

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL110121\
 Data File : VL037954.D
 Acq On : 2 Nov 2021 1:32
 Operator : SY/AP
 Sample : M4425-02
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

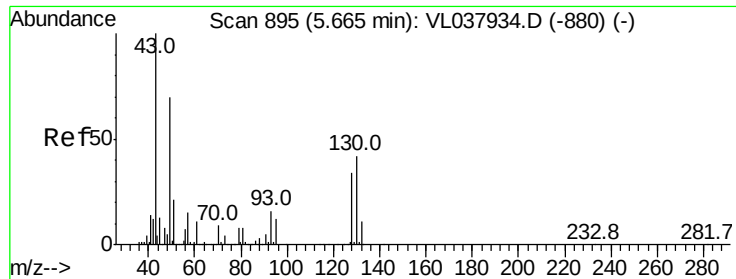
Quant Time: Nov 02 06:08:26 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL110121AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue Nov 02 05:54:07 2021
 QLast Update : Tue Nov 02 05:54:07 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1395512	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	4063639	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.07	117	3442080	10.00	ppbv	-0.01

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.39	95	2508149	10.02	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.20%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	44060	0.224	ppbv	97
3) Chlorodifluoromethane	2.98	51	128876	0.496	ppbv #	82
4) Chloromethane	3.14	50	37920	0.384	ppbv #	85
9) Propene	3.20	41	265043	2.846	ppbv	92
10) Heptane	8.10	43	14345	0.066	ppbv #	28
11) Trichlorofluoromethane	3.94	101	39414	0.201	ppbv	94
12) 1,1,2-Trichlorotrifluoroet	4.47	101	6165	0.040	ppbv #	24
13) Ethanol	3.60	45	386864	41.170	ppbv	92
15) Acetone	3.84	43	916807	7.950	ppbv	98
16) 1,3-Butadiene	3.30	39	21255	0.234	ppbv #	43
19) Isopropyl Alcohol	3.96	45	623185	8.451	ppbv #	92
20) Methylene Chloride	4.34	84	364458	5.757	ppbv	98
23) Vinyl Acetate	5.05	43	46424	0.267	ppbv #	1
25) Ethyl Acetate	5.67	43	229244	0.669	ppbv #	88
26) Hexane	5.68	57	204715	1.261	ppbv #	58
29) Chloroform	5.74	83	64213	0.265	ppbv	85
30) Cyclohexane	7.12	84	14339	0.103	ppbv #	1
34) 2-Butanone	5.24	43	87467	0.581	ppbv	97
36) Benzene	6.87	78	30281	0.092	ppbv	98
39) 1,2-Dichloropropane	7.16	63	946973	7.605	ppbv #	27
44) 2,2,4-Trimethylpentane	7.85	57	33584	0.060	ppbv #	59
52) Tetrachloroethene	11.19	164	3958	0.032	ppbv #	70
53) Toluene	9.78	91	65451	0.184	ppbv #	20
58) Ethyl Benzene	12.69	91	332993	0.791	ppbv	96
59) m/p-Xylene	12.94	91	237769	0.636	ppbv #	27
60) o-Xylene	13.67	91	137353	0.389	ppbv	99
66) Benzyl Chloride	16.95	91	889	0.039	ppbv #	1
73) 1,3,5-Trimethylbenzene	15.98	105	20766	0.055	ppbv #	56
74) 1,2,4-Trimethylbenzene	16.74	105	91955	0.232	ppbv #	72
76) 1,4-Dichlorobenzene	17.11	146	8077	0.034	ppbv #	1

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: IA1

Acq: 2 Nov 2021 1:32

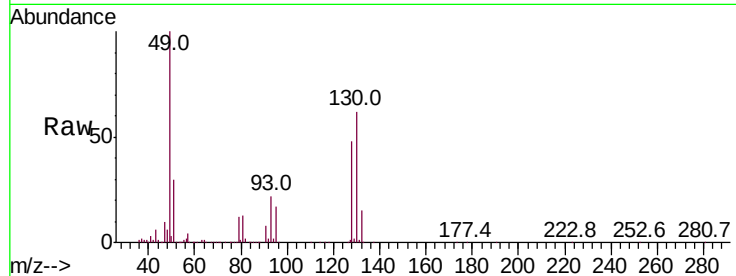
Tot Ion: 49 Resp: 1395512

Ion Ratio Lower Upper

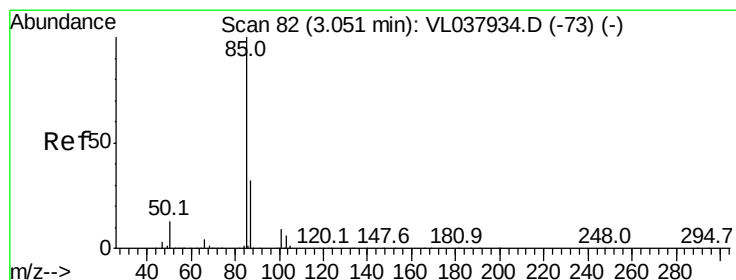
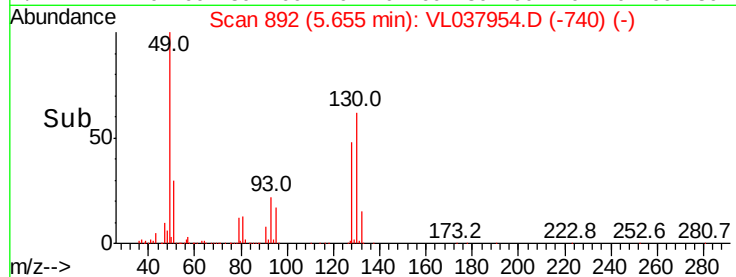
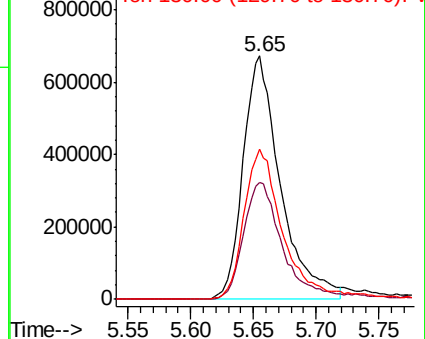
49 100

128 52.0 27.0 81.0

130 65.9 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: 0.224 ppbv

RT: 3.04 min Scan# 80

Delta R.T. -0.01 min

Lab File: VL037954.D

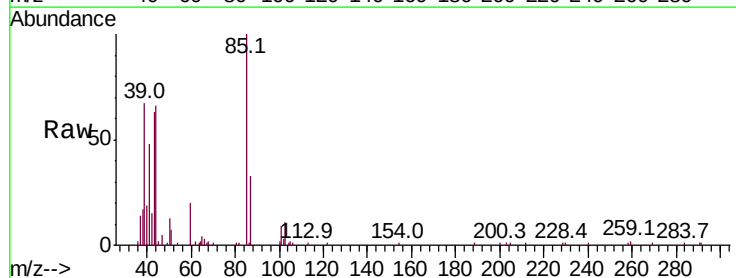
Acq: 2 Nov 2021 1:32

Tgt Ion: 85 Resp: 44060

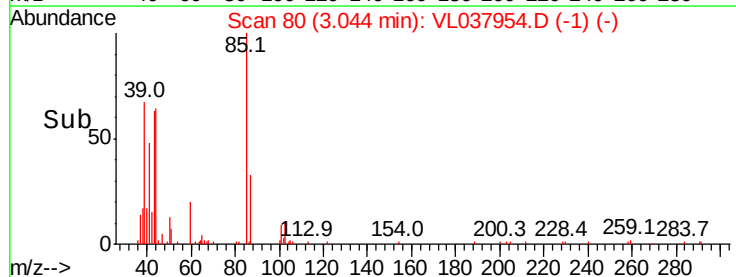
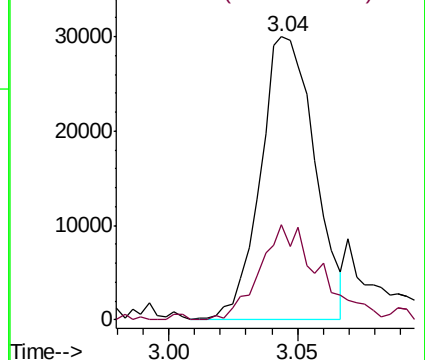
Ion Ratio Lower Upper

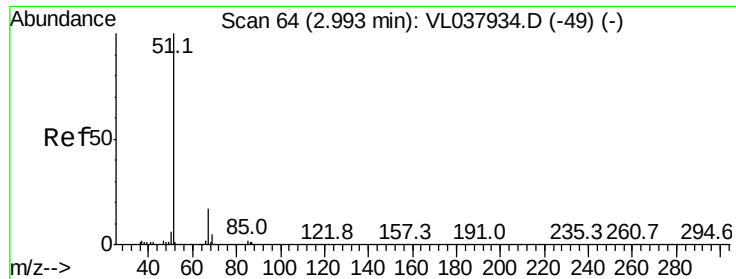
85 100

87 33.5 25.3 37.9



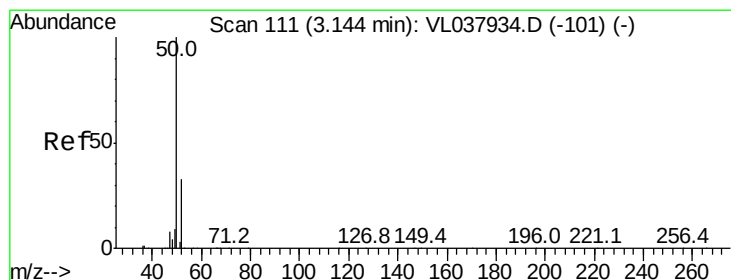
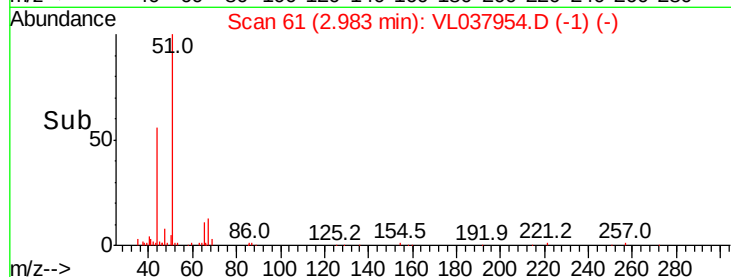
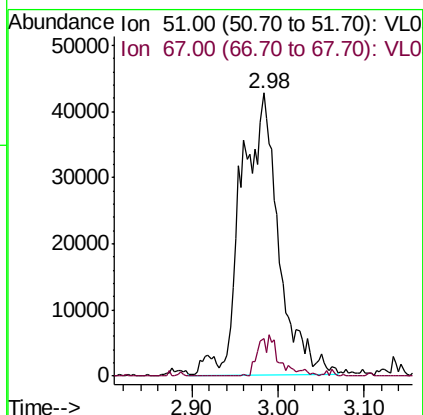
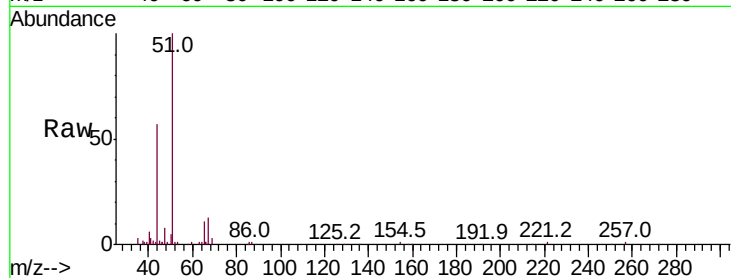
Abundance Ion 85.00 (84.70 to 85.70): VL0
Ion 87.00 (86.70 to 87.70): VL0





