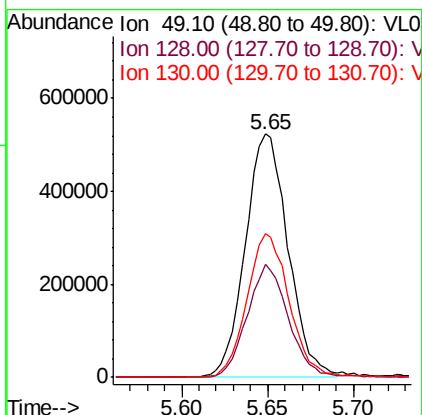
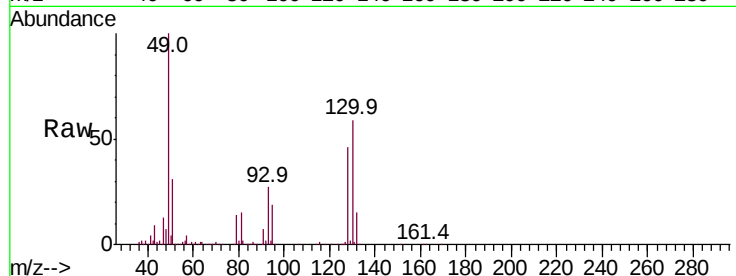




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.65 min Scan# 890
 Delta R.T. -0.01 min
 Lab File: VL034893.D
 Acq: 16 Mar 2020 16:45

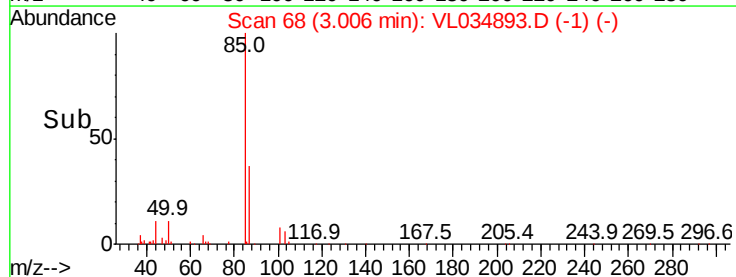
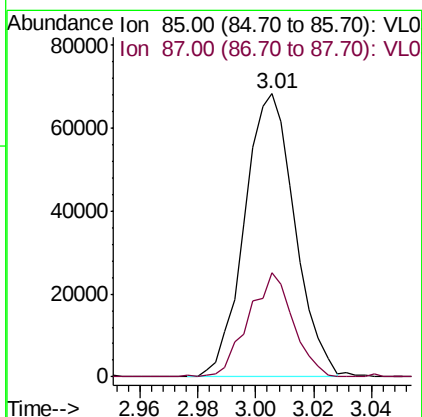
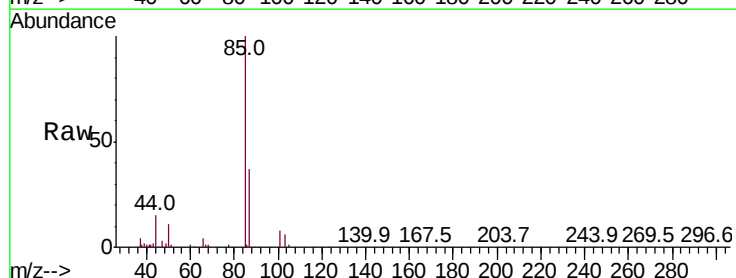
Instrument :
 MSVOA_L
 ClientSampled :

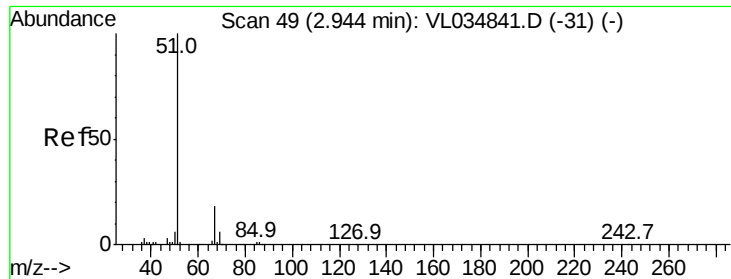
Tot Ion: 49 Resp: 901714
 Ion Ratio Lower Upper
 49 100
 128 44.9 23.4 70.3
 130 59.2 30.0 90.0



#2
 Dichlorodifluoromethane
 Concen: 0.667 ppbv
 RT: 3.01 min Scan# 68
 Delta R.T. 0.00 min
 Lab File: VL034893.D
 Acq: 16 Mar 2020 16:45

Tgt Ion: 85 Resp: 82368
 Ion Ratio Lower Upper
 85 100
 87 36.7 26.9 40.3

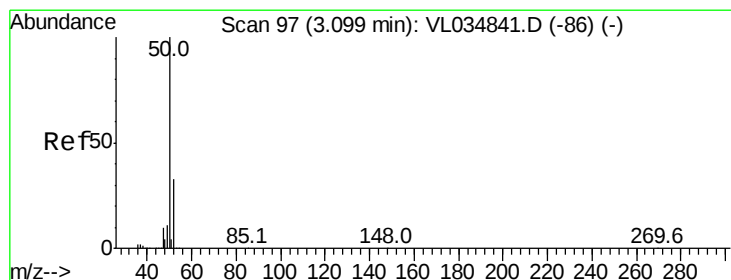
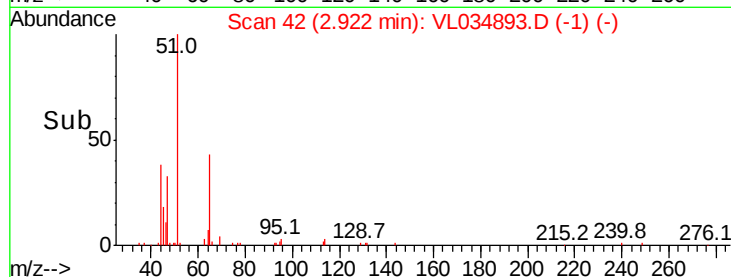
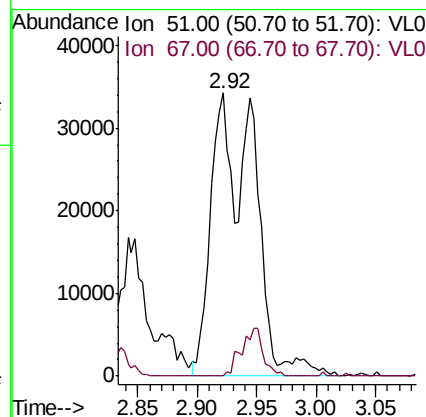
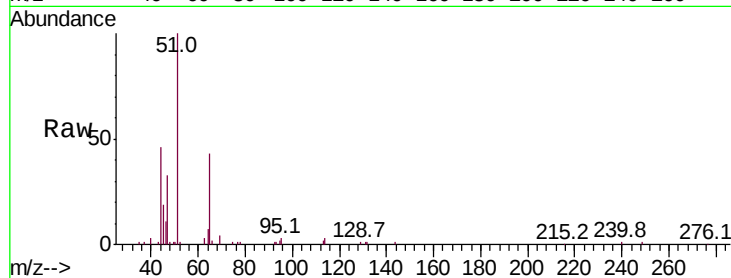




#3
Chlorodifluoromethane
Concen: 0.835 ppbv
RT: 2.92 min Scan# 42
Delta R.T. -0.02 min
Lab File: VL034893.D
Acq: 16 Mar 2020 16:45

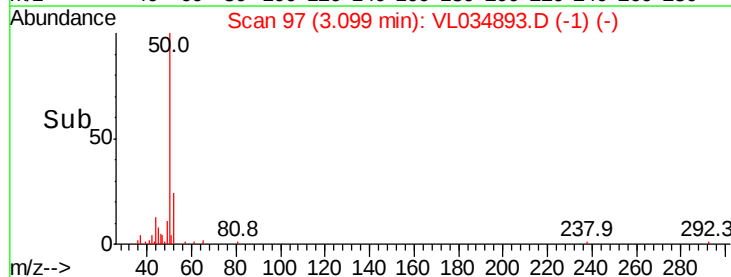
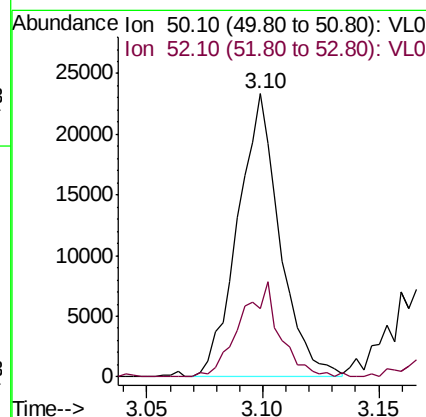
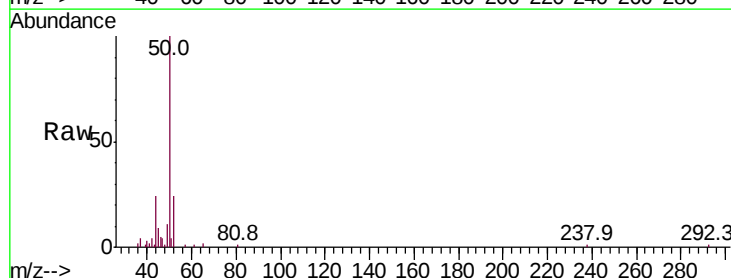
Instrument :
MSVOA_L
ClientSampleId :

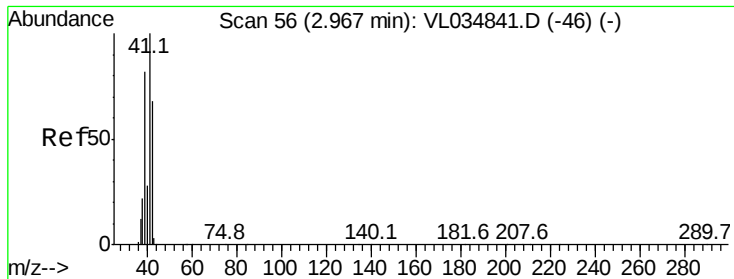
Tot Ion: 51 Resp: 84100
Ion Ratio Lower Upper
51 100
67 8.8 14.3 21.5#



#4
Chloromethane
Concen: 0.516 ppbv
RT: 3.10 min Scan# 97
Delta R.T. 0.00 min
Lab File: VL034893.D
Acq: 16 Mar 2020 16:45

Tgt Ion: 50 Resp: 29363
Ion Ratio Lower Upper
50 100
52 24.3 26.8 40.2#





#9

Propene

Concen: 5.561 ppbv

RT: 3.16 min Scan# 117

Delta R.T. 0.20 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

Instrument :

