

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL120418\
 Data File : VL032886.D
 Acq On : 4 Dec 2018 21:23
 Operator : SY/AP
 Sample : J6175-05
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 MMSV-DUP

Manual Integrations
 APPROVED

MMDadoda
 12/10/2018 1:00:41 PM

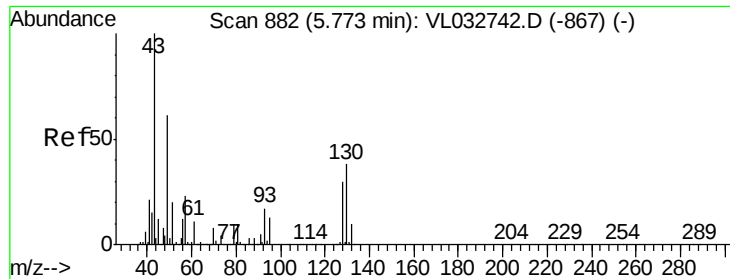
Quant Time: Dec 05 07:15:02 2018
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111418AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Nov 14 07:15:02 2018
 QLast Update : Wed Nov 14 07:00:23 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.77	49	1397601	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.30	114	3560148	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.25	117	3681283	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.58	95	2575326	9.35	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	93.50%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	124411	0.619	ppbv	100
3) Chlorodifluoromethane	3.02	51	2538127	22.907	ppbv	96
9) Propene	3.04	41	796172	17.956	ppbv	97
10) Heptane	8.25	43	57144m	0.338	ppbv	
11) Trichlorofluoromethane	4.01	101	213311	1.127	ppbv	96
13) Ethanol	3.67	45	300055m	20.660	ppbv	
15) Acetone	3.91	43	2563369	20.084	ppbv #	79
20) Methylene Chloride	4.42	84	3484822	52.741	ppbv	99
26) Hexane	5.79	57	994036	7.507	ppbv #	43
27) Carbon Disulfide	4.63	76	237623	1.415	ppbv #	84
34) 2-Butanone	5.33	43	8103399	43.885	ppbv	97
36) Benzene	7.01	78	519447	1.832	ppbv	97
41) Tetrahydrofuran	6.15	42	1408218	13.295	ppbv	99
44) 2,2,4-Trimethylpentane	7.99	57	86568m	0.183	ppbv	
51) 2-Hexanone	10.27	43	758128	4.080	ppbv #	98
52) Tetrachloroethene	11.38	164	26036m	0.264	ppbv	
53) Toluene	9.95	91	552645	1.869	ppbv	100
58) Ethyl Benzene	12.87	91	131976	0.298	ppbv	98
59) m/p-Xylene	13.13	91	284336m	0.721	ppbv	
60) o-Xylene	13.86	91	154672	0.390	ppbv	98
61) Styrene	13.69	104	55226	0.214	ppbv	98
72) 4-Ethyltoluene	16.01	105	68228	0.157	ppbv #	95
73) 1,3,5-Trimethylbenzene	16.17	105	81787m	0.192	ppbv	
74) 1,2,4-Trimethylbenzene	16.93	105	206658	0.454	ppbv #	69

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 882

Delta R.T. 0.00 min

Lab File: VL032886.D

Acq: 4 Dec 2018 21:23

Instrument :

MSVOA_L

ClientSampleId :

MMSV-DUP

Tot Ion: 49 Resp: 1397601

Ion Ratio Lower Upper

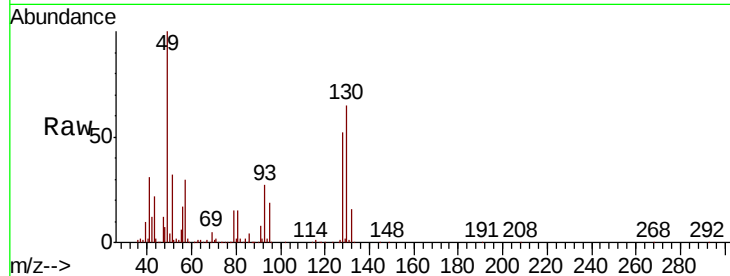
49 100

128 52.0 24.9 74.6

130 66.1 31.4 94.2

Manual Integrations
APPROVED

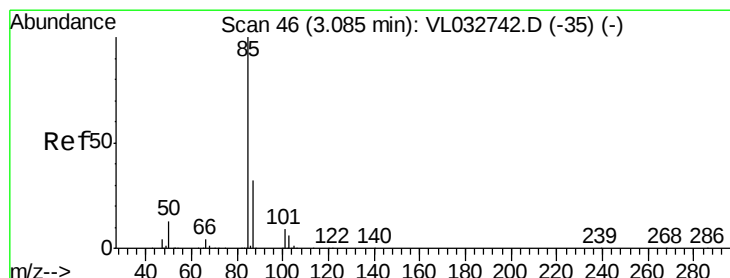
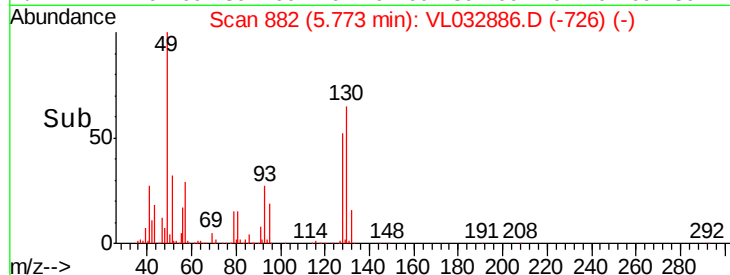
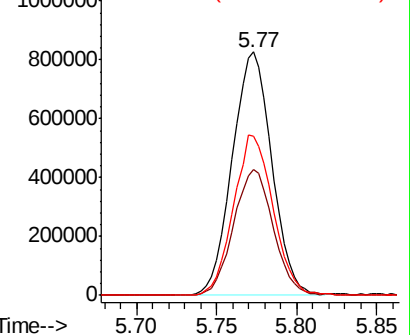
MMDadoda
12/10/2018 1:00:41 PM



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: 0.619 ppbv

RT: 3.08 min Scan# 44

Delta R.T. -0.01 min

Lab File: VL032886.D

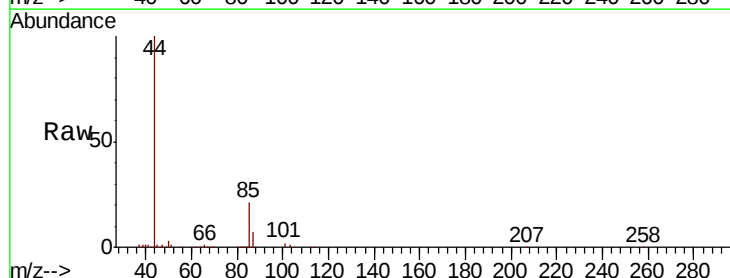
Acq: 4 Dec 2018 21:23

Tgt Ion: 85 Resp: 124411

Ion Ratio Lower Upper

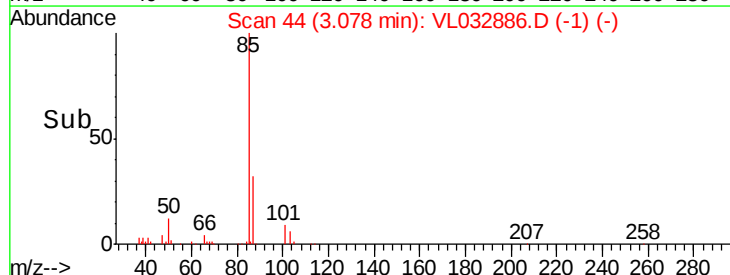
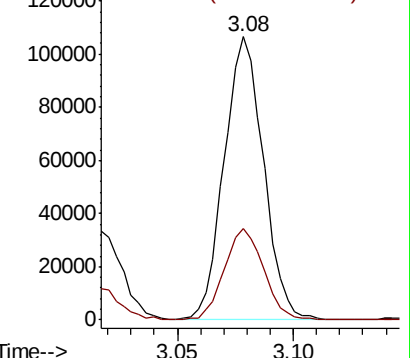
85 100

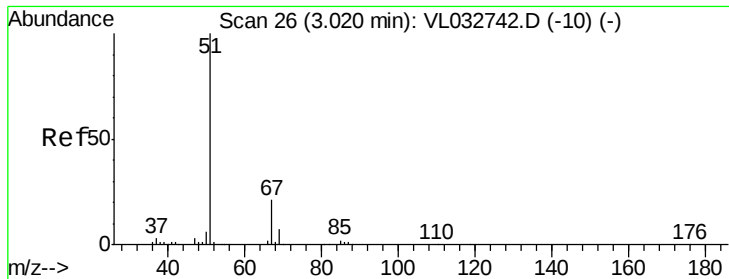
87 32.4 26.0 39.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 22.907 ppbv

RT: 3.02 min Scan# 25

Delta R.T. -0.00 min

Lab File: VL032886.D

Acq: 4 Dec 2018 21:23

Tot Ion: 51 Resp: 2538127

Ion Ratio Lower Upper

51 100

67 18.5 16.1 24.1

Instrument :

MSVOA_L

ClientSampleId :