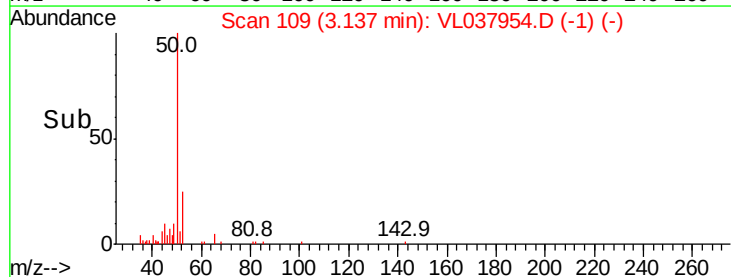
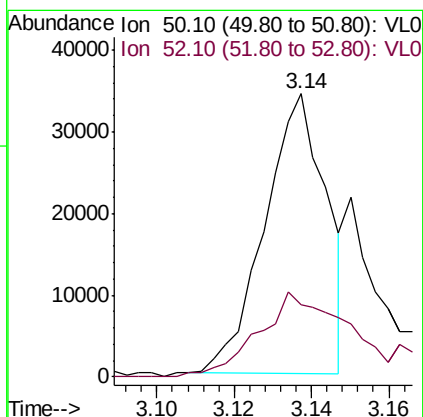
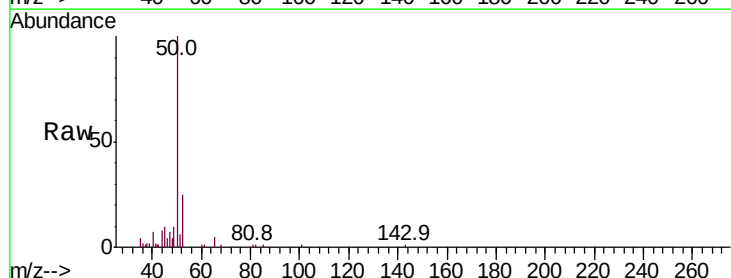
#3
 Chlorodifluoromethane
 Concen: 0.496 ppbv
 RT: 2.98
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId :
 Acq: 2 Nov 2021 1:32

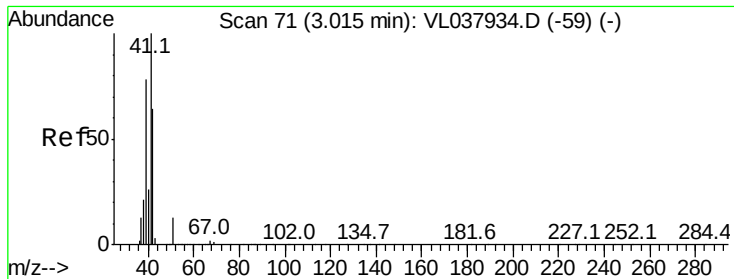
Tot Ion: 51 Resp: 128876
 Ion Ratio Lower Upper
 51 100
 67 8.8 13.4 20.0#



#4
 Chloromethane
 Concen: 0.384 ppbv
 RT: 3.14 min Scan# 109
 Delta R.T. -0.01 min
 Lab File: VL037954.D
 Acq: 2 Nov 2021 1:32

Tgt Ion: 50 Resp: 37920
 Ion Ratio Lower Upper
 50 100
 52 24.3 26.3 39.5#





#9

Propene

Concen: 2.846 ppbv

RT: 3.20 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

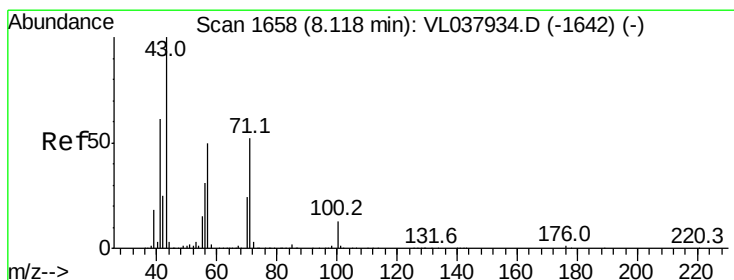
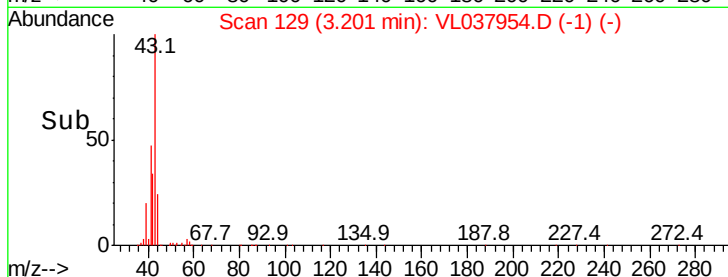
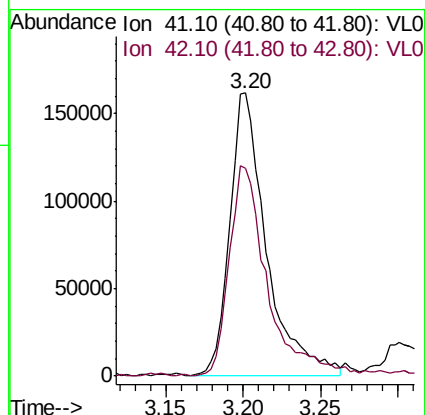
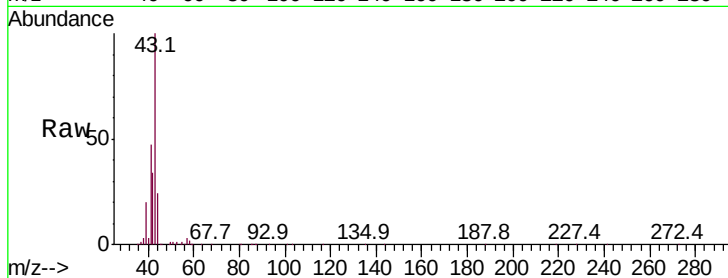
Acq: 2 Nov 2021 1:32

Tot Ion: 41 Resp: 265043

Ion Ratio Lower Upper

41 100

42 78.6 57.6 86.4



#10

Heptane

Concen: 0.066 ppbv

RT: 8.10 min Scan# 1652

Delta R.T. -0.02 min

Lab File: VL037954.D

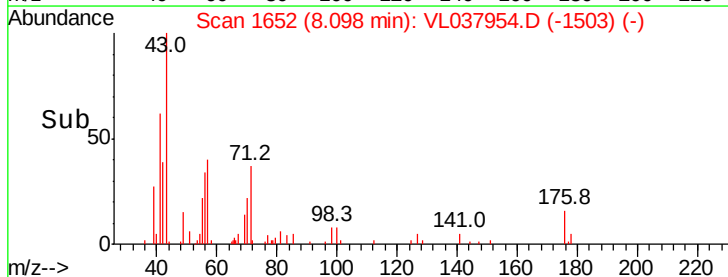
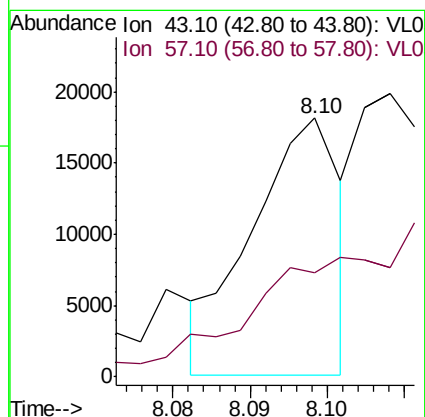
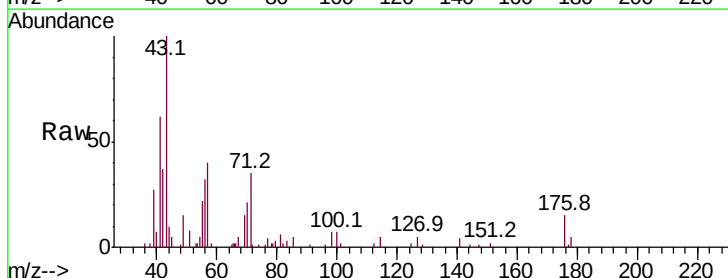
Acq: 2 Nov 2021 1:32

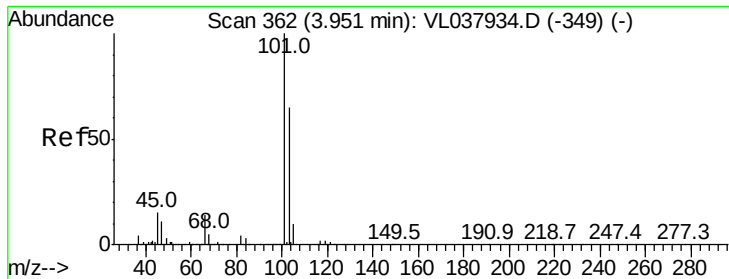
Tgt Ion: 43 Resp: 14345

Ion Ratio Lower Upper

43 100

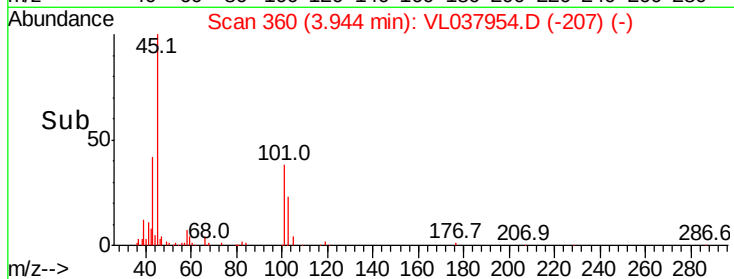
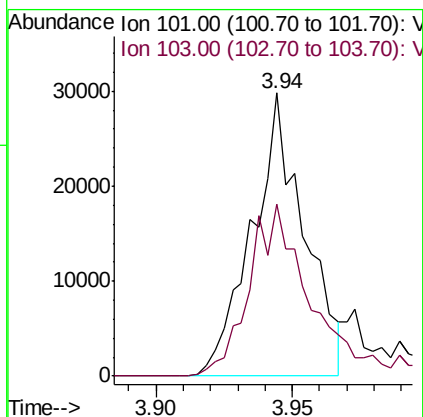
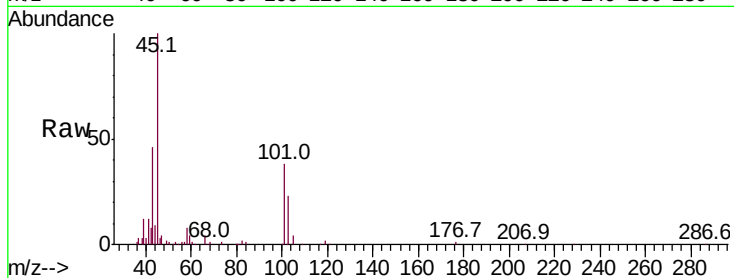
57 0.0 39.8 59.8#





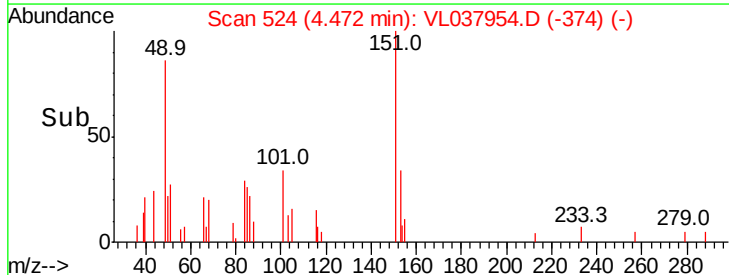
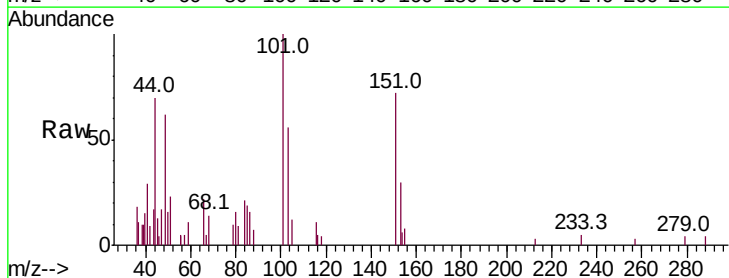
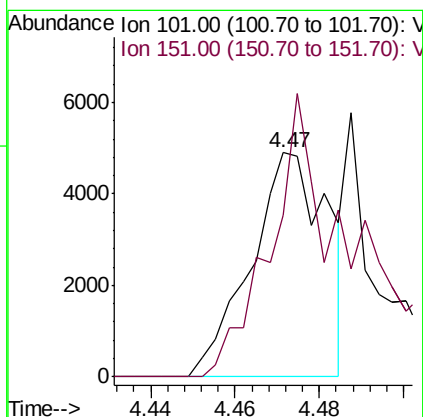
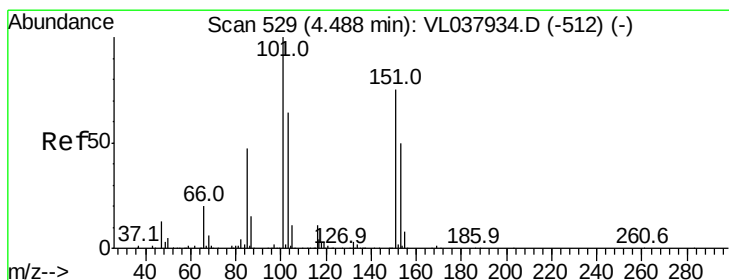
#11
 Trichlorofluoromethane
 Concen: 0.201 ppbv
 RT: 3.94
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 2 Nov 2021 1:32