MSVOA_L

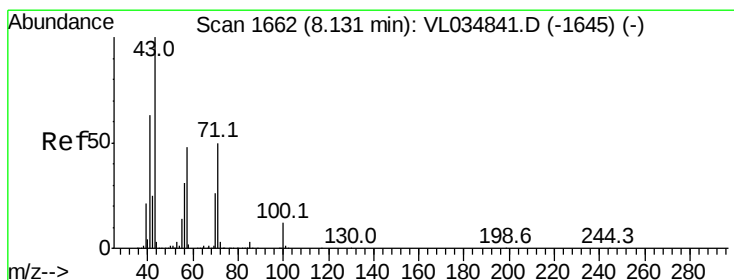
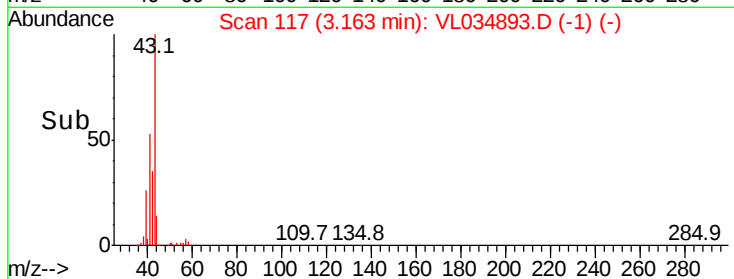
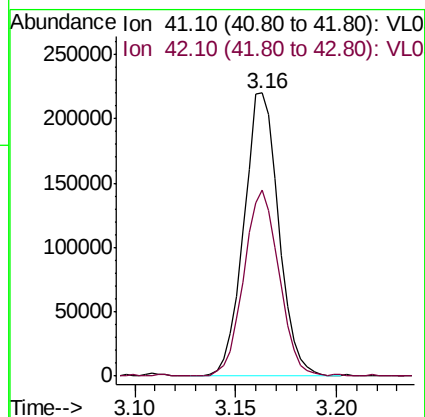
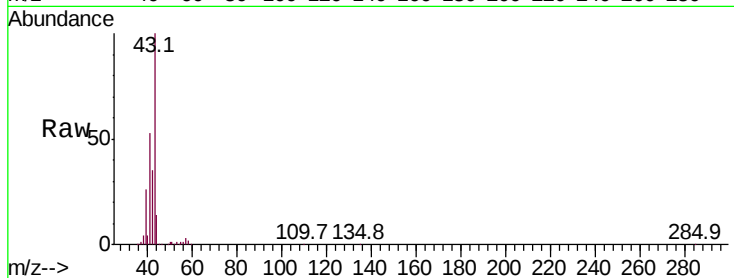
ClientSampleId :

Tot Ion: 41 Resp: 267453

Ion Ratio Lower Upper

41 100

42 66.9 55.2 82.8



#10

Heptane

Concen: 0.102 ppbv

RT: 8.12 min Scan# 1659

Delta R.T. -0.01 min

Lab File: VL034893.D

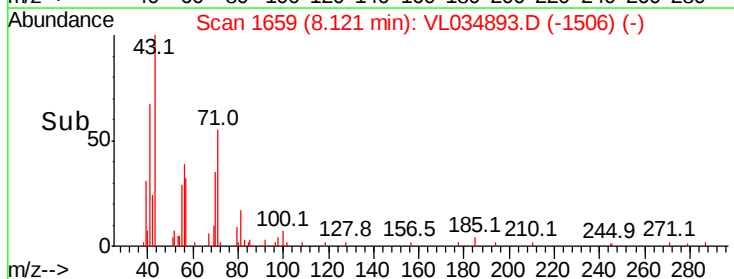
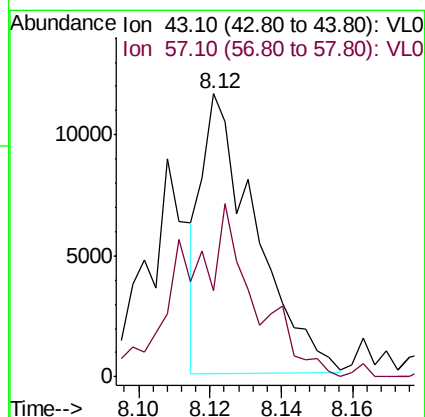
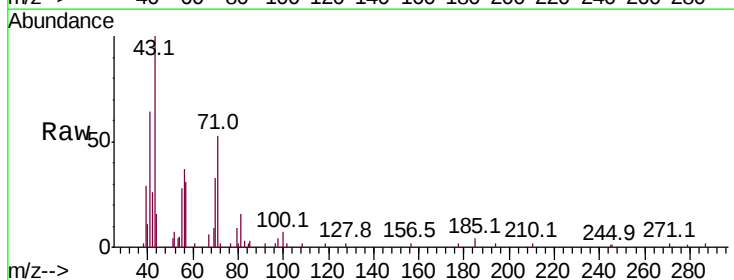
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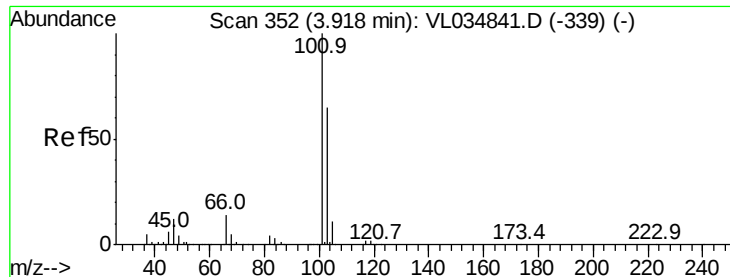
Tgt Ion: 43 Resp: 12076

Ion Ratio Lower Upper

43 100

57 92.6 39.7 59.5#

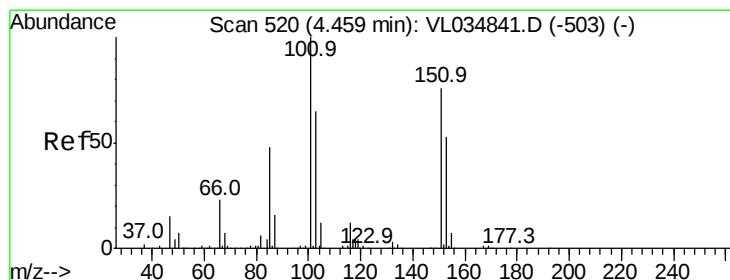
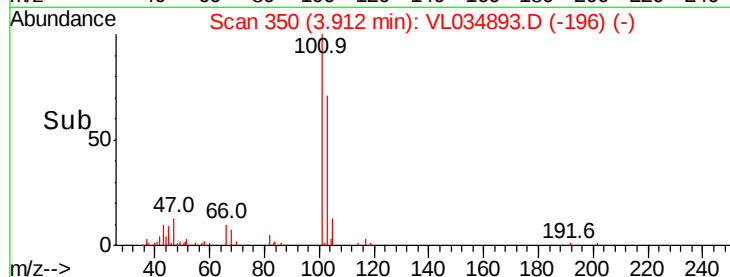
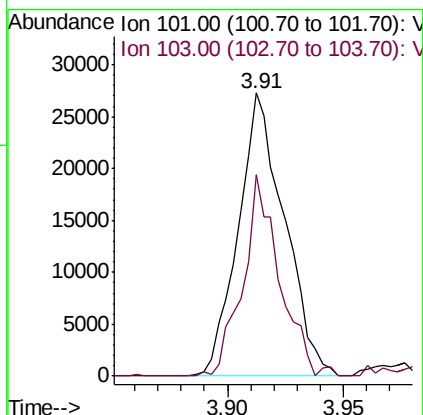
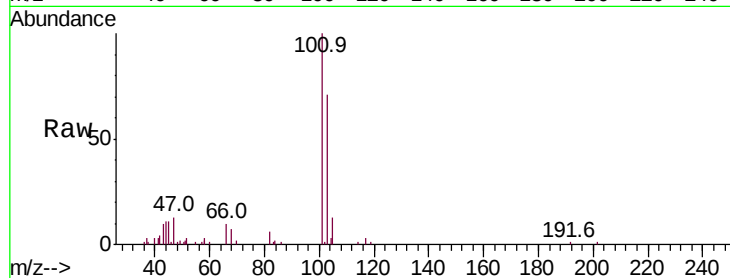




#11
 Trichlorofluoromethane
 Concen: 0.288 ppbv
 RT: 3.91 min Scan# 350
 Delta R.T. -0.01 min
 Lab File: VL034893.D
 Acq: 16 Mar 2020 16:45

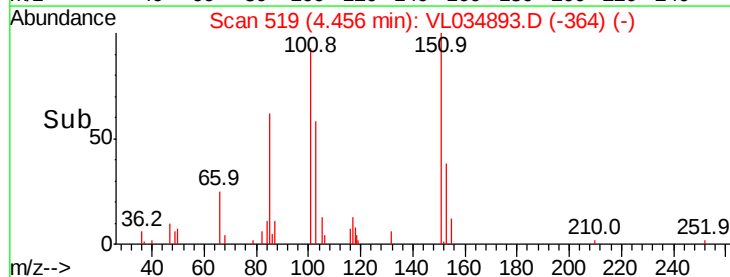
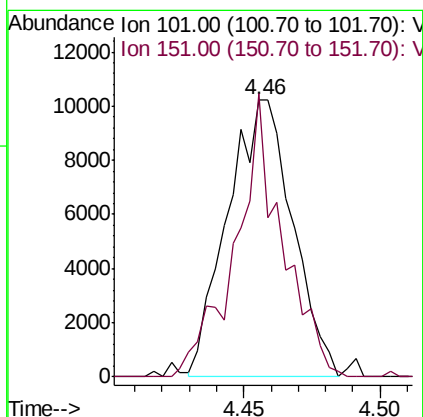
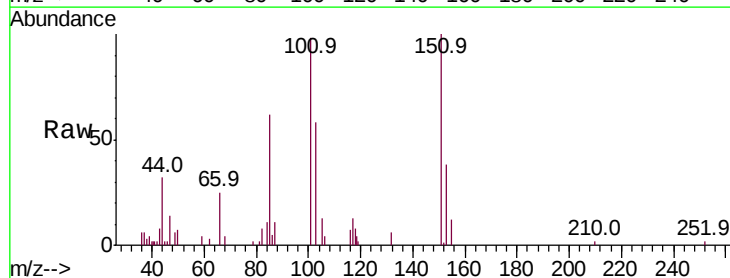
Instrument :
 MSVOA_L
 ClientSampled :

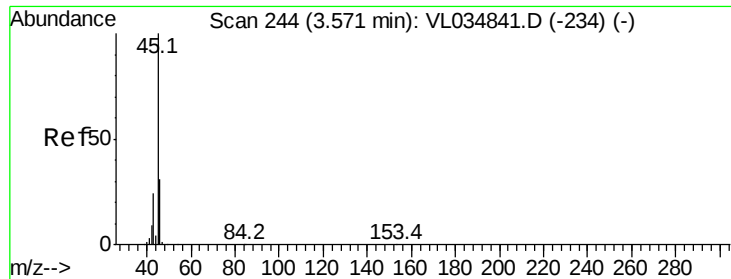
Tot Ion:101 Resp: 37803
 Ion Ratio Lower Upper
 101 100
 103 71.1 51.8 77.8



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.185 ppbv
 RT: 4.46 min Scan# 519
 Delta R.T. -0.00 min
 Lab File: VL034893.D
 Acq: 16 Mar 2020 16:45

Tgt Ion:101 Resp: 16969
 Ion Ratio Lower Upper
 101 100
 151 72.9 60.8 91.2

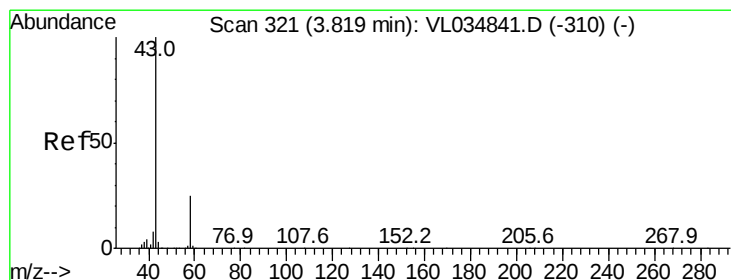
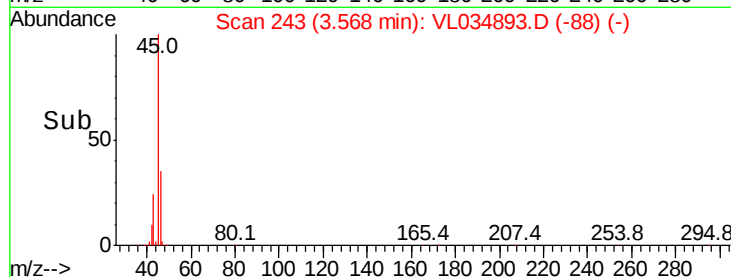
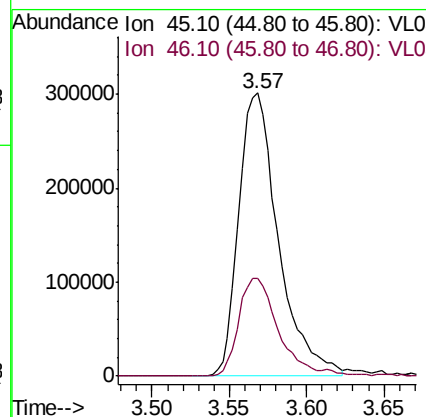
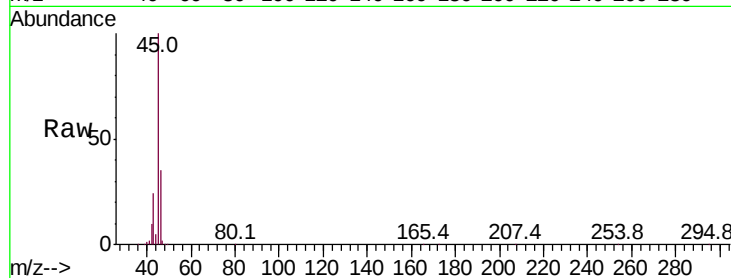




