

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL091019\
 Data File : VL034145.D
 Acq On : 10 Sep 2019 16:34
 Operator : SY/AP
 Sample : K4775-01DL 10X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV1DL

Manual Integrations
 APPROVED

MMDadoda
 9/12/2019 5:16:53 AM

Quant Time: Sep 11 21:38:26 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL090519AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Sep 0
 QLast Update : Thu Sep 05 10:21:45 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.71	49	771252	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.23	114	1553029	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.17	117	1539889	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.50	95	1296721	10.30	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
9) Propene	3.00	41	658621	13.692	ppbv	87
10) Heptane	8.18	43	190662	1.527	ppbv	100
13) Ethanol	3.61	45	111042	11.784	ppbv	99
15) Acetone	3.85	43	7122822	76.629	ppbv #	63
17) tert-Butyl alcohol	4.31	59	212714	3.152	ppbv	95
19) Isopropyl Alcohol	3.98	45	356844	5.688	ppbv #	97
26) Hexane	5.72	57	244049	2.690	ppbv #	36
27) Carbon Disulfide	4.57	76	79683	0.973	ppbv	95
30) Cyclohexane	7.18	84	42476m	0.648	ppbv	
32) 1,1,1-Trichloroethane	6.56	97	31171	0.270	ppbv	98
34) 2-Butanone	5.27	43	1582310	10.598	ppbv	100
36) Benzene	6.94	78	126858	0.715	ppbv	99
44) 2,2,4-Trimethylpentane	7.92	57	121199	0.370	ppbv #	60
50) 4-Methyl-2-Pentanone	8.80	43	97900m	0.430	ppbv	
51) 2-Hexanone	10.20	43	562617	2.859	ppbv #	97
52) Tetrachloroethene	11.30	164	254576	4.067	ppbv	97
53) Toluene	9.87	91	526492	2.682	ppbv	98
58) Ethyl Benzene	12.79	91	171365	0.679	ppbv	89
59) m/p-Xylene	13.05	91	482521	2.343	ppbv	98
60) o-Xylene	13.77	91	184299	0.898	ppbv	98
64) n-propylbenzene	15.65	120	13413m	0.201	ppbv	
70) n-Butylbenzene	18.65	91	39008m	0.129	ppbv	
72) 4-Ethyltoluene	15.93	105	66603	0.288	ppbv	98
73) 1,3,5-Trimethylbenzene	16.09	105	53286m	0.237	ppbv	
74) 1,2,4-Trimethylbenzene	16.85	105	179916	0.777	ppbv #	68

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

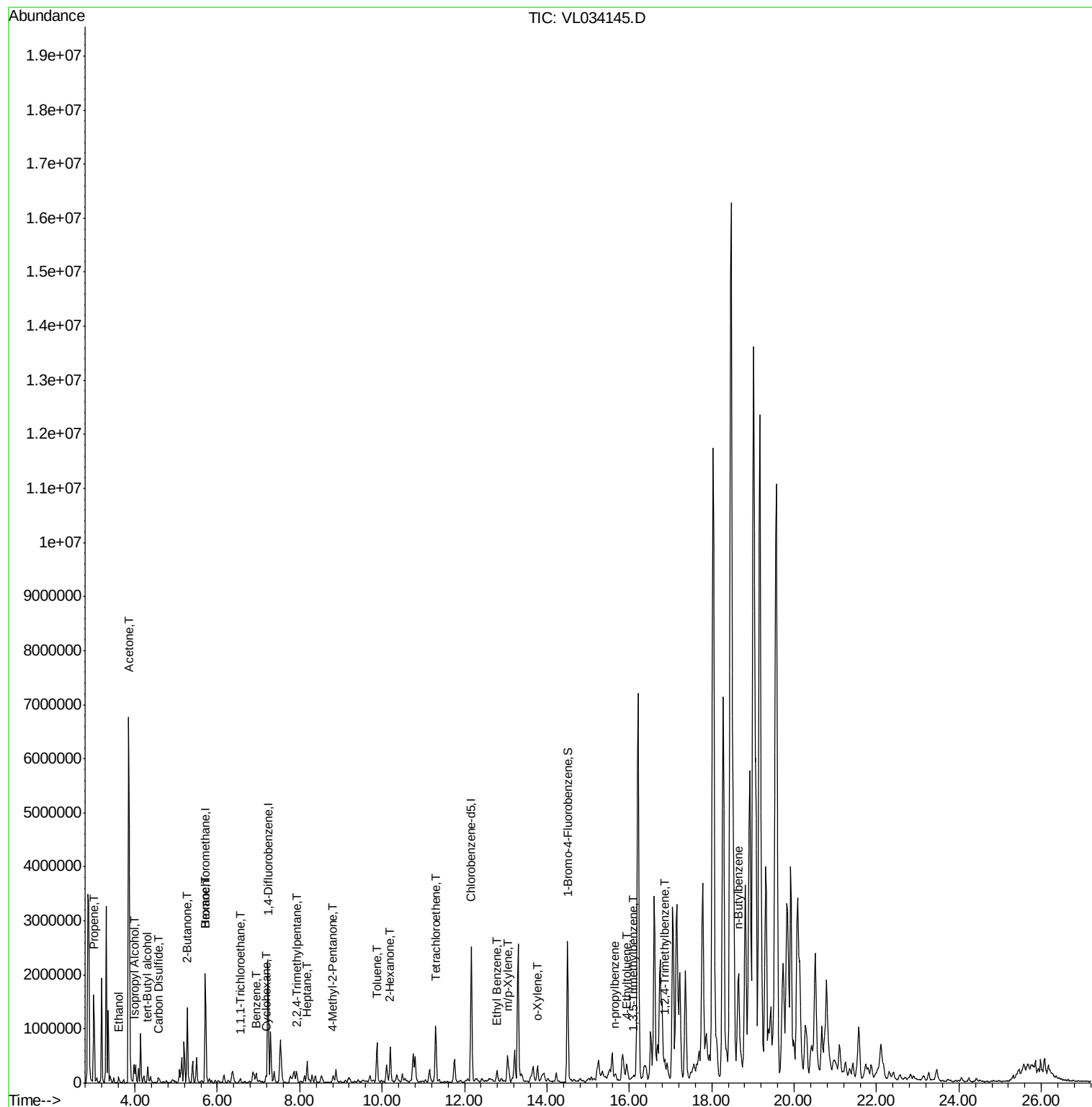
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL091019\
Data File : VL034145.D
Acq On : 10 Sep 2019 16:34
Operator : SY/AP
Sample : K4775-01DL 10X
Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

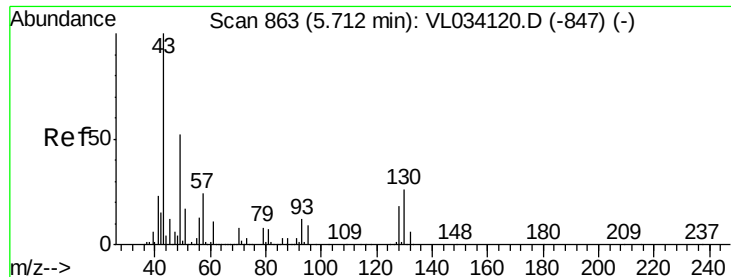
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

Manual Integrations
APPROVED

MMDadoda
9/12/2019 5:16:53 AM

Quant Time: Sep 11 21:38:26 2019
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL090519AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Sep
QLast Update : Thu Sep 05 10:21:45 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.71 min Scan# 908

Delta R.T. -0.01 min

Lab File: VL034145.D

Acq: 10 Sep 2019 16:34

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

Tot Ion: 49 Resp: 771252

Ion Ratio Lower Upper

49 100

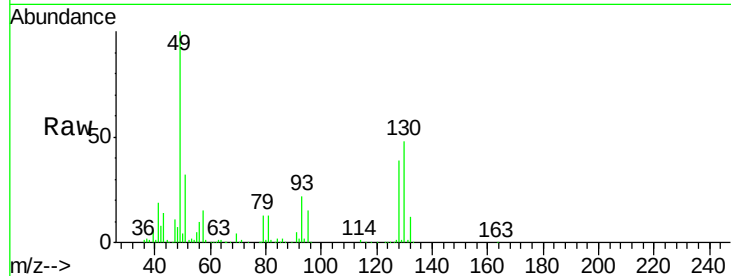
128 40.4 18.4 55.0

130 50.1 23.5 70.6

Manual Integrations
APPROVED

MMDadoda

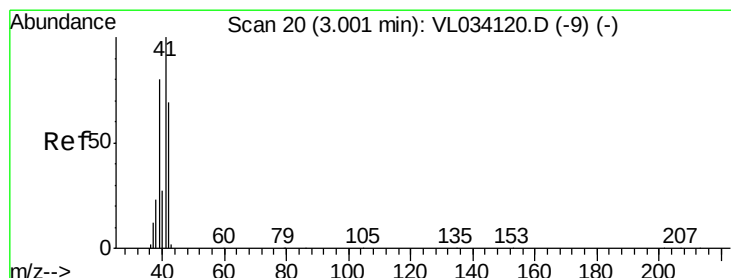
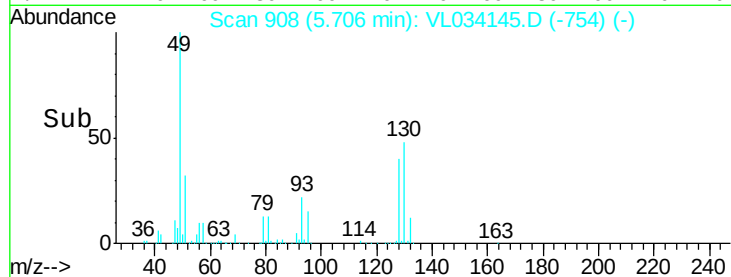
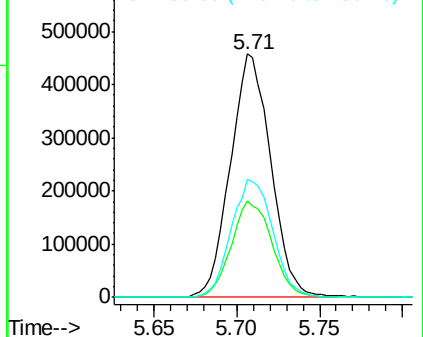
9/12/2019 5:16:53 AM



