

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL081722\
 Data File : VL039546.D
 Acq On : 17 Aug 2022 12:45
 Operator : SY/AP
 Sample : N3986-01DL 4X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 E061-1100DL

Quant Time: Aug 18 05:35:05 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL081722AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Aug 17 12:06:24 2022
 QLast Update : Wed Aug 17 12:06:24 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.20	49	1047517	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	6.66	114	2753351	10.00	ppbv	0.00
55) Chlorobenzene-d5	11.47	117	2486502	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	13.78	95	1962503	10.48	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.80%

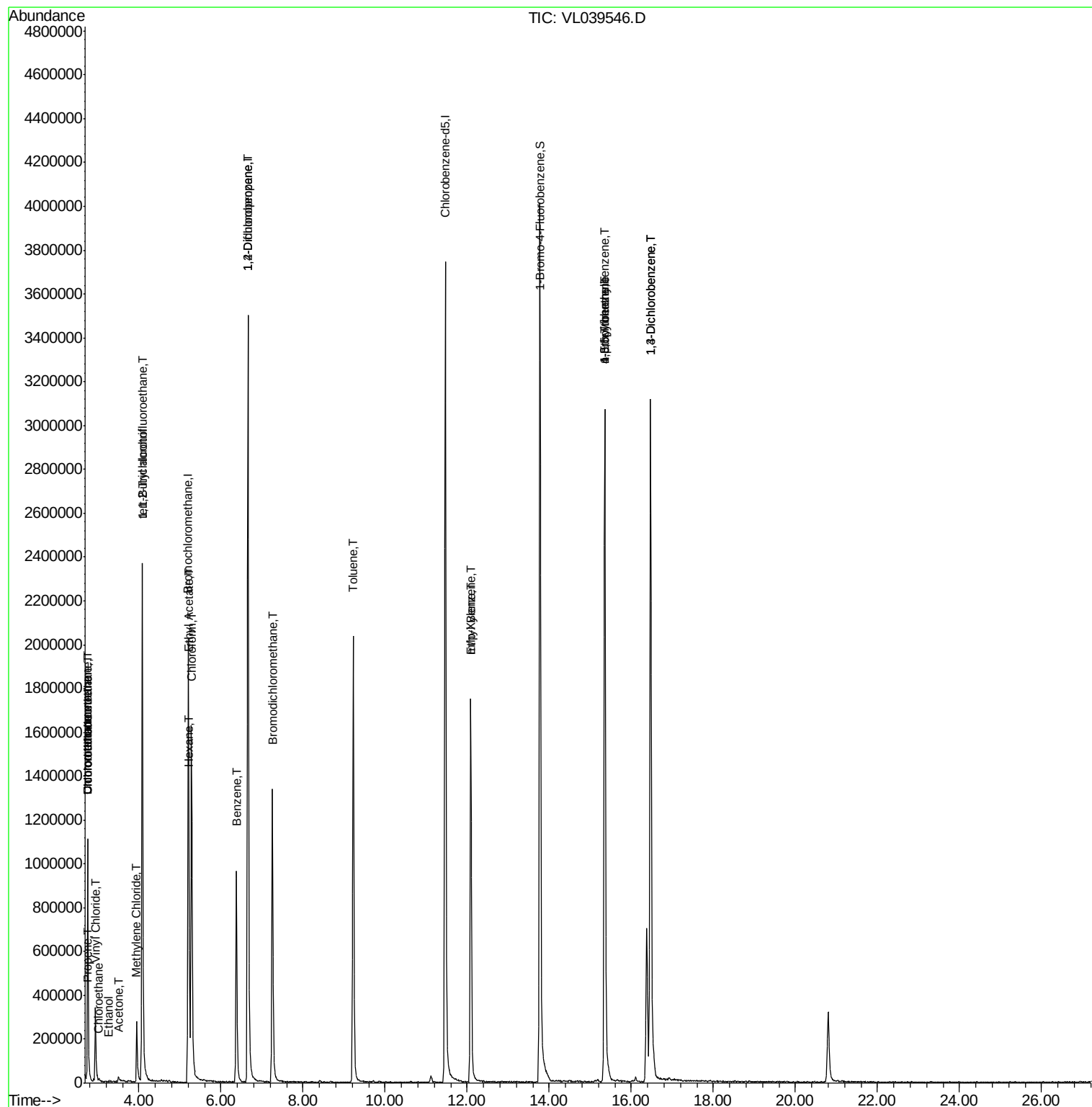
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	2.75	85	853351	6.061	ppbv	98
3) Chlorodifluoromethane	2.75	51	5112	0.041	ppbv #	69
4) Chloromethane	2.75	50	118480	1.578	ppbv #	45
5) Vinyl Chloride	2.94	62	317845	4.910	ppbv	98
7) Chloroethane	3.02	64	1209	0.052	ppbv #	43
8) Dichlorotetrafluoroethane	2.75	85	853351	5.644	ppbv #	14
9) Propene	2.73	41	6890	0.120	ppbv #	60
12) 1,1,2-Trichlorotrifluoroet	4.09	101	925746	8.103	ppbv	99
13) Ethanol	3.25	45	171	0.042	ppbv #	29
15) Acetone	3.50	43	12018	0.102	ppbv #	49
17) tert-Butyl alcohol	4.08	59	3126	0.031	ppbv	96
20) Methylene Chloride	3.95	84	99910	2.073	ppbv	97
25) Ethyl Acetate	5.22	43	18896	0.075	ppbv #	77
26) Hexane	5.23	57	54744	0.529	ppbv #	37
29) Chloroform	5.28	83	1165300	7.195	ppbv	96
36) Benzene	6.38	78	813525	3.877	ppbv	97
39) 1,2-Dichloropropane	6.66	63	683450	8.690	ppbv #	24
42) Bromodichloromethane	7.25	83	977340	6.134	ppbv	99
53) Toluene	9.22	91	1644332	6.994	ppbv	99
58) Ethyl Benzene	12.09	91	1637250	5.686	ppbv	100
59) m/p-Xylene	12.09	91	1637250	6.324	ppbv #	100
64) n-propylbenzene	15.35	120	1163343	11.877	ppbv #	1
72) 4-Ethyltoluene	15.35	105	2570264	8.814	ppbv #	100
73) 1,3,5-Trimethylbenzene	15.35	105	2570264	9.651	ppbv	97
75) 1,3-Dichlorobenzene	16.47	146	1824501	10.114	ppbv	98
76) 1,4-Dichlorobenzene	16.47	146	1824501	10.099	ppbv	99

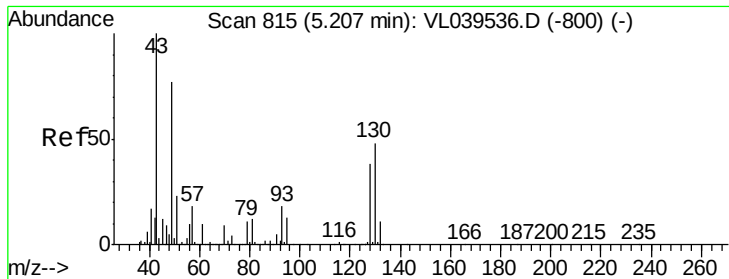
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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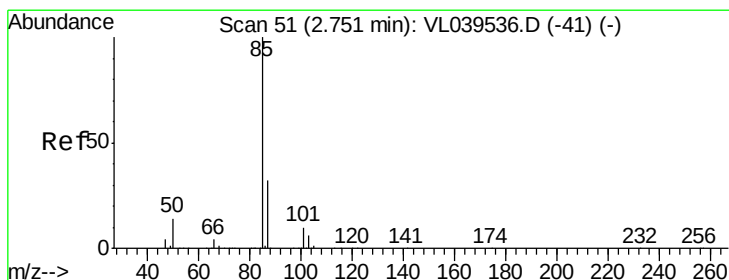
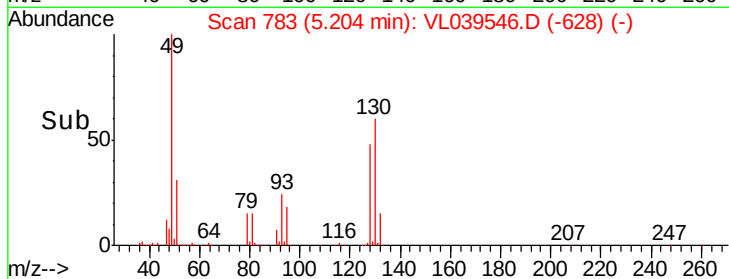
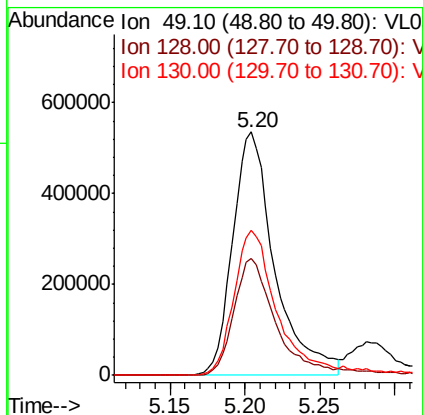
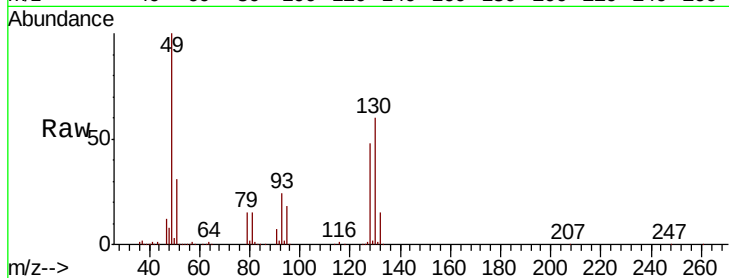
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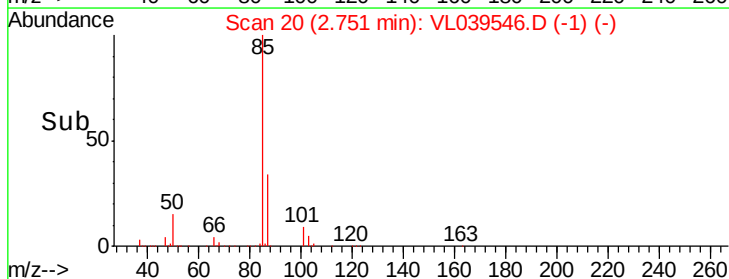
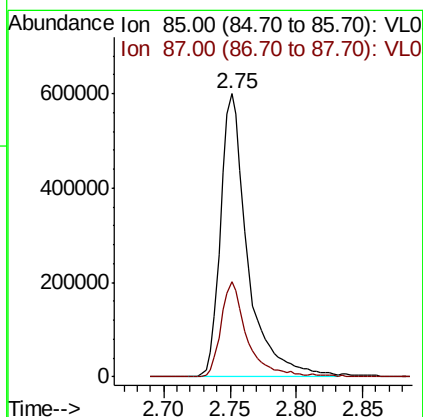
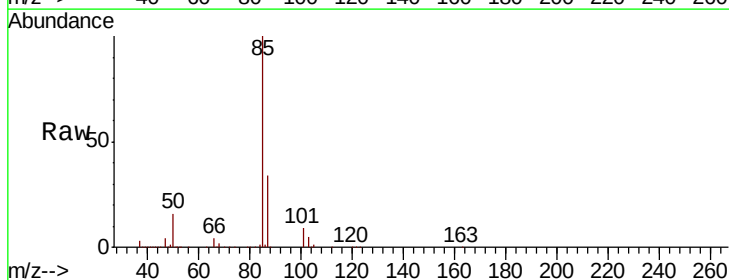
#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.20
 Instrument: MSVOA_L
 Delta R.T.:
 Lab File: ClientSampleId : E061-1100DL
 Acq: 17 Aug 2022 12:45