#13
Ethanol
Concen: 36.635 ppbv
RT: 3.57 min Scan# 243
Delta R.T. -0.00 min
Lab File: VL034893.D
Acq: 16 Mar 2020 16:45

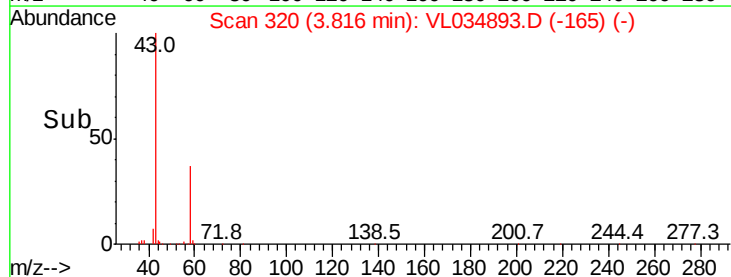
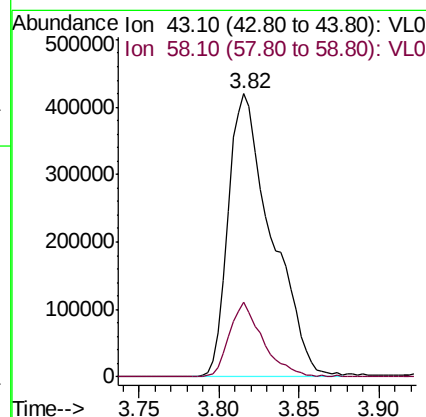
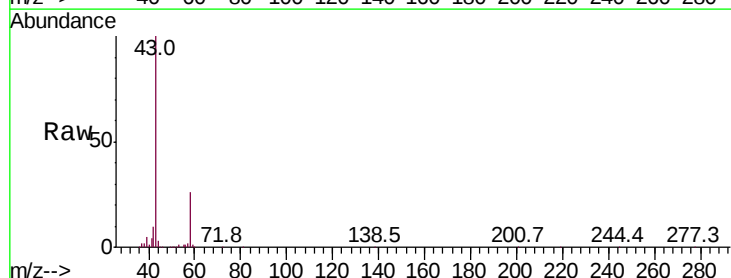
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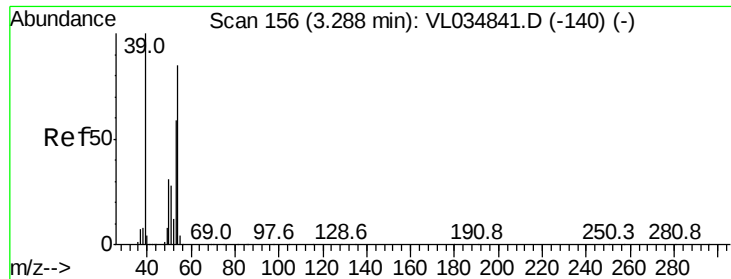
Tot Ion: 45 Resp: 535639
Ion Ratio Lower Upper
45 100
46 35.9 16.0 64.0



#15
Acetone
Concen: 6.641 ppbv
RT: 3.82 min Scan# 320
Delta R.T. -0.00 min
Lab File: VL034893.D
Acq: 16 Mar 2020 16:45

Tgt Ion: 43 Resp: 776119
Ion Ratio Lower Upper
43 100
58 20.8 21.0 31.6#

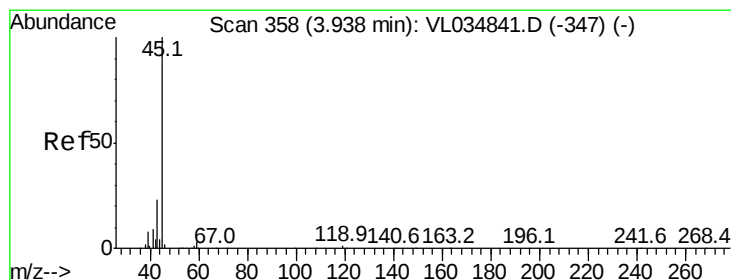
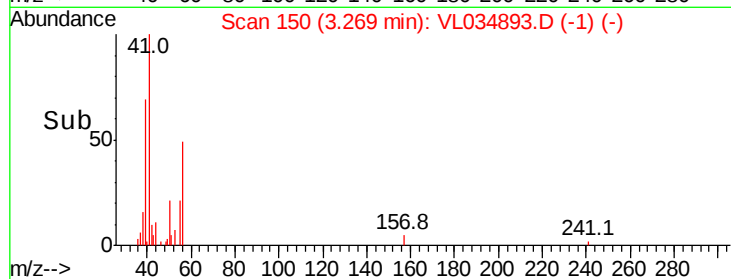
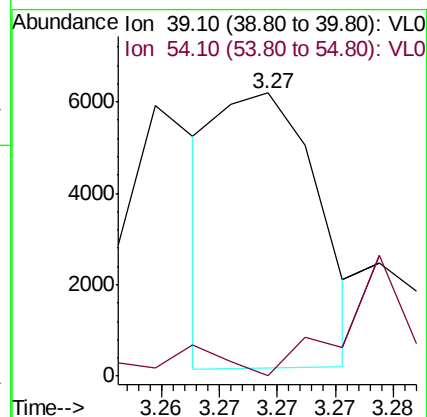
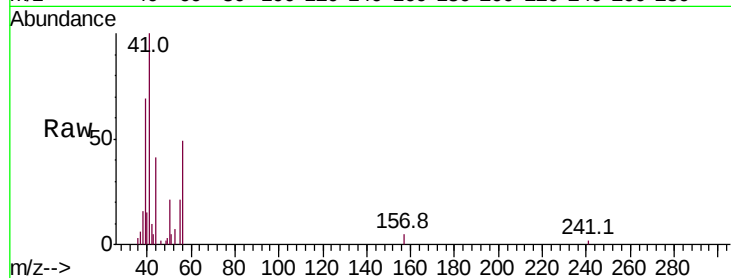




#16
1,3-Butadiene
Concen: 0.068 ppbv
RT: 3.27 min Scan# 150
Delta R.T. -0.02 min
Lab File: VL034893.D
Acq: 16 Mar 2020 16:45

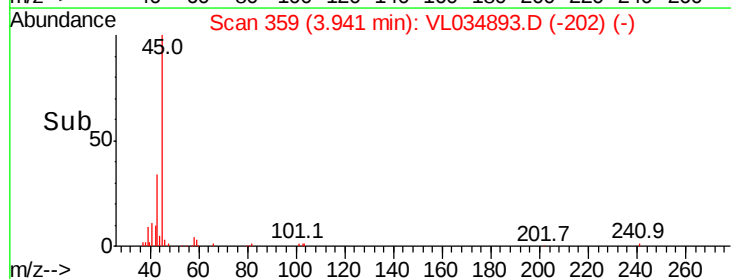
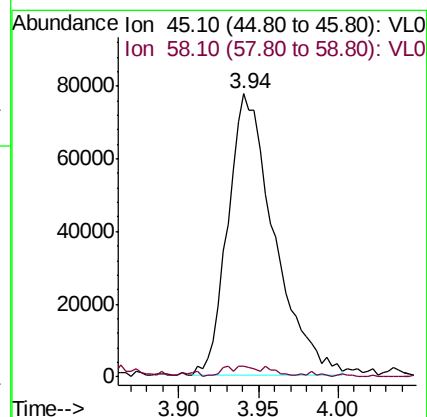
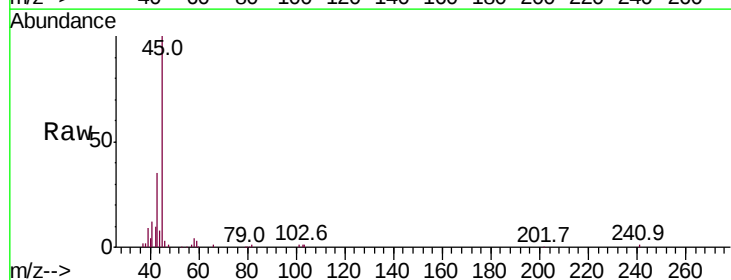
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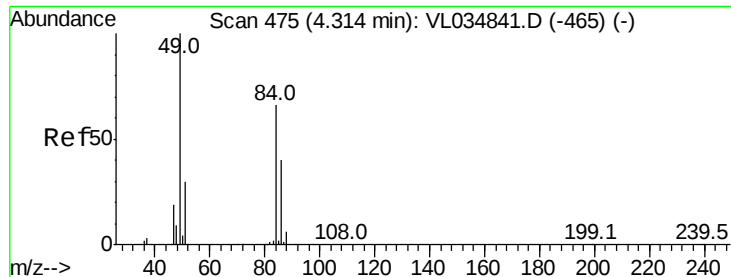
Tot Ion: 39 Resp: 3585
Ion Ratio Lower Upper
39 100
54 96.7 65.0 97.6



#19
Isopropyl Alcohol
Concen: 2.085 ppbv
RT: 3.94 min Scan# 359
Delta R.T. 0.00 min
Lab File: VL034893.D
Acq: 16 Mar 2020 16:45

Tgt Ion: 45 Resp: 153917
Ion Ratio Lower Upper
45 100
58 3.3 30.5 45.7#

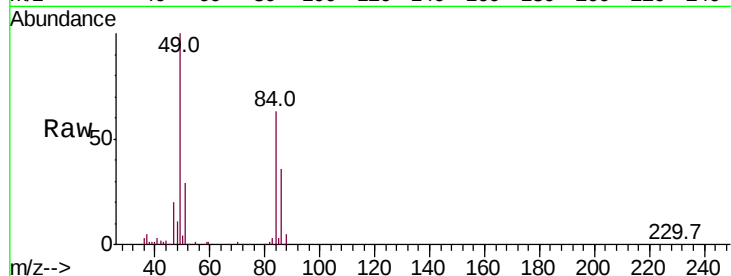




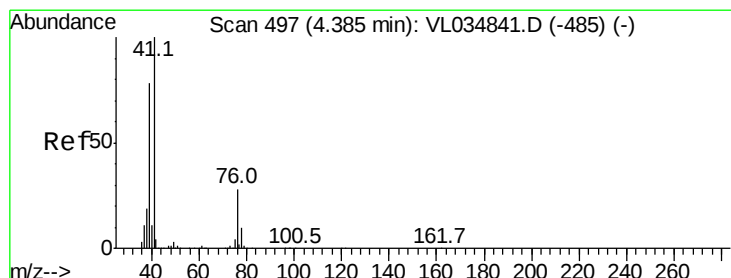
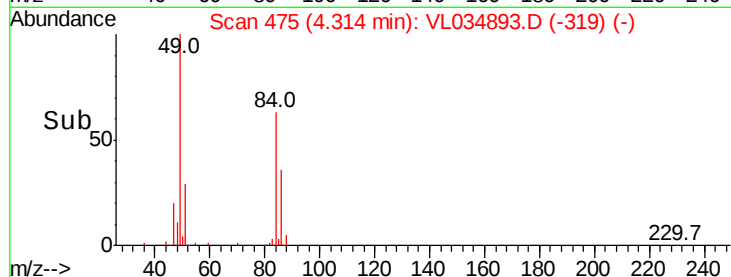
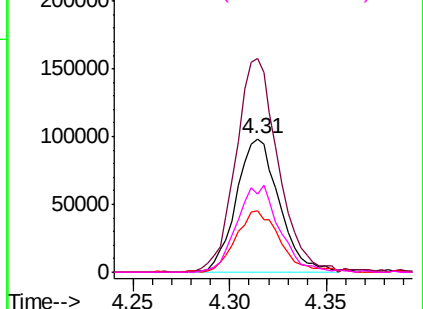
#20
Methylene Chloride
Concen: 4.112 ppbv
RT: 4.31 min Scan# 475
Delta R.T. 0.00 min
Lab File: VL034893.D
Acq: 16 Mar 2020 16:45

