

Data Path : Z:\voasrv\HPCHEM1\MSVOA L\Data\VL060221\
 Data File : VL037104.D
 Acq On : 2 Jun 2021 16:33
 Operator : SY/AP
 Sample : M2548-09DUP
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-9ADUP

Manual Integrations
 APPROVED

MMDadoda
 6/7/2021 3:00:37 PM

Quant Time: Jun 07 08:40:24 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL051821AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue May 18 2021
 QLast Update : Tue May 18 12:00:15 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1367968	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	3974353	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	3576218	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.40	95	2681825	9.98	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.80%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	54957	0.237	ppbv	93
3) Chlorodifluoromethane	2.96	51	196532m	0.784	ppbv	
4) Chloromethane	3.13	50	45577	0.534	ppbv	98
9) Propene	3.01	41	116474m	1.298	ppbv	
10) Heptane	8.10	43	22551m	0.101	ppbv	
11) Trichlorofluoromethane	3.93	101	47552	0.221	ppbv	96
13) Ethanol	3.61	45	19400205	1620.249	ppbv	97
15) Acetone	3.84	43	1295449m	9.245	ppbv	
17) tert-Butyl alcohol	4.30	59	81719	0.637	ppbv #	72
19) Isopropyl Alcohol	3.98	45	574803	7.632	ppbv #	38
20) Methylene Chloride	4.33	84	327935	4.366	ppbv	99
26) Hexane	5.67	57	223818	1.301	ppbv #	54
29) Chloroform	5.74	83	81829	0.337	ppbv	90
34) 2-Butanone	5.24	43	82639	0.571	ppbv #	86
35) Carbon Tetrachloride	7.00	117	15410m	0.058	ppbv	
36) Benzene	6.87	78	57237	0.167	ppbv #	90
38) Trichloroethene	7.82	130	34520	0.236	ppbv #	82
53) Toluene	9.79	91	197800	0.486	ppbv	98
59) m/p-Xylene	12.95	91	69195m	0.166	ppbv	
61) Styrene	13.51	104	27055	0.121	ppbv	90
69) p-Isopropyltoluene	17.64	119	68355m	0.113	ppbv	

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

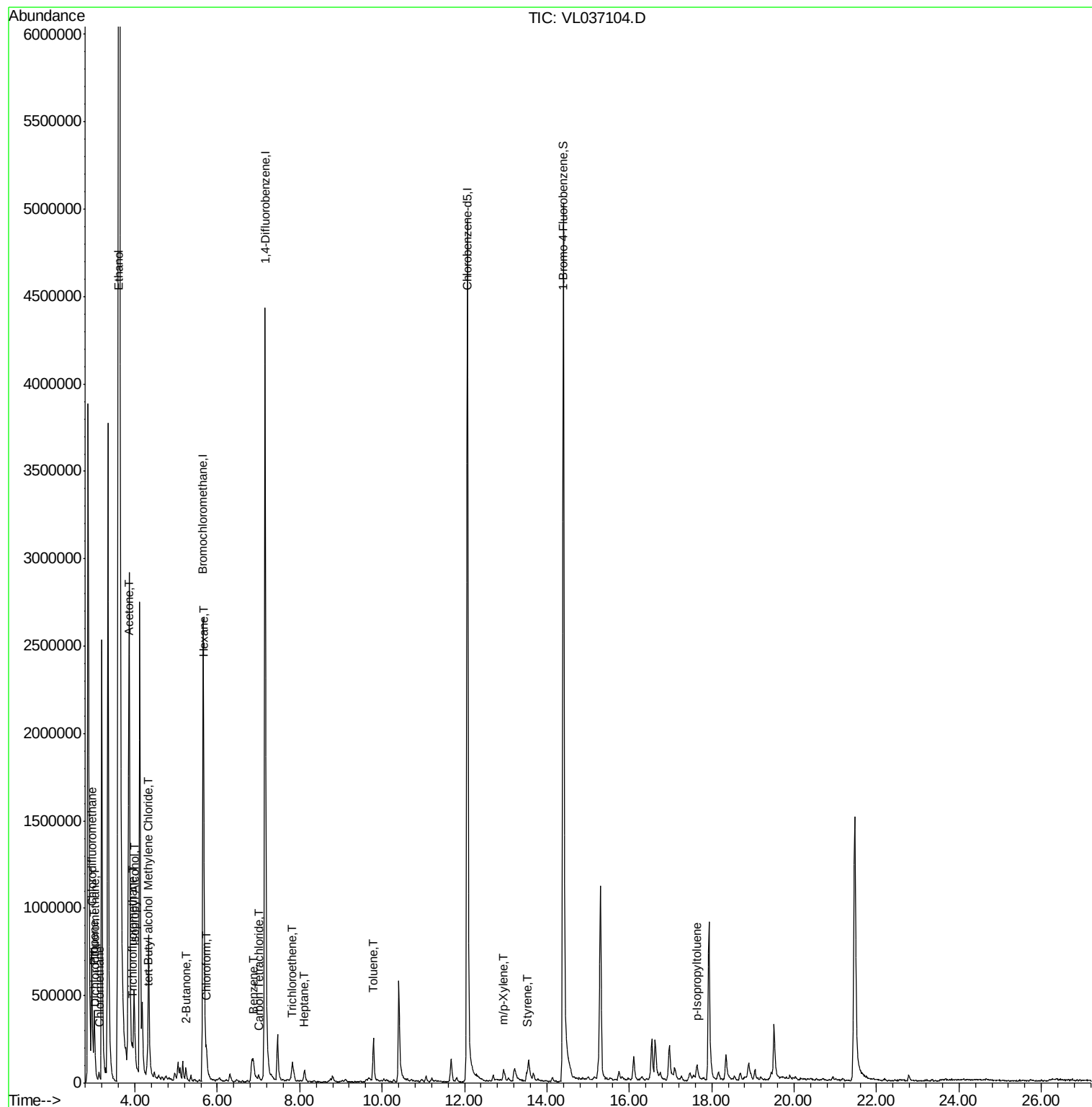
Data Path : Z:\voasrv\HPCHEM1\MSVOA L\Data\VL060221\
Data File : VL037104.D
Acq On : 2 Jun 2021 16:33
Operator : SY/AP
Sample : M2548-09DUP
Misc : 400mL/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

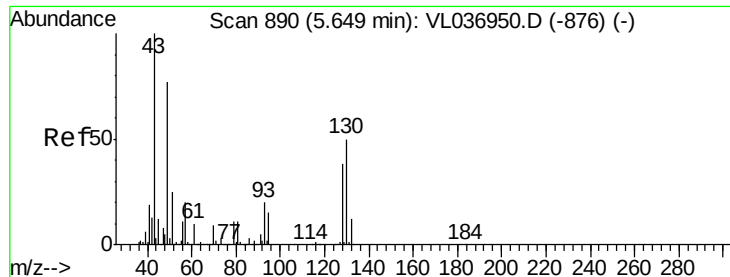
Instrument :
MSVOA_L
ClientSampleId :
IA-9ADUP

Manual Integrations
APPROVED

MMDadoda
6/7/2021 3:00:37 PM

Quant Time: Jun 07 08:40:24 2021
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL051821AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue May
QLast Update : Tue May 18 12:00:15 2021
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 892

Delta R.T. 0.01 min

Lab File: VL037104.D

Acq: 2 Jun 2021 16:33

Instrument :

MSVOA_L

ClientSampleId :

IA-9ADUP

Tot Ion: 49 Resp: 1367968

Ion Ratio Lower Upper

49 100

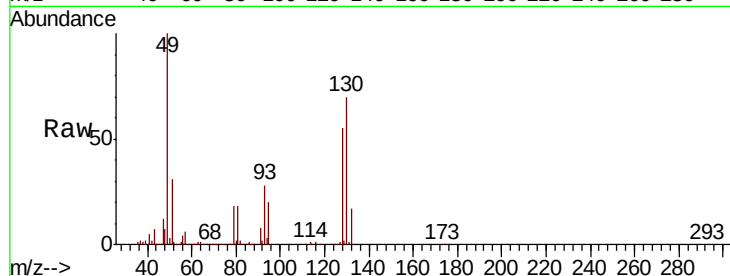
128 57.1 26.9 80.7

130 73.0 33.8 101.4

Manual Integrations
APPROVED

MMDadoda

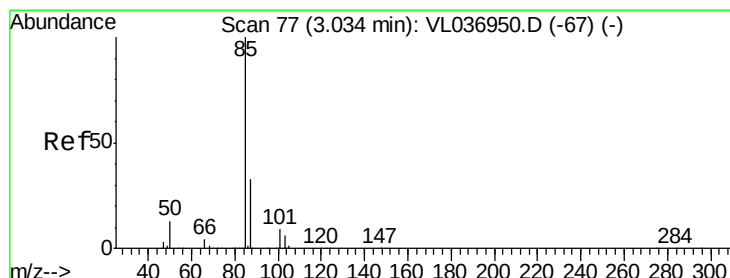
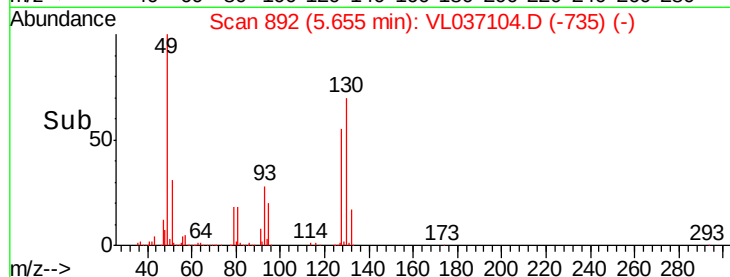
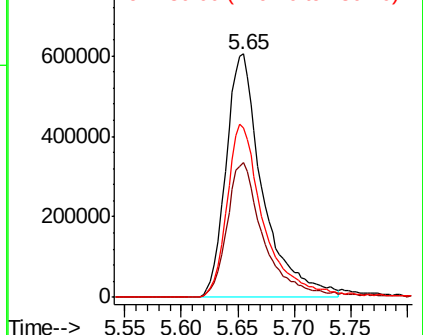
6/7/2021 3:00:37 PM



