

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL110221\
 Data File : VL037968.D
 Acq On : 2 Nov 2021 15:13
 Operator : SY/AP
 Sample : M4447-01DUP
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1DUP

Quant Time: Nov 03 03:49:16 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL110121AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue Nov 02 05:54:07 2021
 QLast Update : Tue Nov 02 05:54:07 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1279338	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	3679501	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	3044308	10.00	ppbv	-0.01

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	2273618	10.27	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.70%

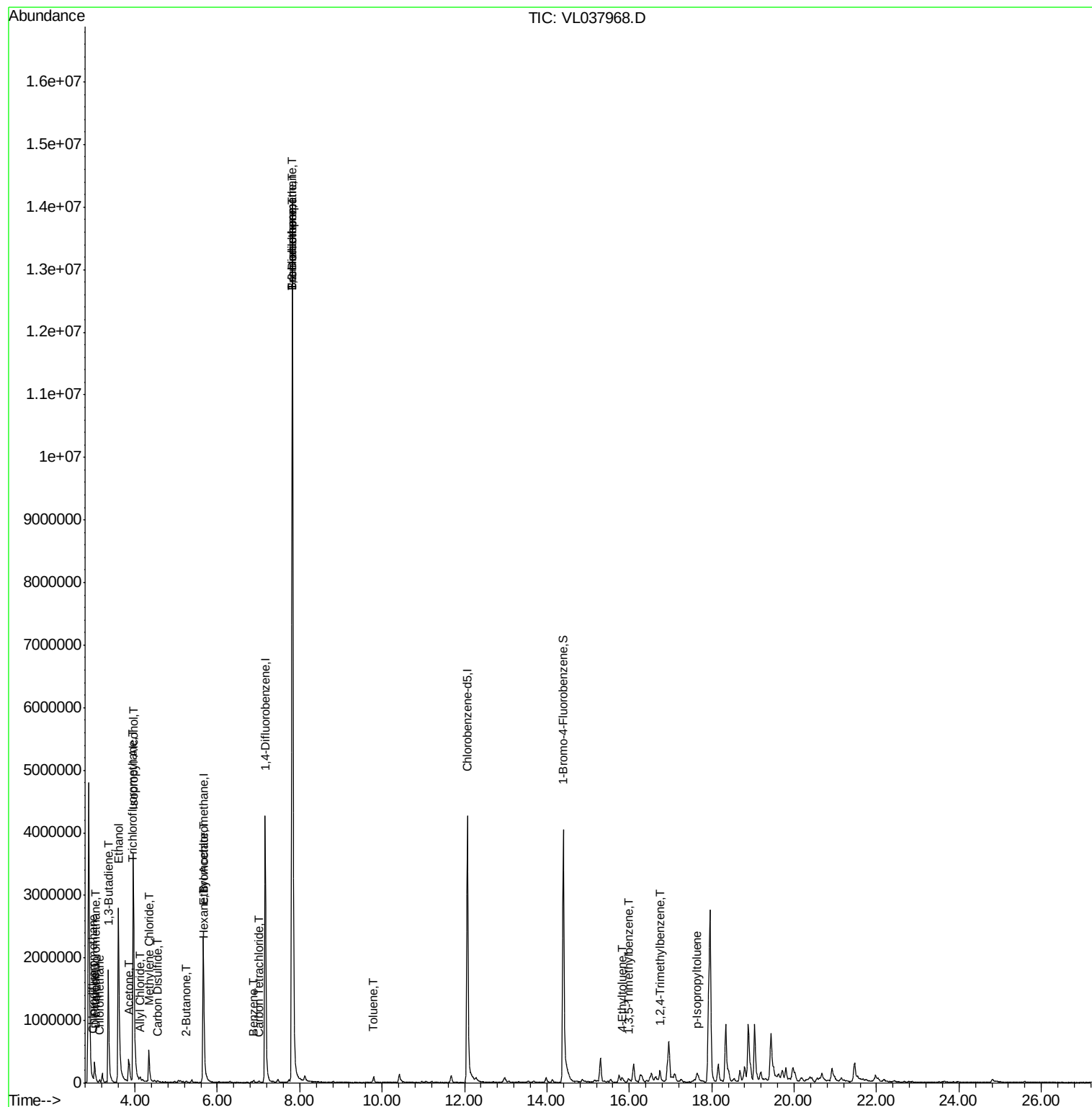
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.05	85	45189	0.251	ppbv	94
3) Chlorodifluoromethane	2.98	51	88522	0.372	ppbv #	85
4) Chloromethane	3.14	50	44893	0.496	ppbv	93
9) Propene	3.02	41	83604	0.979	ppbv #	70
11) Trichlorofluoromethane	3.94	101	19727	0.110	ppbv	93
13) Ethanol	3.60	45	3900978	452.843	ppbv	89
15) Acetone	3.85	43	460198	4.353	ppbv	98
16) 1,3-Butadiene	3.35	39	240975	2.893	ppbv #	14
19) Isopropyl Alcohol	3.96	45	5000359	73.966	ppbv #	91
20) Methylene Chloride	4.34	84	195876	3.375	ppbv	94
21) Allyl Chloride	4.13	41	6363	0.065	ppbv #	22
25) Ethyl Acetate	5.67	43	37856	0.121	ppbv #	86
26) Hexane	5.68	57	61138	0.411	ppbv #	58
27) Carbon Disulfide	4.55	76	15741	0.107	ppbv #	60
34) 2-Butanone	5.24	43	19147	0.140	ppbv #	45
35) Carbon Tetrachloride	7.00	117	6675	0.030	ppbv	86
36) Benzene	6.88	78	18735	0.063	ppbv #	94
38) Trichloroethene	7.82	130	5664156	45.544	ppbv	97
39) 1,2-Dichloropropane	7.82	63	17203	0.153	ppbv #	1
42) Bromodichloromethane	7.82	83	48140	0.224	ppbv	91
53) Toluene	9.79	91	39507	0.123	ppbv #	20
69) p-Isopropyltoluene	17.64	119	45727	0.106	ppbv #	57
72) 4-Ethyltoluene	15.82	105	20358	0.057	ppbv #	46
73) 1,3,5-Trimethylbenzene	15.97	105	10387	0.031	ppbv	95
74) 1,2,4-Trimethylbenzene	16.75	105	122540	0.349	ppbv #	69

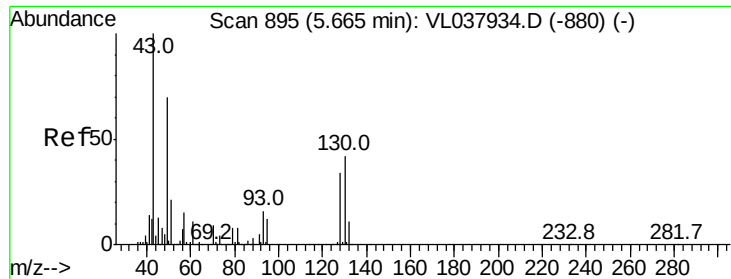
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: IA-1DUP

Acq: 2 Nov 2021 15:13

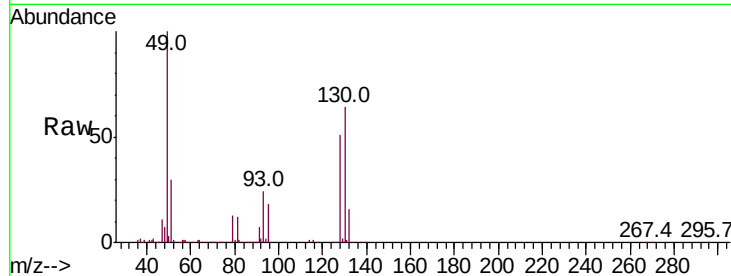
Tot Ion: 49 Resp: 1279338

Ion Ratio Lower Upper

49 100

128 52.8 27.0 81.0

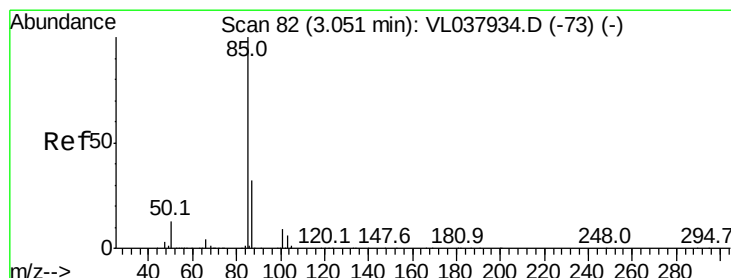
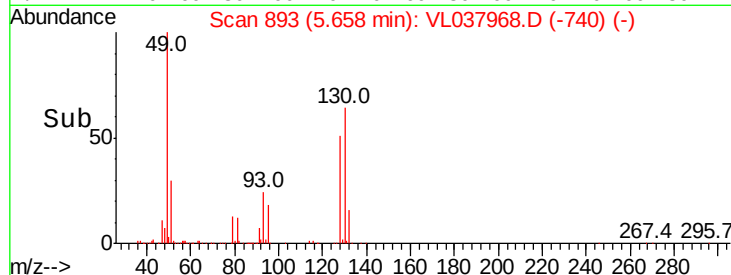
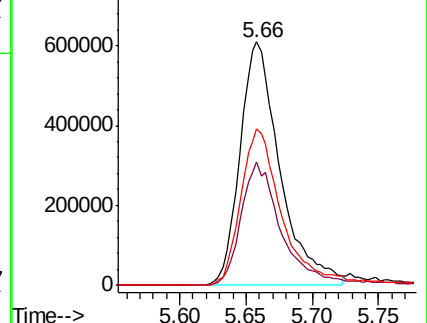
130 68.1 33.4 100.2



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: 0.251 ppbv

RT: 3.05 min Scan# 82

Delta R.T. -0.00 min

Lab File: VL037968.D

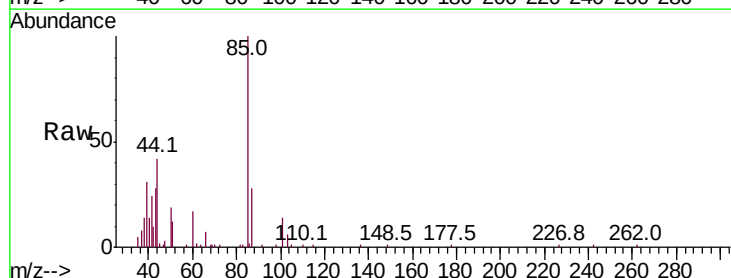
Acq: 2 Nov 2021 15:13

Tgt Ion: 85 Resp: 45189

Ion Ratio Lower Upper

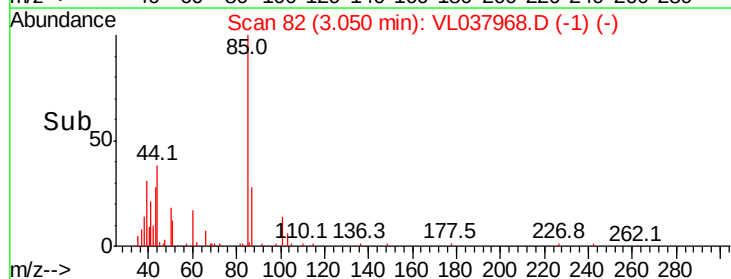
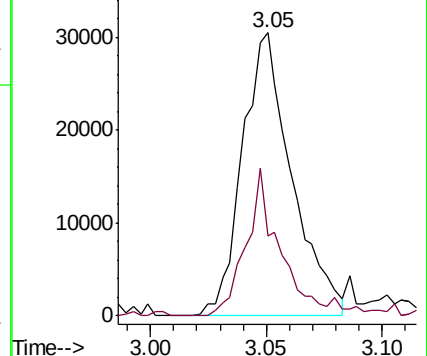
85 100