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:	84	Resp:	151932
Ion	Ratio	Lower	Upper
84	100		
49	159.1	121.5	182.3
51	45.1	36.6	55.0
86	58.3	48.2	72.2

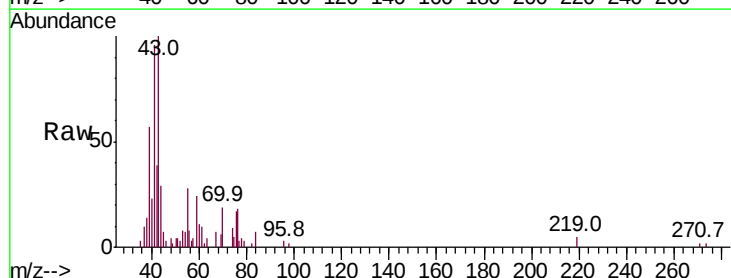


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

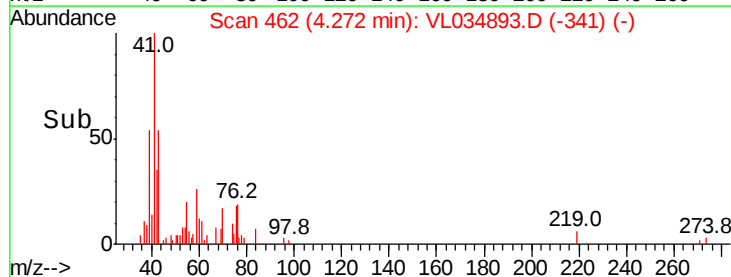
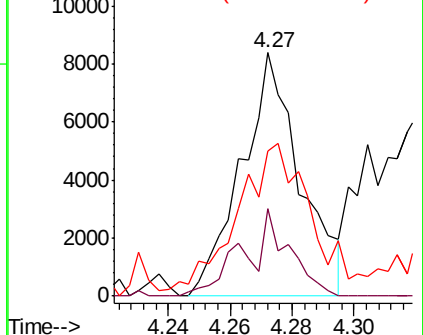


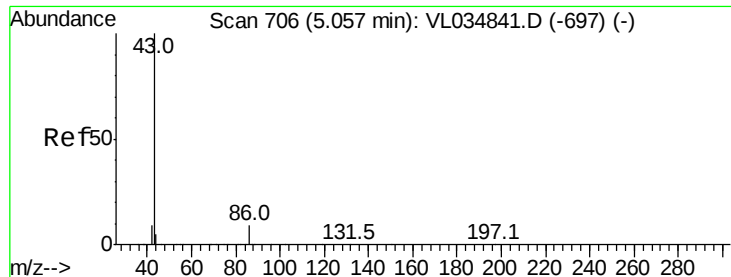
#21
Allyl Chloride
Concen: 0.148 ppbv
RT: 4.27 min Scan# 462
Delta R.T. -0.11 min
Lab File: VL034893.D
Acq: 16 Mar 2020 16:45

Tgt Ion:	41	Resp:	11103
Ion	Ratio	Lower	Upper
41	100		
76	27.7	22.2	33.2
39	84.0	62.6	93.8



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: 0.378 ppbv

RT: 5.03 min Scan# 699

Delta R.T. -0.02 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 43 Resp: 65327

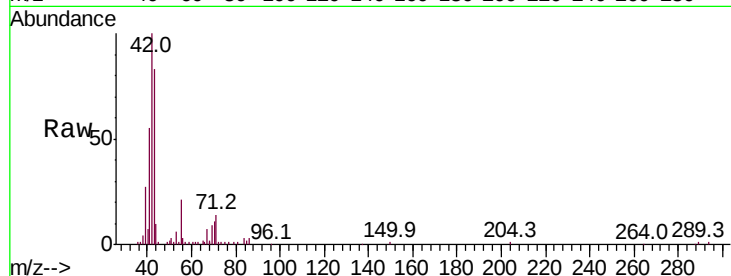
Ion Ratio Lower Upper

43 100

86 3.3 6.3 9.5#

42 119.9 7.8 11.8#

44 7.8 4.0 6.0#

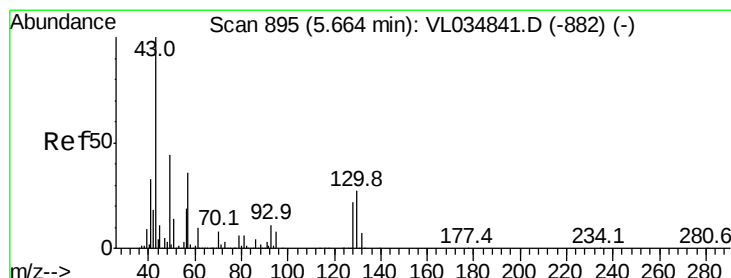
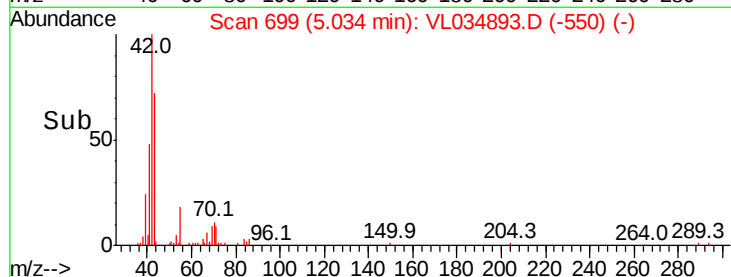
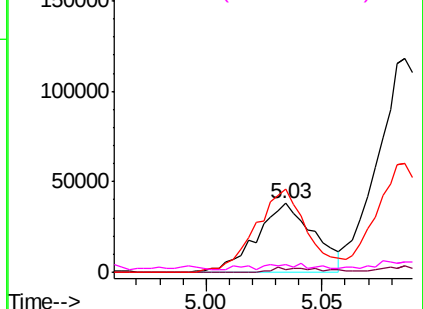


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 1.058 ppbv

RT: 5.67 min Scan# 896

Delta R.T. 0.00 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

Tgt Ion: 43 Resp: 220264

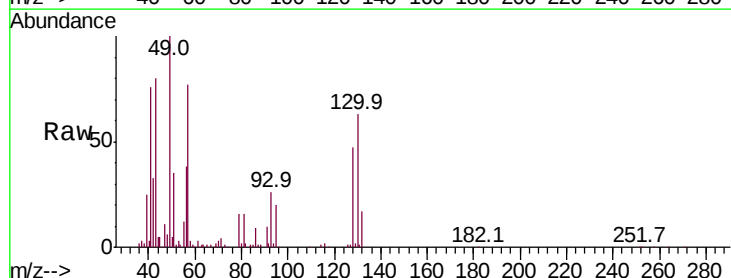
Ion Ratio Lower Upper

43 100

45 10.5 8.2 12.2

61 5.4 7.8 11.6#

70 5.4 5.8 8.8#

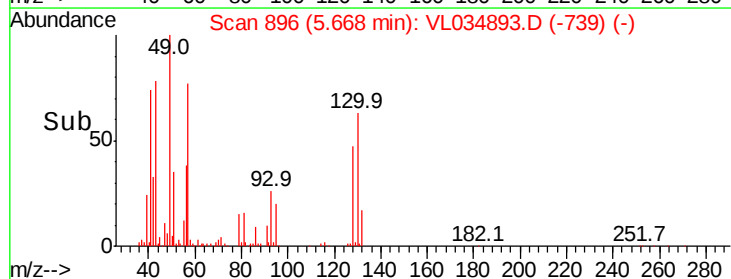
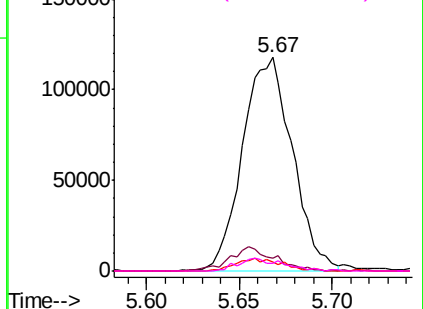


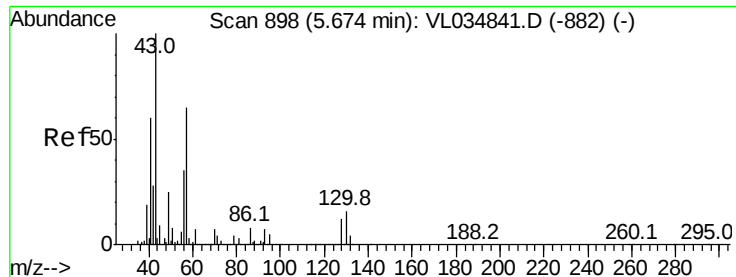
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0





#26

Hexane

Concen: 2.073 ppbv

RT: 5.67 min Scan# 897

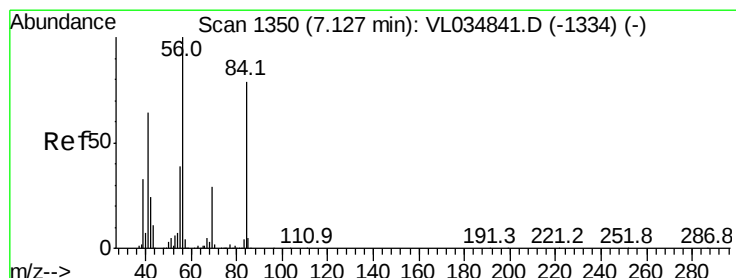
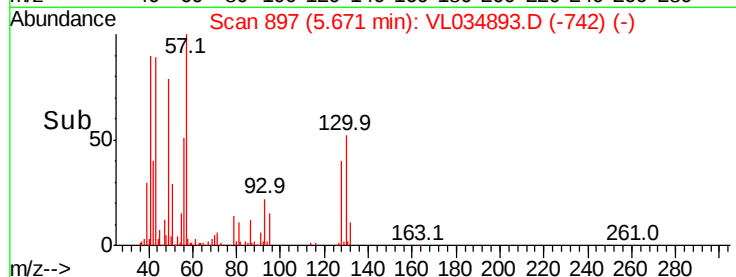
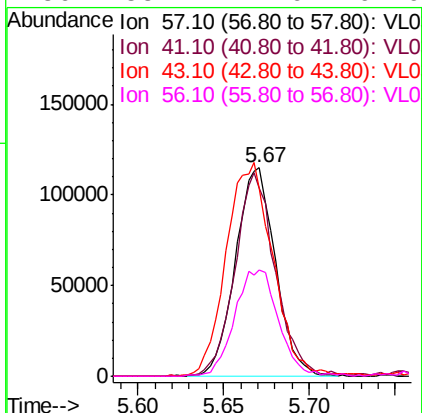
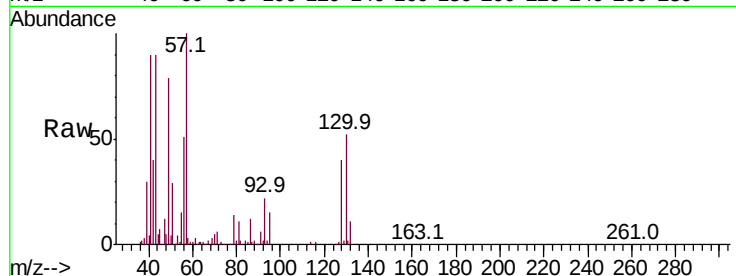
Delta R.T. -0.00 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