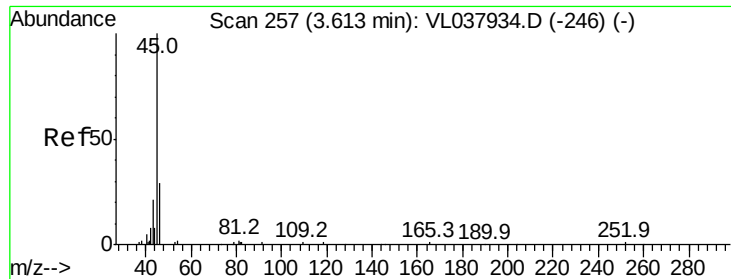
Tot Ion:101 Resp: 39414
 Ion Ratio Lower Upper
 101 100
 103 60.6 52.0 78.0



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.040 ppbv
 RT: 4.47 min Scan# 524
 Delta R.T. -0.02 min
 Lab File: VL037954.D
 Acq: 2 Nov 2021 1:32

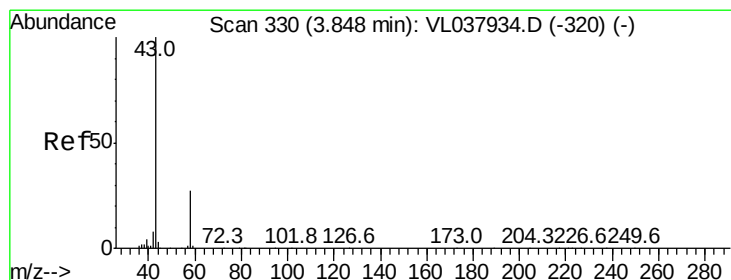
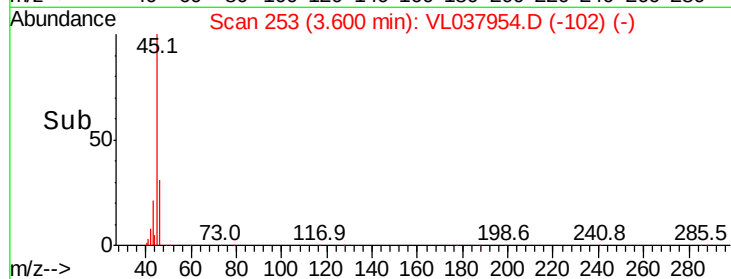
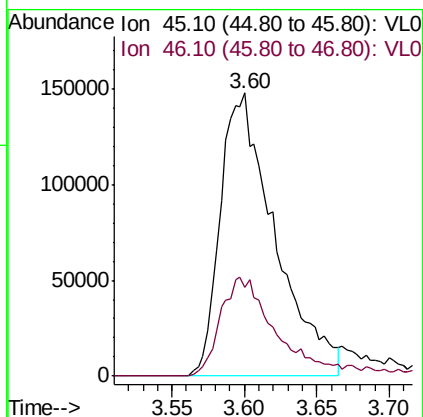
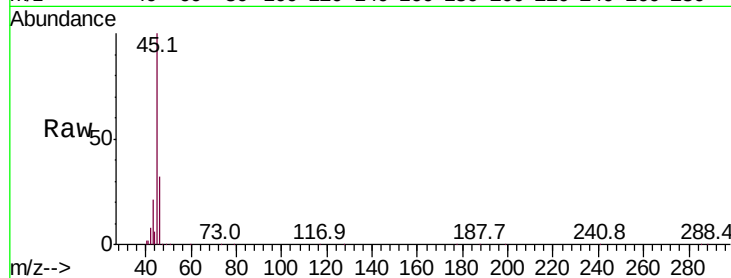
Tgt Ion:101 Resp: 6165
 Ion Ratio Lower Upper
 101 100
 151 142.7 61.8 92.8#





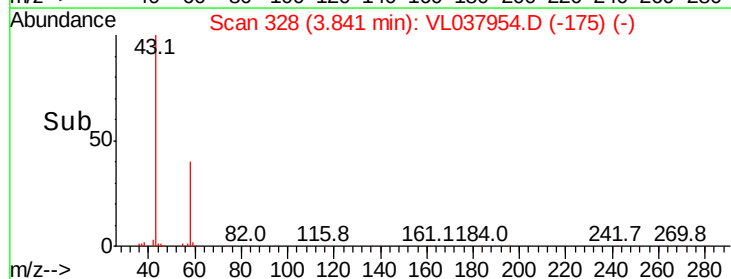
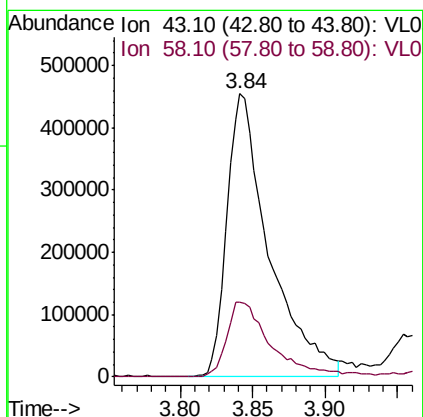
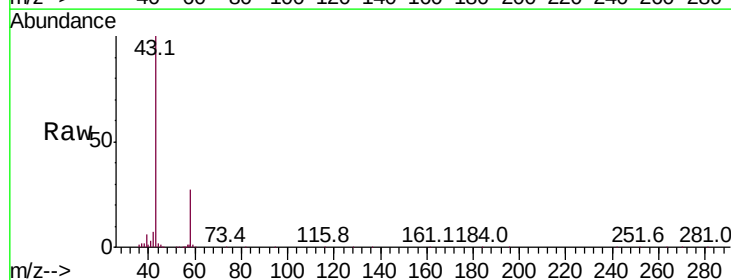
#13
Ethanol
Concen: 41.170 ppbv
RT: 3.60
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 2 Nov 2021 1:32

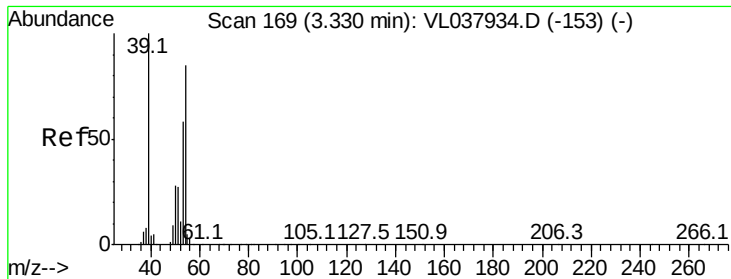
Tot Ion: 45 Resp: 386864
Ion Ratio Lower Upper
45 100
46 38.1 17.4 69.8



#15
Acetone
Concen: 7.950 ppbv
RT: 3.84 min Scan# 328
Delta R.T. -0.01 min
Lab File: VL037954.D
Acq: 2 Nov 2021 1:32

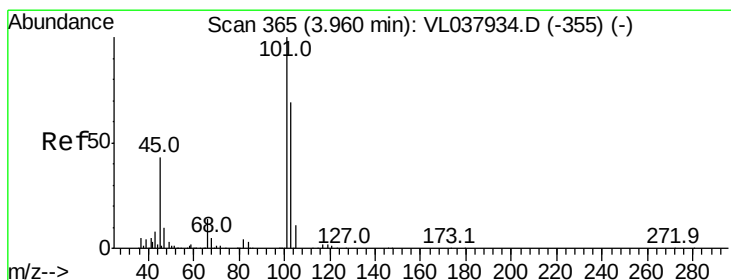
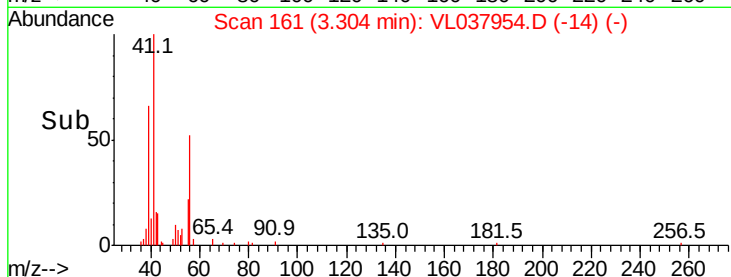
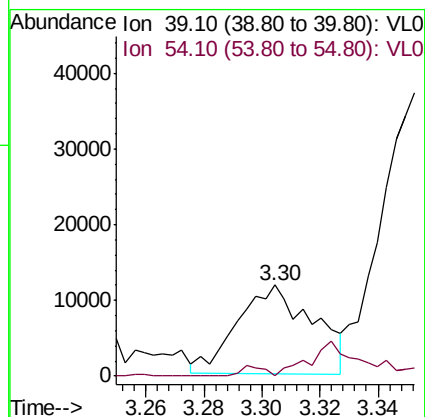
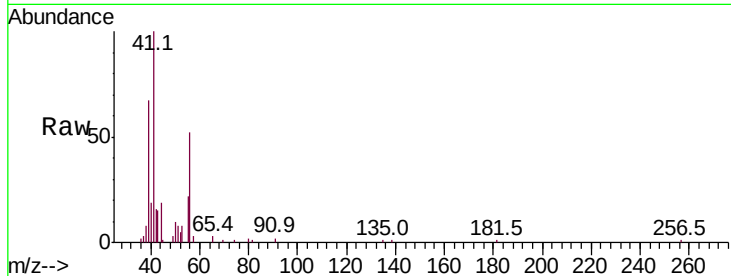
Tgt Ion: 43 Resp: 916807
Ion Ratio Lower Upper
43 100
58 28.3 23.3 34.9





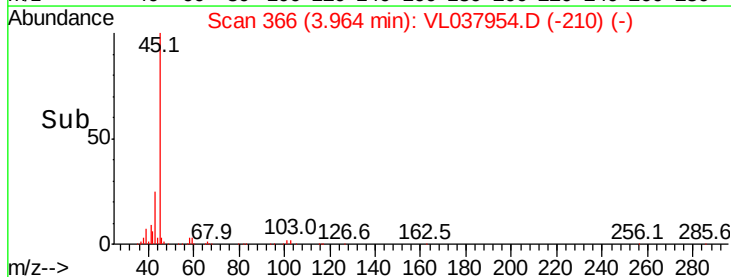
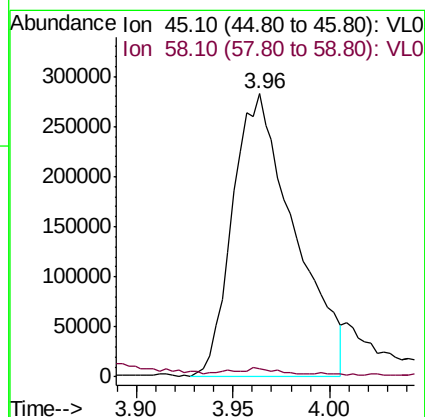
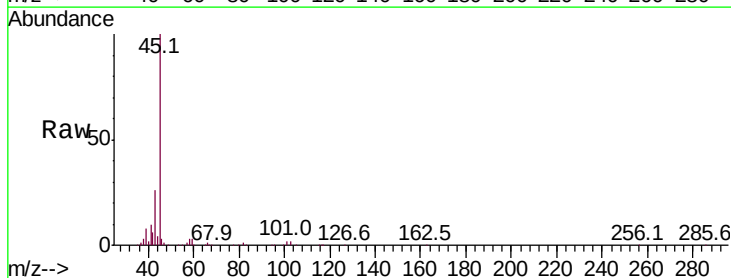
#16
 1,3-Butadiene
 Concen: 0.234 ppbv
 RT: 3.30
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 2 Nov 2021 1:32

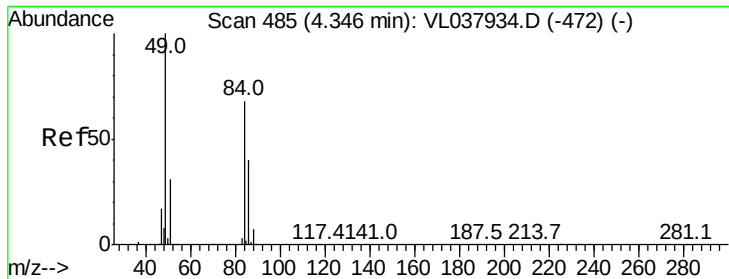
Tot Ion: 39 Resp: 21255
 Ion Ratio Lower Upper
 39 100
 54 28.6 62.6 93.8#