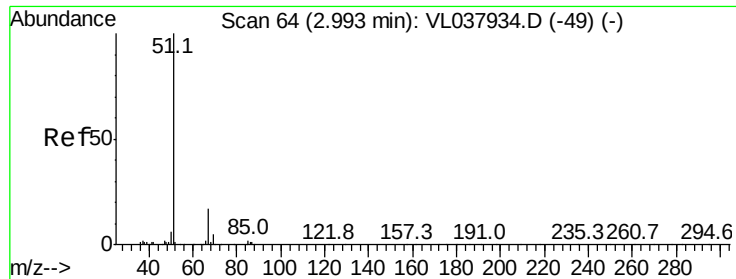
87 28.1 25.3 37.9



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.372 ppbv

RT: 2.98 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: IA-1DUP

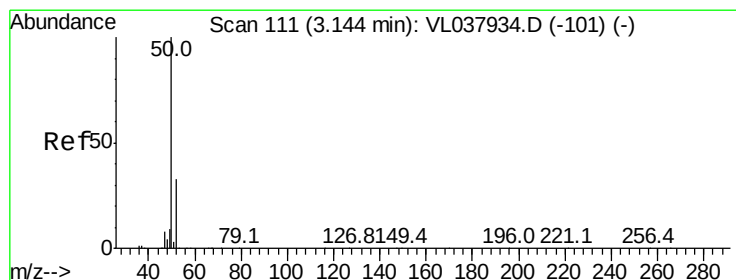
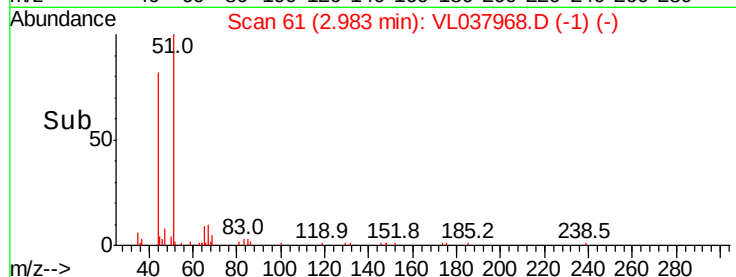
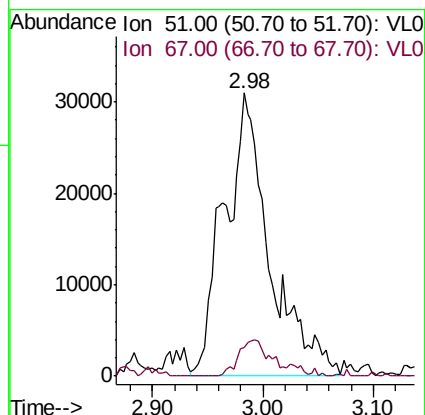
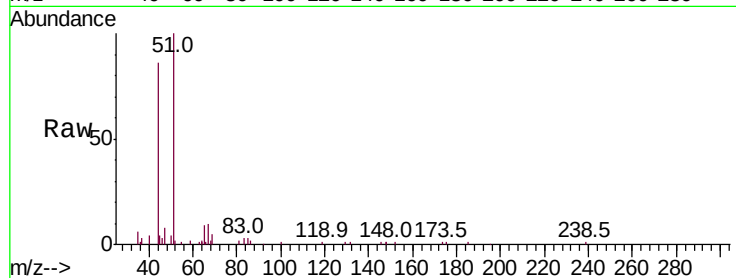
Acq: 2 Nov 2021 15:13

Tot Ion: 51 Resp: 88522

Ion Ratio Lower Upper

51 100

67 10.2 13.4 20.0#



#4

Chloromethane

Concen: 0.496 ppbv

RT: 3.14 min Scan# 111

Delta R.T. -0.00 min

Lab File: VL037968.D

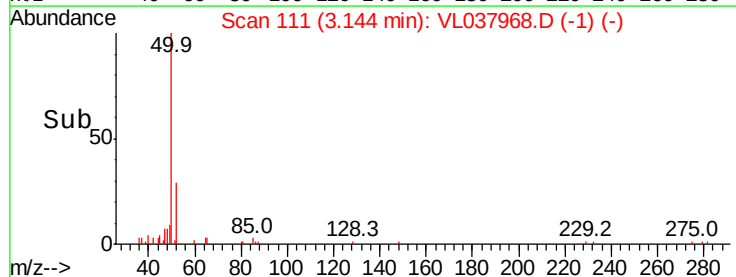
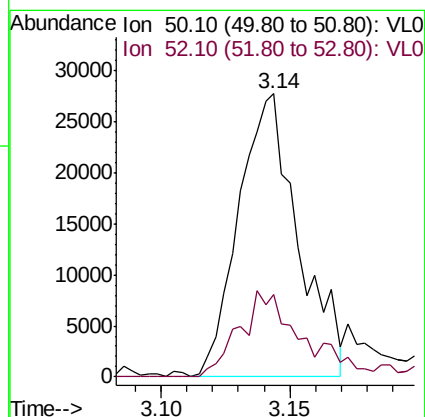
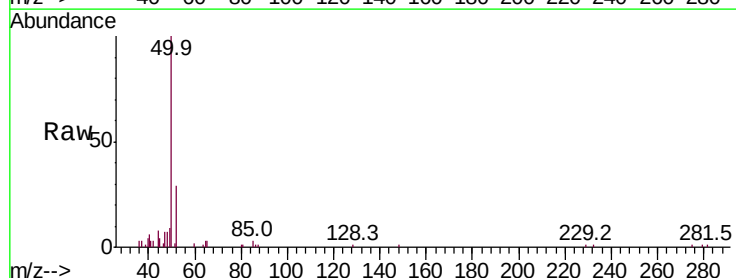
Acq: 2 Nov 2021 15:13

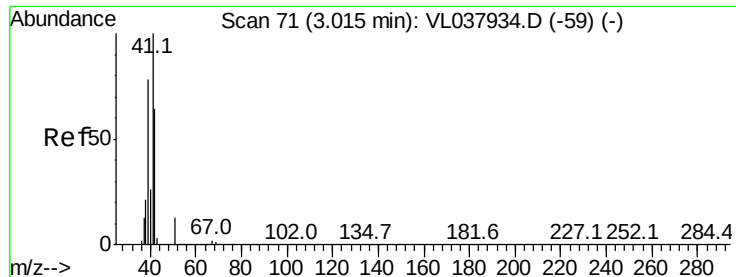
Tgt Ion: 50 Resp: 44893

Ion Ratio Lower Upper

50 100

52 28.9 26.3 39.5





#9

Propene

Concen: 0.979 ppbv

RT: 3.02 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

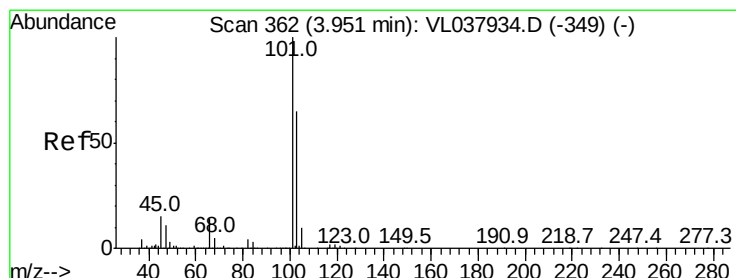
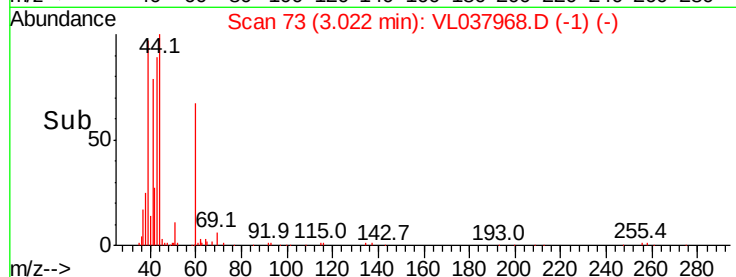
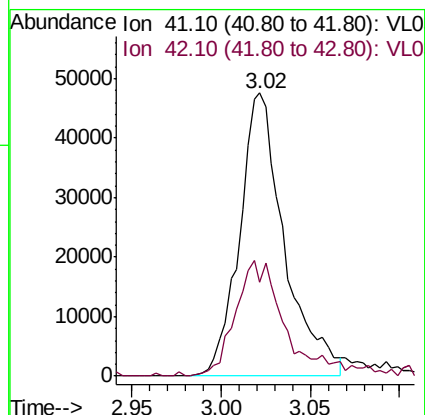
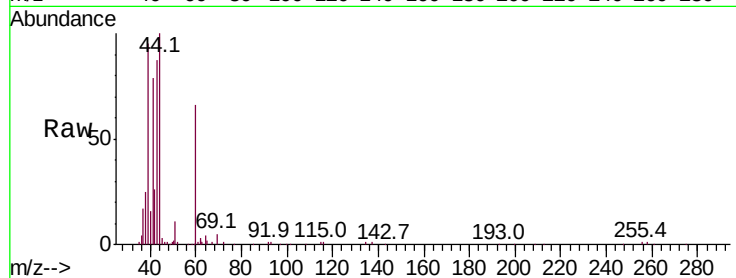
Acq: 2 Nov 2021 15:13

Tot Ion: 41 Resp: 83604

Ion Ratio Lower Upper

41 100

42 47.0 57.6 86.4#



#11

Trichlorofluoromethane

Concen: 0.110 ppbv

RT: 3.94 min Scan# 359

Delta R.T. -0.01 min

Lab File: VL037968.D

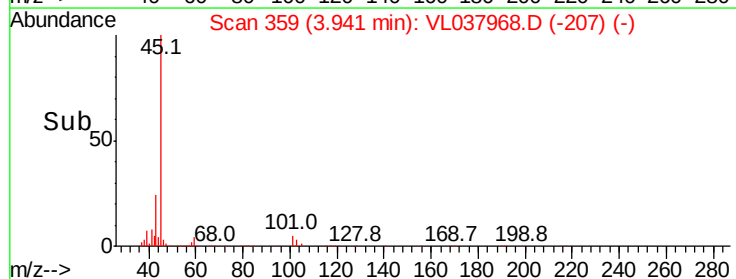
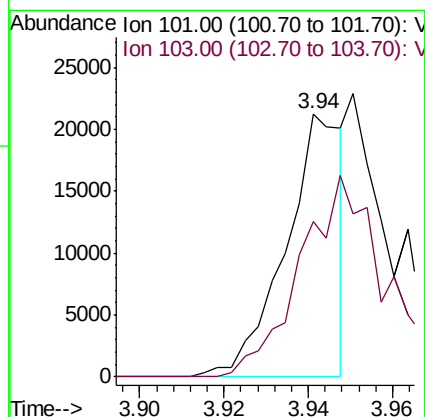
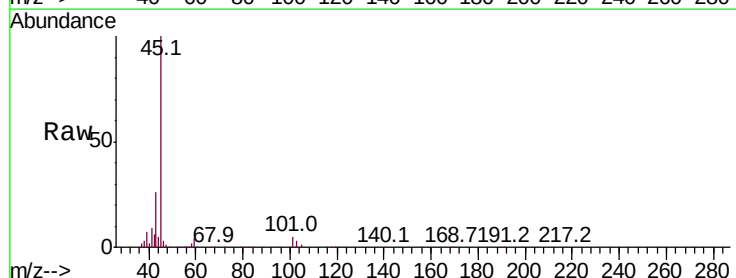
Acq: 2 Nov 2021 15:13