Instrument :
MSVOA_L
ClientSampled :

Tot Ion:	57	Resp:	185879
Ion	Ratio	Lower	Upper
57	100		
41	99.1	72.6	109.0
43	120.3	183.8	275.6#
56	55.7	41.9	62.9



#30

Cyclohexane

Concen: 0.064 ppbv

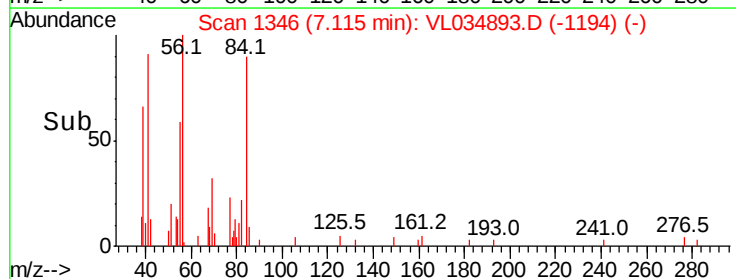
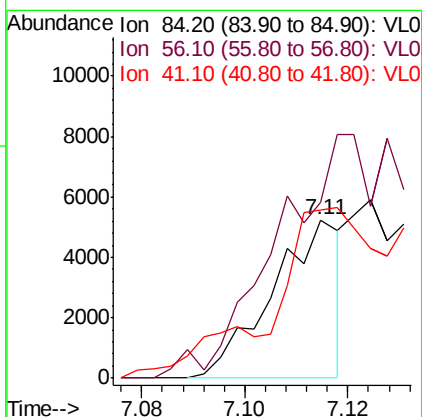
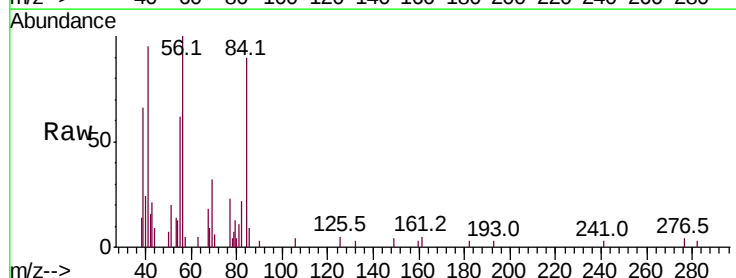
RT: 7.11 min Scan# 1346

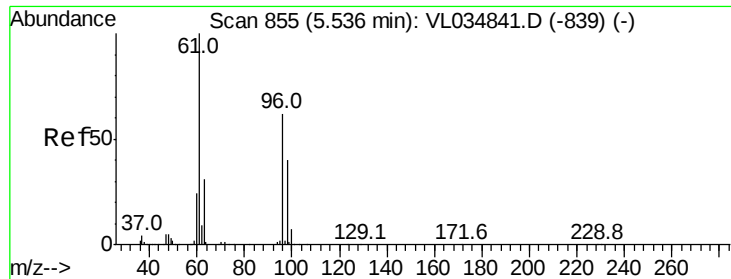
Delta R.T. -0.01 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

Tgt Ion:	84	Resp:	4817
Ion	Ratio	Lower	Upper
84	100		
56	306.0	110.5	165.7#
41	0.0	68.2	102.4#





#31

cis-1,2-Dichloroethene

Concen: 0.031 ppbv

RT: 5.53 min Scan# 854

Delta R.T. -0.00 min

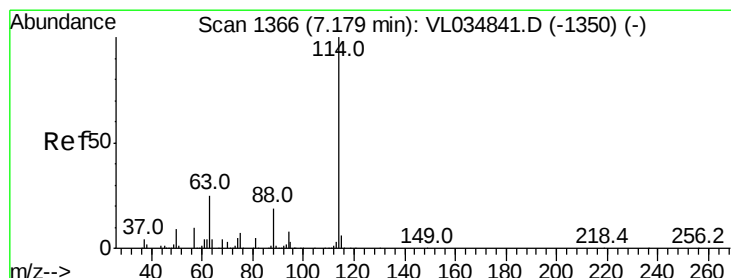
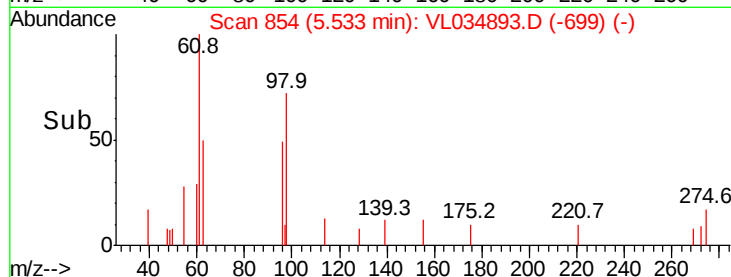
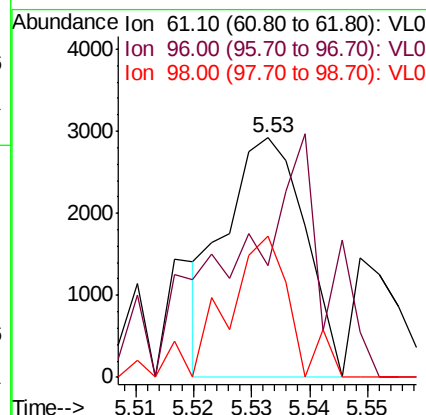
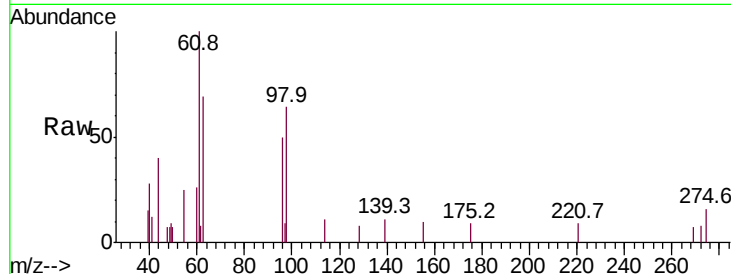
Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 61 Resp: 2800

Ion	Ratio	Lower	Upper
61	100		
96	5.5	49.8	74.8#
98	59.2	32.2	48.4#



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 min Scan# 1363

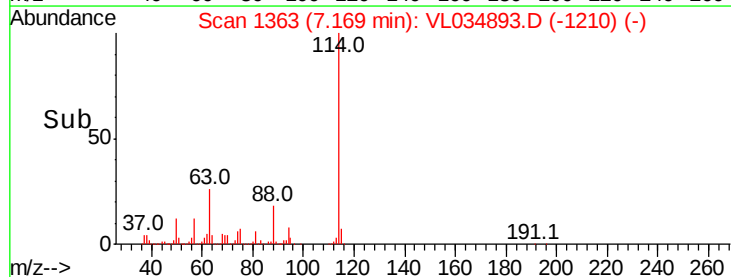
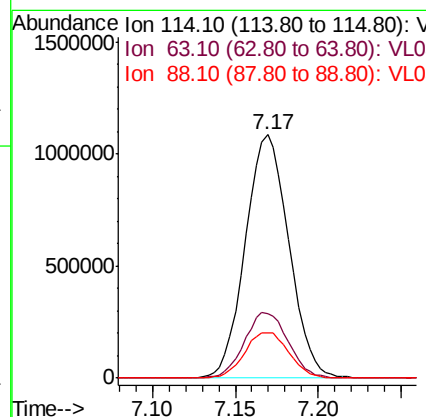
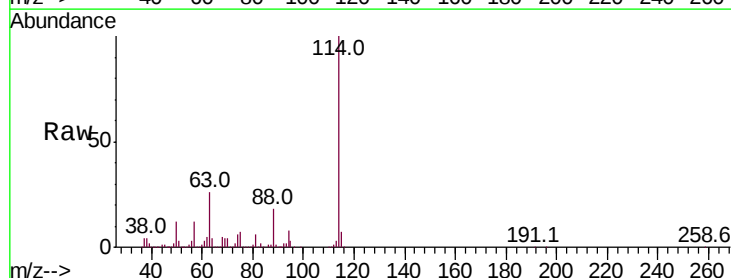
Delta R.T. -0.01 min

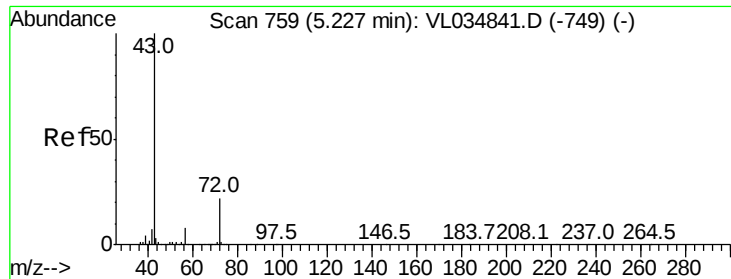
Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

Tgt Ion: 114 Resp: 1983805

Ion	Ratio	Lower	Upper
114	100		
63	27.4	20.6	31.0
88	19.3	15.0	22.6

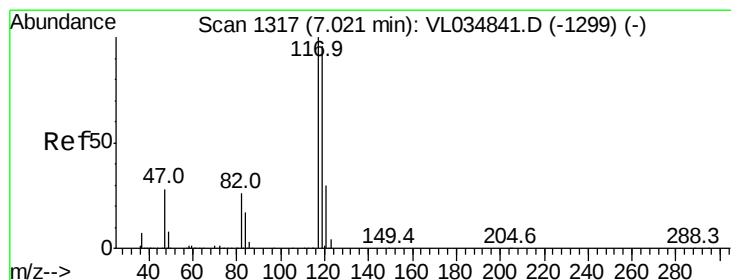
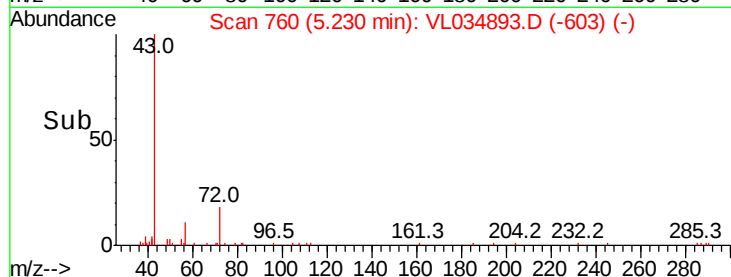
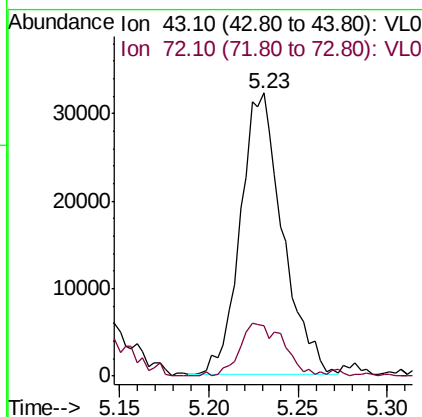
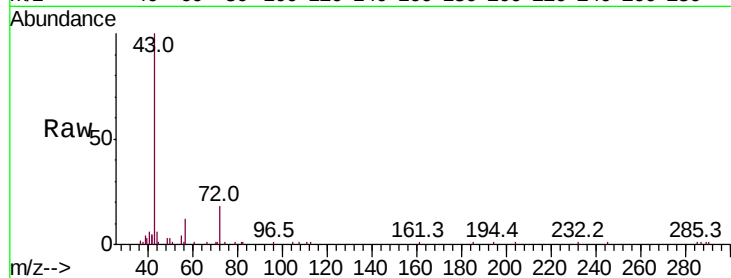