#19
 Isopropyl Alcohol
 Concen: 8.451 ppbv
 RT: 3.96 min Scan# 366
 Delta R.T. 0.00 min
 Lab File: VL037954.D
 Acq: 2 Nov 2021 1:32

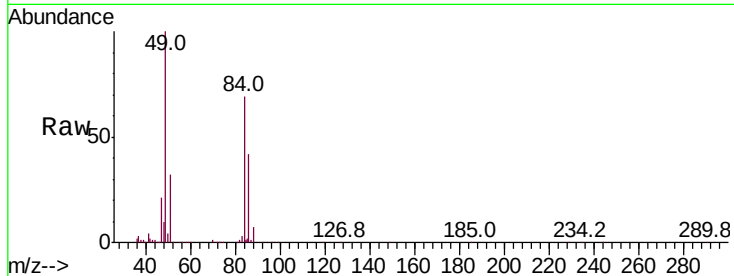
Tgt Ion: 45 Resp: 623185
 Ion Ratio Lower Upper
 45 100
 58 2.4 4.0 6.0#



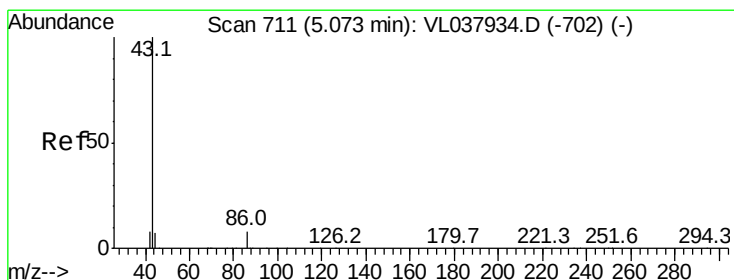
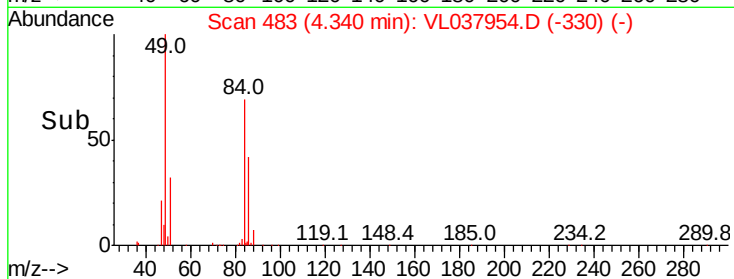
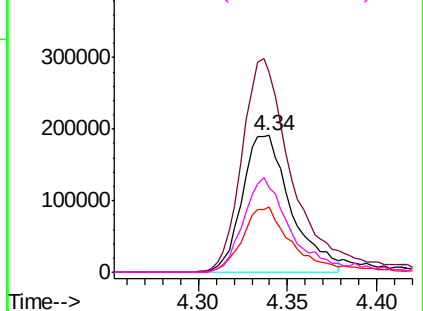


#20
Methvlene Chloride
Concen: 5.757 ppbv
RT: 4.34
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 2 Nov 2021 1:32

Tot Ion:	84	Resp:	364458
Ion	Ratio	Lower	Upper
84	100		
49	145.9	117.5	176.3
51	47.3	35.9	53.9
86	61.6	47.3	70.9

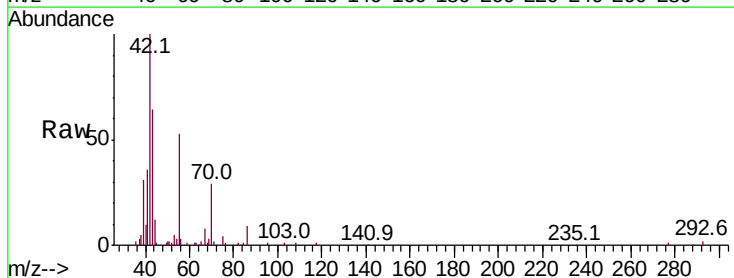


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

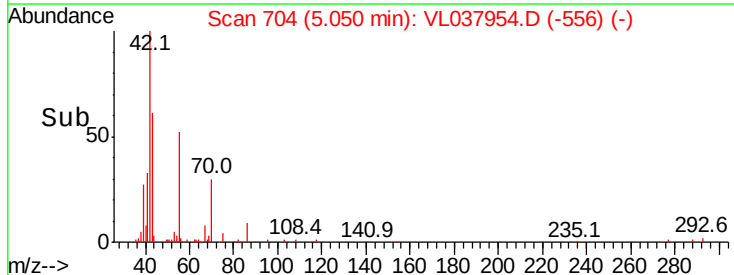
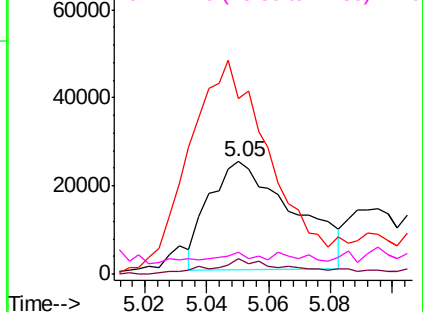


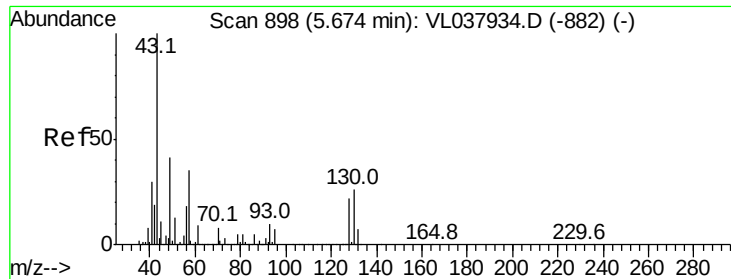
#23
Vinyl Acetate
Concen: 0.267 ppbv
RT: 5.05 min Scan# 704
Delta R.T. -0.02 min
Lab File: VL037954.D
Acq: 2 Nov 2021 1:32

Tgt Ion:	43	Resp:	46424
Ion	Ratio	Lower	Upper
43	100		
86	13.1	5.5	8.3#
42	156.8	7.4	11.2#
44	5.8	4.7	7.1



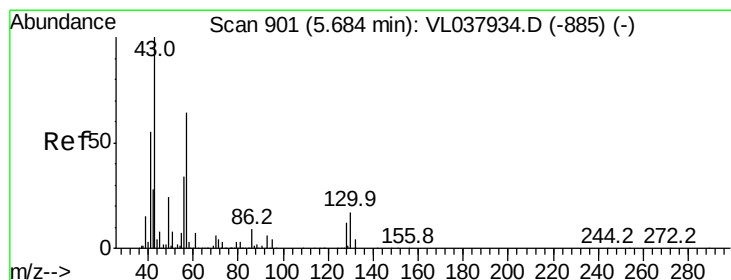
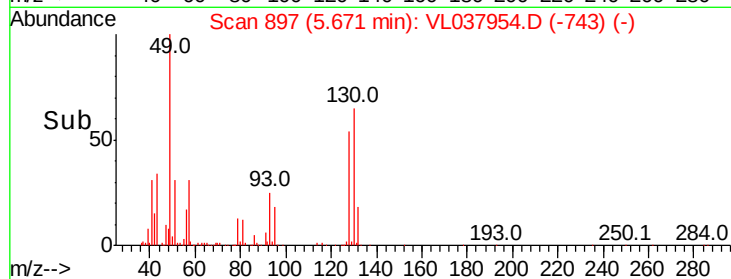
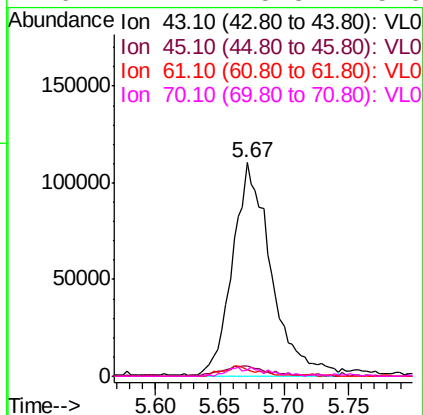
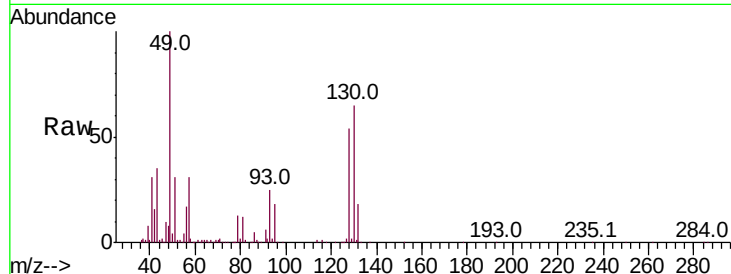
Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 86.10 (85.80 to 86.80): VL0
Ion 42.10 (41.80 to 42.80): VL0
Ion 44.10 (43.80 to 44.80): VL0





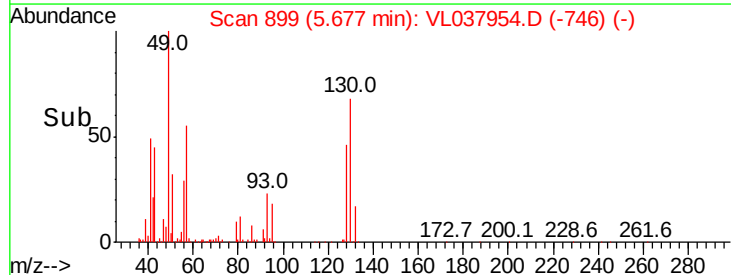
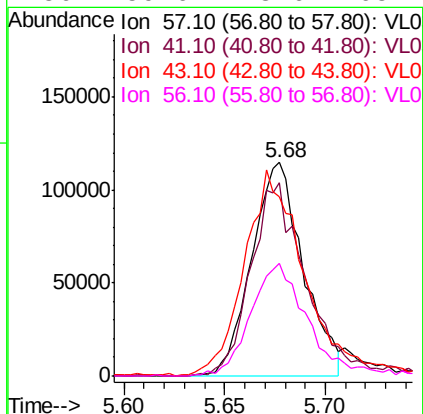
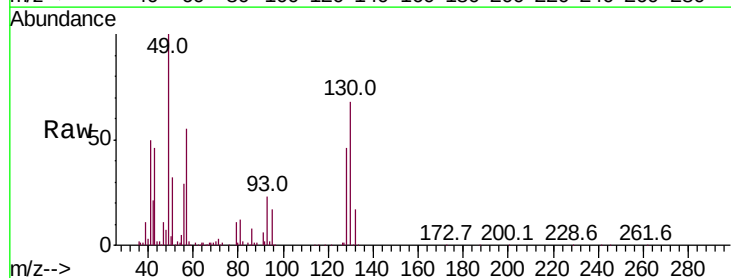
#25
Ethyl Acetate
Concen: 0.669 ppbv
RT: 5.67 min
Delta R.T.: MSVOA_1
Lab File: ClientSampleId :
Acq: 2 Nov 2021 1:32

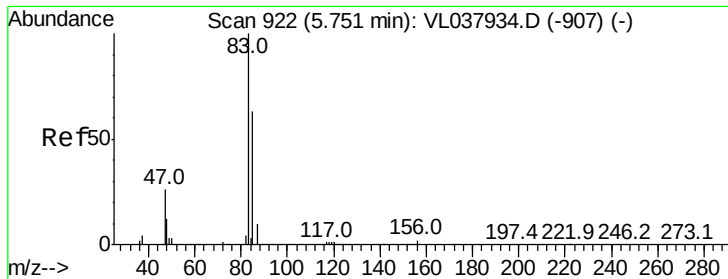
Tot Ion:	43	Resp:	229244
Ion	Ratio	Lower	Upper
43	100		
45	5.8	8.1	12.1#
61	4.6	8.1	12.1#
70	4.4	5.8	8.6#



#26
Hexane
Concen: 1.261 ppbv
RT: 5.68 min Scan# 899
Delta R.T.: -0.01 min
Lab File: VL037954.D
Acq: 2 Nov 2021 1:32

Tgt Ion:	57	Resp:	204715
Ion	Ratio	Lower	Upper
57	100		
41	99.9	71.0	106.6
43	114.5	173.0	259.6#
56	59.6	43.6	65.4





