

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL071322\
 Data File : VL039476.D
 Acq On : 13 Jul 2022 22:49
 Operator : SY/AP
 Sample : N3660-06DL 5X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-9DL

Quant Time: Jul 14 01:24:24 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL062922AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Jul 06 02:15:38 2022
 QLast Update : Wed Jul 06 02:15:38 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1179140	10.00	ppbv	0.02
33) 1,4-Difluorobenzene	7.18	114	3310874	10.00	ppbv	0.02
55) Chlorobenzene-d5	12.09	117	2966747	10.00	ppbv	0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.42	95	2323670	10.56	ppbv	0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.60%

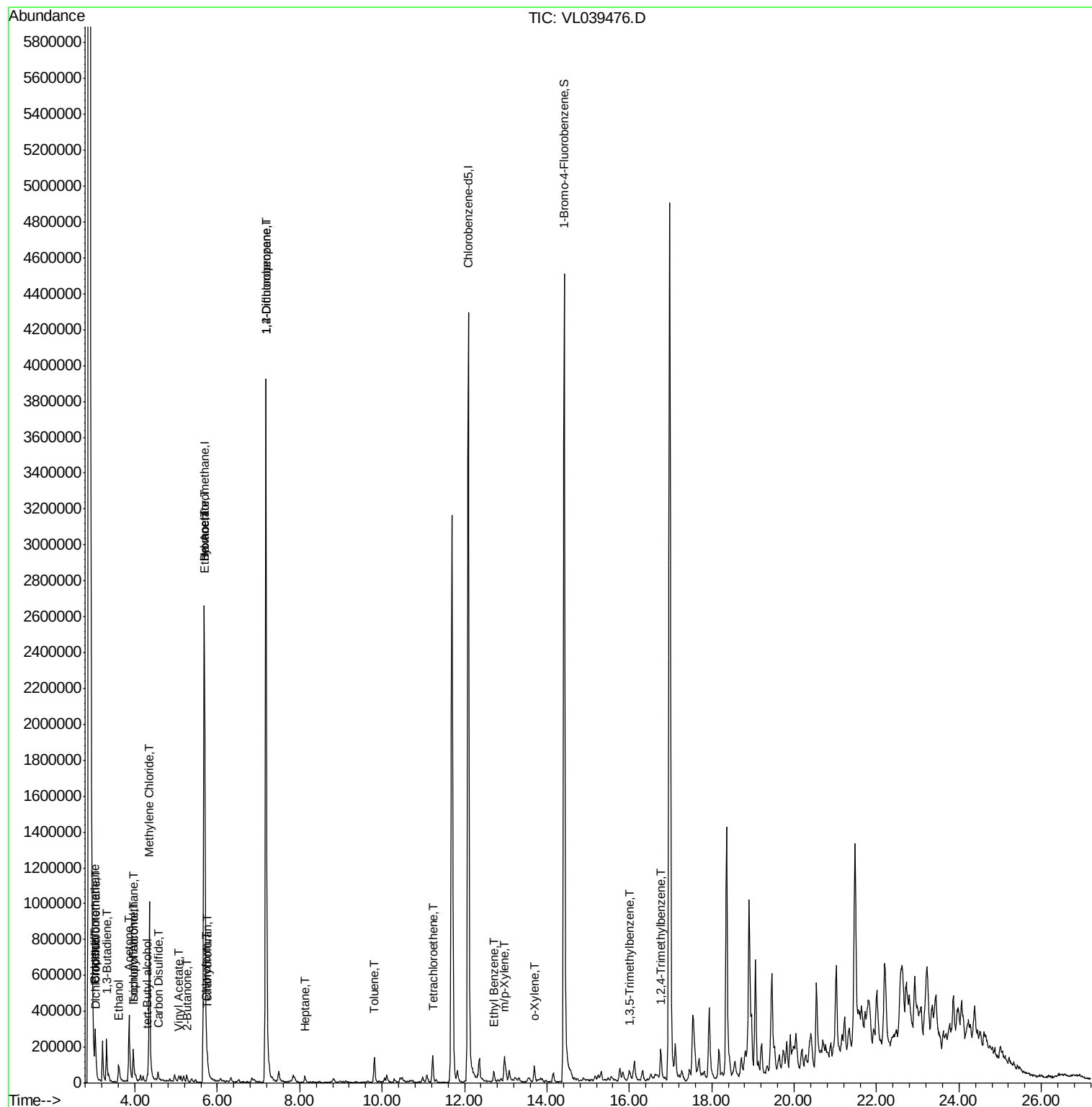
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.06	85	59014	0.35	ppbv	100
3) Chlorodifluoromethane	3.04	51	76100	0.51	ppbv #	58
9) Propene	3.03	41	8873	0.13	ppbv #	10
10) Heptane	8.13	43	5844	0.04	ppbv #	1
11) Trichlorofluoromethane	3.96	101	121166	0.64	ppbv	95
13) Ethanol	3.61	45	61619	15.72	ppbv #	23
15) Acetone	3.85	43	457532	3.28	ppbv #	87
16) 1,3-Butadiene	3.31	39	79133	1.09	ppbv #	14
17) tert-Butyl alcohol	4.30	59	16442	0.14	ppbv #	71
19) Isopropyl Alcohol	3.97	45	12627	0.17	ppbv #	88
20) Methylene Chloride	4.35	84	413971	7.45	ppbv	97
23) Vinyl Acetate	5.08	43	4196	0.05	ppbv #	85
25) Ethyl Acetate	5.69	43	492308	1.72	ppbv #	78
26) Hexane	5.69	57	671729	5.83	ppbv #	39
27) Carbon Disulfide	4.56	76	59034	0.42	ppbv	96
29) Chloroform	5.75	83	14032	0.07	ppbv	100
34) 2-Butanone	5.25	43	43883	0.26	ppbv	92
39) 1,2-Dichloropropane	7.18	63	800382	8.36	ppbv #	25
41) Tetrahydrofuran	5.76	42	3128	0.03	ppbv #	39
52) Tetrachloroethene	11.23	164	35598	0.35	ppbv	92
53) Toluene	9.81	91	107551	0.36	ppbv	97
58) Ethyl Benzene	12.70	91	15476	0.04	ppbv	90
59) m/p-Xylene	12.97	91	137028	0.41	ppbv	93
60) o-Xylene	13.69	91	41186	0.13	ppbv #	31
73) 1,3,5-Trimethylbenzene	16.00	105	37708	0.11	ppbv #	75
74) 1,2,4-Trimethylbenzene	16.76	105	118036	0.31	ppbv #	72

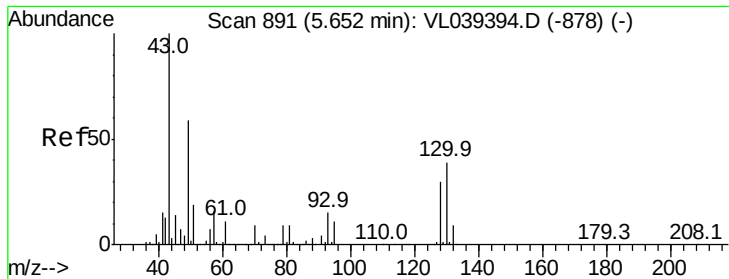
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.67 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 13 Jul 2022 22:49 SG-9DL

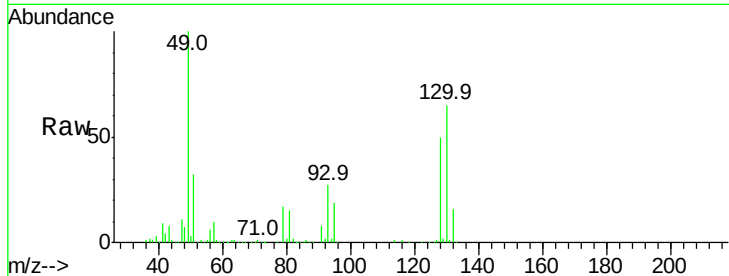
Tgt Ion: 49 Resp: 1179140

Ion Ratio Lower Upper

49 100

128 53.3 26.7 80.0

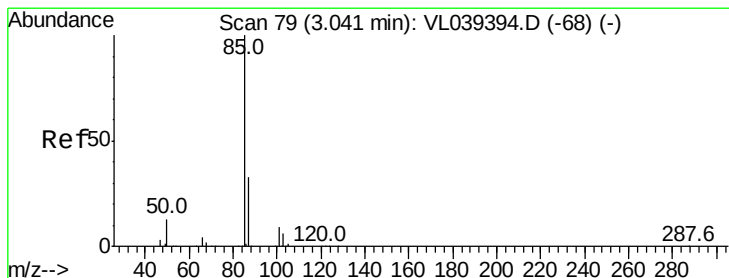
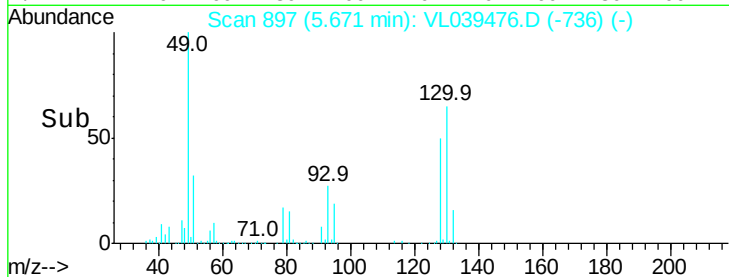
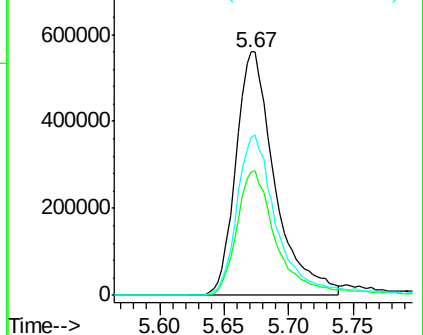
130 69.2 34.3 102.8



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.35 ppbv

RT: 3.06 min Scan# 85

Delta R.T. 0.02 min

Lab File: VL039476.D

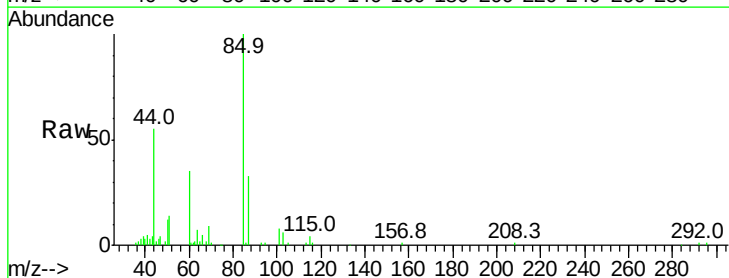
Acq: 13 Jul 2022 22:49

Tgt Ion: 85 Resp: 59014

Ion Ratio Lower Upper

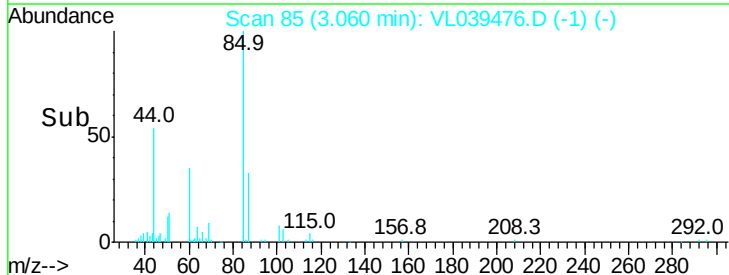
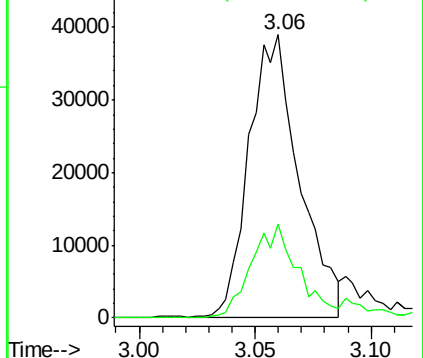
85 100