#34
2-Butanone
Concen: 0.402 ppbv
RT: 5.23 min Scan# 760
Delta R.T. 0.00 min
Lab File: VL034893.D
Acq: 16 Mar 2020 16:45

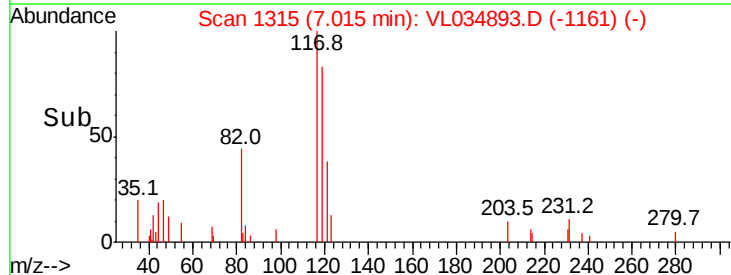
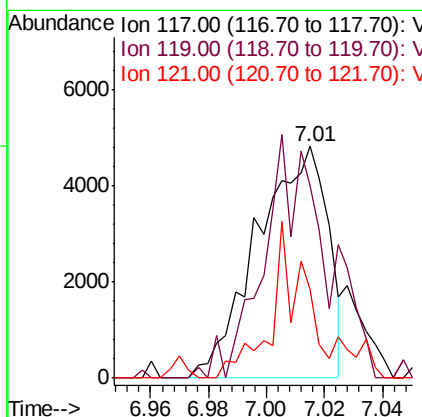
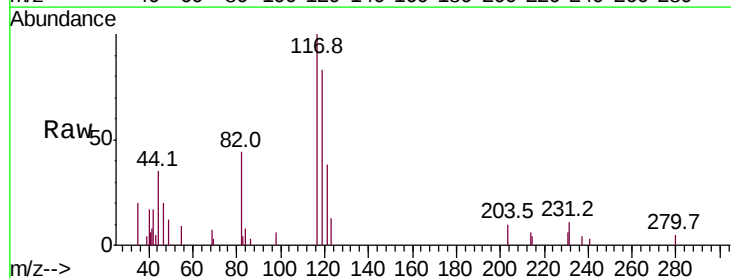
Instrument :
MSVOA_L
ClientSampleId :

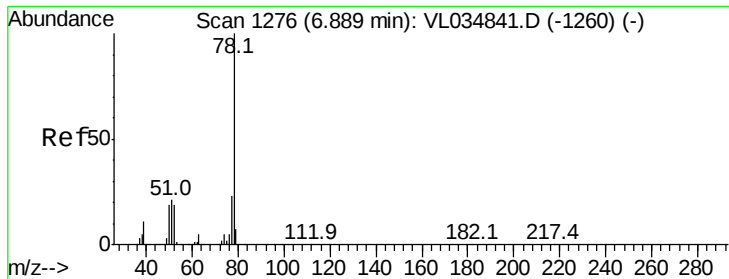
Tot Ion: 43 Resp: 53022
Ion Ratio Lower Upper
43 100
72 20.9 17.6 26.4



#35
Carbon Tetrachloride
Concen: 0.066 ppbv
RT: 7.01 min Scan# 1315
Delta R.T. -0.01 min
Lab File: VL034893.D
Acq: 16 Mar 2020 16:45

Tgt Ion: 117 Resp: 8107
Ion Ratio Lower Upper
117 100
119 83.2 77.0 115.4
121 34.7 24.0 36.0





#36

Benzene

Concen: 0.411 ppbv

RT: 6.88 min Scan# 1273

Delta R.T. -0.01 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

Instrument :

MSVOA_L

ClientSampleId :

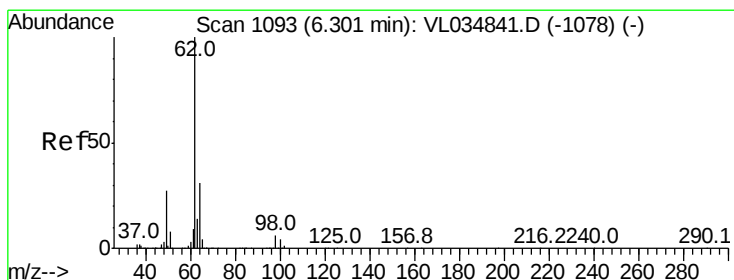
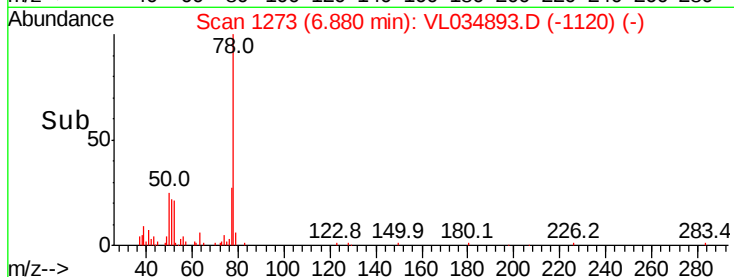
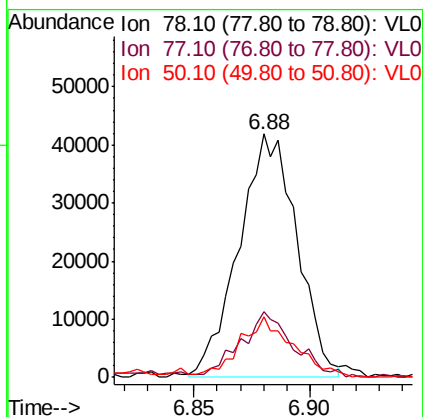
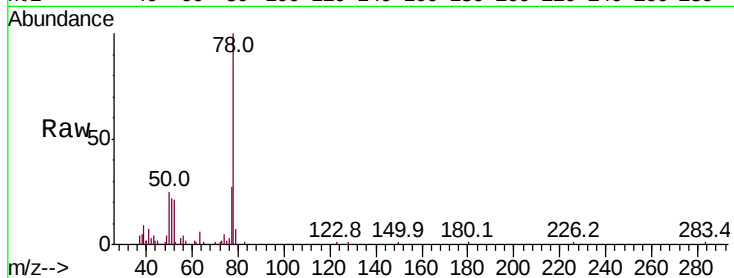
Tot Ion: 78 Resp: 72620

Ion Ratio Lower Upper

78 100

77 25.9 18.2 27.2

50 23.8 15.2 22.8#



#37

1,2-Dichloroethane

Concen: 0.047 ppbv

RT: 6.29 min Scan# 1090

Delta R.T. -0.01 min

Lab File: VL034893.D

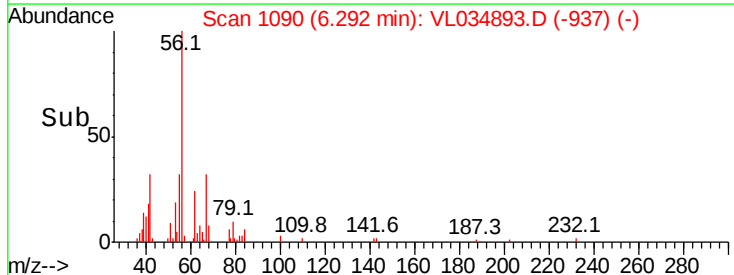
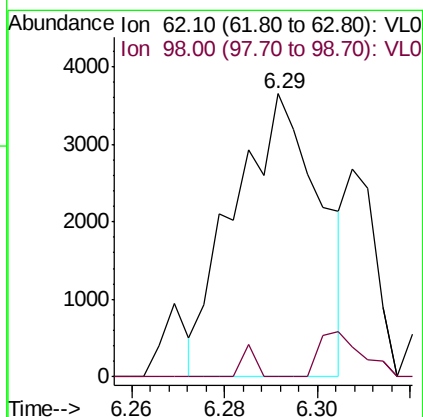
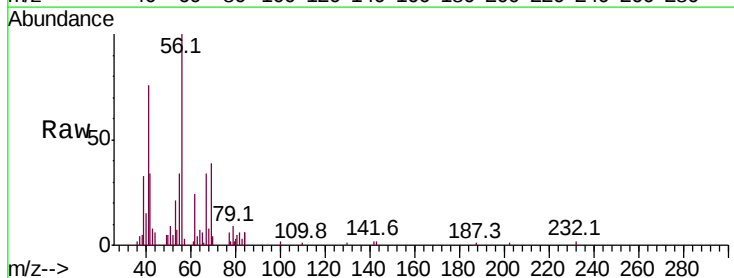
Acq: 16 Mar 2020 16:45

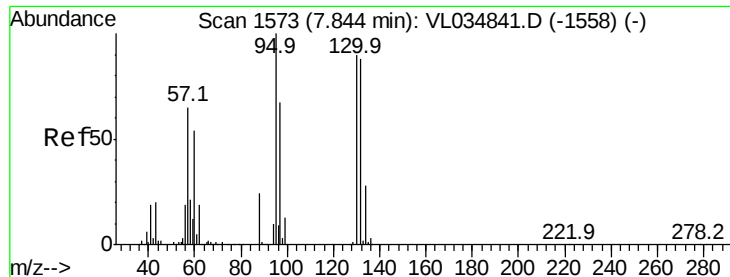
Tgt Ion: 62 Resp: 4705

Ion Ratio Lower Upper

62 100

98 0.0 5.2 7.8#





#38

Trichloroethene

Concen: 0.066 ppbv

RT: 7.83 min Scan# 1569

Delta R.T. -0.01 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:130 Resp: 4435

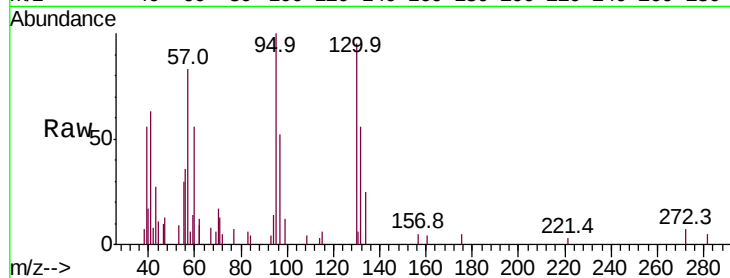
Ion Ratio Lower Upper

130 100

95 78.7 88.5 132.7#

132 50.2 78.0 117.0#

97 38.2 59.3 88.9#

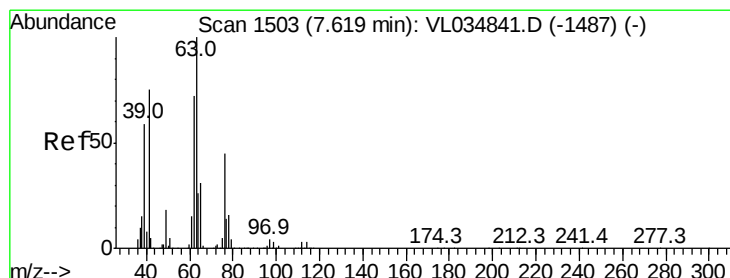
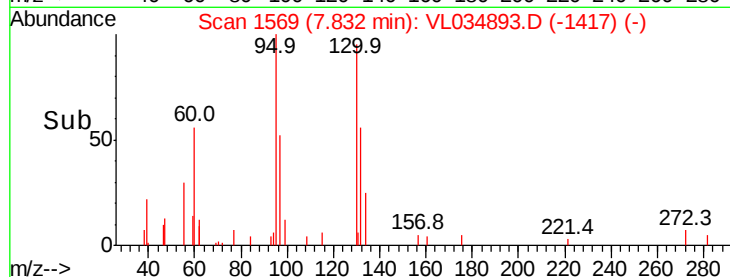
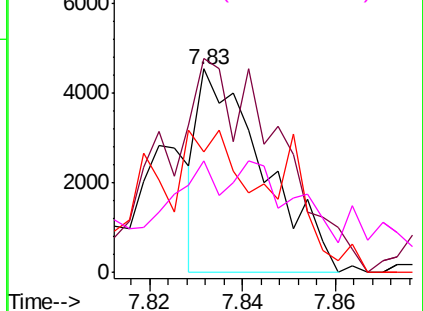