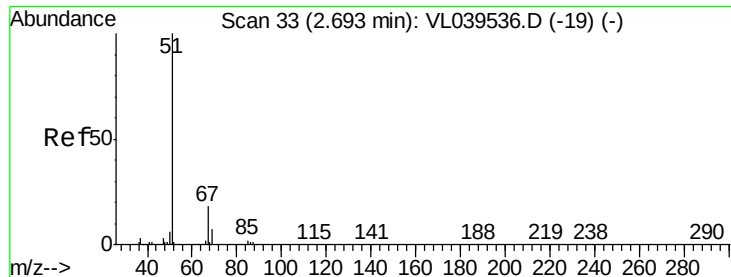
Tot Ion: 49 Resp: 1047517
 Ion Ratio Lower Upper
 49 100
 128 50.6 25.7 77.0
 130 64.8 31.6 95.0



#2
 Dichlorodifluoromethane
 Concen: 6.061 ppbv
 RT: 2.75 min Scan# 20
 Delta R.T.: 0.00 min
 Lab File: VL039546.D
 Acq: 17 Aug 2022 12:45

Tgt Ion: 85 Resp: 853351
 Ion Ratio Lower Upper
 85 100
 87 33.7 25.9 38.9





#3

Chlorodifluoromethane

Concen: 0.041 ppbv

RT: 2.75 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: E061-1100DL

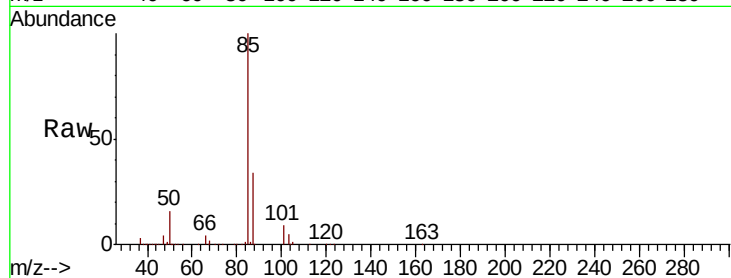
Acq: 17 Aug 2022 12:45

Tot Ion: 51 Resp: 5112

Ion Ratio Lower Upper

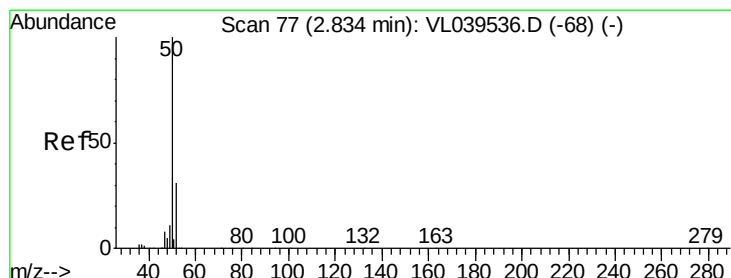
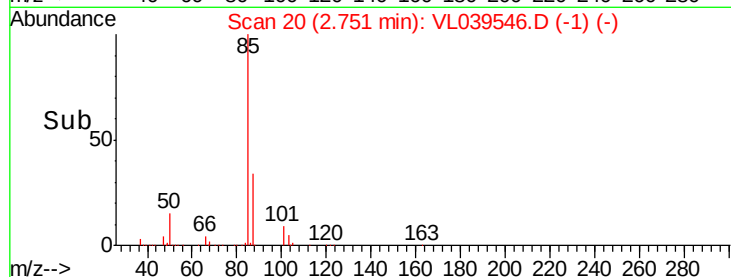
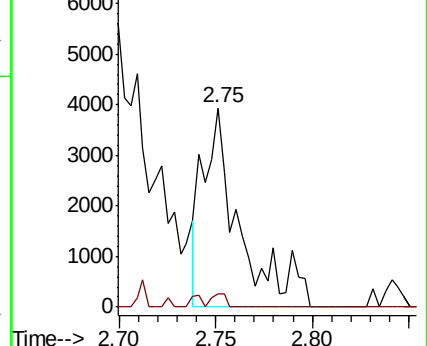
51 100

67 4.4 14.7 22.1#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 1.578 ppbv

RT: 2.75 min Scan# 20

Delta R.T. -0.08 min

Lab File: VL039546.D

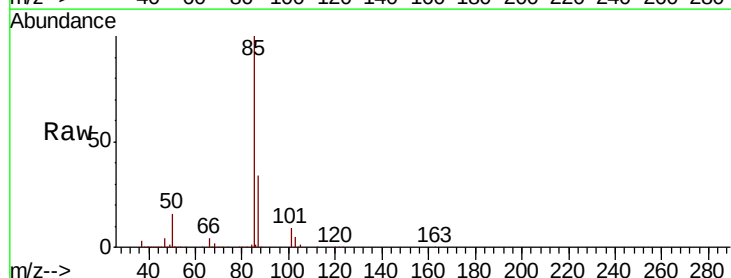
Acq: 17 Aug 2022 12:45

Tgt Ion: 50 Resp: 118480

Ion Ratio Lower Upper

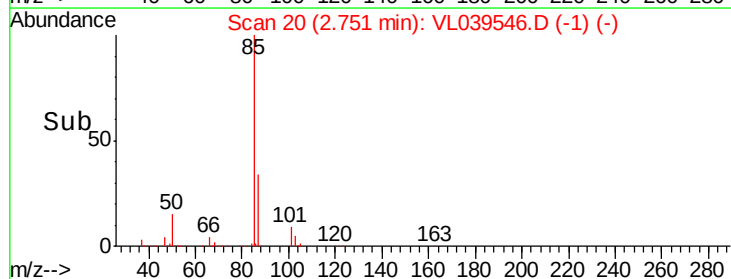
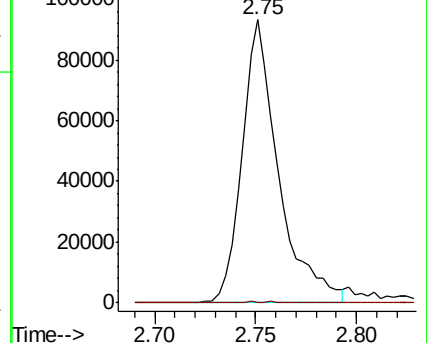
50 100

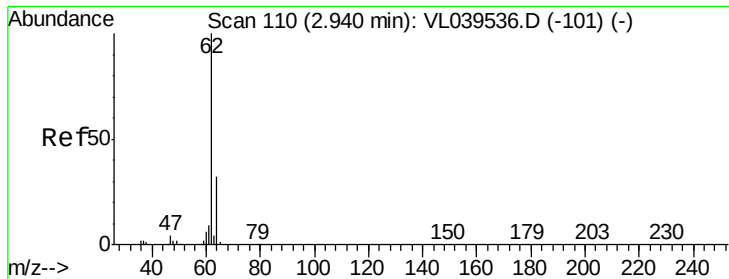
52 0.2 24.3 36.5#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 4.910 ppbv

RT: 2.94 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId: E061-1100DL

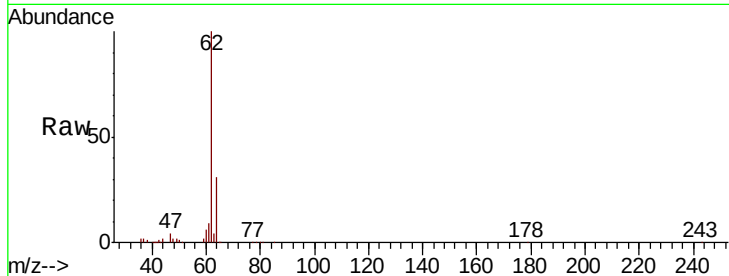
Acq: 17 Aug 2022 12:45

Tot Ion: 62 Resp: 317845

Ion Ratio Lower Upper

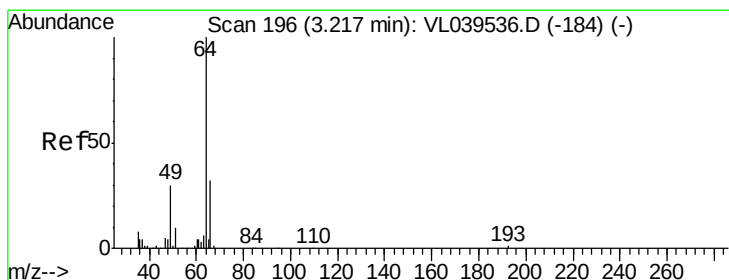
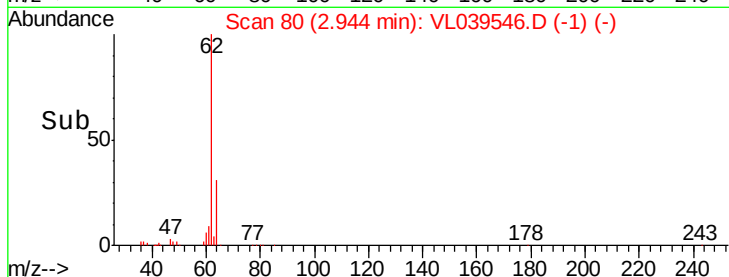
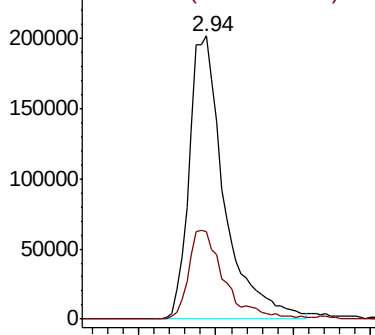
62 100

