

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL031722\
 Data File : VL038630.D
 Acq On : 17 Mar 2022 17:35
 Operator : SY/AP
 Sample : N1976-03
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 AA-1A

Quant Time: Mar 18 03:34:17 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL030822AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Mar 08 21:18:44 2022
 QLast Update : Tue Mar 08 21:18:44 2022
 Response via : Initial Calibration

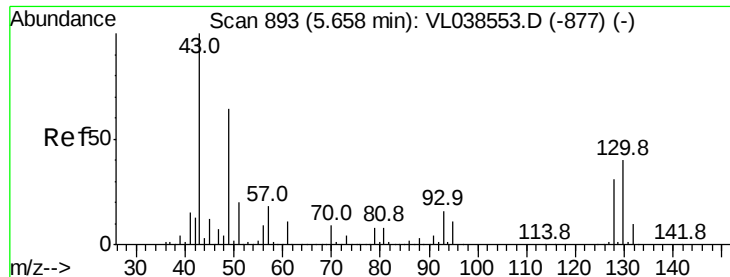
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	833403	10.00	ppbv	0.01
33) 1,4-Difluorobenzene	7.18	114	2160321	10.00	ppbv	0.02
55) Chlorobenzene-d5	12.09	117	1865442	10.00	ppbv	0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	1328877	9.37	ppbv	0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	93.70%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.06	85	25088	0.20	ppbv	93
3) Chlorodifluoromethane	3.00	51	55953	0.38	ppbv #	86
4) Chloromethane	3.15	50	27840	0.51	ppbv	93
9) Propene	3.02	41	49573	0.96	ppbv	86
10) Heptane	8.13	43	15471	0.12	ppbv	89
11) Trichlorofluoromethane	3.96	101	23942	0.22	ppbv	88
12) 1,1,2-Trichlorotrifluoroet	4.49	101	4485	0.05	ppbv #	62
13) Ethanol	3.61	45	261876	43.96	ppbv	94
15) Acetone	3.86	43	441430	7.51	ppbv	99
16) 1,3-Butadiene	3.32	39	6645	0.14	ppbv #	37
19) Isopropyl Alcohol	3.98	45	65311	1.66	ppbv #	92
20) Methylene Chloride	4.35	84	325504	9.20	ppbv	99
25) Ethyl Acetate	5.69	43	321860	1.63	ppbv #	78
26) Hexane	5.69	57	445770	4.79	ppbv #	45
29) Chloroform	5.75	83	4536	0.03	ppbv #	80
30) Cyclohexane	7.13	84	4045	0.05	ppbv #	1
34) 2-Butanone	5.25	43	31300	0.56	ppbv #	40
35) Carbon Tetrachloride	7.02	117	9256	0.06	ppbv	93
36) Benzene	6.90	78	45266	0.23	ppbv	99
39) 1,2-Dichloropropane	7.18	63	502539	6.70	ppbv #	27
41) Tetrahydrofuran	5.69	42	169399	3.70	ppbv #	51
44) 2,2,4-Trimethylpentane	7.88	57	16019	0.05	ppbv #	1
53) Toluene	9.81	91	1291976	6.21	ppbv	99
58) Ethyl Benzene	12.71	91	8787	0.04	ppbv	94
60) o-Xylene	13.70	91	10242	0.05	ppbv #	42
61) Styrene	13.53	104	3160	0.03	ppbv #	64
72) 4-Ethyltoluene	15.84	105	4608	0.02	ppbv #	86
74) 1,2,4-Trimethylbenzene	16.76	105	17632	0.08	ppbv #	76

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



#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.67 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

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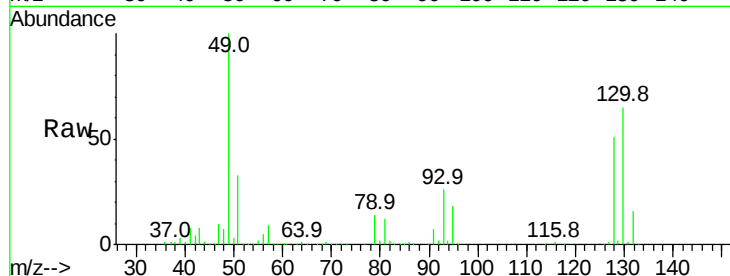
Tgt Ion: 49 Resp: 833403

Ion Ratio Lower Upper

49 100

128 53.3 26.4 79.2

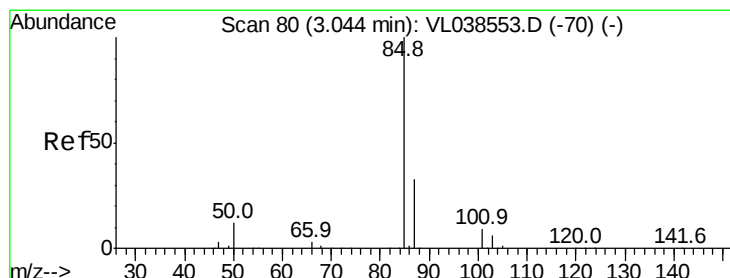
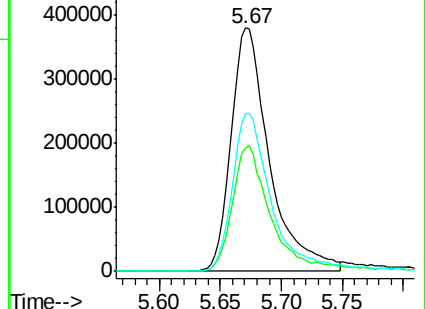
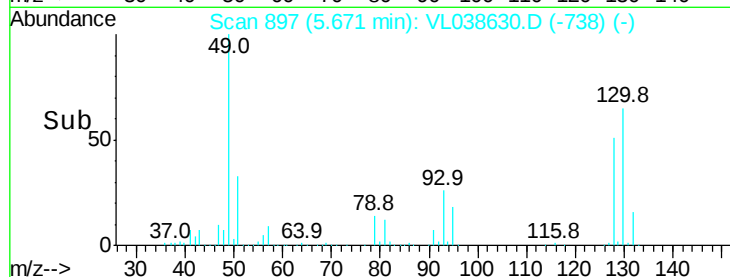
130 68.1 33.0 98.9



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: 0.20 ppbv

RT: 3.06 min Scan# 85

Delta R.T. 0.02 min

Lab File: VL038630.D

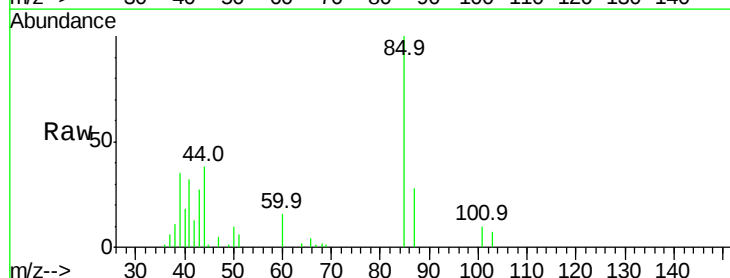
Acq: 17 Mar 2022 17:35

Tgt Ion: 85 Resp: 25088

Ion Ratio Lower Upper

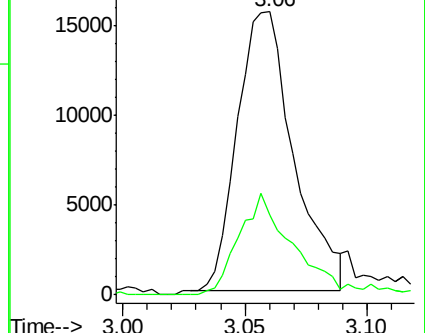
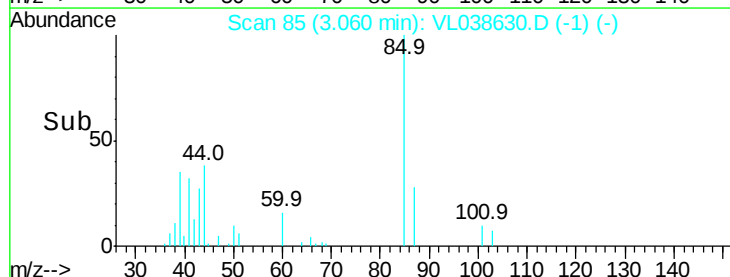
85 100

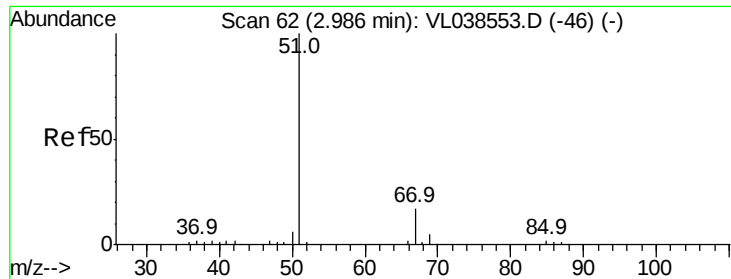
87 28.6 26.2 39.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.38 ppbv

RT: 3.00 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

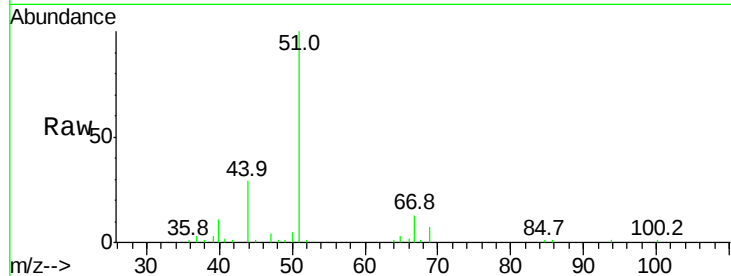
Acq: 17 Mar 2022 17:35

Tgt Ion: 51 Resp: 55953

Ion Ratio Lower Upper

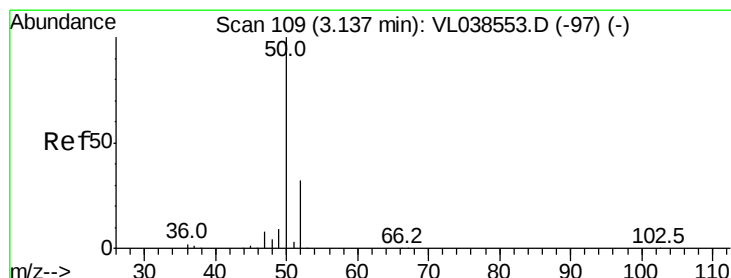
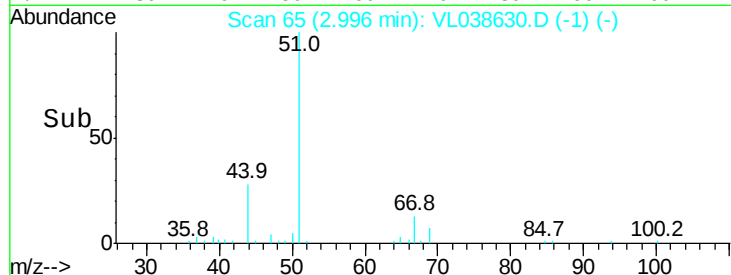
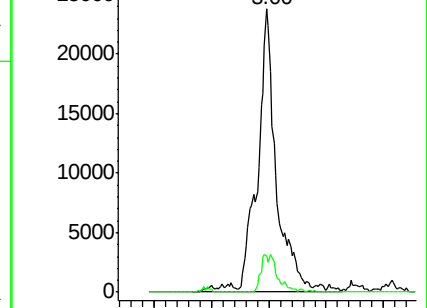
51 100