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: 0.237 ppbv

RT: 3.04 min Scan# 79

Delta R.T. 0.01 min

Lab File: VL037104.D

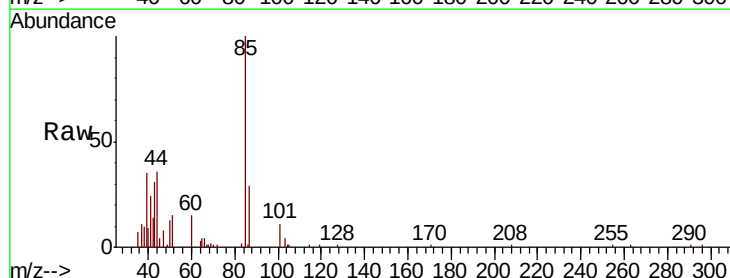
Acq: 2 Jun 2021 16:33

Tgt Ion: 85 Resp: 54957

Ion Ratio Lower Upper

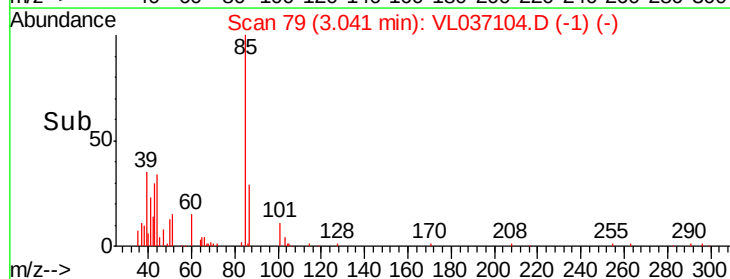
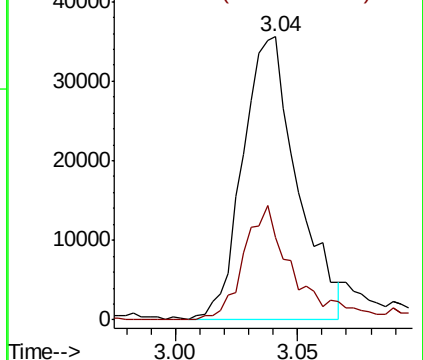
85 100

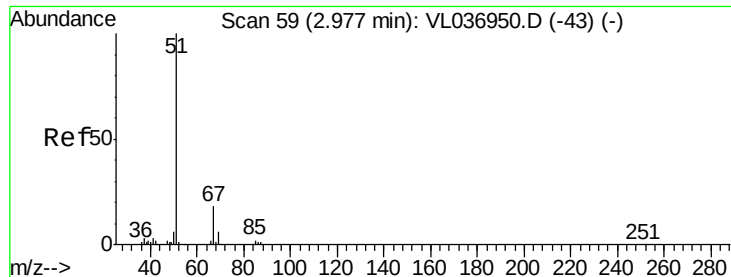
87 29.1 26.6 39.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.784 ppbv

RT: 2.96 min Scan# 55

Delta R.T. -0.01 min

Lab File: VL037104.D

Acq: 2 Jun 2021 16:33

Instrument :

MSVOA_L

ClientSampleId :

IA-9ADUP

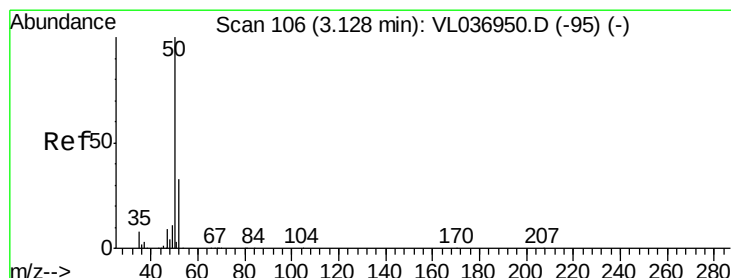
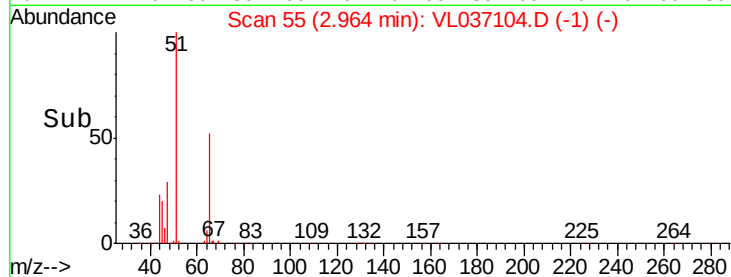
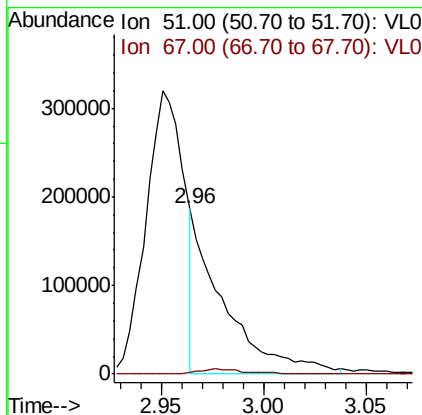
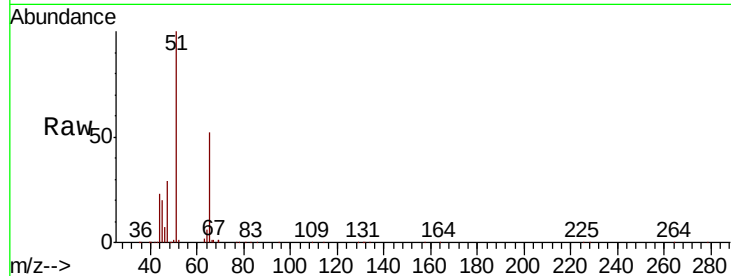
Tot Ion: 51 Resp: 196532
Ion Ratio Lower Upper

51 100

67 5.6 14.6 21.8#

Manual Integrations
APPROVED

MMDadoda
6/7/2021 3:00:37 PM



#4

Chloromethane

Concen: 0.534 ppbv

RT: 3.13 min Scan# 106

Delta R.T. -0.00 min

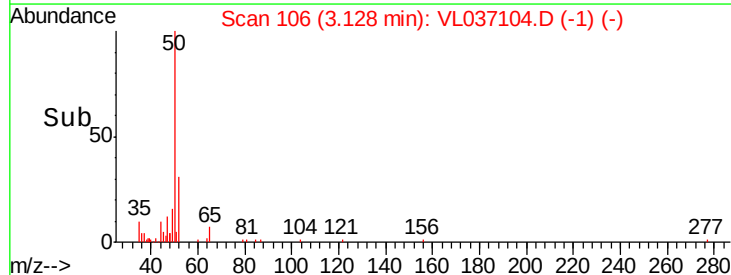
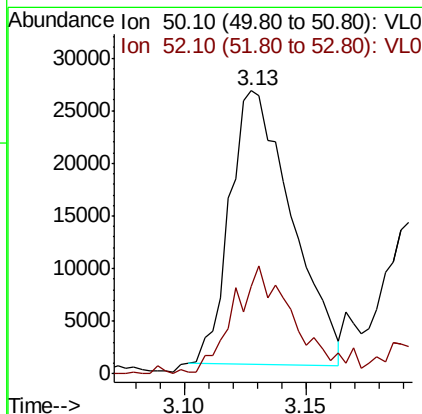
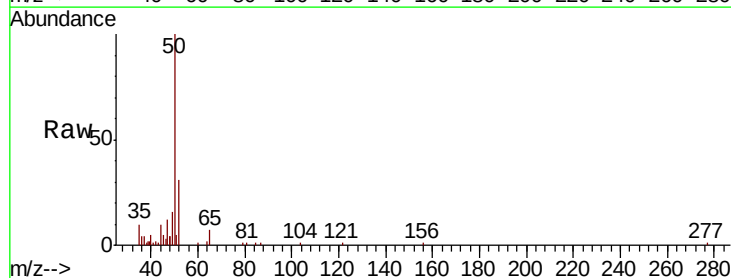
Lab File: VL037104.D

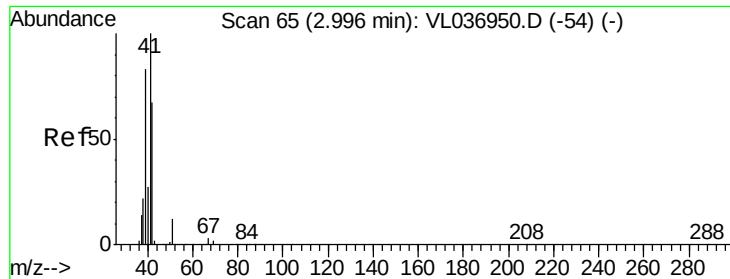
Acq: 2 Jun 2021 16:33

Tgt Ion: 50 Resp: 45577
Ion Ratio Lower Upper

50 100

52 31.4 26.1 39.1





#9

Propene

Concen: 1.298 ppbv m

RT: 3.01 min Scan# 70

Delta R.T. 0.02 min

Lab File: VL037104.D

Acq: 2 Jun 2021 16:33

Instrument :

MSVOA_L

ClientSampleId :

