

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111418\
 Data File : VL032754.D
 Acq On : 14 Nov 2018 11:45
 Operator : SY/AP
 Sample : J5891-01
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IASC1

Manual Integrations
 APPROVED

MMDadoda
 11/16/2018 1:30:31 PM

Quant Time: Nov 15 05:54:06 2018
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111418AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Nov 14 2018
 QLast Update : Wed Nov 14 07:00:23 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.77	49	1328910	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.30	114	3276052	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	3057145	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.58	95	2256604	9.87	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.70%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	106842	0.559	ppbv	99
3) Chlorodifluoromethane	3.02	51	104974m	0.996	ppbv	
4) Chloromethane	3.18	50	31810	0.545	ppbv	94
9) Propene	3.05	41	107707m	2.555	ppbv	
10) Heptane	8.25	43	79755	0.495	ppbv	92
11) Trichlorofluoromethane	4.01	101	53982	0.300	ppbv	93
13) Ethanol	3.66	45	1415455	102.497	ppbv	98
15) Acetone	3.91	43	741819	6.113	ppbv	96
19) Isopropyl Alcohol	4.04	45	229318	2.836	ppbv #	97
20) Methylene Chloride	4.41	84	299889	4.773	ppbv	97
26) Hexane	5.79	57	476955	3.788	ppbv #	44
30) Cyclohexane	7.26	84	23490m	0.213	ppbv	
34) 2-Butanone	5.34	43	96412	0.567	ppbv	99
35) Carbon Tetrachloride	7.14	117	21579	0.082	ppbv #	80
36) Benzene	7.01	78	119182	0.457	ppbv	94
41) Tetrahydrofuran	6.17	42	17751m	0.182	ppbv	
44) 2,2,4-Trimethylpentane	7.99	57	379361	0.870	ppbv #	85
52) Tetrachloroethene	11.37	164	4834m	0.053	ppbv	
53) Toluene	9.95	91	3204888	11.776	ppbv	100
58) Ethyl Benzene	12.87	91	206015	0.560	ppbv	96
59) m/p-Xylene	13.13	91	677354	2.068	ppbv	99
60) o-Xylene	13.85	91	267129	0.811	ppbv	99
64) n-propylbenzene	15.73	120	26150m	0.223	ppbv	
72) 4-Ethyltoluene	16.00	105	123927	0.343	ppbv #	90
73) 1,3,5-Trimethylbenzene	16.16	105	133016	0.377	ppbv	92
74) 1,2,4-Trimethylbenzene	16.93	105	445781	1.180	ppbv #	68
79) Naphthalene	22.43	128	45860m	0.185	ppbv	

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

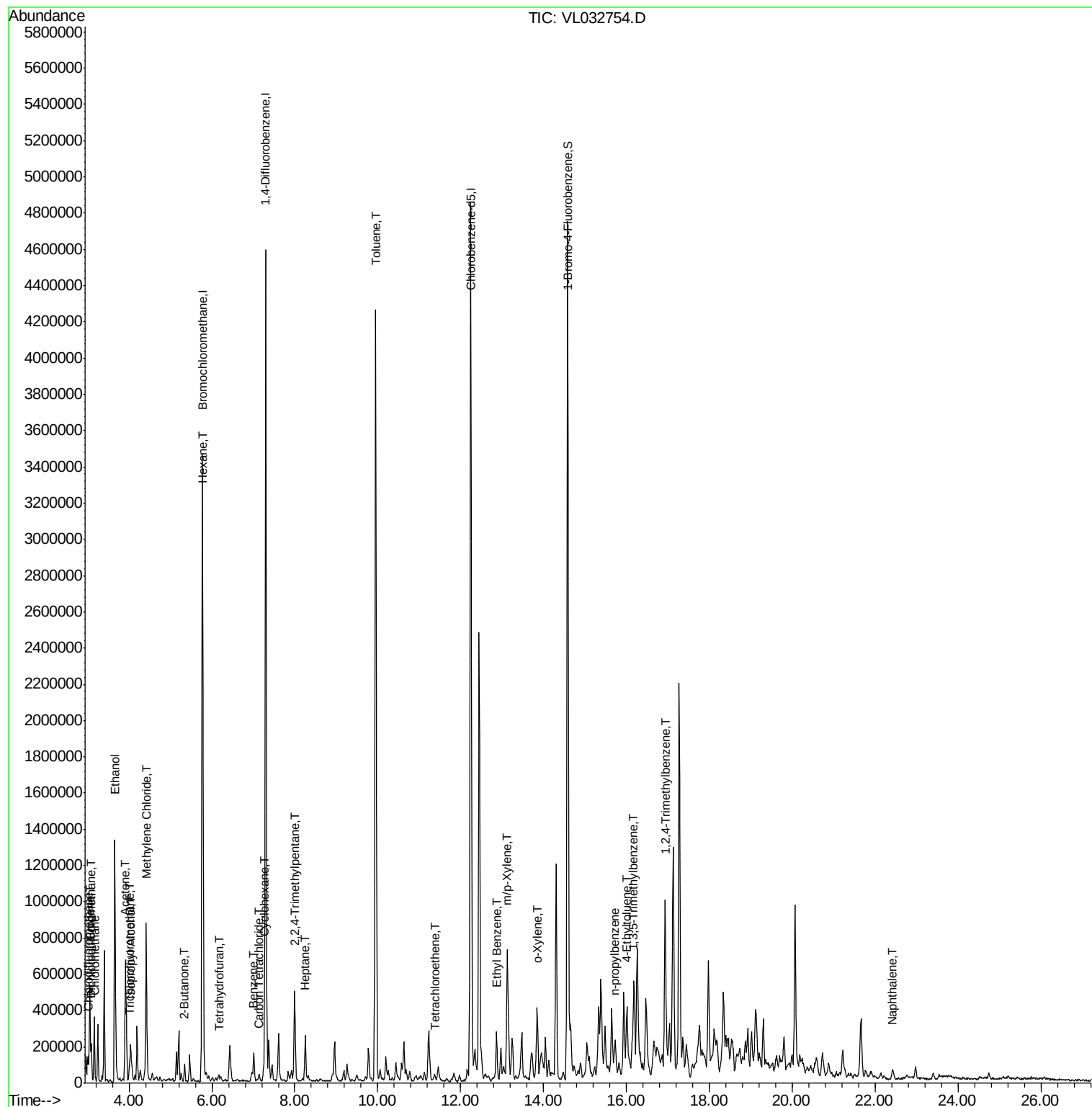
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL111418\
Data File : VL032754.D
Acq On : 14 Nov 2018 11:45
Operator : SY/AP
Sample : J5891-01
Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

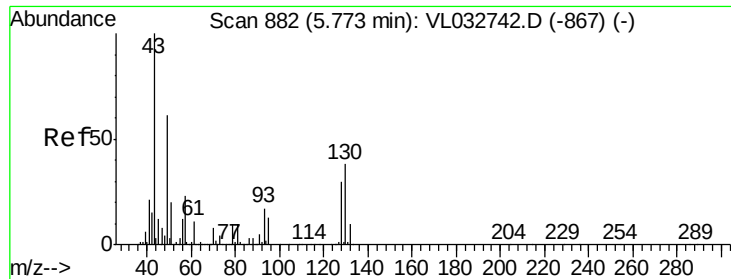
Instrument :
MSVOA_L
ClientSampleId :
IASC1

Manual Integrations
APPROVED

MMDadoda
11/16/2018 1:30:31 PM

Quant Time: Nov 15 05:54:06 2018
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL111418AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Nov
QLast Update : Wed Nov 14 07:00:23 2018
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 880

Delta R.T. -0.01 min

Lab File: VL032754.D

Acq: 14 Nov 2018 11:45

Instrument :

MSVOA_L

ClientSampleId :

IASC1

Tot Ion: 49 Resp: 1328910

Ion Ratio Lower Upper

49 100

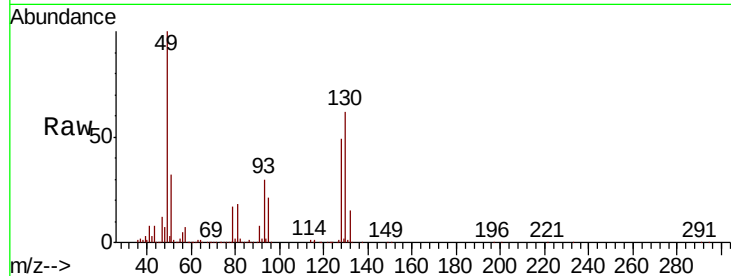
128 49.9 24.9 74.6

130 64.5 31.4 94.2

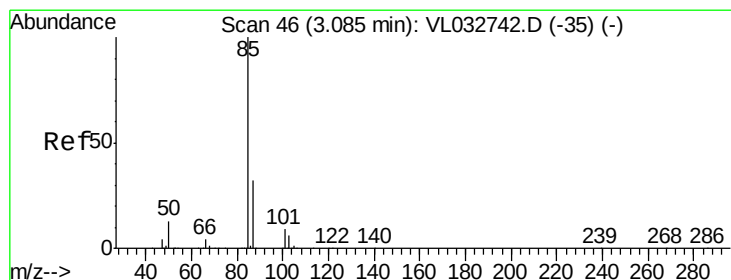
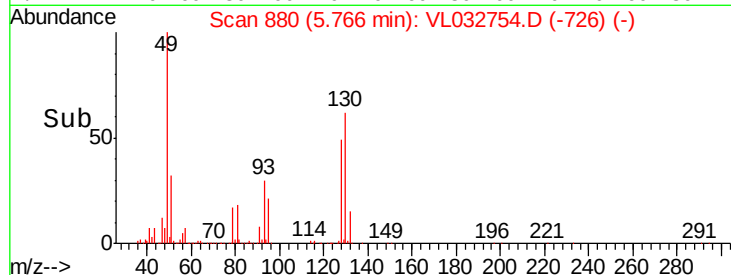
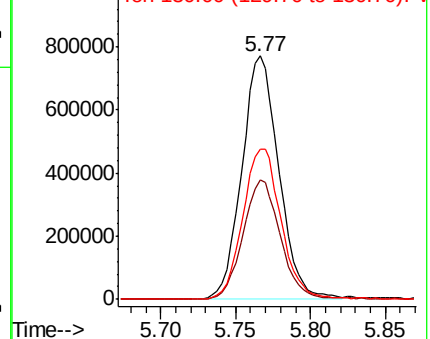
Manual Integrations
APPROVED

MMDadoda

11/16/2018 1:30:31 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: 0.559 ppbv

RT: 3.08 min Scan# 46

Delta R.T. 0.00 min

Lab File: VL032754.D

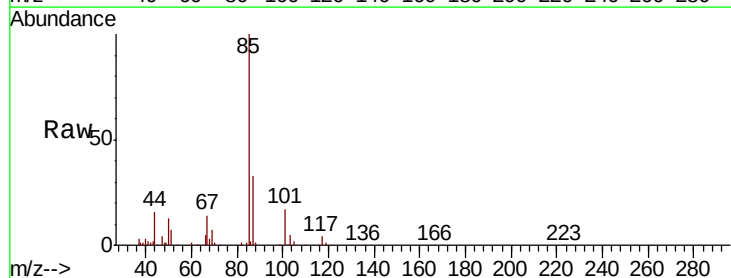
Acq: 14 Nov 2018 11:45

Tgt Ion: 85 Resp: 106842

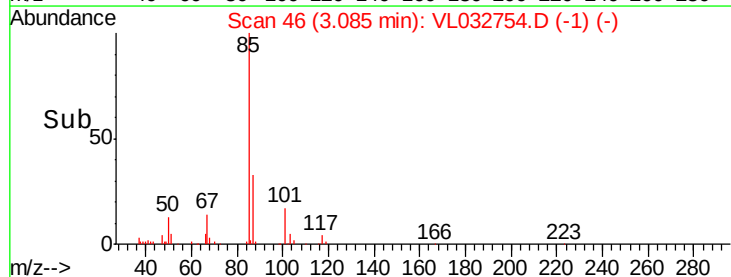
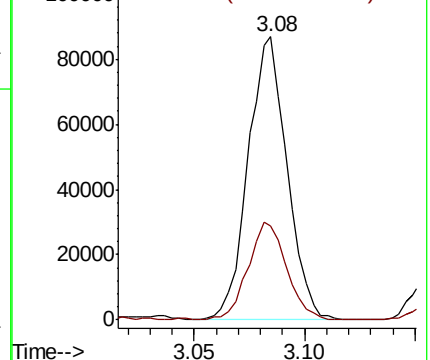
Ion Ratio Lower Upper