67 11.1 13.6 20.4#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.51 ppbv

RT: 3.15 min Scan# 113

Delta R.T. 0.01 min

Lab File: VL038630.D

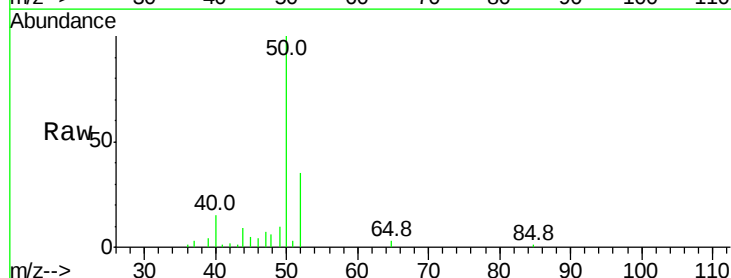
Acq: 17 Mar 2022 17:35

Tgt Ion: 50 Resp: 27840

Ion Ratio Lower Upper

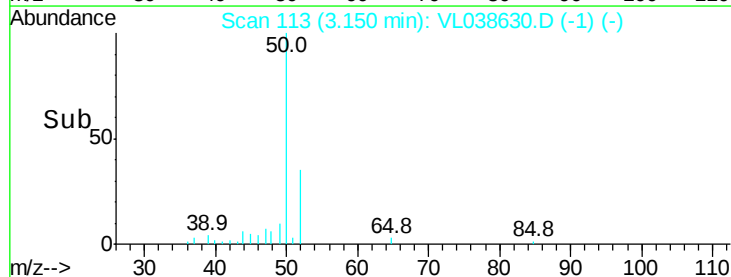
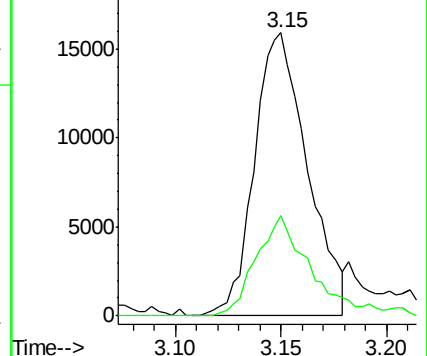
50 100

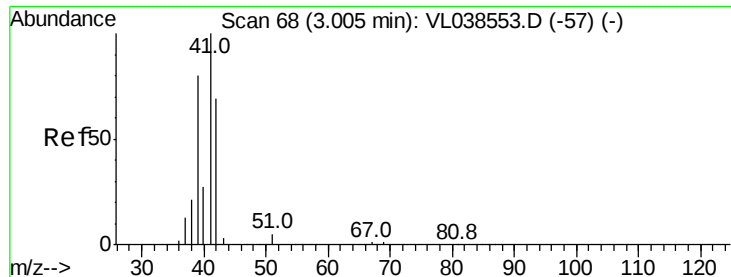
52 36.2 25.6 38.4



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.96 ppbv

RT: 3.02 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

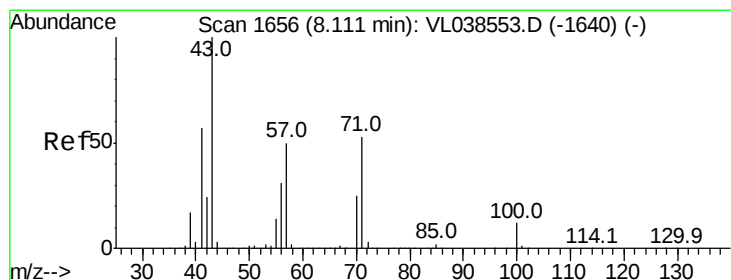
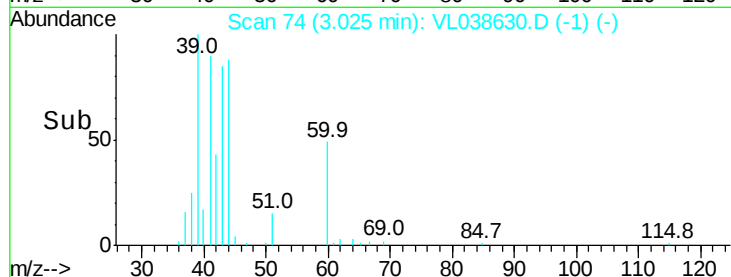
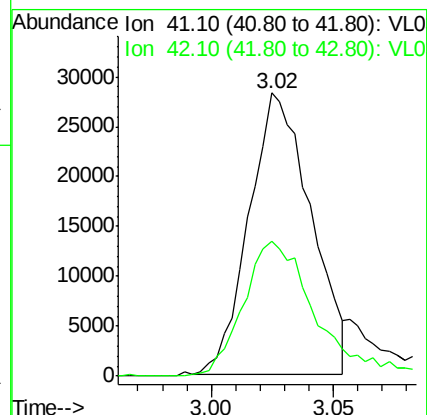
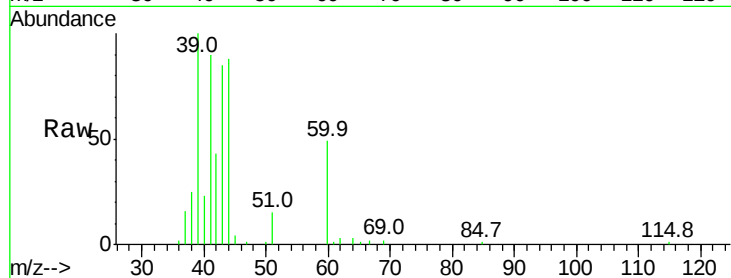
Acq: 17 Mar 2022 17:35

Tgt Ion: 41 Resp: 49573

Ion Ratio Lower Upper

41 100

42 57.8 55.7 83.5



#10

Heptane

Concen: 0.12 ppbv

RT: 8.13 min Scan# 1661

Delta R.T. 0.02 min

Lab File: VL038630.D

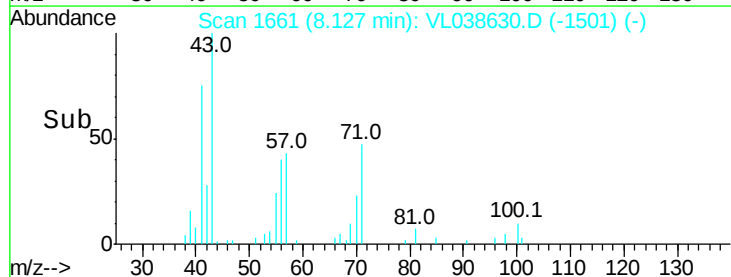
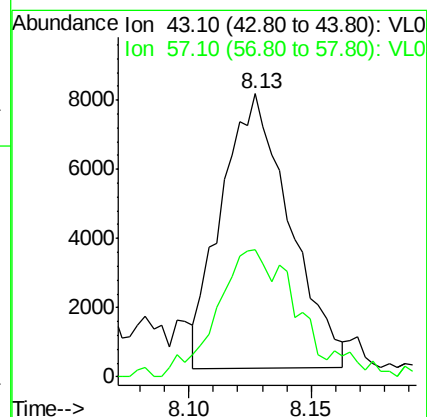
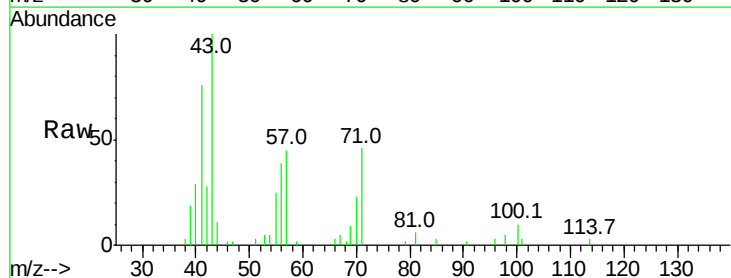
Acq: 17 Mar 2022 17:35

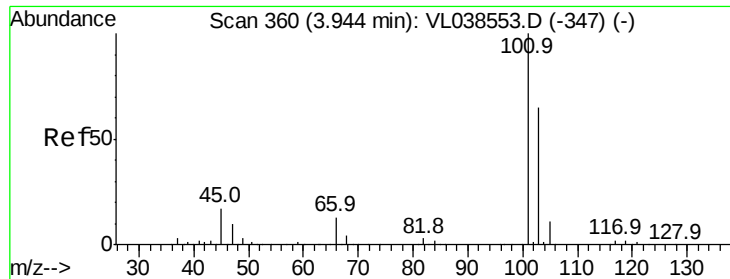
Tgt Ion: 43 Resp: 15471

Ion Ratio Lower Upper

43 100

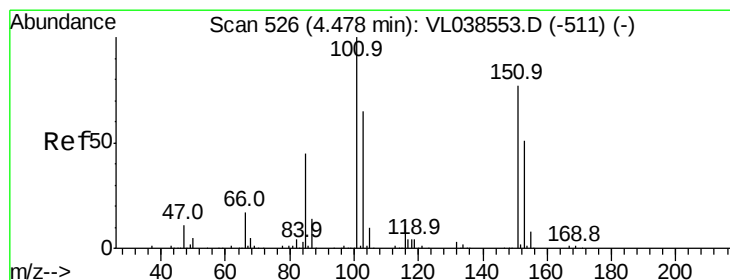
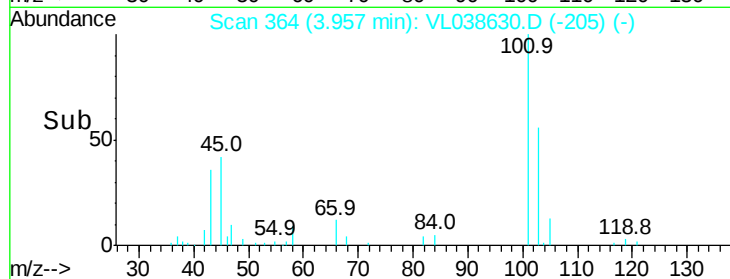
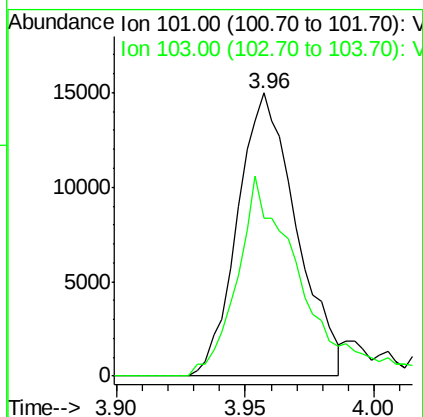
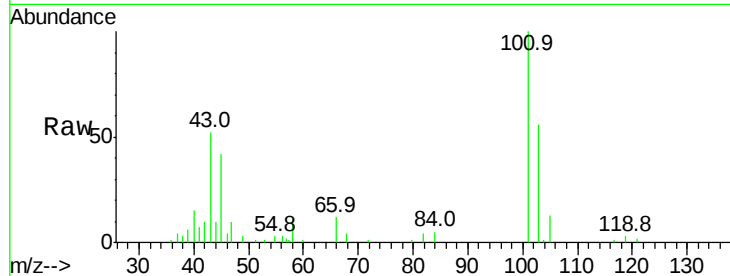
57 57.2 39.6 59.4