IA-9ADUP

Tot Ion: 41 Resp: 116474

Ion Ratio Lower Upper

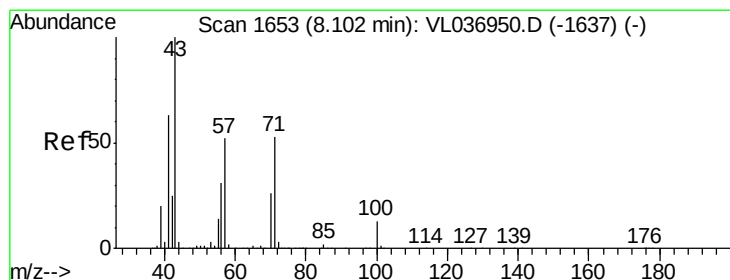
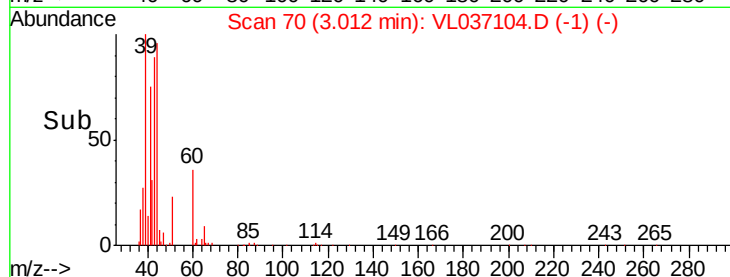
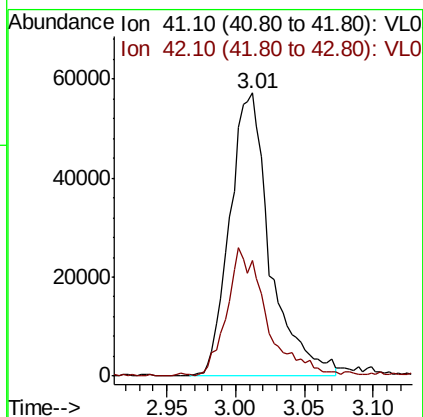
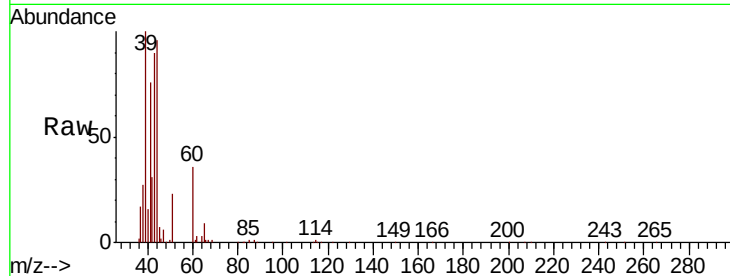
41 100

42 521.3 53.9 80.9#

Manual Integrations
APPROVED

MMDadoda

6/7/2021 3:00:37 PM



#10

Heptane

Concen: 0.101 ppbv m

RT: 8.10 min Scan# 1652

Delta R.T. -0.00 min

Lab File: VL037104.D

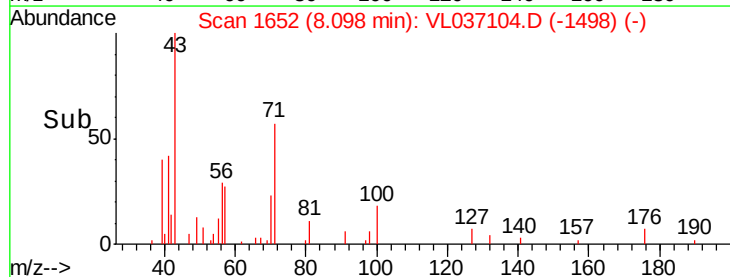
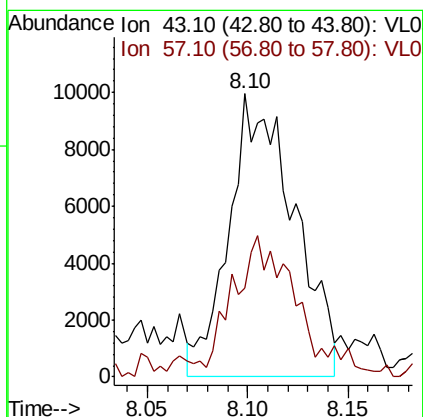
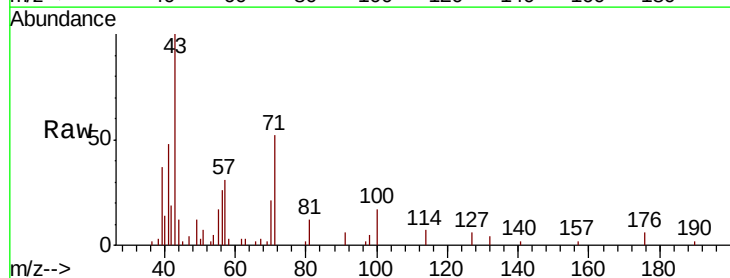
Acq: 2 Jun 2021 16:33

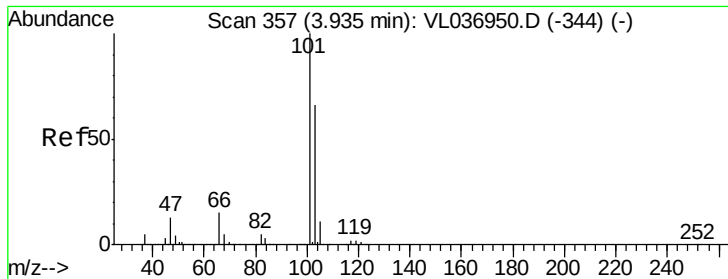
Tgt Ion: 43 Resp: 22551

Ion Ratio Lower Upper

43 100

57 0.0 41.0 61.6#





#11

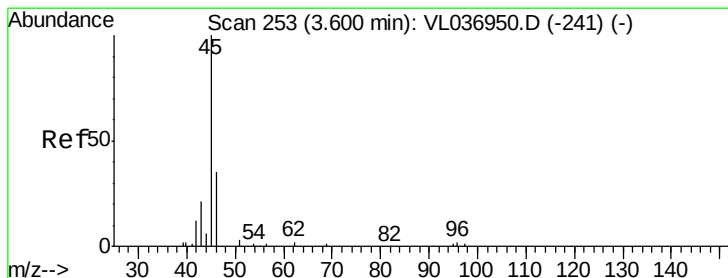
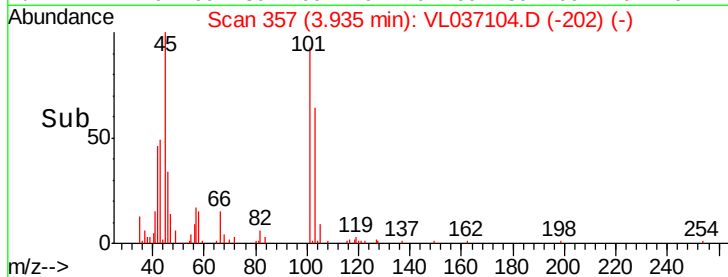
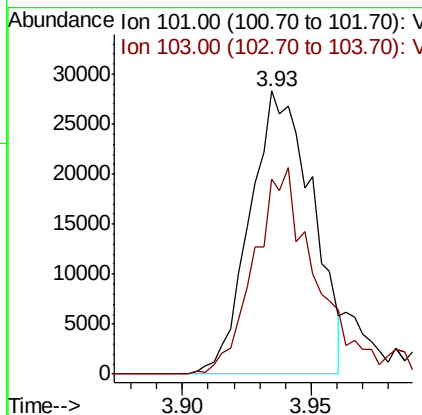
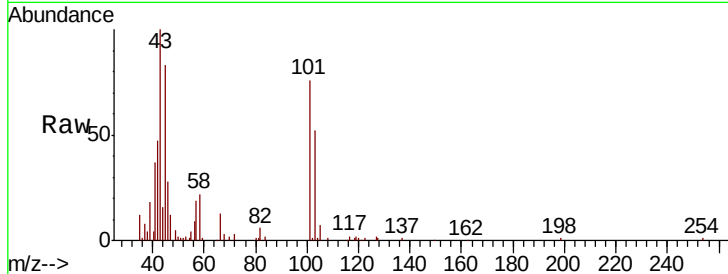
Trichlorofluoromethane
 Concen: 0.221 ppbv
 RT: 3.93 min Scan# 357
 Delta R.T. -0.00 min
 Lab File: VL037104.D
 Acq: 2 Jun 2021 16:33

Instrument :
 MSVOA_L
 ClientSampled :
 IA-9ADUP

Tot Ion	Ratio	Lower	Upper
101	100		
103	69.0	52.6	79.0

Manual Integrations
 APPROVED

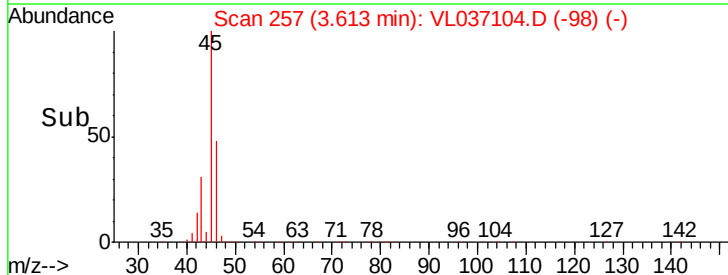
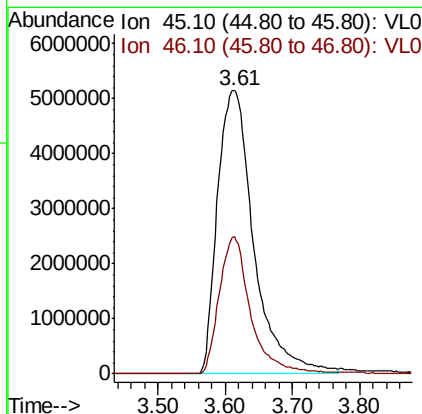
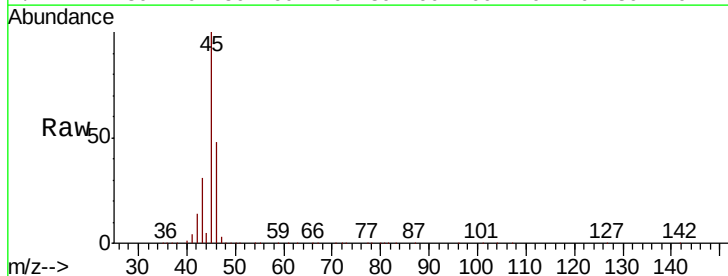
MMDadoda
 6/7/2021 3:00:37 PM