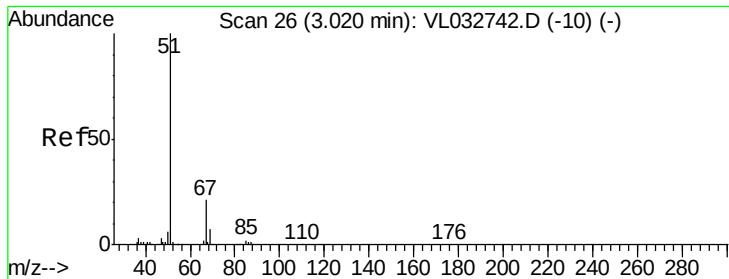
85 100

87 33.2 26.0 39.0



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





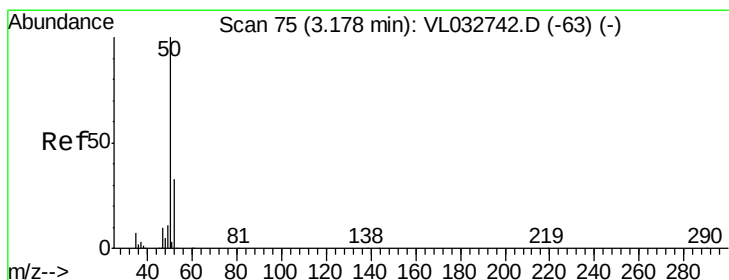
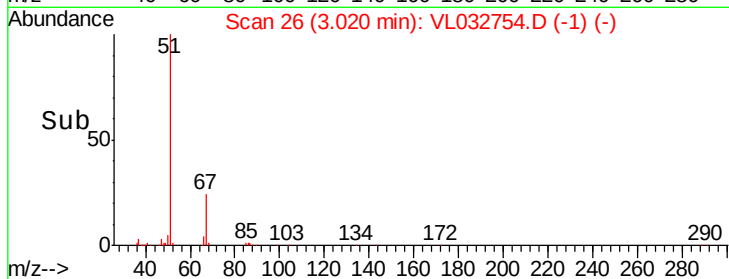
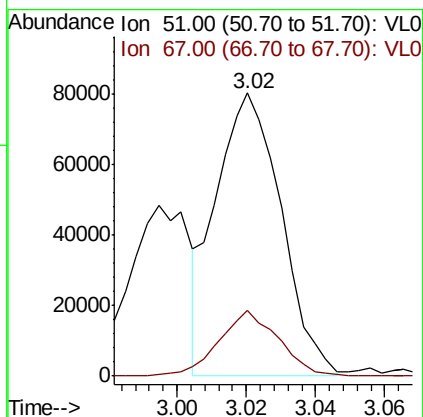
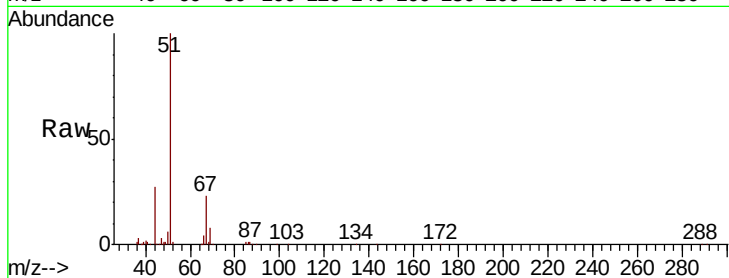
#3
Chlorodifluoromethane
Concen: 0.996 ppbv
RT: 3.02 min Scan# 26
Delta R.T. 0.00 min
Lab File: VL032754.D
Acq: 14 Nov 2018 11:45

Instrument :
MSVOA_L
ClientSampled :
IASC1

Tot Ion	51	Resp	104974
Ion Ratio	Lower	Upper	
51	100		
67	21.2	16.1	24.1

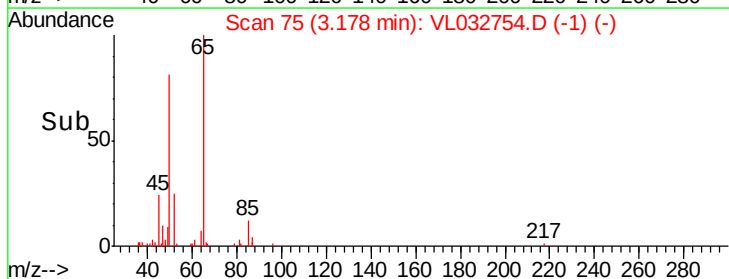
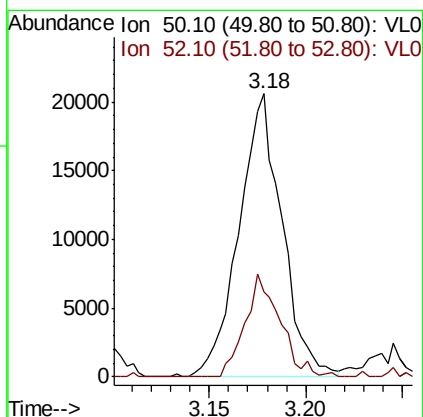
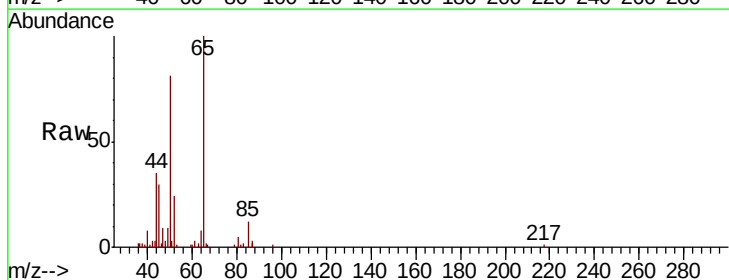
Manual Integrations
APPROVED

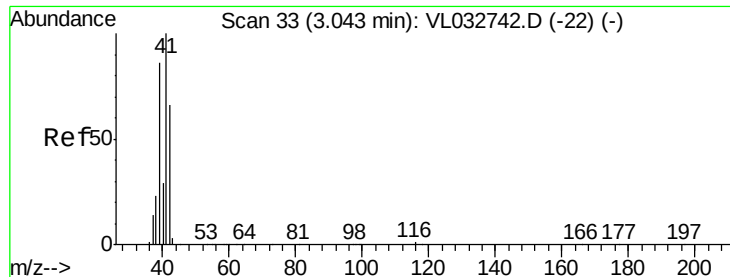
MMDadoda
11/16/2018 1:30:31 PM



#4
Chloromethane
Concen: 0.545 ppbv
RT: 3.18 min Scan# 75
Delta R.T. 0.00 min
Lab File: VL032754.D
Acq: 14 Nov 2018 11:45

Tgt Ion	50	Resp	31810
Ion Ratio	Lower	Upper	
50	100		
52	29.8	26.6	40.0





#9

Propene

Concen: 2.555 ppbv m

RT: 3.05 min Scan# 36

Delta R.T. 0.01 min

Lab File: VL032754.D

Acq: 14 Nov 2018 11:45

Instrument :

MSVOA_L

ClientSampled :

IASC1

Tot Ion: 41 Resp: 107707

Ion Ratio Lower Upper

41 100

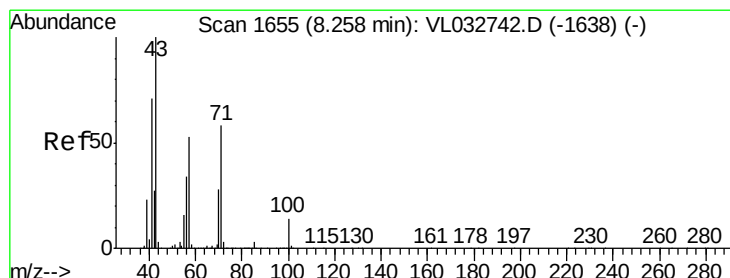
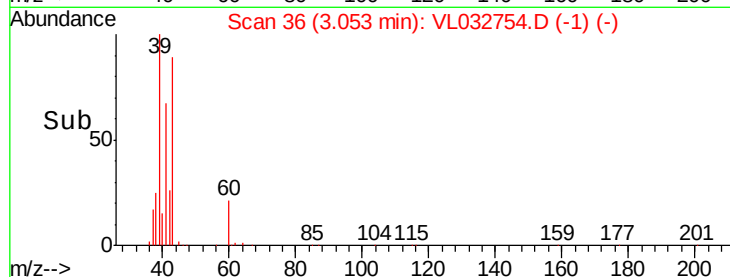
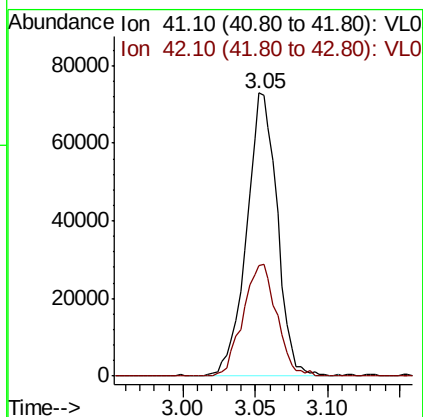
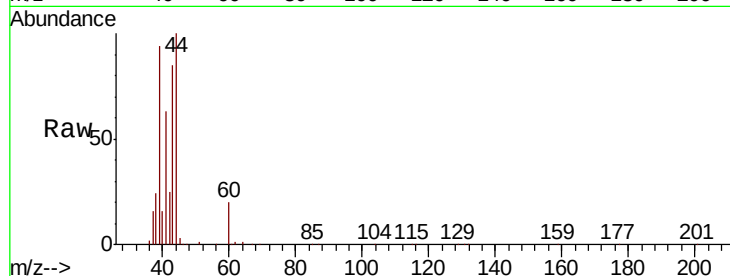
42 50.5 55.0 82.6#

Manual Integrations

APPROVED

MMDadoda

11/16/2018 1:30:31 PM



#10

Heptane

Concen: 0.495 ppbv

RT: 8.25 min Scan# 1654

Delta R.T. -0.00 min

Lab File: VL032754.D

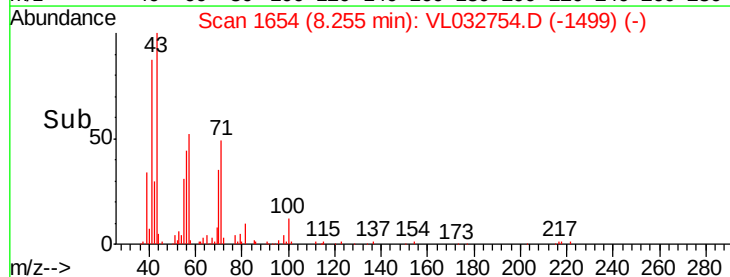
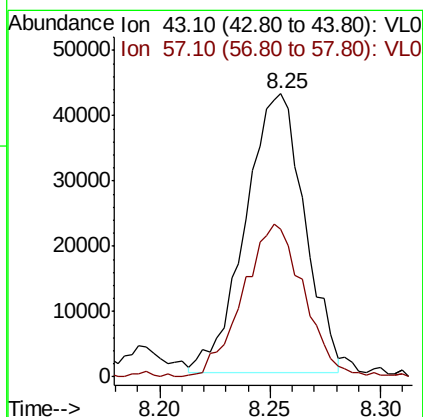
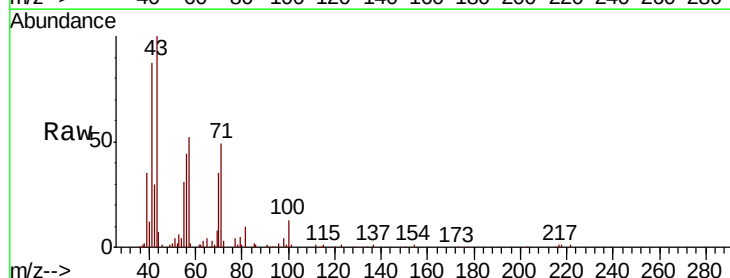
Acq: 14 Nov 2018 11:45