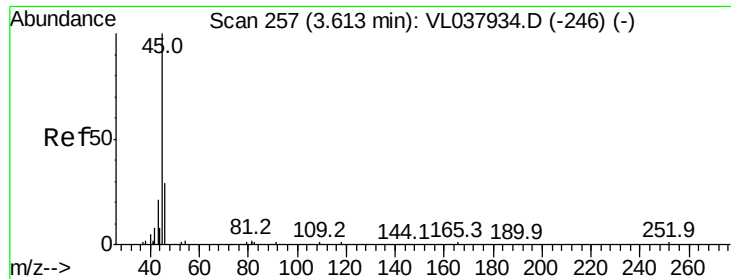
Tgt Ion: 101 Resp: 19727

Ion Ratio Lower Upper

101 100

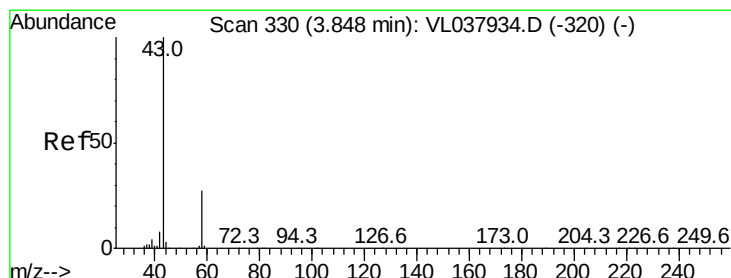
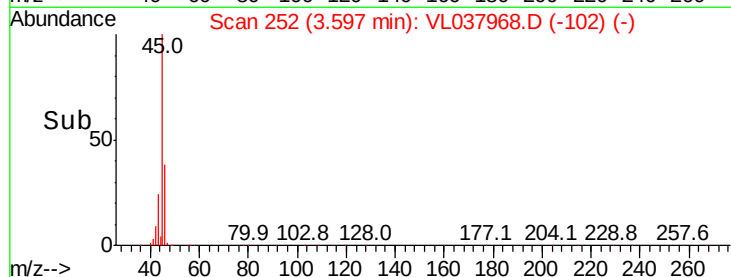
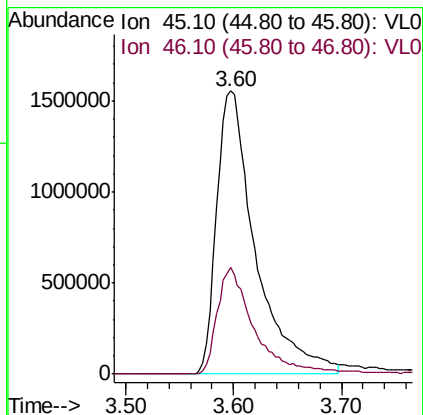
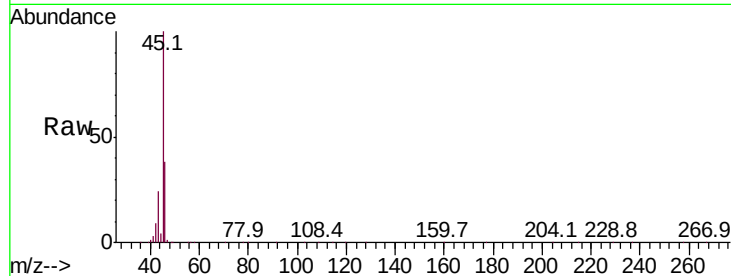
103 59.2 52.0 78.0





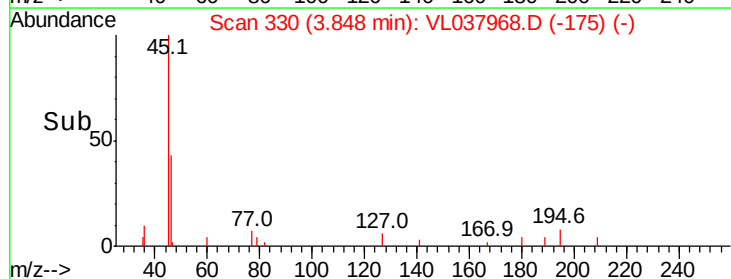
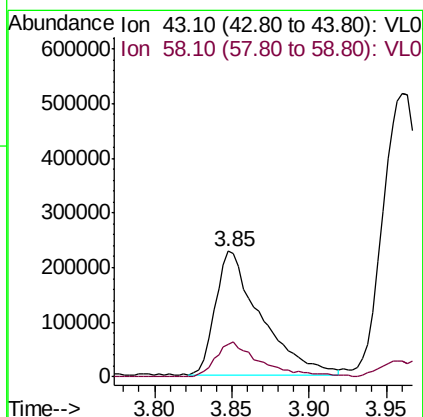
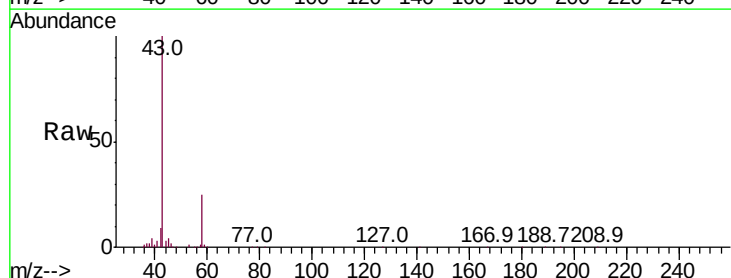
#13
 Ethanol
 Concen: 452.843 ppbv
 RT: 3.60
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 2 Nov 2021 15:13

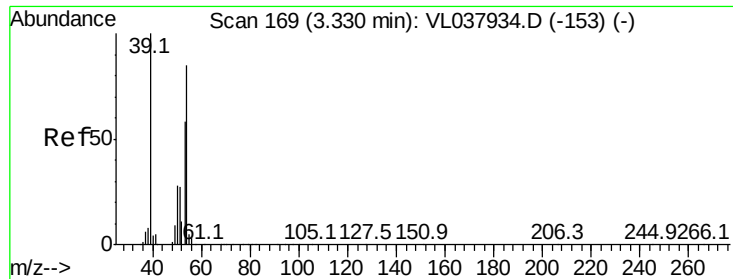
Tot Ion: 45 Resp: 3900978
 Ion Ratio Lower Upper
 45 100
 46 36.5 17.4 69.8



#15
 Acetone
 Concen: 4.353 ppbv
 RT: 3.85 min Scan# 330
 Delta R.T. -0.00 min
 Lab File: VL037968.D
 Acq: 2 Nov 2021 15:13

Tgt Ion: 43 Resp: 460198
 Ion Ratio Lower Upper
 43 100
 58 28.2 23.3 34.9





#16

1,3-Butadiene

Concen: 2.893 ppbv

RT: 3.35

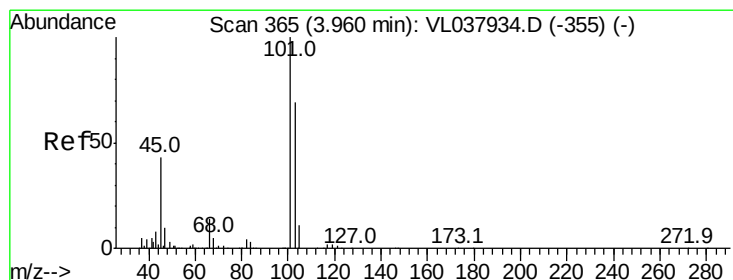
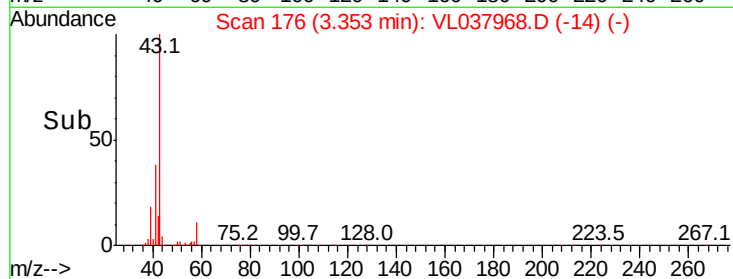
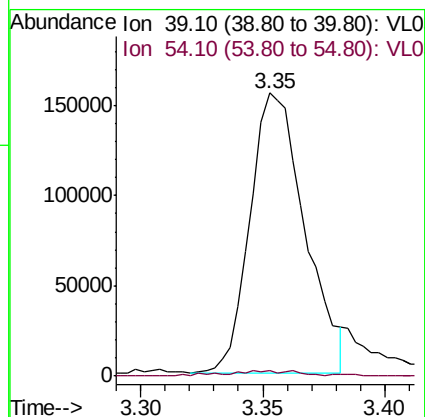
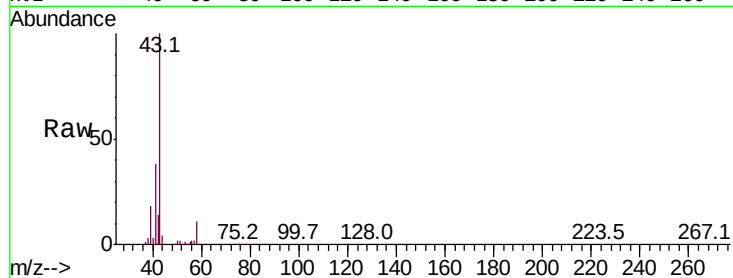
Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 2 Nov 2021 15:13