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#9

Propene

Concen: 13.692 ppbv

RT: 3.00 min Scan# 66

Delta R.T. -0.00 min

Lab File: VL034145.D

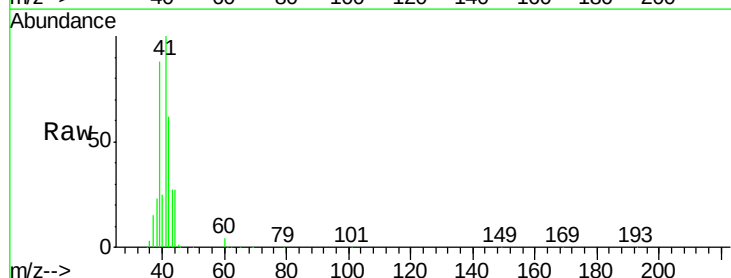
Acq: 10 Sep 2019 16:34

Tgt Ion: 41 Resp: 658621

Ion Ratio Lower Upper

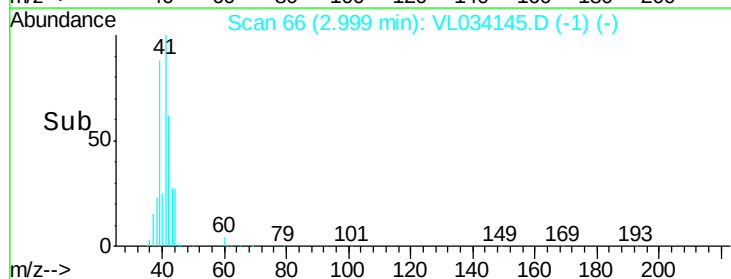
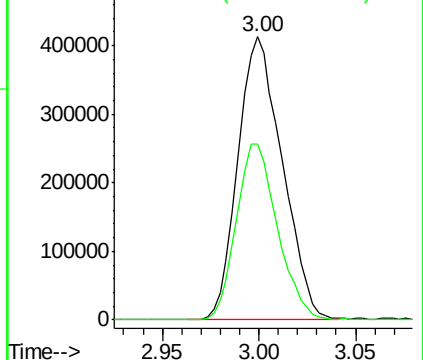
41 100

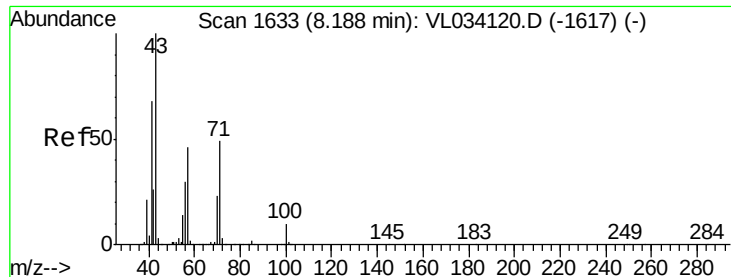
42 58.0 54.6 81.8



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





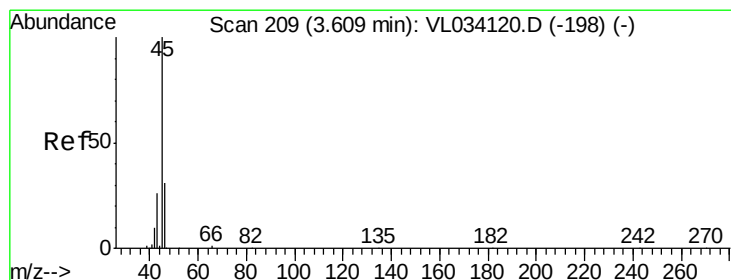
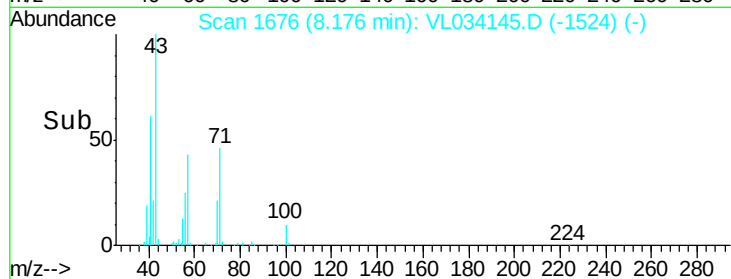
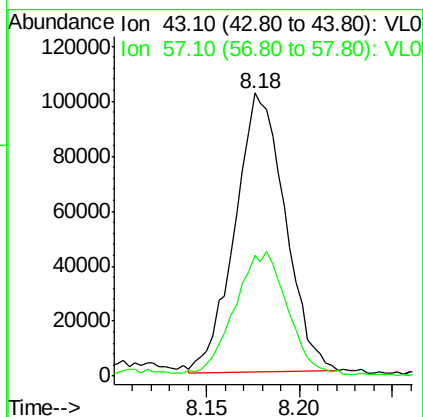
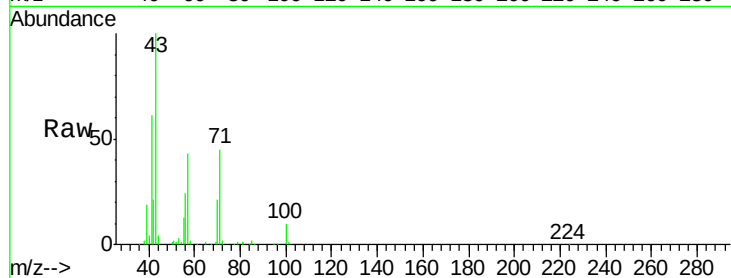
#10
Heptane
Concen: 1.527 ppbv
RT: 8.18 min Scan# 1676
Delta R.T. -0.01 min
Lab File: VL034145.D
Acq: 10 Sep 2019 16:34

Instrument :
MSVOA_L
ClientSampled :
SV1DL

Tot Ion: 43 Resp: 190662
Ion Ratio Lower Upper
43 100
57 47.5 38.1 57.1

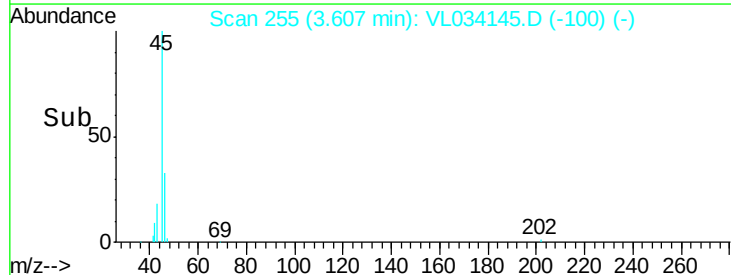
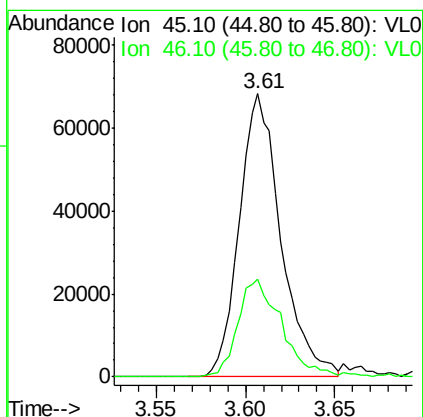
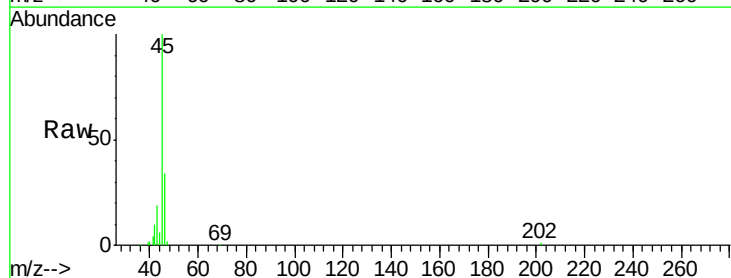
Manual Integrations
APPROVED

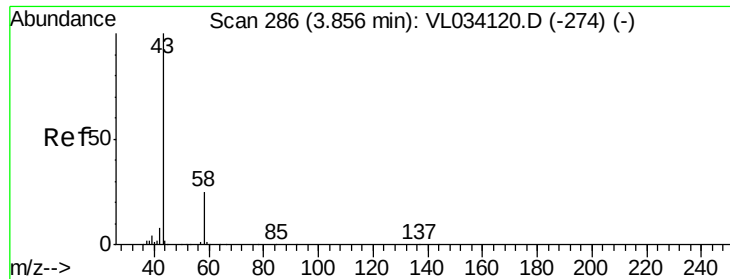
MMDadoda
9/12/2019 5:16:53 AM



#13
Ethanol
Concen: 11.784 ppbv
RT: 3.61 min Scan# 255
Delta R.T. -0.00 min
Lab File: VL034145.D
Acq: 10 Sep 2019 16:34

Tgt Ion: 45 Resp: 111042
Ion Ratio Lower Upper
45 100
46 36.9 15.0 60.0





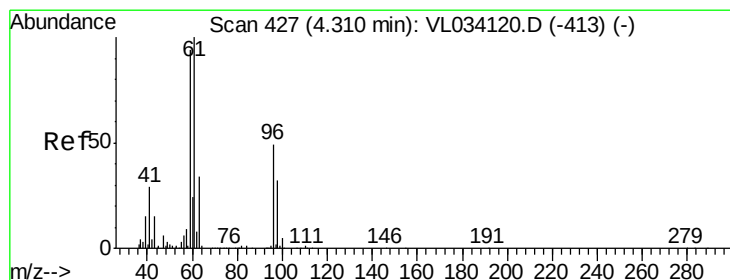
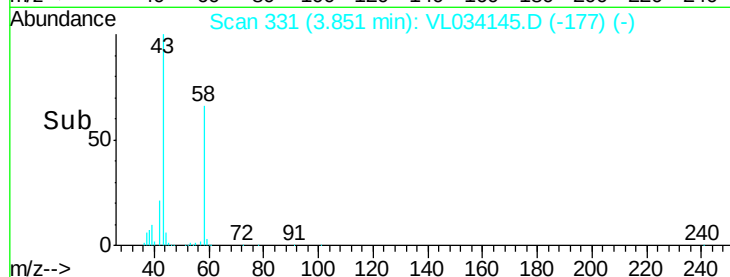
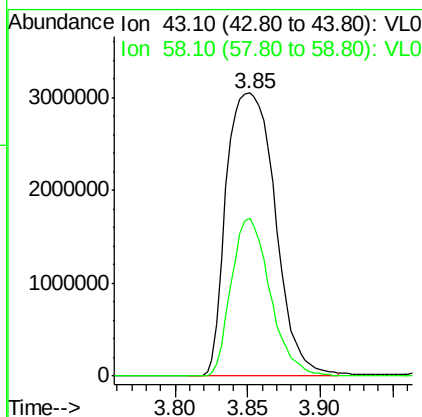
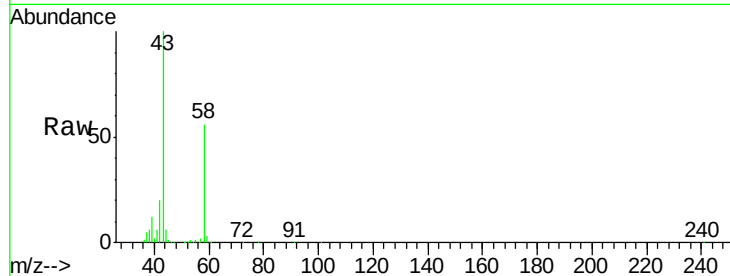
#15
Acetone
Concen: 76.629 ppbv
RT: 3.85 min Scan# 331
Delta R.T. -0.01 min
Lab File: VL034145.D
Acq: 10 Sep 2019 16:34