64 31.1 25.5 38.3



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0



#7

Chloroethane

Concen: 0.052 ppbv

RT: 3.02 min Scan# 103

Delta R.T. -0.20 min

Lab File: VL039546.D

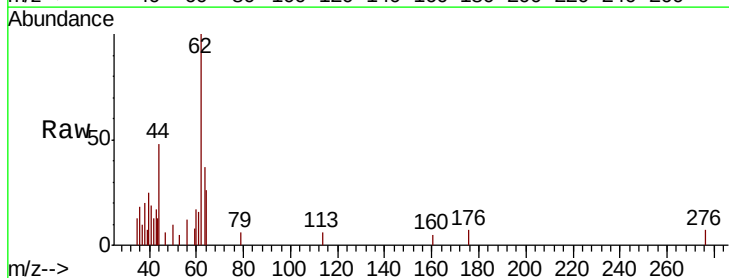
Acq: 17 Aug 2022 12:45

Tgt Ion: 64 Resp: 1209

Ion Ratio Lower Upper

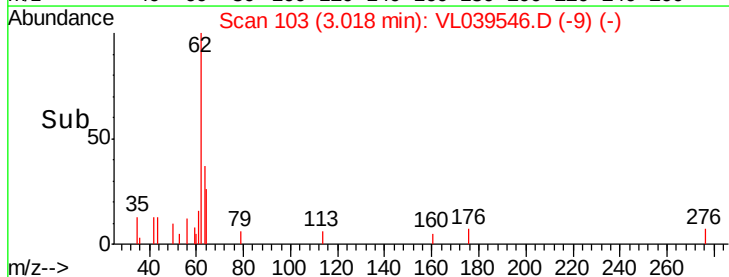
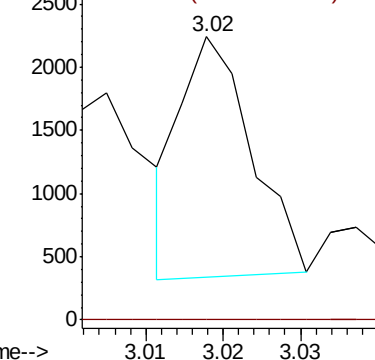
64 100

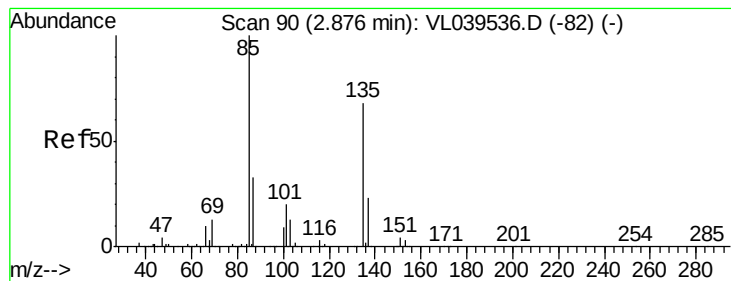
66 0.0 25.6 38.4#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0





#8

Dichlorotetrafluoroethane

Concen: 5.644 ppbv

RT: 2.75 Instrument: MSVOA_1

Delta R.T. 0.01 min

Lab File: ClientSampleId: E061-1100DL

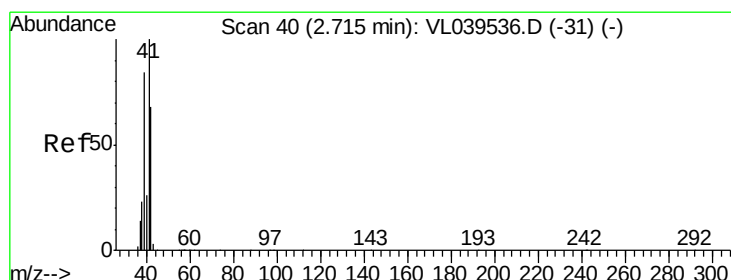
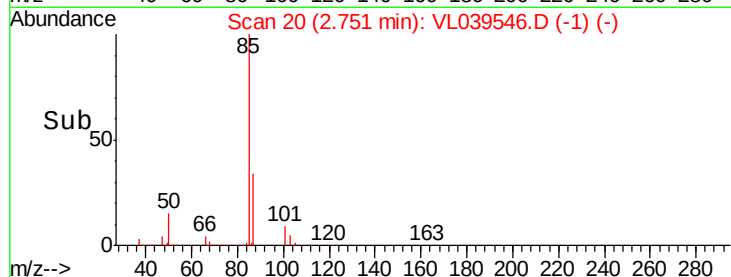
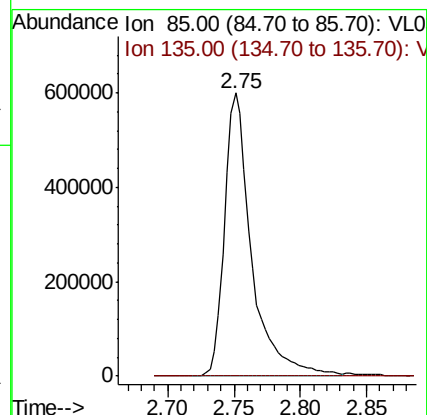
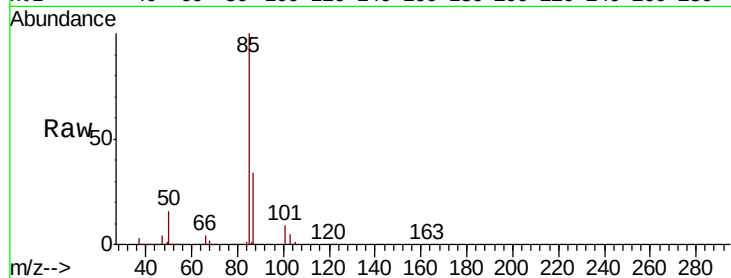
Acq: 17 Aug 2022 12:45

Tot Ion: 85 Resp: 853351

Ion Ratio Lower Upper

85 100

135 0.0 56.3 84.5#



#9

Propene

Concen: 0.120 ppbv

RT: 2.73 min Scan# 13

Delta R.T. 0.01 min

Lab File: VL039546.D

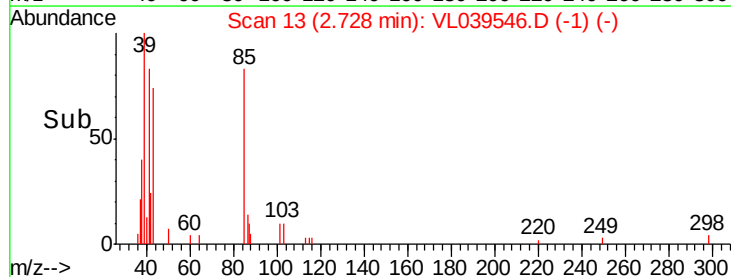
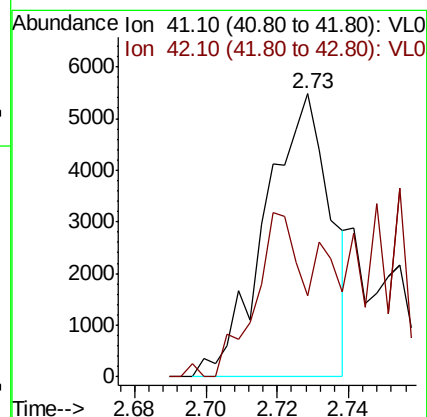
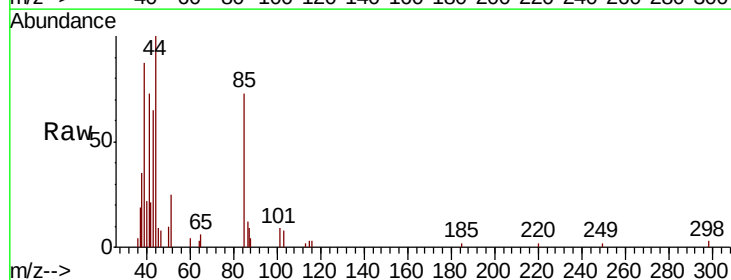
Acq: 17 Aug 2022 12:45

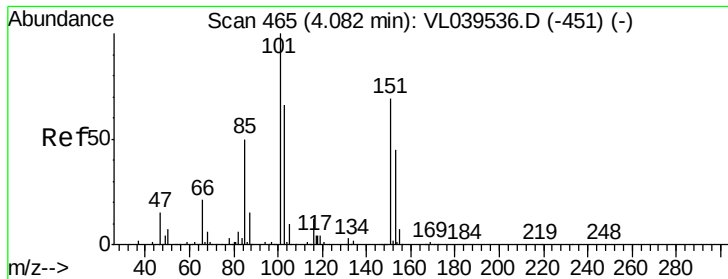
Tgt Ion: 41 Resp: 6890

Ion Ratio Lower Upper

41 100

42 36.7 55.4 83.0#





#12

1,1,2-Trichlorotrifluoroethane

Concen: 8.103 ppbv

RT: 4.09 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

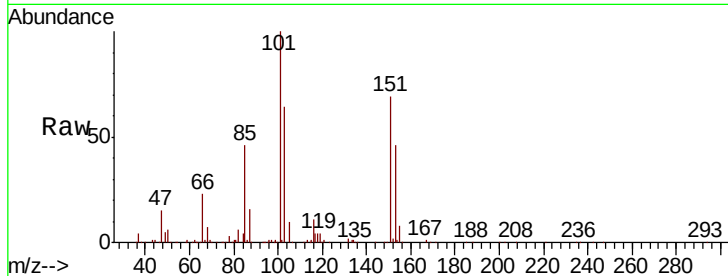
Acq: 17 Aug 2022 12:45 E061-1100DL

Tot Ion:101 Resp: 925746

Ion Ratio Lower Upper

101 100

151 72.0 58.6 87.8



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V

4.09

500000

400000

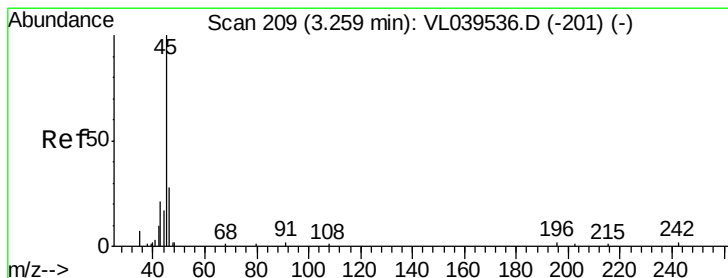
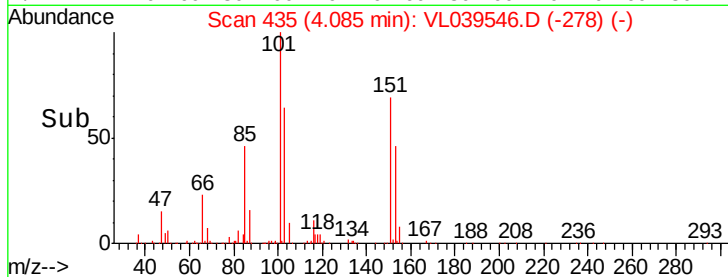
300000