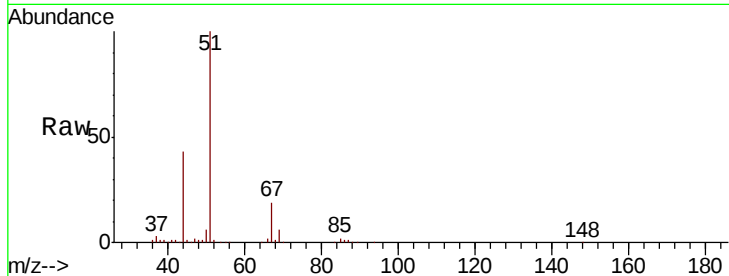
MMSV-DUP

Manual Integrations

APPROVED

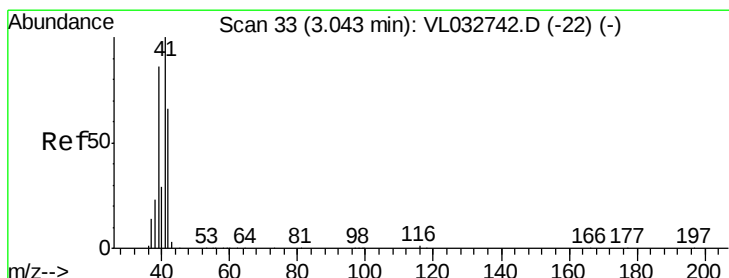
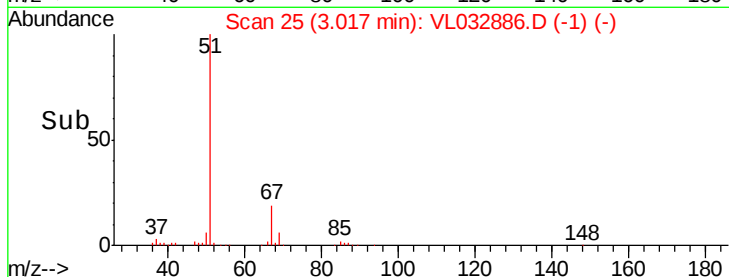
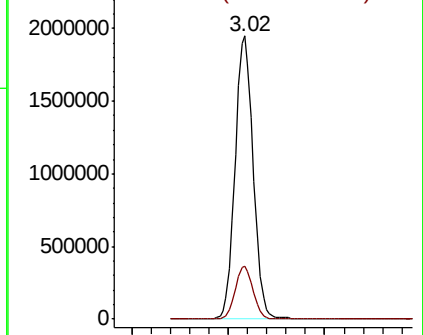
MMDadoda

12/10/2018 1:00:41 PM



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#9

Propene

Concen: 17.956 ppbv

RT: 3.04 min Scan# 32

Delta R.T. -0.00 min

Lab File: VL032886.D

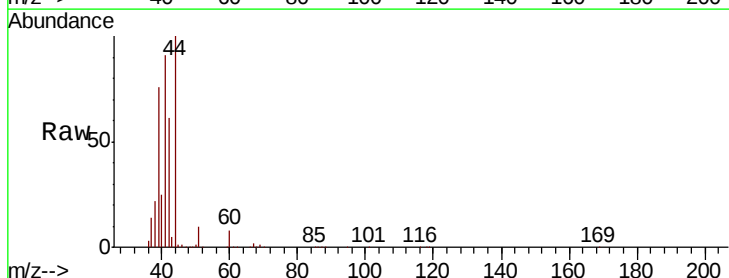
Acq: 4 Dec 2018 21:23

Tgt Ion: 41 Resp: 796172

Ion Ratio Lower Upper

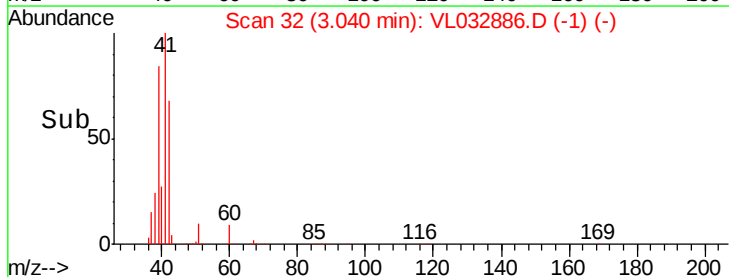
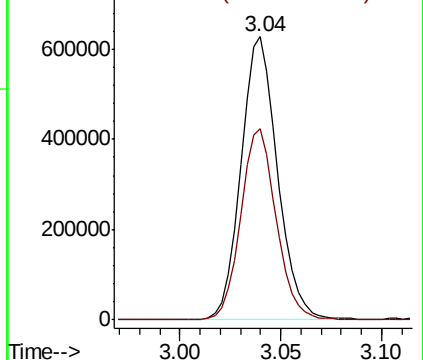
41 100

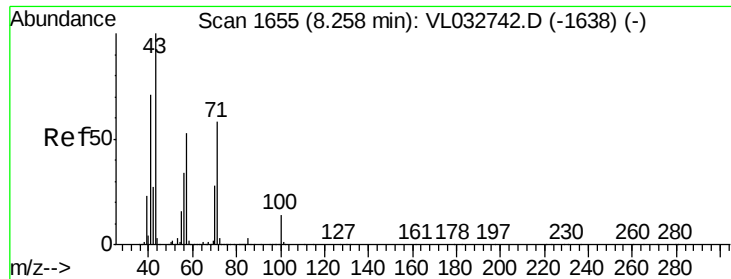
42 66.0 55.0 82.6



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





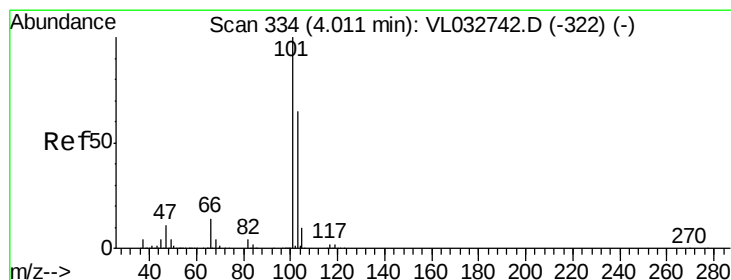
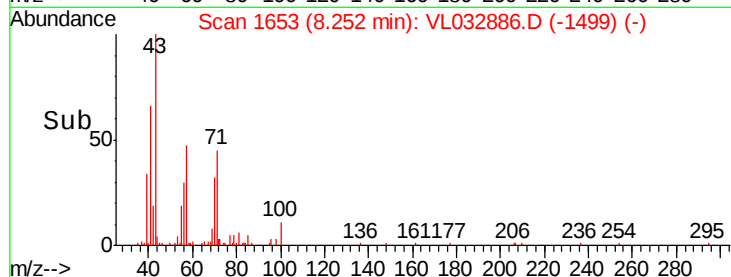
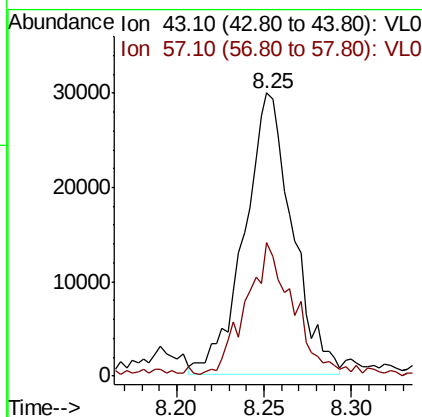
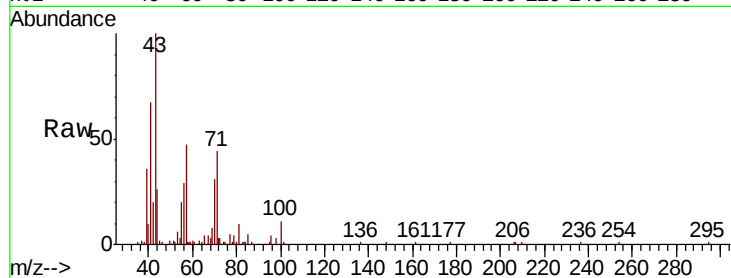
#10
Heptane
Concen: 0.338 ppbv m
RT: 8.25 min Scan# 1653
Delta R.T. -0.01 min
Lab File: VL032886.D
Acq: 4 Dec 2018 21:23

Instrument :
MSVOA_L
ClientSampleId :
MMSV-DUP

Tot Ion: 43 Resp: 57144
Ion Ratio Lower Upper
43 100
57 49.7 41.8 62.8

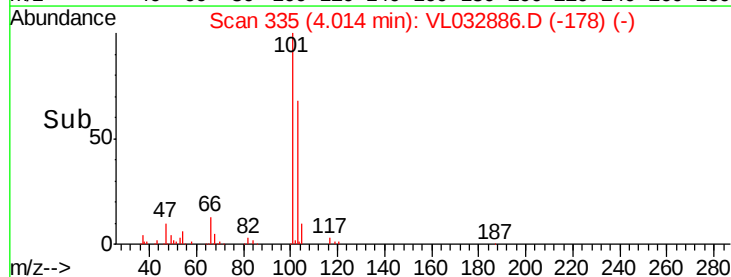
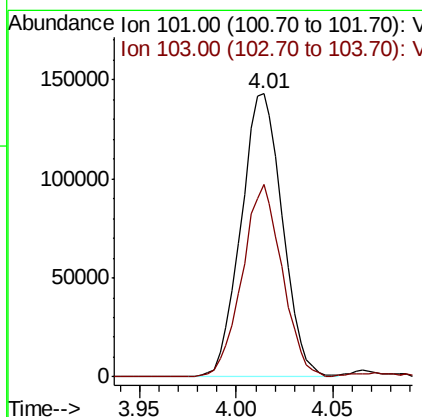
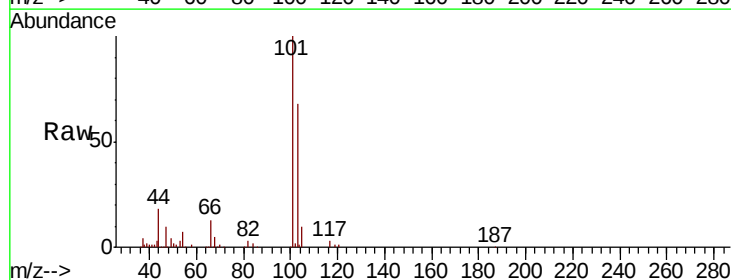
Manual Integrations
APPROVED

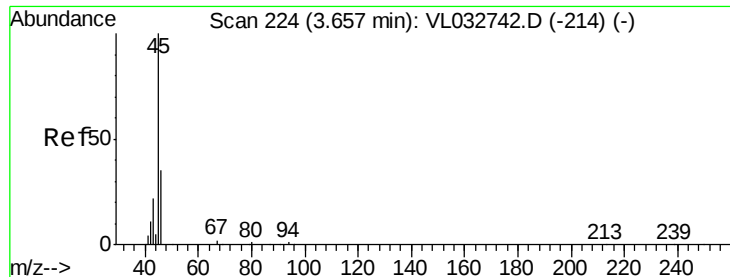
MMDadoda
12/10/2018 1:00:41 PM



#11
Trichlorofluoromethane
Concen: 1.127 ppbv
RT: 4.01 min Scan# 335
Delta R.T. 0.00 min
Lab File: VL032886.D
Acq: 4 Dec 2018 21:23

Tgt Ion:101 Resp: 213311
Ion Ratio Lower Upper
101 100
103 67.9 51.6 77.4





#13

Ethanol

Concen: 20.660 ppbv m

RT: 3.67 min Scan# 227

Delta R.T. 0.01 min

Lab File: VL032886.D

Acq: 4 Dec 2018 21:23

Tot Ion: 45 Resp: 300055

Ion Ratio Lower Upper

45 100

46 36.5 14.5 57.9

Instrument :