Instrument :
MSVOA_L
ClientSampleId :
SV1DL

Tot Ion: 43 Resp: 7122822
Ion Ratio Lower Upper
43 100
58 44.7 20.6 30.8#

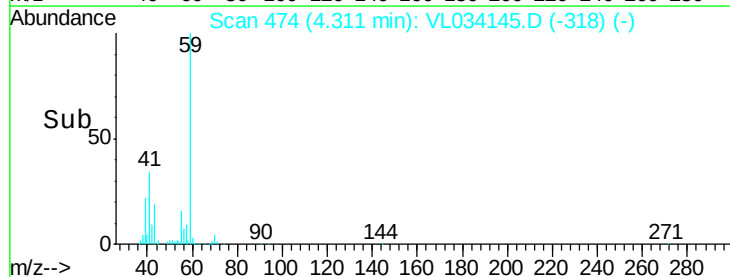
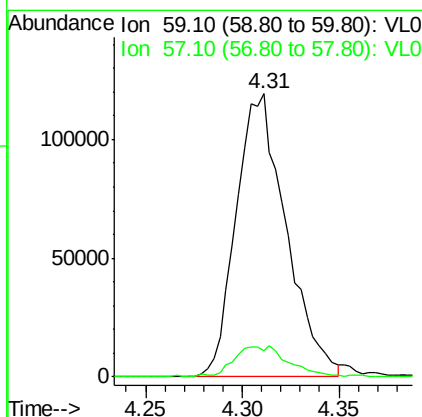
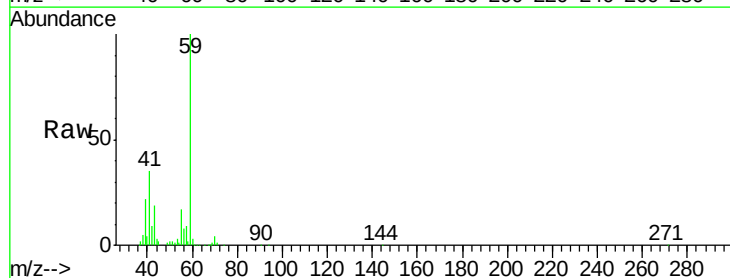
Manual Integrations
APPROVED

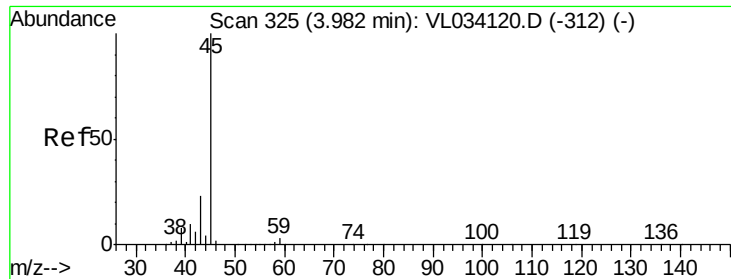
MMDadoda
9/12/2019 5:16:53 AM



#17
tert-Butyl alcohol
Concen: 3.152 ppbv
RT: 4.31 min Scan# 474
Delta R.T. 0.00 min
Lab File: VL034145.D
Acq: 10 Sep 2019 16:34

Tgt Ion: 59 Resp: 212714
Ion Ratio Lower Upper
59 100
57 12.5 8.6 12.8





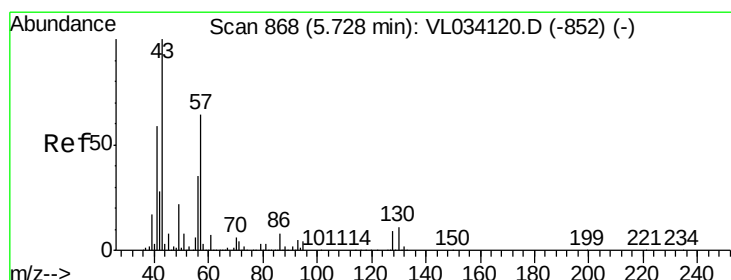
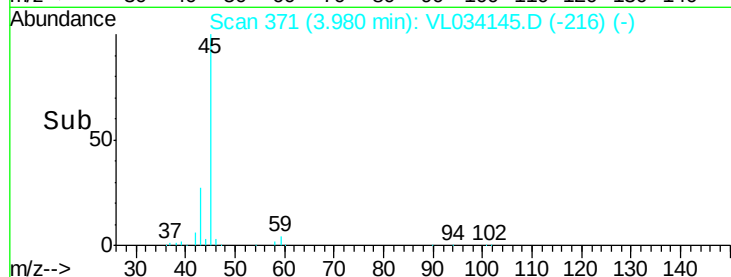
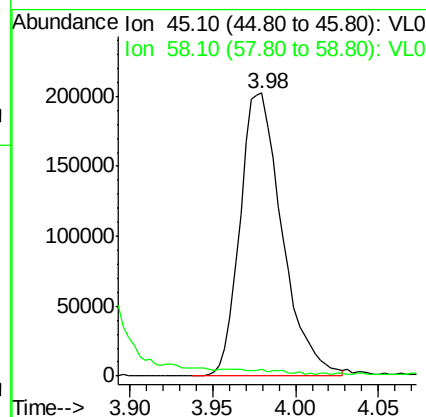
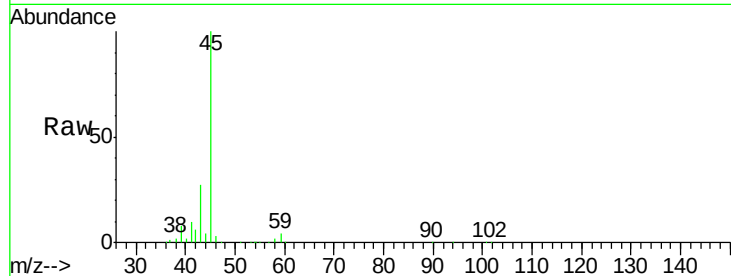
#19
Isopropyl Alcohol
Concen: 5.688 ppbv
RT: 3.98 min Scan# 371
Delta R.T. -0.00 min
Lab File: VL034145.D
Acq: 10 Sep 2019 16:34

Instrument :
MSVOA_L
ClientSampleId :
SV1DL

Tot Ion	Ratio	Lower	Upper
45	100		
58	0.0	1.0	1.6#

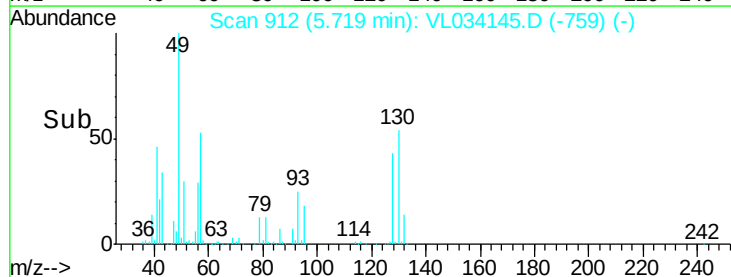
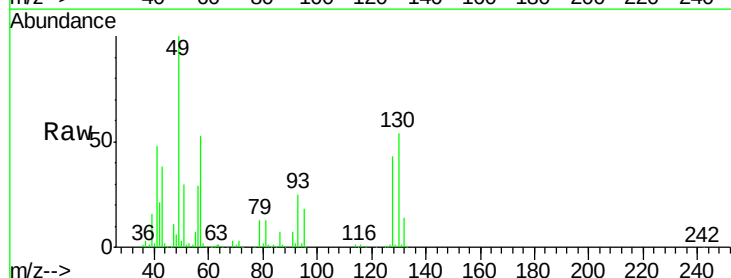
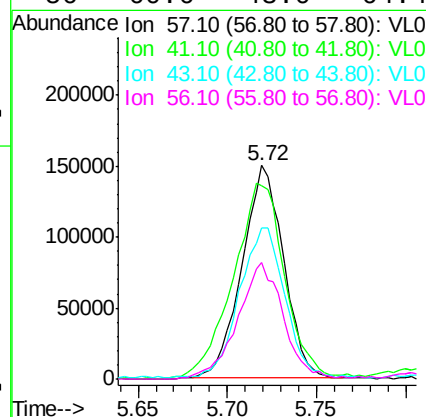
Manual Integrations
APPROVED

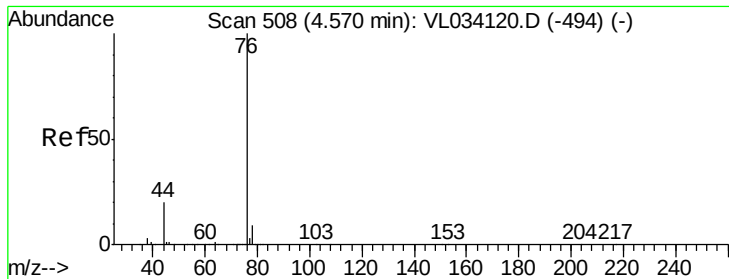
MMDadoda
9/12/2019 5:16:53 AM



#26
Hexane
Concen: 2.690 ppbv
RT: 5.72 min Scan# 912
Delta R.T. -0.01 min
Lab File: VL034145.D
Acq: 10 Sep 2019 16:34

Tgt Ion	Ratio	Lower	Upper
57	100		
41	113.9	76.6	115.0
43	77.3	189.2	283.8#
56	60.6	43.0	64.4





#27

Carbon Disulfide

Concen: 0.973 ppbv

RT: 4.57 min Scan# 554

Delta R.T. -0.00 min

Lab File: VL034145.D

Acq: 10 Sep 2019 16:34

Instrument :

MSVOA_L

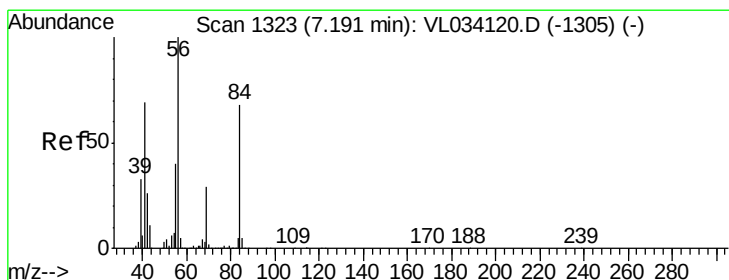
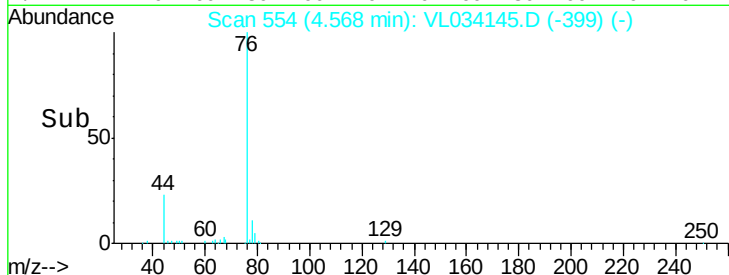
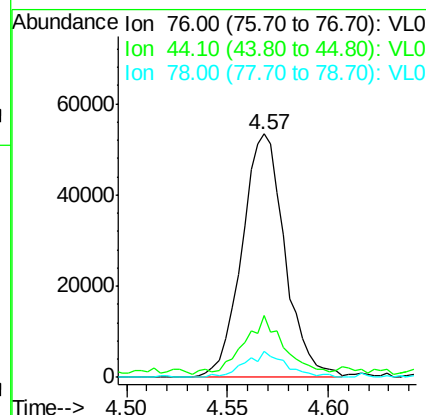
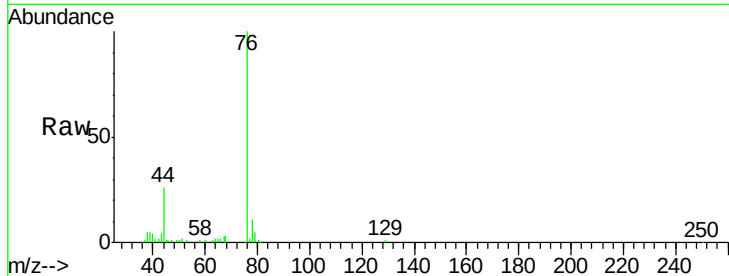
ClientSampleId :