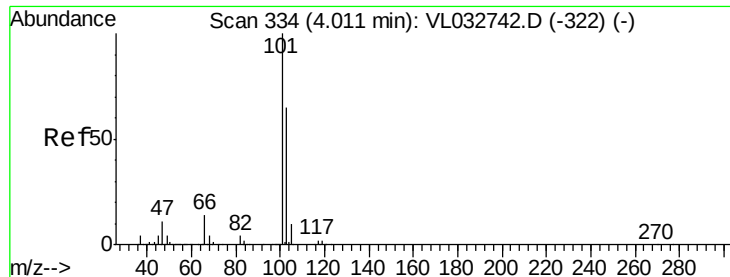
Tgt Ion: 43 Resp: 79755

Ion Ratio Lower Upper

43 100

57 57.6 41.8 62.8





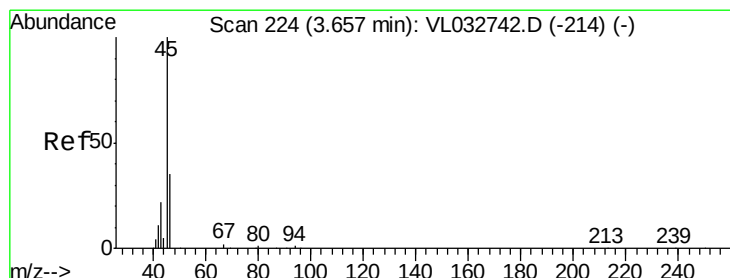
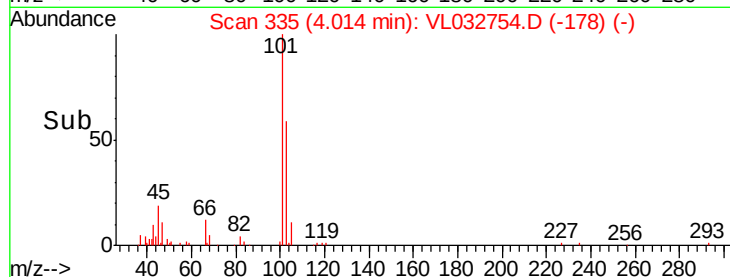
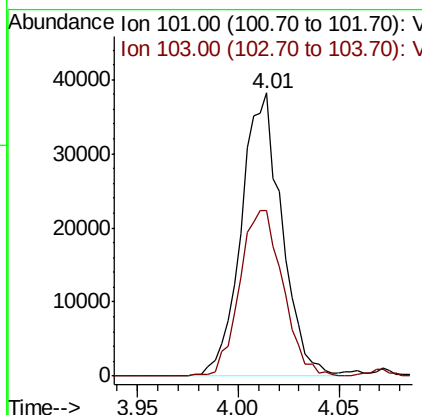
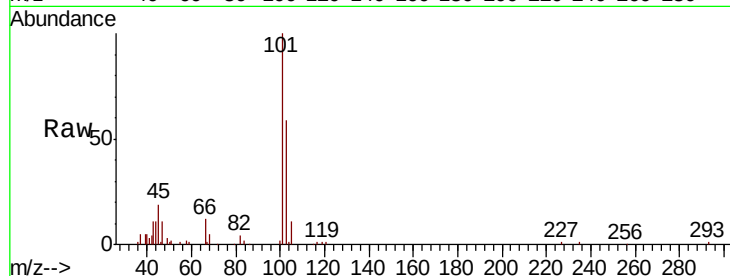
#11
 Trichlorofluoromethane
 Concen: 0.300 ppbv
 RT: 4.01 min Scan# 335
 Delta R.T. 0.00 min
 Lab File: VL032754.D
 Acq: 14 Nov 2018 11:45

Instrument :
 MSVOA_L
 ClientSampled :
 IASC1

Tot Ion:101 Resp: 53982
 Ion Ratio Lower Upper
 101 100
 103 58.7 51.6 77.4

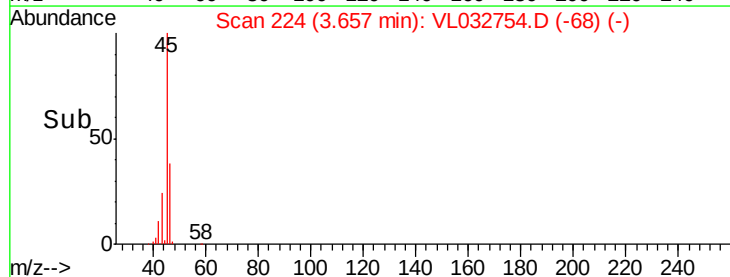
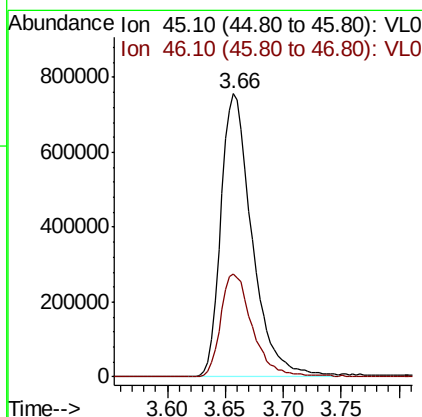
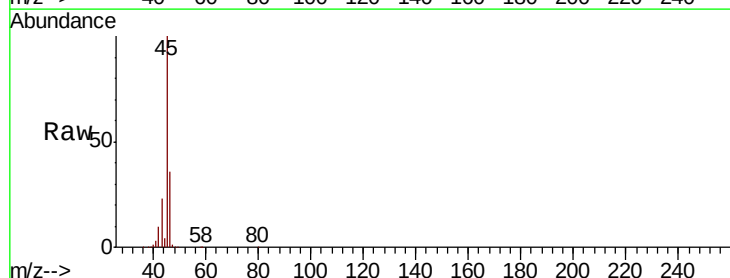
Manual Integrations
 APPROVED

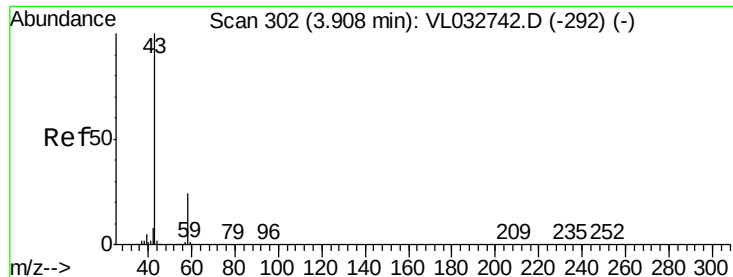
MMDadoda
 11/16/2018 1:30:31 PM



#13
 Ethanol
 Concen: 102.497 ppbv
 RT: 3.66 min Scan# 224
 Delta R.T. 0.00 min
 Lab File: VL032754.D
 Acq: 14 Nov 2018 11:45

Tgt Ion: 45 Resp: 1415455
 Ion Ratio Lower Upper
 45 100
 46 37.5 14.5 57.9





#15

Acetone

Concen: 6.113 ppbv

RT: 3.91 min Scan# 302

Delta R.T. 0.00 min

Lab File: VL032754.D

Acq: 14 Nov 2018 11:45

Instrument :

MSVOA_L

ClientSampled :

IASC1

Tot Ion: 43 Resp: 741819

Ion Ratio Lower Upper

43 100

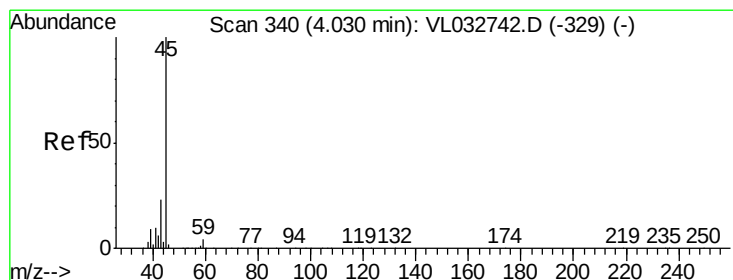
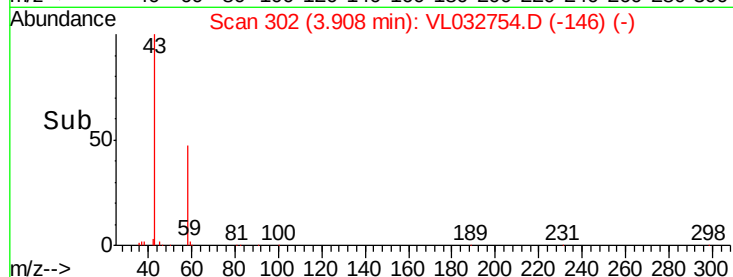
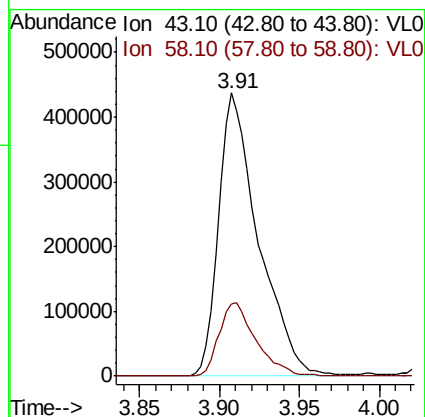
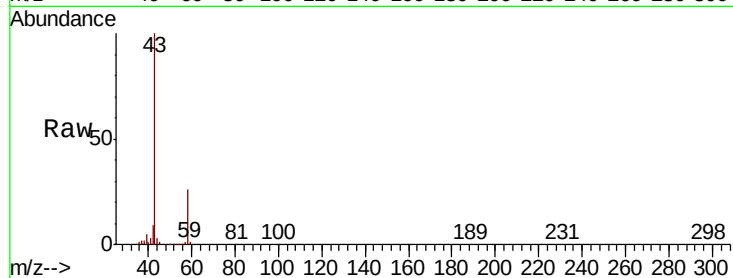
58 24.5 21.1 31.7

Manual Integrations

APPROVED

MMDadoda

11/16/2018 1:30:31 PM



#19

Isopropyl Alcohol

Concen: 2.836 ppbv

RT: 4.04 min Scan# 342

Delta R.T. 0.01 min

Lab File: VL032754.D

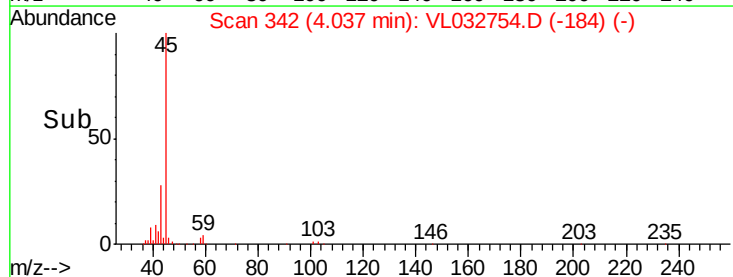
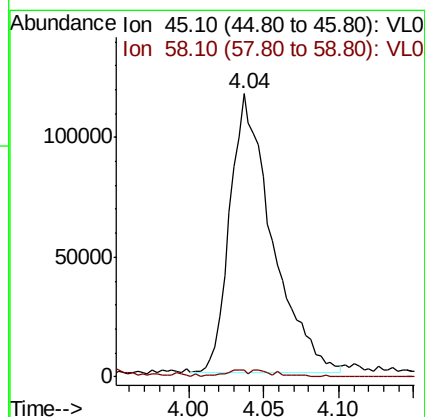
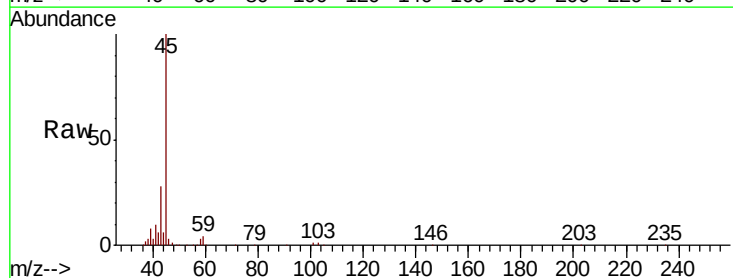
Acq: 14 Nov 2018 11:45