MSVOA_L

ClientSampleId :

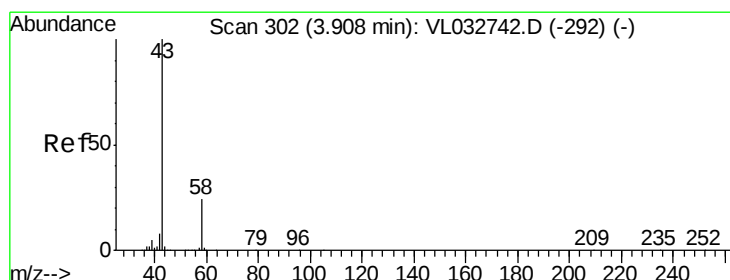
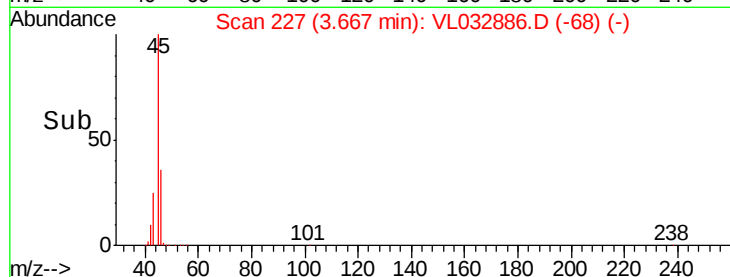
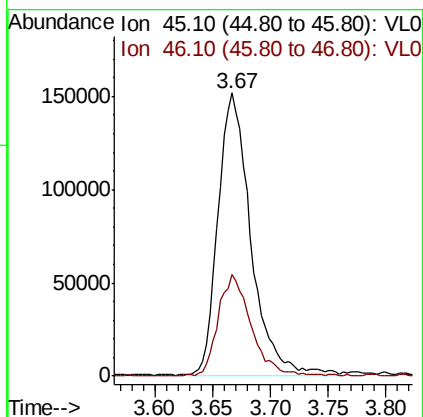
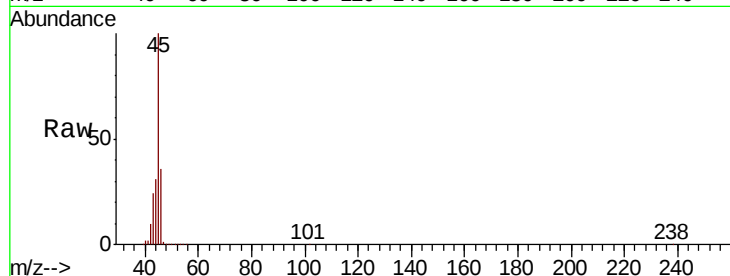
MMSV-DUP

Manual Integrations

APPROVED

MMDadoda

12/10/2018 1:00:41 PM



#15

Acetone

Concen: 20.084 ppbv

RT: 3.91 min Scan# 302

Delta R.T. 0.00 min

Lab File: VL032886.D

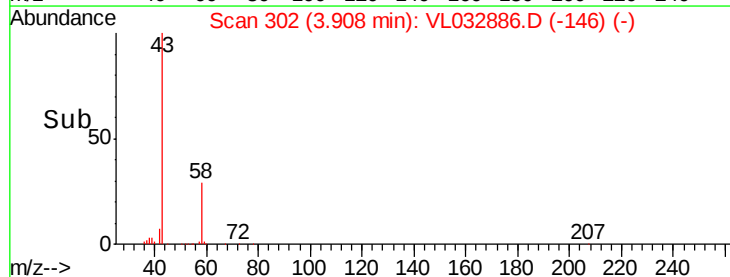
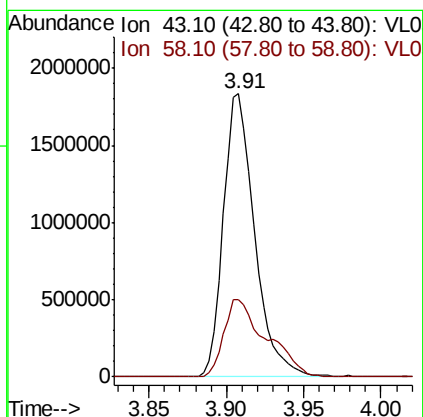
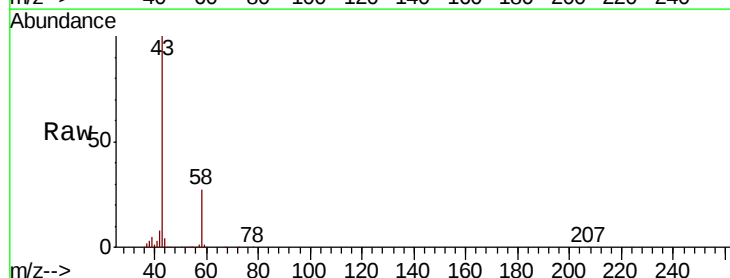
Acq: 4 Dec 2018 21:23

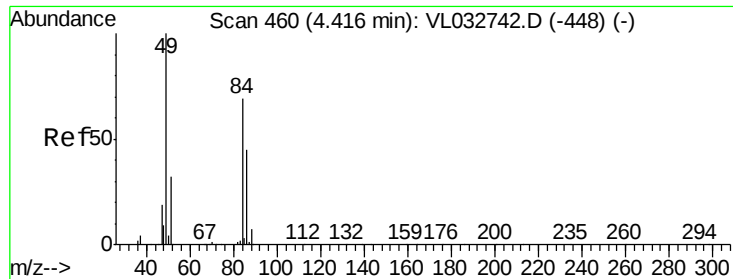
Tgt Ion: 43 Resp: 2563369

Ion Ratio Lower Upper

43 100

58 37.3 21.1 31.7#





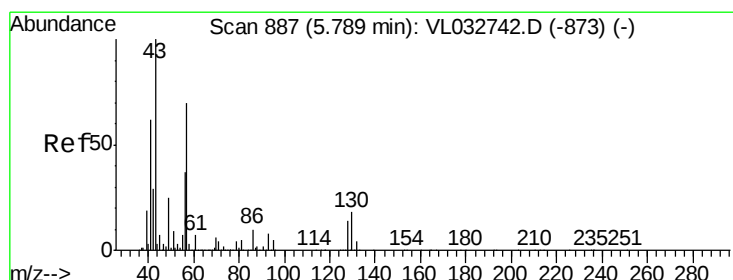
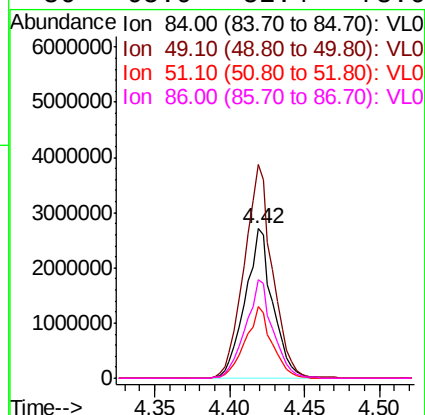
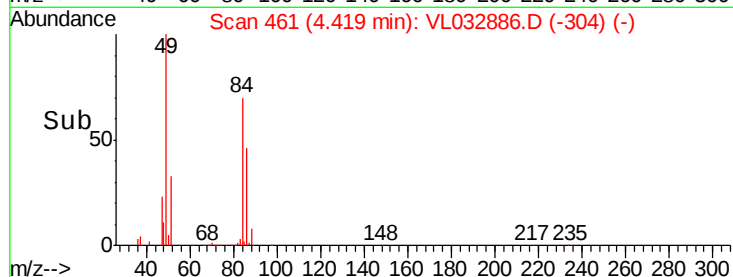
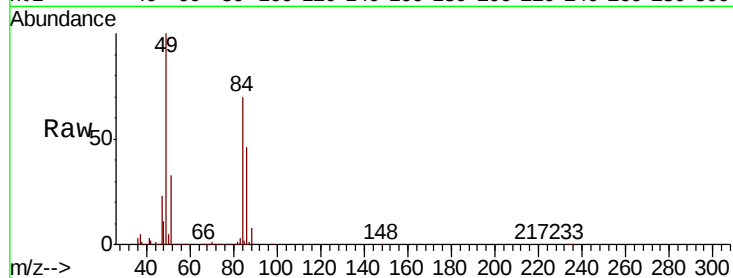
#20
Methvlene Chloride
Concen: 52.741 ppbv
RT: 4.42 min Scan# 461
Delta R.T. 0.00 min
Lab File: VL032886.D
Acq: 4 Dec 2018 21:23

Instrument :
MSVOA_L
ClientSampleId :
MMSV-DUP

Tot Ion	Ratio	Lower	Upper
84	100		
49	143.0	115.8	173.6
51	47.6	36.9	55.3
86	65.9	52.4	78.6

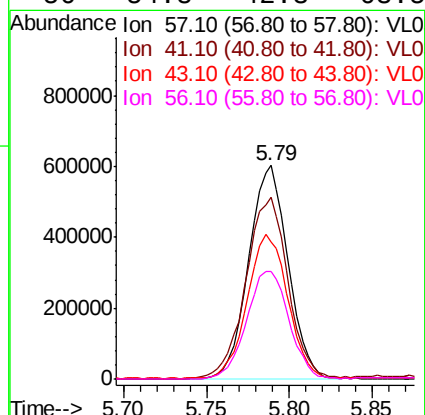
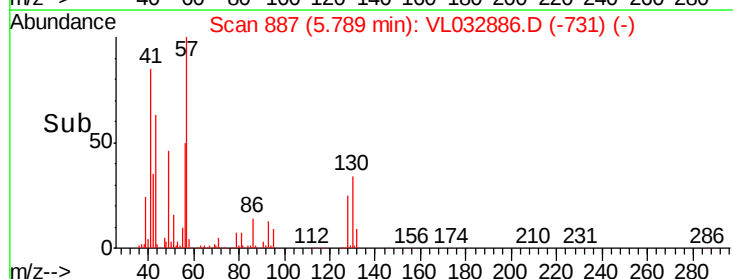
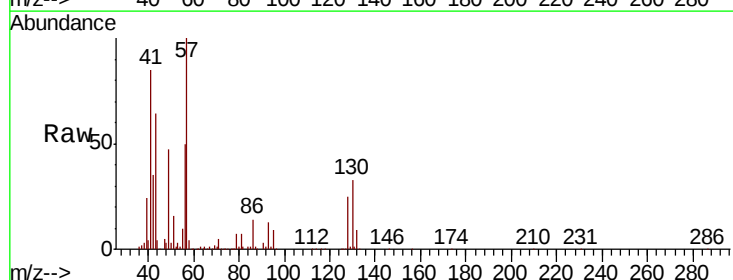
Manual Integrations
APPROVED