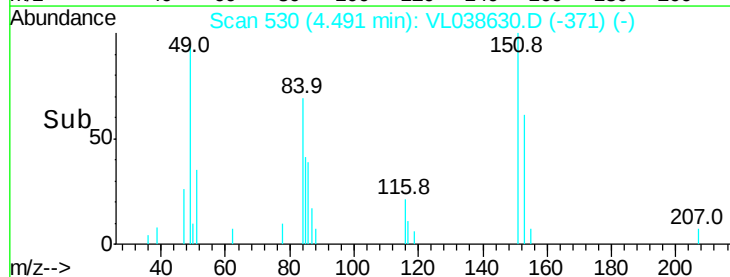
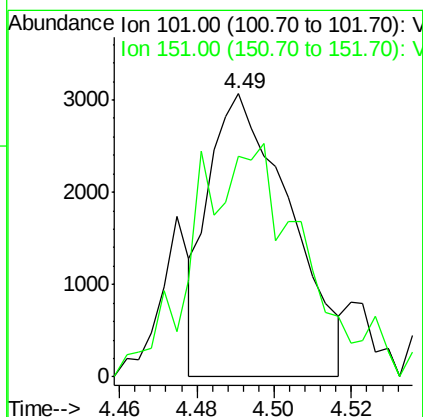
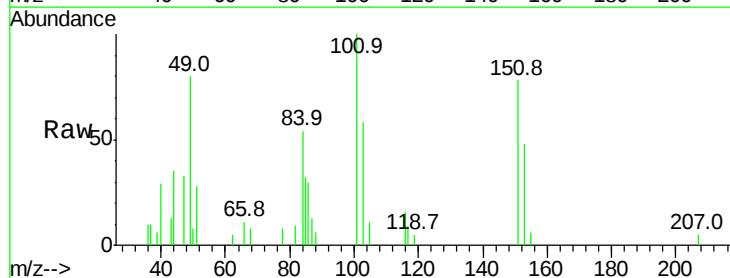
#11
 Trichlorofluoromethane
 Concen: 0.22 ppbv
 RT: 3.96
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 17 Mar 2022 17:35

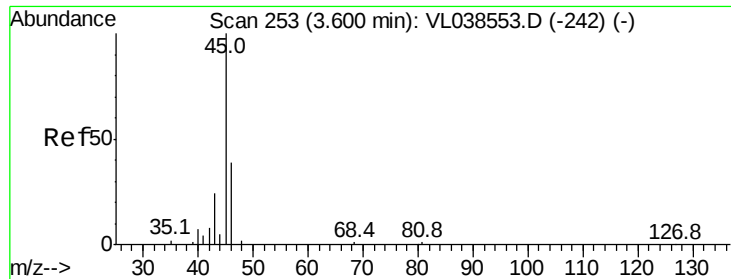
Tgt Ion:101 Resp: 23942
 Ion Ratio Lower Upper
 101 100
 103 55.8 52.0 78.0



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.05 ppbv
 RT: 4.49 min Scan# 530
 Delta R.T. 0.01 min
 Lab File: VL038630.D
 Acq: 17 Mar 2022 17:35

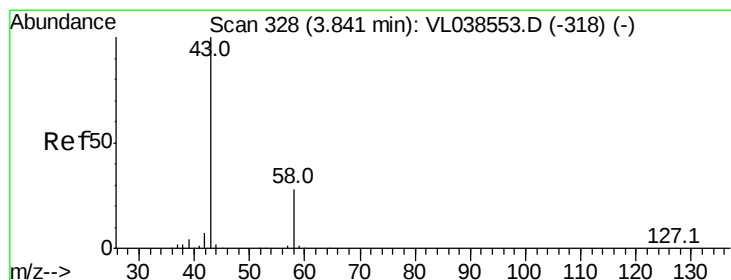
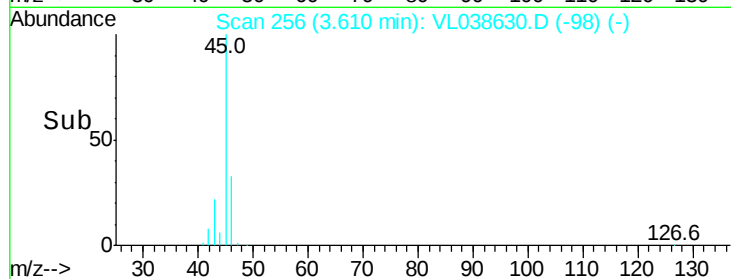
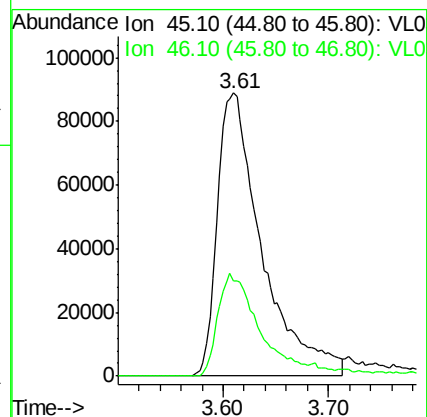
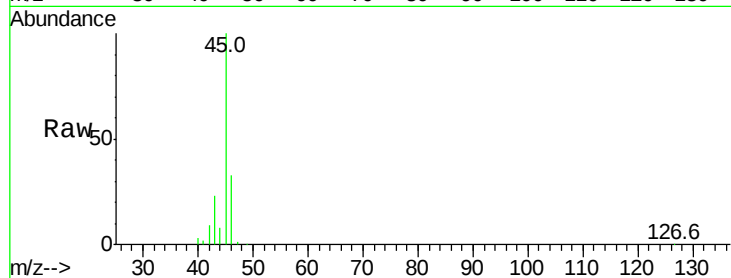
Tgt Ion:101 Resp: 4485
 Ion Ratio Lower Upper
 101 100
 151 112.9 63.4 95.0#





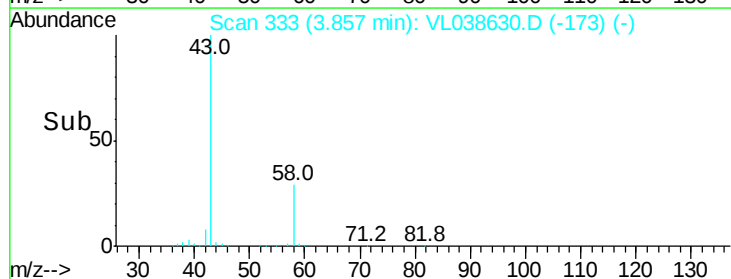
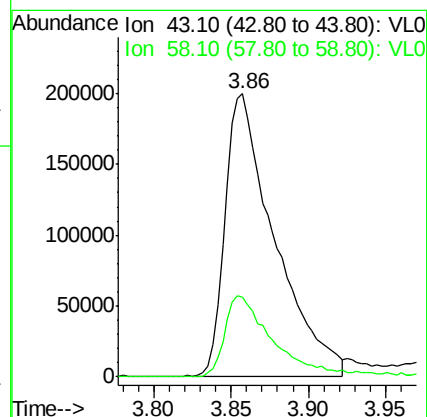
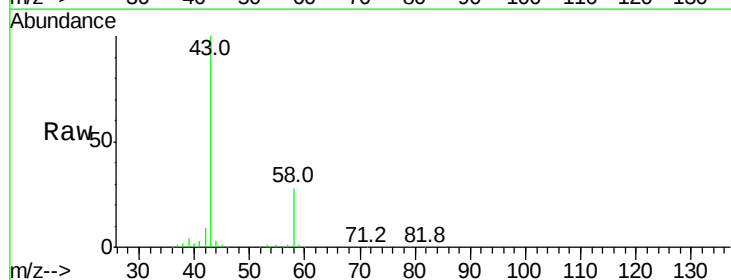
#13
 Ethanol
 Concen: 43.96 ppbv
 RT: 3.61
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 17 Mar 2022 17:35

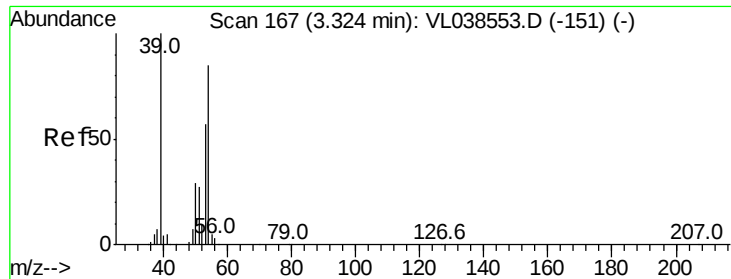
Tgt Ion: 45 Resp: 261876
 Ion Ratio Lower Upper
 45 100
 46 38.1 16.8 67.0



#15
 Acetone
 Concen: 7.51 ppbv
 RT: 3.86 min Scan# 333
 Delta R.T. 0.02 min
 Lab File: VL038630.D
 Acq: 17 Mar 2022 17:35

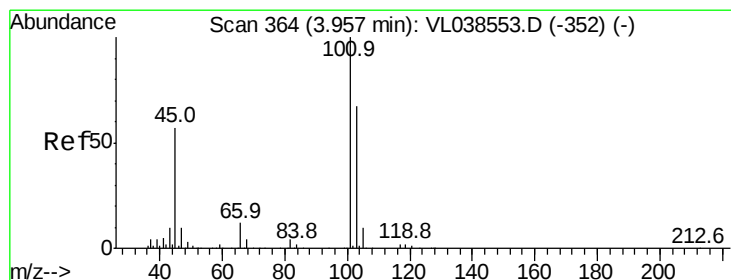
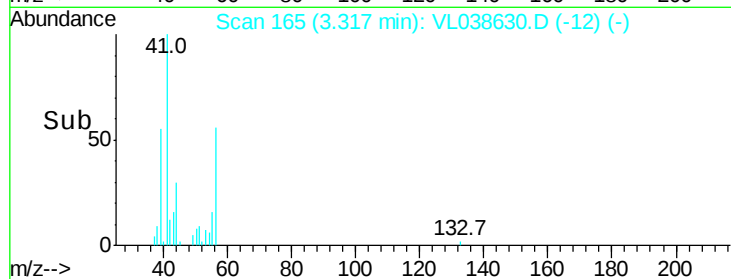
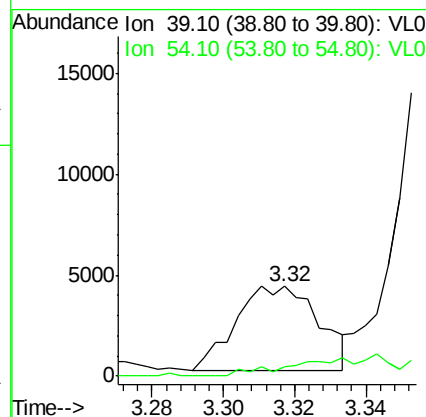
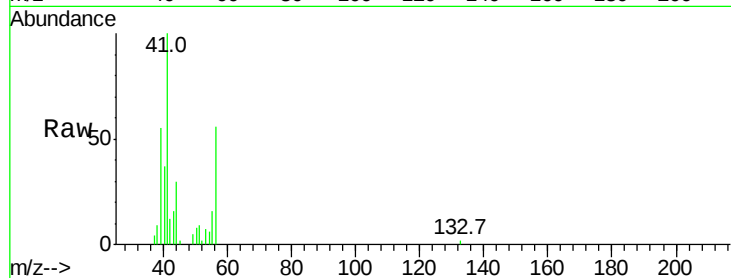
Tgt Ion: 43 Resp: 441430
 Ion Ratio Lower Upper
 43 100
 58 28.9 22.7 34.1