200000

100000

0

Time--> 4.00 4.05 4.10 4.15



#13

Ethanol

Concen: 0.042 ppbv

RT: 3.25 min Scan# 175

Delta R.T. -0.01 min

Lab File: VL039546.D

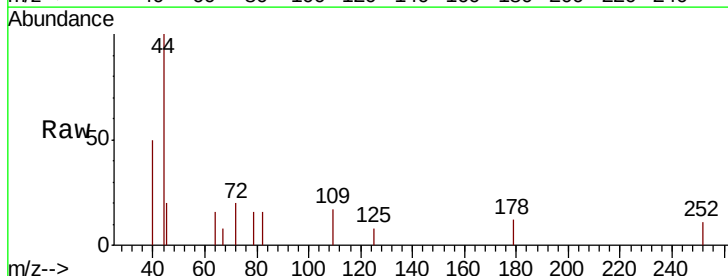
Acq: 17 Aug 2022 12:45

Tgt Ion: 45 Resp: 171

Ion Ratio Lower Upper

45 100

46 0.0 19.3 77.1#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0

800

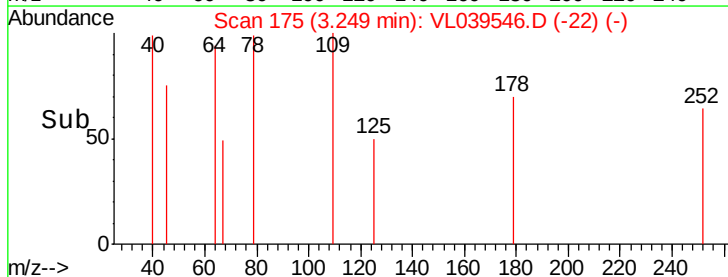
600

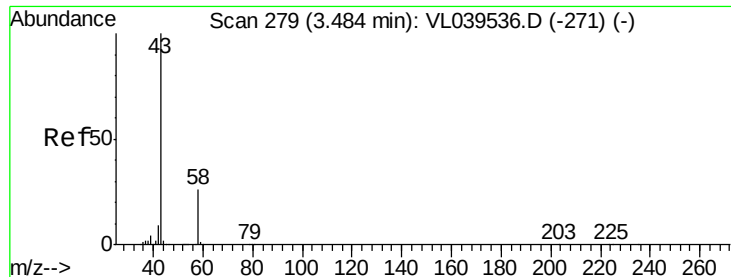
400

200

0

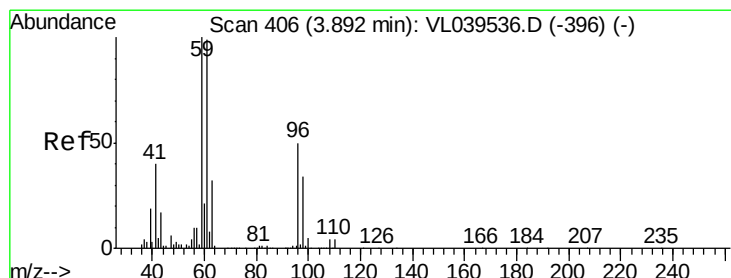
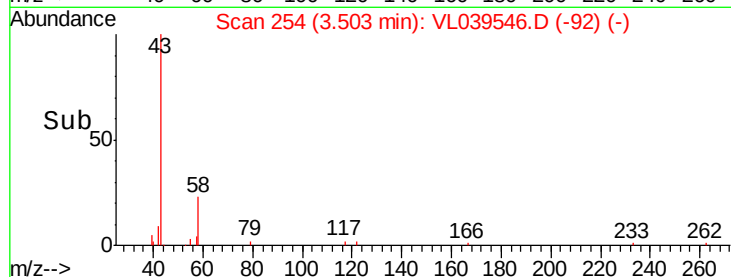
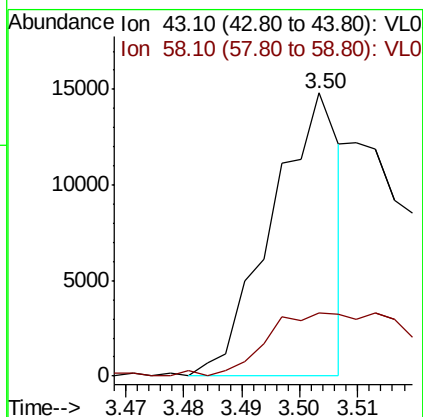
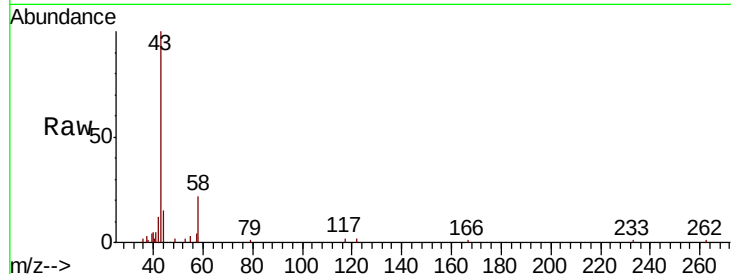
Time--> 3.23 3.24 3.25 3.25 3.25





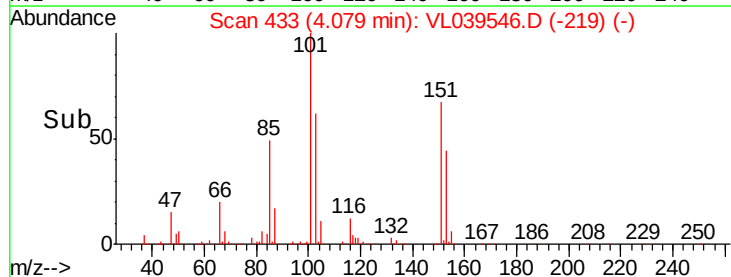
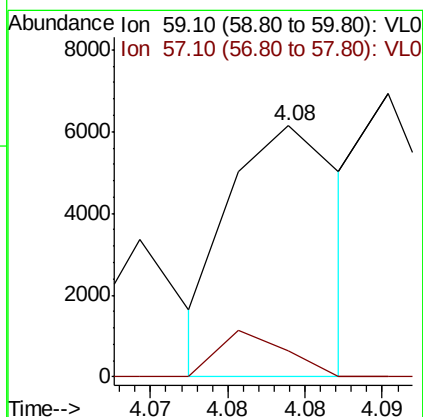
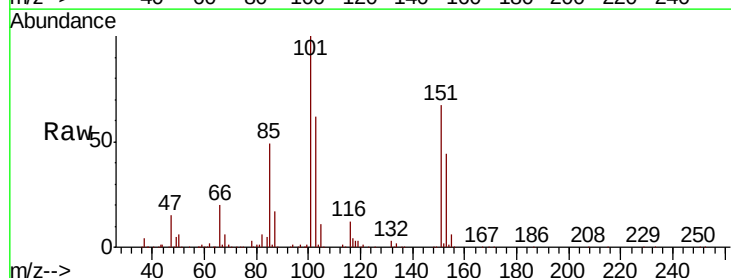
#15
Acetone
Concen: 0.102 ppbv
RT: 3.50
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
E061-1100DL
Acq: 17 Aug 2022 12:45

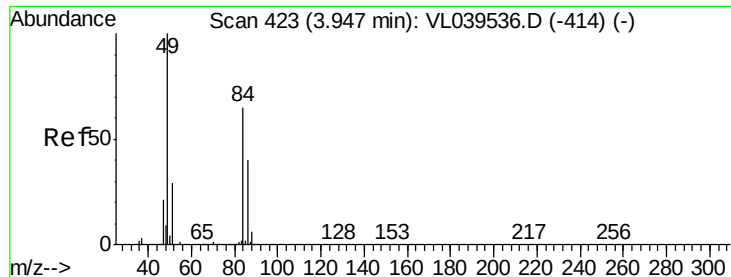
Tot Ion: 43 Resp: 12018
Ion Ratio Lower Upper
43 100
58 0.0 20.7 31.1#



#17
tert-Butyl alcohol
Concen: 0.031 ppbv
RT: 4.08 min Scan# 433
Delta R.T. 0.19 min
Lab File: VL039546.D
Acq: 17 Aug 2022 12:45

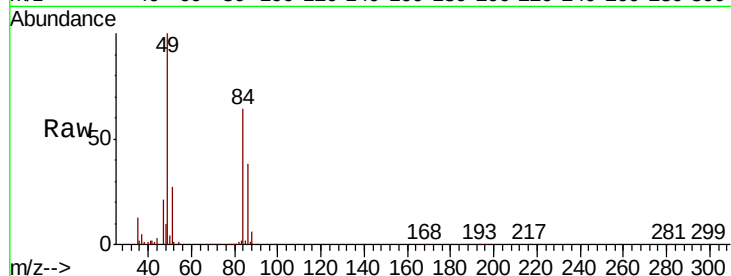
Tgt Ion: 59 Resp: 3126
Ion Ratio Lower Upper
59 100
57 12.1 8.6 12.8



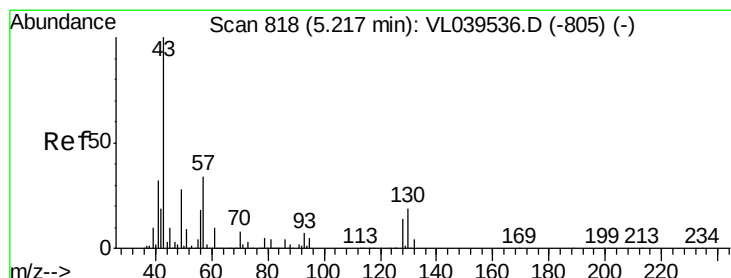
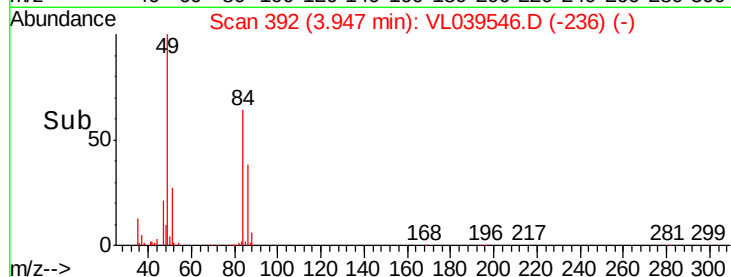
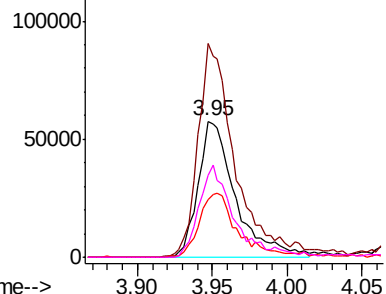


#20
Methylene Chloride
Concen: 2.073 ppbv
RT: 3.95
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
E061-1100DL
Acq: 17 Aug 2022 12:45

Tot Ion:	84	Resp:	99910
Ion	Ratio	Lower	Upper
84	100		
49	156.7	122.2	183.4
51	42.4	35.8	53.6
86	60.2	48.4	72.6