SV1DL

Tot Ion:	76	Resp:	79683
Ion	Ratio	Lower	Upper
76	100		
44	24.9	17.6	26.4
78	10.0	7.3	10.9

Manual Integrations
APPROVED

MMDadoda
9/12/2019 5:16:53 AM



#30

Cyclohexane

Concen: 0.648 ppbv m

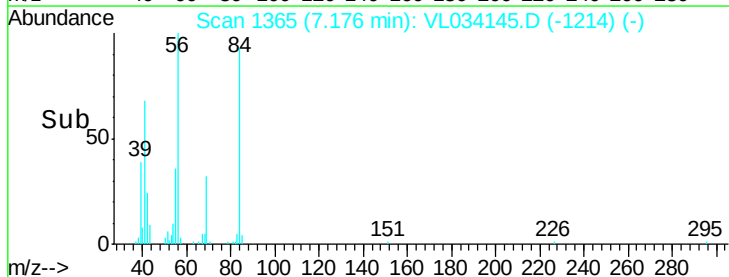
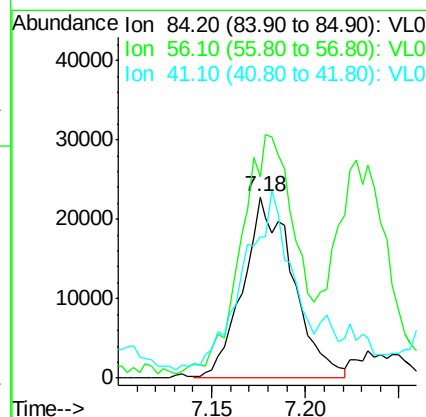
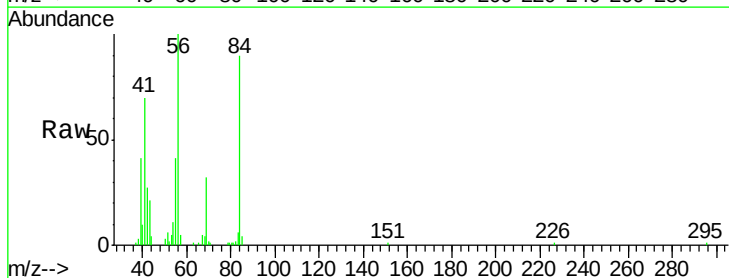
RT: 7.18 min Scan# 1365

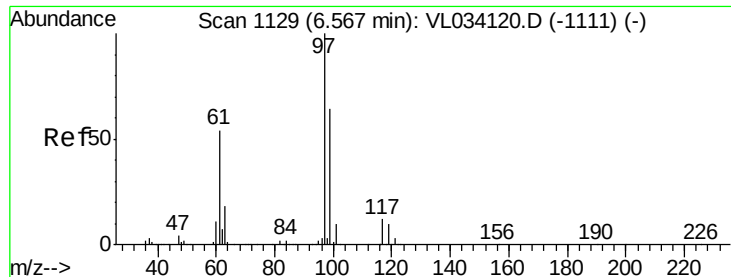
Delta R.T. -0.02 min

Lab File: VL034145.D

Acq: 10 Sep 2019 16:34

Tgt Ion:	84	Resp:	42476
Ion	Ratio	Lower	Upper
84	100		
56	146.1	122.6	183.8
41	120.2	79.1	118.7#





#32

1,1,1-Trichloroethane

Concen: 0.270 ppbv

RT: 6.56 min Scan# 1173

Delta R.T. -0.01 min

Lab File: VL034145.D

Acq: 10 Sep 2019 16:34

Instrument :

MSVOA_L

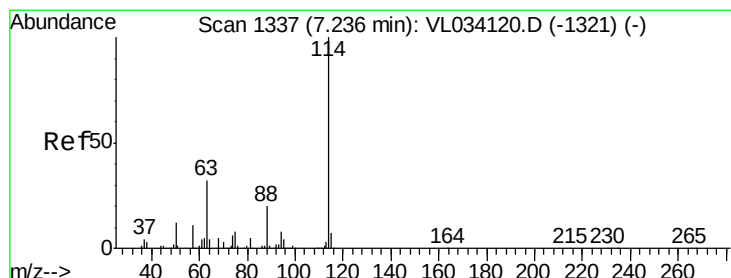
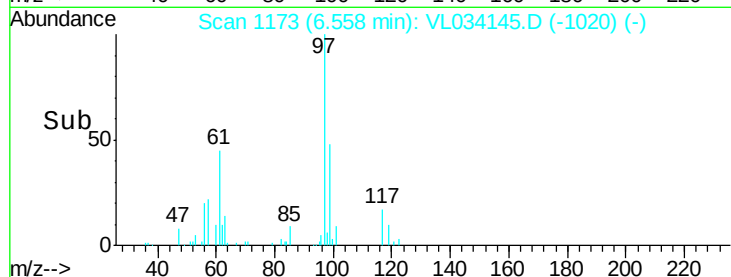
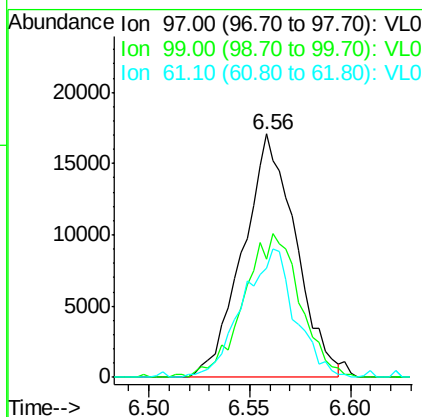
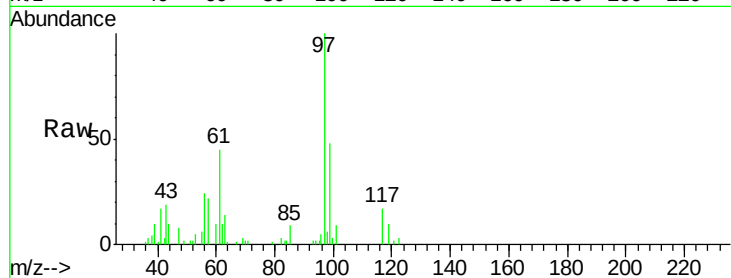
ClientSampled :

SV1DL

Tot Ion:	97	Resp:	31171
Ion	Ratio	Lower	Upper
97	100		
99	63.2	51.7	77.5
61	53.7	44.0	66.0

Manual Integrations
APPROVED

MMDadoda
9/12/2019 5:16:53 AM



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

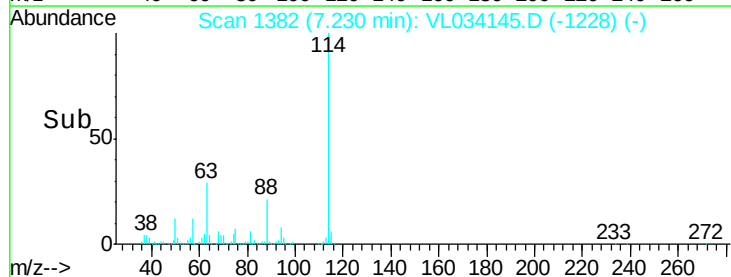
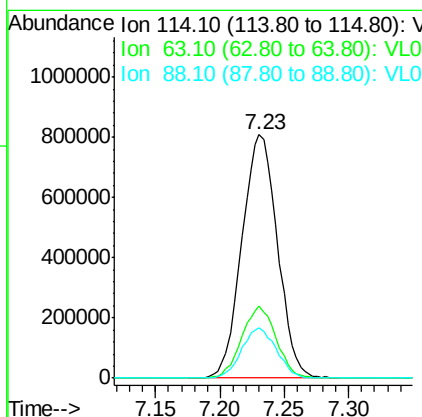
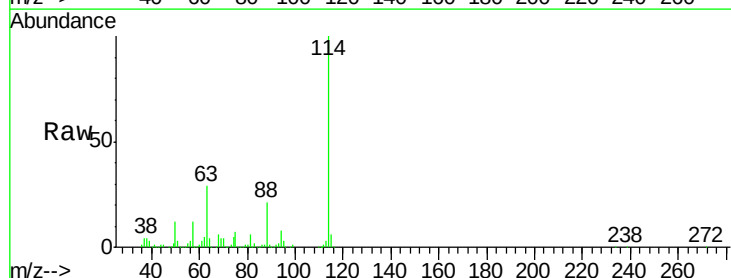
RT: 7.23 min Scan# 1382

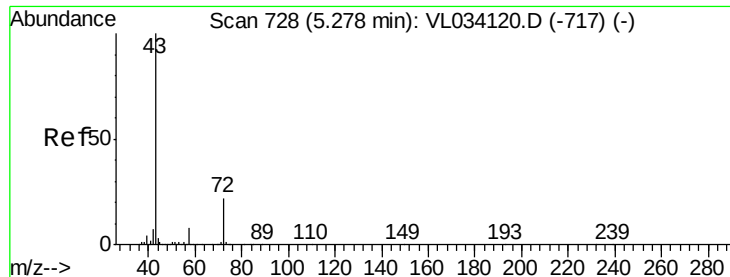
Delta R.T. -0.01 min

Lab File: VL034145.D

Acq: 10 Sep 2019 16:34

Tgt Ion:	114	Resp:	1553029
Ion	Ratio	Lower	Upper
114	100		
63	28.7	25.5	38.3
88	20.3	16.8	25.2