Tot Ion: 39 Resp: 240975

Ion	Ratio	Lower	Upper
39	100		
54	3.2	62.6	93.8#



#19

Isopropyl Alcohol

Concen: 73.966 ppbv

RT: 3.96 min Scan# 365

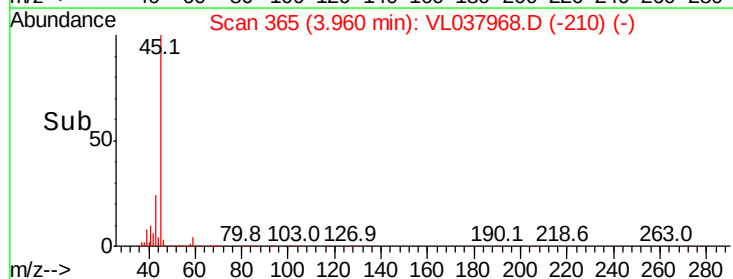
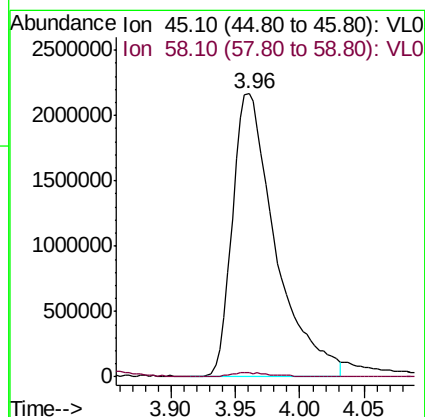
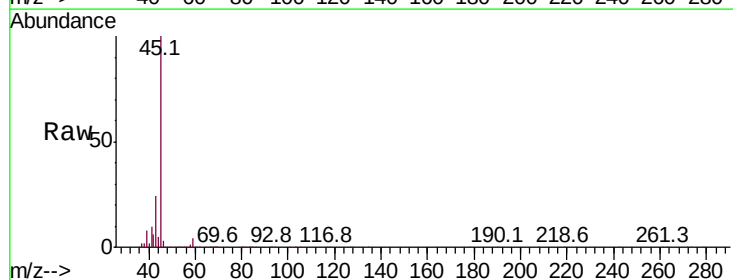
Delta R.T. -0.00 min

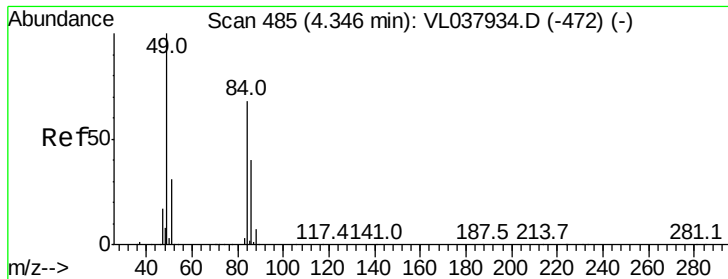
Lab File: VL037968.D

Acq: 2 Nov 2021 15:13

Tgt Ion: 45 Resp: 5000359

Ion	Ratio	Lower	Upper
45	100		
58	1.9	4.0	6.0#





#20

Methylene Chloride

Concen: 3.375 ppbv

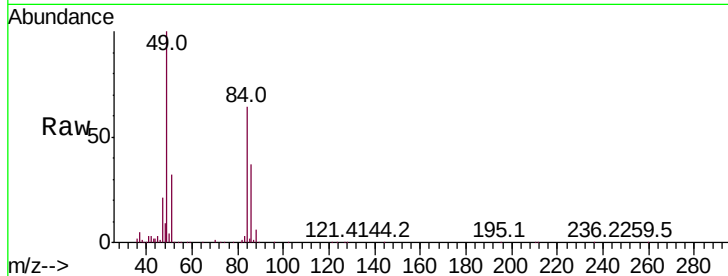
RT: 4.34

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 2 Nov 2021 15:13

Tot Ion:	84	Resp:	195876
Ion	Ratio	Lower	Upper
84	100		
49	156.3	117.5	176.3
51	49.5	35.9	53.9
86	57.2	47.3	70.9



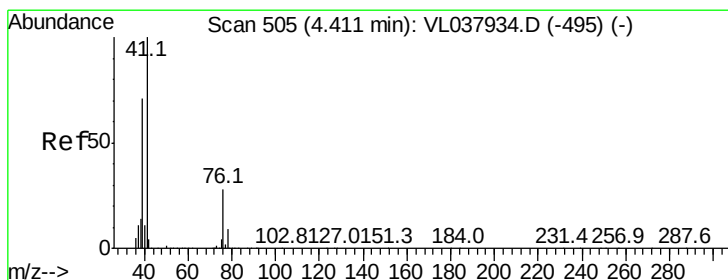
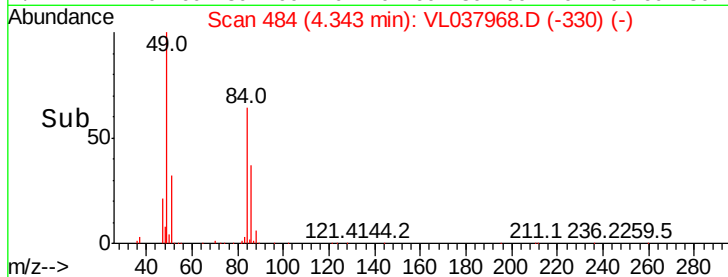
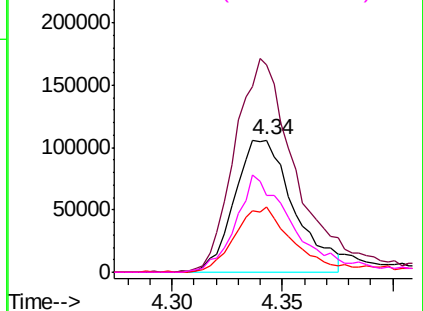
Abundance

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: 0.065 ppbv

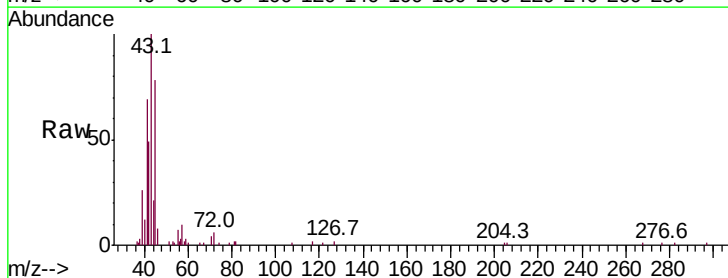
RT: 4.13 min Scan# 418

Delta R.T. -0.28 min

Lab File: VL037968.D

Acq: 2 Nov 2021 15:13

Tgt Ion:	41	Resp:	6363
Ion	Ratio	Lower	Upper
41	100		
76	0.0	23.6	35.4#
39	0.0	59.7	89.5#

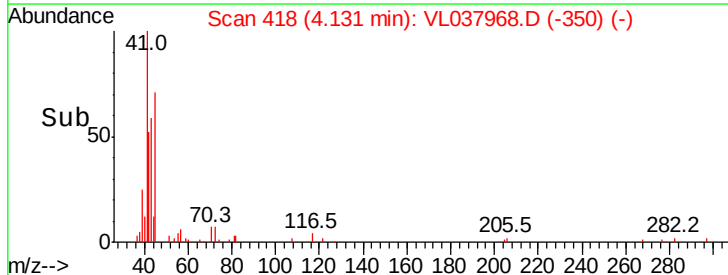
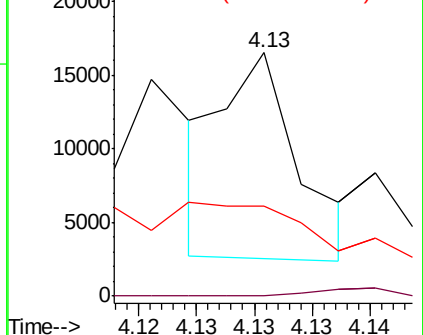


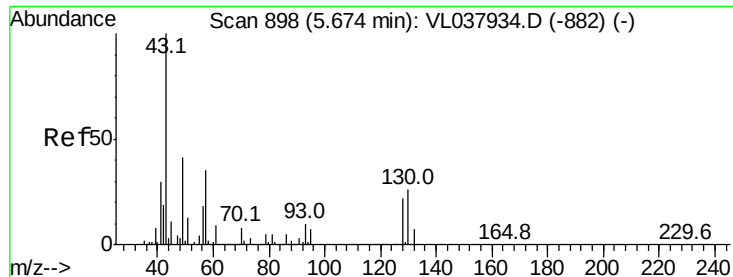
Abundance

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





#25

Ethyl Acetate

Concen: 0.121 ppbv

RT: 5.67

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 2 Nov 2021 15:13

Tot Ion: 43 Resp: 37856

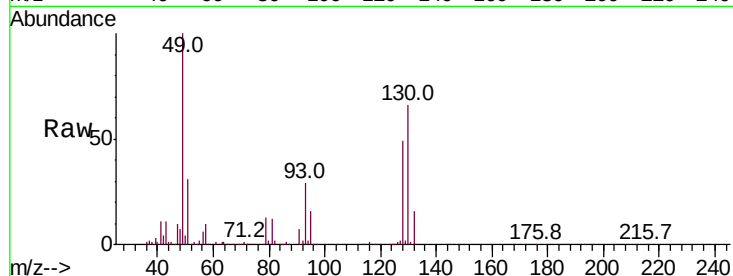
Ion Ratio Lower Upper

43 100

45 0.0 8.1 12.1#

61 11.9 8.1 12.1

70 10.3 5.8 8.6#



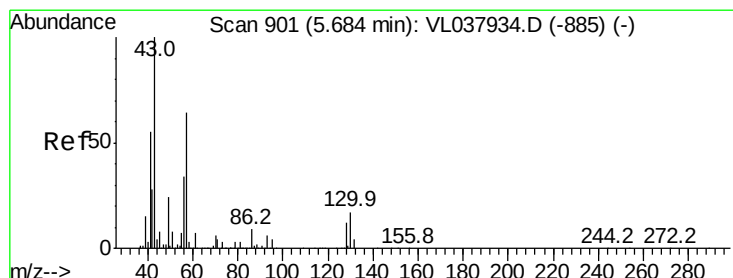
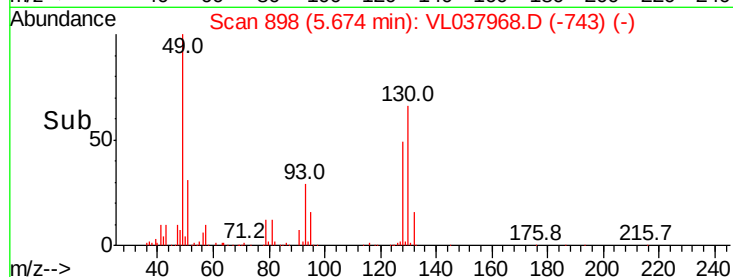
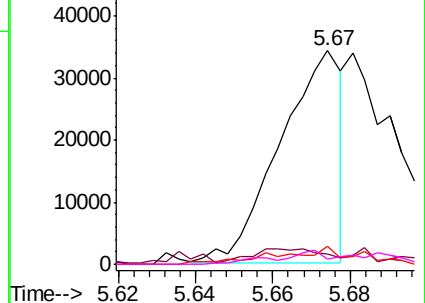
Abundance