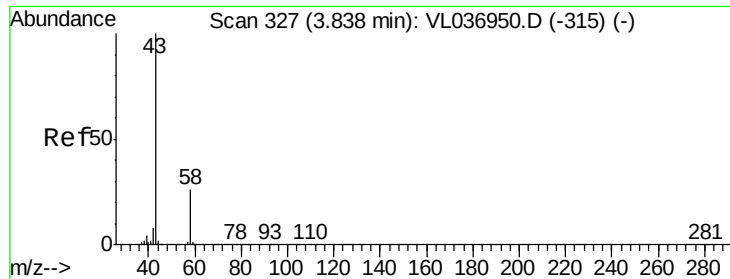


#13

Ethanol
 Concen: 1620.249 ppbv
 RT: 3.61 min Scan# 257
 Delta R.T. 0.01 min
 Lab File: VL037104.D
 Acq: 2 Jun 2021 16:33

Tgt Ion	Ratio	Lower	Upper
45	100		
46	42.6	16.3	65.3





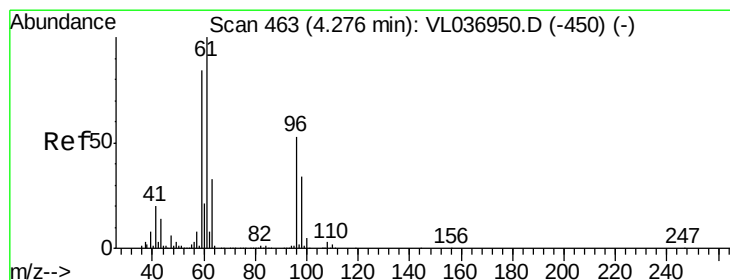
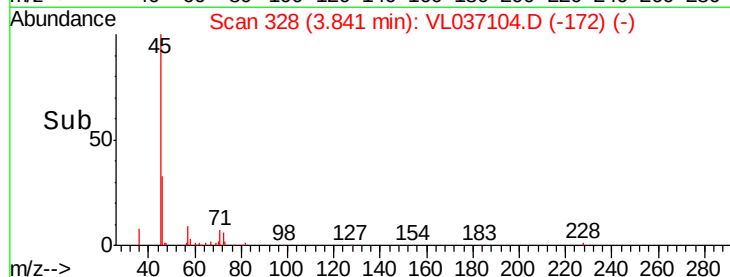
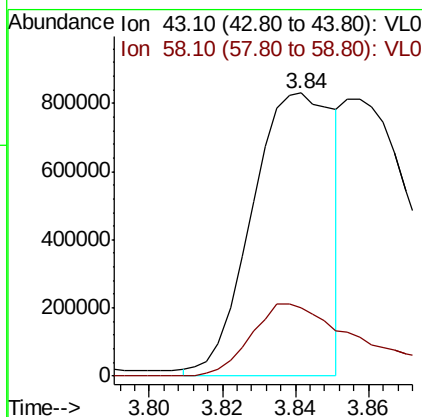
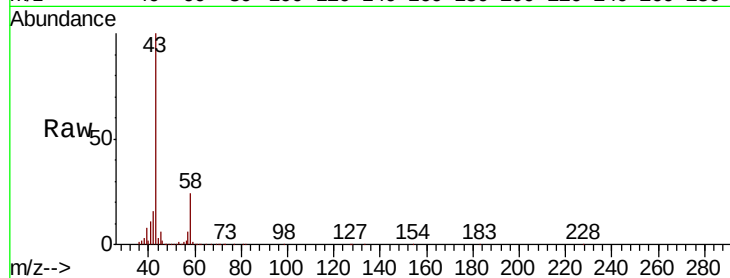
#15
Acetone
Concen: 9.245 ppbv m
RT: 3.84 min Scan# 328
Delta R.T. 0.00 min
Lab File: VL037104.D
Acq: 2 Jun 2021 16:33

Instrument :
MSVOA_L
ClientSampleId :
IA-9ADUP

Tot Ion: 43 Resp: 1295449
Ion Ratio Lower Upper
43 100
58 38.2 24.0 36.0#

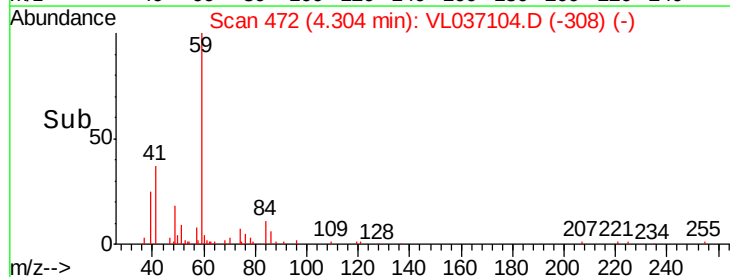
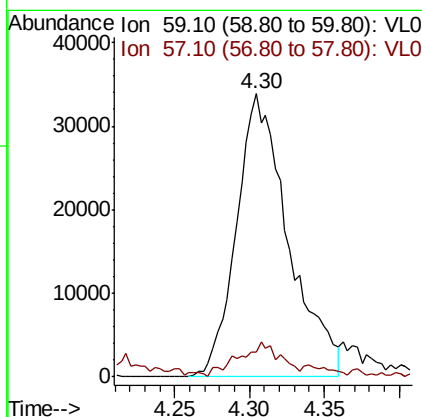
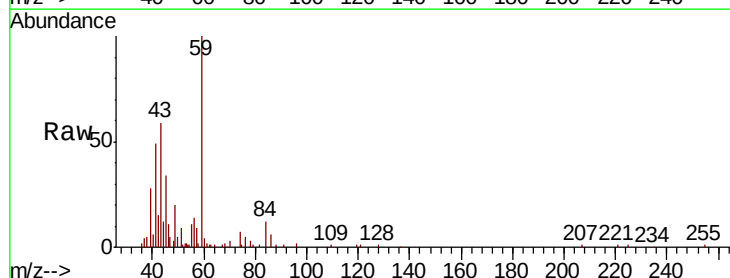
Manual Integrations
APPROVED

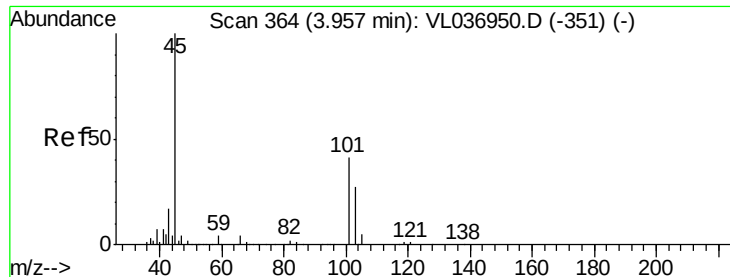
MMDadoda
6/7/2021 3:00:37 PM



#17
tert-Butyl alcohol
Concen: 0.637 ppbv
RT: 4.30 min Scan# 472
Delta R.T. 0.03 min
Lab File: VL037104.D
Acq: 2 Jun 2021 16:33

Tgt Ion: 59 Resp: 81719
Ion Ratio Lower Upper
59 100
57 0.0 8.3 12.5#





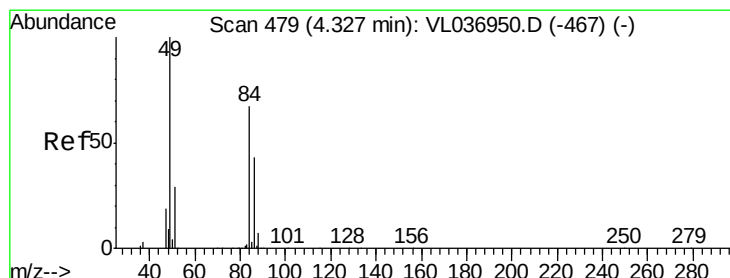
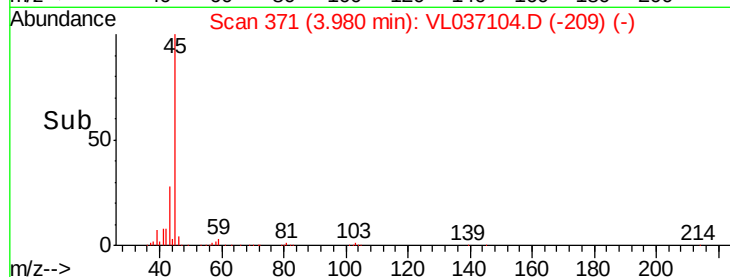
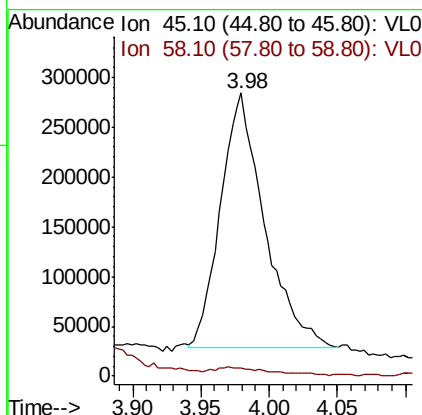
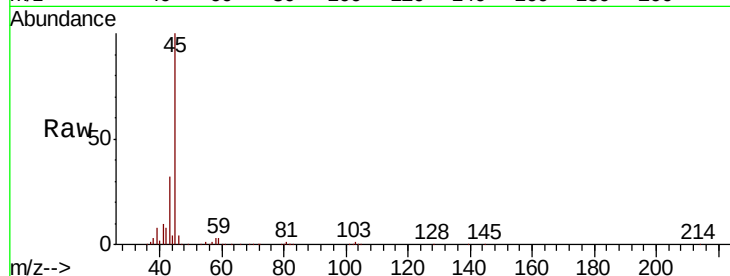
#19
Isopropyl Alcohol
Concen: 7.632 ppbv
RT: 3.98 min Scan# 371
Delta R.T. 0.02 min
Lab File: VL037104.D
Acq: 2 Jun 2021 16:33