Abundance Ion 130.00 (129.70 to 130.70): V

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: 7.705 ppbv

RT: 7.17 min Scan# 1362

Delta R.T. -0.45 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

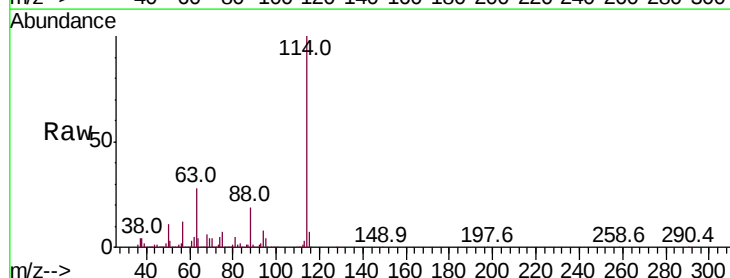
Tgt Ion: 63 Resp: 539833

Ion Ratio Lower Upper

63 100

41 0.0 59.8 89.8#

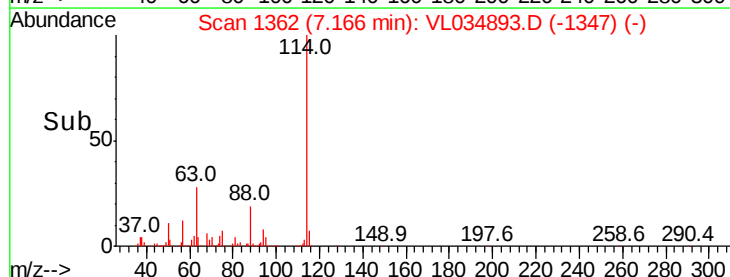
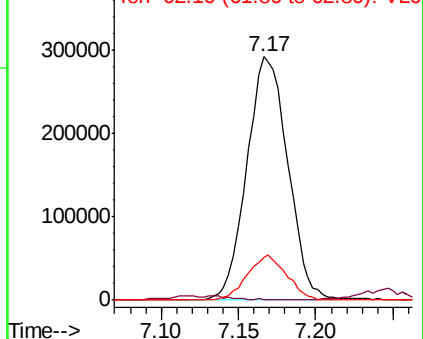
62 17.4 57.6 86.4#

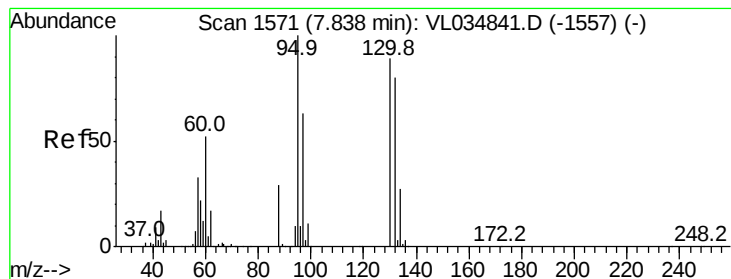


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#40

1,4-Dioxane

Concen: 0.070 ppbv

RT: 7.87 min Scan# 1582

Delta R.T. 0.04 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 88 Resp: 1846

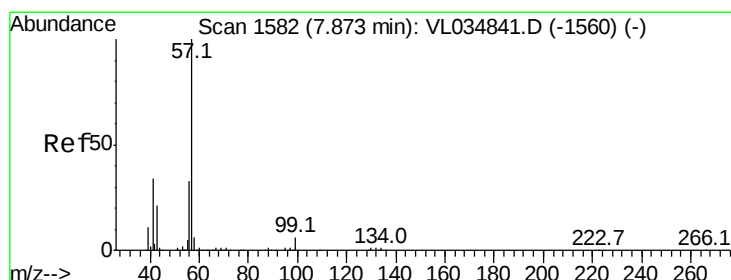
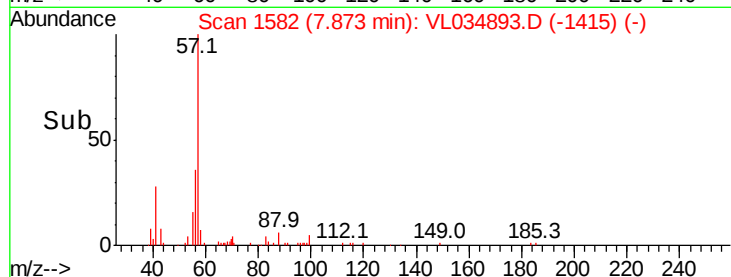
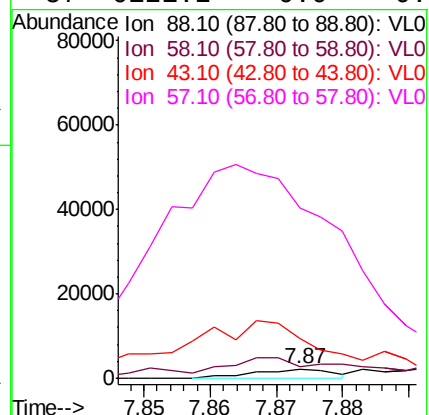
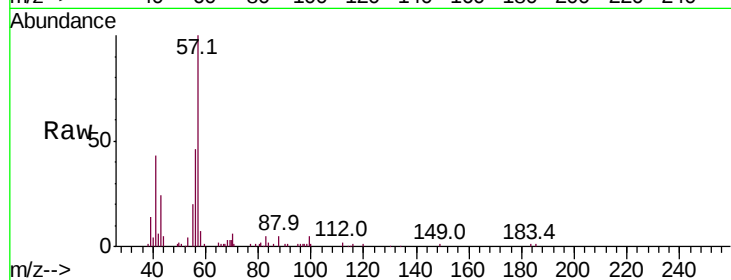
Ion Ratio Lower Upper

88 100

58 549.2 103.9 155.9#

43 1478.8 0.0 0.0#

57 6121.2 0.0 0.0#



#44

2,2,4-Trimethylpentane

Concen: 0.377 ppbv

RT: 7.86 min Scan# 1579

Delta R.T. -0.01 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

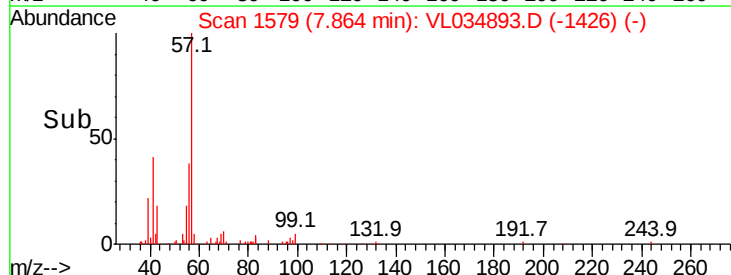
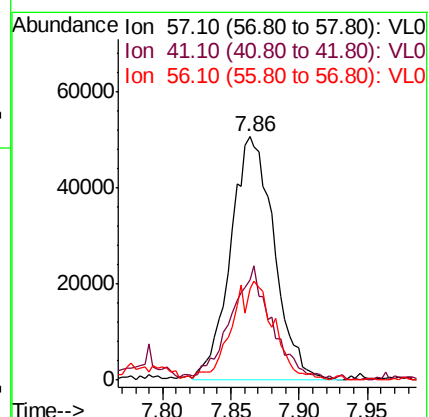
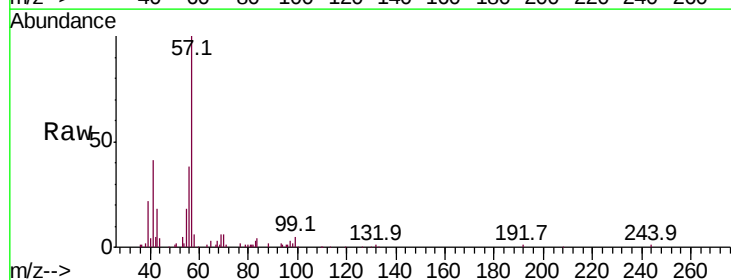
Tgt Ion: 57 Resp: 112515

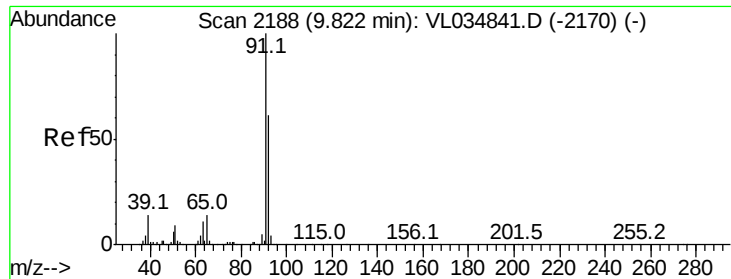
Ion Ratio Lower Upper

57 100

41 45.1 26.2 39.4#

56 39.6 25.0 37.4#





#53

Toluene

Concen: 3.752 ppbv

RT: 9.81 min Scan# 2185

Delta R.T. -0.01 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

Instrument :

MSVOA_L

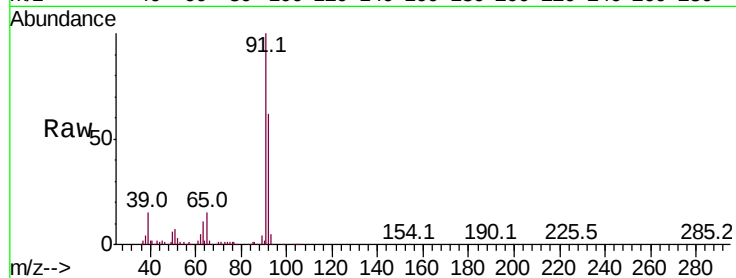
ClientSampleId :

Tot Ion: 91 Resp: 766118

Ion Ratio Lower Upper

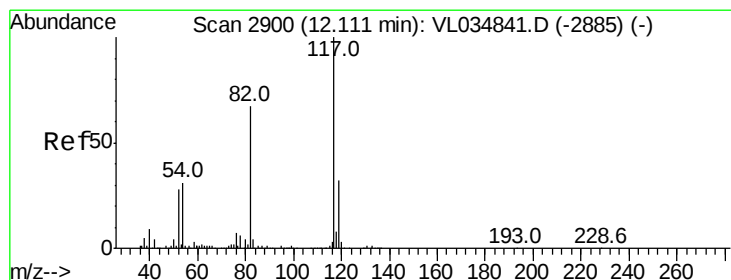
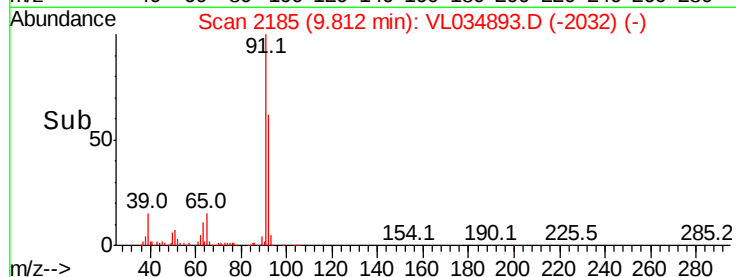
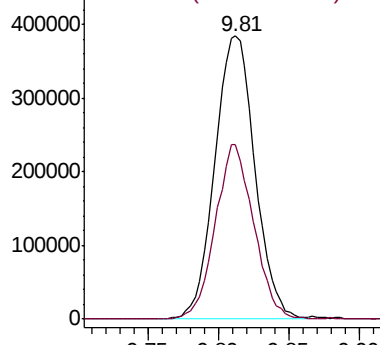
91 100