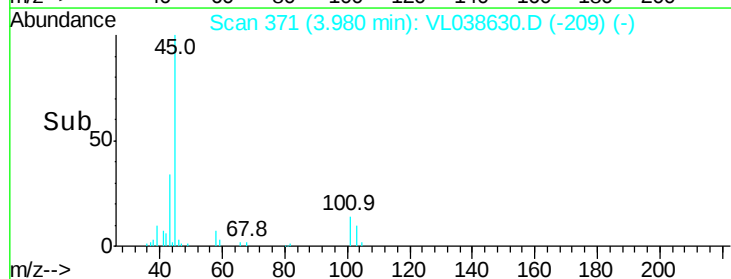
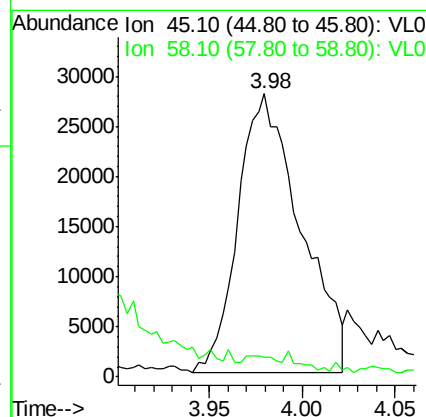
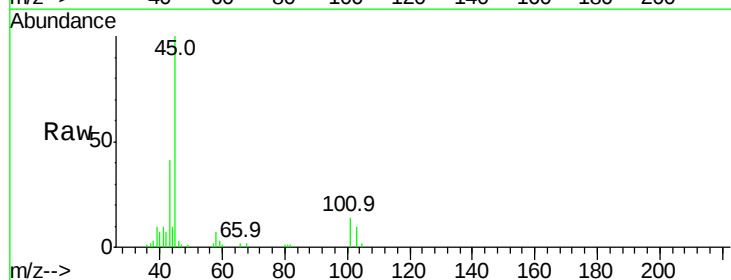
#16
 1,3-Butadiene
 Concen: 0.14 ppbv
 RT: 3.32
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 17 Mar 2022 17:35

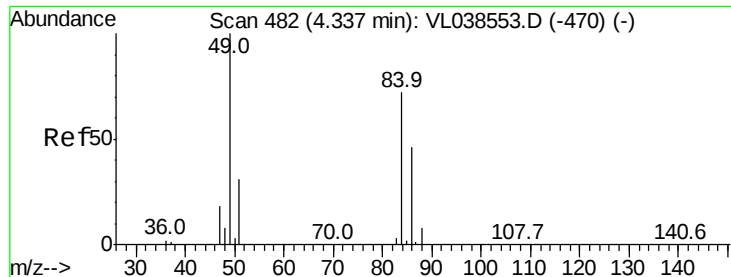
Tgt Ion: 39 Resp: 6645
 Ion Ratio Lower Upper
 39 100
 54 24.7 64.2 96.2#



#19
 Isopropyl Alcohol
 Concen: 1.66 ppbv
 RT: 3.98 min Scan# 371
 Delta R.T. 0.02 min
 Lab File: VL038630.D
 Acq: 17 Mar 2022 17:35

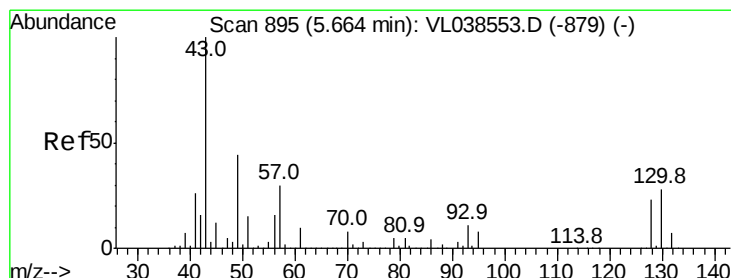
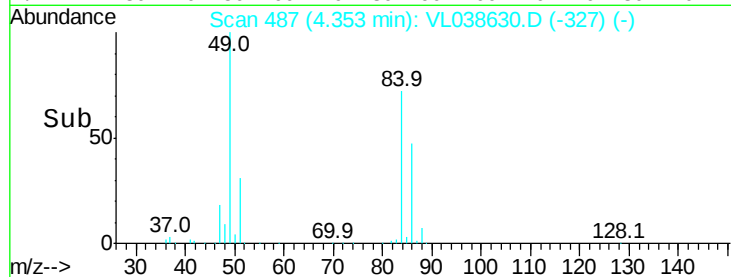
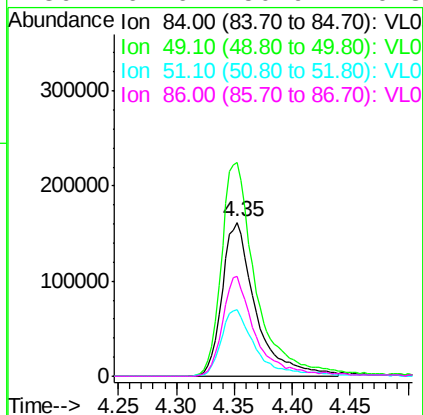
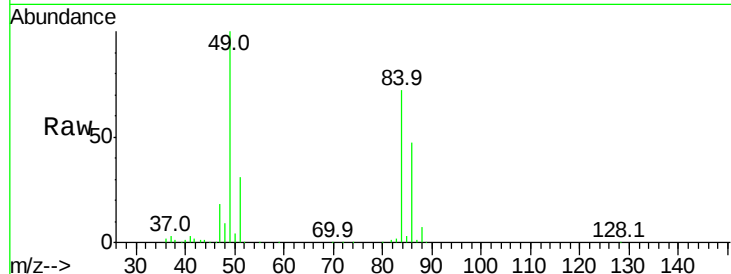
Tgt Ion: 45 Resp: 65311
 Ion Ratio Lower Upper
 45 100
 58 0.0 2.2 3.2#





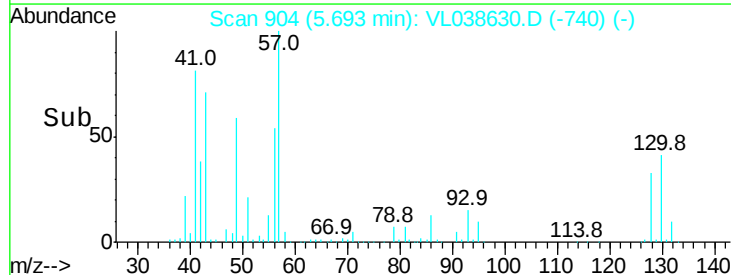
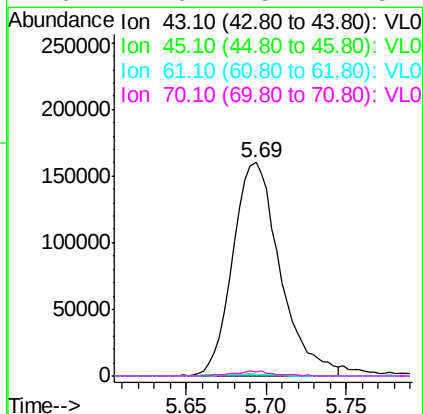
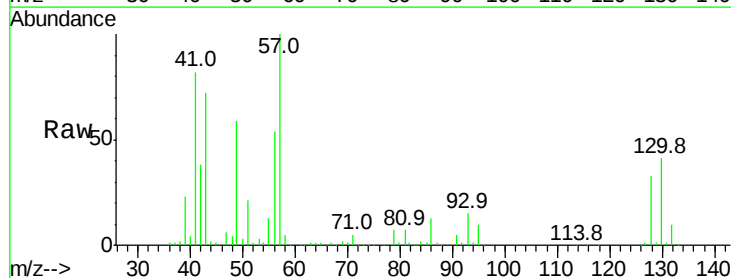
#20
Methylene Chloride
Concen: 9.20 ppbv
RT: 4.35
Delta R.T. MSVOA_1
Lab File: ClientSampleId :
Acq: 17 Mar 2022 17:35

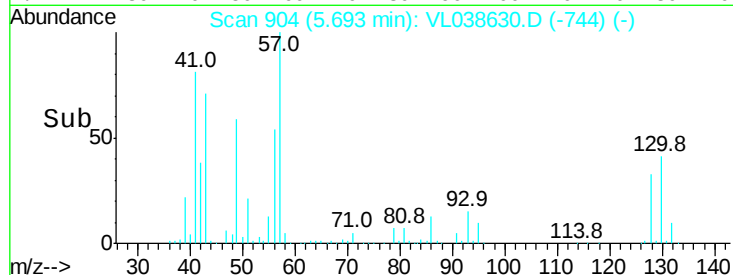
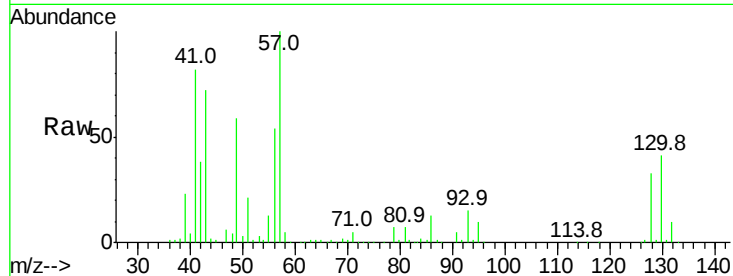
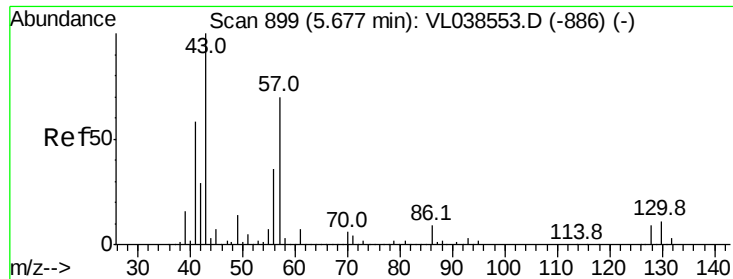
Tgt Ion:	84	Resp:	325504
Ion	Ratio	Lower	Upper
84	100		
49	138.7	111.1	166.7
51	43.0	34.0	51.0
86	64.6	50.9	76.3



#25
Ethyl Acetate
Concen: 1.63 ppbv
RT: 5.69 min Scan# 904
Delta R.T. 0.03 min
Lab File: VL038630.D
Acq: 17 Mar 2022 17:35

Tgt Ion:	43	Resp:	321860
Ion	Ratio	Lower	Upper
43	100		
45	1.3	8.0	12.0#
61	0.8	8.2	12.4#
70	2.0	5.4	8.2#





#26

Hexane

Concen: 4.79 ppbv

RT: 5.69 Instrument:

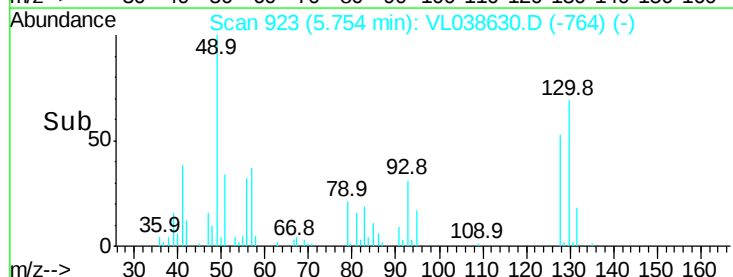
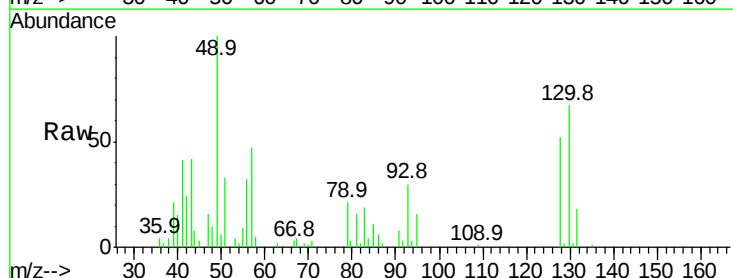
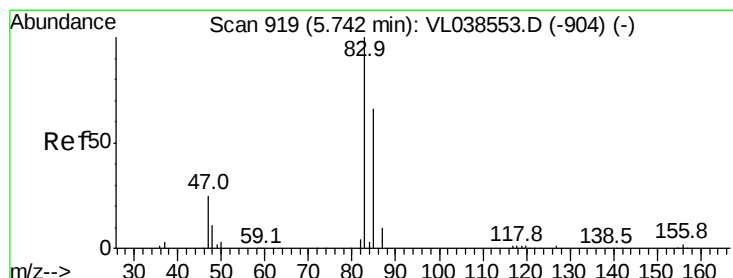
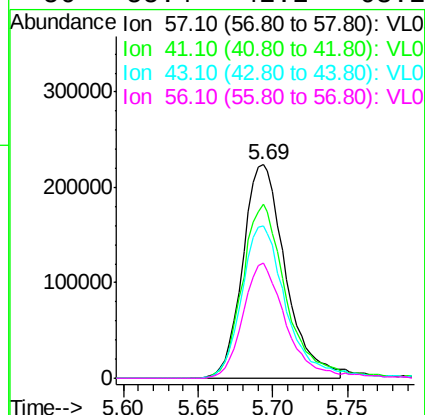
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 17 Mar 2022 17:35

Tgt Ion: 57 Resp: 445770

Ion	Ratio	Lower	Upper
57	100		
41	84.8	67.8	101.6
43	74.7	173.6	260.4#
56	55.4	42.2	63.2



#29

Chloroform

Concen: 0.03 ppbv

RT: 5.75 min Scan# 923

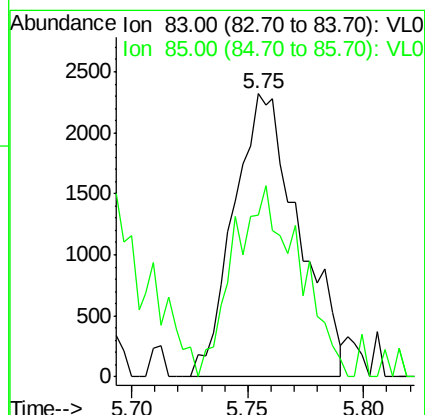
Delta R.T. 0.01 min

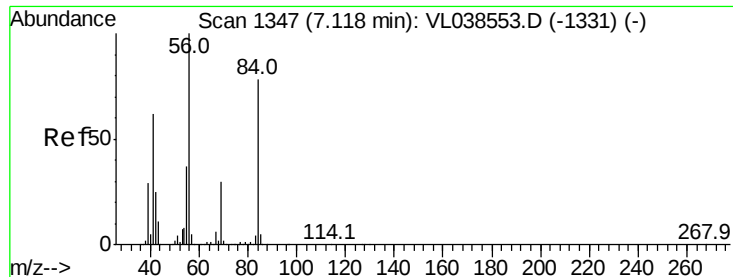
Lab File: VL038630.D

Acq: 17 Mar 2022 17:35

Tgt Ion: 83 Resp: 4536

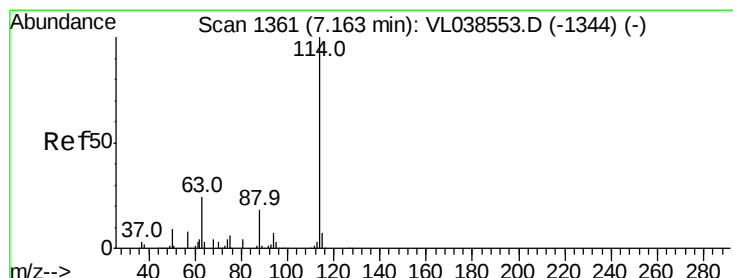
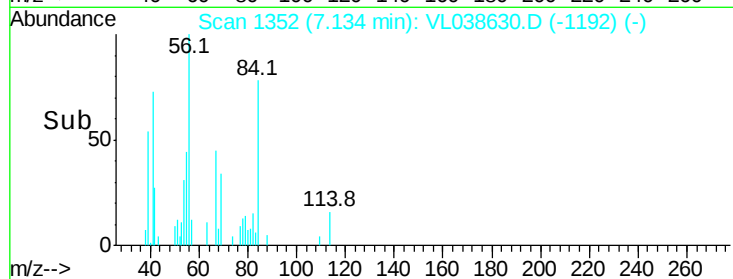
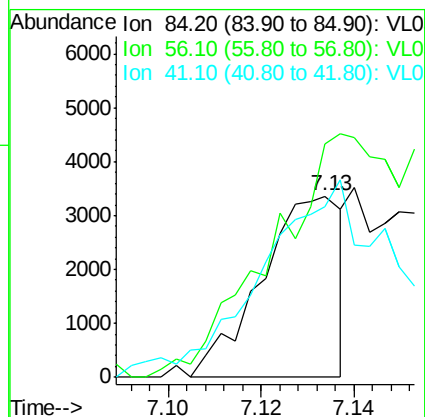
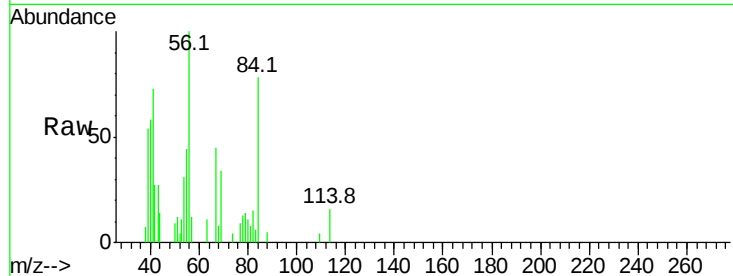
Ion	Ratio	Lower	Upper
83	100		
85	50.3	52.8	79.2#





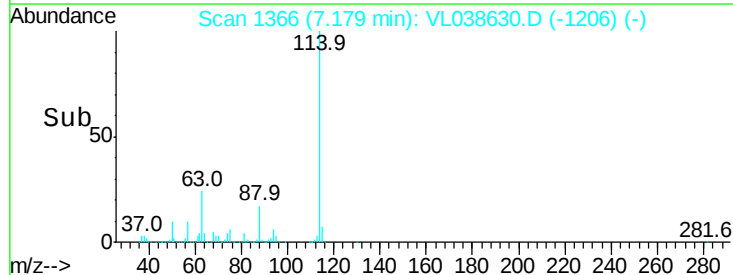
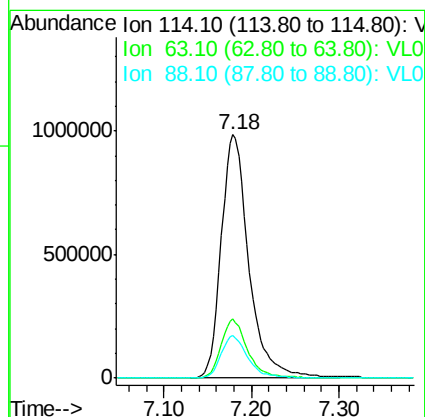
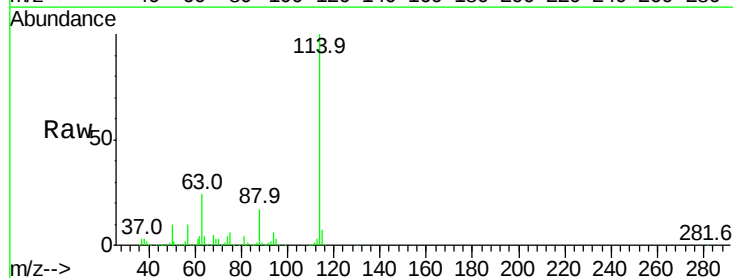
#30
Cyclohexane
Concen: 0.05 ppbv
RT: 7.13
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 17 Mar 2022 17:35

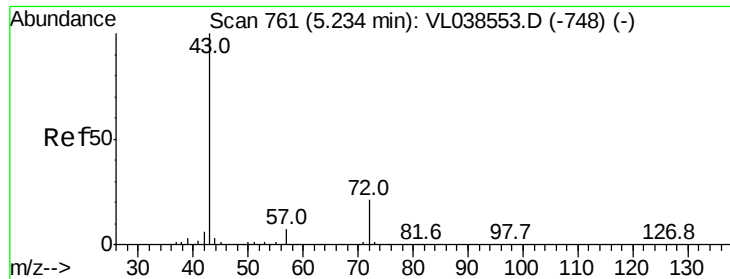
Tgt Ion	Ratio	Lower	Upper
84	100		
56	0.0	111.4	167.0#
41	225.1	65.5	98.3#



#33
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 7.18 min Scan# 1366
Delta R.T. 0.02 min
Lab File: VL038630.D
Acq: 17 Mar 2022 17:35

Tgt Ion	Ratio	Lower	Upper
114	100		
63	23.8	19.6	29.4
88	17.0	13.9	20.9





#34

2-Butanone

Concen: 0.56 ppbv

RT: 5.25 Instrument: MSVOA_L

Delta R.T.

Lab File: ClientSampleId:

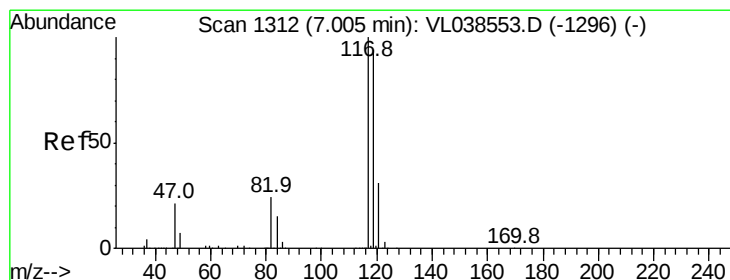
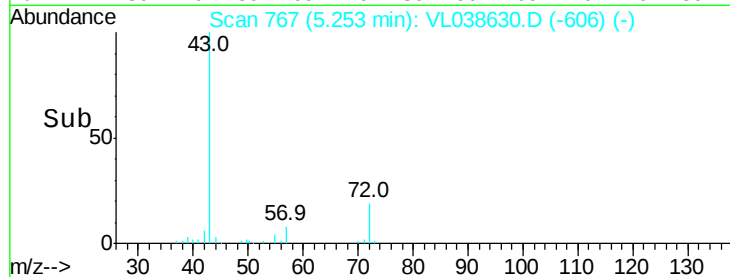
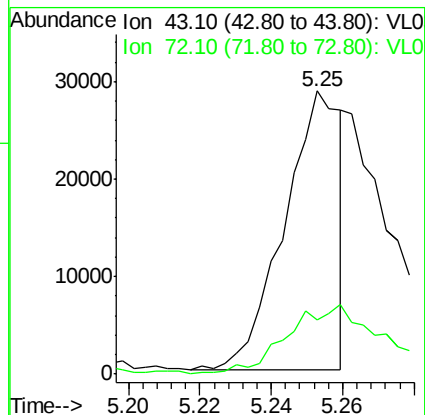
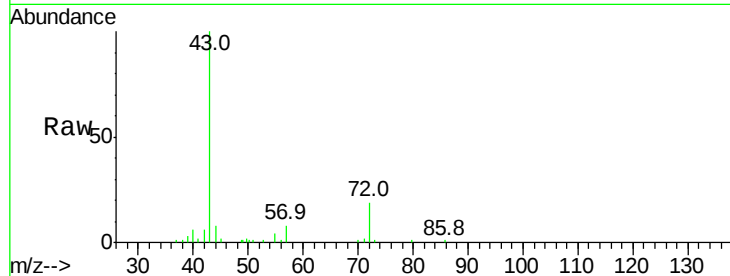
Acq: 17 Mar 2022 17:35