#29

Chloroform

Concen: 0.265 ppbv

RT: 5.74 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

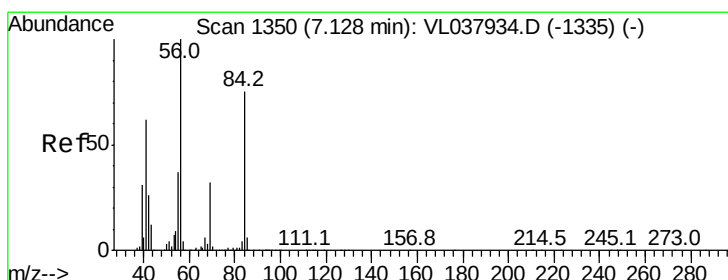
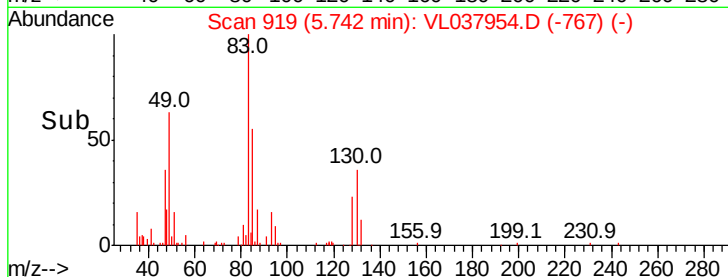
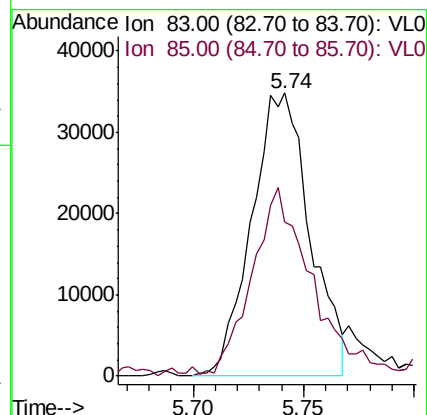
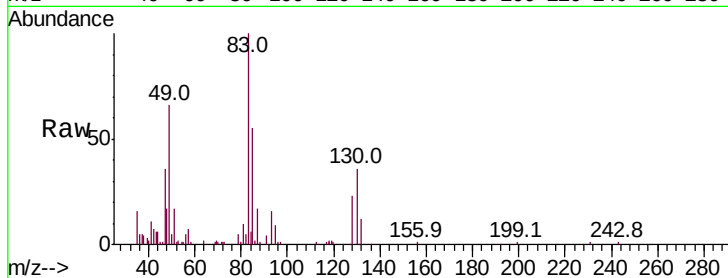
Acq: 2 Nov 2021 1:32

Tot Ion: 83 Resp: 64213

Ion Ratio Lower Upper

83 100

85 51.4 50.6 76.0



#30

Cyclohexane

Concen: 0.103 ppbv

RT: 7.12 min Scan# 1347

Delta R.T. -0.01 min

Lab File: VL037954.D

Acq: 2 Nov 2021 1:32

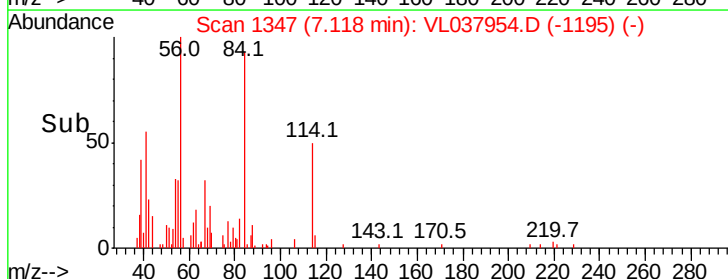
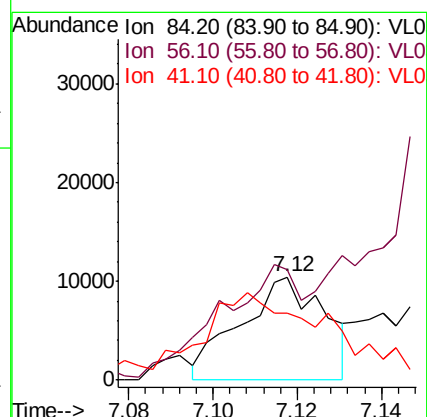
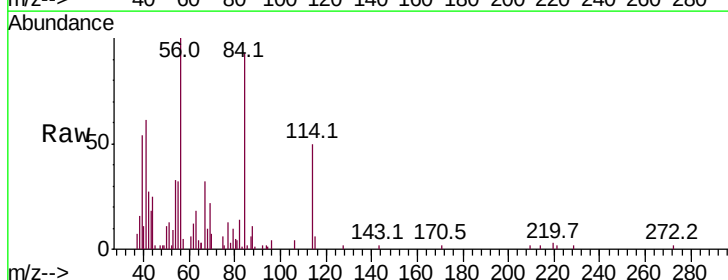
Tgt Ion: 84 Resp: 14339

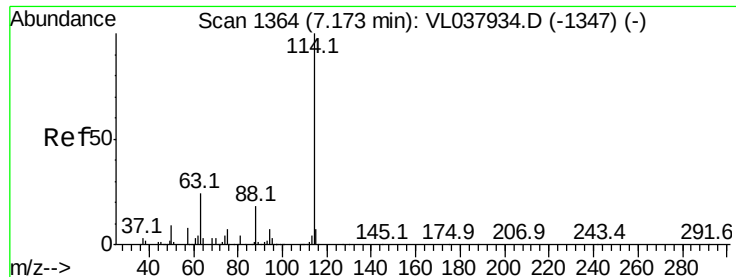
Ion Ratio Lower Upper

84 100

56 0.0 114.0 171.0#

41 159.9 68.3 102.5#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 Instrument: MSVOA_L

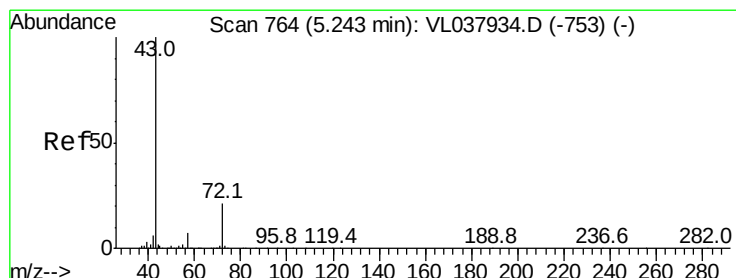
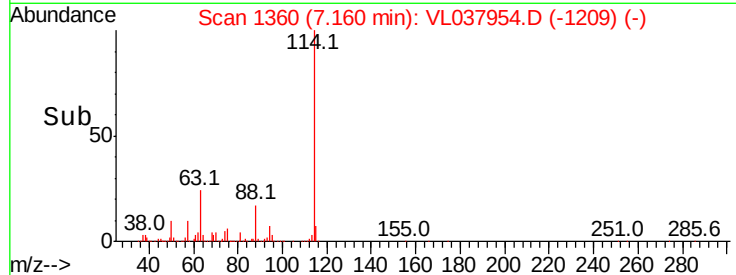
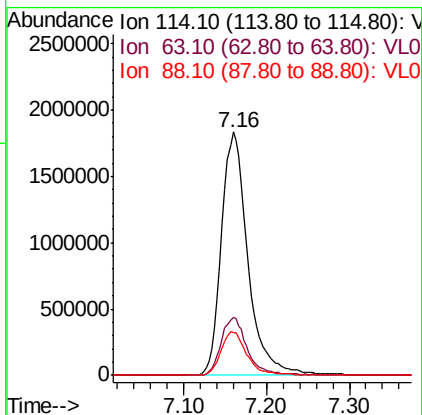
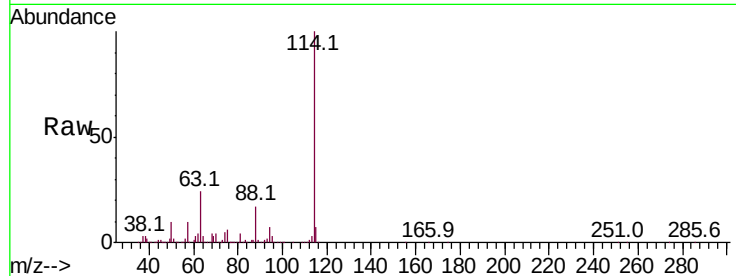
Delta R.T. ClientSampleId:

Lab File: IA1

Acq: 2 Nov 2021 1:32

Tot Ion:114 Resp: 4063639

Ion	Ratio	Lower	Upper
114	100		
63	23.8	19.4	29.0
88	17.6	14.2	21.4



#34

2-Butanone

Concen: 0.581 ppbv

RT: 5.24 min Scan# 762

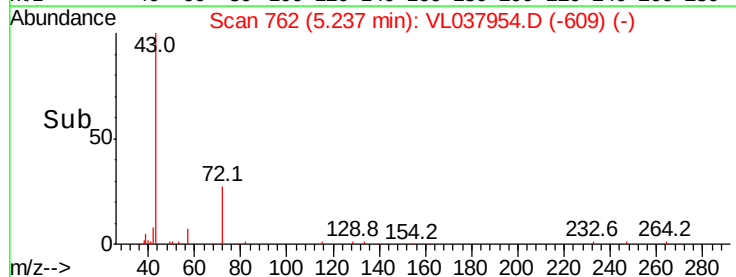
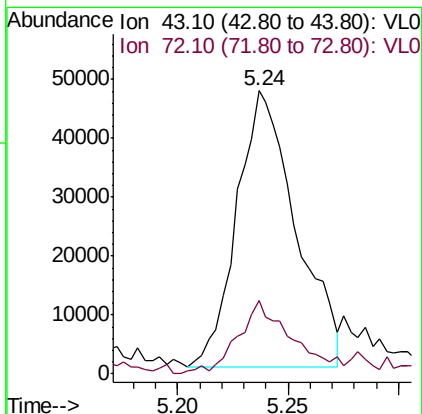
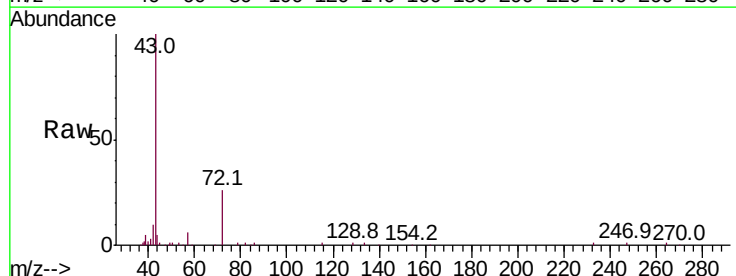
Delta R.T. -0.01 min

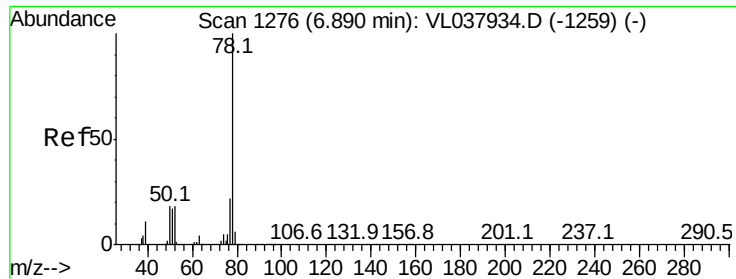
Lab File: VL037954.D

Acq: 2 Nov 2021 1:32

Tgt Ion: 43 Resp: 87467

Ion	Ratio	Lower	Upper
43	100		
72	24.3	18.3	27.5





#36

Benzene

Concen: 0.092 ppbv

RT: 6.87 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

Acq: 2 Nov 2021 1:32

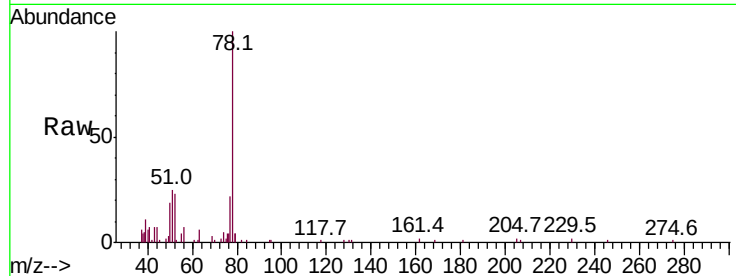
Tot Ion: 78 Resp: 30281

Ion Ratio Lower Upper

78 100

77 20.8 17.9 26.9

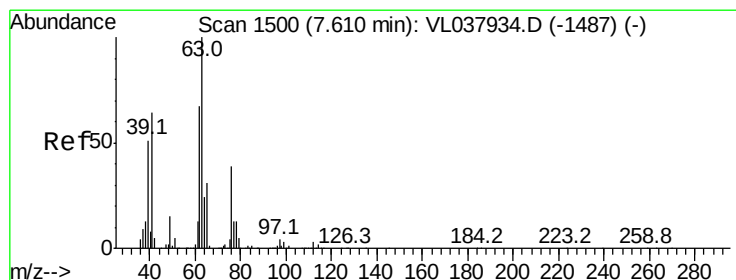
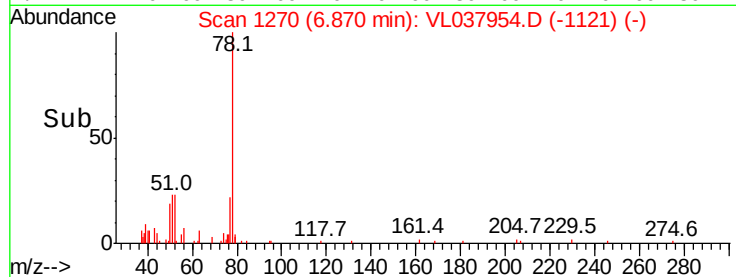
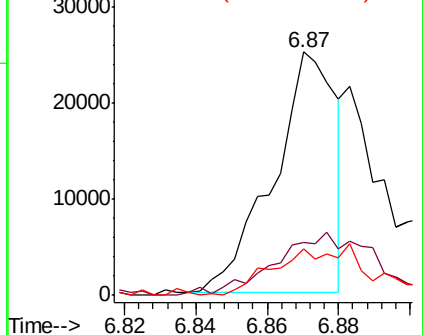
50 18.4 14.4 21.6



Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0



#39

1,2-Dichloropropane

Concen: 7.605 ppbv

RT: 7.16 min Scan# 1360

Delta R.T. -0.45 min

Lab File: VL037954.D

Acq: 2 Nov 2021 1:32

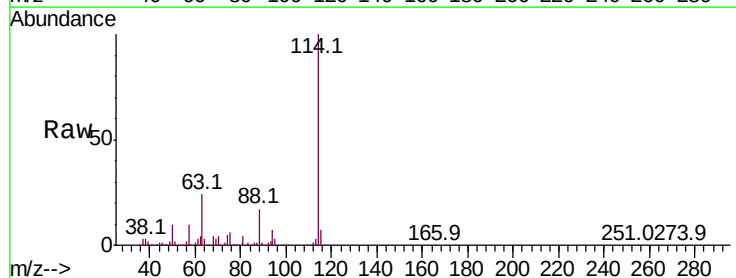
Tgt Ion: 63 Resp: 946973

Ion Ratio Lower Upper

63 100

41 0.0 51.6 77.4#

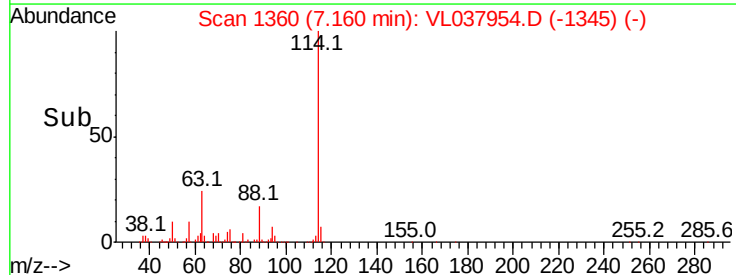
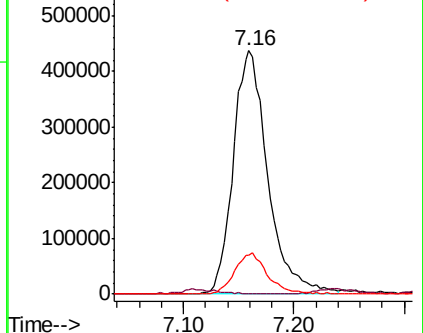
62 16.1 53.5 80.3#

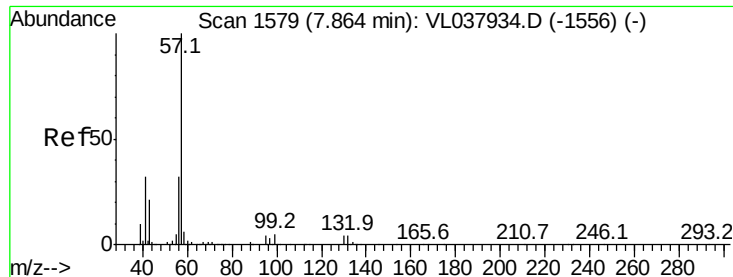


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

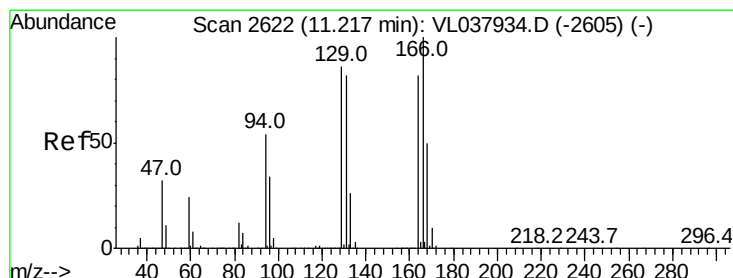
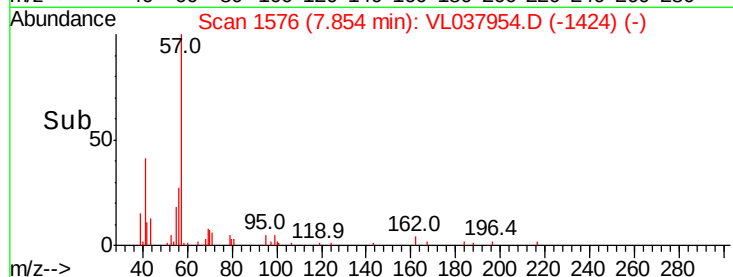
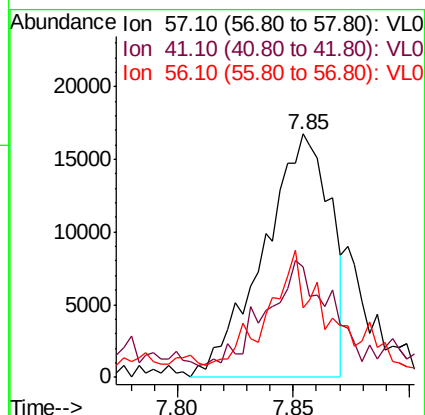
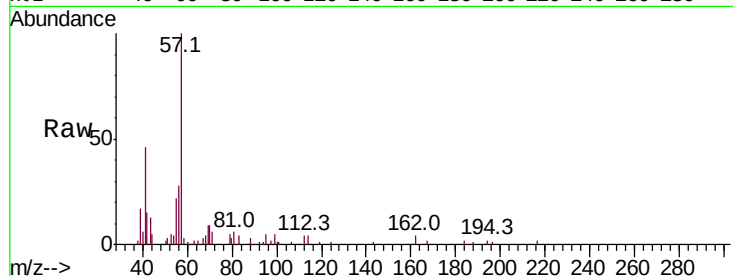
Ion 62.10 (61.80 to 62.80): VL0





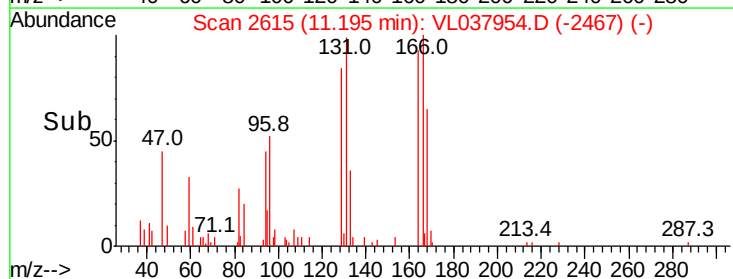
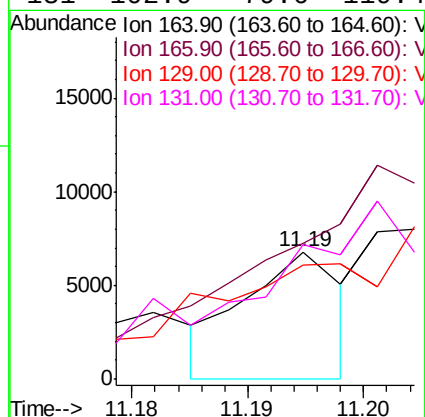
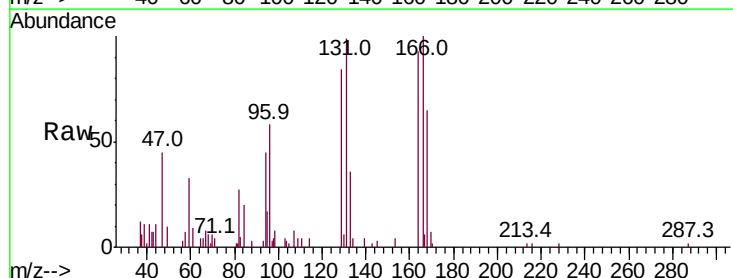
#44
2,2,4-Trimethylpentane
Concen: 0.060 ppbv
RT: 7.85
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 2 Nov 2021 1:32

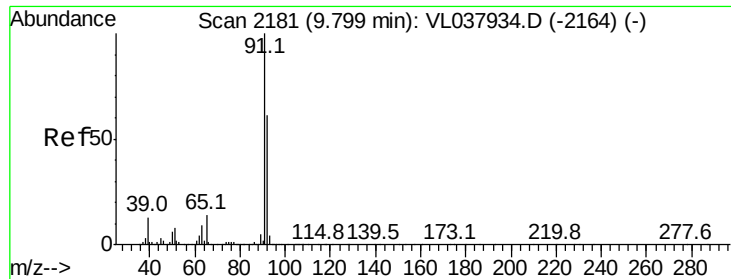
Tot Ion: 57 Resp: 33584
Ion Ratio Lower Upper
57 100
41 52.3 25.8 38.8#
56 58.5 25.9 38.9#



#52
Tetrachloroethene
Concen: 0.032 ppbv
RT: 11.19 min Scan# 2615
Delta R.T. -0.02 min
Lab File: VL037954.D
Acq: 2 Nov 2021 1:32

Tgt Ion: 164 Resp: 3958
Ion Ratio Lower Upper
164 100
166 85.9 97.6 146.4#
129 50.9 84.2 126.2#
131 102.9 79.6 119.4





#53

Toluene

Concen: 0.184 ppbv

RT: 9.78 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

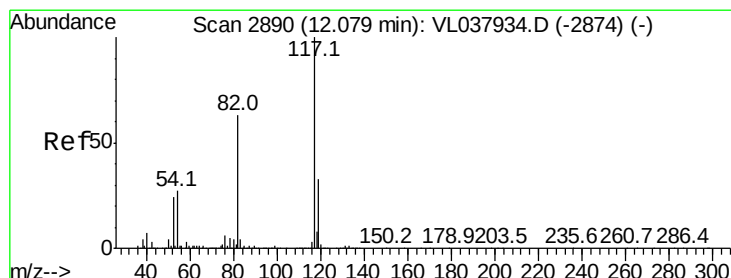
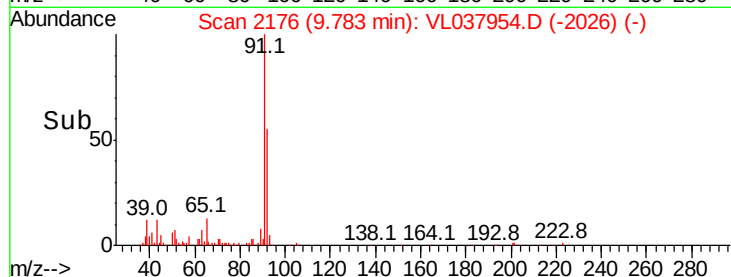
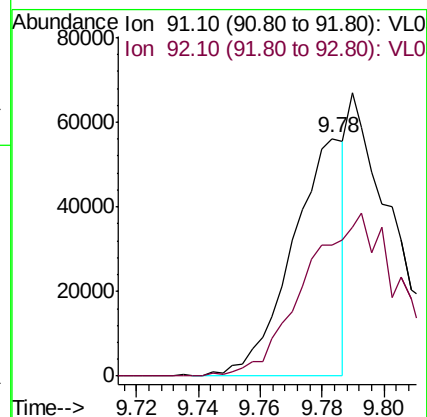
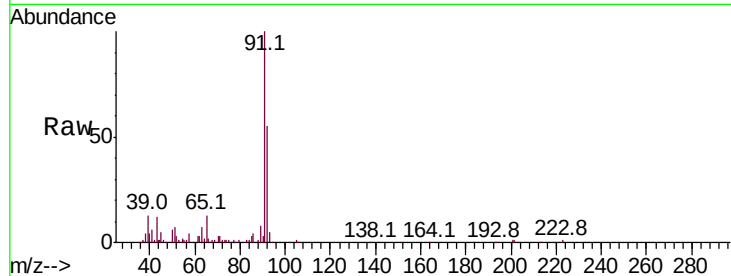
Acq: 2 Nov 2021 1:32