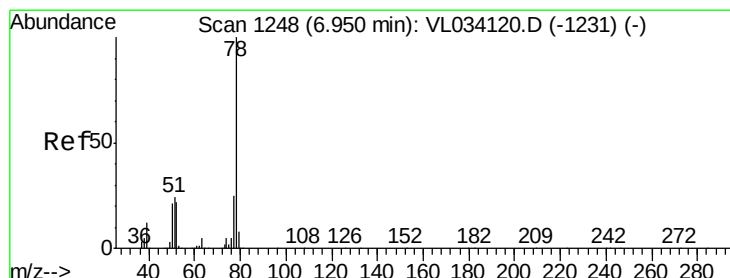
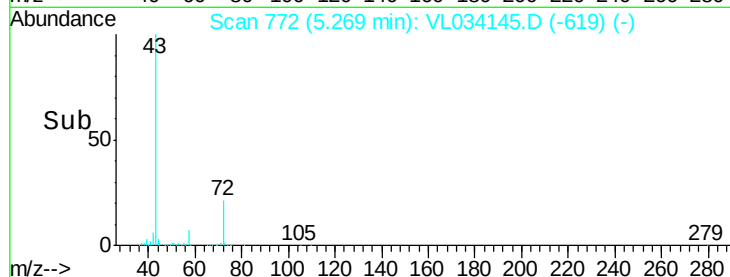
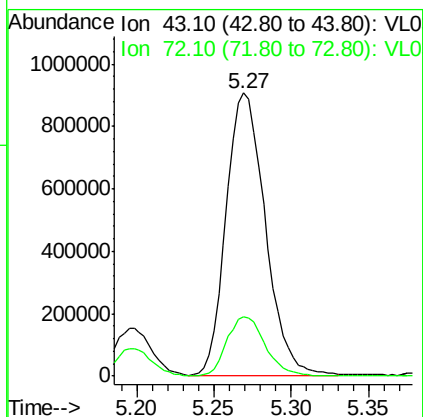
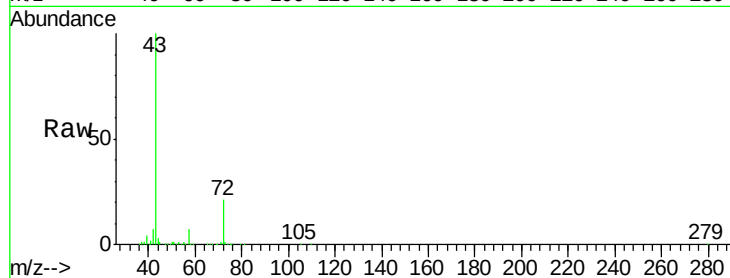
#34
2-Butanone
Concen: 10.598 ppbv
RT: 5.27 min Scan# 772
Delta R.T. -0.01 min
Lab File: VL034145.D
Acq: 10 Sep 2019 16:34

Instrument :
MSVOA_L
ClientSampled :
SV1DL

Tot Ion: 43 Resp: 1582310
Ion Ratio Lower Upper
43 100
72 20.8 16.5 24.7

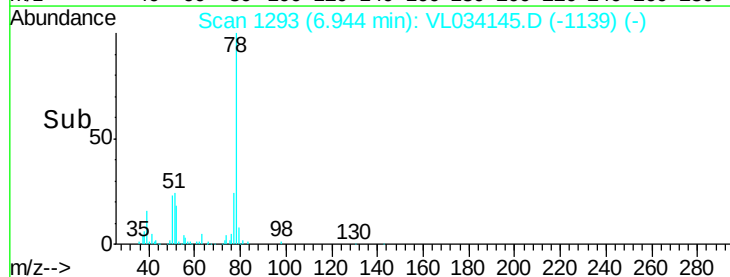
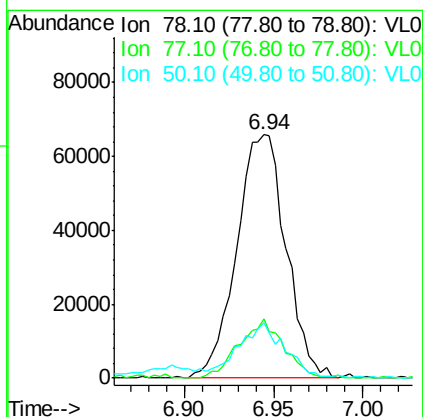
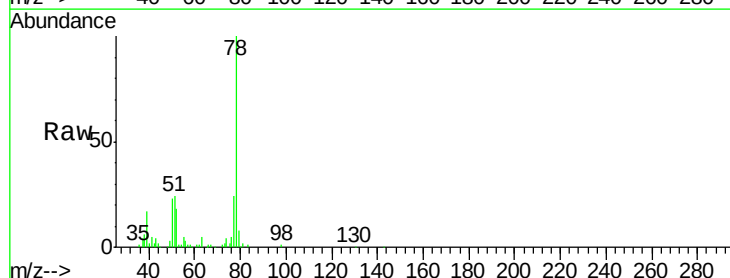
Manual Integrations
APPROVED

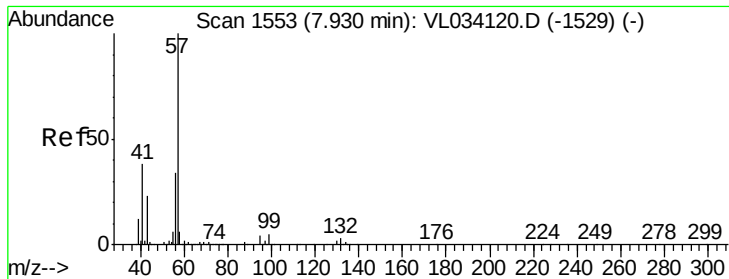
MMDadoda
9/12/2019 5:16:53 AM



#36
Benzene
Concen: 0.715 ppbv
RT: 6.94 min Scan# 1293
Delta R.T. -0.01 min
Lab File: VL034145.D
Acq: 10 Sep 2019 16:34

Tgt Ion: 78 Resp: 126858
Ion Ratio Lower Upper
78 100
77 24.5 20.3 30.5
50 21.2 16.9 25.3





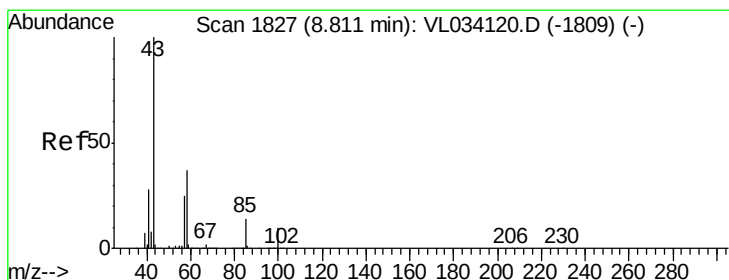
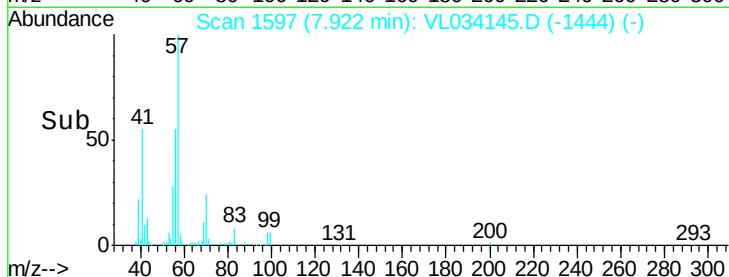
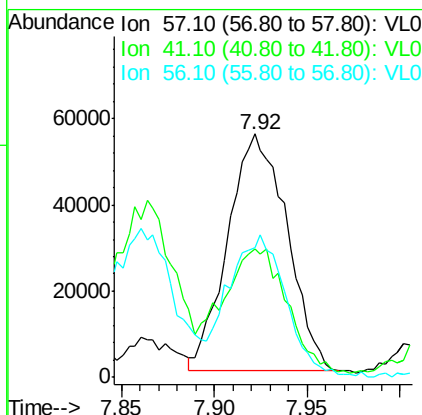
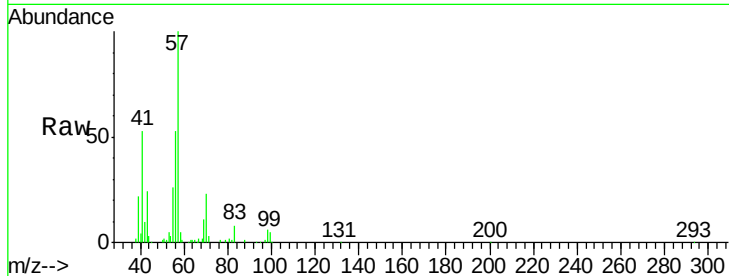
#44
 2,2,4-Trimethylpentane
 Concen: 0.370 ppbv
 RT: 7.92 min Scan# 1597
 Delta R.T. -0.01 min
 Lab File: VL034145.D
 Acq: 10 Sep 2019 16:34

Instrument :
 MSVOA_L
 ClientSampleId :
 SV1DL

Tot Ion	Ratio	Lower	Upper
57	100		
41	55.9	28.4	42.6#
56	58.7	26.3	39.5#

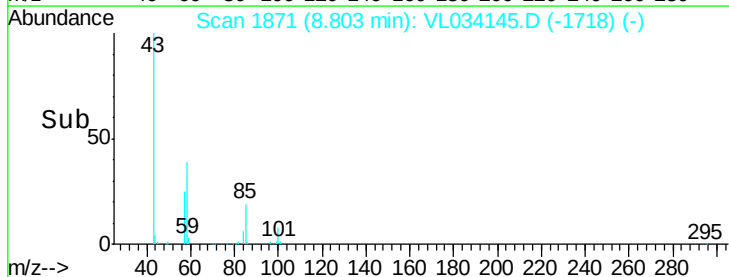
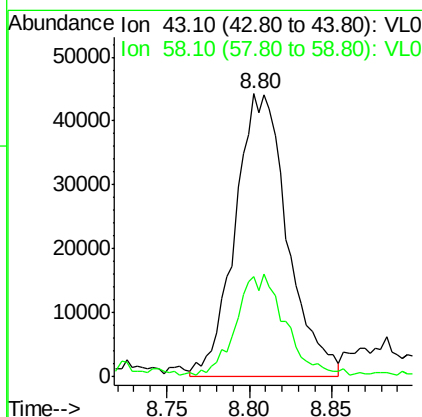
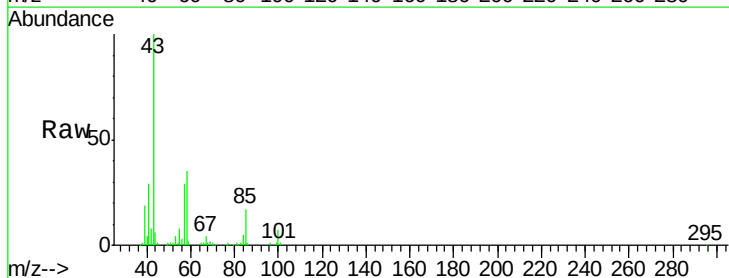
Manual Integrations
 APPROVED

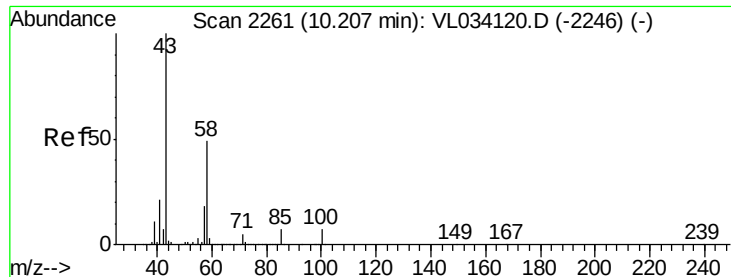
MMDadoda
 9/12/2019 5:16:53 AM



#50
 4-Methyl-2-Pentanone
 Concen: 0.430 ppbv m
 RT: 8.80 min Scan# 1871
 Delta R.T. -0.01 min
 Lab File: VL034145.D
 Acq: 10 Sep 2019 16:34