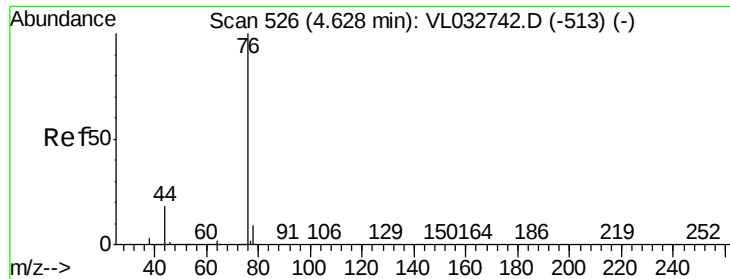
MMDadoda
12/10/2018 1:00:41 PM



#26
Hexane
Concen: 7.507 ppbv
RT: 5.79 min Scan# 887
Delta R.T. 0.00 min
Lab File: VL032886.D
Acq: 4 Dec 2018 21:23

Tgt Ion	Ratio	Lower	Upper
57	100		
41	91.2	70.3	105.5
43	70.3	174.0	261.0#
56	54.8	42.3	63.5





#27

Carbon Disulfide

Concen: 1.415 ppbv

RT: 4.63 min Scan# 527

Delta R.T. 0.00 min

Lab File: VL032886.D

Acq: 4 Dec 2018 21:23

Instrument :

MSVOA_L

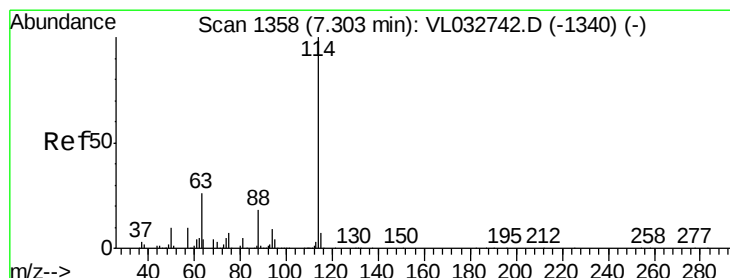
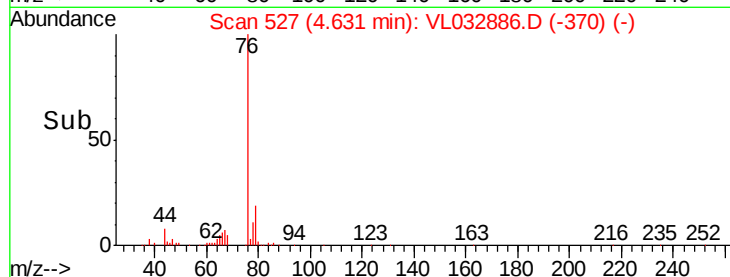
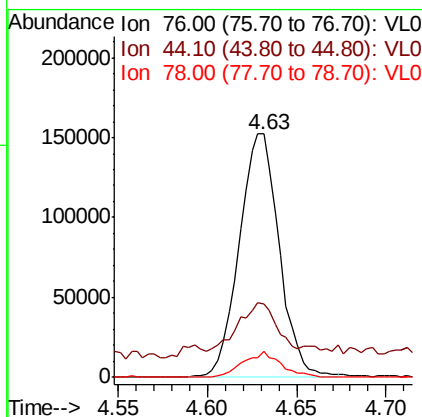
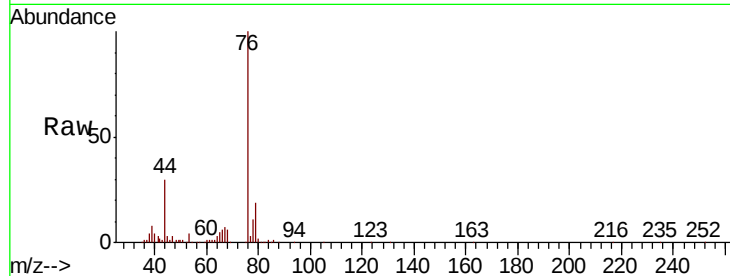
ClientSampleId :

MMSV-DUP

Tot Ion:	76	Resp:	237623
Ion	Ratio	Lower	Upper
76	100		
44	28.4	14.4	21.6#
78	10.4	7.7	11.5

Manual Integrations
APPROVED

MMDadoda
12/10/2018 1:00:41 PM



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

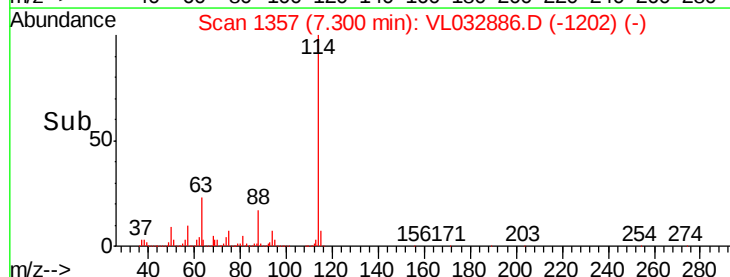
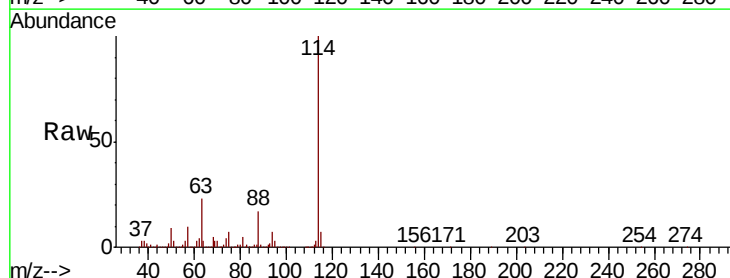
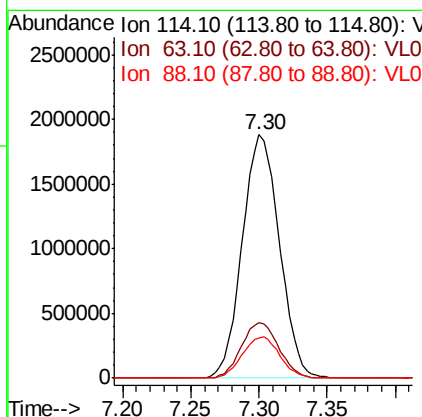
RT: 7.30 min Scan# 1357

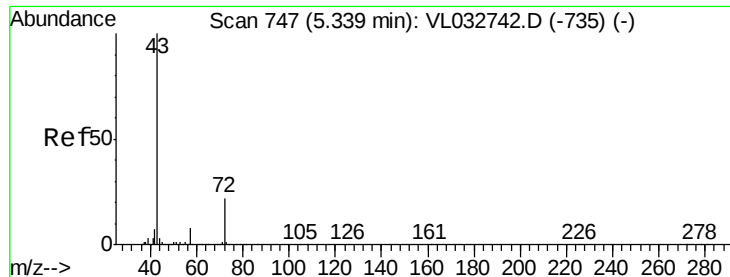
Delta R.T. -0.00 min

Lab File: VL032886.D

Acq: 4 Dec 2018 21:23

Tgt Ion:	114	Resp:	3560148
Ion	Ratio	Lower	Upper
114	100		
63	23.1	20.9	31.3
88	17.1	14.4	21.6





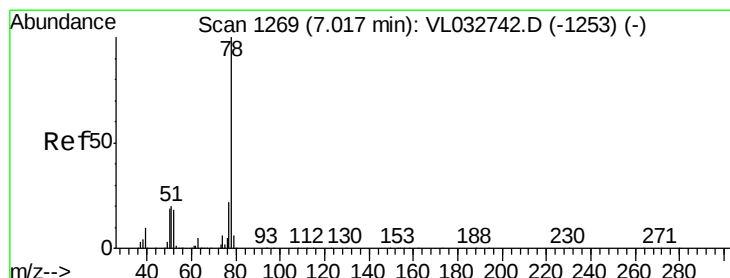
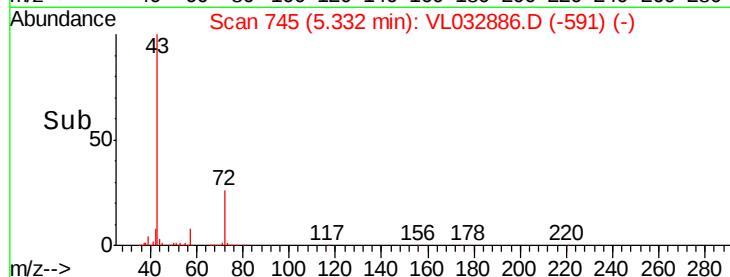
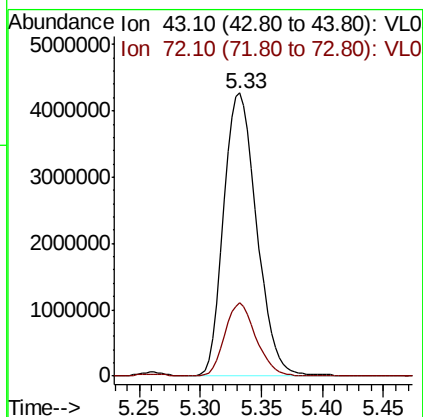
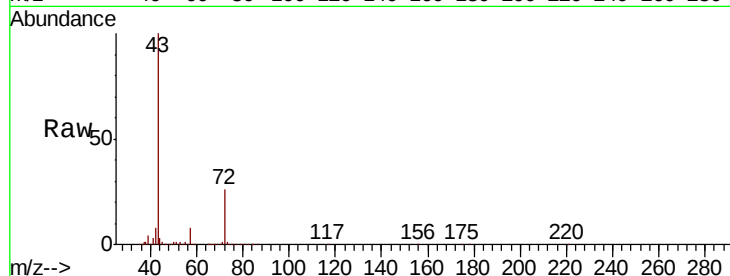
#34
2-Butanone
Concen: 43.885 ppbv
RT: 5.33 min Scan# 745
Delta R.T. -0.01 min
Lab File: VL032886.D
Acq: 4 Dec 2018 21:23