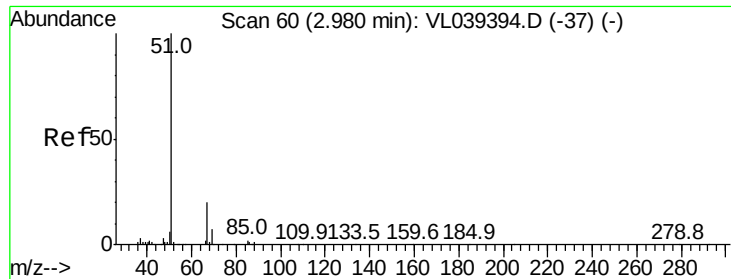
87 33.2 26.7 40.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.51 ppbv

RT: 3.04 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

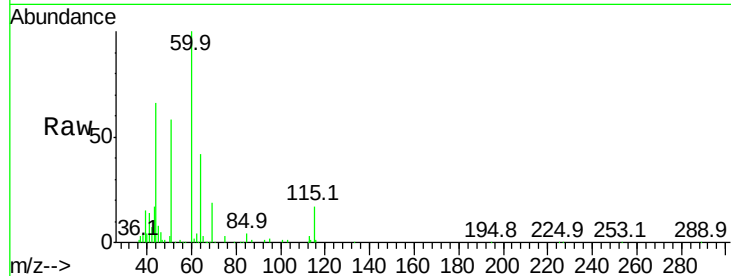
Acq: 13 Jul 2022 22:49 SG-9DL

Tgt Ion: 51 Resp: 76100

Ion Ratio Lower Upper

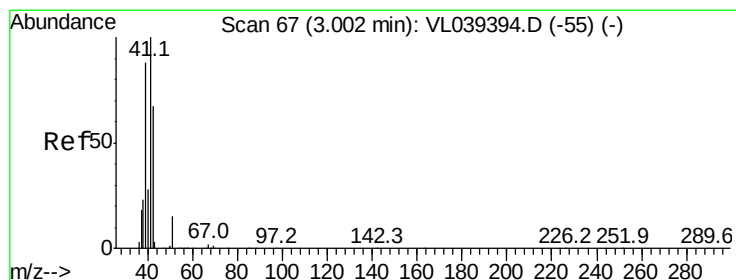
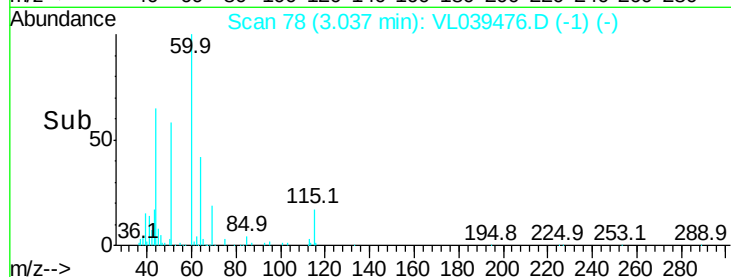
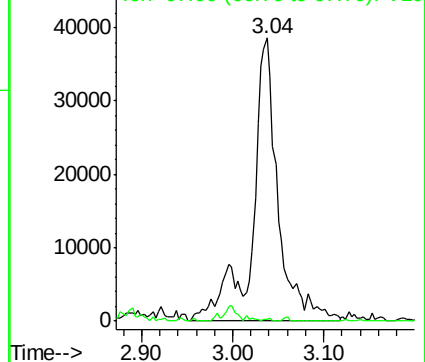
51 100

67 0.2 15.7 23.5#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#9

Propene

Concen: 0.13 ppbv

RT: 3.03 min Scan# 77

Delta R.T. 0.03 min

Lab File: VL039476.D

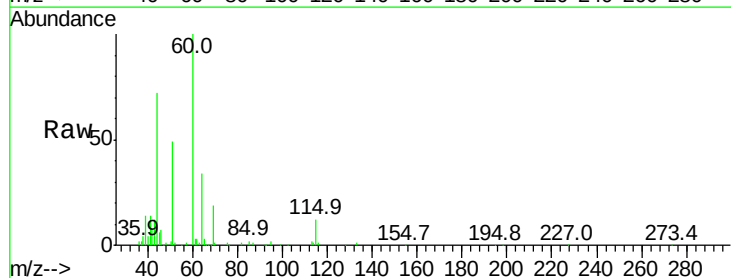
Acq: 13 Jul 2022 22:49

Tgt Ion: 41 Resp: 8873

Ion Ratio Lower Upper

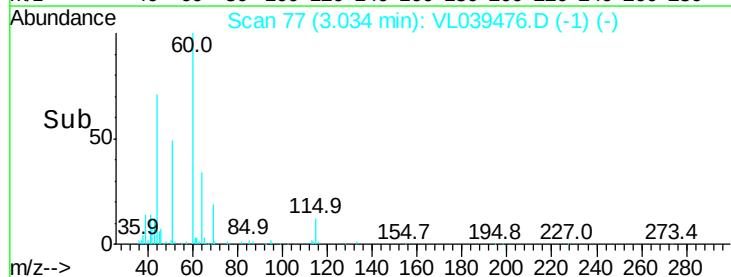
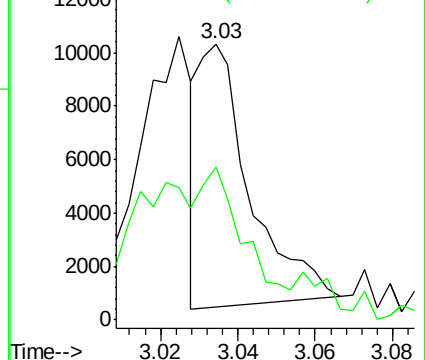
41 100

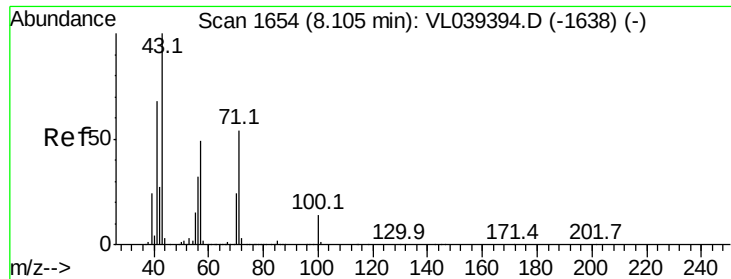
42 142.0 55.2 82.8#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#10

Heptane

Concen: 0.04 ppbv

RT: 8.13 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

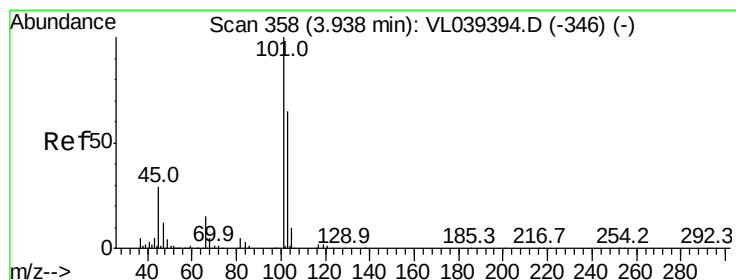
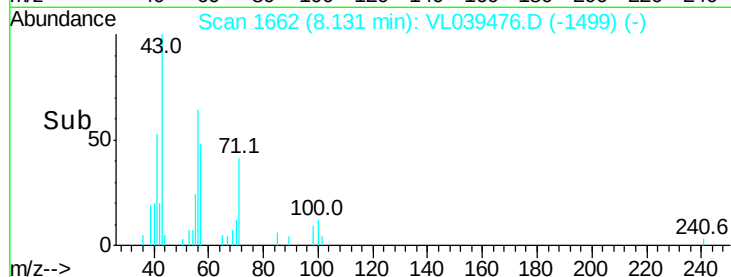
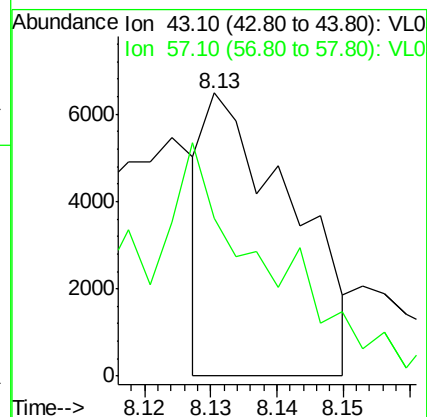
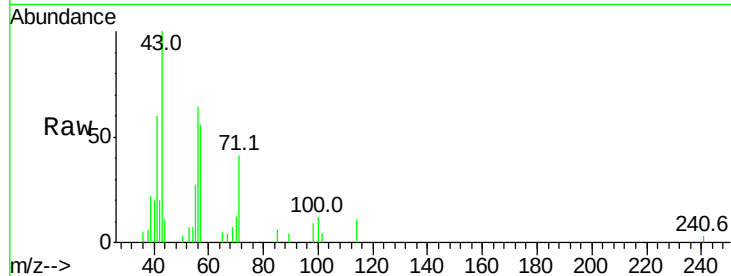
Acq: 13 Jul 2022 22:49

Tgt Ion: 43 Resp: 5844

Ion Ratio Lower Upper

43 100

57 158.4 40.5 60.7#



#11

Trichlorofluoromethane

Concen: 0.64 ppbv

RT: 3.96 min Scan# 364

Delta R.T. 0.02 min

Lab File: VL039476.D

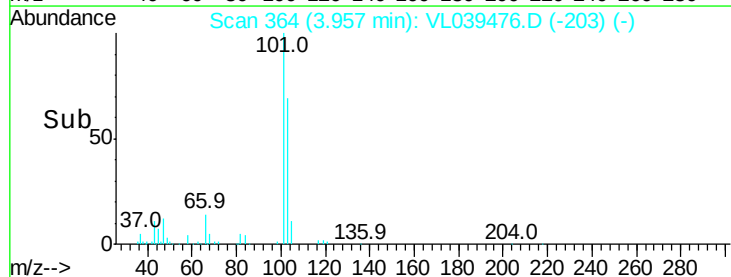
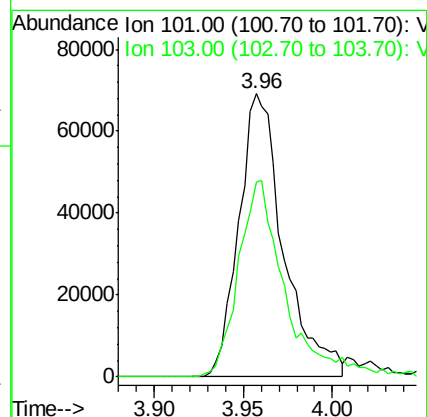
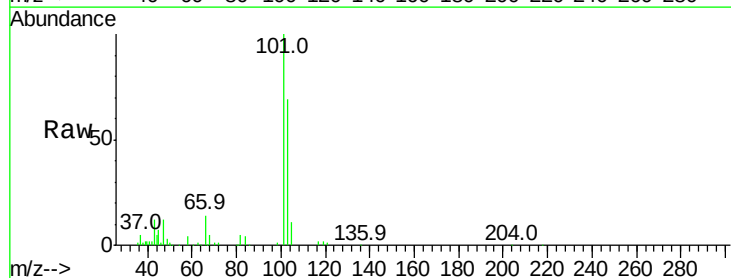
Acq: 13 Jul 2022 22:49