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: 0.411 ppbv

RT: 5.68 min Scan# 900

Delta R.T. -0.00 min

Lab File: VL037968.D

Acq: 2 Nov 2021 15:13

Tgt Ion: 57 Resp: 61138

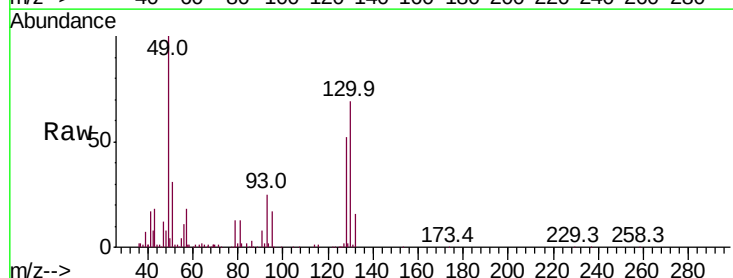
Ion Ratio Lower Upper

57 100

41 116.4 71.0 106.6#

43 129.2 173.0 259.6#

56 64.6 43.6 65.4



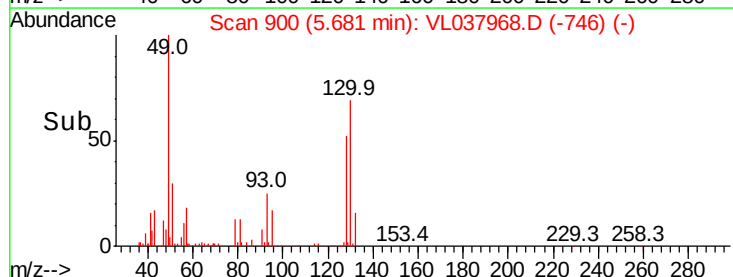
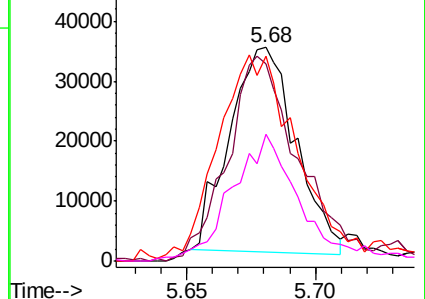
Abundance

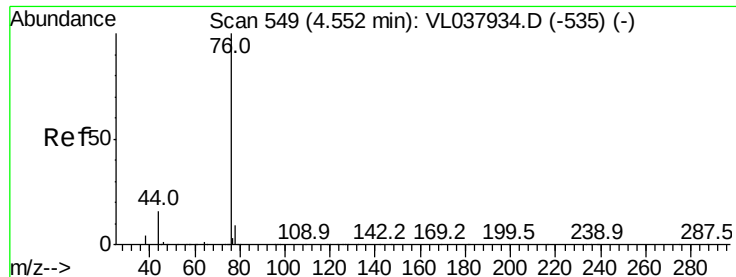
Ion 57.10 (56.80 to 57.80): VL0

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: 0.107 ppbv

RT: 4.55 Instrument: MSVOA_1

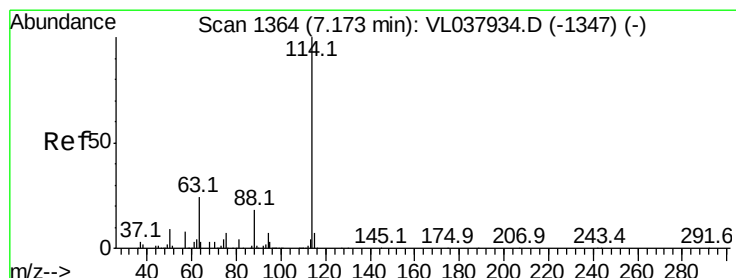
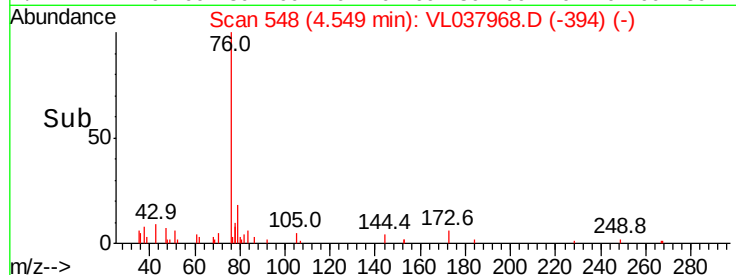
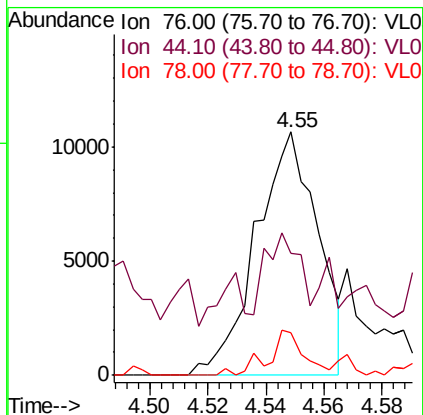
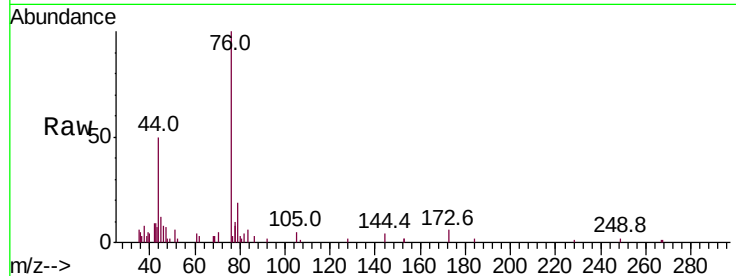
Delta R.T.

Lab File: ClientSampleId:

Acq: 2 Nov 2021 15:13

Tot Ion: 76 Resp: 15741

Ion	Ratio	Lower	Upper
76	100		
44	39.1	13.2	19.8#
78	15.4	7.2	10.8#



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 min Scan# 1361

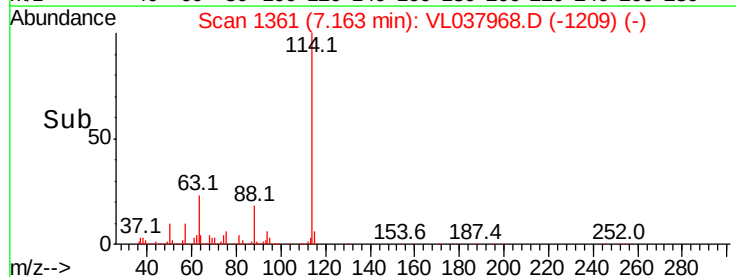
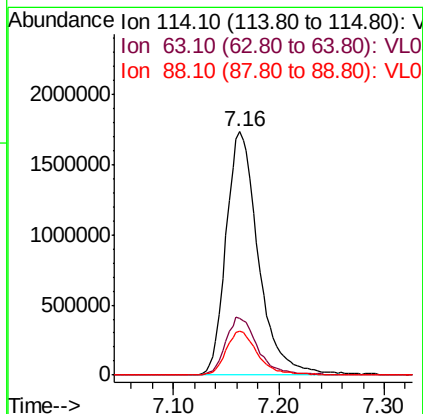
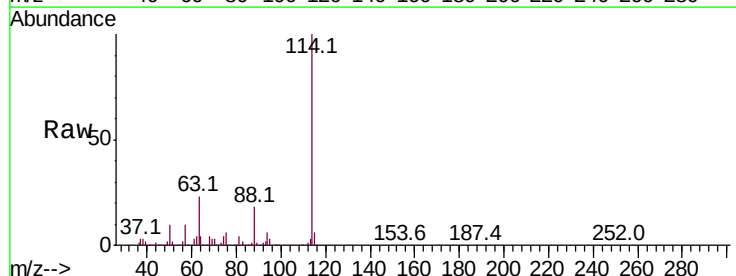
Delta R.T. -0.01 min

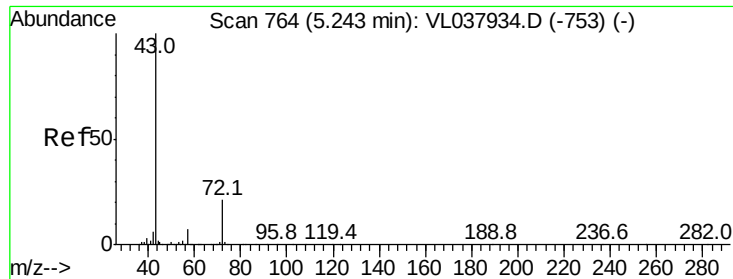
Lab File: VL037968.D

Acq: 2 Nov 2021 15:13

Tgt Ion: 114 Resp: 3679501

Ion	Ratio	Lower	Upper
114	100		
63	23.8	19.4	29.0
88	17.8	14.2	21.4





#34

2-Butanone

Concen: 0.140 ppbv

RT: 5.24

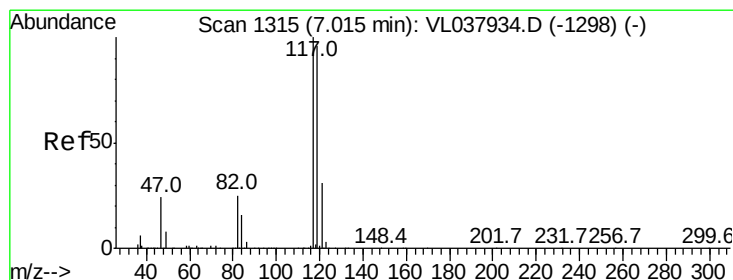
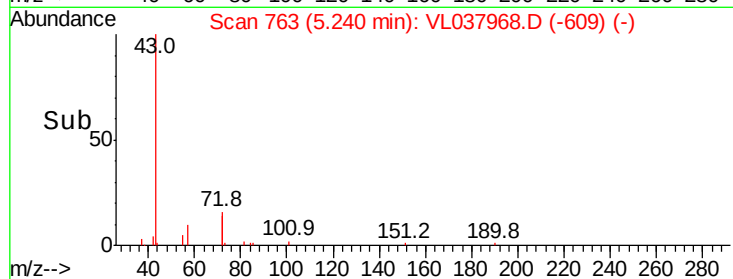
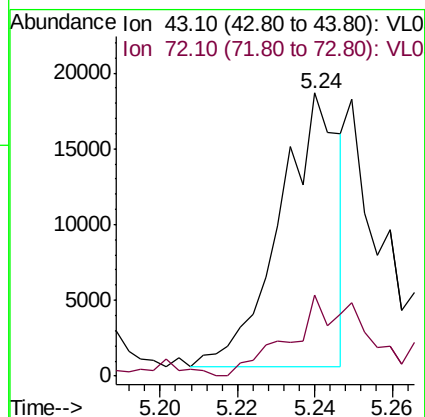
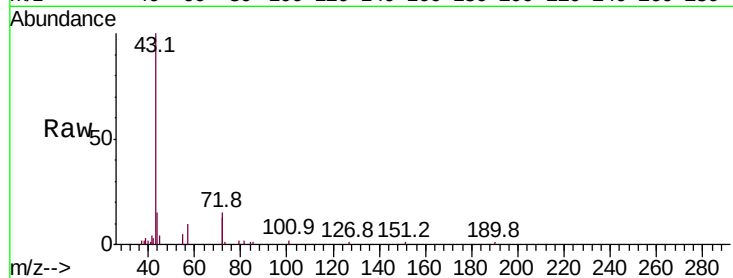
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 2 Nov 2021 15:13