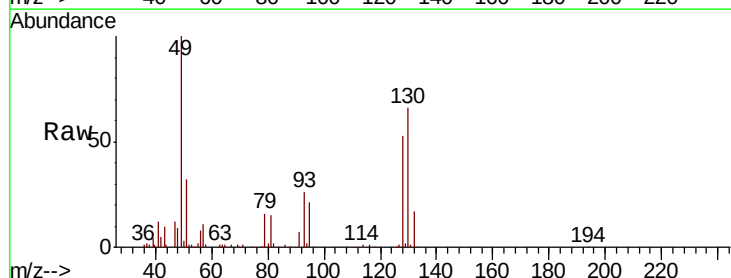


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

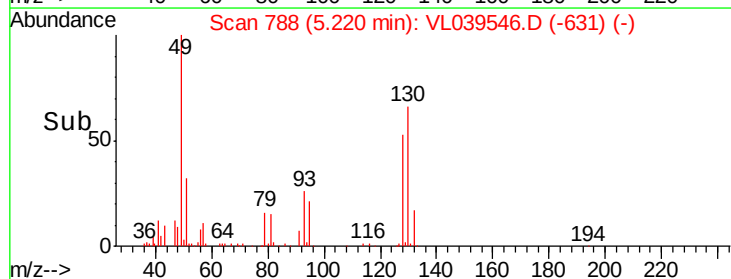
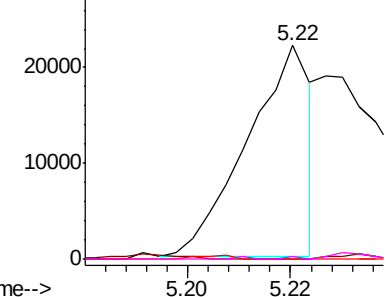


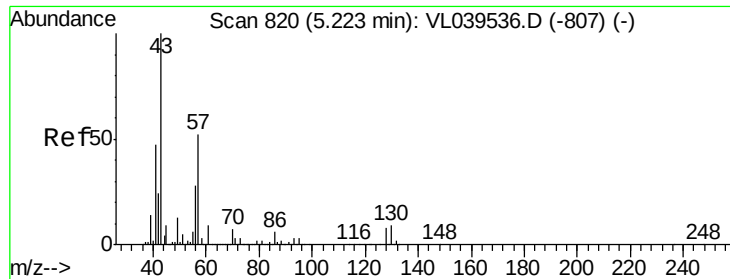
#25
Ethyl Acetate
Concen: 0.075 ppbv
RT: 5.22 min Scan# 788
Delta R.T.: 0.00 min
Lab File: VL039546.D
Acq: 17 Aug 2022 12:45

Tgt Ion:	43	Resp:	18896
Ion	Ratio	Lower	Upper
43	100		
45	2.3	8.2	12.4#
61	0.9	8.6	12.8#
70	0.0	5.7	8.5#



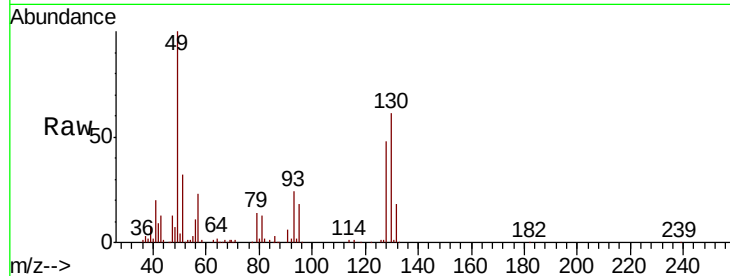
Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0





#26
Hexane
Concen: 0.529 ppbv
RT: 5.23
Instrument: MSVOA_L
Delta R.T.:
Lab File: ClientSampleId :
E061-1100DL
Acq: 17 Aug 2022 12:45

Tot Ion	Ion	Ratio	Lower	Upper
57	100			
41	111.5	79.4	119.2	
43	83.4	199.7	299.5	
56	61.4	44.0	66.0	



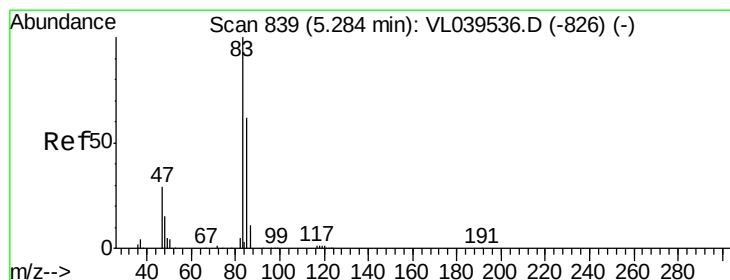
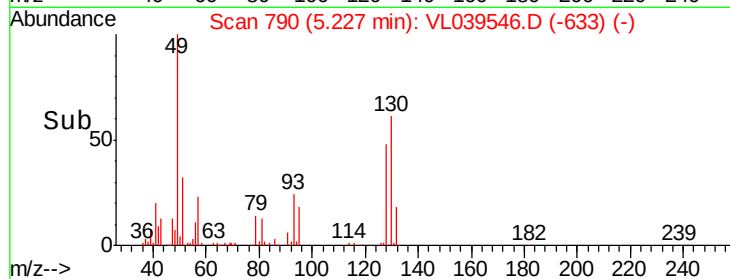
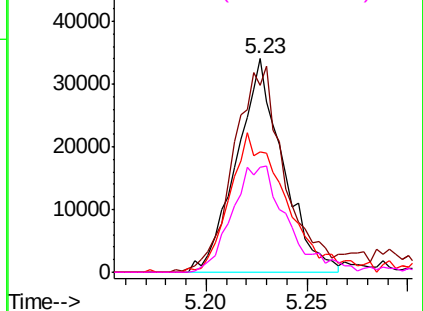
Abundance

Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

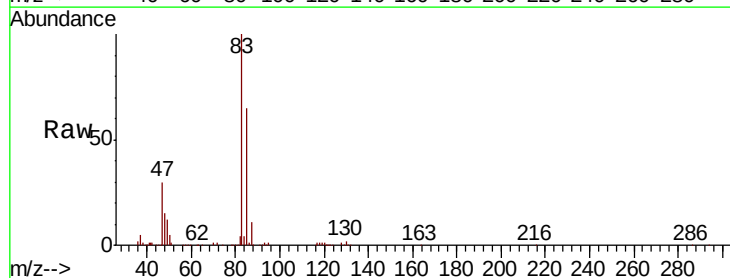
Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#29
Chloroform
Concen: 7.195 ppbv
RT: 5.28 min Scan# 808
Delta R.T.: 0.00 min
Lab File: VL039546.D
Acq: 17 Aug 2022 12:45

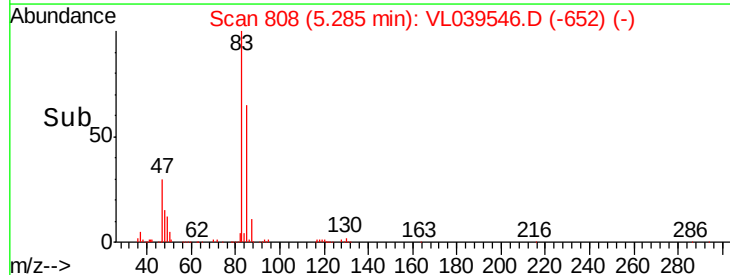
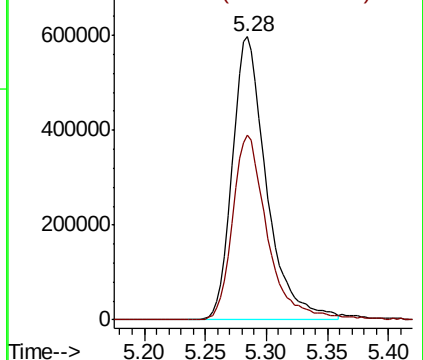
Tgt Ion	Ion	Ratio	Lower	Upper
83	100			
85	65.4	49.8	74.8	

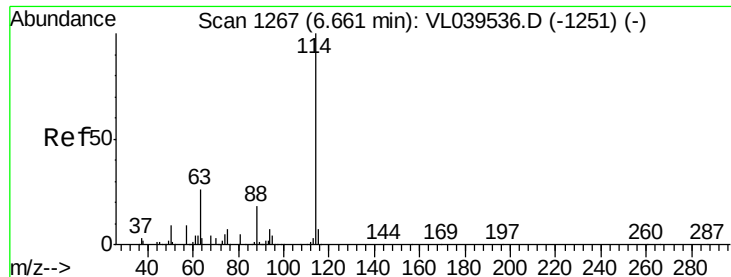


Abundance

Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0

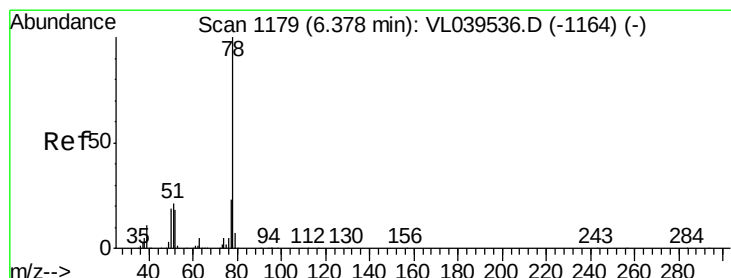
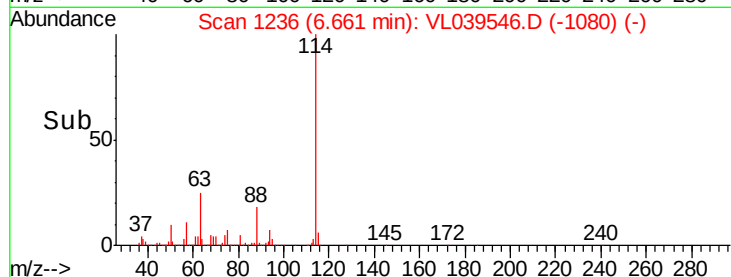
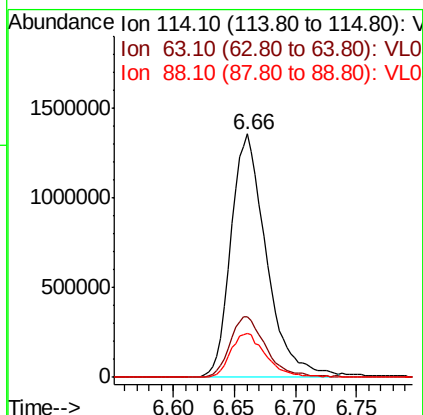
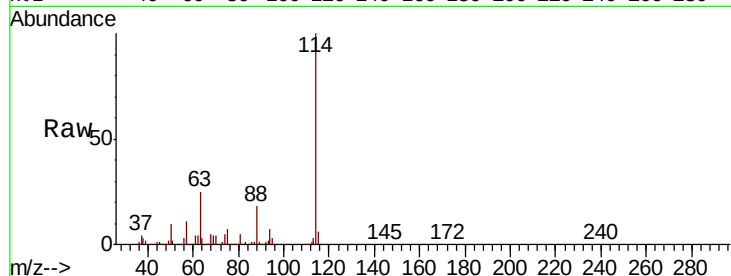




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 6.66
 Instrument: MSVOA_L
 Delta R.T.:
 Lab File: ClientSampleId:
 E061-1100DL
 Acq: 17 Aug 2022 12:45