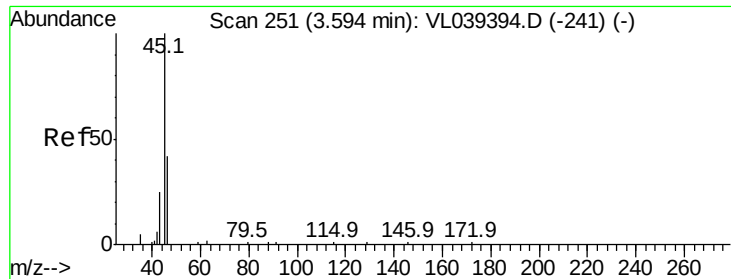
Tgt Ion: 101 Resp: 121166

Ion Ratio Lower Upper

101 100

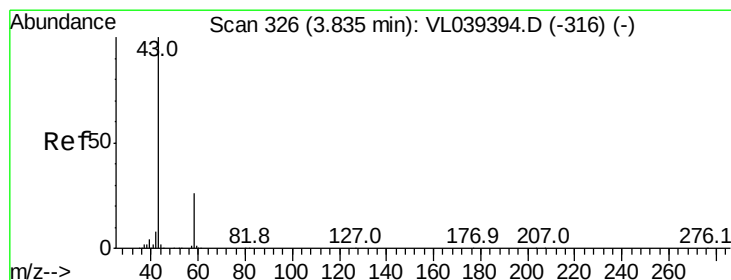
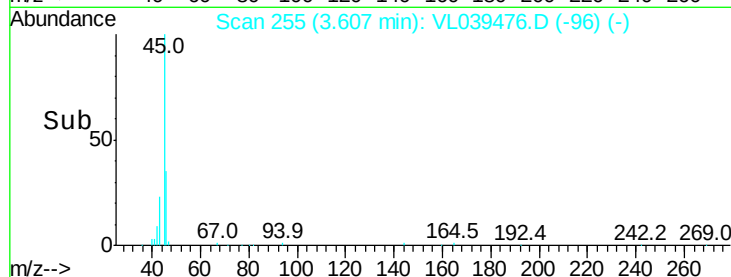
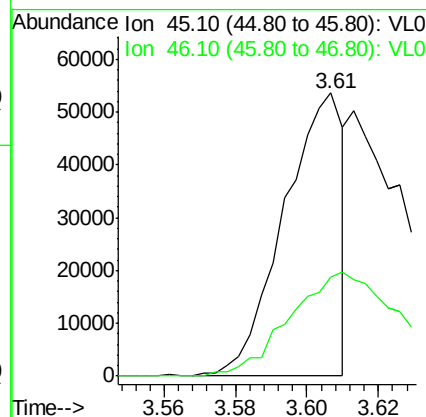
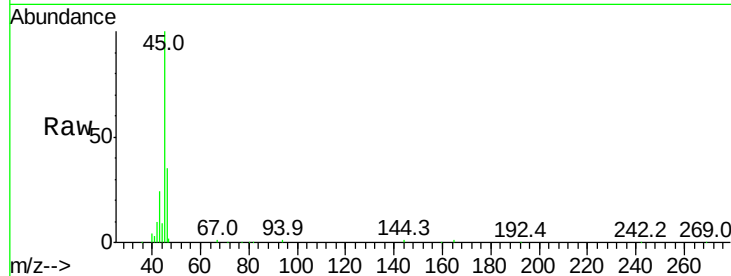
103 68.7 51.8 77.8





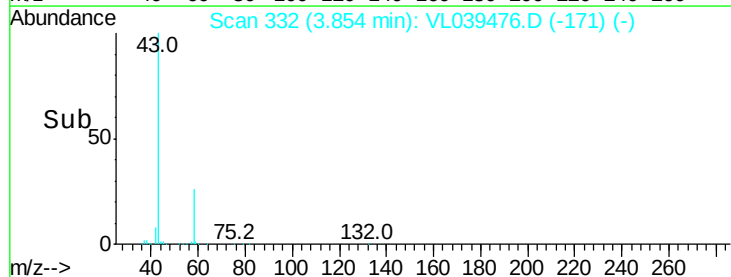
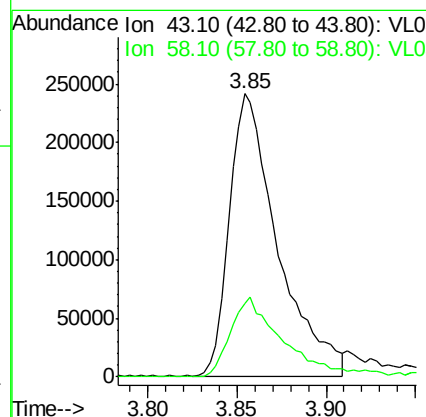
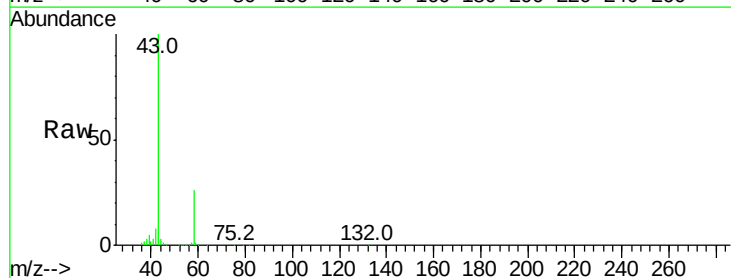
#13
Ethanol
Concen: 15.72 ppbv
RT: 3.61
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 13 Jul 2022 22:49

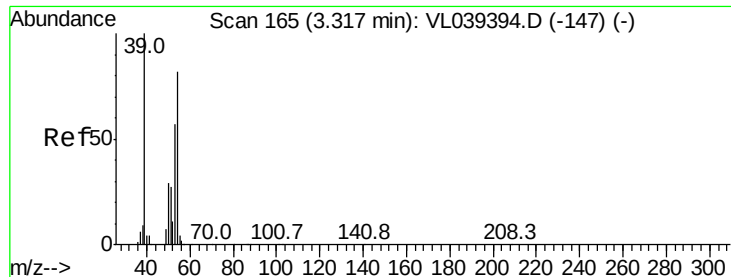
Tgt Ion: 45 Resp: 61619
Ion Ratio Lower Upper
45 100
46 0.0 22.8 91.2#



#15
Acetone
Concen: 3.28 ppbv
RT: 3.85 min Scan# 332
Delta R.T. 0.02 min
Lab File: VL039476.D
Acq: 13 Jul 2022 22:49

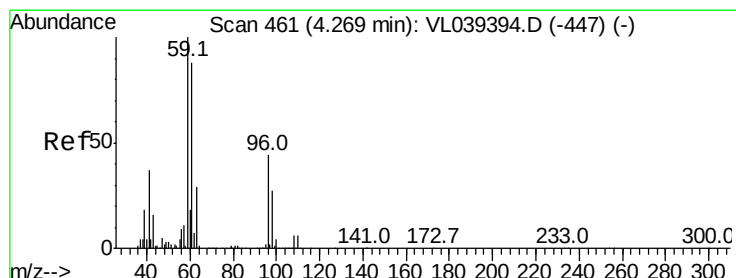
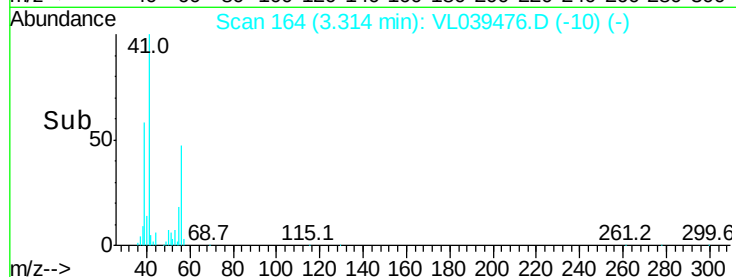
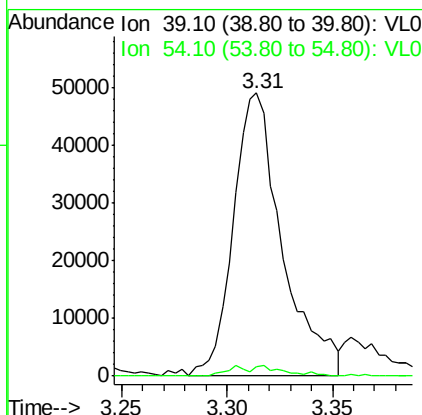
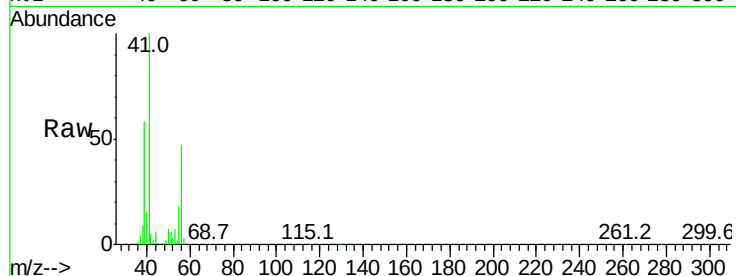
Tgt Ion: 43 Resp: 457532
Ion Ratio Lower Upper
43 100
58 32.9 21.0 31.6#





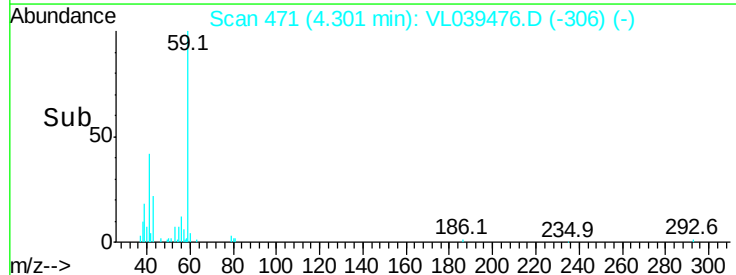
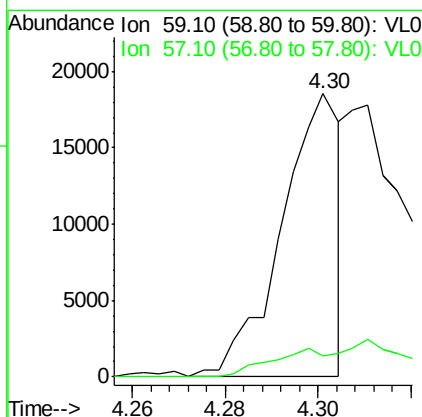
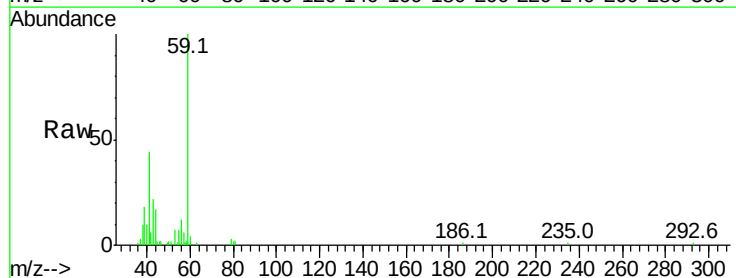
#16
 1,3-Butadiene
 Concen: 1.09 ppbv
 RT: 3.31
 Delta R.T. MSVOA_1
 Lab File: ClientSampleId :
 Acq: 13 Jul 2022 22:49