Tgt Ion	Ratio	Lower	Upper
43	100		
58	0.0	28.5	42.7#





#51

2-Hexanone

Concen: 2.859 ppbv

RT: 10.20 min Scan# 2305

Delta R.T. -0.01 min

Lab File: VL034145.D

Acq: 10 Sep 2019 16:34

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

Tot Ion: 43 Resp: 562617

Ion Ratio Lower Upper

43 100

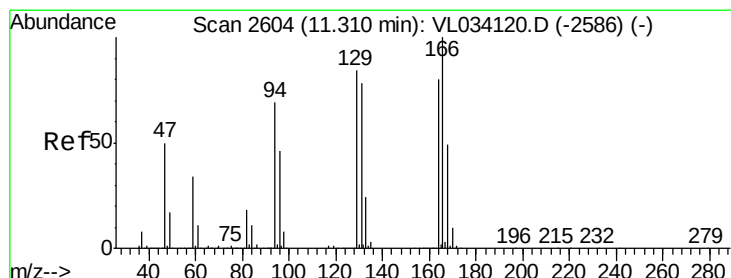
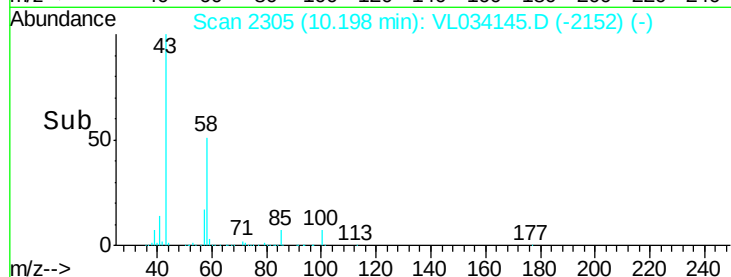
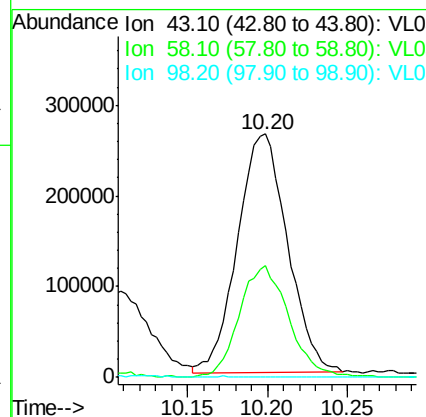
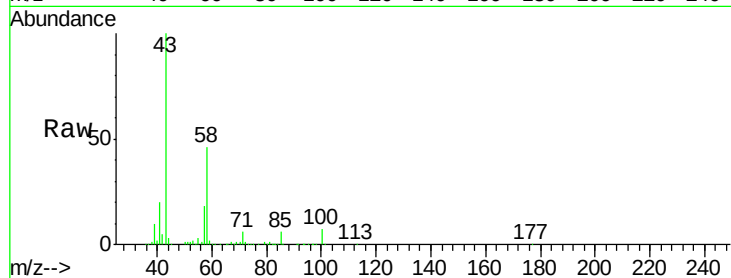
58 45.8 38.2 57.2

98 0.2 0.1 0.1#

Manual Integrations
APPROVED

MMDadoda

9/12/2019 5:16:53 AM



#52

Tetrachloroethene

Concen: 4.067 ppbv

RT: 11.30 min Scan# 2648

Delta R.T. -0.01 min

Lab File: VL034145.D

Acq: 10 Sep 2019 16:34

Tgt Ion: 164 Resp: 254576

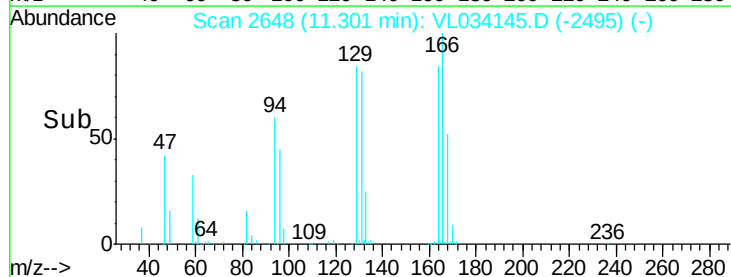
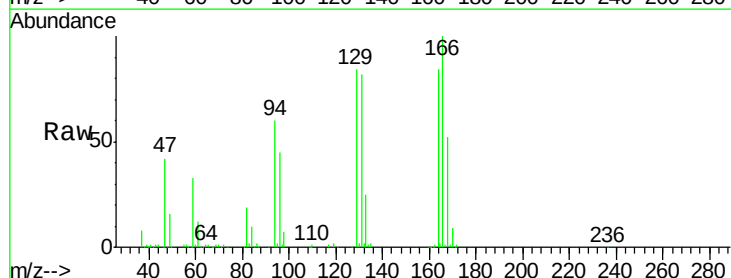
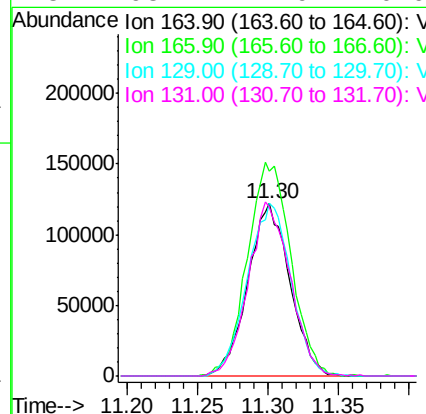
Ion Ratio Lower Upper

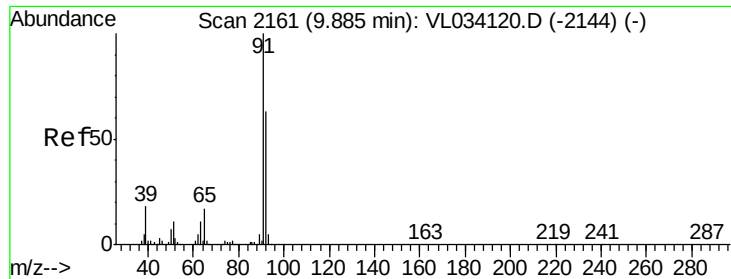
164 100

166 119.3 99.5 149.3

129 100.0 83.6 125.4

131 98.2 77.9 116.9





#53

Toluene

Concen: 2.682 ppbv

RT: 9.87 min Scan# 2204

Delta R.T. -0.01 min

Lab File: VL034145.D

Acq: 10 Sep 2019 16:34

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

Tot Ion: 91 Resp: 526492

Ion Ratio Lower Upper

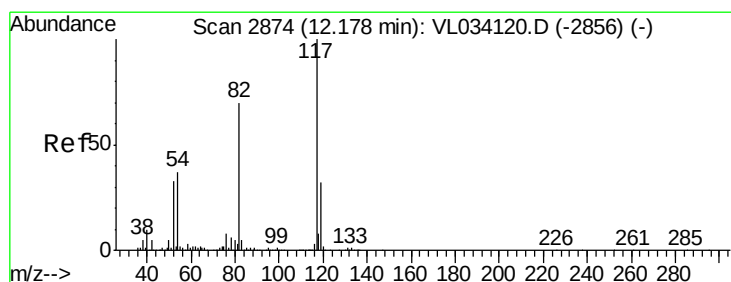
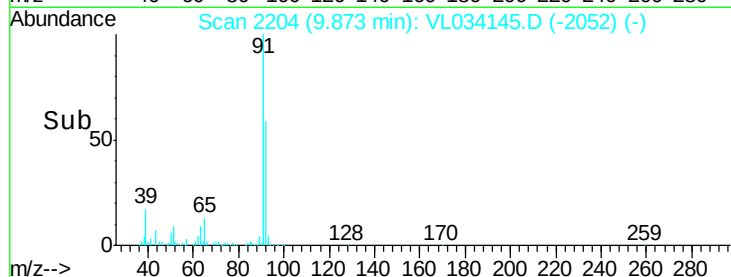
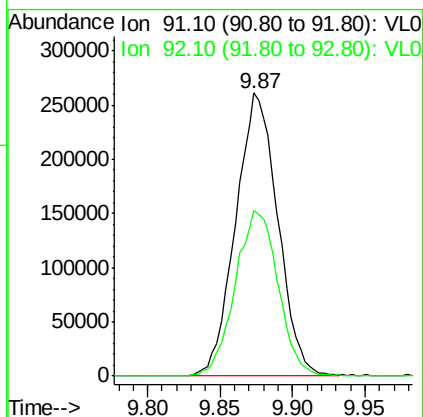
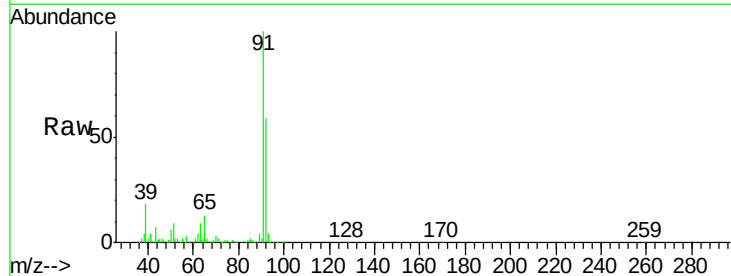
91 100

92 59.7 49.3 73.9

Manual Integrations
APPROVED

MMDadoda

9/12/2019 5:16:53 AM



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.17 min Scan# 2918

Delta R.T. -0.01 min

Lab File: VL034145.D

Acq: 10 Sep 2019 16:34

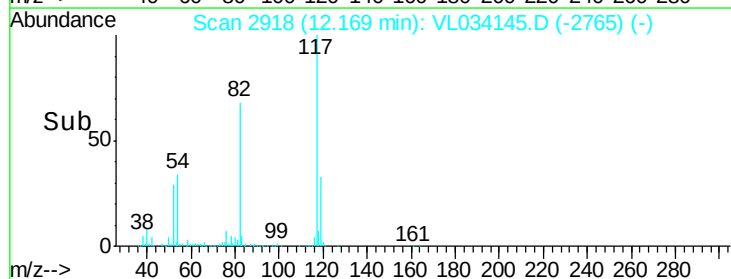
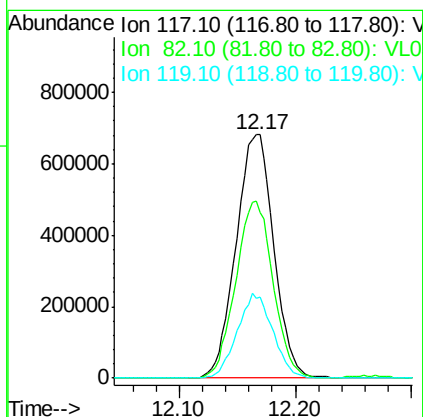
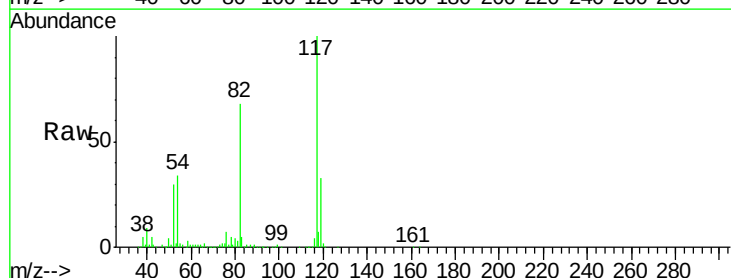
Tgt Ion: 117 Resp: 1539889