Tot Ion:114 Resp: 2753351

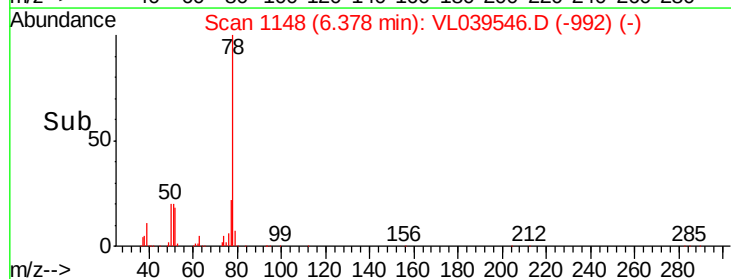
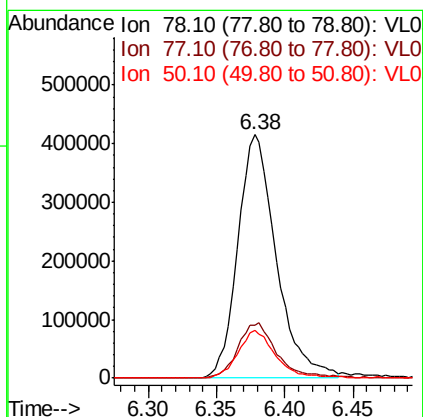
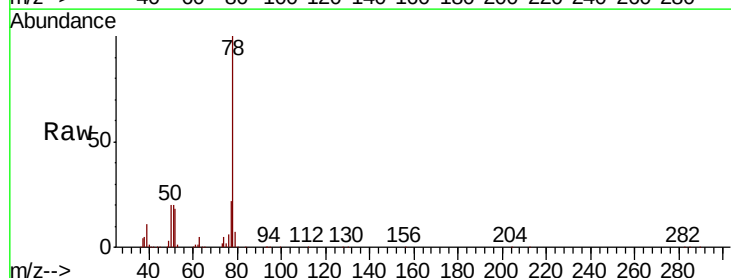
Ion	Ratio	Lower	Upper
114	100		
63	25.6	20.6	31.0
88	18.2	14.6	22.0

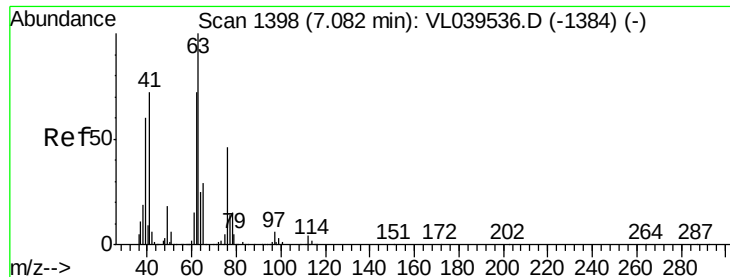


#36
 Benzene
 Concen: 3.877 ppbv
 RT: 6.38 min Scan# 1148
 Delta R.T.: 0.00 min
 Lab File: VL039546.D
 Acq: 17 Aug 2022 12:45

Tgt Ion: 78 Resp: 813525

Ion	Ratio	Lower	Upper
78	100		
77	21.7	18.6	27.8
50	19.7	15.0	22.4





#39

1,2-Dichloropropane

Concen: 8.690 ppbv

RT: 6.66 Instrument: MSVOA_1

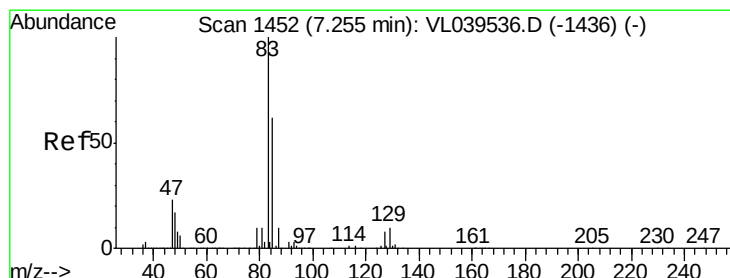
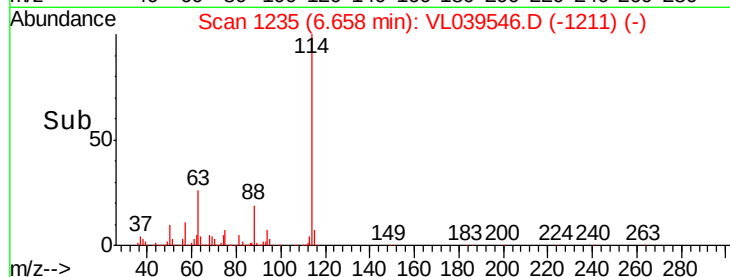
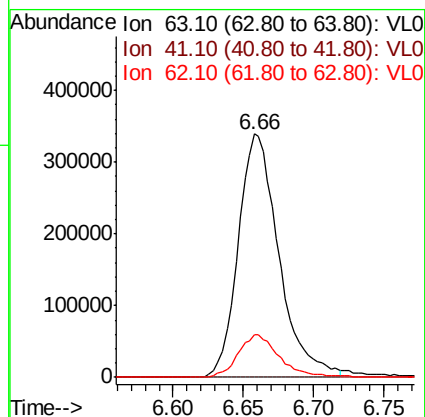
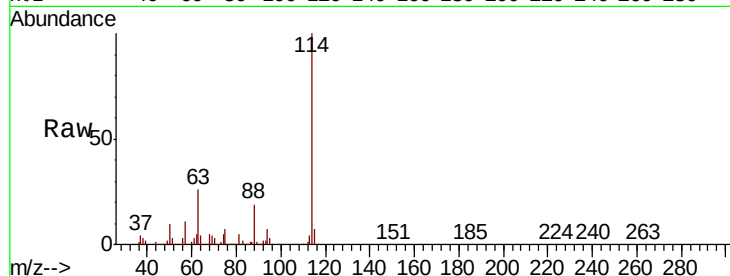
Delta R.T.

Lab File: ClientSampleId:

Acq: 17 Aug 2022 12:45

Tot Ion: 63 Resp: 683450

Ion	Ratio	Lower	Upper
63	100		
41	0.0	58.0	87.0#
62	17.4	57.8	86.8#



#42

Bromodichloromethane

Concen: 6.134 ppbv

RT: 7.25 min Scan# 1420

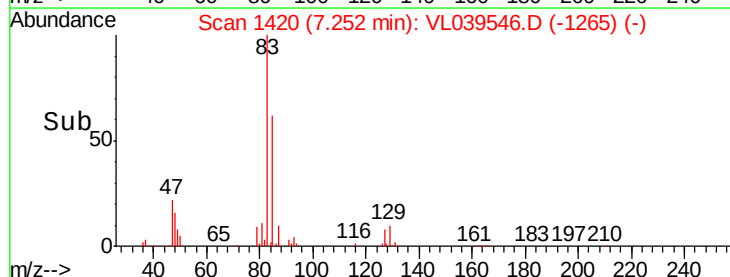
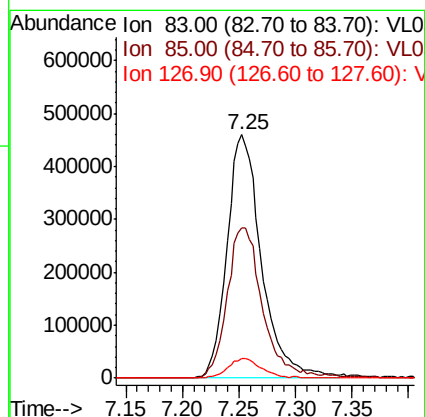
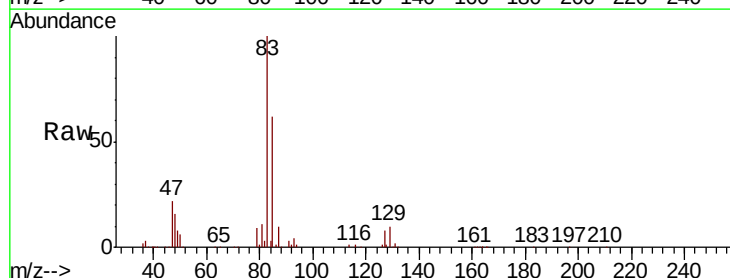
Delta R.T. -0.00 min

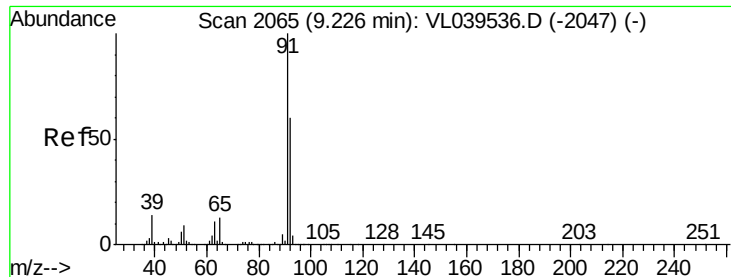
Lab File: VL039546.D

Acq: 17 Aug 2022 12:45

Tgt Ion: 83 Resp: 977340

Ion	Ratio	Lower	Upper
83	100		
85	61.5	49.9	74.9
127	7.9	6.7	10.1





#53

Toluene

Concen: 6.994 ppbv

RT: 9.22 Instrument: MSVOA_1

Delta R.T. 0.00 min

Lab File: ClientSampleId: E061-1100DL

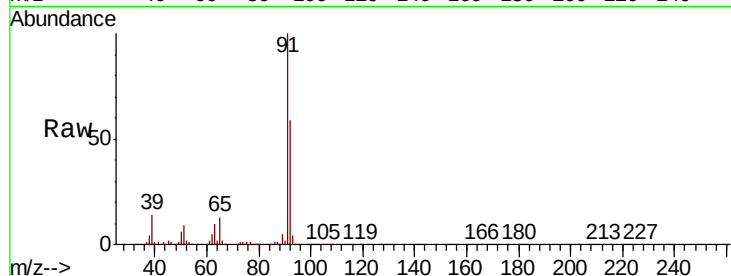
Acq: 17 Aug 2022 12:45

Tot Ion: 91 Resp: 1644332

Ion Ratio Lower Upper

91 100

92 60.8 47.9 71.9



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.22

800000

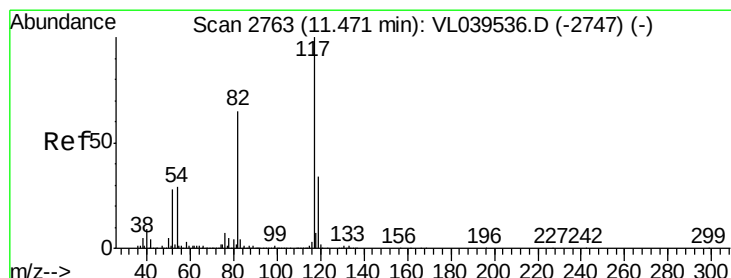
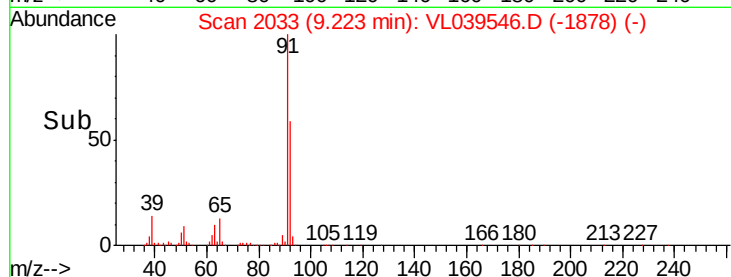
600000