Instrument :
MSVOA_L
ClientSampleId :
MMSV-DUP

Tot Ion: 43 Resp: 8103399
Ion Ratio Lower Upper
43 100
72 24.6 18.4 27.6

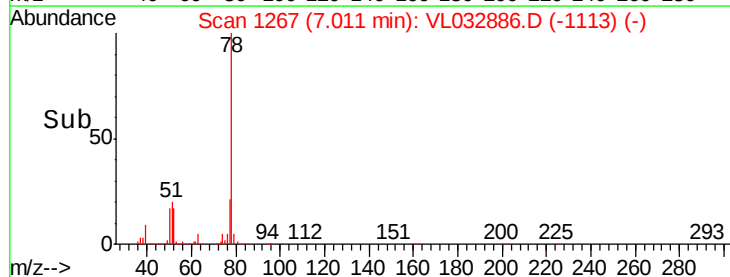
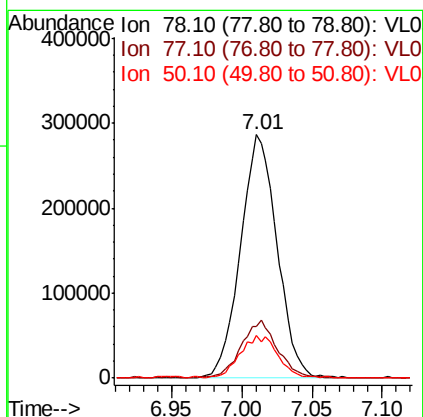
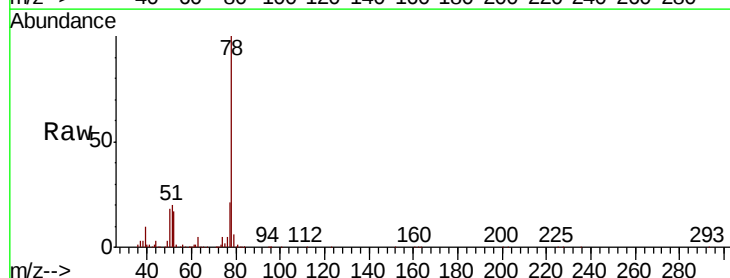
Manual Integrations
APPROVED

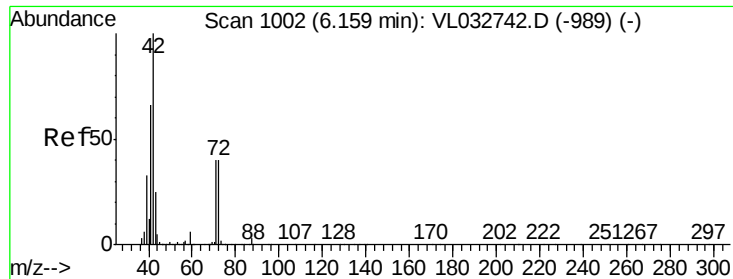
MMDadoda
12/10/2018 1:00:41 PM



#36
Benzene
Concen: 1.832 ppbv
RT: 7.01 min Scan# 1267
Delta R.T. -0.01 min
Lab File: VL032886.D
Acq: 4 Dec 2018 21:23

Tgt Ion: 78 Resp: 519447
Ion Ratio Lower Upper
78 100
77 21.1 17.8 26.8
50 17.6 15.4 23.0





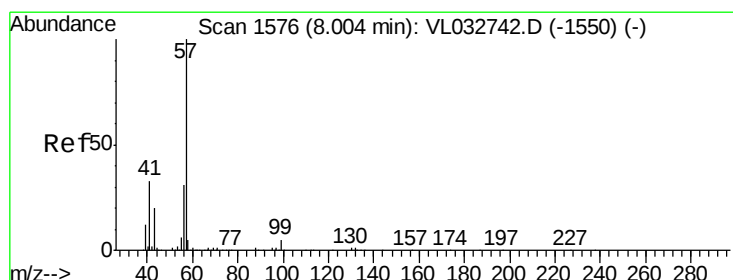
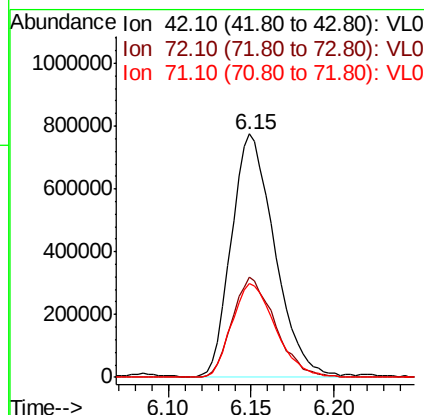
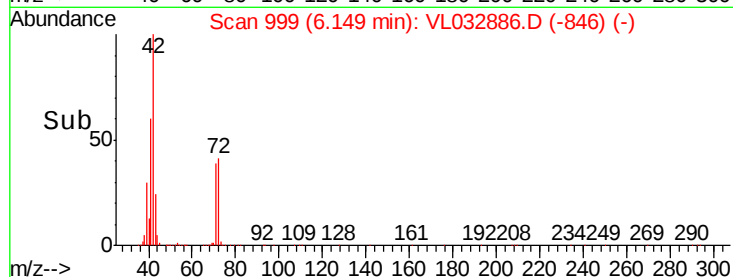
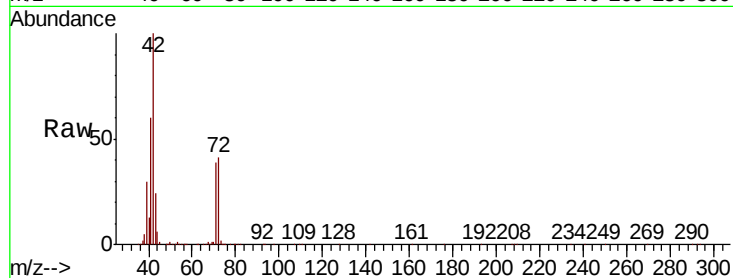
#41
Tetrahydrofuran
Concen: 13.295 ppbv
RT: 6.15 min Scan# 999
Delta R.T. -0.01 min
Lab File: VL032886.D
Acq: 4 Dec 2018 21:23

Instrument :
MSVOA_L
ClientSampled :
MMSV-DUP

Tot Ion	Ratio	Lower	Upper
42	100		
72	41.0	32.4	48.6
71	39.1	31.6	47.4

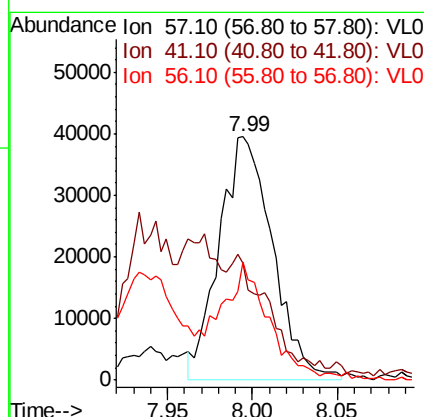
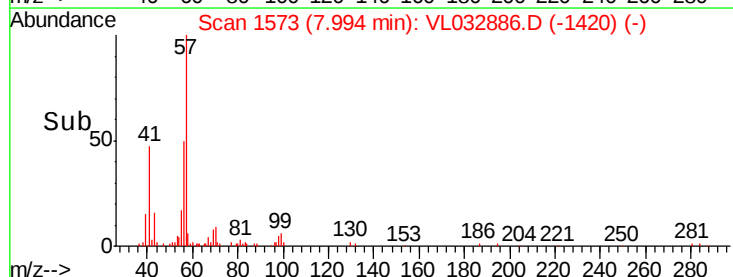
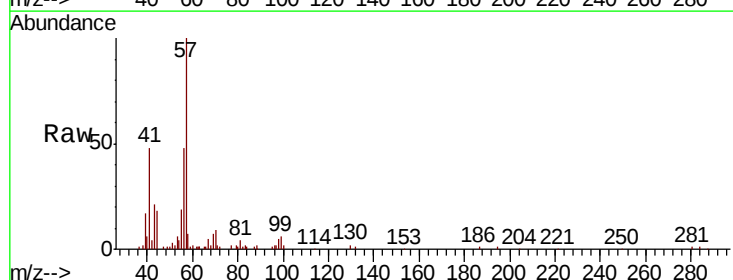
Manual Integrations
APPROVED

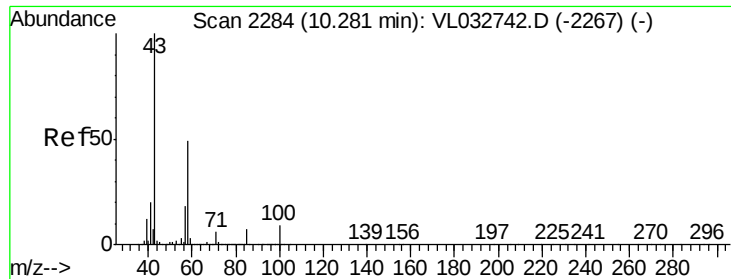
MMDadoda
12/10/2018 1:00:41 PM



#44
2,2,4-Trimethylpentane
Concen: 0.183 ppbv m
RT: 7.99 min Scan# 1573
Delta R.T. -0.01 min
Lab File: VL032886.D
Acq: 4 Dec 2018 21:23