Instrument :
MSVOA_L
ClientSampleId :
IA-9ADUP

Tot Ion: 45 Resp: 574803
Ion Ratio Lower Upper
45 100
58 5.2 37.2 55.8#

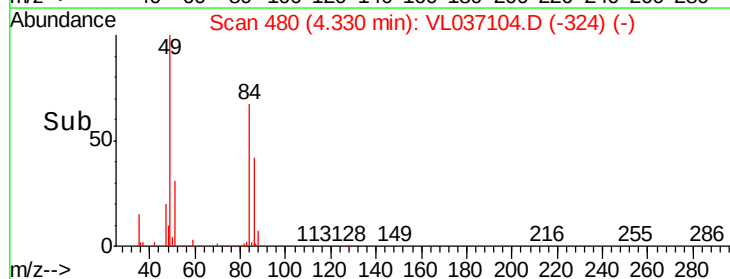
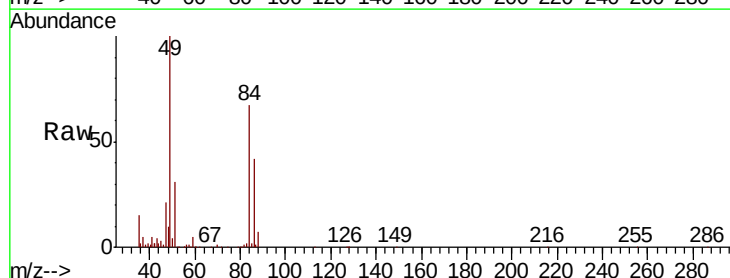
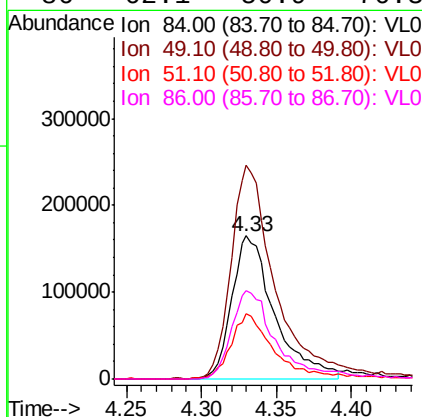
Manual Integrations
APPROVED

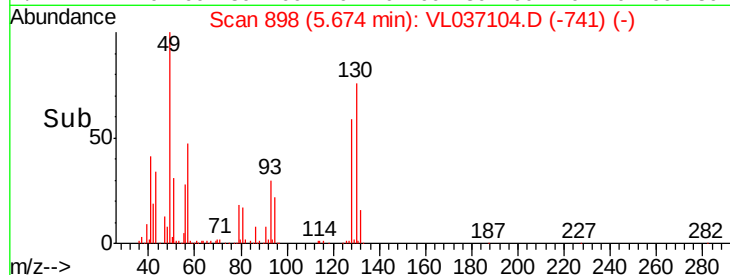
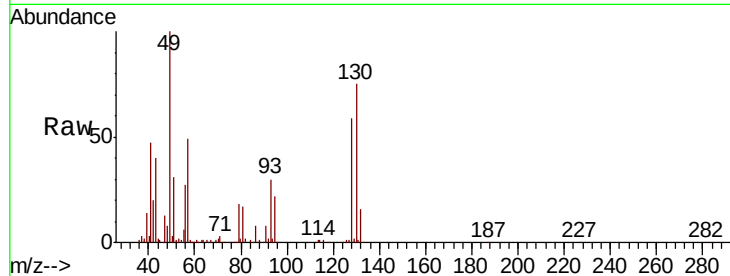
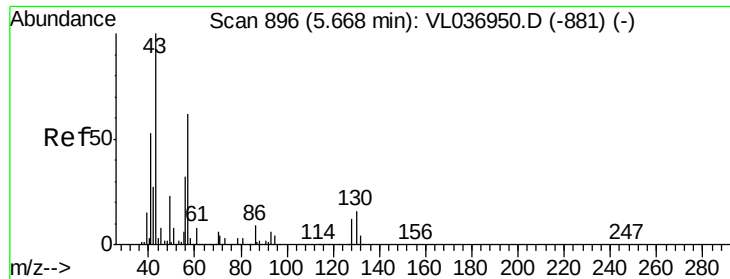
MMDadoda
6/7/2021 3:00:37 PM



#20
Methylene Chloride
Concen: 4.366 ppbv
RT: 4.33 min Scan# 480
Delta R.T. 0.00 min
Lab File: VL037104.D
Acq: 2 Jun 2021 16:33

Tgt Ion: 84 Resp: 327935
Ion Ratio Lower Upper
84 100
49 148.7 119.8 179.6
51 45.5 35.1 52.7
86 62.1 50.9 76.3





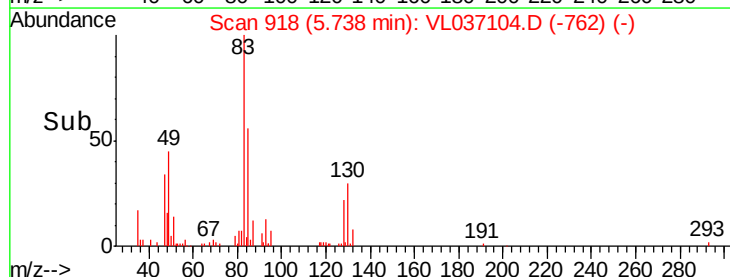
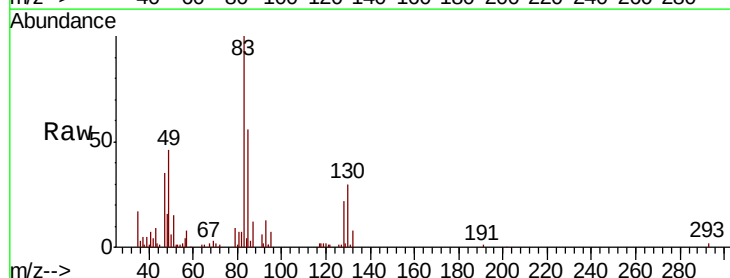
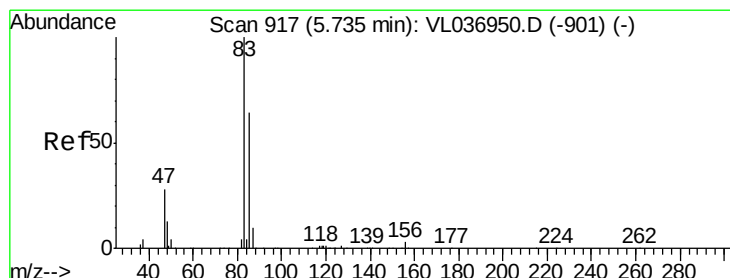
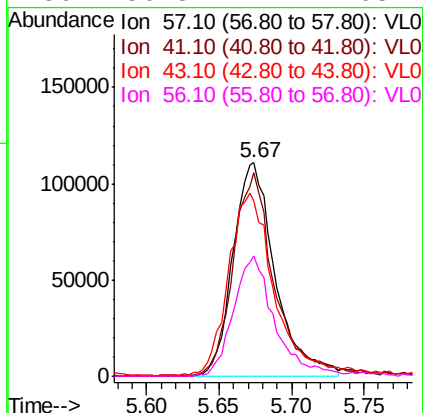
#26
Hexane
Concen: 1.301 ppbv
RT: 5.67 min Scan# 898
Delta R.T. 0.01 min
Lab File: VL037104.D
Acq: 2 Jun 2021 16:33

Tot Ion	Ratio	Lower	Upper
57	100		
41	97.5	70.5	105.7
43	95.3	165.8	248.8#
56	56.3	42.2	63.4

Instrument :
MSVOA_L
ClientSampleId :
IA-9ADUP

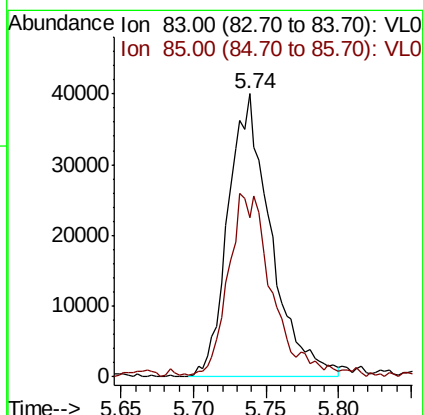
Manual Integrations
APPROVED

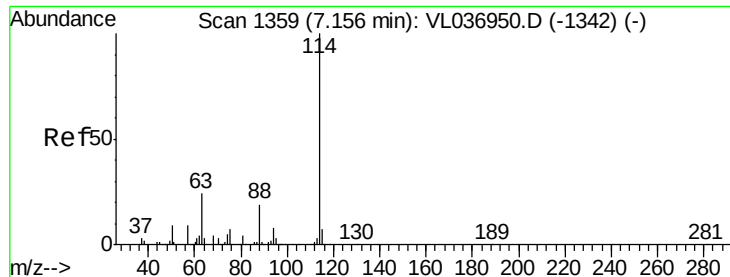
MMDadoda
6/7/2021 3:00:37 PM



#29
Chloroform
Concen: 0.337 ppbv
RT: 5.74 min Scan# 918
Delta R.T. 0.00 min
Lab File: VL037104.D
Acq: 2 Jun 2021 16:33