400000

200000

0

Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 11.47 min Scan# 2732

Delta R.T. 0.00 min

Lab File: VL039546.D

Acq: 17 Aug 2022 12:45

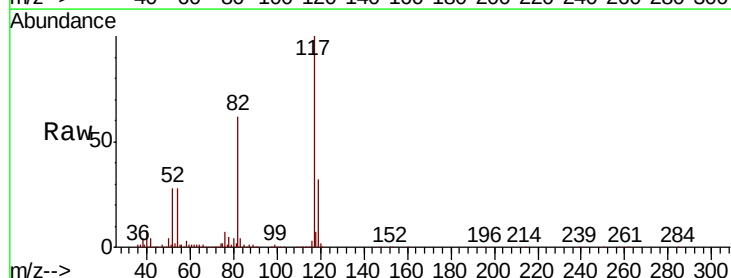
Tgt Ion: 117 Resp: 2486502

Ion Ratio Lower Upper

117 100

82 65.2 49.1 73.7

119 34.4 25.9 38.9



Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V

11.47

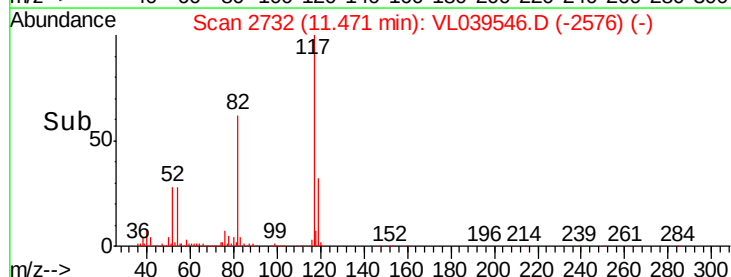
1500000

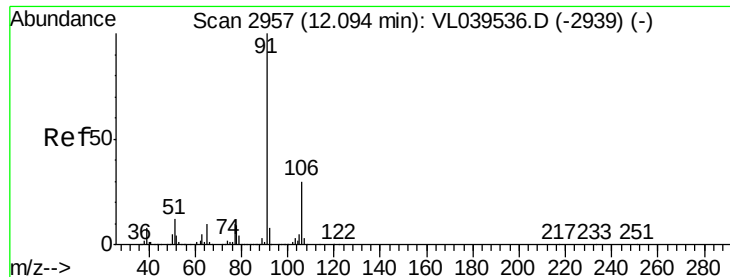
1000000

500000

0

Time-->





#58

Ethyl Benzene

Concen: 5.686 ppbv

RT: 12.09 min

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

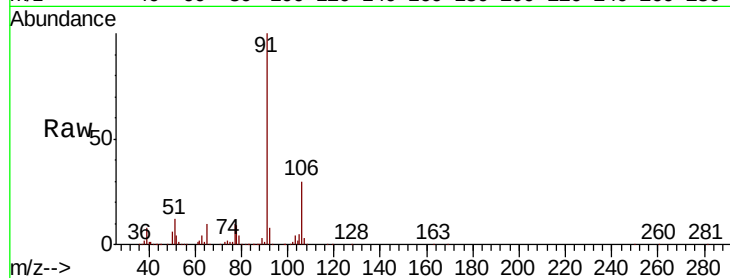
Acq: 17 Aug 2022 12:45

Tot Ion: 91 Resp: 1637250

Ion Ratio Lower Upper

91 100

106 30.1 24.2 36.4



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

12.09

800000

600000

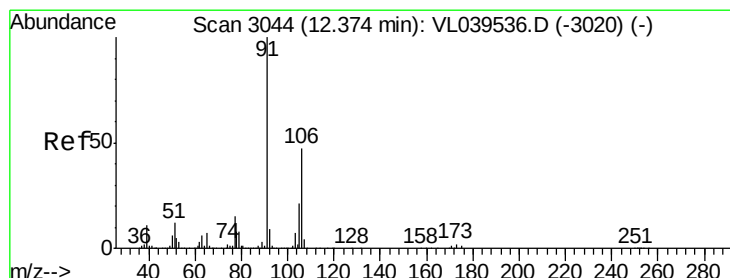
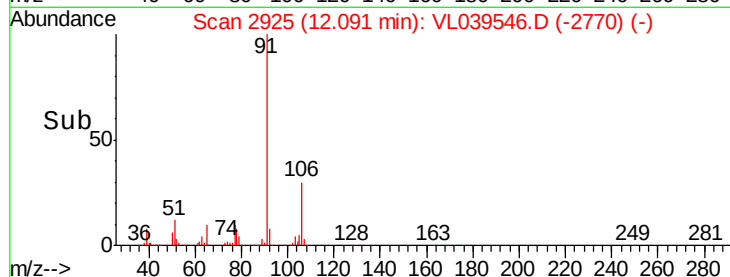
400000

200000

0

Time-->

12.00 12.10 12.20



#59

m/p-Xylene

Concen: 6.324 ppbv

RT: 12.09 min Scan# 2925

Delta R.T. -0.28 min

Lab File: VL039546.D

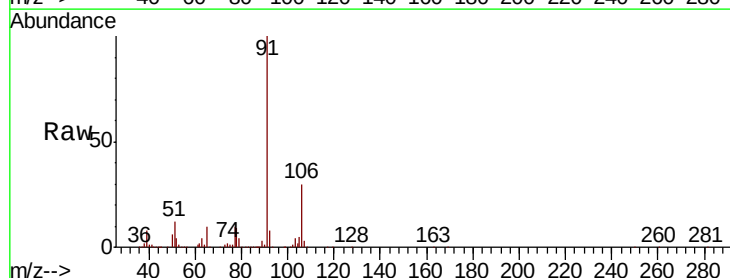
Acq: 17 Aug 2022 12:45

Tgt Ion: 91 Resp: 1637250

Ion Ratio Lower Upper

91 100

106 30.6 0.0 0.0#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

12.09

800000

600000

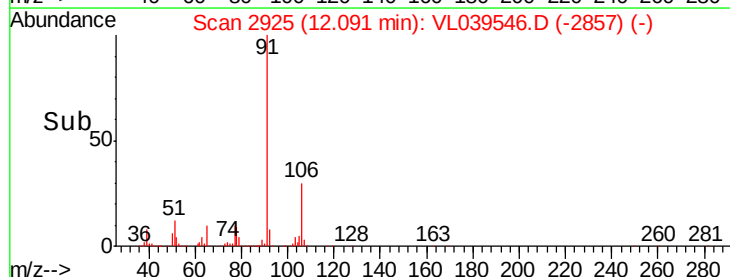
400000

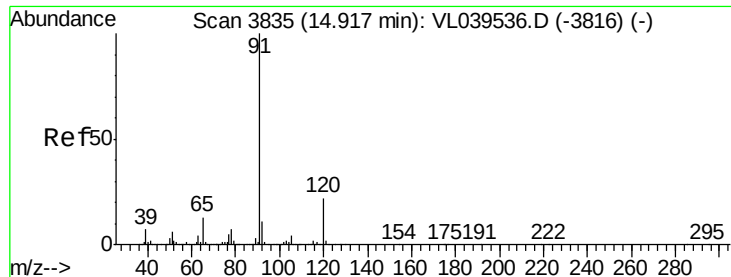
200000

0

Time-->

12.00 12.10 12.20





#64

n-propylbenzene

Concen: 11.877 ppbv

RT: 15.35

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

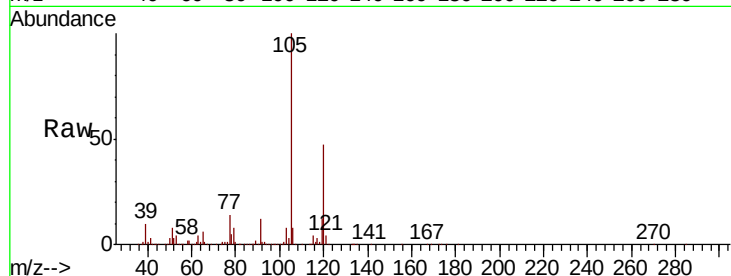
Acq: 17 Aug 2022 12:45

Tot Ion:120 Resp: 1163343

Ion Ratio Lower Upper

120 100

91 0.0 372.6 559.0#



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

15.35

500000

400000

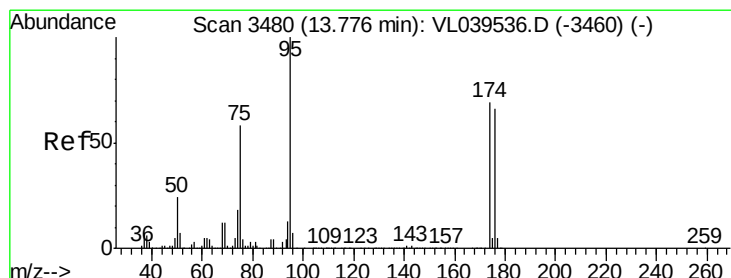
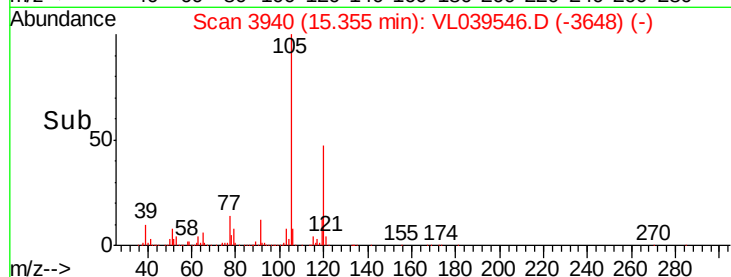
300000