Tgt Ion	Ratio	Lower	Upper
57	100		
41	79.9	26.6	39.8#
56	0.0	24.8	37.2#





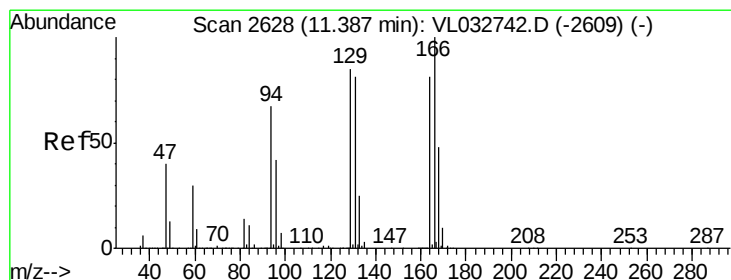
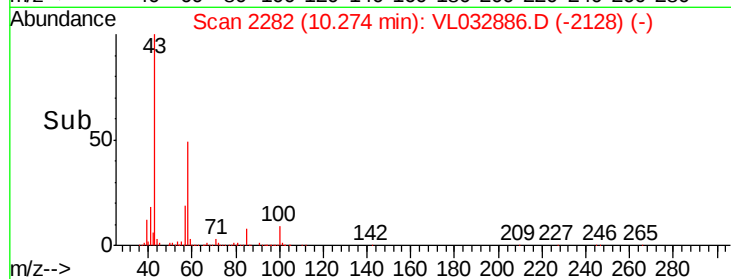
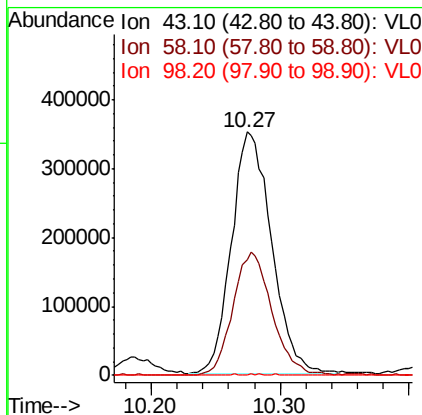
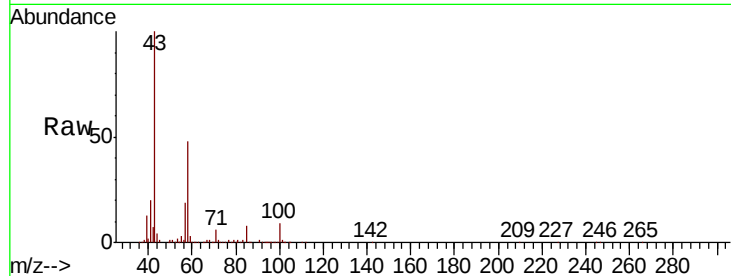
#51
2-Hexanone
Concen: 4.080 ppbv
RT: 10.27 min Scan# 2282
Delta R.T. -0.01 min
Lab File: VL032886.D
Acq: 4 Dec 2018 21:23

Instrument :
MSVOA_L
ClientSampleId :
MMSV-DUP

Tot Ion	Ratio	Lower	Upper
43	100		
58	50.0	38.9	58.3
98	0.8	0.2	0.4

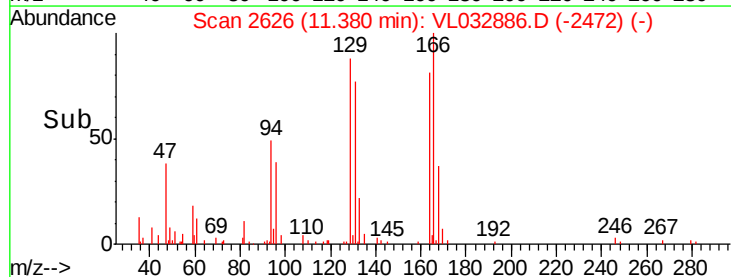
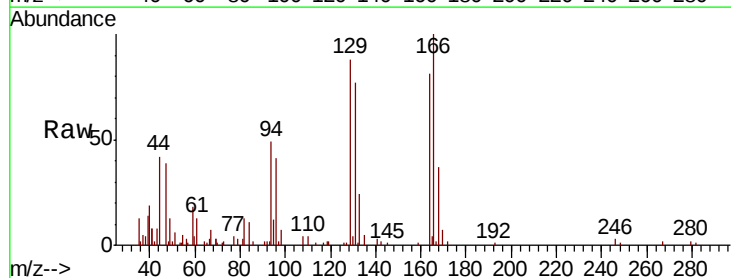
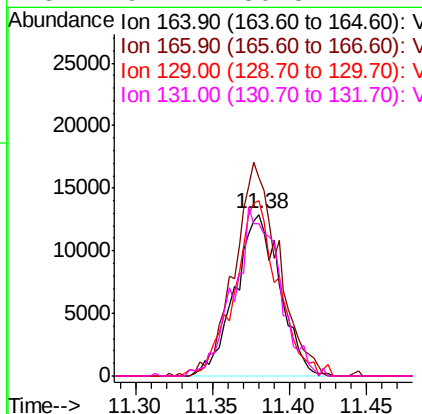
Manual Integrations
APPROVED

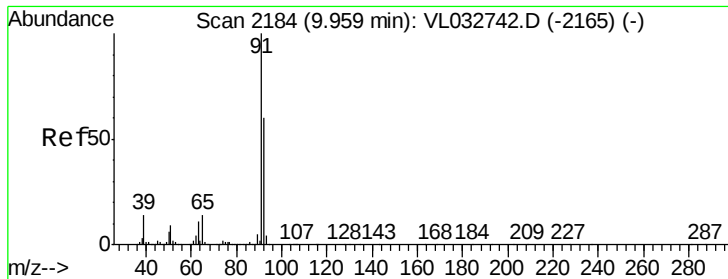
MMDadoda
12/10/2018 1:00:41 PM



#52
Tetrachloroethene
Concen: 0.264 ppbv m
RT: 11.38 min Scan# 2626
Delta R.T. -0.01 min
Lab File: VL032886.D
Acq: 4 Dec 2018 21:23

Tgt Ion	Ratio	Lower	Upper
164	100		
166	123.0	99.3	148.9
129	108.3	83.9	125.9
131	94.2	80.8	121.2





#53

Toluene

Concen: 1.869 ppbv

RT: 9.95 min Scan# 2182

Delta R.T. -0.01 min

Lab File: VL032886.D

Acq: 4 Dec 2018 21:23

Instrument :

MSVOA_L

ClientSampleId :

MMSV-DUP

Tot Ion: 91 Resp: 552645

Ion Ratio Lower Upper

91 100

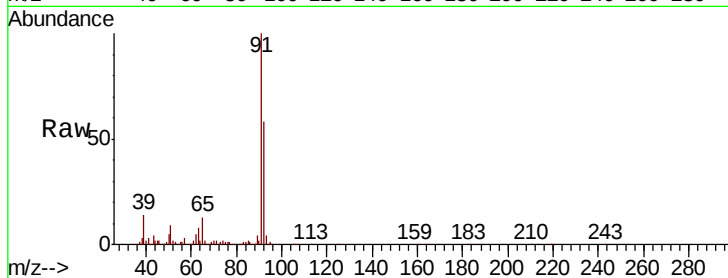
92 60.1 47.9 71.9

Manual Integrations

APPROVED

MMDadoda

12/10/2018 1:00:41 PM



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.95

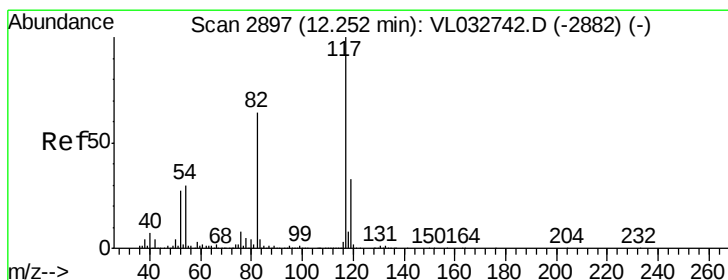
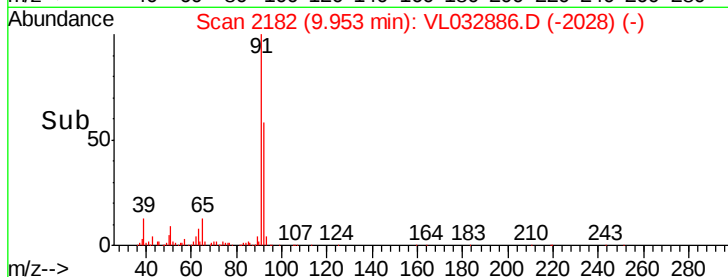
300000