Tgt Ion: 43 Resp: 31300

Ion Ratio Lower Upper

43 100

72 51.1 17.8 26.6#



#35

Carbon Tetrachloride

Concen: 0.06 ppbv

RT: 7.02 min Scan# 1317

Delta R.T. 0.02 min

Lab File: VL038630.D

Acq: 17 Mar 2022 17:35

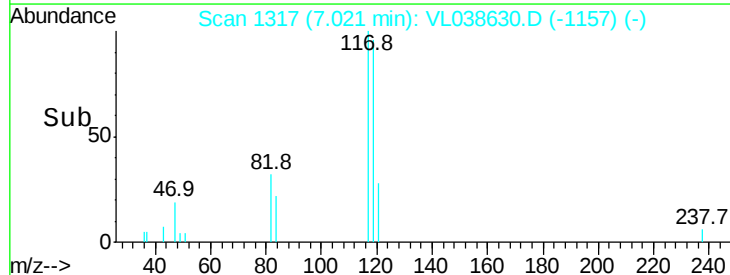
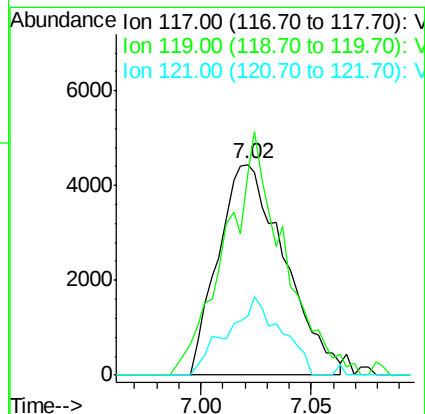
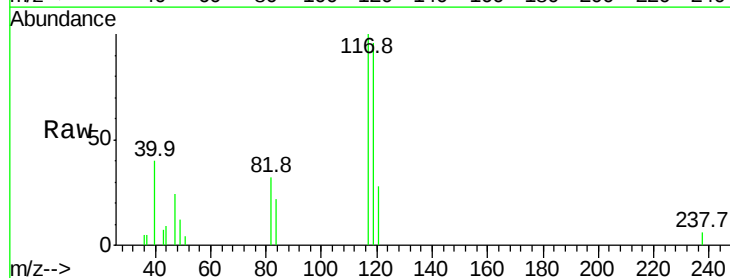
Tgt Ion: 117 Resp: 9256

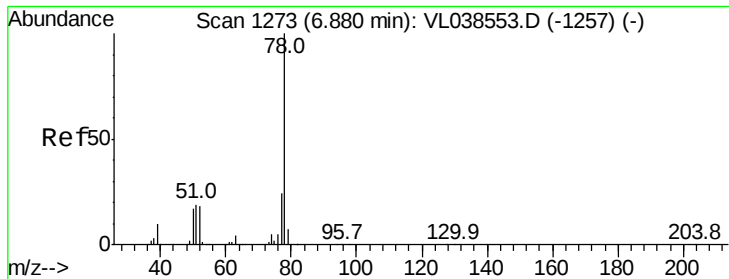
Ion Ratio Lower Upper

117 100

119 86.7 75.2 112.8

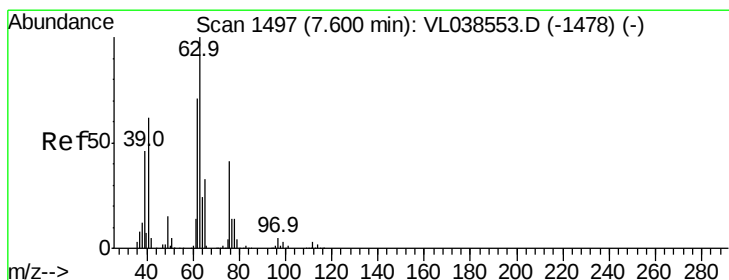
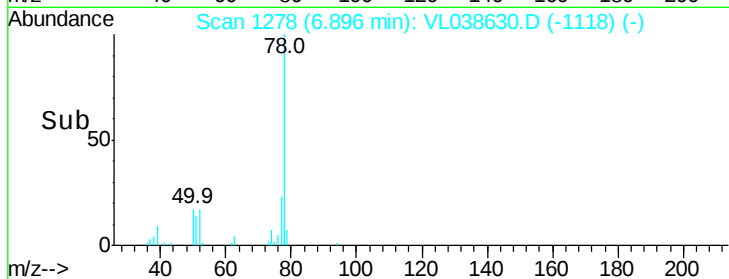
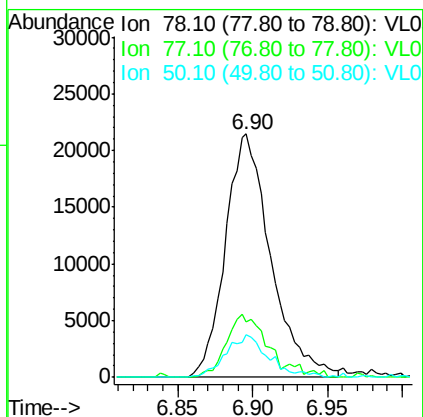
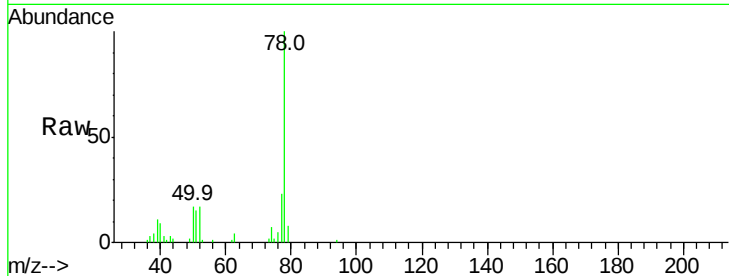
121 28.0 24.8 37.2





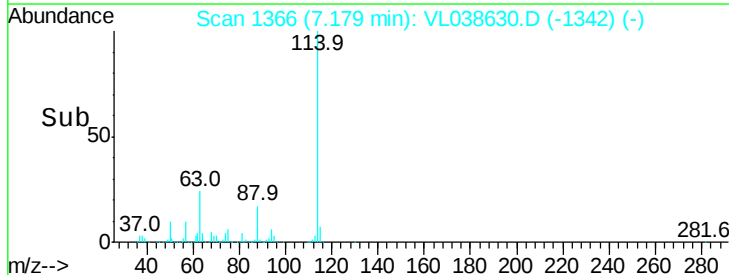
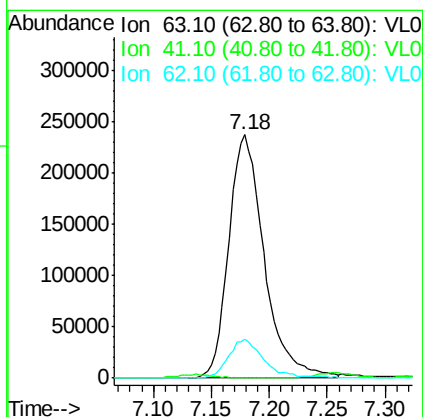
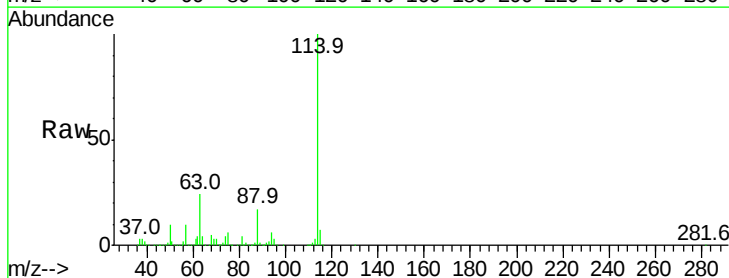
#36
Benzene
Concen: 0.23 ppbv
RT: 6.90
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 17 Mar 2022 17:35

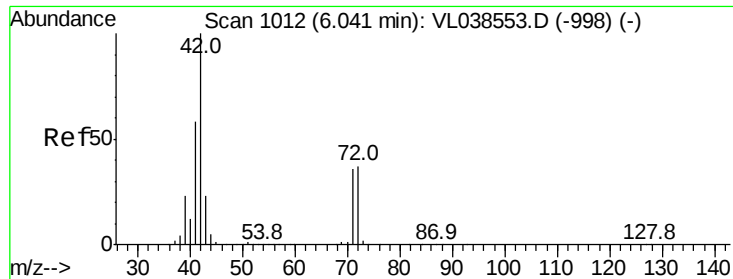
Tgt Ion	Ratio	Lower	Upper
78	100		
77	22.8	19.0	28.4
50	17.3	13.9	20.9



#39
1,2-Dichloropropane
Concen: 6.70 ppbv
RT: 7.18 min Scan# 1366
Delta R.T. -0.42 min
Lab File: VL038630.D
Acq: 17 Mar 2022 17:35

Tgt Ion	Ratio	Lower	Upper
63	100		
41	0.0	49.8	74.6#
62	16.2	56.7	85.1#





#41

Tetrahydrofuran

Concen: 3.70 ppbv

RT: 5.69 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 17 Mar 2022 17:35

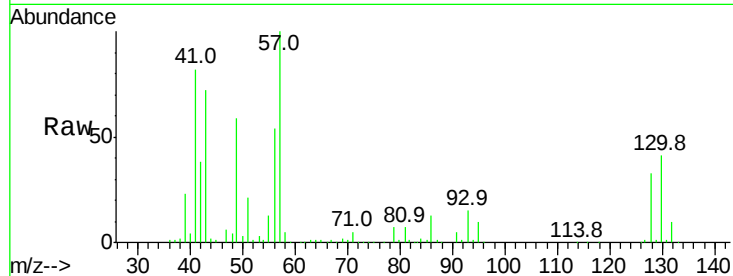
Tgt Ion: 42 Resp: 169399

Ion Ratio Lower Upper

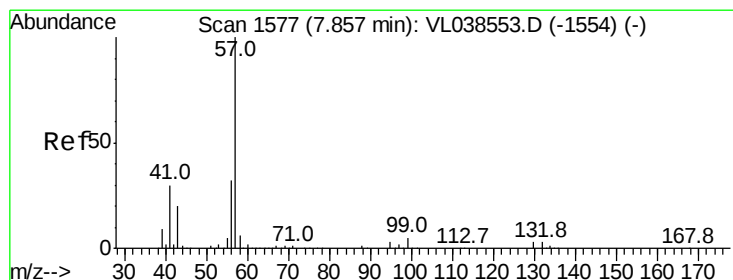
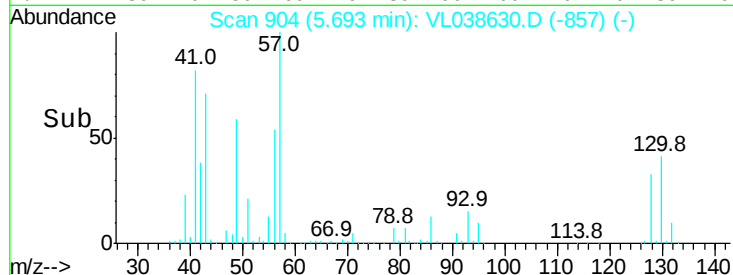
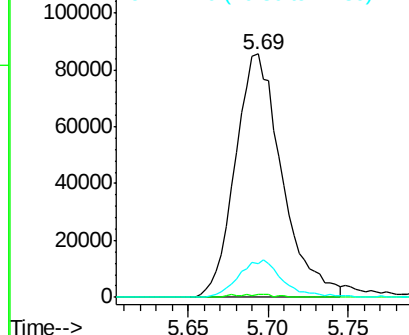
42 100