200000

100000

0

Time--> 15.25 15.30 15.35 15.40



#68

1-Bromo-4-Fluorobenzene

Concen: 10.484 ppbv

RT: 13.78 min Scan# 3449

Delta R.T. 0.00 min

Lab File: VL039546.D

Acq: 17 Aug 2022 12:45

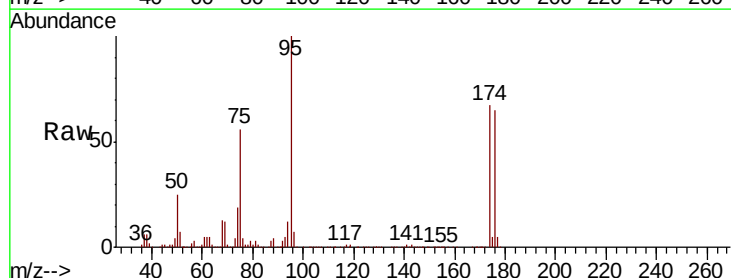
Tgt Ion: 95 Resp: 1962503

Ion Ratio Lower Upper

95 100

174 72.0 56.3 84.5

175 5.6 4.3 6.5



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

13.78

1000000

800000

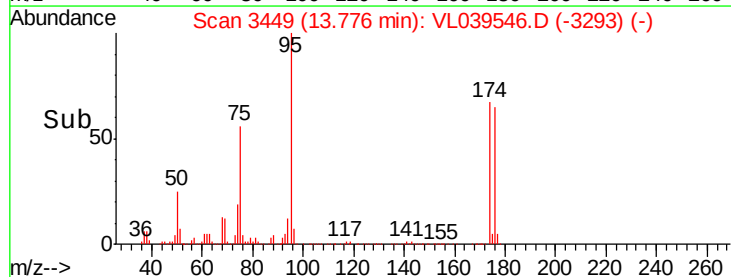
600000

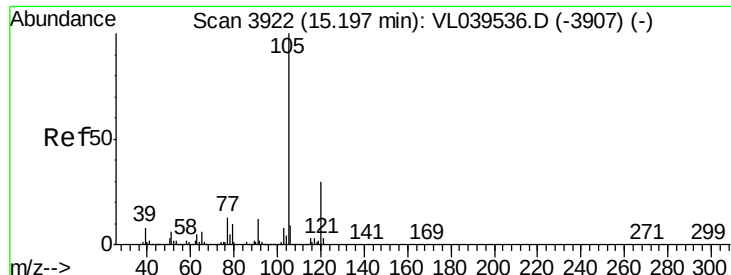
400000

200000

0

Time--> 13.70 13.80 13.90





#72

4-Ethyltoluene

Concen: 8.814 ppbv

RT: 15.35 min

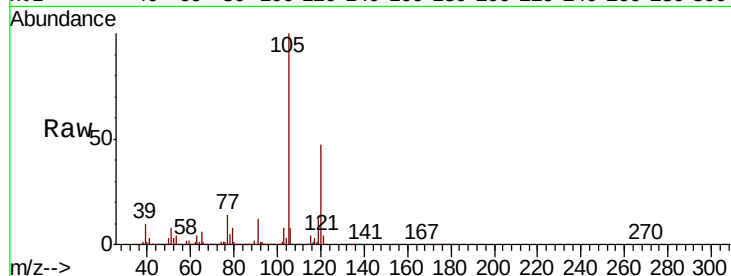
Delta R.T. 0.00 min

Lab File: VL039546.D

Acq: 17 Aug 2022 12:45

Tot Ion:105 Resp: 2570264

Ion	Ratio	Lower	Upper
105	100		
120	47.5	0.0	0.0#
91	12.2	0.0	0.0#
77	15.3	0.0	0.0#



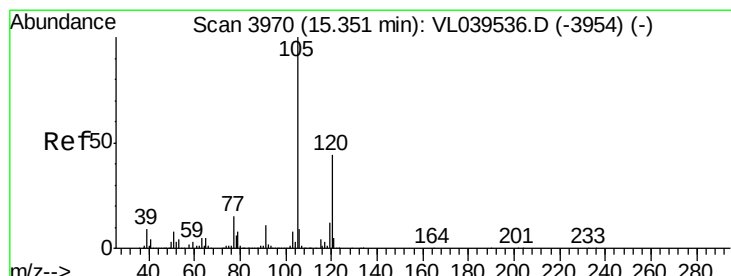
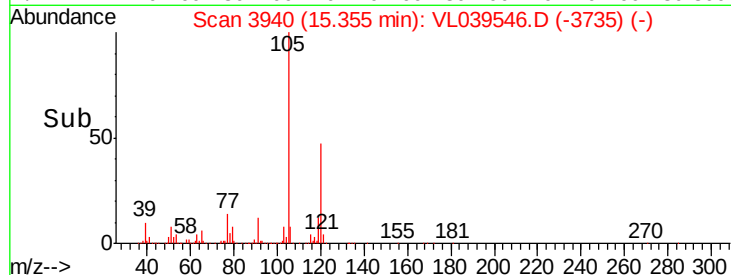
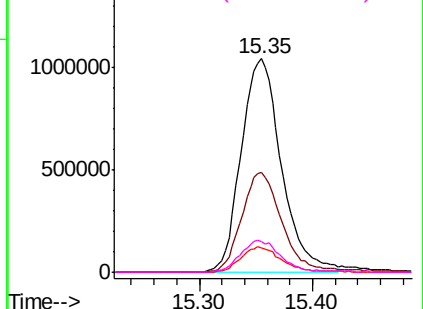
Abundance

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



#73

1,3,5-Trimethylbenzene

Concen: 9.651 ppbv

RT: 15.35 min Scan# 3940

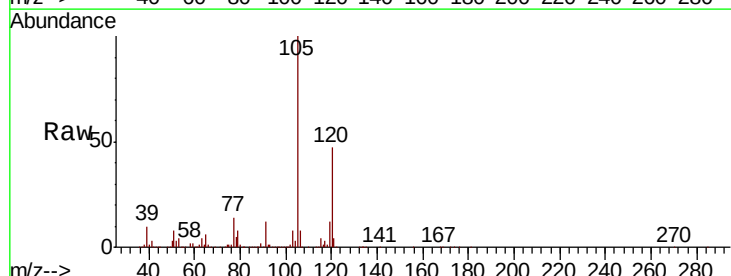
Delta R.T. 0.00 min

Lab File: VL039546.D

Acq: 17 Aug 2022 12:45

Tgt Ion:105 Resp: 2570264

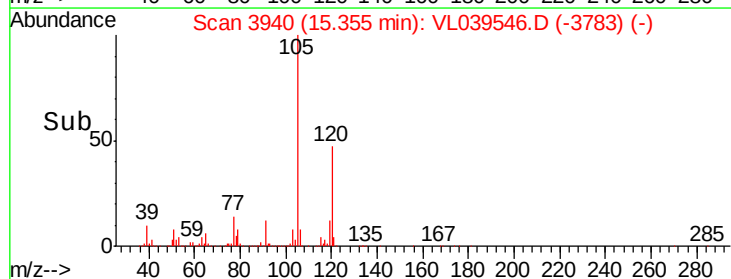
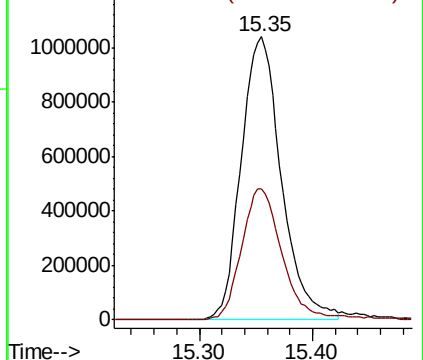
Ion	Ratio	Lower	Upper
105	100		
120	46.5	35.4	53.2

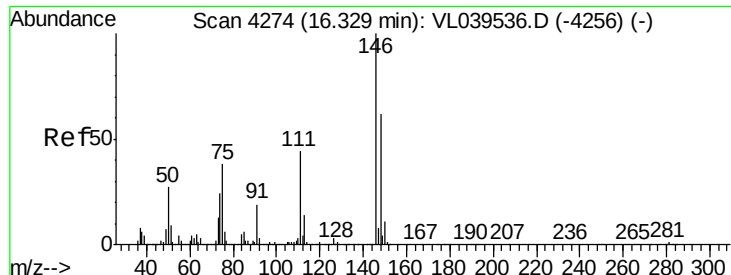


Abundance

Ion 105.10 (104.80 to 105.80): V

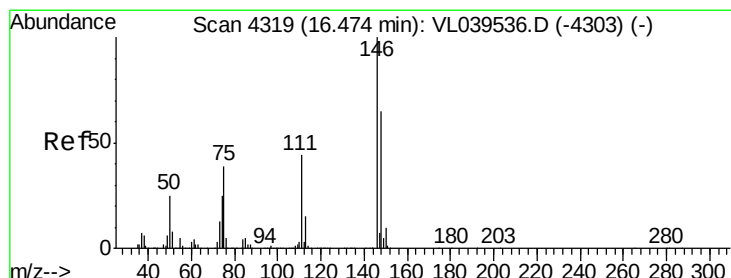
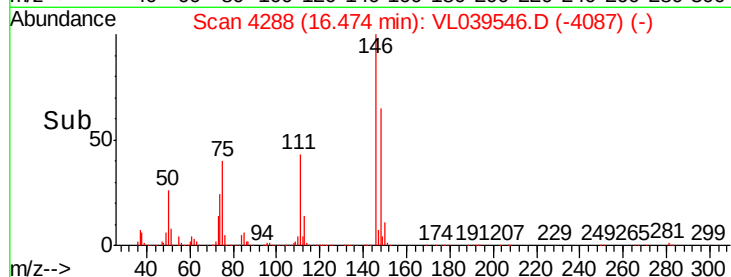
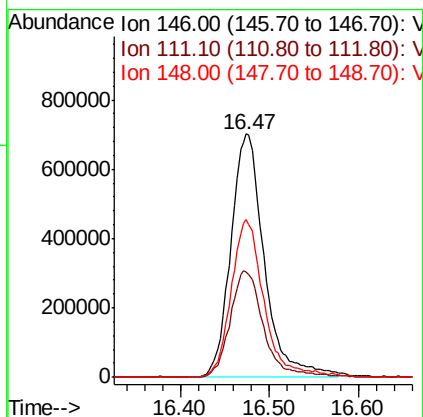
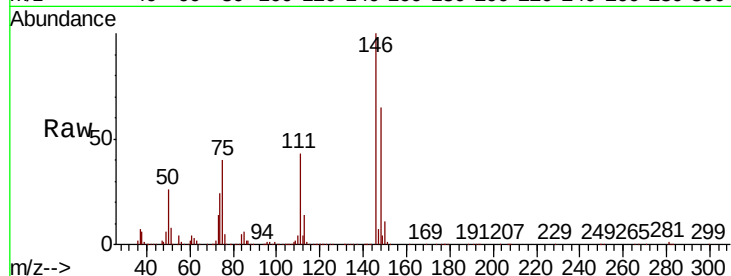
Ion 120.20 (119.90 to 120.90): V





#75
 1,3-Dichlorobenzene
 Concen: 10.114 ppbv
 RT: 16.47 min
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId : E061-1100DL
 Acq: 17 Aug 2022 12:45

Tot Ion:146 Resp: 1824501
 Ion Ratio Lower Upper
 146 100
 111 43.8 22.9 68.5
 148 64.1 32.4 97.0



#76
 1,4-Dichlorobenzene
 Concen: 10.099 ppbv
 RT: 16.47 min Scan# 4288
 Delta R.T. 0.00 min
 Lab File: VL039546.D
 Acq: 17 Aug 2022 12:45

Tgt Ion:146 Resp: 1824501
 Ion Ratio Lower Upper
 146 100
 111 43.8 22.3 66.8
 148 64.1 31.5 94.5