92 59.1 48.6 72.8



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# 2897

Delta R.T. -0.01 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

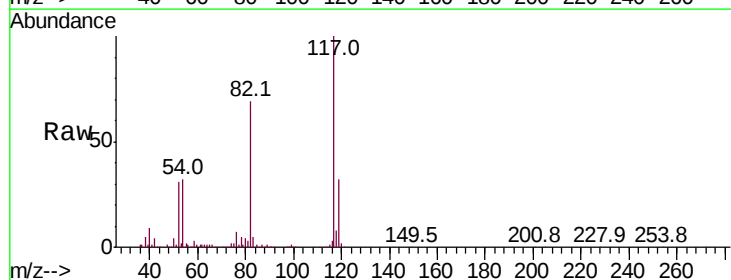
Tgt Ion: 117 Resp: 1944802

Ion Ratio Lower Upper

117 100

82 68.9 51.1 76.7

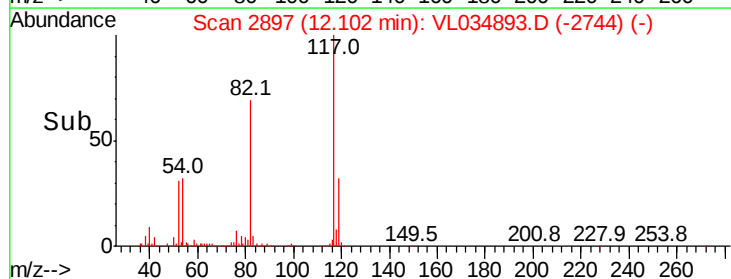
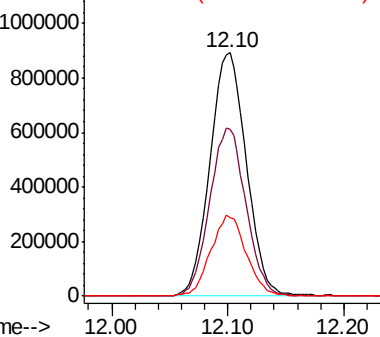
119 32.5 27.3 40.9

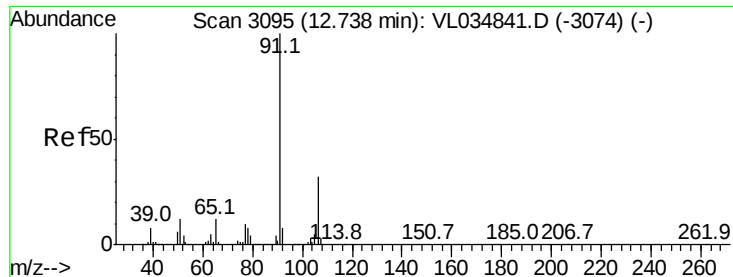


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#58

Ethyl Benzene

Concen: 0.080 ppbv

RT: 12.98 min Scan# 3171

Delta R.T. 0.24 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

Instrument :

MSVOA_L

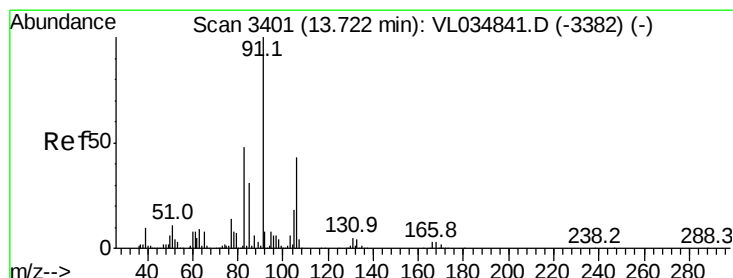
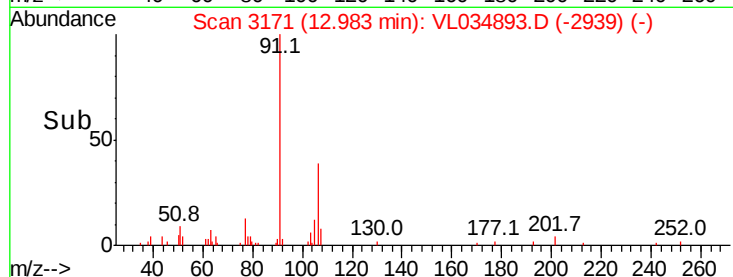
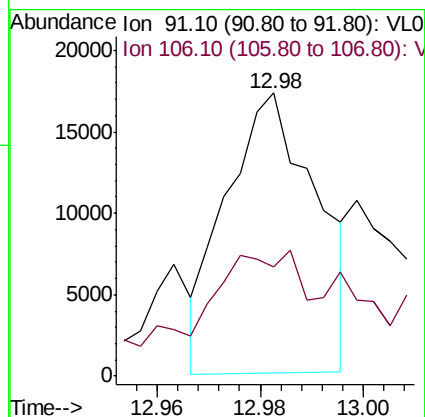
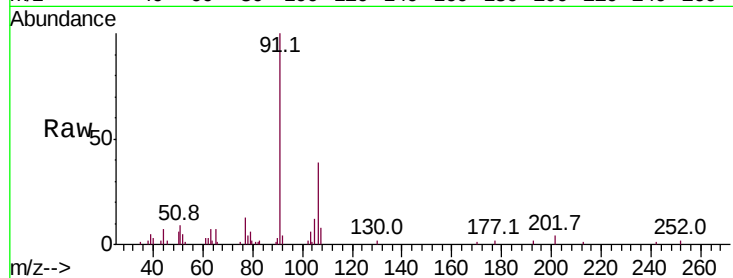
ClientSampled :

Tot Ion: 91 Resp: 21008

Ion Ratio Lower Upper

91 100

106 34.1 25.8 38.6



#60

o-Xylene

Concen: 0.040 ppbv

RT: 13.72 min Scan# 3399

Delta R.T. -0.01 min

Lab File: VL034893.D

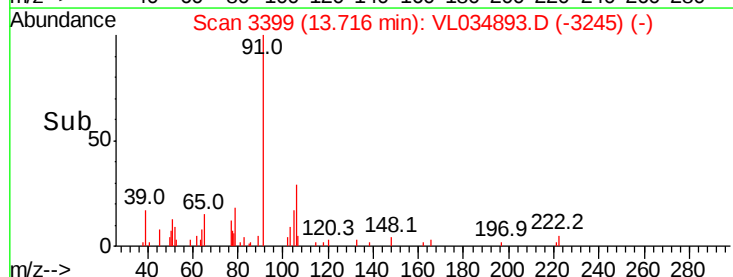
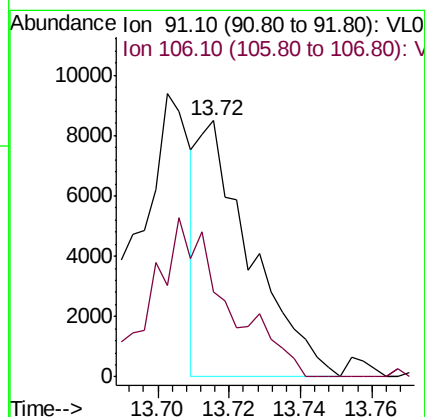
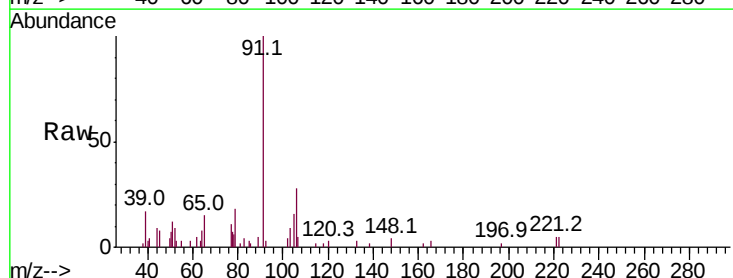
Acq: 16 Mar 2020 16:45

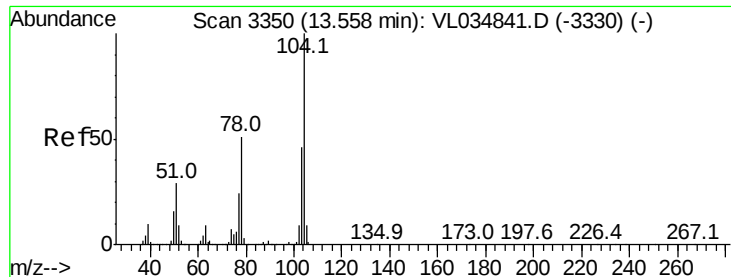
Tgt Ion: 91 Resp: 8634

Ion Ratio Lower Upper

91 100

106 0.0 22.5 67.5#





#61

Stvrene

Concen: 0.039 ppbv

RT: 13.54 min Scan# 3343

Delta R.T. -0.02 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

Instrument :

MSVOA_L

ClientSampled :

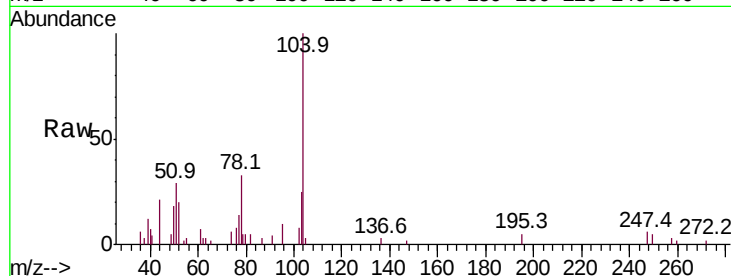
Tot Ion:104 Resp: 5848

Ion Ratio Lower Upper

104 100

78 157.5 41.8 62.6#

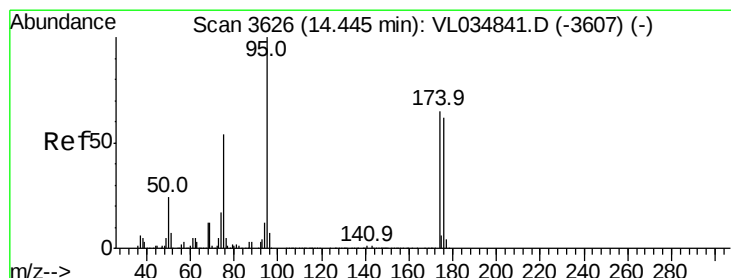
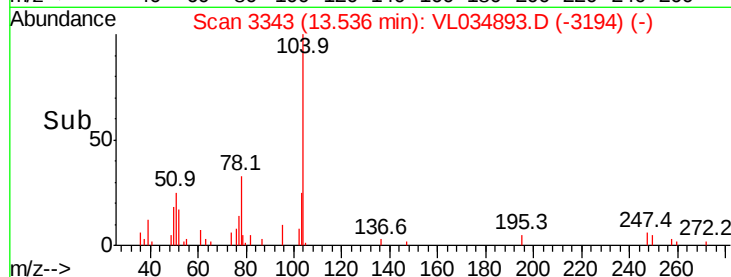
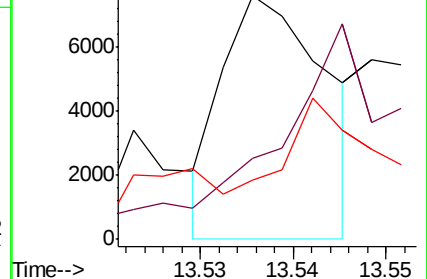
103 142.4 37.8 56.6#



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: 10.480 ppbv

RT: 14.44 min Scan# 3623

Delta R.T. -0.01 min

Lab File: VL034893.D

Acq: 16 Mar 2020 16:45

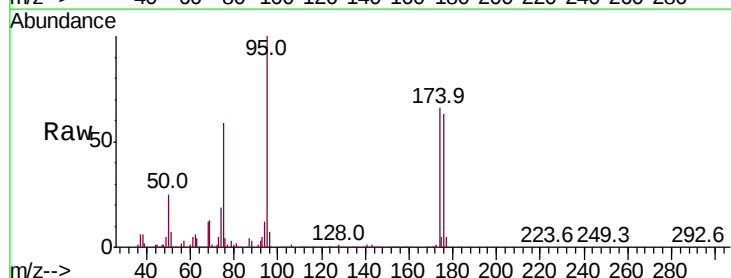
Tgt Ion: 95 Resp: 1589571

Ion Ratio Lower Upper

95 100

174 64.1 55.2 82.8

175 4.6 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