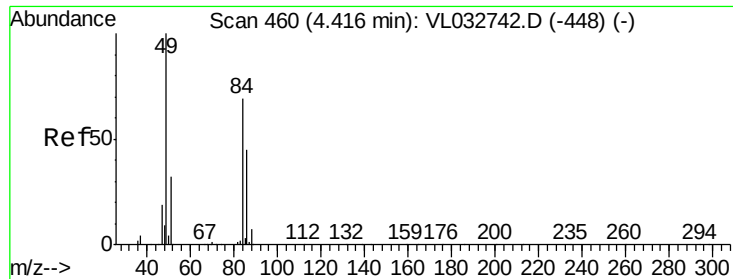
Tgt Ion: 45 Resp: 229318

Ion Ratio Lower Upper

45 100

58 2.9 1.4 2.0#





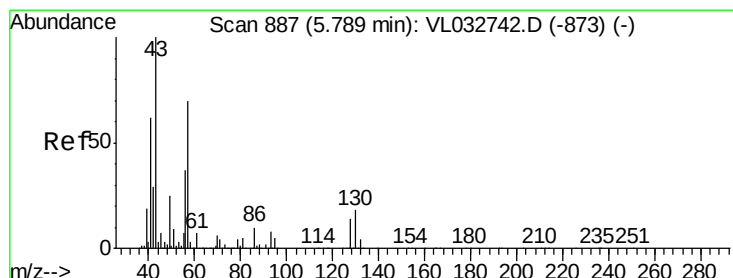
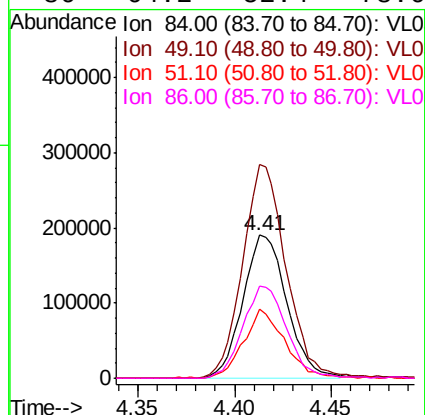
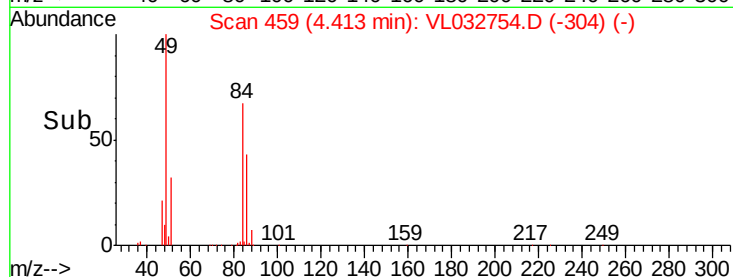
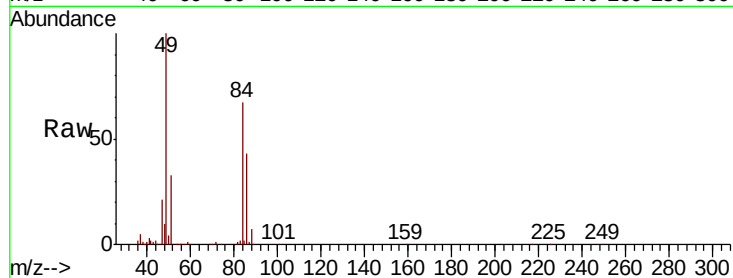
#20
Methvlene Chloride
Concen: 4.773 ppbv
RT: 4.41 min Scan# 459
Delta R.T. -0.00 min
Lab File: VL032754.D
Acq: 14 Nov 2018 11:45

Instrument :
MSVOA_L
ClientSampleId :
IASC1

Tot Ion	Ion	Ratio	Lower	Upper
84	100			
49	149.1	115.8	173.6	
51	48.0	36.9	55.3	
86	64.2	52.4	78.6	

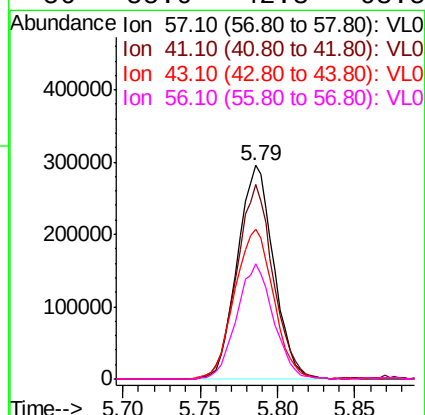
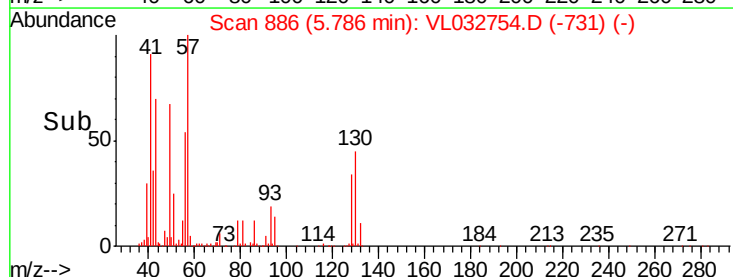
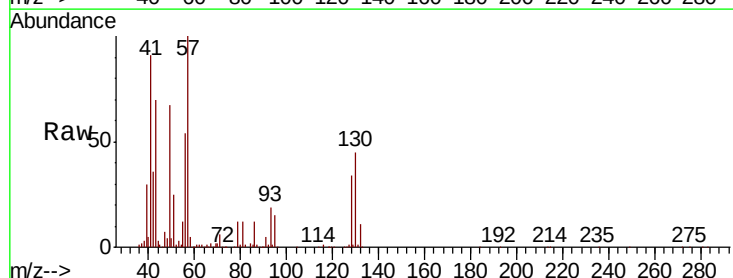
Manual Integrations
APPROVED

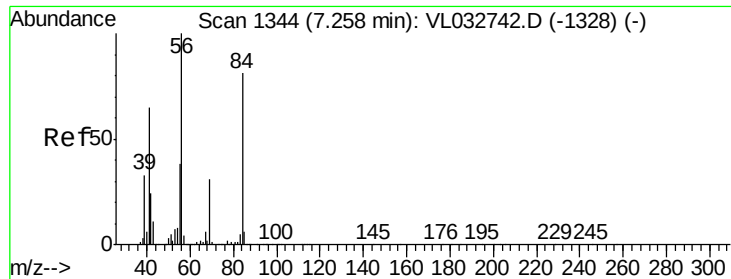
MMDadoda
11/16/2018 1:30:31 PM



#26
Hexane
Concen: 3.788 ppbv
RT: 5.79 min Scan# 886
Delta R.T. -0.00 min
Lab File: VL032754.D
Acq: 14 Nov 2018 11:45

Tgt Ion	Ion	Ratio	Lower	Upper
57	100			
41	92.9	70.3	105.5	
43	75.8	174.0	261.0#	
56	55.0	42.3	63.5	





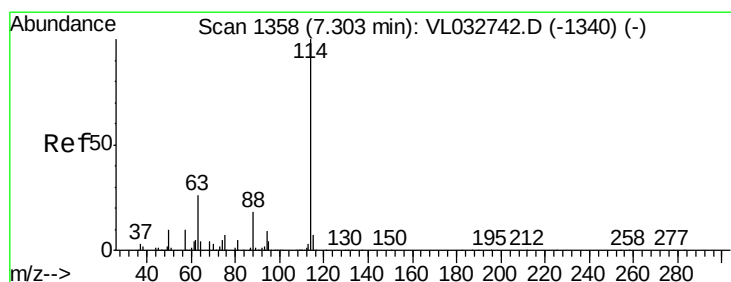
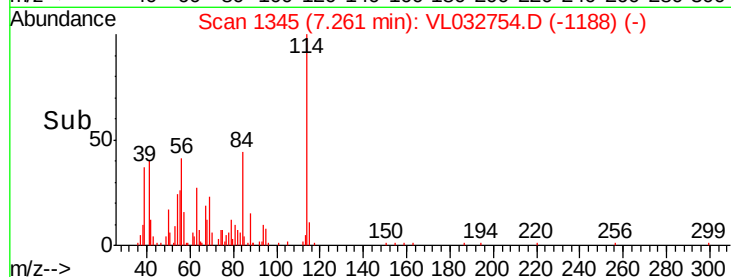
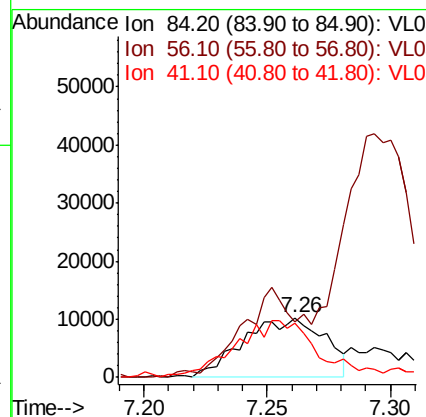
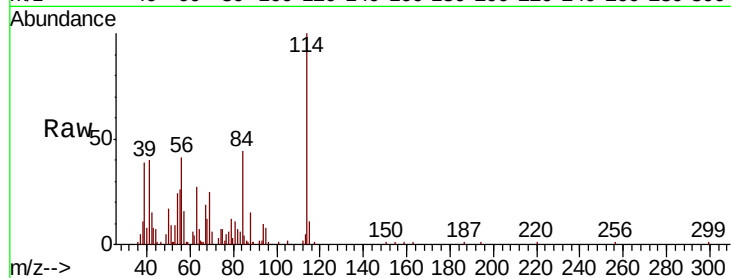
#30
Cyclohexane
Concen: 0.213 ppbv m
RT: 7.26 min Scan# 1345
Delta R.T. 0.00 min
Lab File: VL032754.D
Acq: 14 Nov 2018 11:45

Instrument :
MSVOA_L
ClientSampleId :
IASC1

Tot Ion	Ratio	Lower	Upper
84	100		
56	0.0	105.0	157.4#
41	103.6	65.3	97.9#

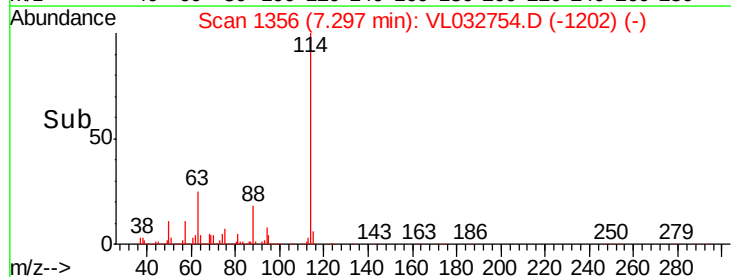
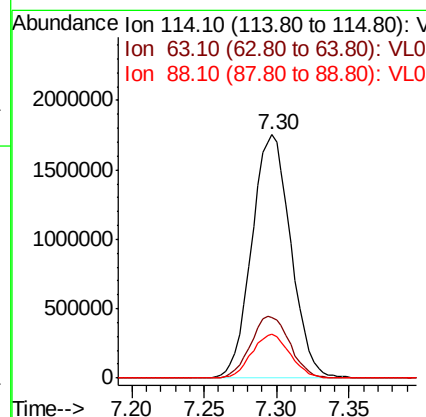
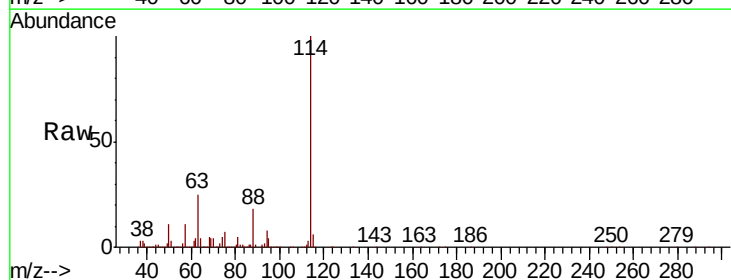
Manual Integrations
APPROVED

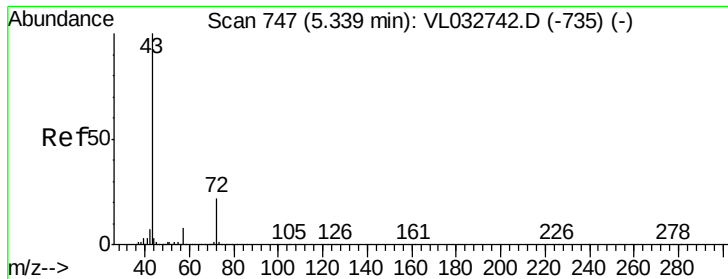
MMDadoda
11/16/2018 1:30:31 PM



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.30 min Scan# 1356
Delta R.T. -0.01 min
Lab File: VL032754.D
Acq: 14 Nov 2018 11:45