Tot Ion: 91 Resp: 65451

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: VL037954.D

Acq: 2 Nov 2021 1:32

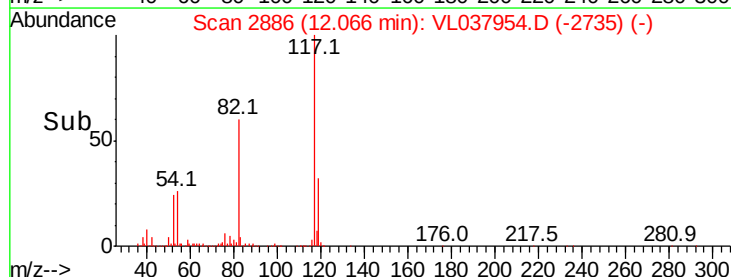
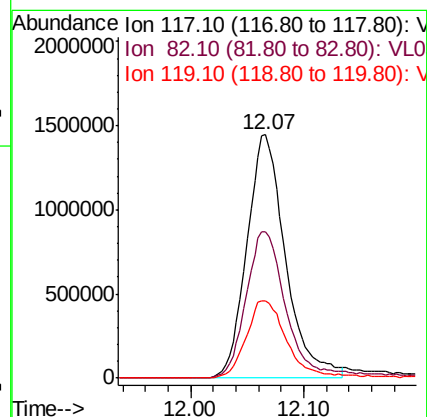
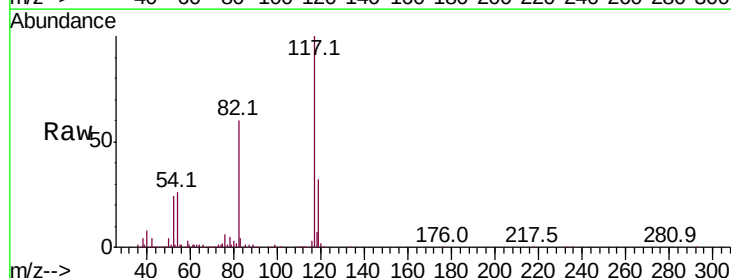
Tgt Ion: 117 Resp: 3442080

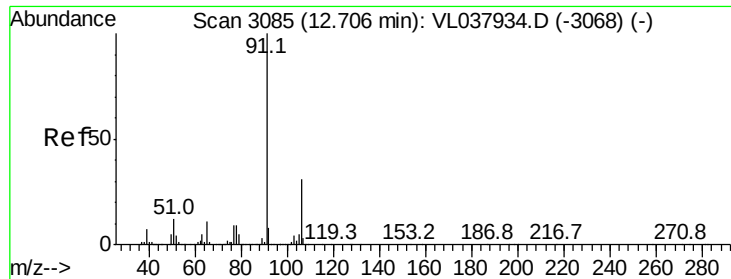
Ion Ratio Lower Upper

117 100

82 65.0 51.0 76.6

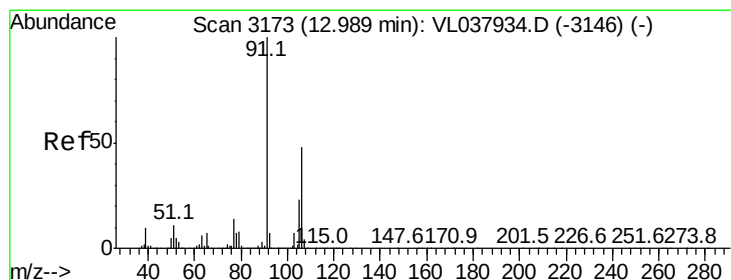
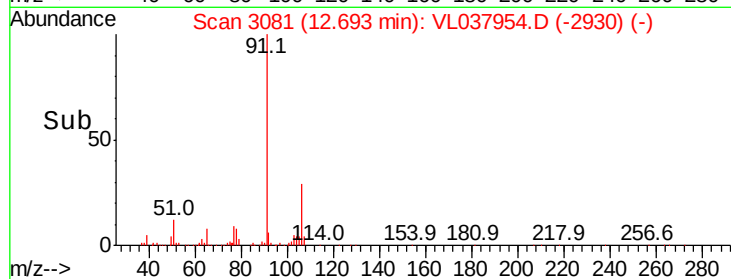
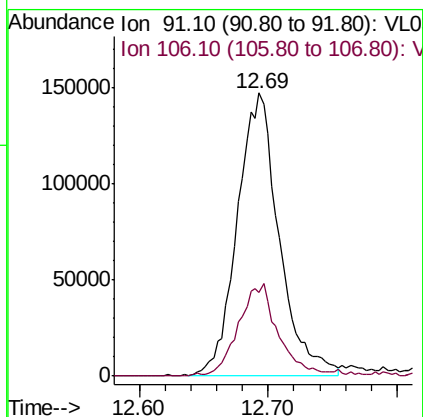
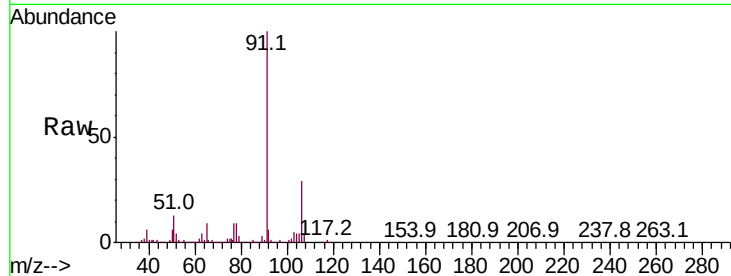
119 34.0 26.9 40.3





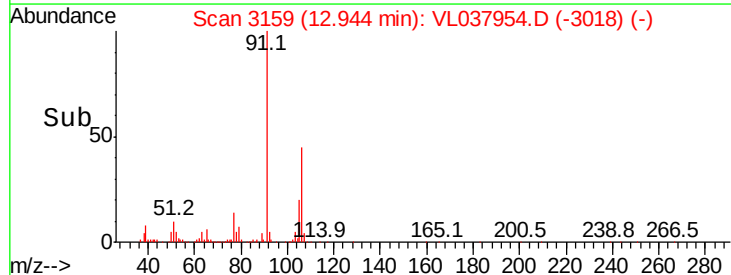
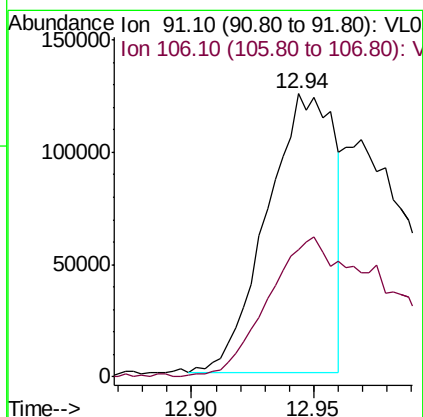
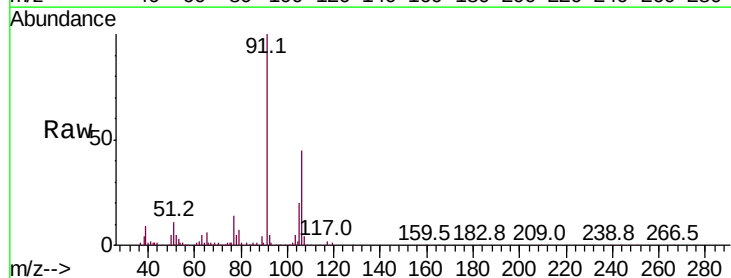
#58
Ethyl Benzene
Concen: 0.791 ppbv
RT: 12.69
Delta R.T. MSVOA_1
Lab File: ClientSampleId :
Acq: 2 Nov 2021 1:32

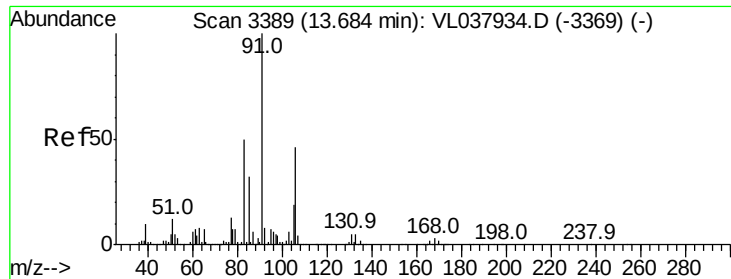
Tot Ion: 91 Resp: 332993
Ion Ratio Lower Upper
91 100
106 29.5 25.1 37.7



#59
m/p-Xylene
Concen: 0.636 ppbv
RT: 12.94 min Scan# 3159
Delta R.T. -0.05 min
Lab File: VL037954.D
Acq: 2 Nov 2021 1:32

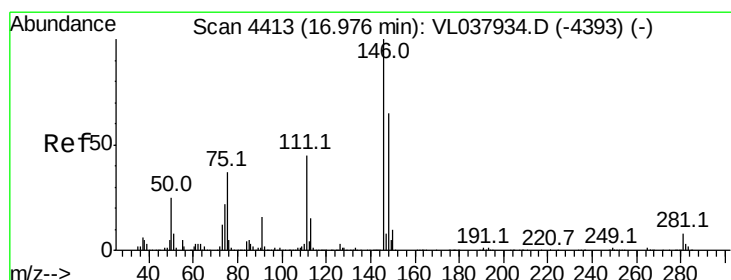
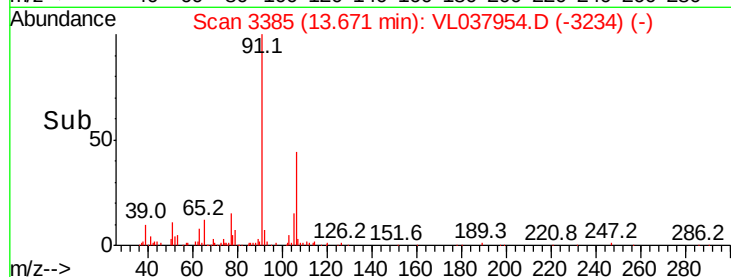
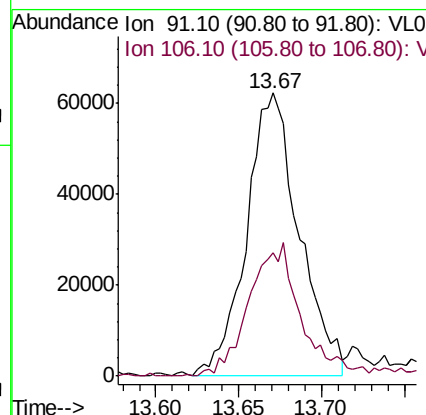
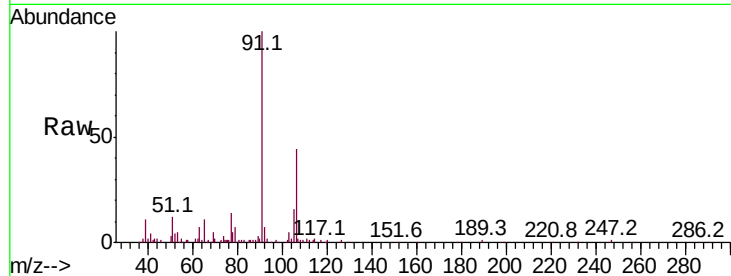
Tgt Ion: 91 Resp: 237769
Ion Ratio Lower Upper
91 100
106 94.9 37.1 55.7#