72 1.2 30.9 46.3#

71 14.9 29.1 43.7#



Abundance Ion 42.10 (41.80 to 42.80): VL0
Ion 72.10 (71.80 to 72.80): VL0
Ion 71.10 (70.80 to 71.80): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.05 ppbv

RT: 7.88 min Scan# 1584

Delta R.T. 0.02 min

Lab File: VL038630.D

Acq: 17 Mar 2022 17:35

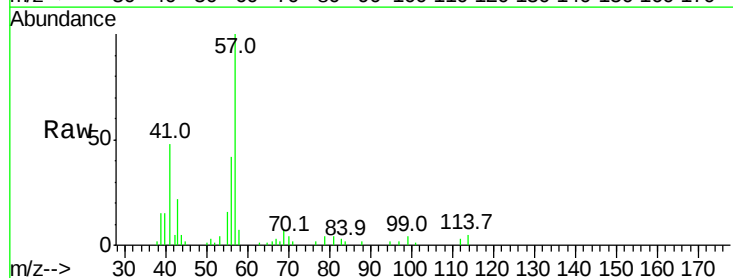
Tgt Ion: 57 Resp: 16019

Ion Ratio Lower Upper

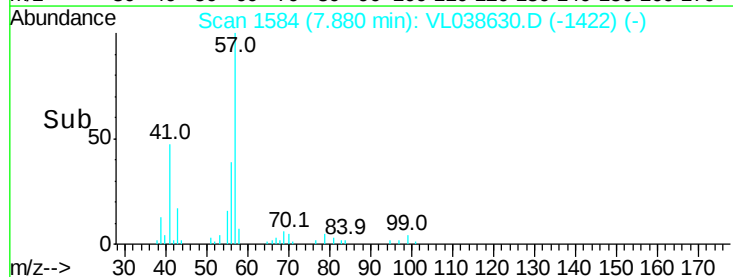
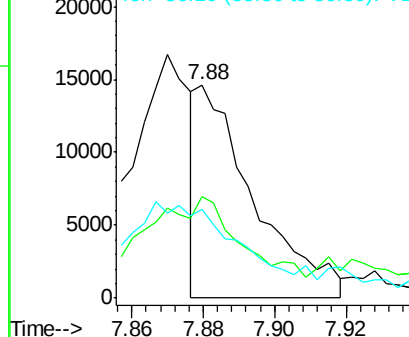
57 100

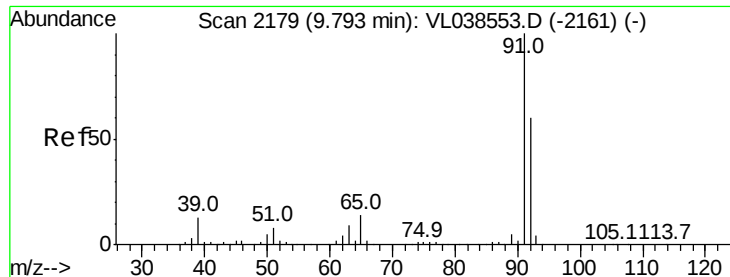
41 139.3 24.0 36.0#

56 0.0 25.6 38.4#



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





#53

Toluene

Concen: 6.21 ppbv

RT: 9.81 Instrument: MSVOA_1

Delta R.T. 0.02 min

Lab File: ClientSampleId: AA-1A

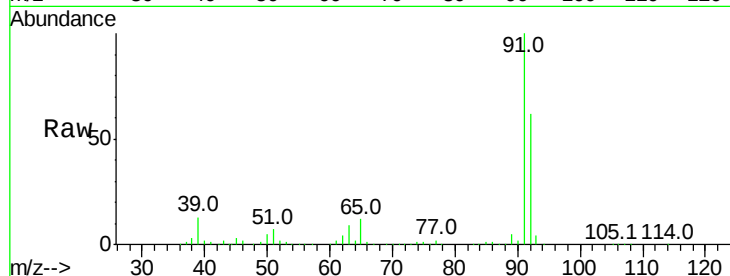
Acq: 17 Mar 2022 17:35

Tgt Ion: 91 Resp: 1291976

Ion Ratio Lower Upper

91 100

92 60.5 48.1 72.1



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

600000

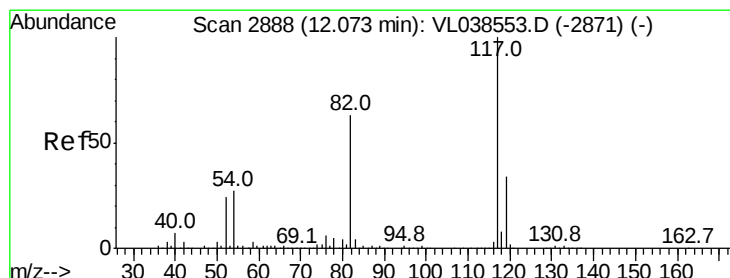
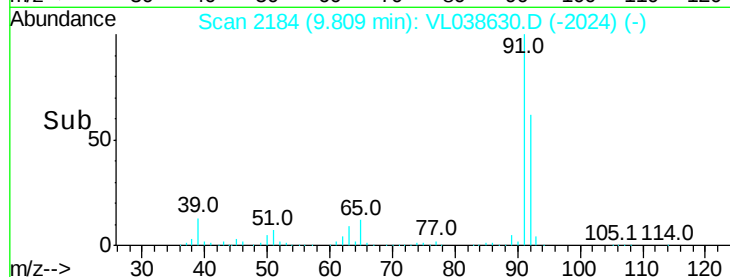
400000

200000

0

9.70 9.75 9.80 9.85 9.90

Time-->



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.09 min Scan# 2893

Delta R.T. 0.02 min

Lab File: VL038630.D

Acq: 17 Mar 2022 17:35

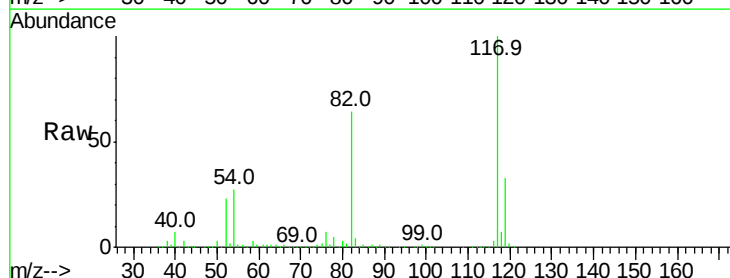
Tgt Ion: 117 Resp: 1865442

Ion Ratio Lower Upper

117 100

82 62.5 52.5 78.7

119 34.2 46.4 69.6#



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

1000000

800000

600000

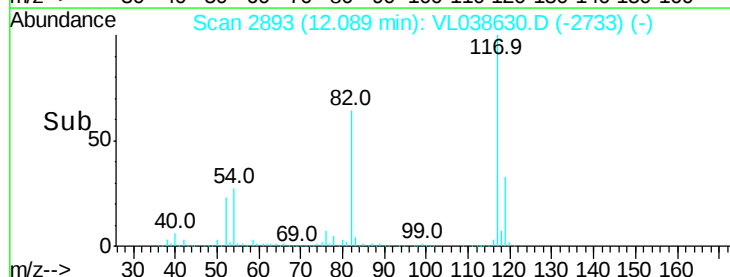
400000

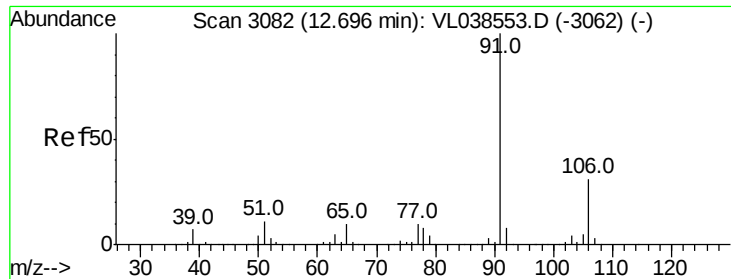
200000

0

12.00 12.10 12.20

Time-->





#58

Ethyl Benzene

Concen: 0.04 ppbv

RT: 12.71 min

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

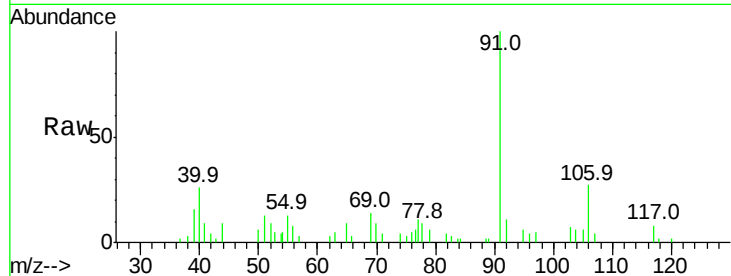
Acq: 17 Mar 2022 17:35

Tgt Ion: 91 Resp: 8787

Ion Ratio Lower Upper

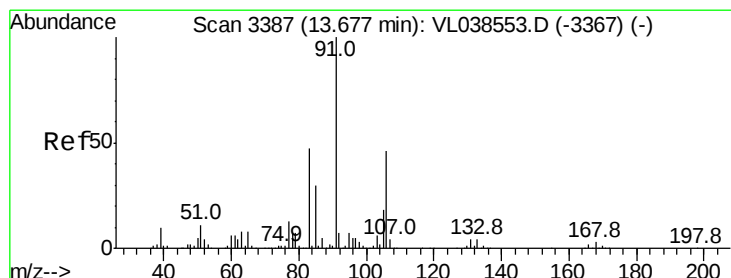
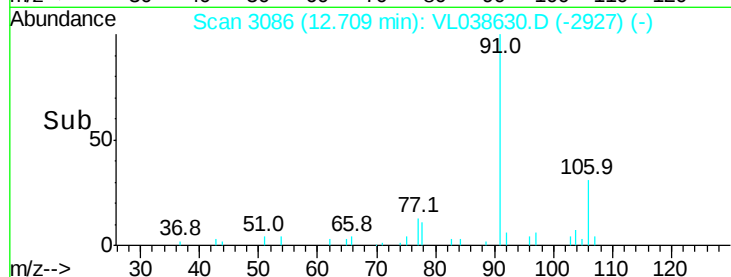
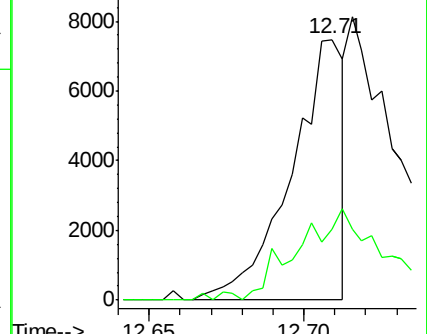
91 100