Tgt Ion	Ratio	Lower	Upper
114	100		
63	25.7	20.9	31.3
88	17.9	14.4	21.6





#34

2-Butanone

Concen: 0.567 ppbv

RT: 5.34 min Scan# 747

Delta R.T. 0.00 min

Lab File: VL032754.D

Acq: 14 Nov 2018 11:45

Instrument :

MSVOA_L

ClientSampleId :

IASC1

Tot Ion: 43 Resp: 96412

Ion Ratio Lower Upper

43 100

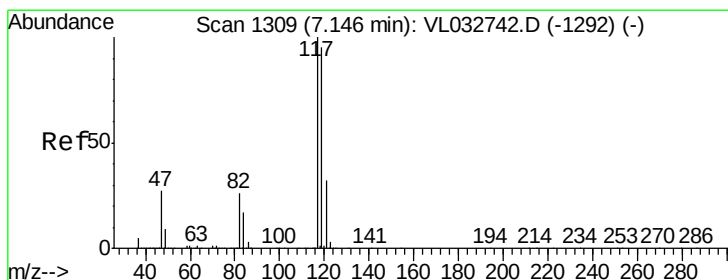
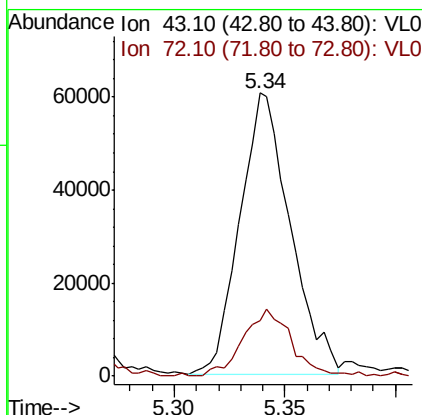
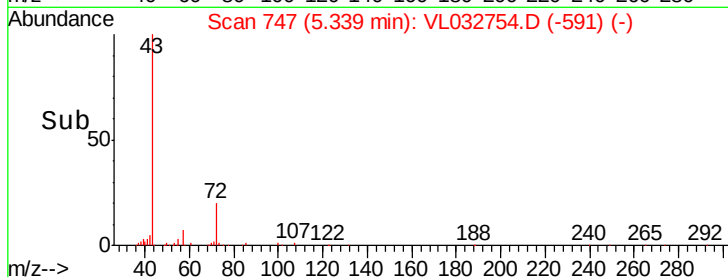
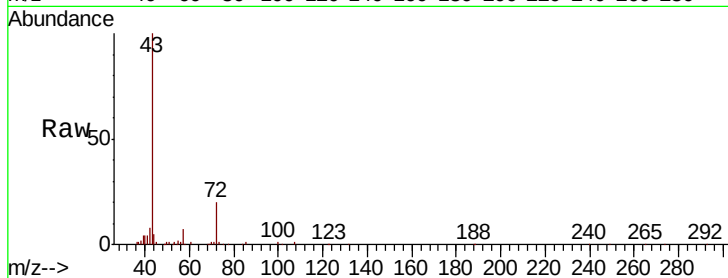
72 23.7 18.4 27.6

Manual Integrations

APPROVED

MMDadoda

11/16/2018 1:30:31 PM



#35

Carbon Tetrachloride

Concen: 0.082 ppbv

RT: 7.14 min Scan# 1307

Delta R.T. -0.01 min

Lab File: VL032754.D

Acq: 14 Nov 2018 11:45

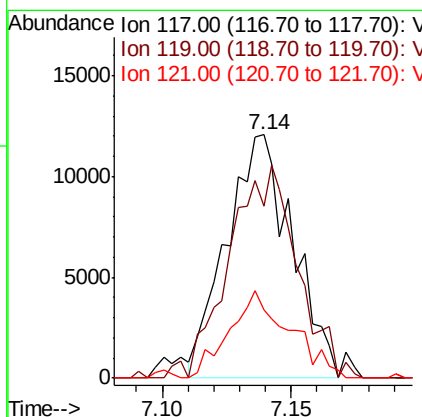
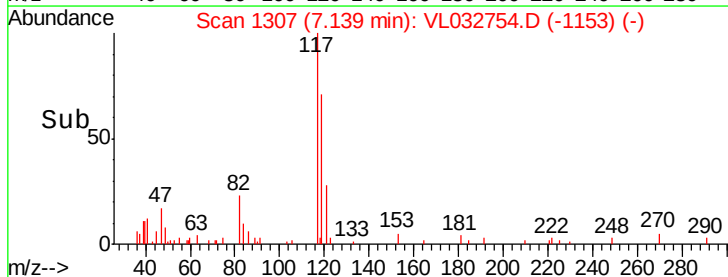
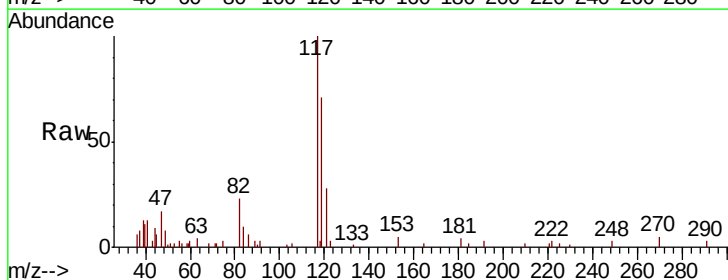
Tgt Ion: 117 Resp: 21579

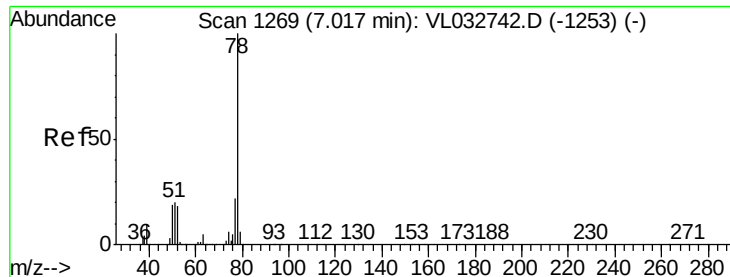
Ion Ratio Lower Upper

117 100

119 70.7 76.1 114.1#

121 28.0 25.4 38.0





#36

Benzene

Concen: 0.457 ppbv

RT: 7.01 min Scan# 1268

Delta R.T. -0.00 min

Lab File: VL032754.D

Acq: 14 Nov 2018 11:45

Instrument :

MSVOA_L

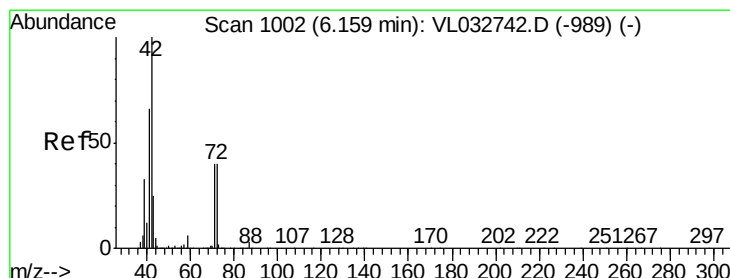
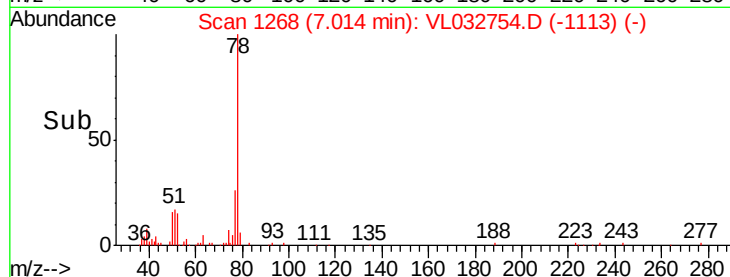
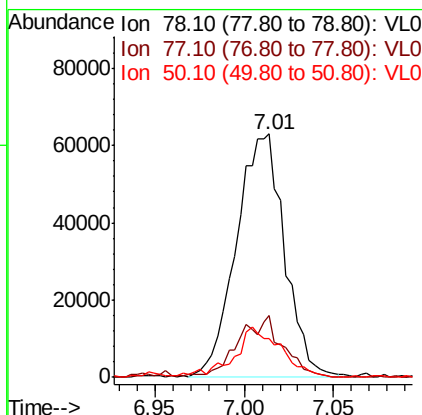
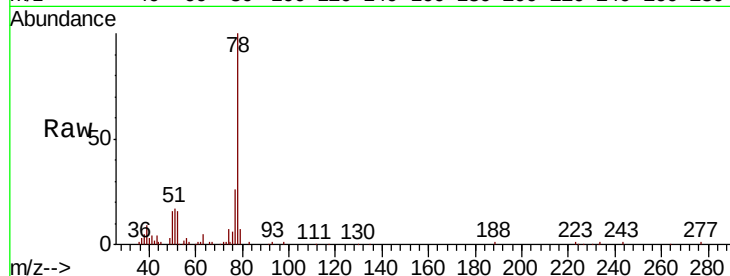
ClientSampleId :

IASC1

Tot Ion:	78	Resp:	119182
Ion	Ratio	Lower	Upper
78	100		
77	24.6	17.8	26.8
50	15.9	15.4	23.0

Manual Integrations
APPROVED

MMDadoda
11/16/2018 1:30:31 PM



#41

Tetrahydrofuran

Concen: 0.182 ppbv m

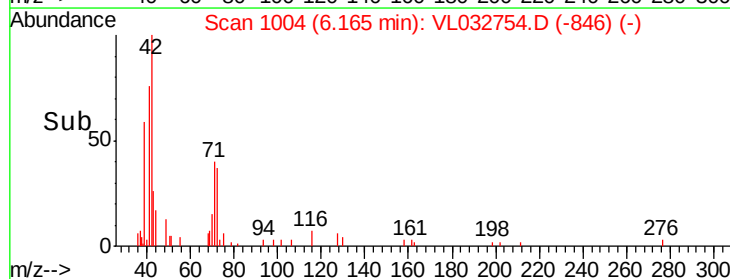
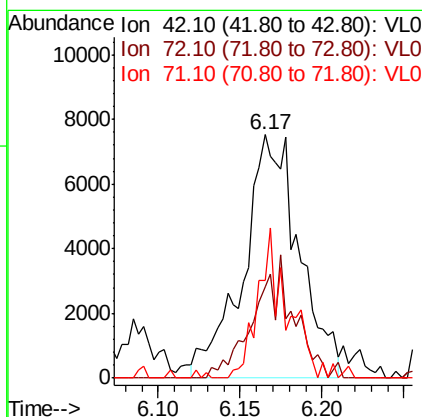
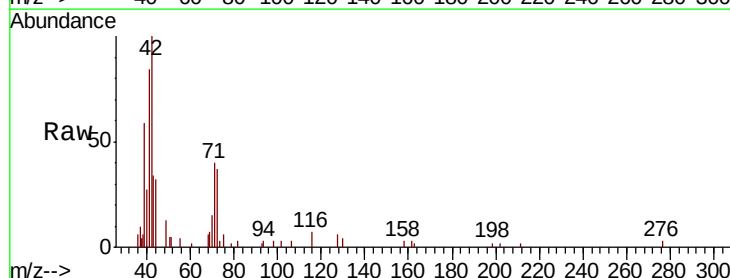
RT: 6.17 min Scan# 1004

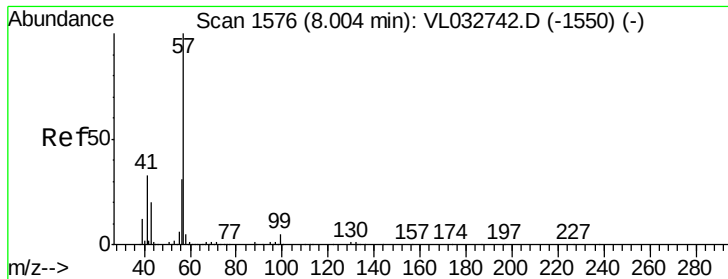
Delta R.T. 0.01 min

Lab File: VL032754.D

Acq: 14 Nov 2018 11:45

Tgt Ion:	42	Resp:	17751
Ion	Ratio	Lower	Upper
42	100		
72	35.8	32.4	48.6
71	33.0	31.6	47.4