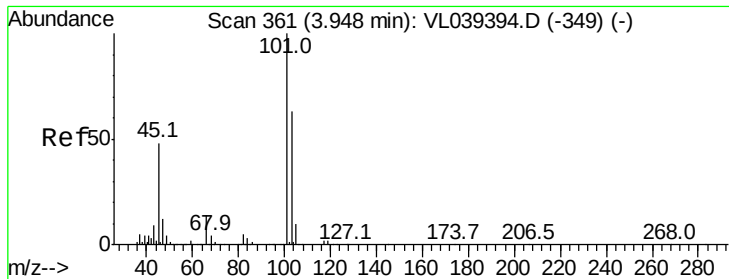
Tgt Ion: 39 Resp: 79133
 Ion Ratio Lower Upper
 39 100
 54 4.0 63.7 95.5#



#17
 tert-Butyl alcohol
 Concen: 0.14 ppbv
 RT: 4.30 min Scan# 471
 Delta R.T. 0.03 min
 Lab File: VL039476.D
 Acq: 13 Jul 2022 22:49

Tgt Ion: 59 Resp: 16442
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.7 13.1#





#19

Isopropyl Alcohol

Concen: 0.17 ppbv

RT: 3.97 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId :

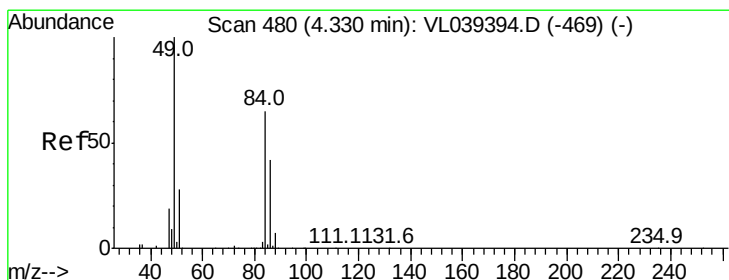
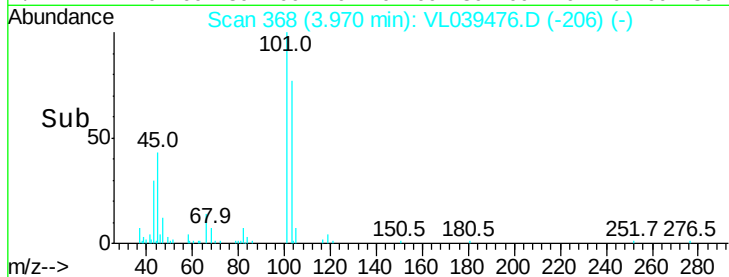
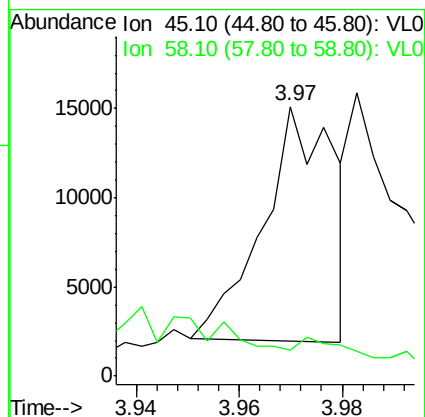
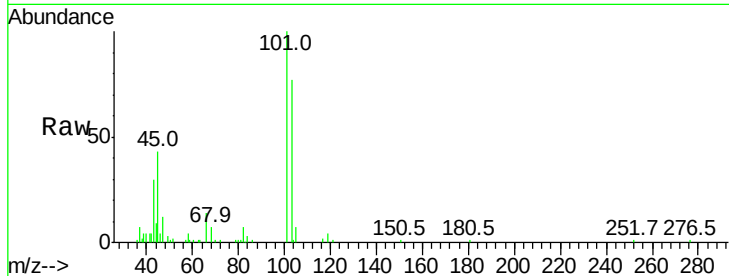
Acq: 13 Jul 2022 22:49

Tgt Ion: 45 Resp: 12627

Ion Ratio Lower Upper

45 100

58 0.0 3.2 4.8#



#20

Methylene Chloride

Concen: 7.45 ppbv

RT: 4.35 min Scan# 487

Delta R.T. 0.02 min

Lab File: VL039476.D

Acq: 13 Jul 2022 22:49

Tgt Ion: 84 Resp: 413971

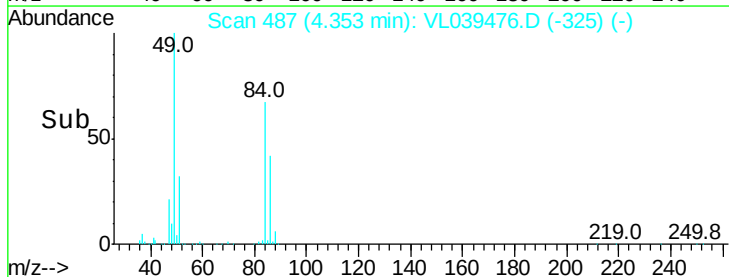
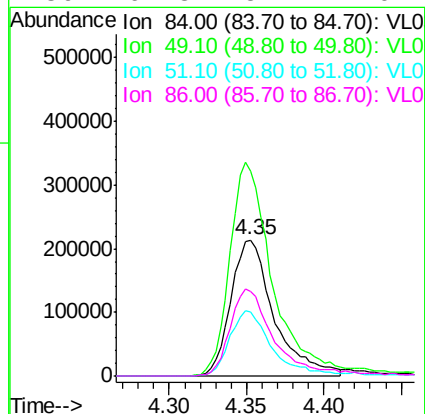
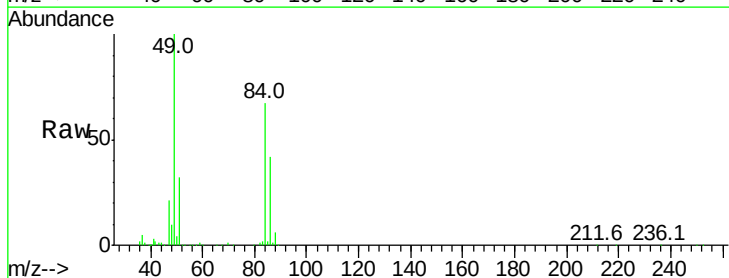
Ion Ratio Lower Upper

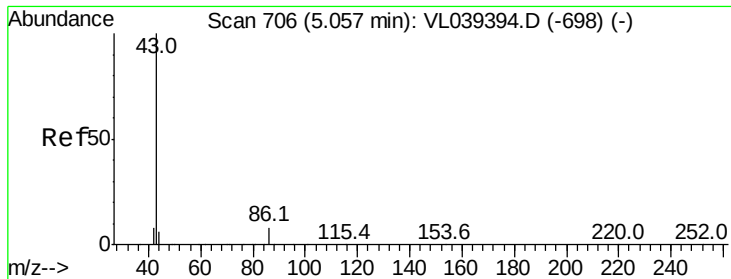
84 100

49 150.0 123.1 184.7

51 47.3 34.4 51.6

86 62.3 51.1 76.7





#23

Vinyl Acetate

Concen: 0.05 ppbv

RT: 5.08 Instrument: MSVOA_1

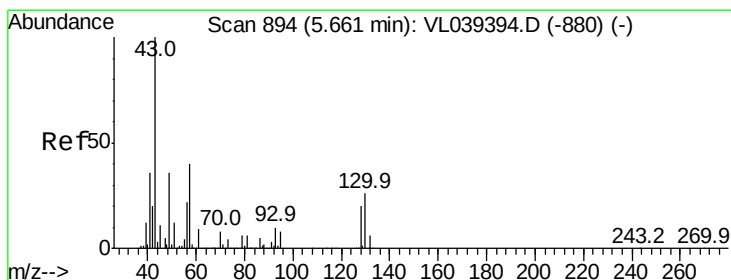
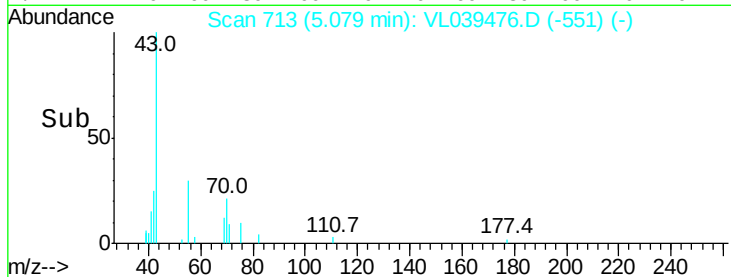
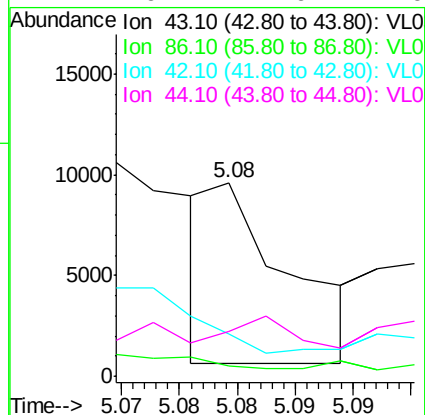
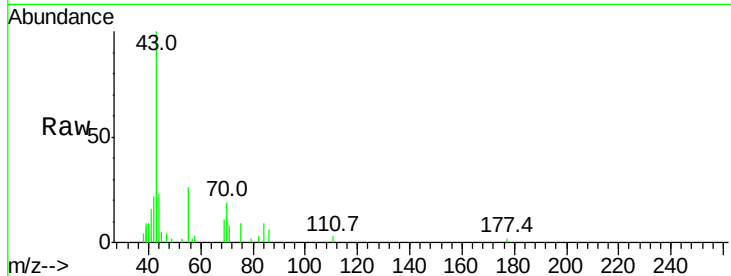
Delta R.T.