Tgt Ion	Ratio	Lower	Upper
83	100		
85	56.0	51.1	76.7





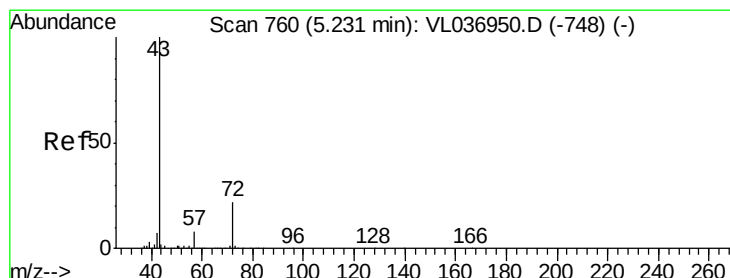
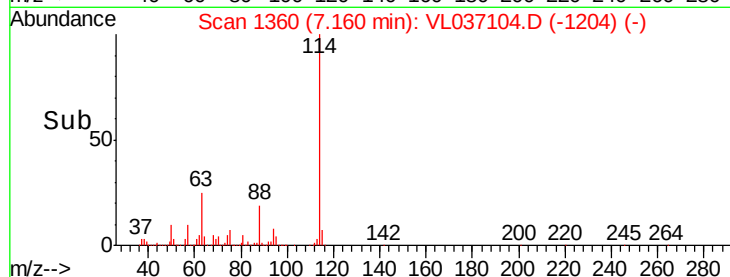
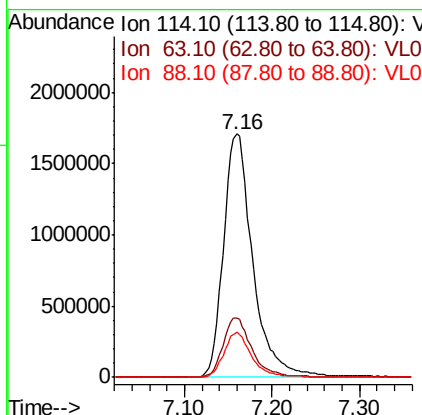
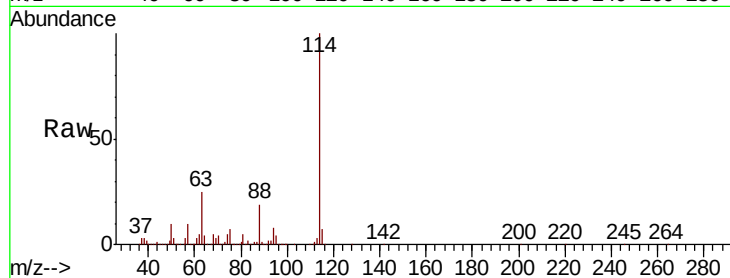
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.16 min Scan# 1360
 Delta R.T. 0.00 min
 Lab File: VL037104.D
 Acq: 2 Jun 2021 16:33

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-9ADUP

Tot Ion	Ratio	Lower	Upper
114	100		
63	24.6	19.6	29.4
88	17.8	14.6	21.8

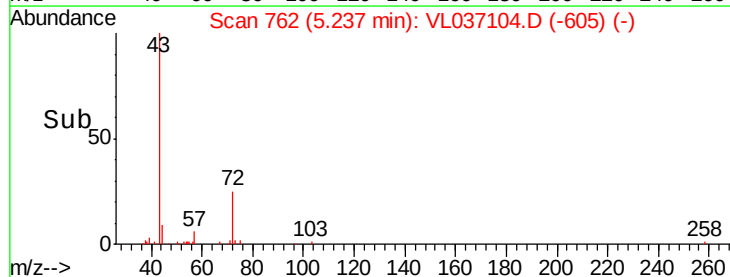
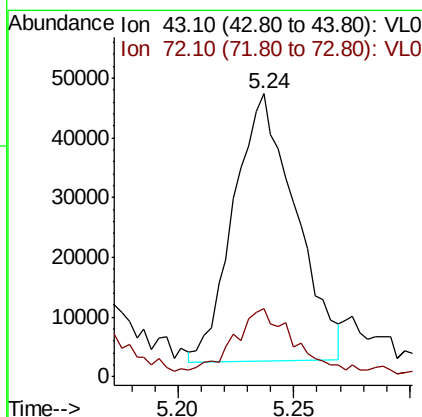
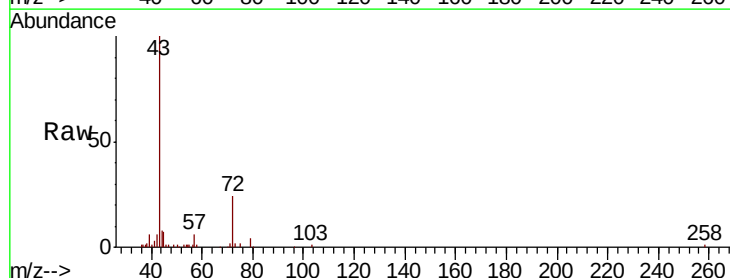
Manual Integrations
 APPROVED

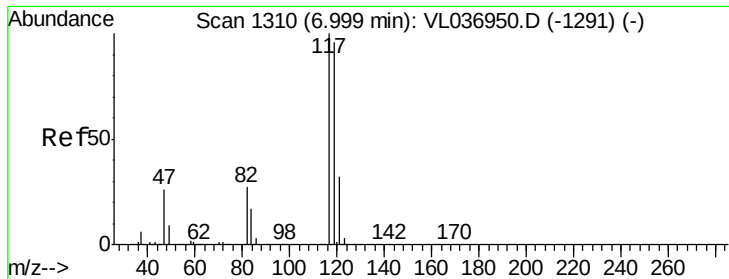
MMDadoda
 6/7/2021 3:00:37 PM



#34
 2-Butanone
 Concen: 0.571 ppbv
 RT: 5.24 min Scan# 762
 Delta R.T. 0.01 min
 Lab File: VL037104.D
 Acq: 2 Jun 2021 16:33

Tgt Ion	Ratio	Lower	Upper
43	100		
72	30.3	19.0	28.4





#35

Carbon Tetrachloride

Concen: 0.058 ppbv m

RT: 7.00 min Scan# 1311

Delta R.T. 0.00 min

Lab File: VL037104.D

Acq: 2 Jun 2021 16:33

Instrument :

MSVOA_L

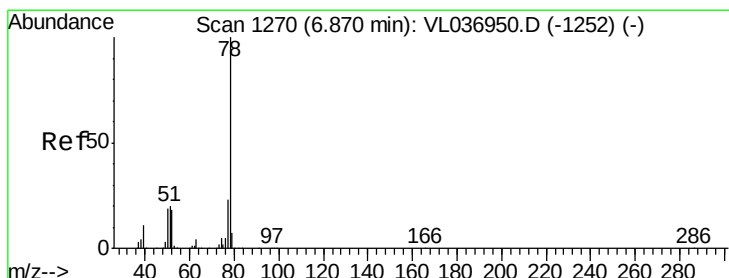
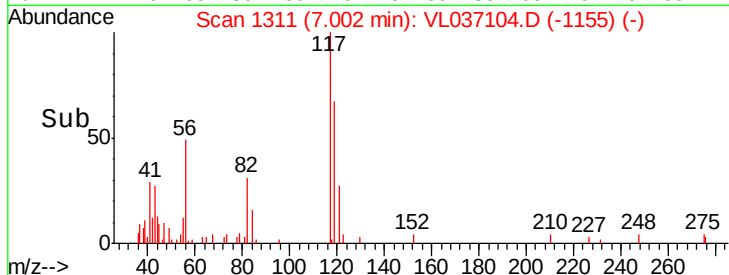
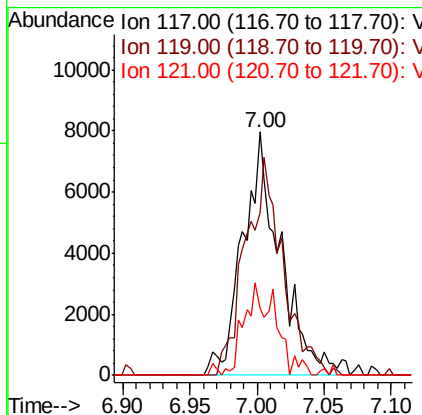
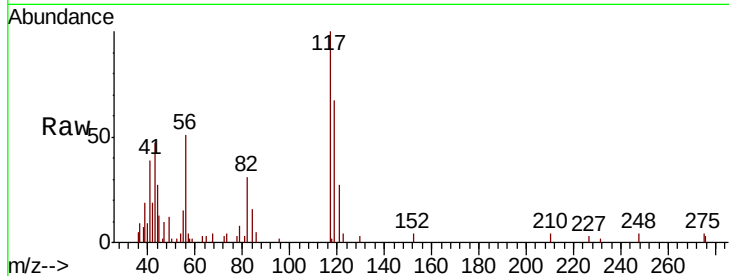
ClientSampled :

IA-9ADUP

Tot Ion:	117	Resp:	15410
Ion Ratio	Lower	Upper	
117	100		
119	66.8	76.6	114.8#
121	27.4	25.8	38.6

Manual Integrations
APPROVED

MMDadoda
6/7/2021 3:00:37 PM



#36

Benzene

Concen: 0.167 ppbv

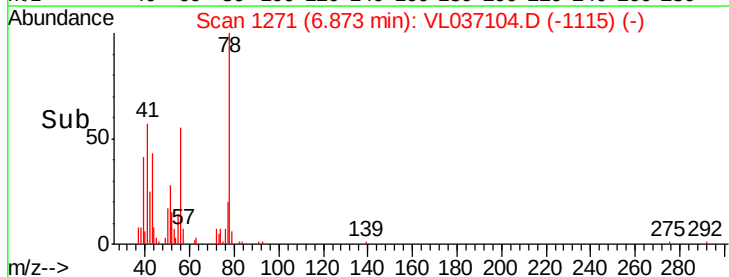
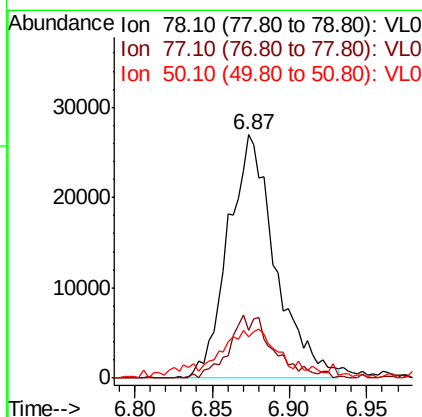
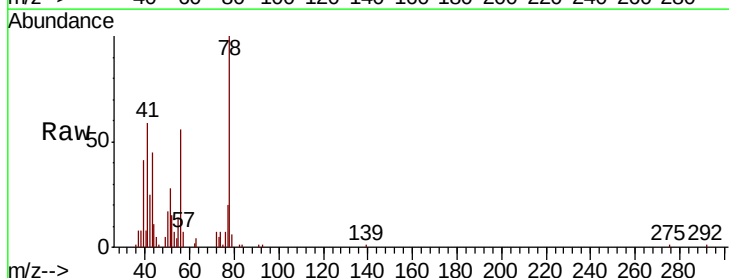
RT: 6.87 min Scan# 1271