#44

2,2,4-Trimethylpentane

Concen: 0.870 ppbv

RT: 7.99 min Scan# 1573

Delta R.T. -0.01 min

Lab File: VL032754.D

Acq: 14 Nov 2018 11:45

Instrument :

MSVOA_L

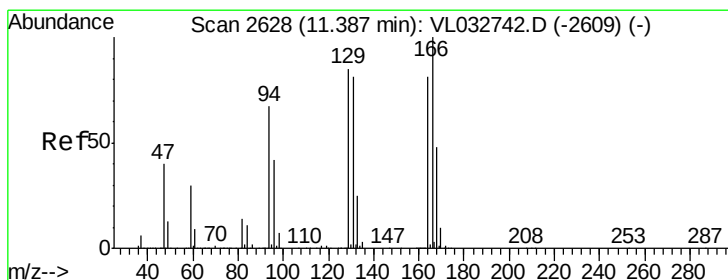
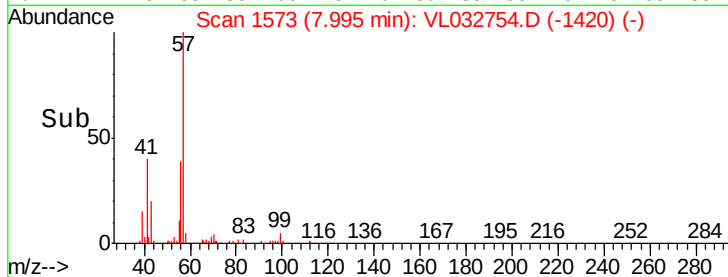
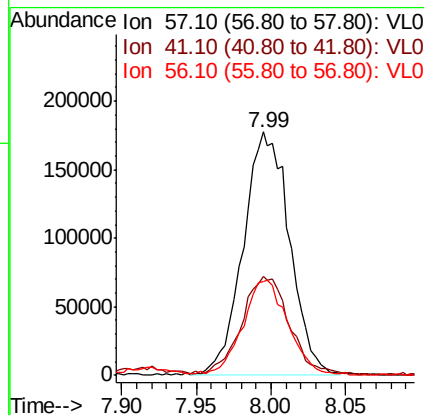
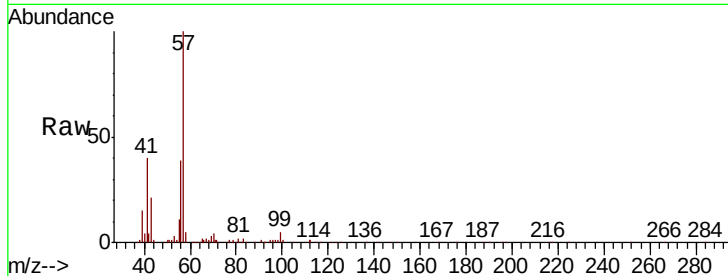
ClientSampleId :

IASC1

Tot Ion	57	Resp	379361
Ion Ratio	Lower	Upper	
57	100		
41	42.5	26.6	39.8#
56	38.3	24.8	37.2#

Manual Integrations
APPROVED

MMDadoda
11/16/2018 1:30:31 PM



#52

Tetrachloroethene

Concen: 0.053 ppbv m

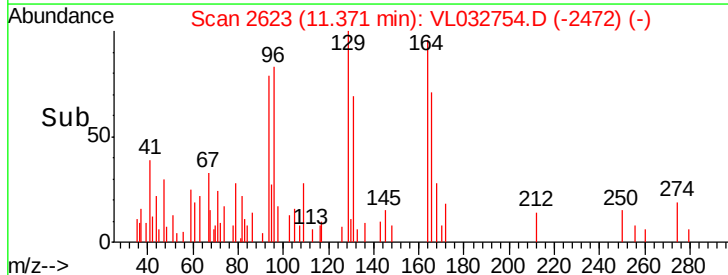
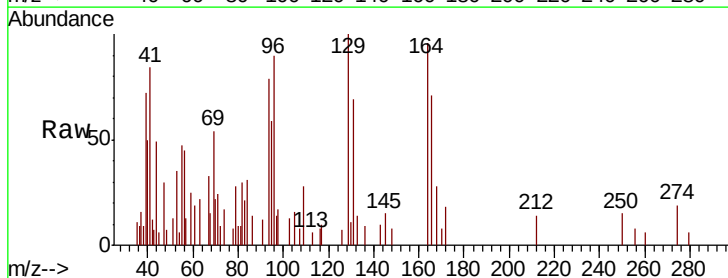
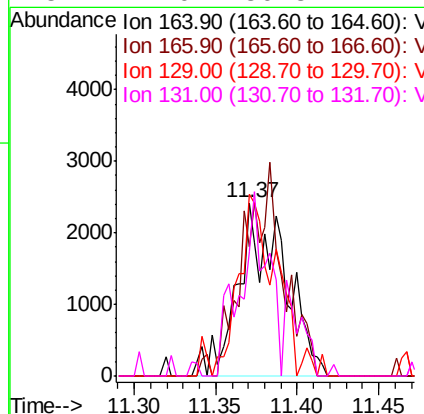
RT: 11.37 min Scan# 2623

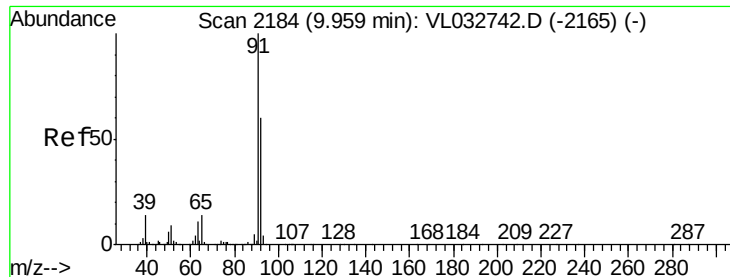
Delta R.T. -0.02 min

Lab File: VL032754.D

Acq: 14 Nov 2018 11:45

Tgt Ion	164	Resp	4834
Ion Ratio	Lower	Upper	
164	100		
166	74.4	99.3	148.9#
129	104.7	83.9	125.9
131	72.0	80.8	121.2#





#53

Toluene

Concen: 11.776 ppbv

RT: 9.95 min Scan# 2181

Delta R.T. -0.01 min

Lab File: VL032754.D

Acq: 14 Nov 2018 11:45

Instrument :

MSVOA_L

ClientSampled :

IASC1

Tot Ion: 91 Resp: 3204888

Ion Ratio Lower Upper

91 100

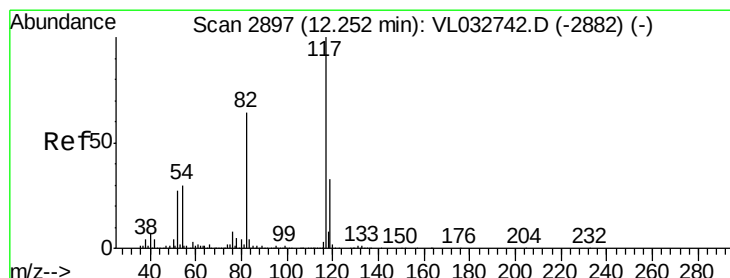
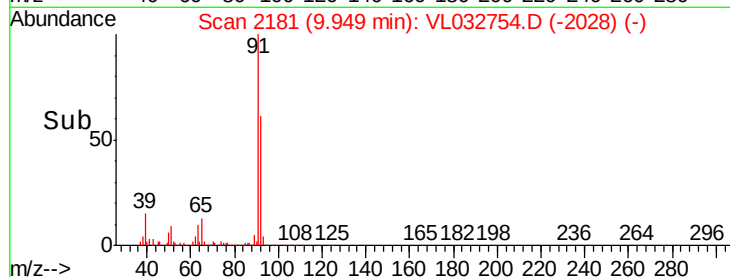
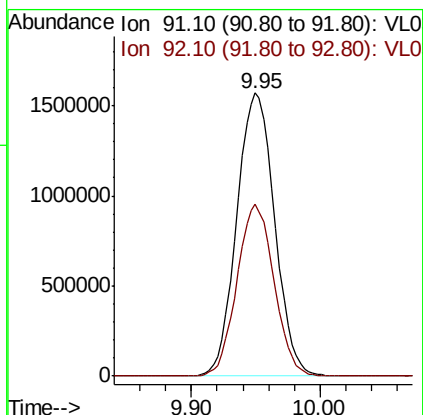
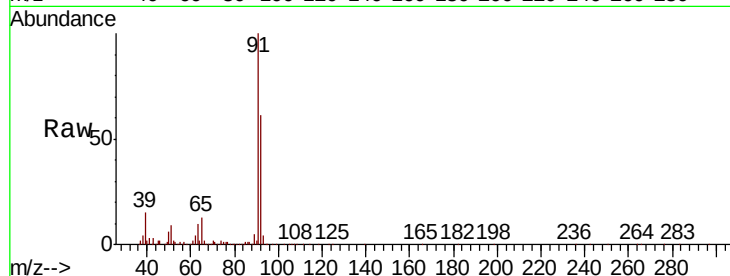
92 59.5 47.9 71.9

Manual Integrations

APPROVED

MMDadoda

11/16/2018 1:30:31 PM



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.24 min Scan# 2894

Delta R.T. -0.01 min

Lab File: VL032754.D

Acq: 14 Nov 2018 11:45

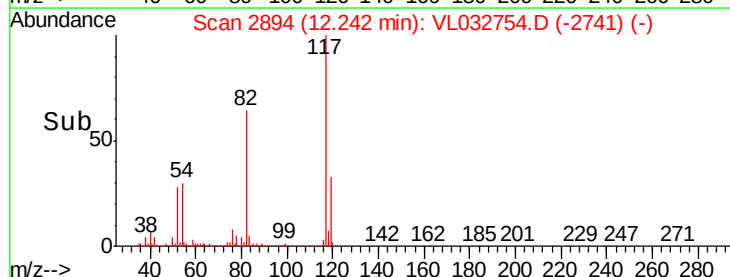
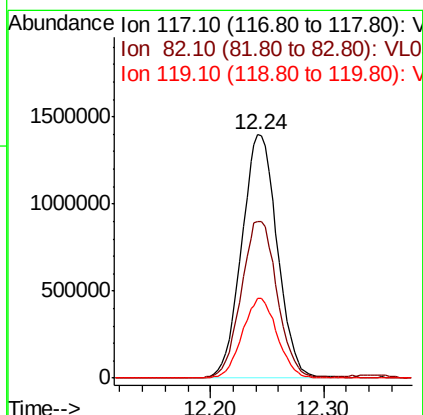
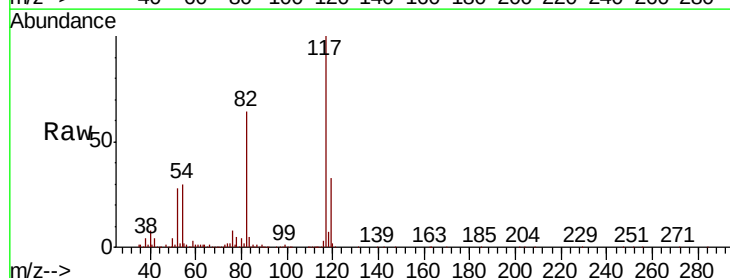
Tgt Ion: 117 Resp: 3057145

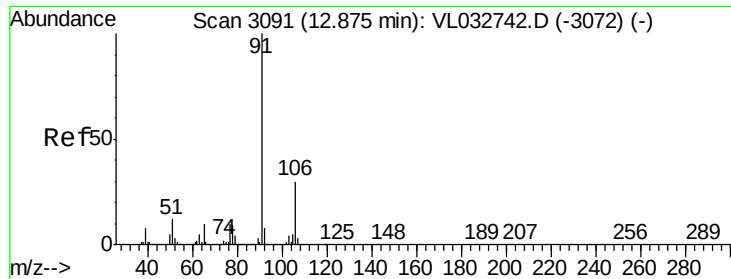
Ion Ratio Lower Upper

117 100

82 65.1 51.0 76.6

119 32.4 28.0 42.0





#58

Ethyl Benzene

Concen: 0.560 ppbv

RT: 12.87 min Scan# 3090

Delta R.T. -0.00 min

Lab File: VL032754.D

Acq: 14 Nov 2018 11:45

Instrument :