Lab File: ClientSampleId:

Acq: 13 Jul 2022 22:49

Tgt Ion: 43 Resp: 4196

Ion	Ratio	Lower	Upper
43	100		
86	0.0	5.0	7.6#
42	14.6	7.7	11.5#
44	10.1	4.6	7.0#



#25

Ethyl Acetate

Concen: 1.72 ppbv

RT: 5.69 min Scan# 904

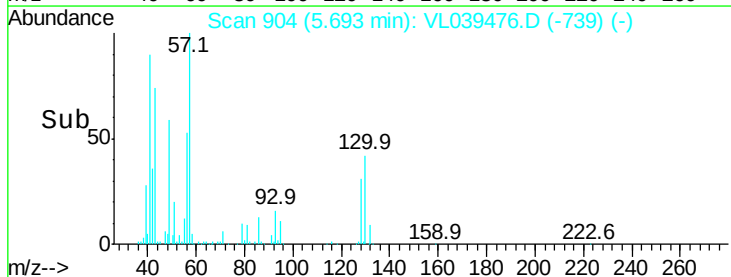
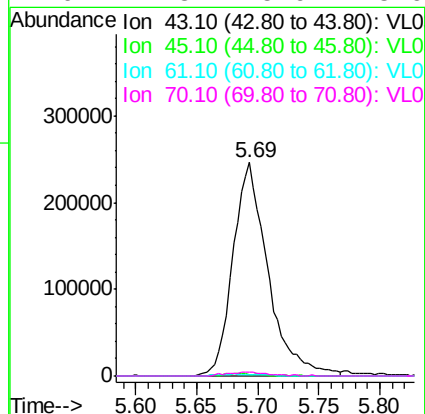
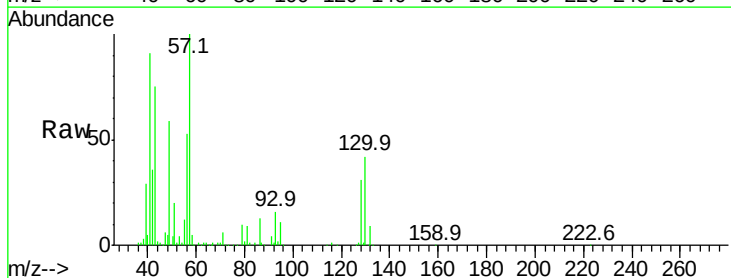
Delta R.T. 0.03 min

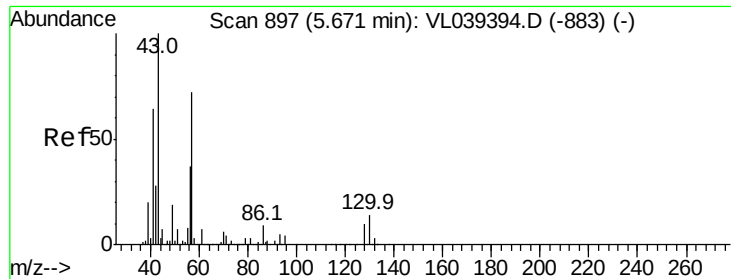
Lab File: VL039476.D

Acq: 13 Jul 2022 22:49

Tgt Ion: 43 Resp: 492308

Ion	Ratio	Lower	Upper
43	100		
45	1.5	8.2	12.4#
61	1.2	8.3	12.5#
70	2.3	5.9	8.9#





#26

Hexane

Concen: 5.83 ppbv

RT: 5.69

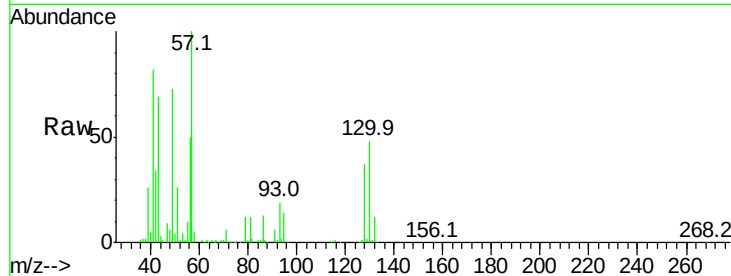
Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 13 Jul 2022 22:49

Tgt Ion: 57 Resp: 671729

Ion	Ratio	Lower	Upper
57	100		
41	90.2	76.9	115.3
43	74.8	191.0	286.6#
56	53.0	43.2	64.8



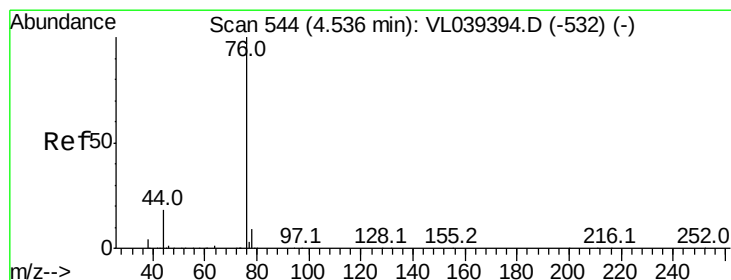
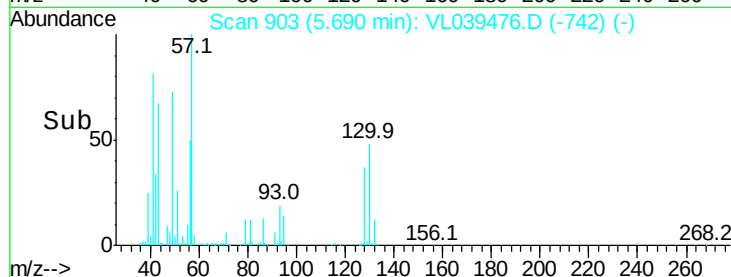
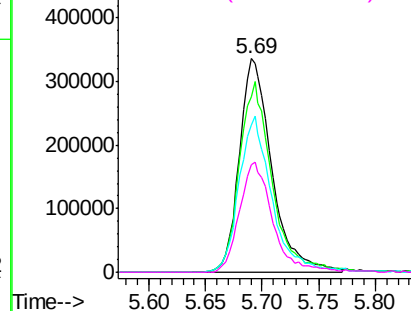
Abundance

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



#27

Carbon Disulfide

Concen: 0.42 ppbv

RT: 4.56 min Scan# 552

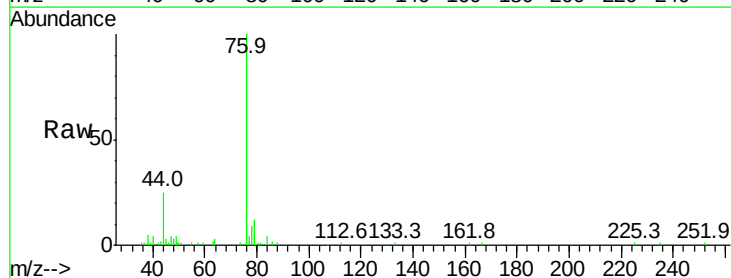
Delta R.T. 0.03 min

Lab File: VL039476.D

Acq: 13 Jul 2022 22:49

Tgt Ion: 76 Resp: 59034

Ion	Ratio	Lower	Upper
76	100		
44	20.2	14.6	21.8
78	10.4	7.8	11.6

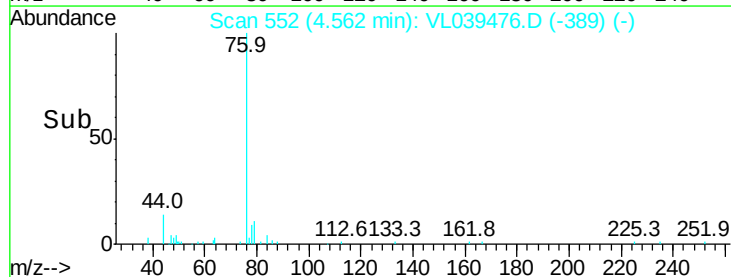
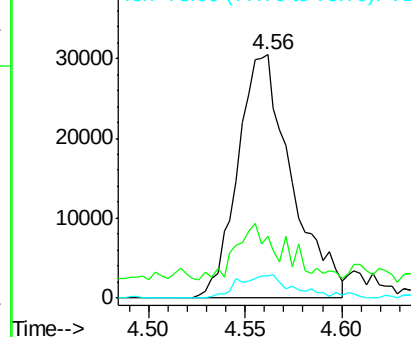


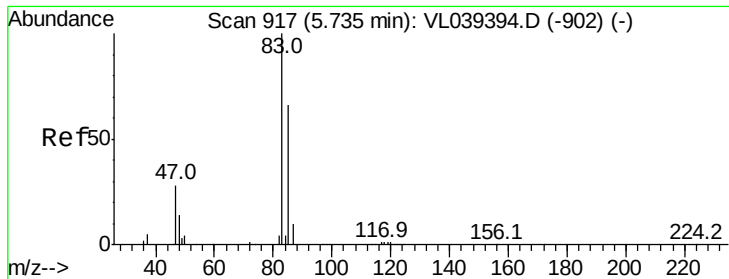
Abundance

Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

Ion 78.00 (77.70 to 78.70): VL0





#29

Chloroform

Concen: 0.07 ppbv

RT: 5.75 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

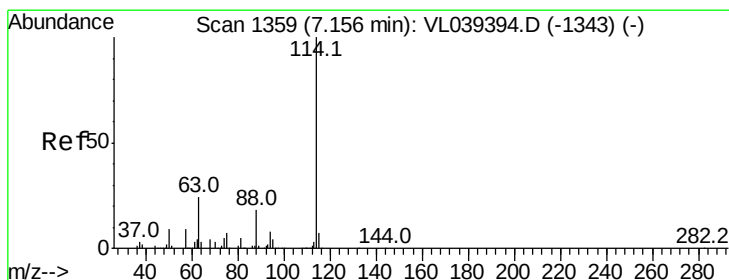
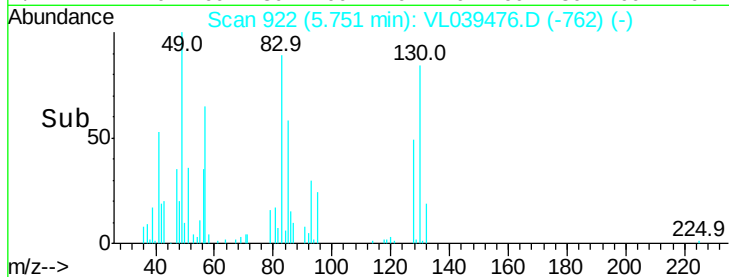
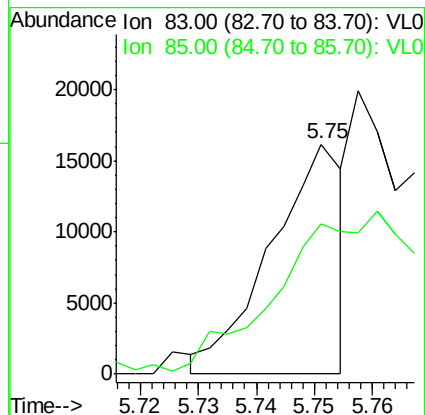
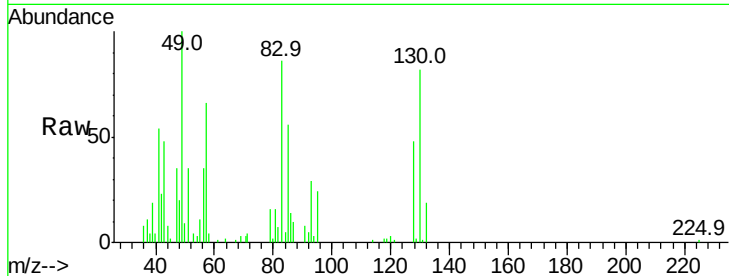
Acq: 13 Jul 2022 22:49

Tgt Ion: 83 Resp: 14032

Ion Ratio Lower Upper

83 100

85 66.3 52.8 79.2



#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 7.18 min Scan# 1366

Delta R.T. 0.02 min

Lab File: VL039476.D

Acq: 13 Jul 2022 22:49

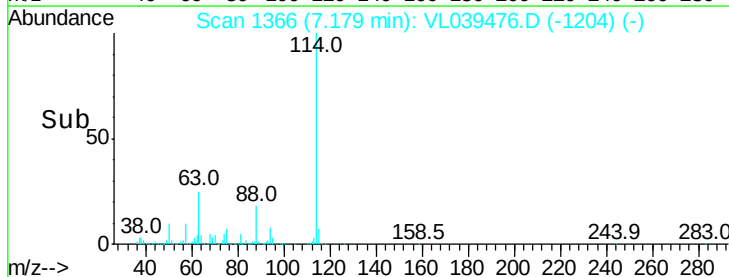
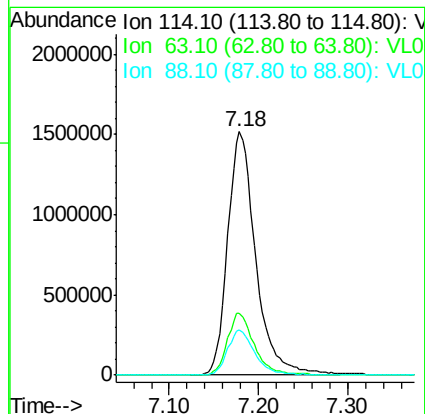
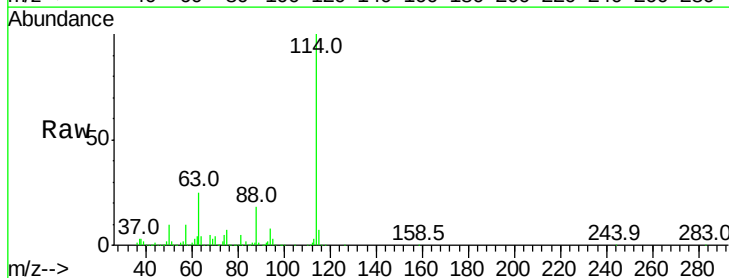
Tgt Ion: 114 Resp: 3310874