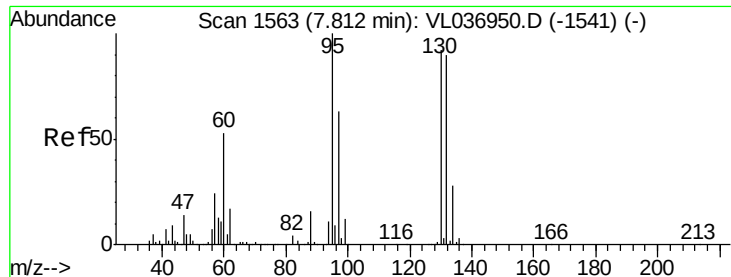
Delta R.T. 0.00 min

Lab File: VL037104.D

Acq: 2 Jun 2021 16:33

Tgt Ion:	78	Resp:	57237
Ion Ratio	Lower	Upper	
78	100		
77	19.1	18.6	28.0
50	14.0	15.0	22.4#





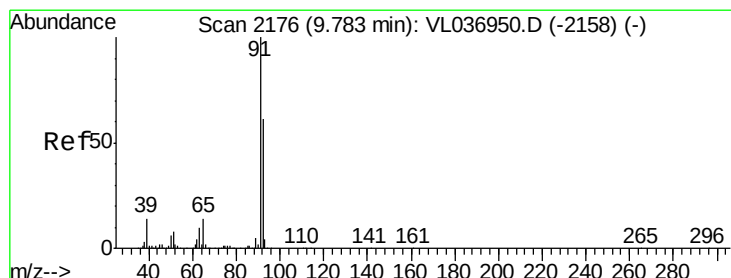
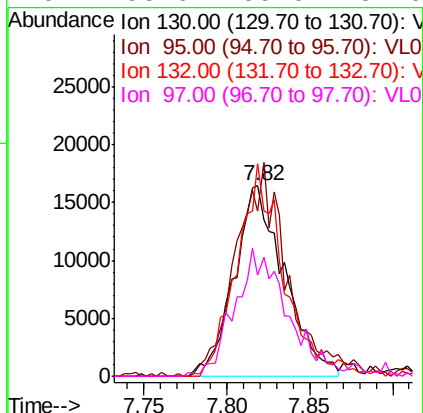
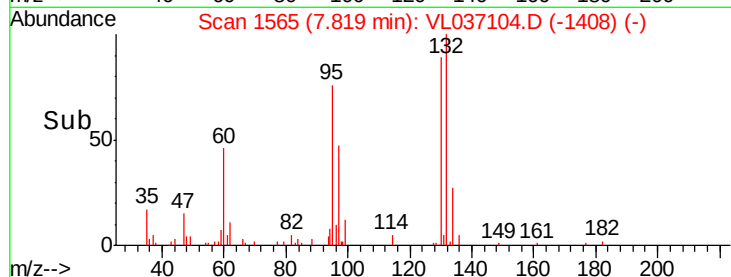
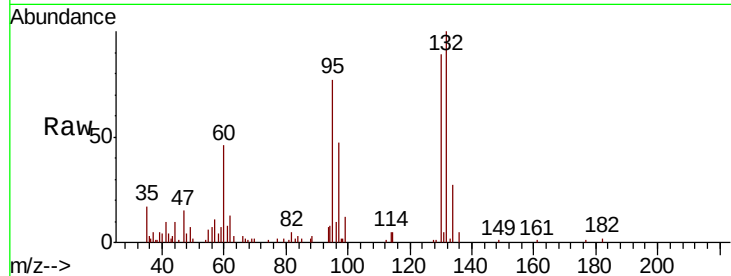
#38
 Trichloroethene
 Concen: 0.236 ppbv
 RT: 7.82 min Scan# 1565
 Delta R.T. 0.01 min
 Lab File: VL037104.D
 Acq: 2 Jun 2021 16:33

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-9ADUP

Tot Ion	Ratio	Lower	Upper
130	100		
95	86.7	86.9	130.3#
132	112.0	78.4	117.6
97	53.6	55.0	82.6#

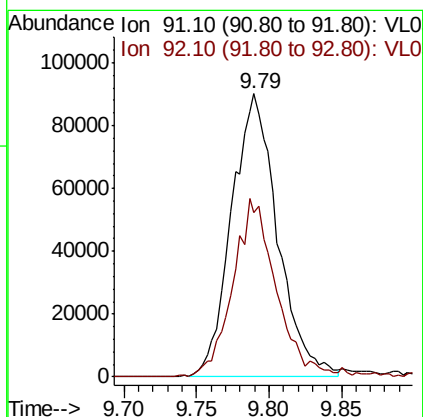
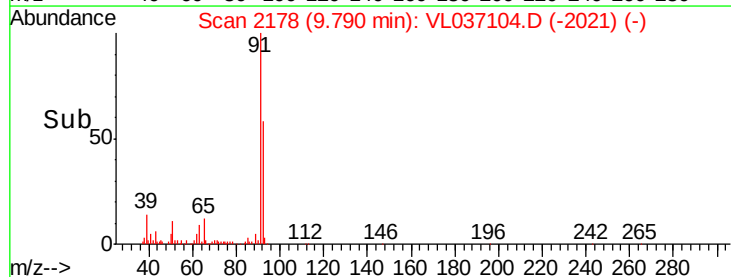
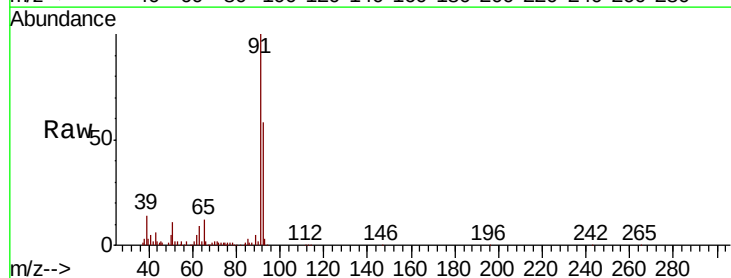
Manual Integrations
 APPROVED

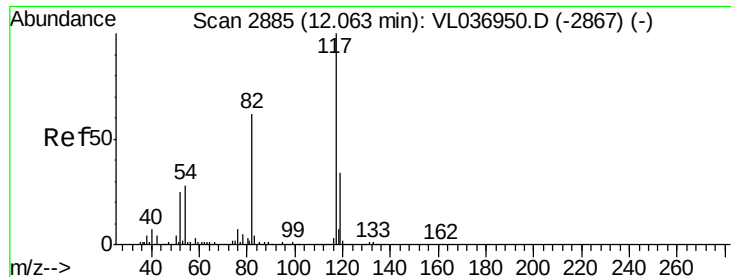
MMDadoda
 6/7/2021 3:00:37 PM



#53
 Toluene
 Concen: 0.486 ppbv
 RT: 9.79 min Scan# 2178
 Delta R.T. 0.01 min
 Lab File: VL037104.D
 Acq: 2 Jun 2021 16:33

Tgt Ion	Ratio	Lower	Upper
91	100		
92	60.3	49.5	74.3





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2887

Delta R.T. 0.01 min

Lab File: VL037104.D

Acq: 2 Jun 2021 16:33

Instrument :

MSVOA_L

ClientSampleId :

IA-9ADUP

Tot Ion:117 Resp: 3576218

Ion Ratio Lower Upper

117 100

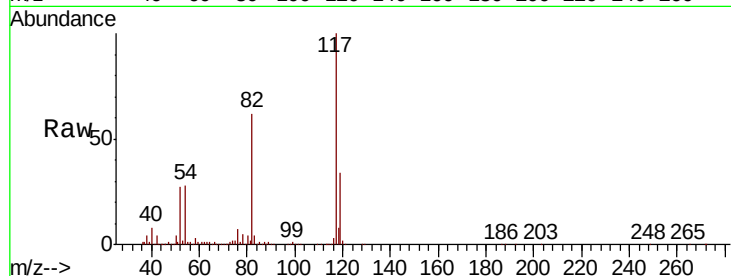
82 63.3 52.6 79.0

119 33.8 46.6 70.0#

Manual Integrations
APPROVED

MMDadoda

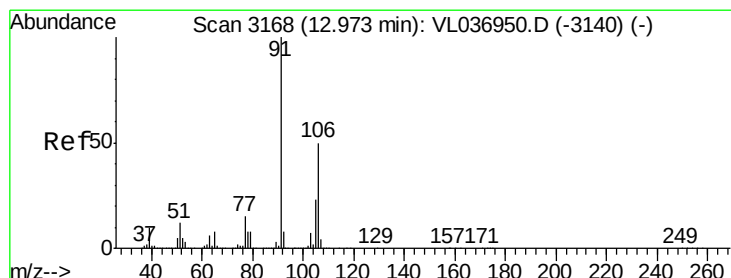
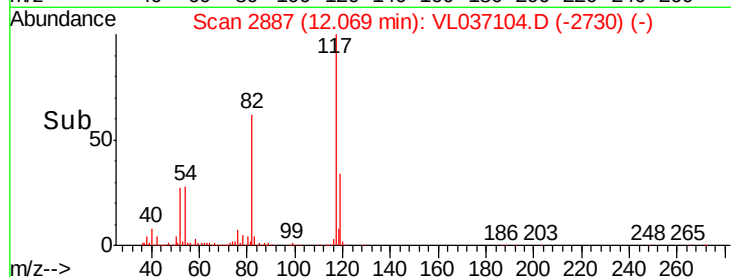
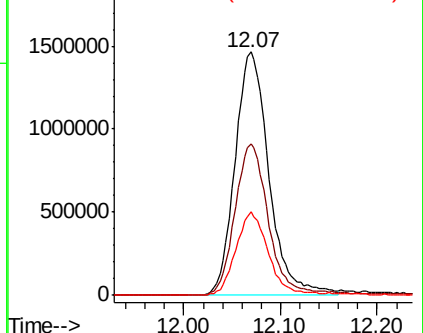
6/7/2021 3:00:37 PM