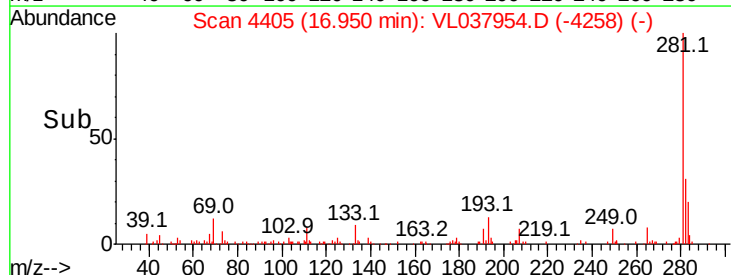
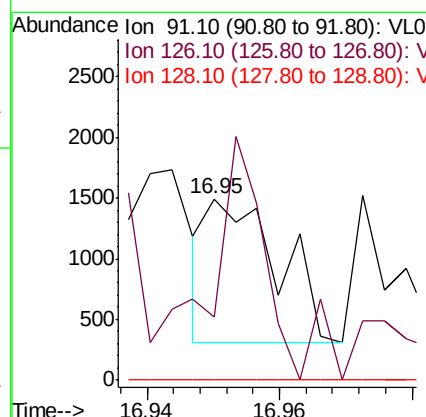
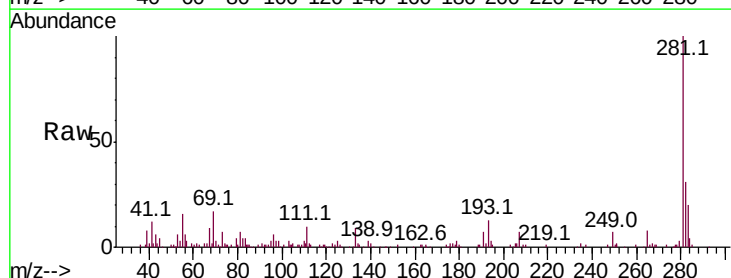
#60
o-Xylene
Concen: 0.389 ppbv
RT: 13.67
Delta R.T. MSVOA_1
Lab File: ClientSampleId :
Acq: 2 Nov 2021 1:32

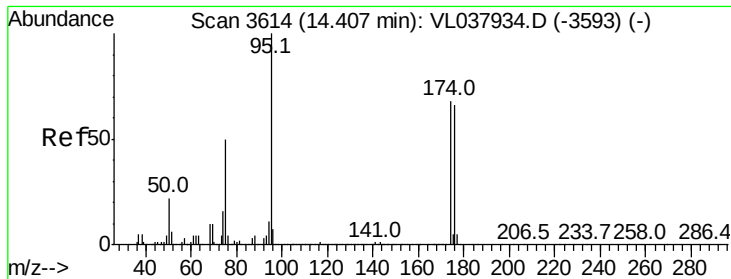
Tot Ion: 91 Resp: 137353
Ion Ratio Lower Upper
91 100
106 46.1 23.5 70.6



#66
Benzyl Chloride
Concen: 0.039 ppbv
RT: 16.95 min Scan# 4405
Delta R.T. -0.03 min
Lab File: VL037954.D
Acq: 2 Nov 2021 1:32

Tgt Ion: 91 Resp: 889
Ion Ratio Lower Upper
91 100
126 189.1 13.8 20.6#
128 0.0 5.1 7.7#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.024 ppbv

RT: 14.39

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 2 Nov 2021 1:32

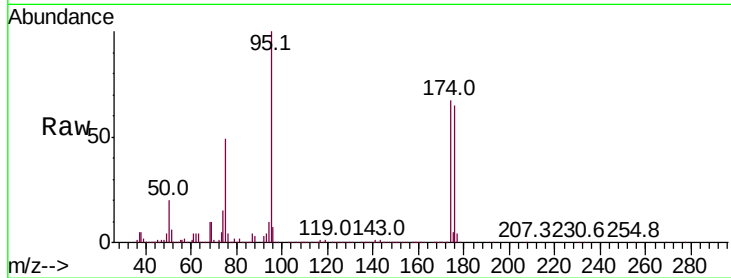
Tot Ion: 95 Resp: 2508149

Ion Ratio Lower Upper

95 100

174 77.7 58.3 87.5

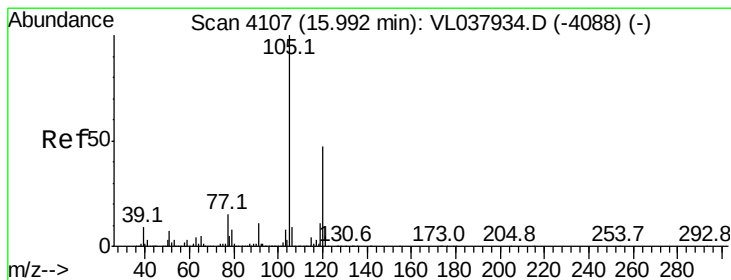
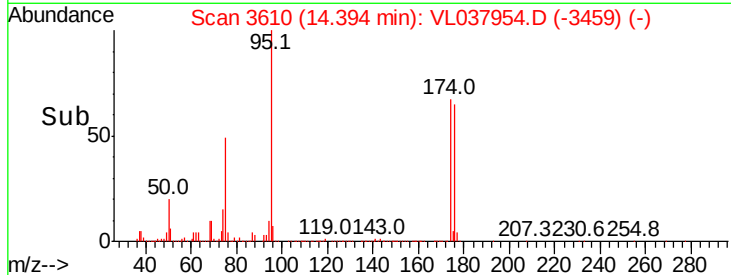
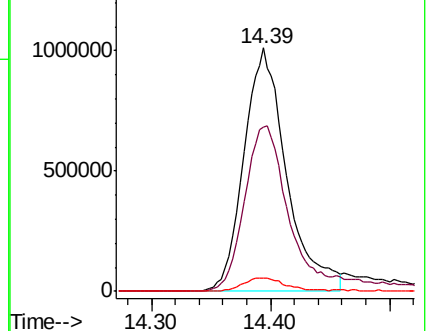
175 5.6 4.6 6.8



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V



#73

1,3,5-Trimethylbenzene

Concen: 0.055 ppbv

RT: 15.98 min Scan# 4102

Delta R.T. -0.02 min

Lab File: VL037954.D

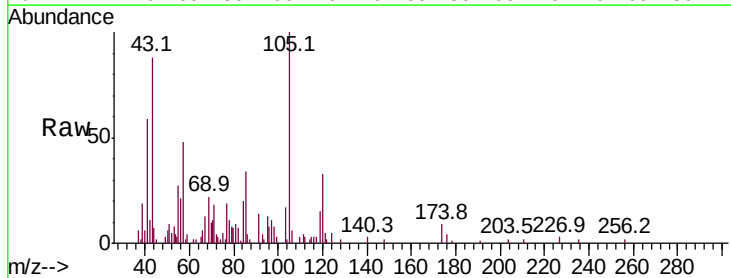
Acq: 2 Nov 2021 1:32

Tgt Ion:105 Resp: 20766

Ion Ratio Lower Upper

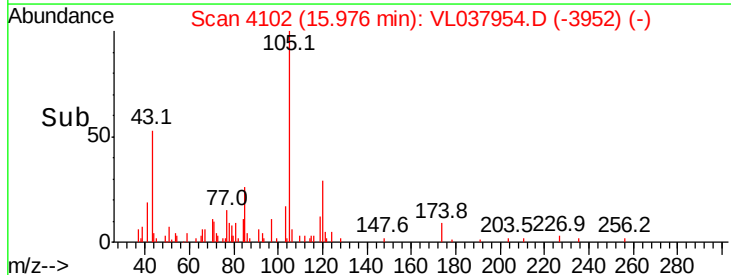
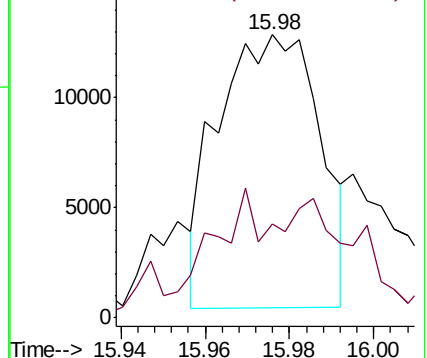
105 100

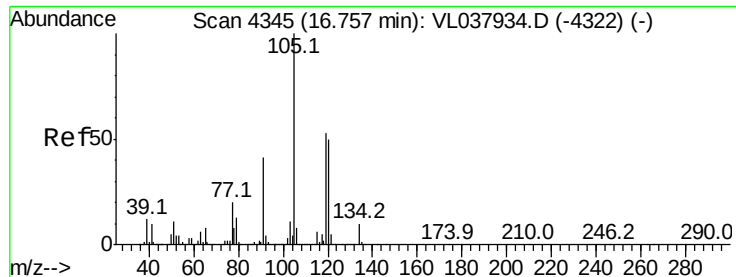
120 17.7 37.9 56.9#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#74

1,2,4-Trimethylbenzene

Concen: 0.232 ppbv

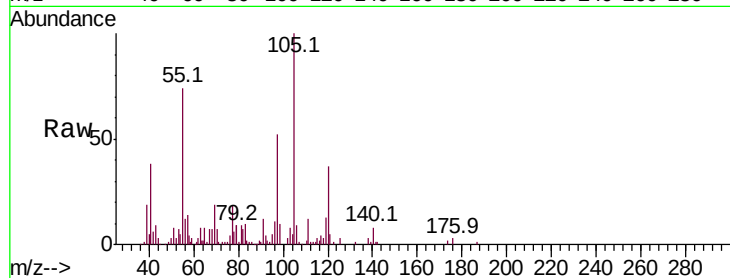
RT: 16.74

Delta R.T. MSVOA_1

Lab File: ClientSampleId :

Acq: 2 Nov 2021 1:32

Tot Ion:	105	Resp:	91955
Ion Ratio	Lower	Upper	
105	100		
120	36.9	40.0	60.0#
91	10.6	32.6	49.0#
77	16.9	15.8	23.8

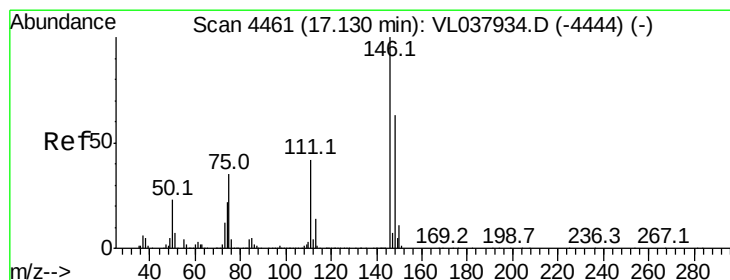
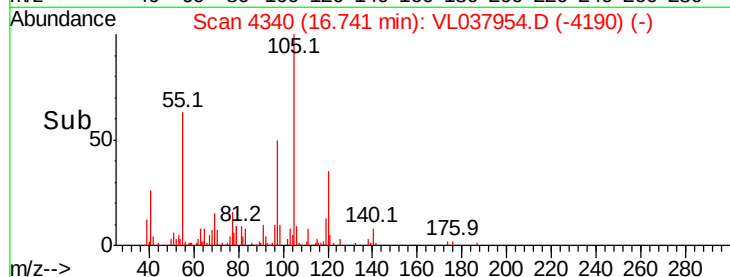
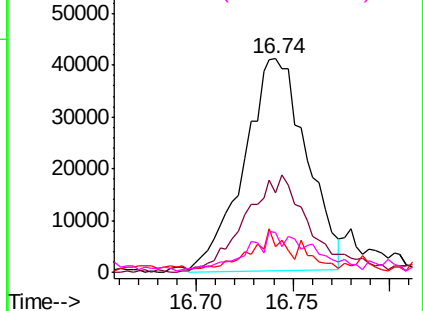


Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0



#76

1,4-Dichlorobenzene

Concen: 0.034 ppbv

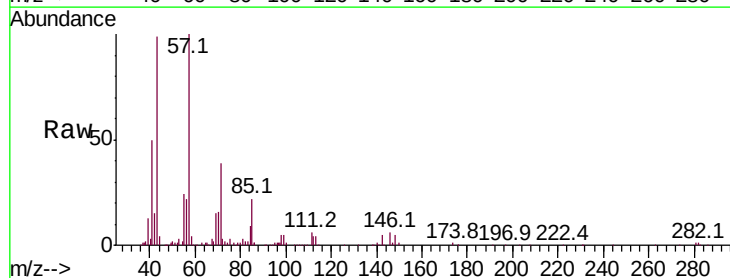
RT: 17.11 min Scan# 4454

Delta R.T. -0.02 min

Lab File: VL037954.D

Acq: 2 Nov 2021 1:32

Tgt Ion:	146	Resp:	8077
Ion Ratio	Lower	Upper	
146	100		
111	351.9	22.7	68.1#
148	0.0	33.5	100.4#



Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.10 (110.80 to 111.80): V

Ion 148.00 (147.70 to 148.70): V