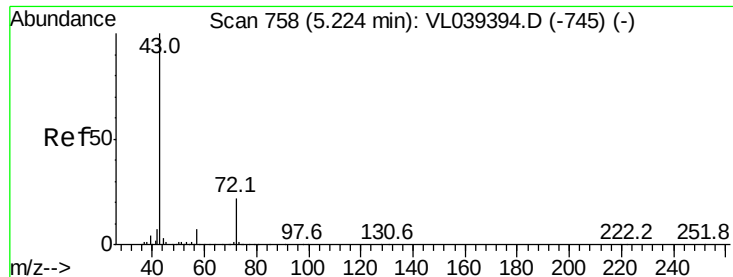
Ion Ratio Lower Upper

114 100

63 24.6 20.2 30.4

88 18.2 14.5 21.7





#34

2-Butanone

Concen: 0.26 ppbv

RT: 5.25

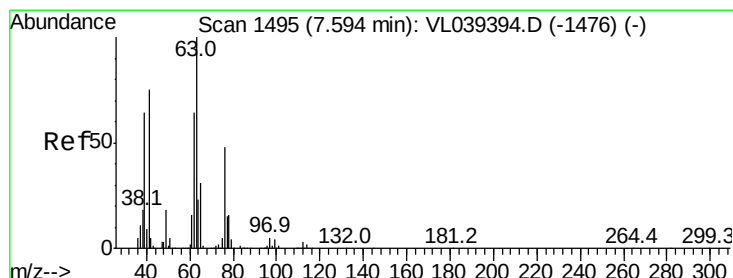
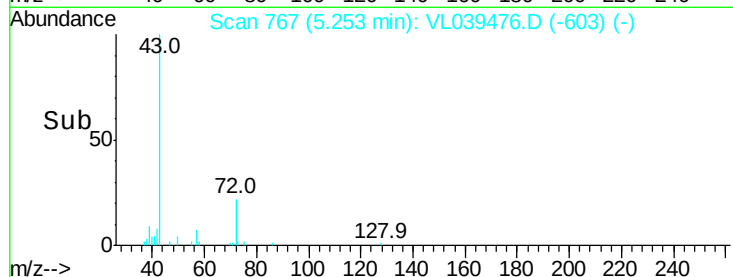
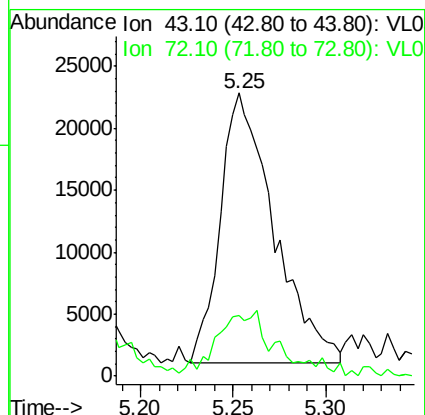
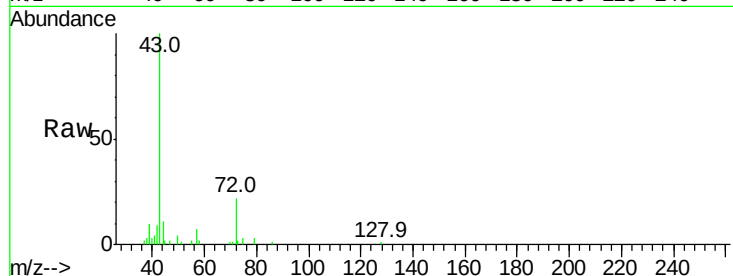
Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 13 Jul 2022 22:49

Tgt Ion: 43 Resp: 43883

Ion	Ratio	Lower	Upper
43	100		
72	26.2	17.9	26.9



#39

1,2-Dichloropropane

Concen: 8.36 ppbv

RT: 7.18 min Scan# 1366

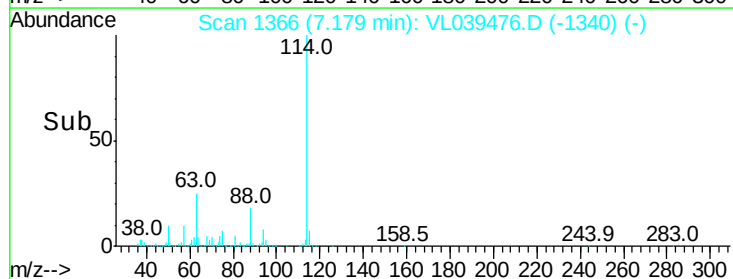
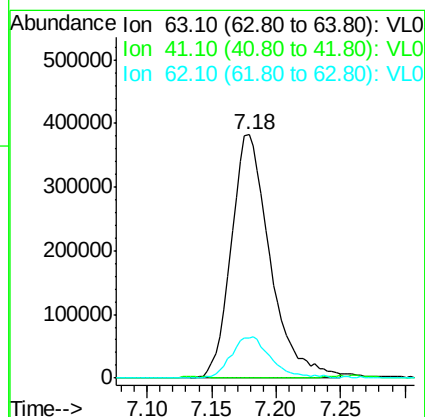
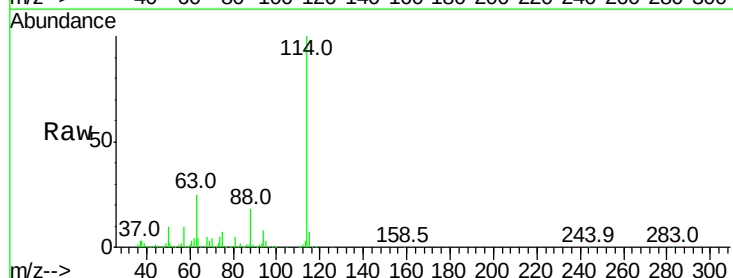
Delta R.T. -0.41 min

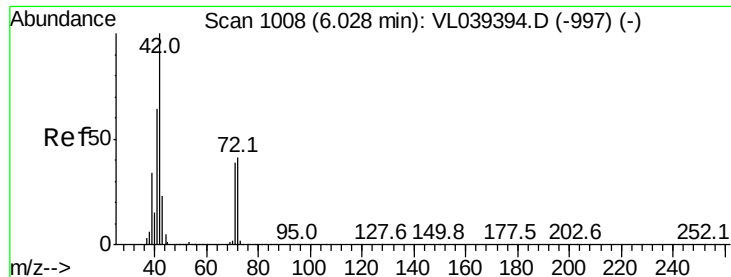
Lab File: VL039476.D

Acq: 13 Jul 2022 22:49

Tgt Ion: 63 Resp: 800382

Ion	Ratio	Lower	Upper
63	100		
41	0.0	59.6	89.4#
62	16.6	51.4	77.0#





#41

Tetrahydrofuran

Concen: 0.03 ppbv

RT: 5.76 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 13 Jul 2022 22:49 SG-9DL

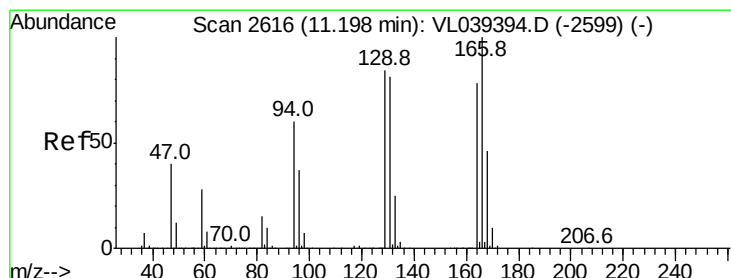
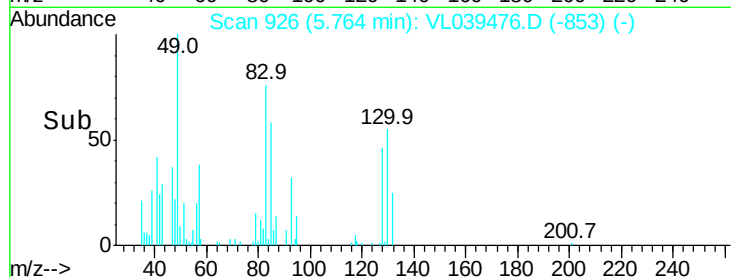
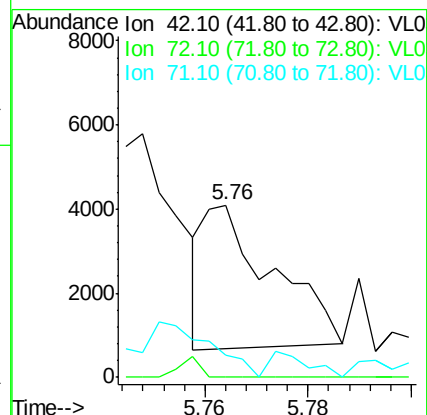
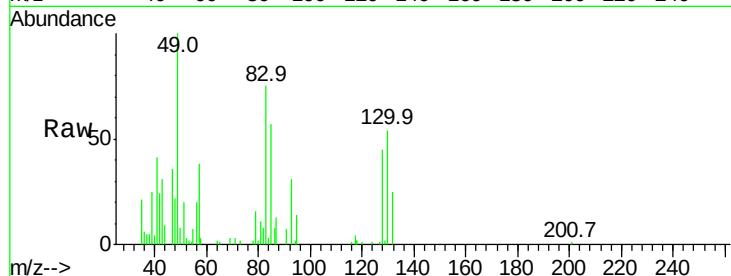
Tgt Ion: 42 Resp: 3128