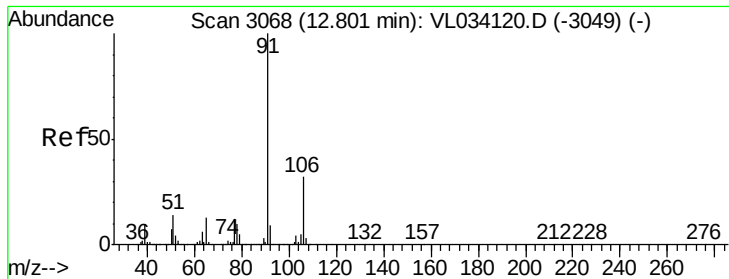
Ion Ratio Lower Upper

117 100

82 71.9 55.8 83.6

119 32.8 43.1 64.7#





#58

Ethyl Benzene

Concen: 0.679 ppbv

RT: 12.79 min Scan# 3112

Delta R.T. -0.01 min

Lab File: VL034145.D

Acq: 10 Sep 2019 16:34

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

Tot Ion: 91 Resp: 171365

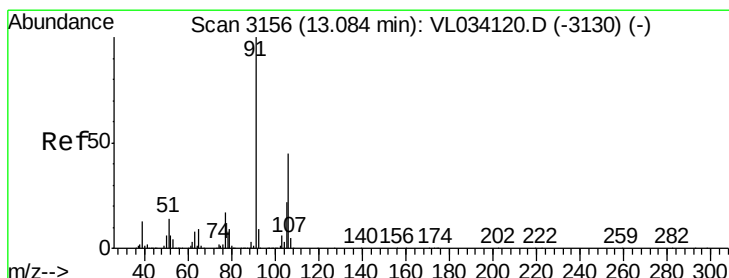
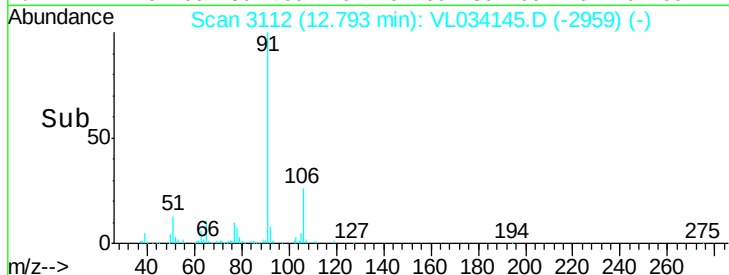
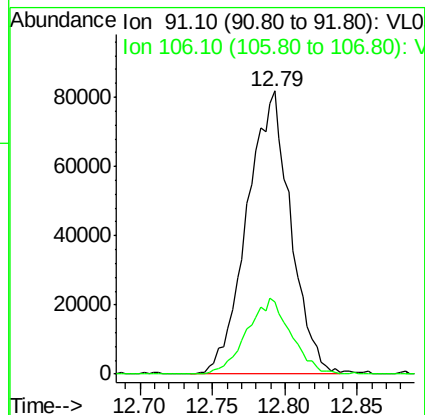
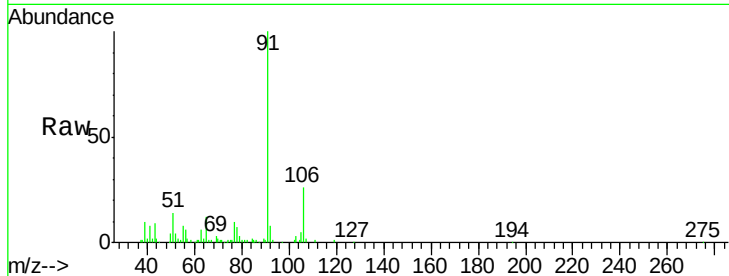
Ion Ratio Lower Upper

91 100

106 25.7 25.3 37.9

Manual Integrations
APPROVED

MMDadoda
9/12/2019 5:16:53 AM



#59

m/p-Xylene

Concen: 2.343 ppbv

RT: 13.05 min Scan# 3191

Delta R.T. -0.04 min

Lab File: VL034145.D

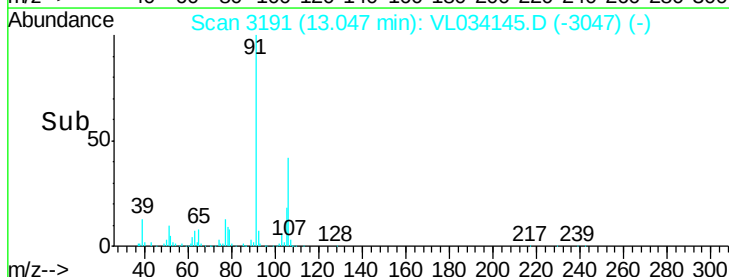
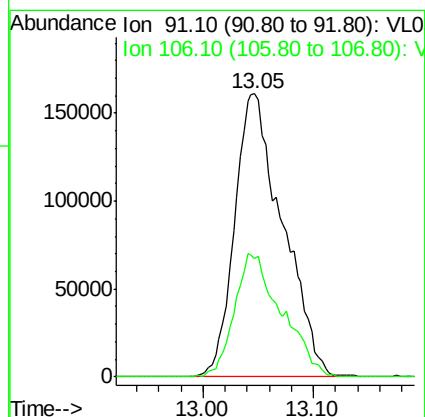
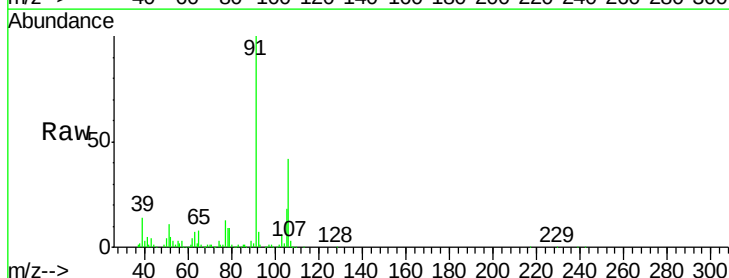
Acq: 10 Sep 2019 16:34

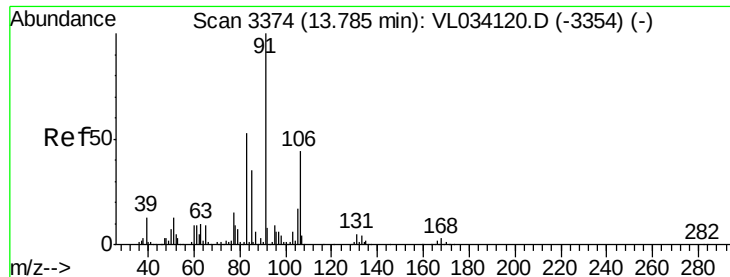
Tgt Ion: 91 Resp: 482521

Ion Ratio Lower Upper

91 100

106 42.9 35.4 53.2





#60

o-Xylene

Concen: 0.898 ppbv

RT: 13.77 min Scan# 3417

Delta R.T. -0.01 min

Lab File: VL034145.D

Acq: 10 Sep 2019 16:34

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

Tot Ion: 91 Resp: 184299

Ion Ratio Lower Upper

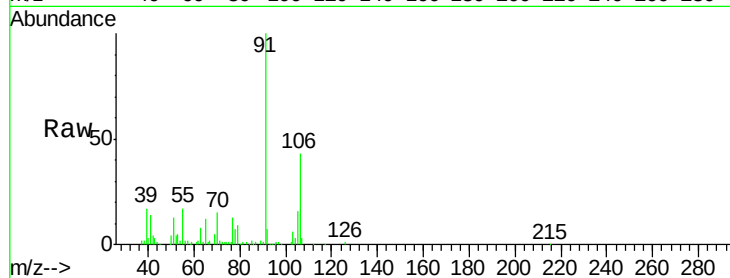
91 100

106 41.6 21.4 64.3

Manual Integrations
APPROVED

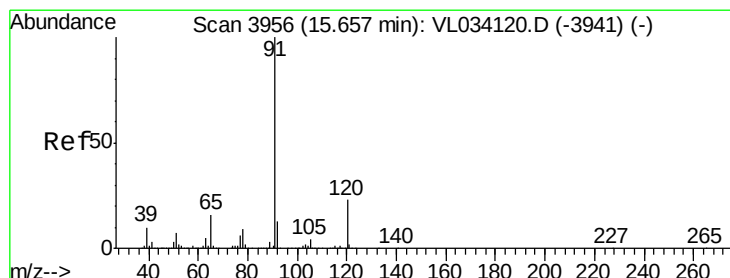
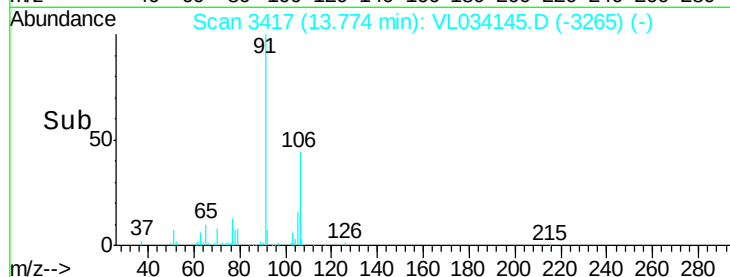
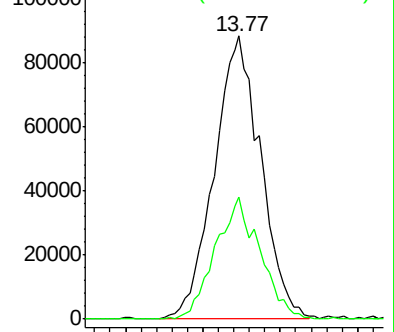
MMDadoda

9/12/2019 5:16:53 AM



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#64

n-propylbenzene

Concen: 0.201 ppbv m

RT: 15.65 min Scan# 4000

Delta R.T. -0.01 min

Lab File: VL034145.D

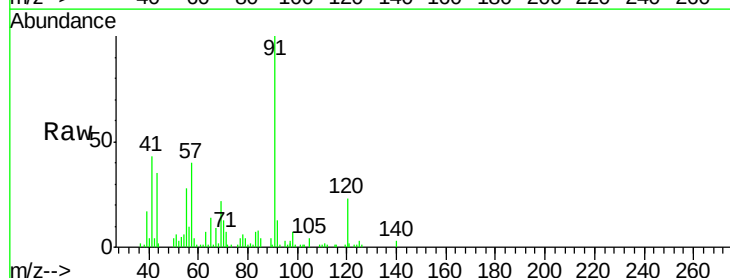
Acq: 10 Sep 2019 16:34

Tgt Ion: 120 Resp: 13413

Ion Ratio Lower Upper

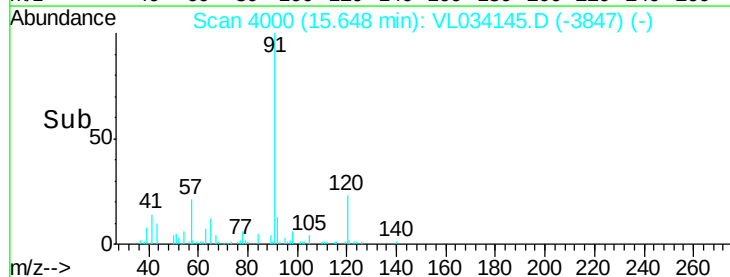
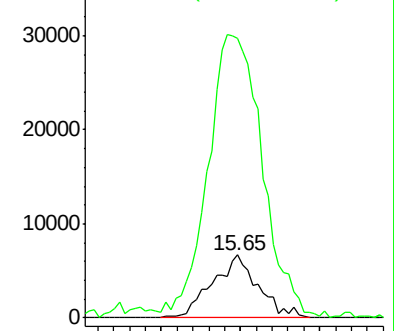
120 100