Tot Ion: 43 Resp: 19147

Ion	Ratio	Lower	Upper
43	100		
72	49.4	18.3	27.5#



#35

Carbon Tetrachloride

Concen: 0.030 ppbv

RT: 7.00 min Scan# 1311

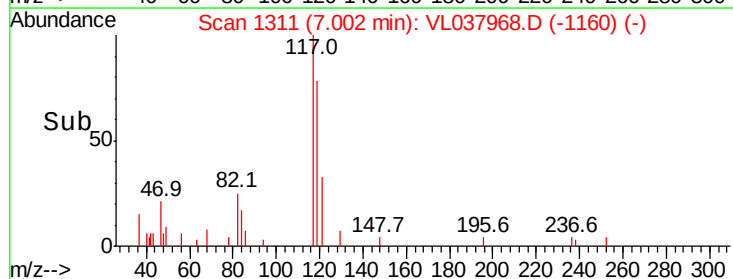
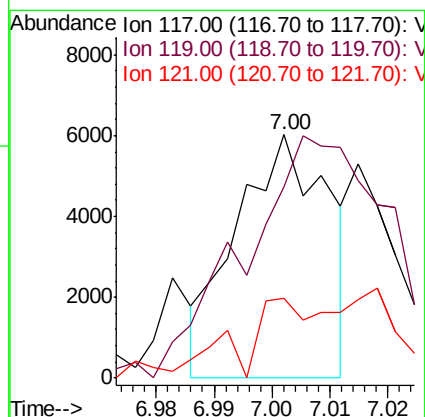
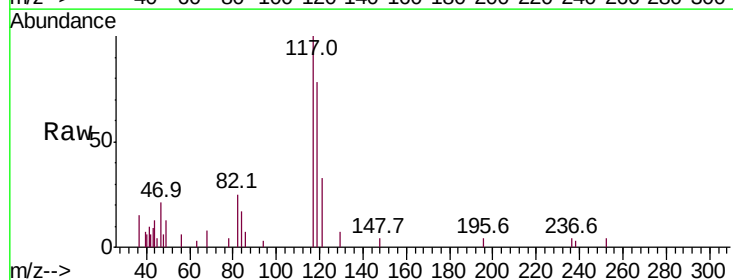
Delta R.T. -0.01 min

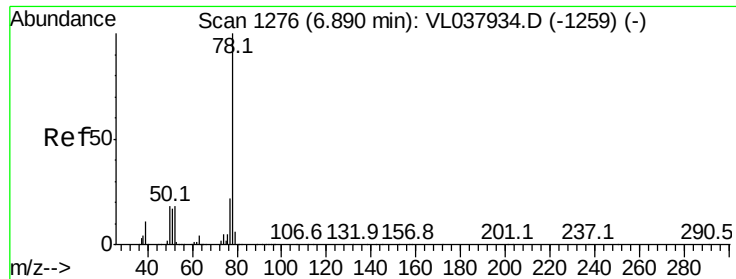
Lab File: VL037968.D

Acq: 2 Nov 2021 15:13

Tgt Ion: 117 Resp: 6675

Ion	Ratio	Lower	Upper
117	100		
119	80.7	76.6	114.8
121	35.9	25.1	37.7





#36

Benzene

Concen: 0.063 ppbv

RT: 6.88 Instrument:

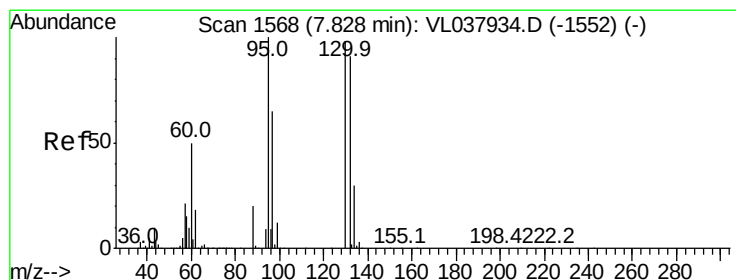
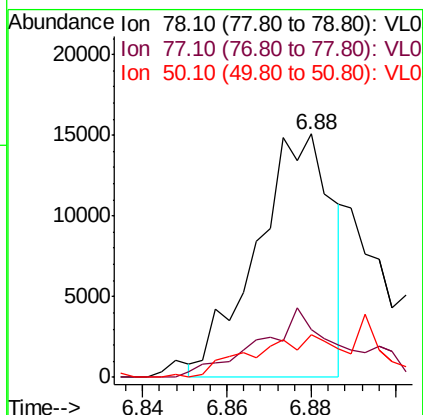
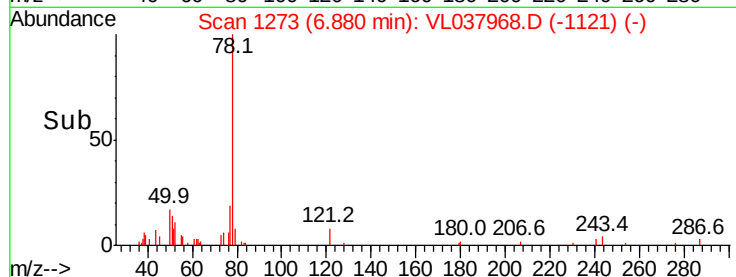
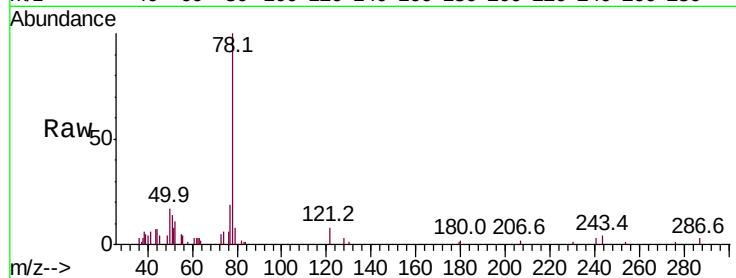
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 2 Nov 2021 15:13

Tot Ion: 78 Resp: 18735

Ion	Ratio	Lower	Upper
78	100		
77	17.9	17.9	26.9#
50	18.3	14.4	21.6



#38

Trichloroethene

Concen: 45.544 ppbv

RT: 7.82 min Scan# 1566

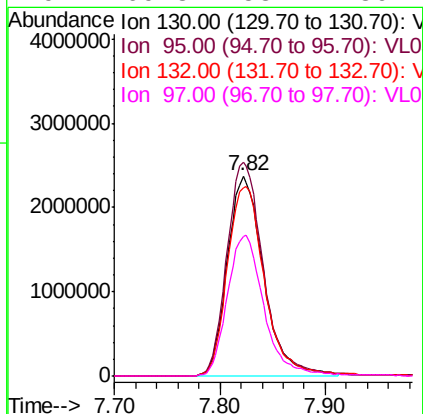
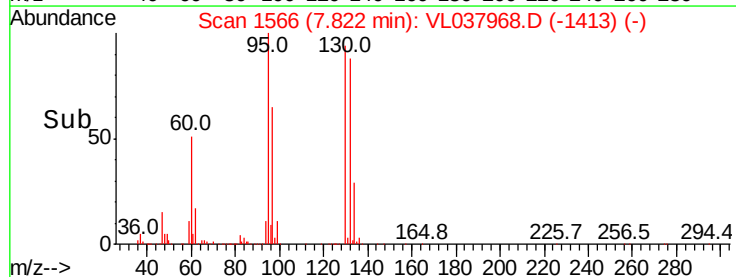
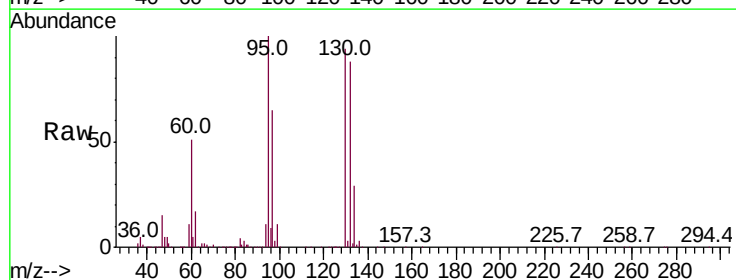
Delta R.T. -0.01 min

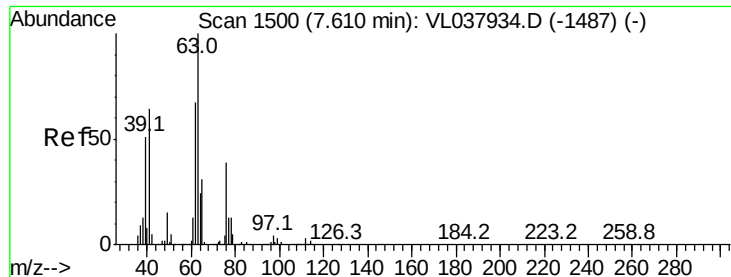
Lab File: VL037968.D

Acq: 2 Nov 2021 15:13

Tgt Ion: 130 Resp: 5664156

Ion	Ratio	Lower	Upper
130	100		
95	106.7	81.8	122.8
132	94.1	74.2	111.2
97	69.8	53.4	80.2





#39

1,2-Dichloropropane

Concen: 0.153 ppbv

RT: 7.82 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 2 Nov 2021 15:13

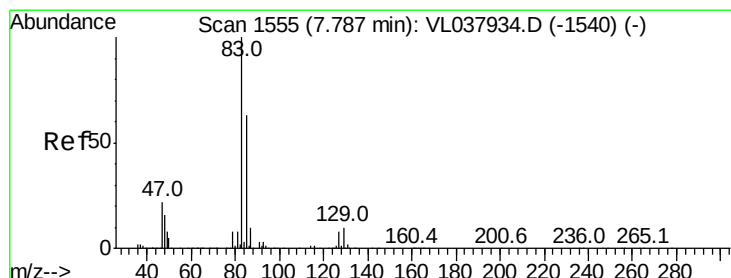
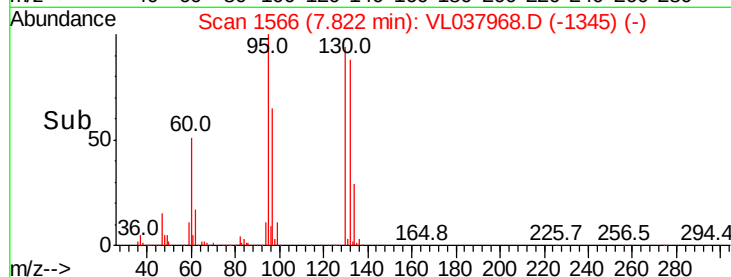
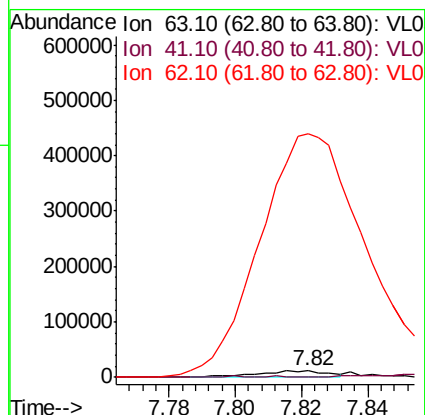
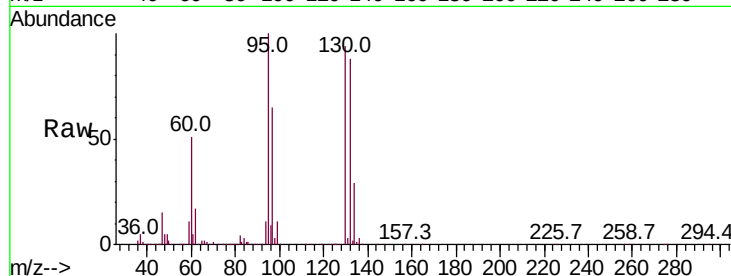
Tot Ion: 63 Resp: 17203