Ion Ratio Lower Upper

42 100

72 4.4 31.8 47.8#

71 0.0 31.8 47.8#



#52

Tetrachloroethene

Concen: 0.35 ppbv

RT: 11.23 min Scan# 2626

Delta R.T. 0.03 min

Lab File: VL039476.D

Acq: 13 Jul 2022 22:49

Tgt Ion: 164 Resp: 35598

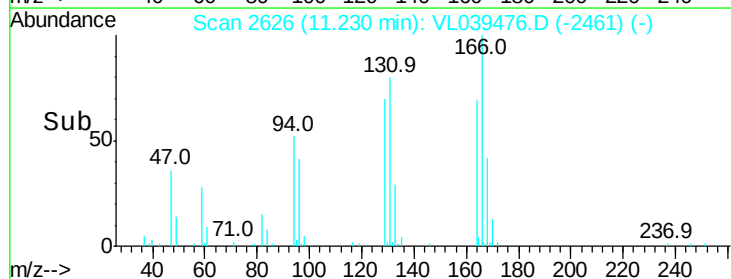
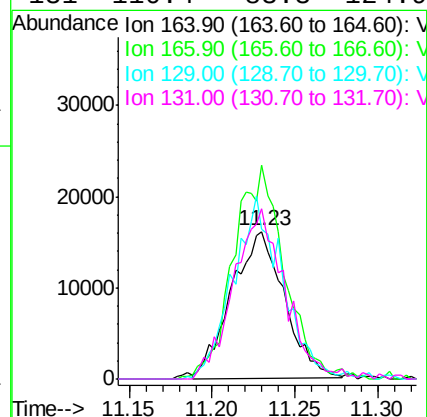
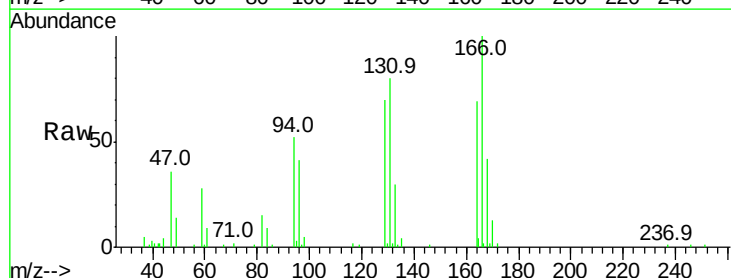
Ion Ratio Lower Upper

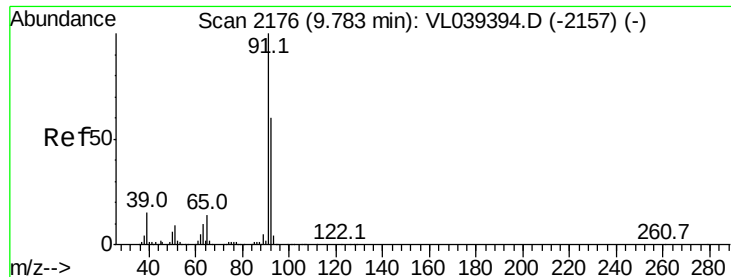
164 100

166 136.0 102.2 153.2

129 95.9 85.8 128.8

131 110.4 83.3 124.9





#53

Toluene

Concen: 0.36 ppbv

RT: 9.81 Instrument: MSVOA_1

Delta R.T. 0.02 min

Lab File: ClientSampleId :

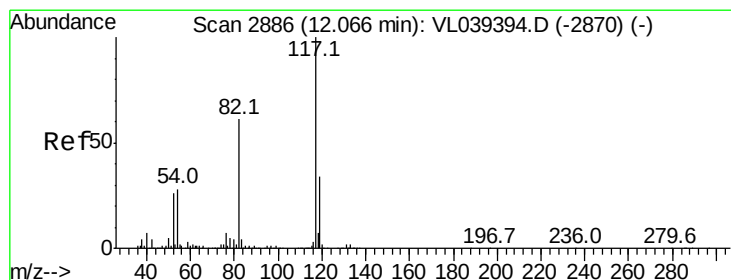
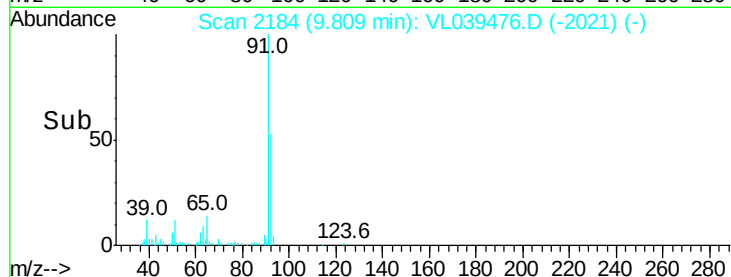
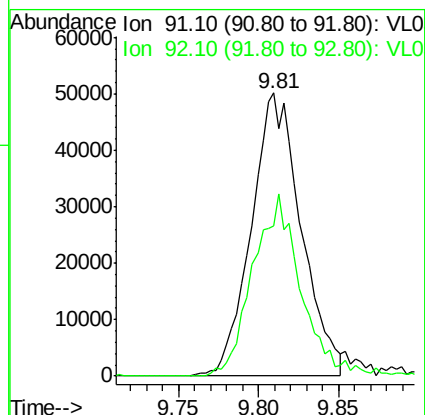
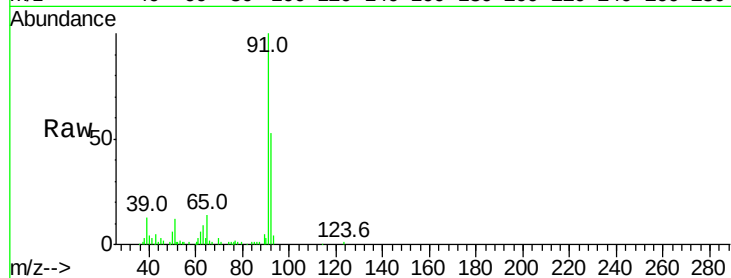
Acq: 13 Jul 2022 22:49

Tgt Ion: 91 Resp: 107551

Ion Ratio Lower Upper

91 100

92 62.1 48.2 72.2



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.09 min Scan# 2893

Delta R.T. 0.02 min

Lab File: VL039476.D

Acq: 13 Jul 2022 22:49

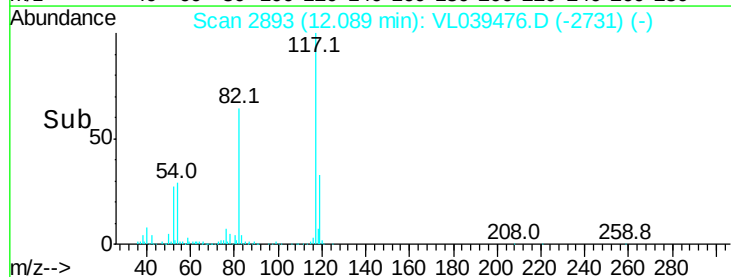
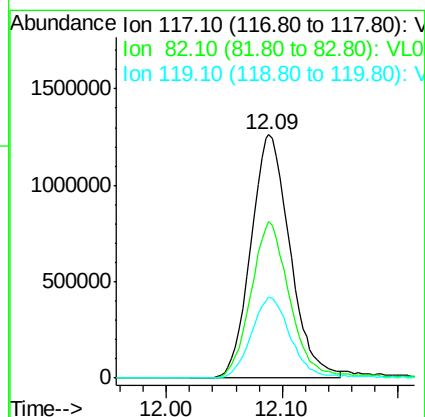
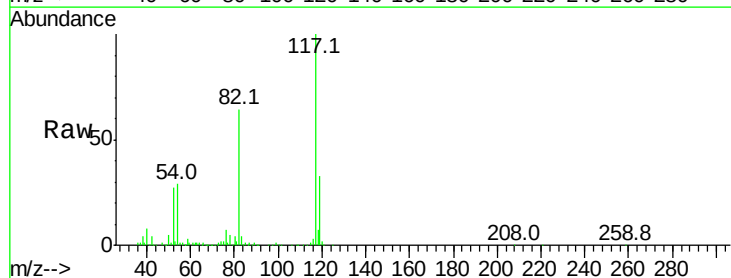
Tgt Ion: 117 Resp: 2966747

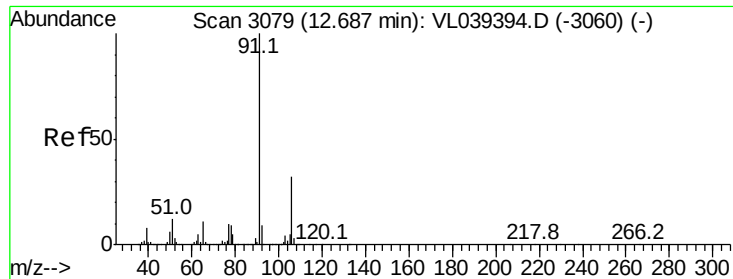
Ion Ratio Lower Upper

117 100

82 65.1 50.8 76.2

119 34.1 24.1 36.1





#58

Ethyl Benzene

Concen: 0.04 ppbv

RT: 12.70

Delta R.T. MSVOA_1

Lab File: ClientSampleId :

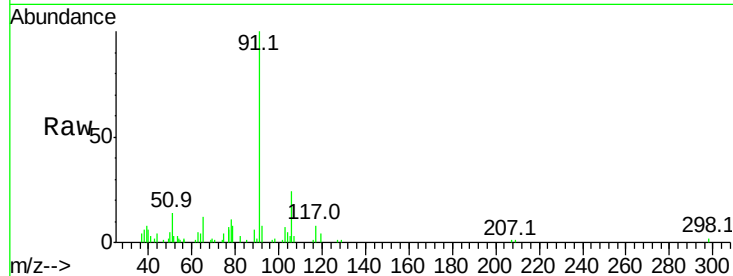
Acq: 13 Jul 2022 22:49

Tgt Ion: 91 Resp: 15476

Ion Ratio Lower Upper

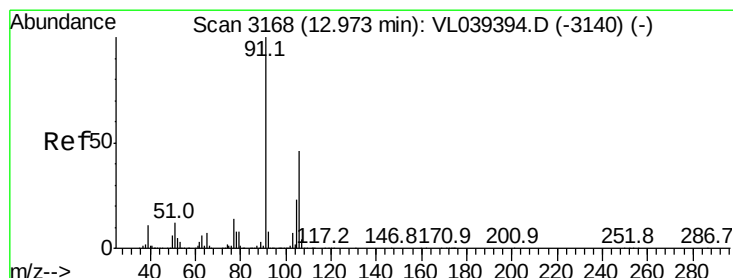
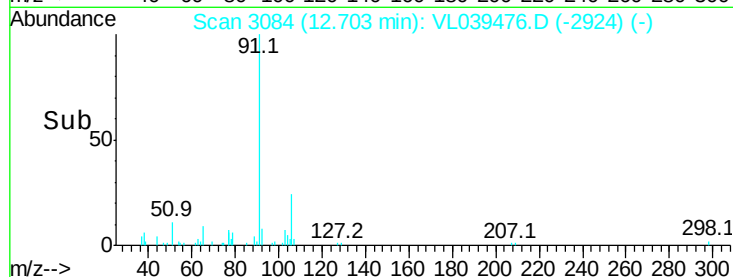
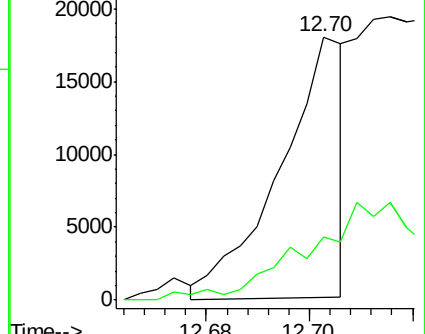
91 100