106 27.3 24.6 37.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#60

o-Xylene

Concen: 0.05 ppbv

RT: 13.70 min Scan# 3393

Delta R.T. 0.02 min

Lab File: VL038630.D

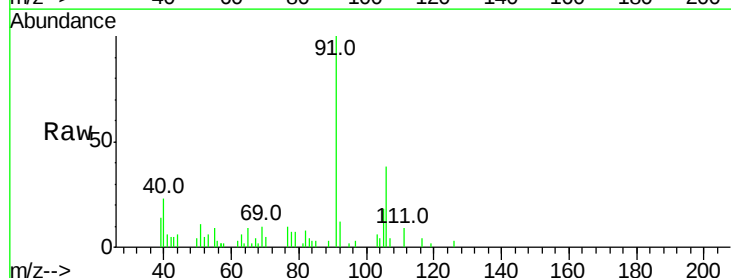
Acq: 17 Mar 2022 17:35

Tgt Ion: 91 Resp: 10242

Ion Ratio Lower Upper

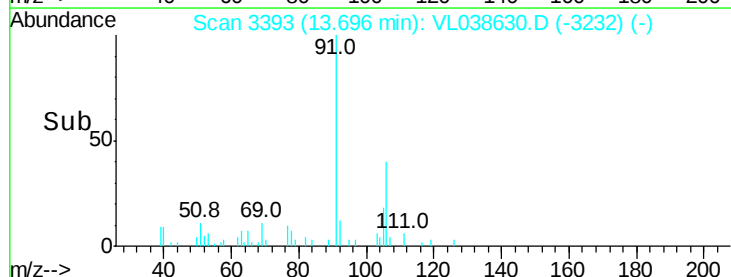
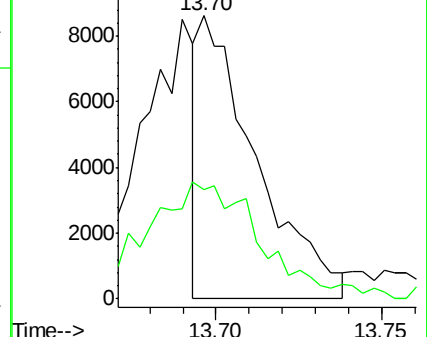
91 100

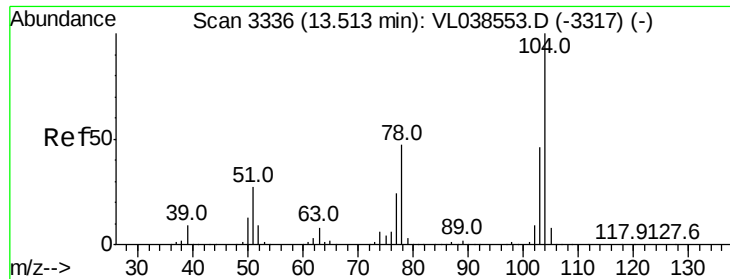
106 86.2 23.5 70.6#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





#61

Styrene

Concen: 0.03 ppbv

RT: 13.53

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 17 Mar 2022 17:35

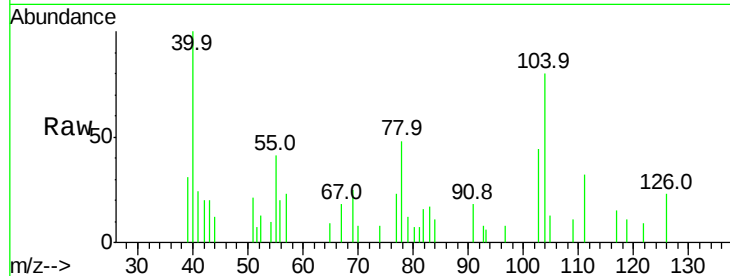
Tgt Ion: 104 Resp: 3160

Ion Ratio Lower Upper

104 100

78 81.3 39.0 58.4#

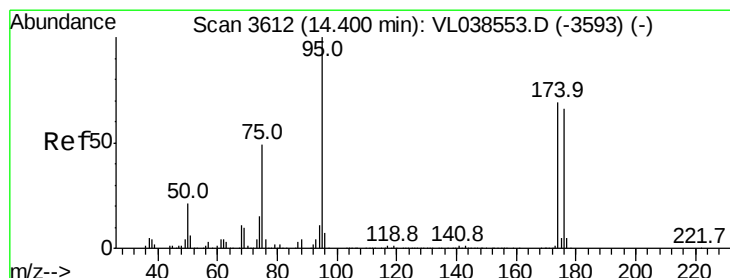
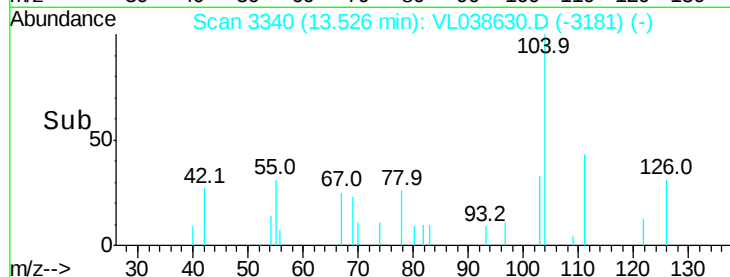
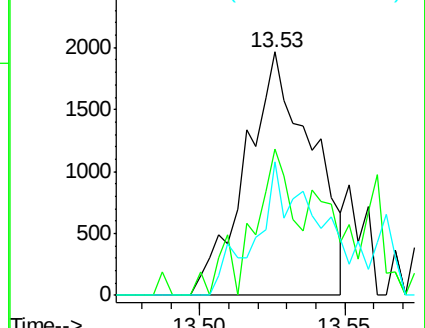
103 63.4 38.0 57.0#



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: 9.37 ppbv

RT: 14.42 min Scan# 3617

Delta R.T. 0.02 min

Lab File: VL038630.D

Acq: 17 Mar 2022 17:35

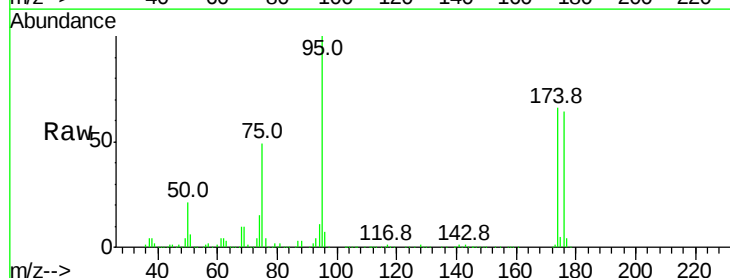
Tgt Ion: 95 Resp: 1328877

Ion Ratio Lower Upper

95 100

174 72.9 56.2 84.4

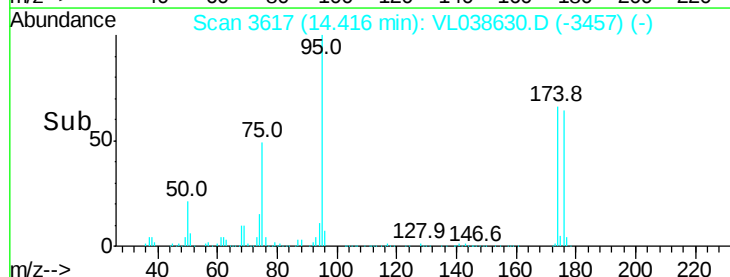
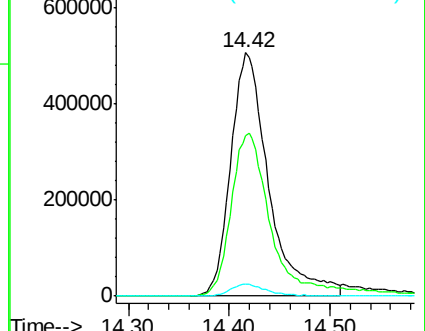
175 5.2 4.2 6.2

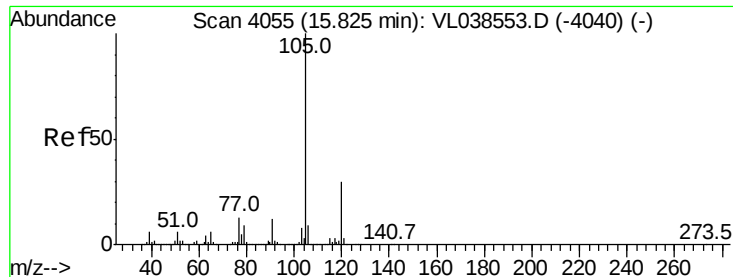


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#72

4-Ethyltoluene

Concen: 0.02 ppbv

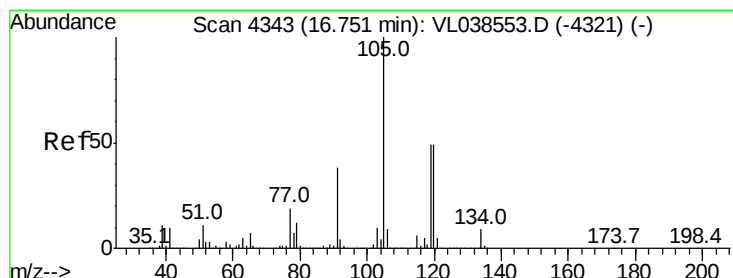
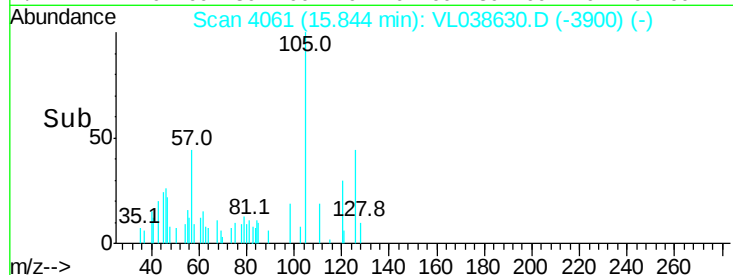
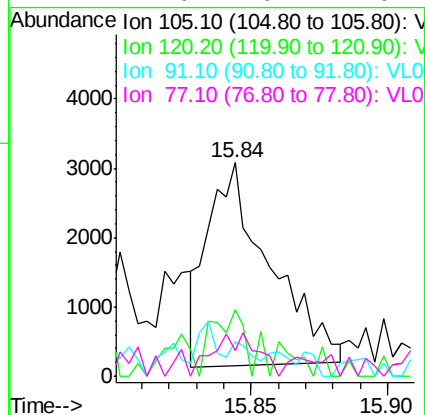
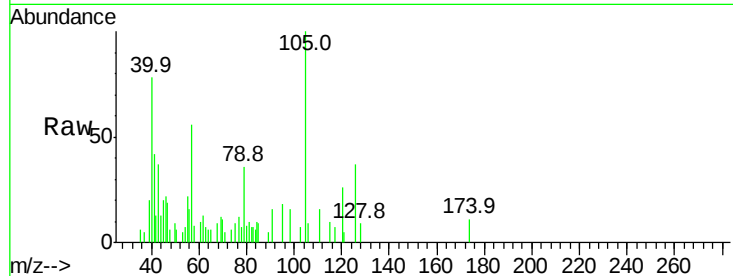
RT: 15.84

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 17 Mar 2022 17:35

Tgt Ion:	105	Resp:	4608
Ion	Ratio	Lower	Upper
105	100		
120	31.9	25.0	37.4
91	22.1	9.8	14.6#
77	27.0	10.7	16.1#



#74

1,2,4-Trimethylbenzene

Concen: 0.08 ppbv

RT: 16.76 min Scan# 4347

Delta R.T. 0.01 min

Lab File: VL038630.D

Acq: 17 Mar 2022 17:35

Tgt Ion:	105	Resp:	17632
Ion	Ratio	Lower	Upper
105	100		
120	38.8	38.9	58.3#
91	8.7	30.6	46.0#
77	18.5	15.2	22.8