200000

100000

0

Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.25 min Scan# 2895

Delta R.T. -0.01 min

Lab File: VL032886.D

Acq: 4 Dec 2018 21:23

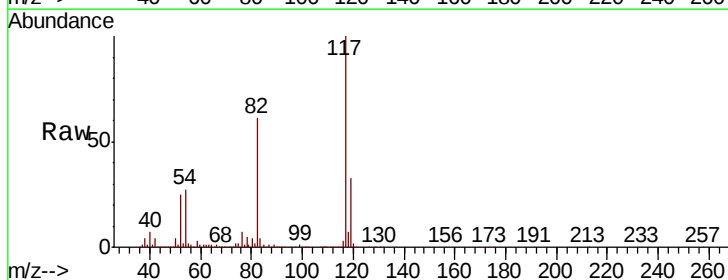
Tgt Ion: 117 Resp: 3681283

Ion Ratio Lower Upper

117 100

82 61.4 51.0 76.6

119 32.4 28.0 42.0



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

12.25

2000000

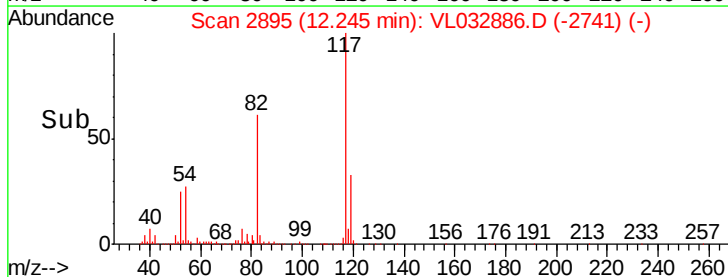
1500000

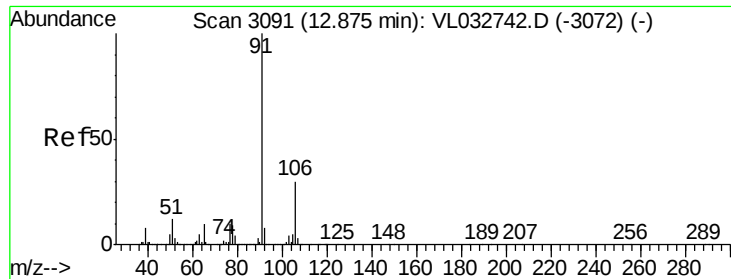
1000000

500000

0

Time-->





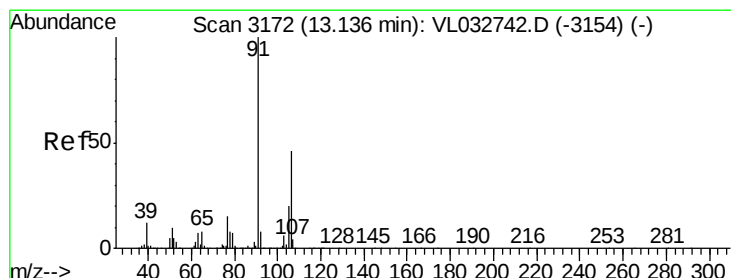
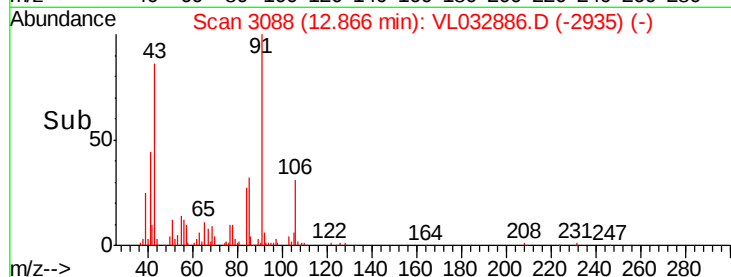
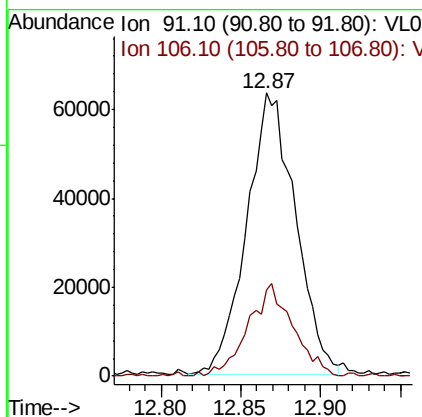
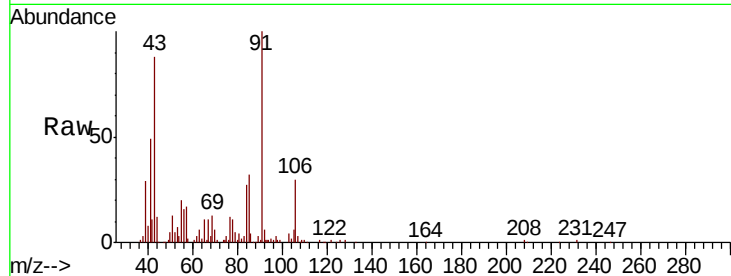
#58
Ethyl Benzene
Concen: 0.298 ppbv
RT: 12.87 min Scan# 3088
Delta R.T. -0.01 min
Lab File: VL032886.D
Acq: 4 Dec 2018 21:23

Instrument :
MSVOA_L
ClientSampleId :
MMSV-DUP

Tot Ion: 91 Resp: 131976
Ion Ratio Lower Upper
91 100
106 30.7 23.6 35.4

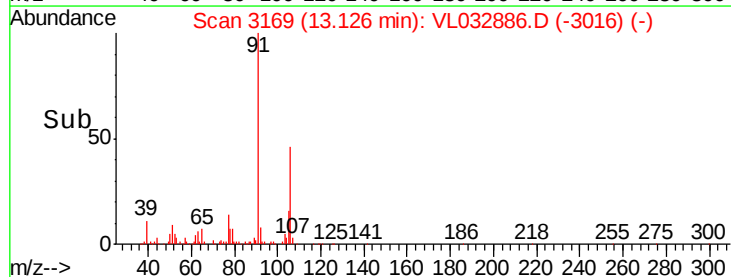
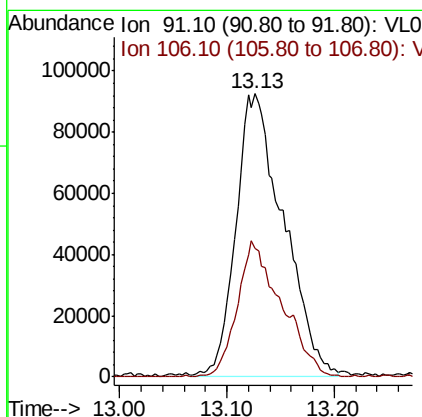
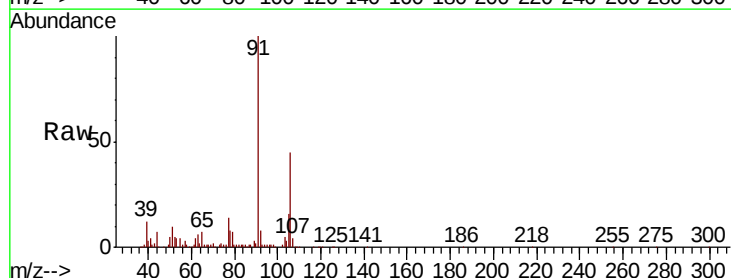
Manual Integrations
APPROVED

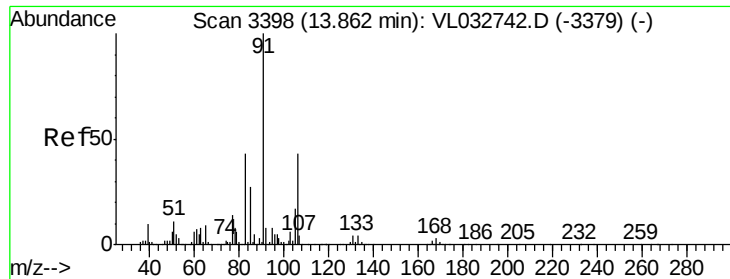
MMDadoda
12/10/2018 1:00:41 PM



#59
m/p-Xylene
Concen: 0.721 ppbv m
RT: 13.13 min Scan# 3169
Delta R.T. -0.01 min
Lab File: VL032886.D
Acq: 4 Dec 2018 21:23

Tgt Ion: 91 Resp: 284336
Ion Ratio Lower Upper
91 100
106 0.0 36.1 54.1#





#60

o-Xylene

Concen: 0.390 ppbv

RT: 13.86 min Scan# 3396

Delta R.T. -0.01 min

Lab File: VL032886.D

Acq: 4 Dec 2018 21:23

Instrument :

MSVOA_L

ClientSampleId :

MMSV-DUP

Tot Ion: 91 Resp: 154672

Ion Ratio Lower Upper

91 100

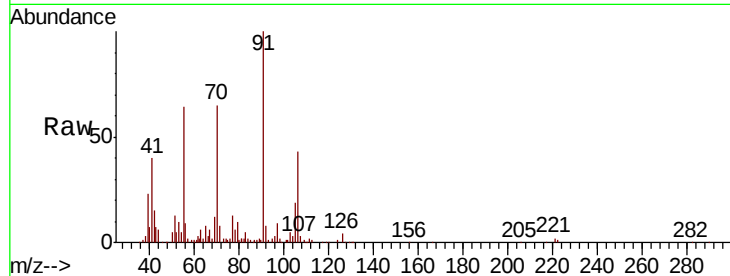
106 45.2 21.9 65.7

Manual Integrations

APPROVED

MMDadoda

12/10/2018 1:00:41 PM



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

13.86

80000

60000

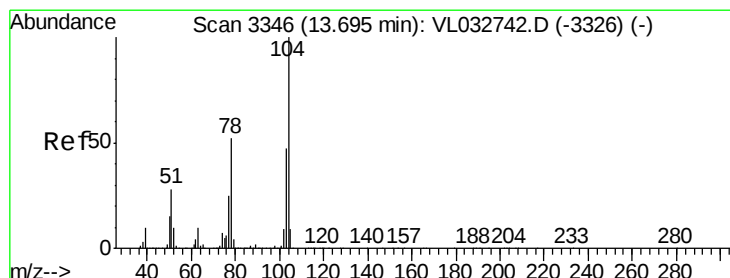
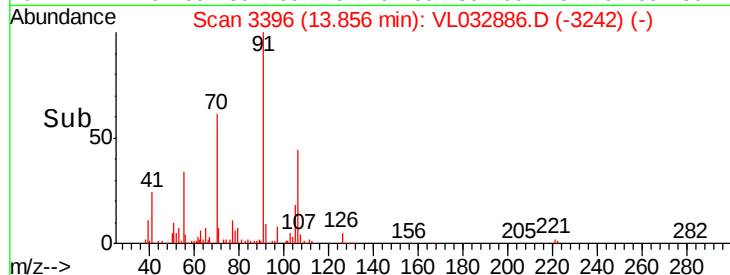
40000