Ion Ratio Lower Upper

63 100

41 6.2 51.6 77.4#

62 3632.5 53.5 80.3#



#42

Bromodichloromethane

Concen: 0.224 ppbv

RT: 7.82 min Scan# 1566

Delta R.T. 0.04 min

Lab File: VL037968.D

Acq: 2 Nov 2021 15:13

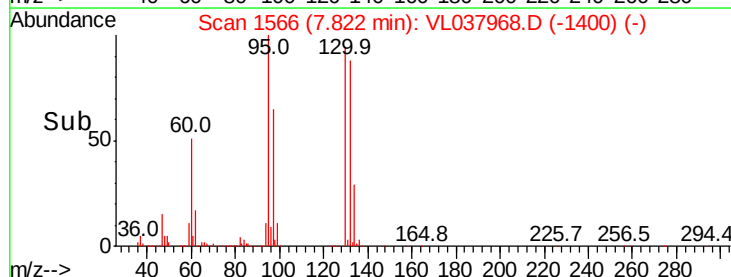
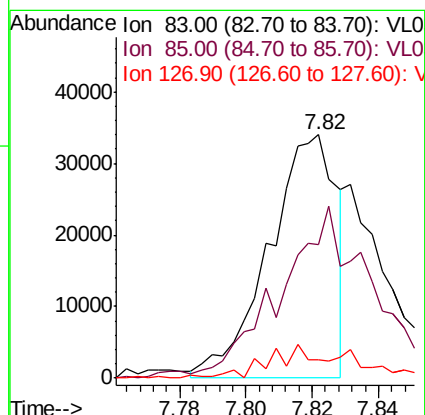
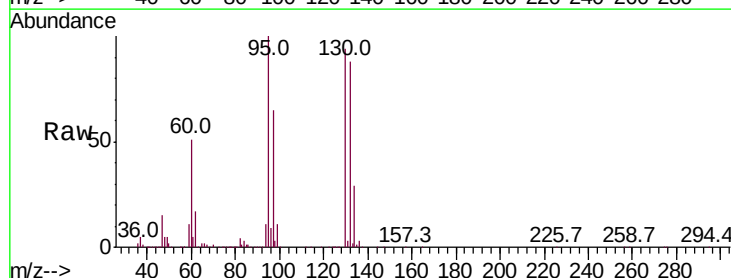
Tgt Ion: 83 Resp: 48140

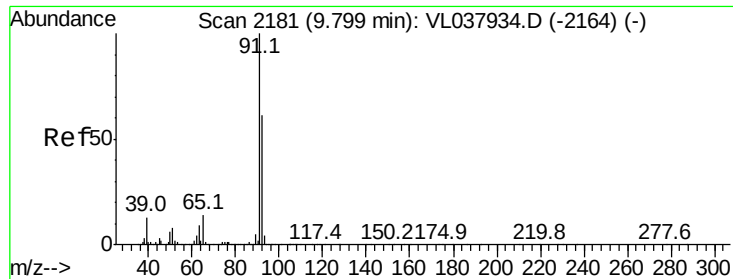
Ion Ratio Lower Upper

83 100

85 55.0 50.1 75.1

127 6.2 6.1 9.1





#53

Toluene

Concen: 0.123 ppbv

RT: 9.79 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

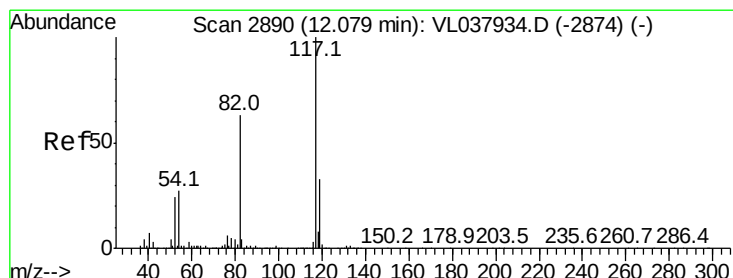
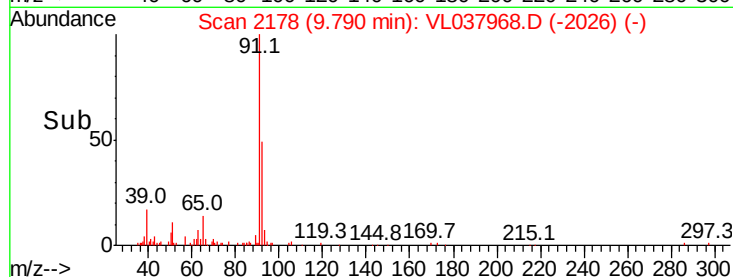
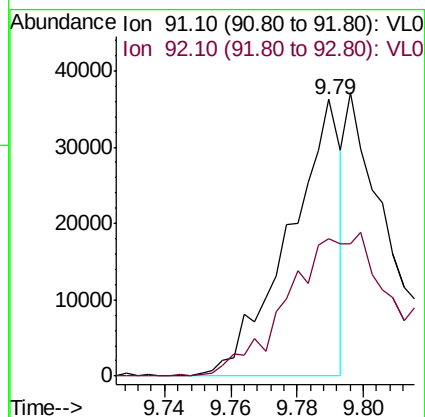
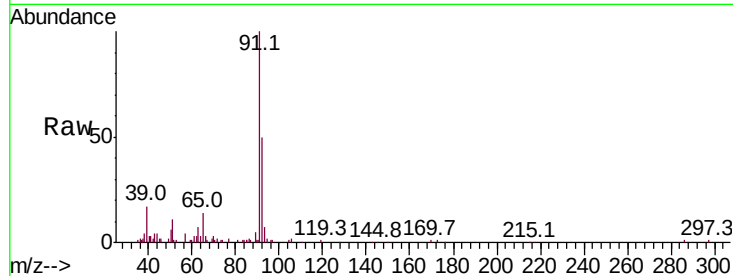
Acq: 2 Nov 2021 15:13

Tot Ion: 91 Resp: 39507

Ion Ratio Lower Upper

91 100

92 0.0 48.2 72.4#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2886

Delta R.T. -0.01 min

Lab File: VL037968.D

Acq: 2 Nov 2021 15:13

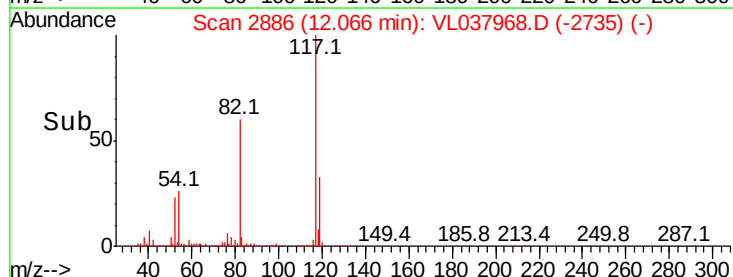
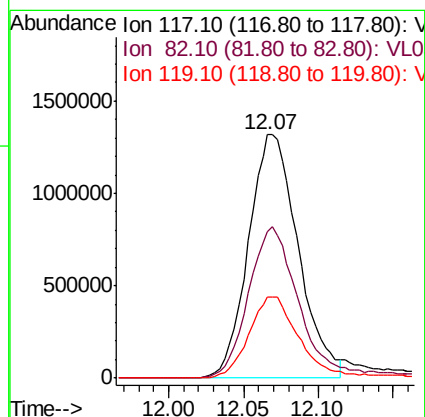
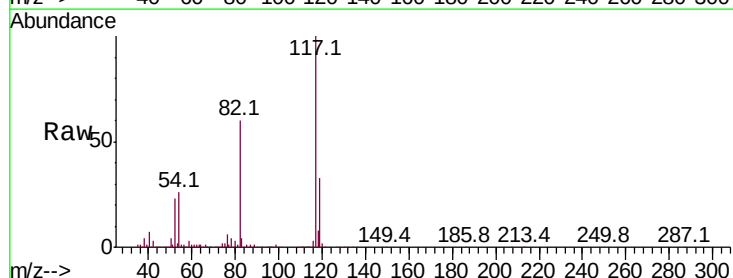
Tgt Ion: 117 Resp: 3044308

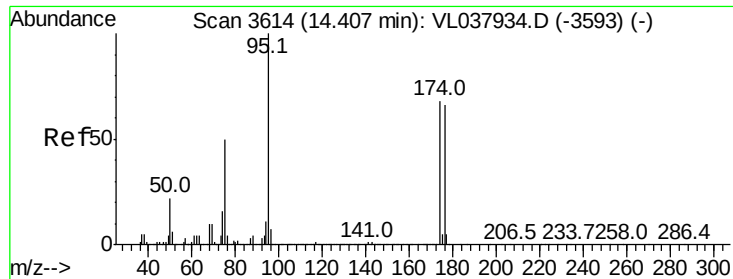
Ion Ratio Lower Upper

117 100

82 66.0 51.0 76.6

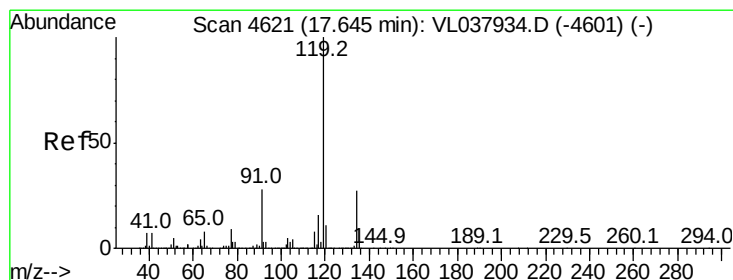
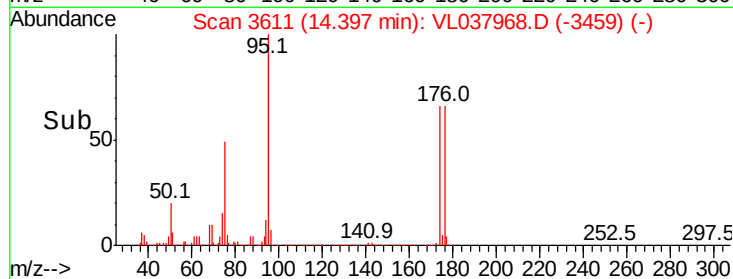
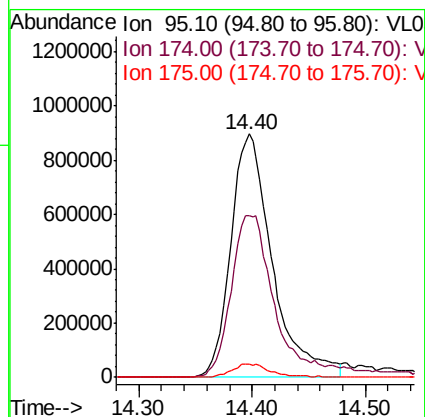
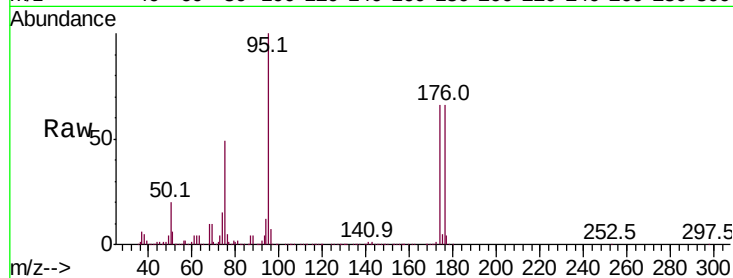
119 36.1 26.9 40.3