106 26.4 25.4 38.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.41 ppbv

RT: 12.97 min Scan# 3168

Delta R.T. -0.00 min

Lab File: VL039476.D

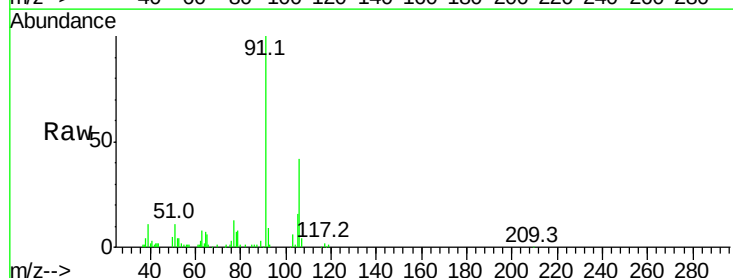
Acq: 13 Jul 2022 22:49

Tgt Ion: 91 Resp: 137028

Ion Ratio Lower Upper

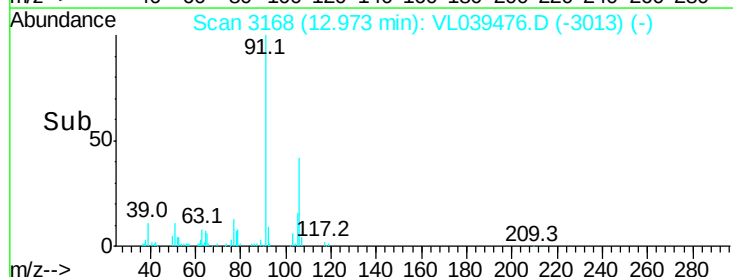
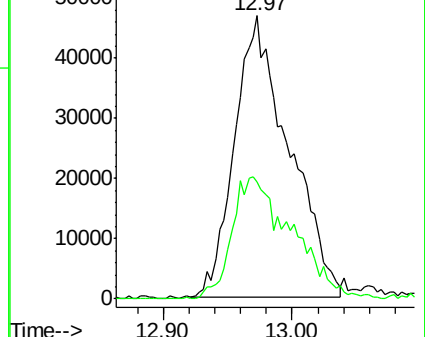
91 100

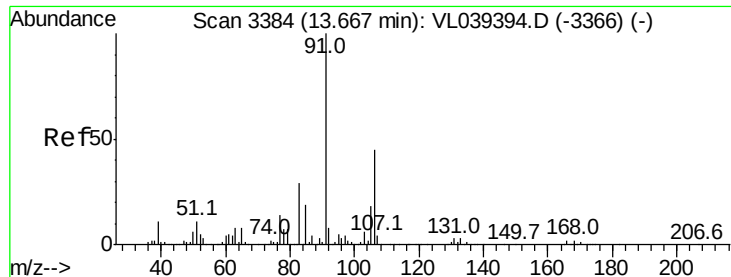
106 48.8 35.4 53.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

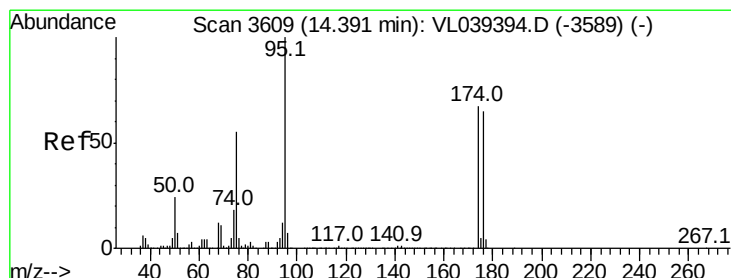
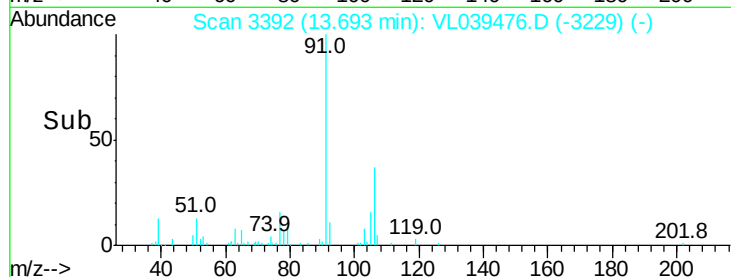
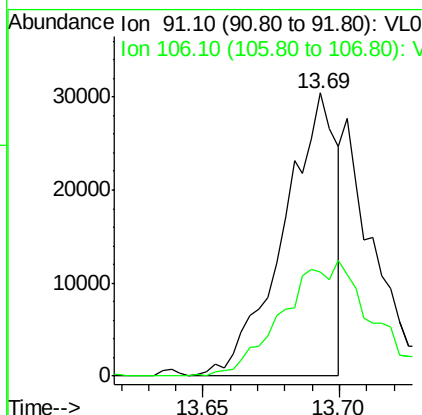
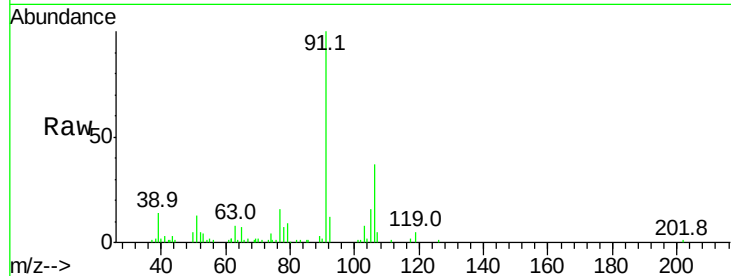
Ion 106.10 (105.80 to 106.80): V





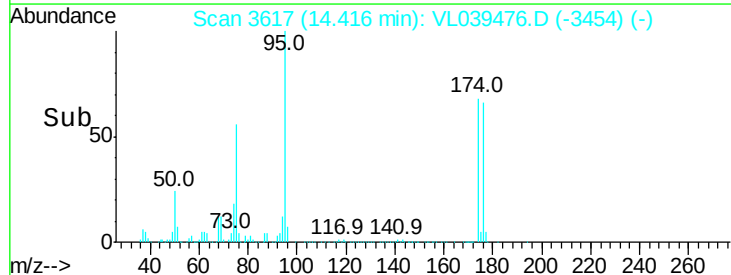
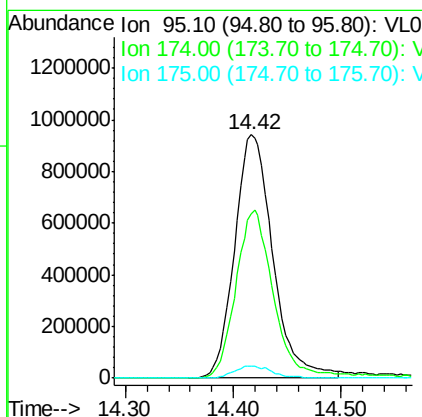
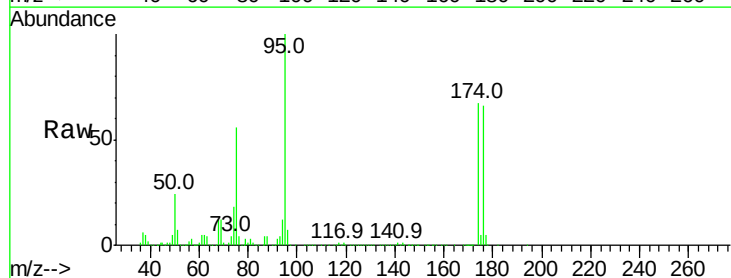
#60
o-Xylene
Concen: 0.13 ppbv
RT: 13.69
Delta R.T. MSVOA_L
Lab File: ClientSampleId:
Acq: 13 Jul 2022 22:49

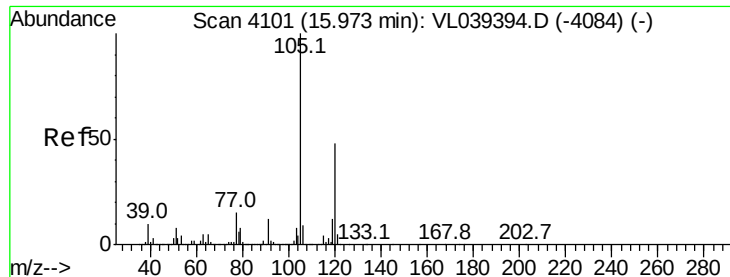
Tgt Ion: 91 Resp: 41186
Ion Ratio Lower Upper
91 100
106 0.0 22.4 67.3#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.56 ppbv
RT: 14.42 min Scan# 3617
Delta R.T. 0.03 min
Lab File: VL039476.D
Acq: 13 Jul 2022 22:49

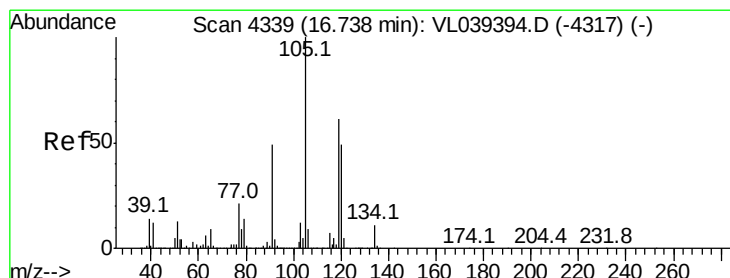
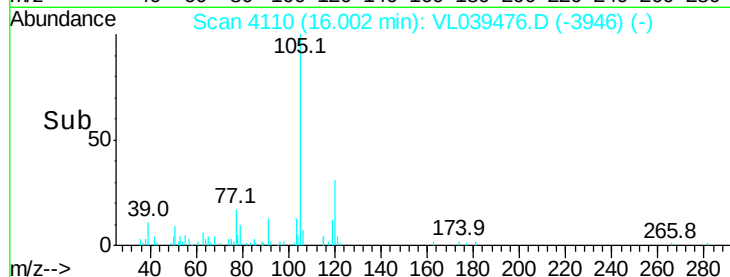
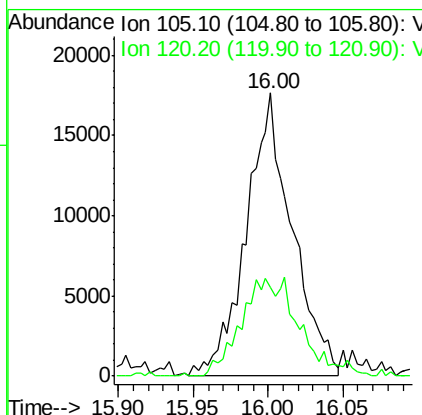
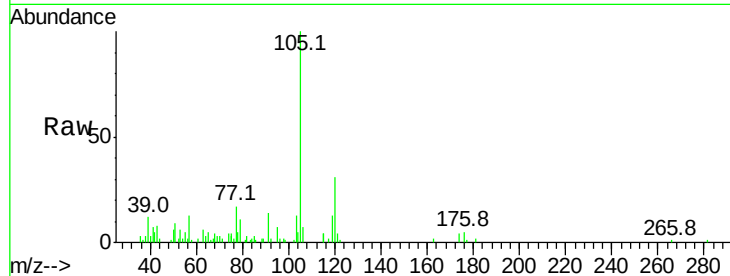
Tgt Ion: 95 Resp: 2323670
Ion Ratio Lower Upper
95 100
174 70.3 55.9 83.9
175 5.2 4.2 6.4





#73
 1,3,5-Trimethylbenzene
 Concen: 0.11 ppbv
 RT: 16.00
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 13 Jul 2022 22:49

Tgt Ion:105 Resp: 37708
 Ion Ratio Lower Upper
 105 100
 120 31.3 38.2 57.4#



#74
 1,2,4-Trimethylbenzene
 Concen: 0.31 ppbv
 RT: 16.76 min Scan# 4346
 Delta R.T. 0.02 min
 Lab File: VL039476.D
 Acq: 13 Jul 2022 22:49

Tgt Ion:105 Resp: 118036
 Ion Ratio Lower Upper
 105 100
 120 44.8 39.5 59.3
 91 12.0 39.2 58.8#
 77 14.0 17.2 25.8#