MSVOA_L

ClientSampled :

IASC1

Tot Ion: 91 Resp: 206015

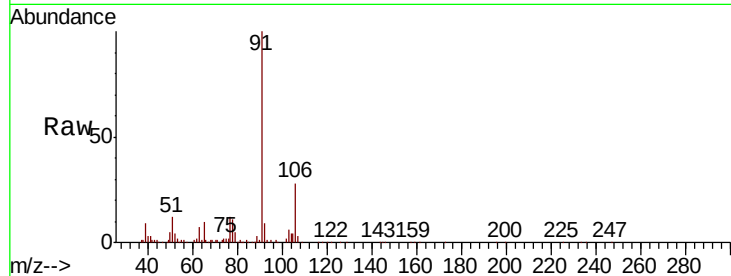
Ion Ratio Lower Upper

91 100

106 27.5 23.6 35.4

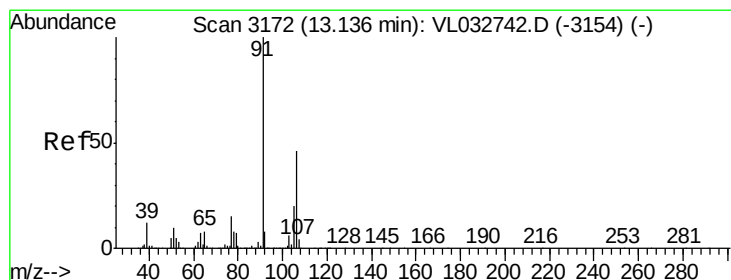
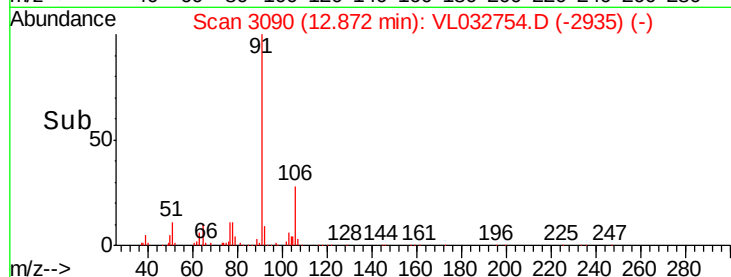
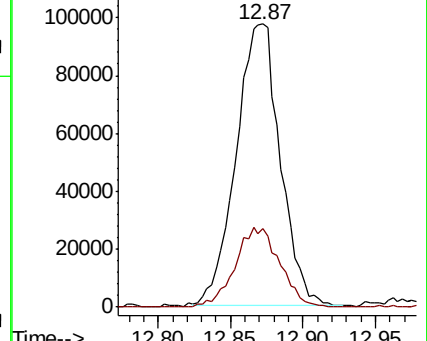
Manual Integrations
APPROVED

MMDadoda
11/16/2018 1:30:31 PM



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 2.068 ppbv

RT: 13.13 min Scan# 3169

Delta R.T. -0.01 min

Lab File: VL032754.D

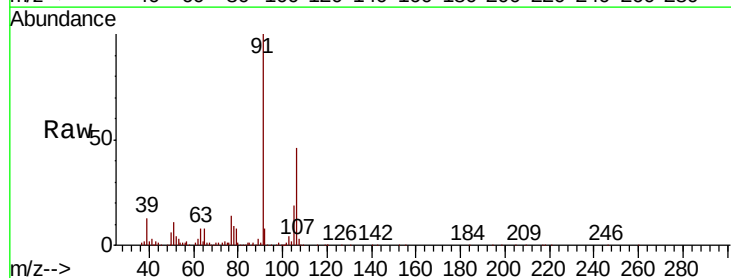
Acq: 14 Nov 2018 11:45

Tgt Ion: 91 Resp: 677354

Ion Ratio Lower Upper

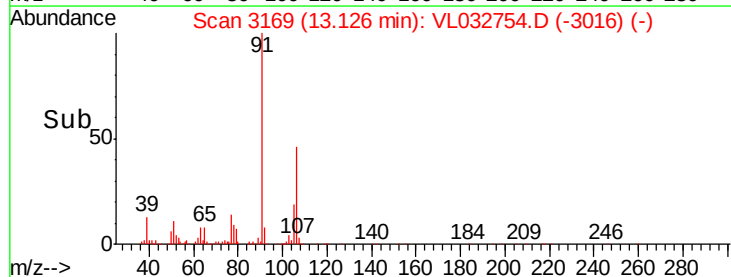
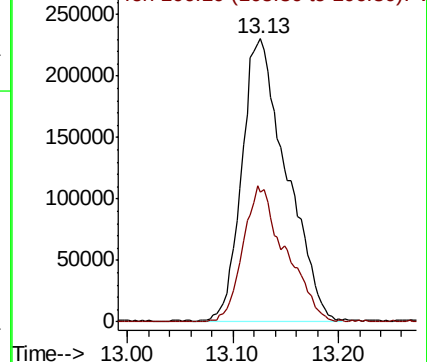
91 100

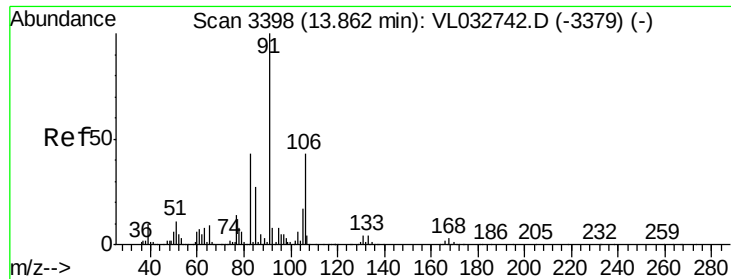
106 45.8 36.1 54.1



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





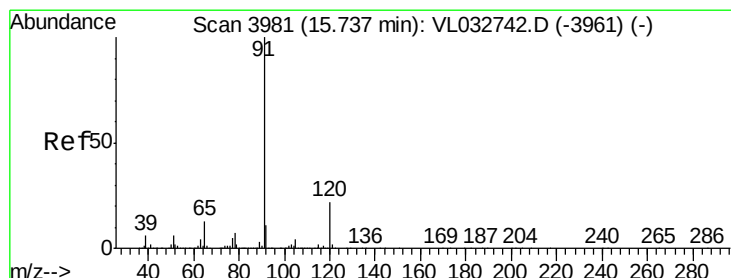
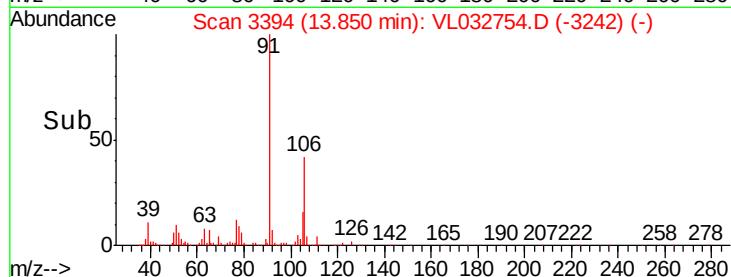
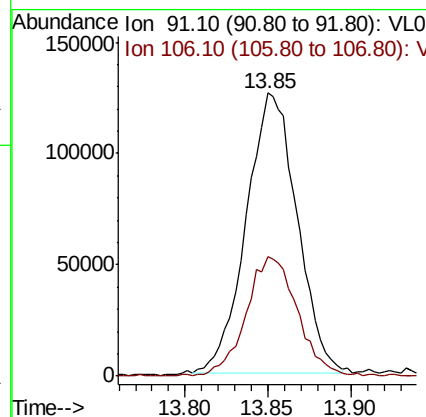
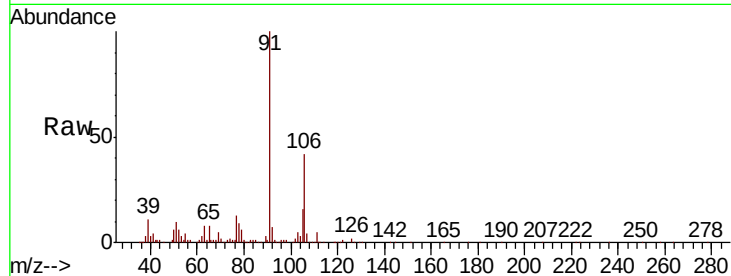
#60
o-Xylene
Concen: 0.811 ppbv
RT: 13.85 min Scan# 3394
Delta R.T. -0.01 min
Lab File: VL032754.D
Acq: 14 Nov 2018 11:45

Instrument :
MSVOA_L
ClientSampled :
IASC1

Tot Ion	Ratio	Lower	Upper
91	100		
106	43.5	21.9	65.7

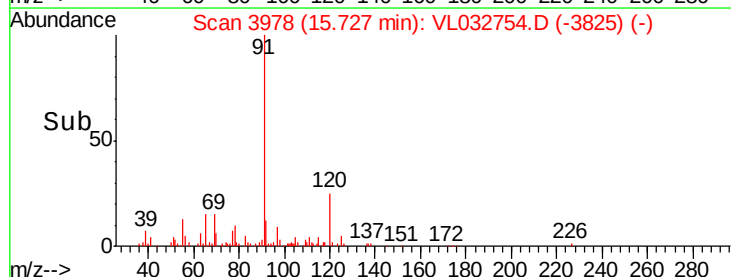
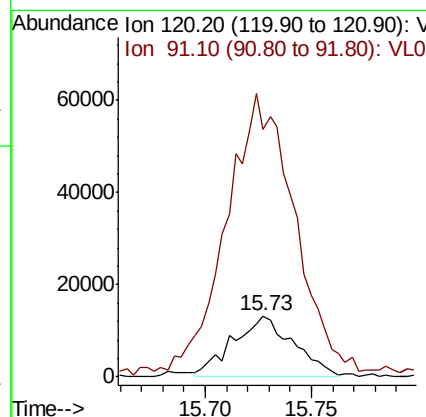
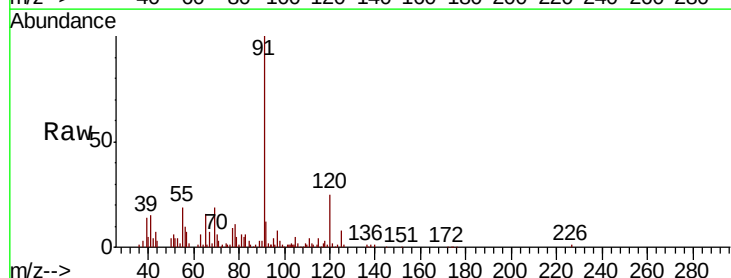
Manual Integrations
APPROVED

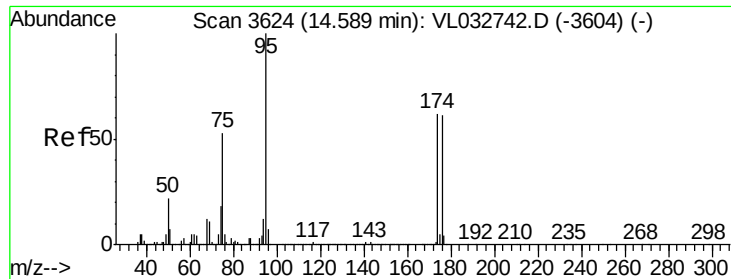
MMDadoda
11/16/2018 1:30:31 PM



#64
n-propylbenzene
Concen: 0.223 ppbv m
RT: 15.73 min Scan# 3978
Delta R.T. -0.01 min
Lab File: VL032754.D
Acq: 14 Nov 2018 11:45