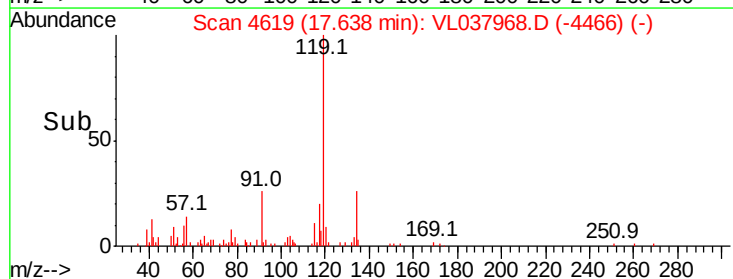
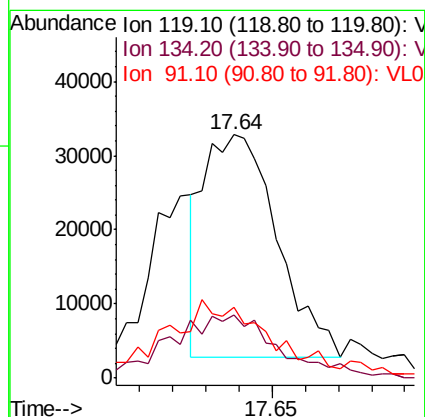
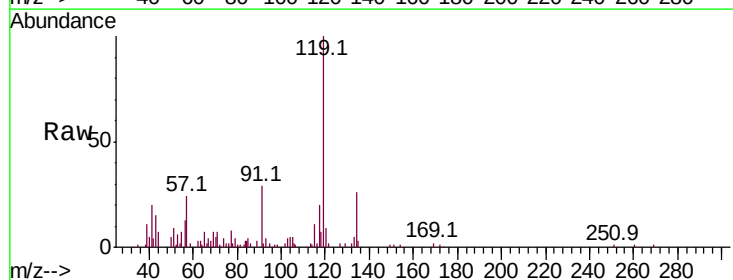
#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.274 ppbv
 RT: 14.40 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 2 Nov 2021 15:13

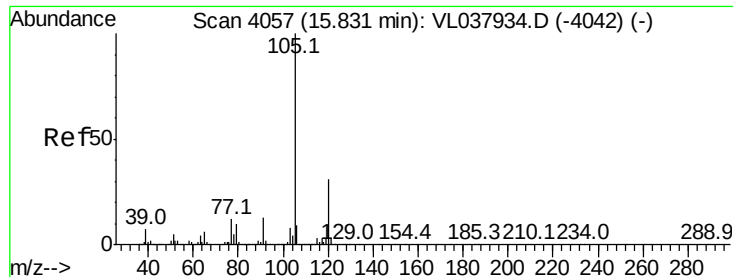
Tot Ion: 95 Resp: 2273618
 Ion Ratio Lower Upper
 95 100
 174 75.3 58.3 87.5
 175 5.5 4.6 6.8



#69
 p-Isopropyltoluene
 Concen: 0.106 ppbv
 RT: 17.64 min Scan# 4619
 Delta R.T. -0.01 min
 Lab File: VL037968.D
 Acq: 2 Nov 2021 15:13

Tgt Ion: 119 Resp: 45727
 Ion Ratio Lower Upper
 119 100
 134 46.1 21.0 31.4#
 91 52.0 21.8 32.8#





#72

4-Ethyltoluene

Concen: 0.057 ppbv

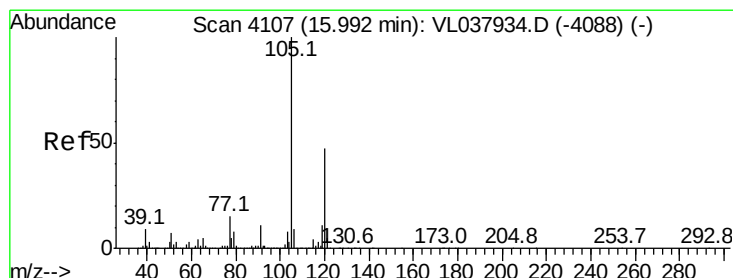
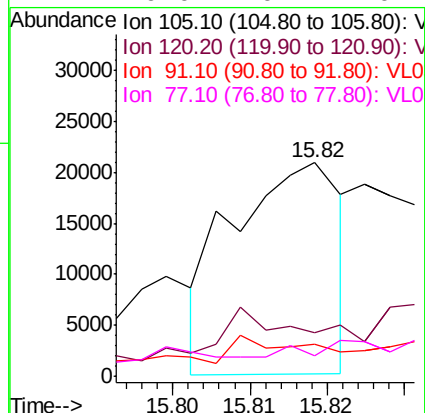
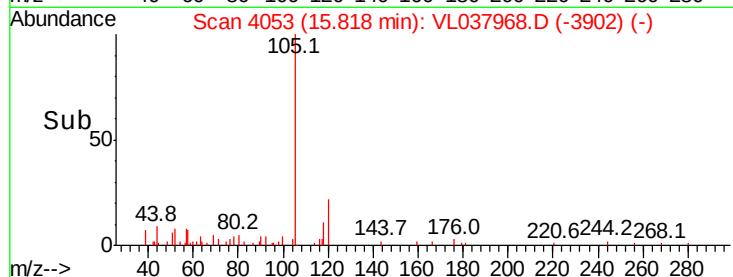
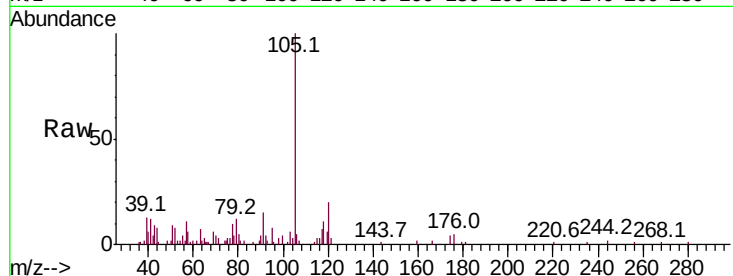
RT: 15.82

Delta R.T. MSVOA_1

Lab File: ClientSampleId :

Acq: 2 Nov 2021 15:13

Tot Ion:	105	Resp:	20358
Ion	Ratio	Lower	Upper
105	100		
120	0.0	25.3	37.9#
91	39.9	9.9	14.9#
77	0.0	10.7	16.1#



#73

1,3,5-Trimethylbenzene

Concen: 0.031 ppbv

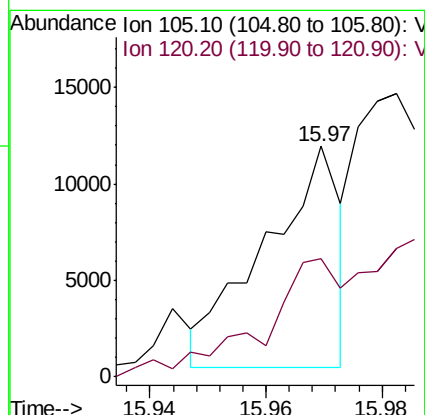
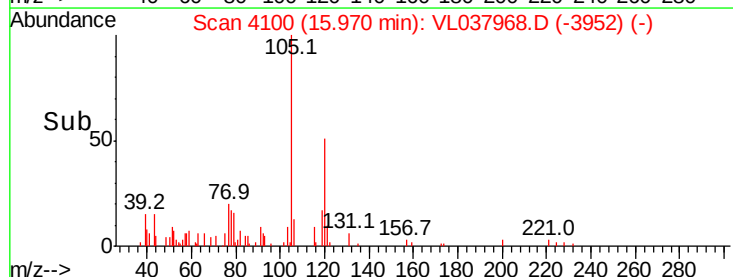
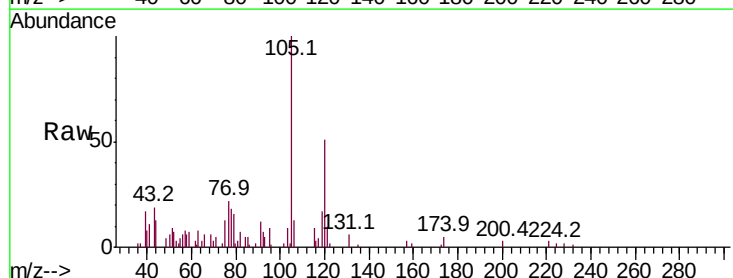
RT: 15.97 min Scan# 4100

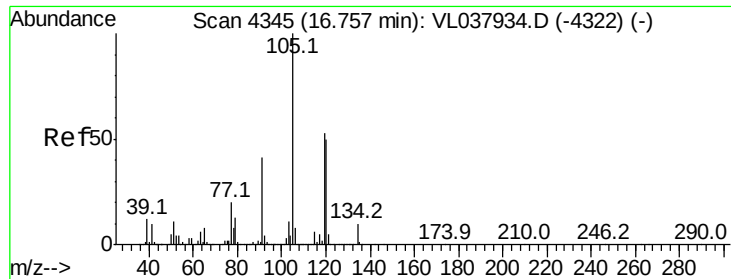
Delta R.T. -0.02 min

Lab File: VL037968.D

Acq: 2 Nov 2021 15:13

Tgt Ion:	105	Resp:	10387
Ion	Ratio	Lower	Upper
105	100		
120	50.8	37.9	56.9





#74
 1,2,4-Trimethylbenzene
 Concen: 0.349 ppbv
 RT: 16.75
 Delta R.T: MSVOA_L
 Lab File: ClientSampleId :
 Acq: 2 Nov 2021 15:15

Tot Ion:	105	Resp:	122540
Ion Ratio	Lower	Upper	
105	100		
120	32.3	40.0	60.0#
91	12.9	32.6	49.0#
77	11.2	15.8	23.8#