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



#59

m/p-Xylene

Concen: 0.166 ppbv m

RT: 12.95 min Scan# 3161

Delta R.T. -0.02 min

Lab File: VL037104.D

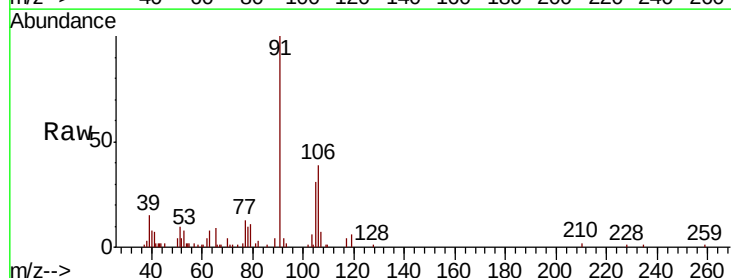
Acq: 2 Jun 2021 16:33

Tgt Ion: 91 Resp: 69195

Ion Ratio Lower Upper

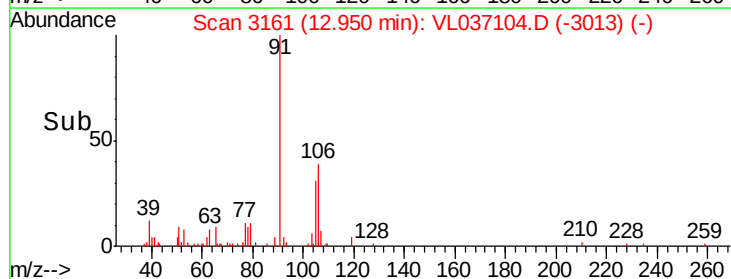
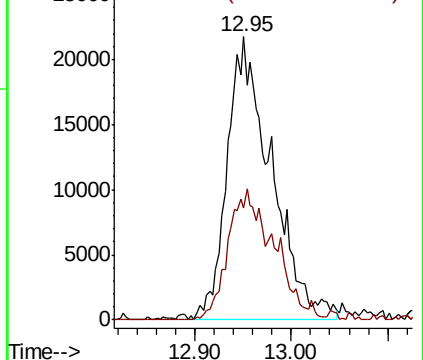
91 100

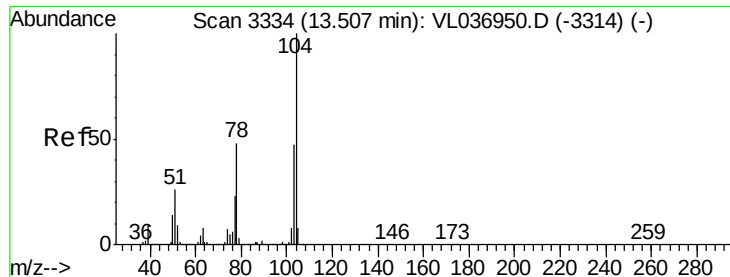
106 0.0 37.4 56.2#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





#61

Stvrene

Concen: 0.121 ppbv

RT: 13.51 min Scan# 3336

Delta R.T. 0.01 min

Lab File: VL037104.D

Acq: 2 Jun 2021 16:33

Instrument :

MSVOA_L

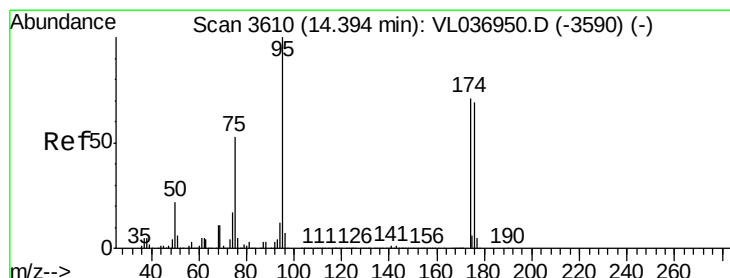
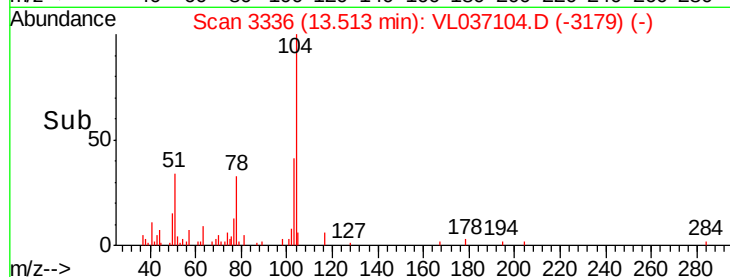
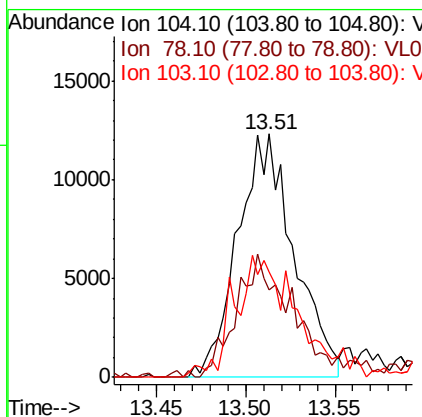
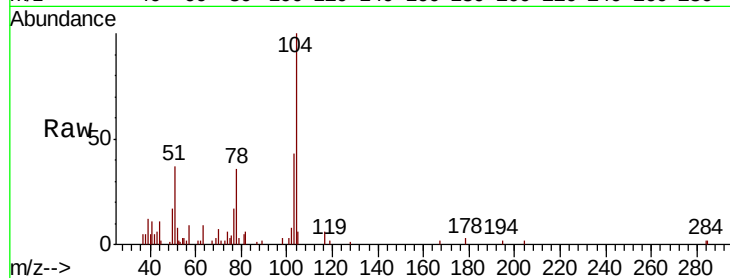
ClientSampleId :

IA-9ADUP

Tot Ion:	104	Resp:	27055
Ion Ratio	Lower	Upper	
104	100		
78	52.8	39.0	58.6
103	57.0	38.0	57.0

Manual Integrations
APPROVED

MMDadoda
6/7/2021 3:00:37 PM



#68

1-Bromo-4-Fluorobenzene

Concen: 9.982 ppbv

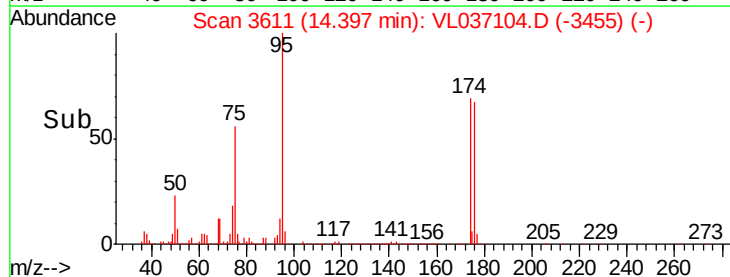
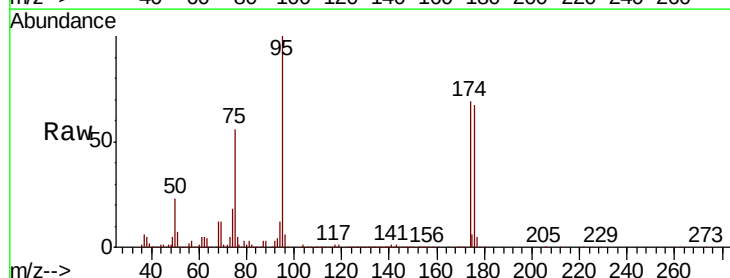
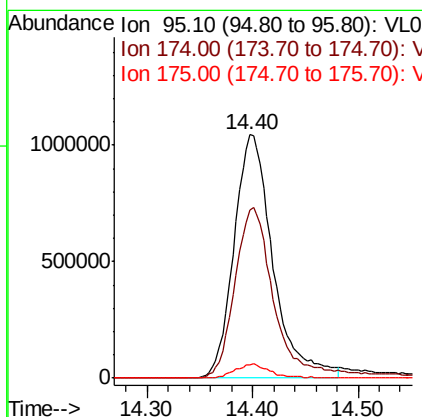
RT: 14.40 min Scan# 3611

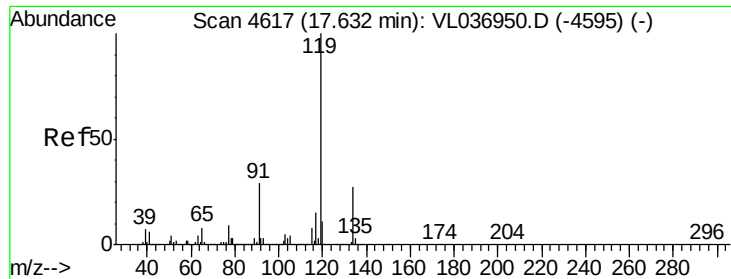
Delta R.T. 0.00 min

Lab File: VL037104.D

Acq: 2 Jun 2021 16:33

Tgt Ion:	95	Resp:	2681825
Ion Ratio	Lower	Upper	
95	100		
174	73.6	58.4	87.6
175	5.5	4.4	6.6





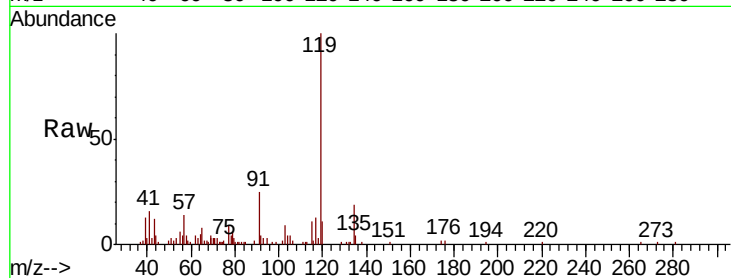
#69
 p-Isopropyltoluene
 Concen: 0.113 ppbv m
 RT: 17.64 min Scan# 4621
 Delta R.T. 0.01 min
 Lab File: VL037104.D
 Acq: 2 Jun 2021 16:33

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-9ADUP

Tot Ion	Ratio	Resp Lower	Upper
119	100		
134	0.0	21.2	31.8#
91	0.0	22.2	33.4#

Manual Integrations
 APPROVED

MMDadoda
 6/7/2021 3:00:37 PM



Abundance

Ion 119.10 (118.80 to 119.80): V

Ion 134.20 (133.90 to 134.90): V

Ion 91.10 (90.80 to 91.80): VLO