Tgt Ion	Ratio	Lower	Upper
120	100		
91	511.8	381.7	572.5





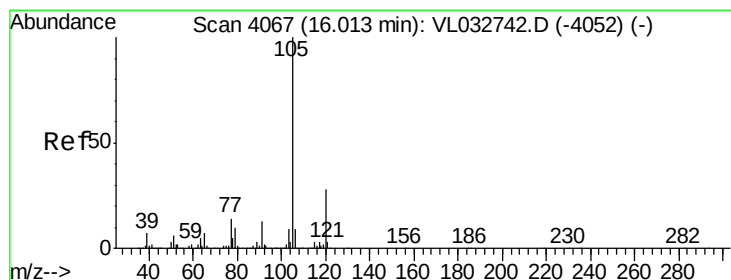
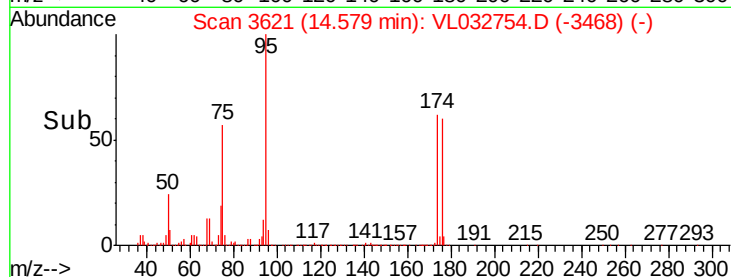
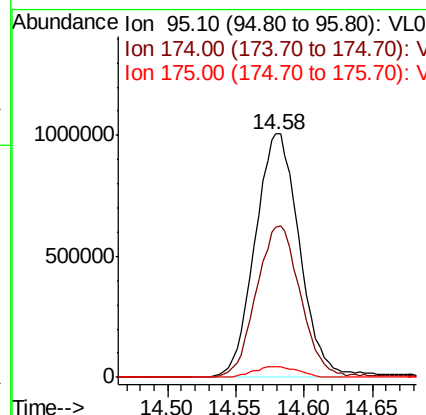
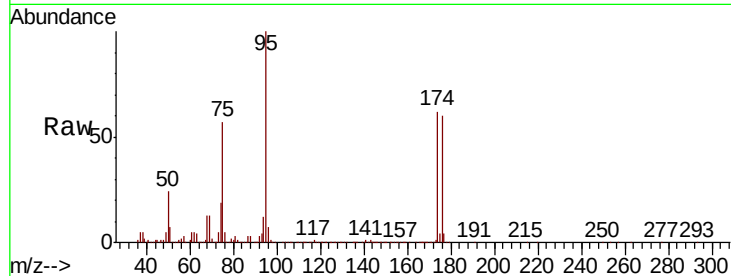
#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.869 ppbv
 RT: 14.58 min Scan# 3621
 Delta R.T. -0.01 min
 Lab File: VL032754.D
 Acq: 14 Nov 2018 11:45

Instrument :
 MSVOA_L
 ClientSampled :
 IASC1

Tot Ion: 95 Resp: 2256604
 Ion Ratio Lower Upper
 95 100
 174 63.6 50.7 76.1
 175 4.6 3.8 5.6

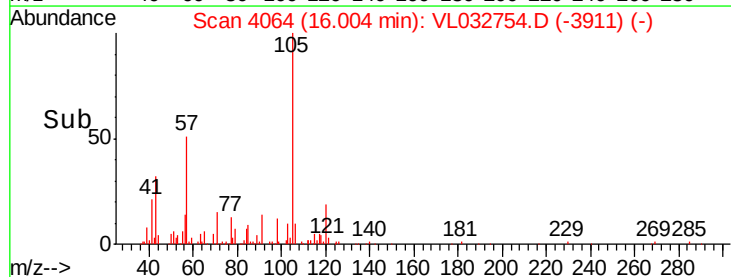
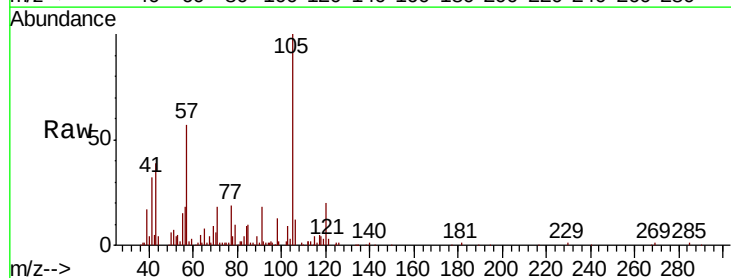
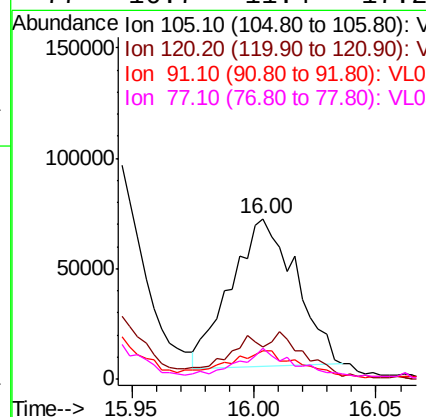
Manual Integrations
 APPROVED

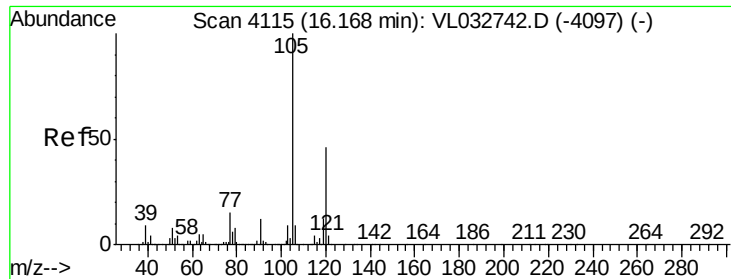
MMDadoda
 11/16/2018 1:30:31 PM



#72
 4-Ethyltoluene
 Concen: 0.343 ppbv
 RT: 16.00 min Scan# 4064
 Delta R.T. -0.01 min
 Lab File: VL032754.D
 Acq: 14 Nov 2018 11:45

Tgt Ion: 105 Resp: 123927
 Ion Ratio Lower Upper
 105 100
 120 33.6 22.9 34.3
 91 20.0 10.6 15.8#
 77 16.7 11.4 17.2





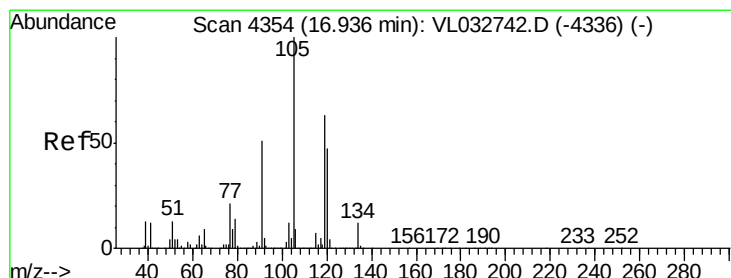
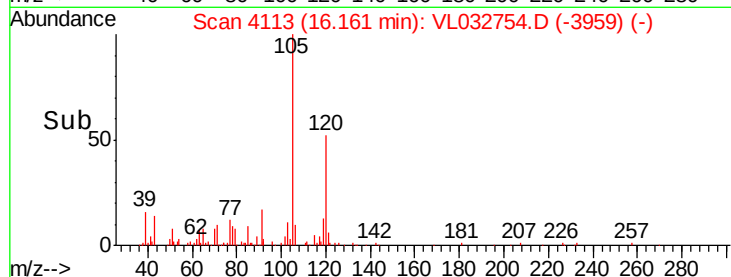
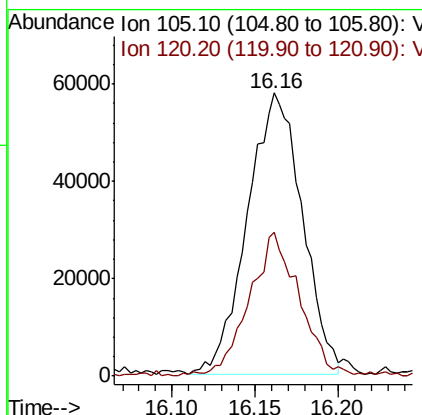
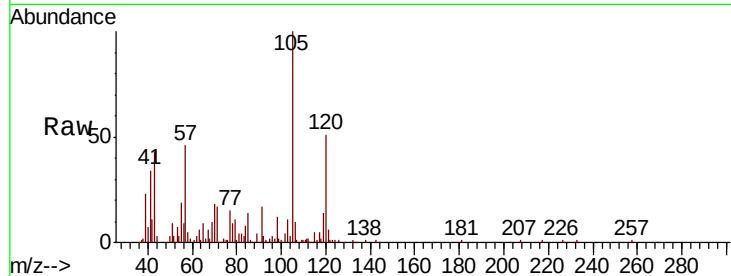
#73
 1,3,5-Trimethylbenzene
 Concen: 0.377 ppbv
 RT: 16.16 min Scan# 4113
 Delta R.T. -0.01 min
 Lab File: VL032754.D
 Acq: 14 Nov 2018 11:45

Instrument :
 MSVOA_L
 ClientSampled :
 IASC1

Tot Ion	Ratio	Lower	Upper
105	100		
120	50.8	36.6	55.0

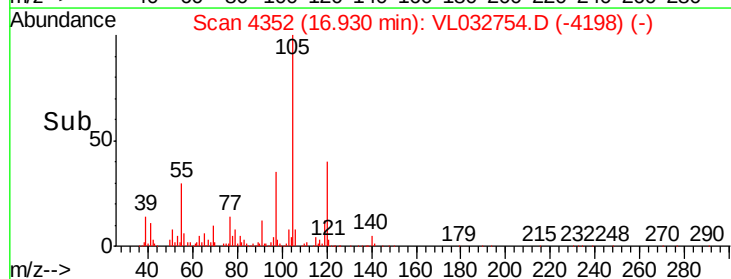
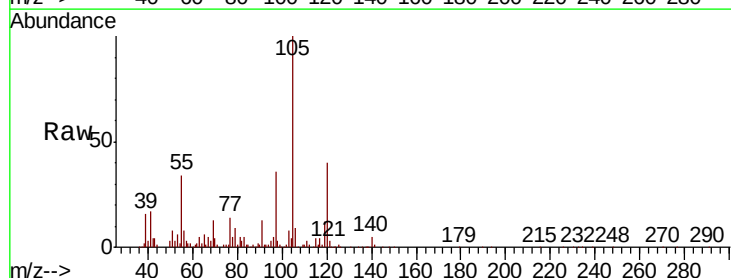
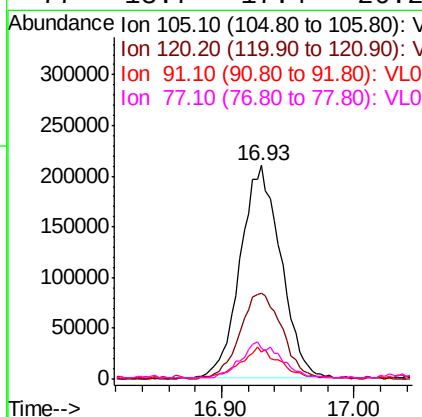
Manual Integrations
 APPROVED

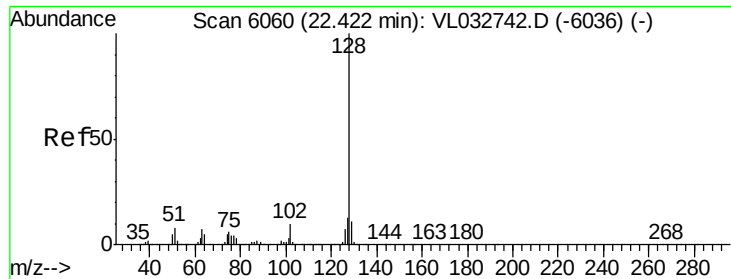
MMDadoda
 11/16/2018 1:30:31 PM



#74
 1,2,4-Trimethylbenzene
 Concen: 1.180 ppbv
 RT: 16.93 min Scan# 4352
 Delta R.T. -0.01 min
 Lab File: VL032754.D
 Acq: 14 Nov 2018 11:45

Tgt Ion	Ratio	Lower	Upper
105	100		
120	40.4	37.6	56.4
91	12.0	42.5	63.7#
77	13.7	17.4	26.2#





#79

Naphthalene

Concen: 0.185 ppbv m

RT: 22.43 min Scan# 6062

Delta R.T. 0.01 min

Lab File: VL032754.D

Acq: 14 Nov 2018 11:45

Instrument :

MSVOA_L

ClientSampleId :

IASC1

Tot Ion:	128	Resp:	45860
Ion Ratio	Lower	Upper	
128	100		
127	11.2	10.1	15.1
129	5.2	8.9	13.3#

Manual Integrations
APPROVED

MMDadoda
11/16/2018 1:30:31 PM