20000

0

13.80 13.85 13.90

Time-->



#61

Styrene

Concen: 0.214 ppbv

RT: 13.69 min Scan# 3343

Delta R.T. -0.01 min

Lab File: VL032886.D

Acq: 4 Dec 2018 21:23

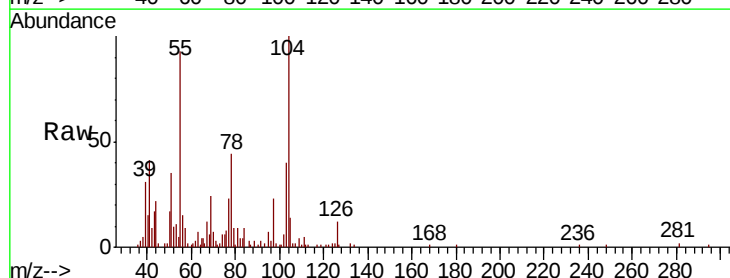
Tgt Ion: 104 Resp: 55226

Ion Ratio Lower Upper

104 100

78 55.4 42.2 63.4

103 48.5 38.2 57.2



Abundance Ion 104.10 (103.80 to 104.80): V

Ion 78.10 (77.80 to 78.80): VL0

Ion 103.10 (102.80 to 103.80): V

13.69

30000

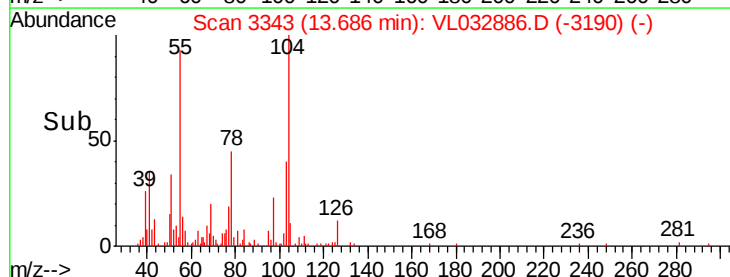
20000

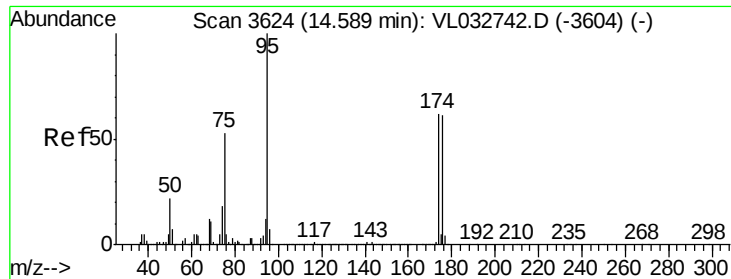
10000

0

13.65 13.70 13.75

Time-->





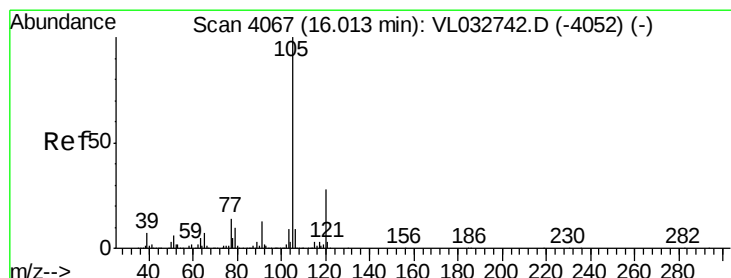
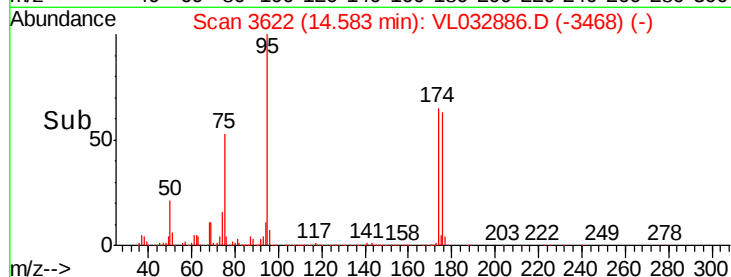
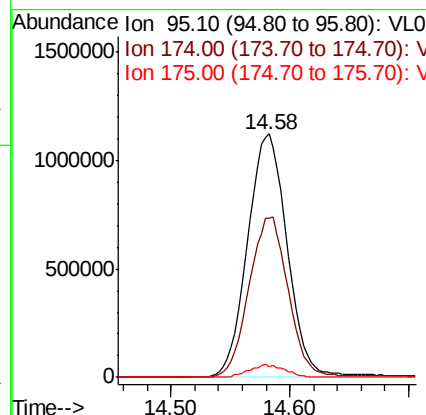
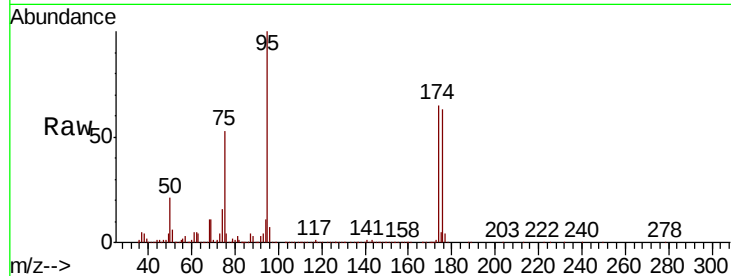
#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.353 ppbv
 RT: 14.58 min Scan# 3622
 Delta R.T. -0.01 min
 Lab File: VL032886.D
 Acq: 4 Dec 2018 21:23

Instrument :
 MSVOA_L
 ClientSampleId :
 MMSV-DUP

Tot Ion: 95 Resp: 2575326
 Ion Ratio Lower Upper
 95 100
 174 66.7 50.7 76.1
 175 4.9 3.8 5.6

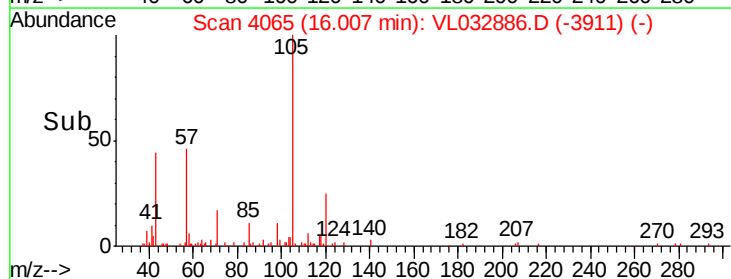
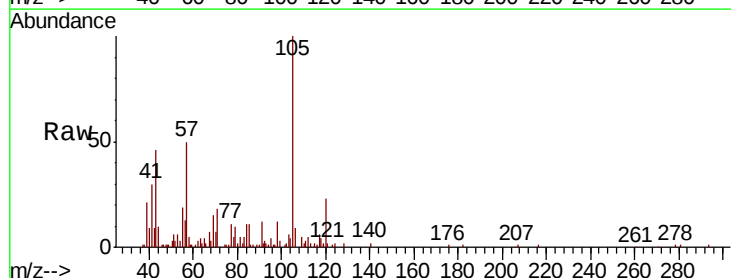
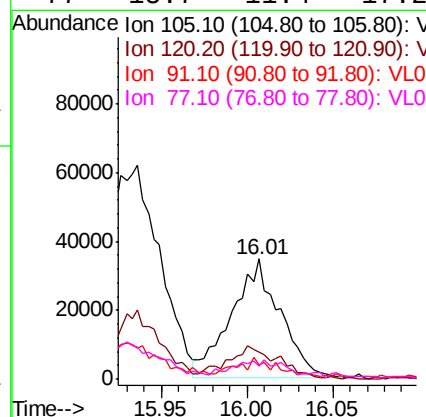
Manual Integrations
 APPROVED

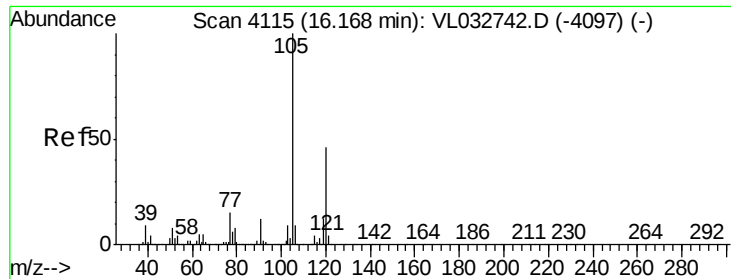
MMDadoda
 12/10/2018 1:00:41 PM



#72
 4-Ethyltoluene
 Concen: 0.157 ppbv
 RT: 16.01 min Scan# 4065
 Delta R.T. -0.01 min
 Lab File: VL032886.D
 Acq: 4 Dec 2018 21:23

Tgt Ion: 105 Resp: 68228
 Ion Ratio Lower Upper
 105 100
 120 30.2 22.9 34.3
 91 17.6 10.6 15.8#
 77 15.7 11.4 17.2





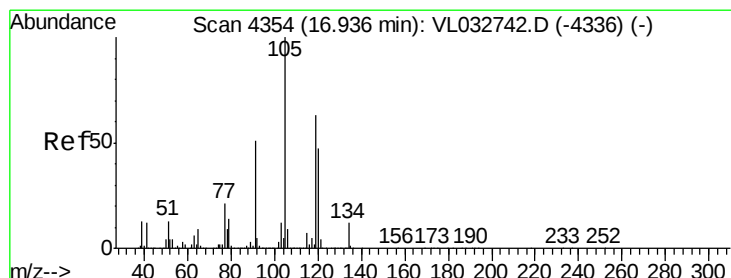
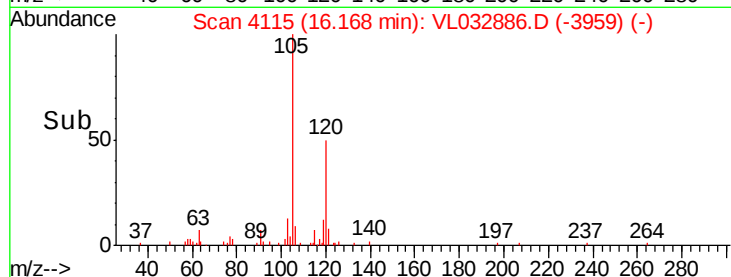
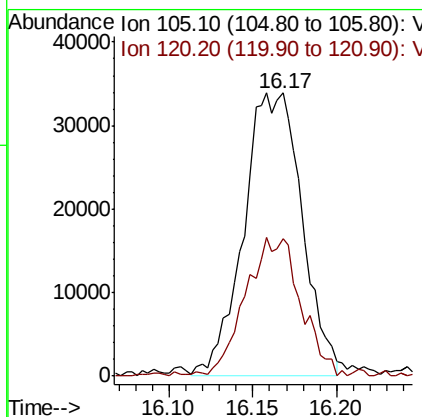
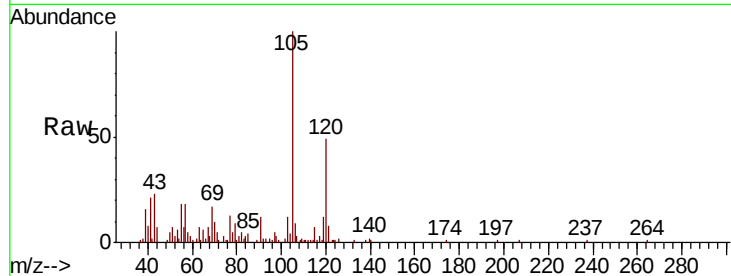
#73
 1,3,5-Trimethylbenzene
 Concen: 0.192 ppbv m
 RT: 16.17 min Scan# 4115
 Delta R.T. 0.00 min
 Lab File: VL032886.D
 Acq: 4 Dec 2018 21:23

Instrument :
 MSVOA_L
 ClientSampled :
 MMSV-DUP

Tot Ion	Ratio	Lower	Upper
105	100		
120	48.6	36.6	55.0

Manual Integrations
 APPROVED

MMDadoda
 12/10/2018 1:00:41 PM



#74
 1,2,4-Trimethylbenzene
 Concen: 0.454 ppbv
 RT: 16.93 min Scan# 4352
 Delta R.T. -0.01 min
 Lab File: VL032886.D
 Acq: 4 Dec 2018 21:23

Tgt Ion	Ratio	Lower	Upper
105	100		
120	40.6	37.6	56.4
91	12.4	42.5	63.7#
77	14.9	17.4	26.2#