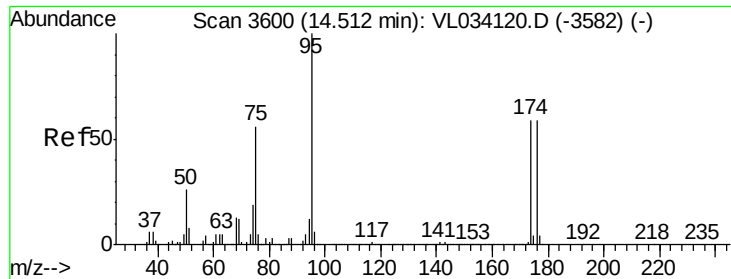
91 0.0 376.8 565.2#



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0





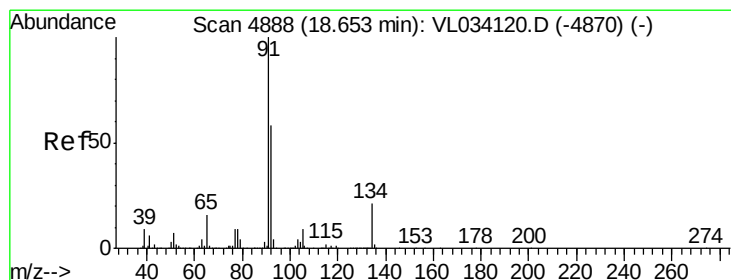
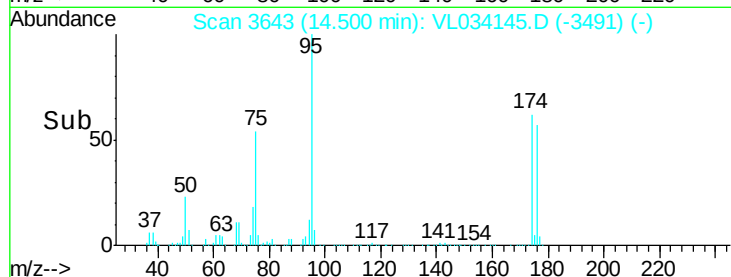
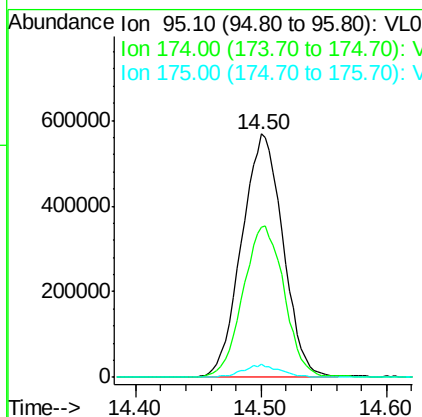
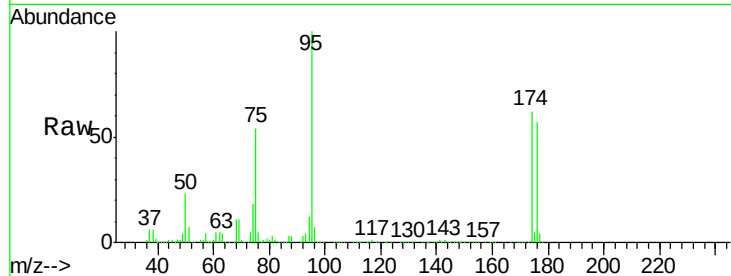
#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.301 ppbv
 RT: 14.50 min Scan# 3643
 Delta R.T. -0.01 min
 Lab File: VL034145.D
 Acq: 10 Sep 2019 16:34

Instrument :
 MSVOA_L
 ClientSampleID :
 SV1DL

Tot Ion: 95 Resp: 1296721
 Ion Ratio Lower Upper
 95 100
 174 62.4 48.1 72.1
 175 4.7 3.5 5.3

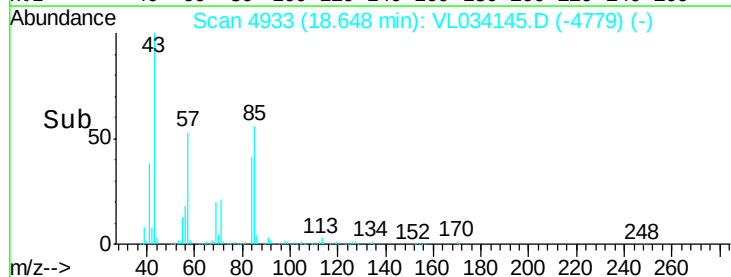
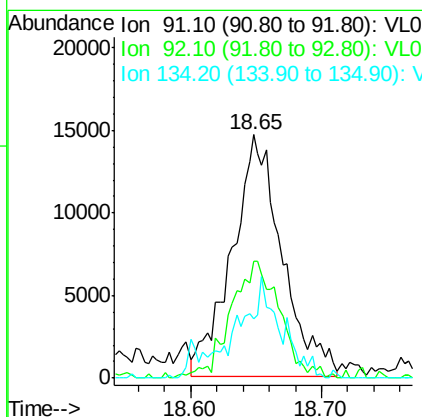
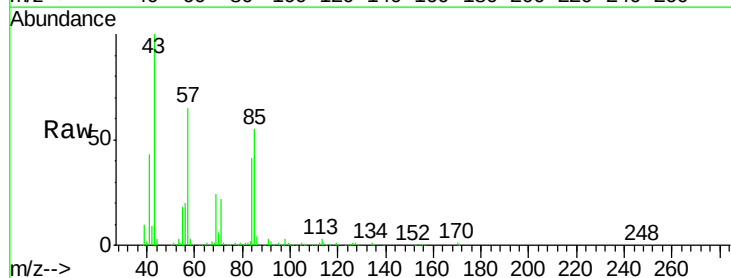
Manual Integrations
 APPROVED

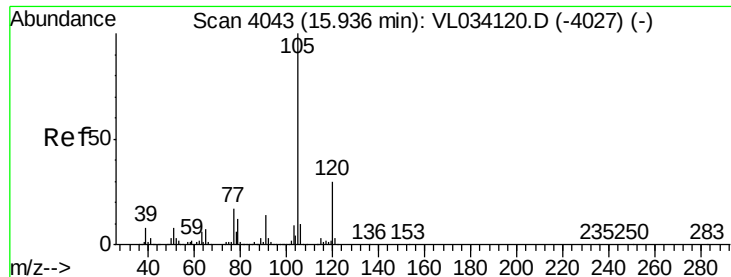
MMDadoda
 9/12/2019 5:16:53 AM



#70
 n-Butylbenzene
 Concen: 0.129 ppbv m
 RT: 18.65 min Scan# 4933
 Delta R.T. -0.01 min
 Lab File: VL034145.D
 Acq: 10 Sep 2019 16:34

Tgt Ion: 91 Resp: 39008
 Ion Ratio Lower Upper
 91 100
 92 48.6 45.3 67.9
 134 0.0 17.4 26.0#





#72

4-Ethyltoluene

Concen: 0.288 ppbv

RT: 15.93 min Scan# 4087

Delta R.T. -0.01 min

Lab File: VL034145.D

Acq: 10 Sep 2019 16:34

Instrument :

MSVOA_L

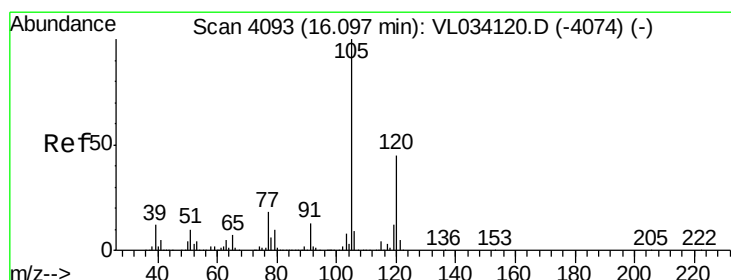
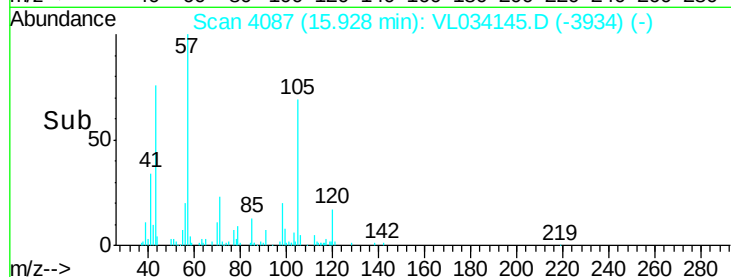
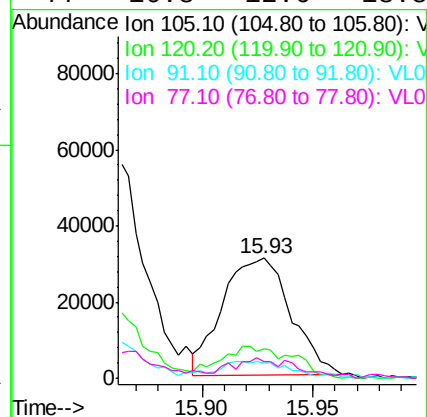
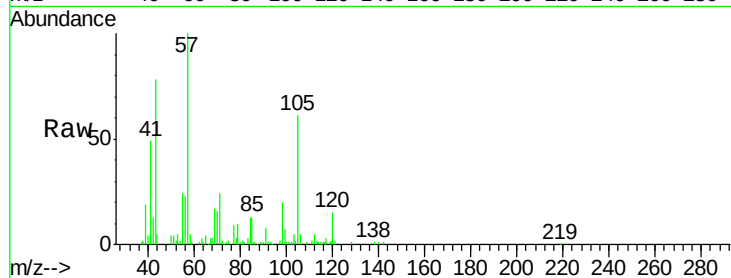
ClientSampled :

SV1DL

Tot Ion:	105	Resp:	66603
Ion Ratio	Lower	Upper	
105	100		
120	29.9	23.8	35.6
91	15.3	11.4	17.0
77	16.8	12.6	18.8

Manual Integrations
APPROVED

MMDadoda
9/12/2019 5:16:53 AM



#73

1,3,5-Trimethylbenzene

Concen: 0.237 ppbv m

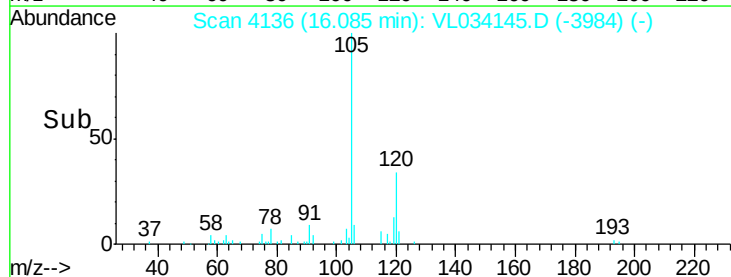
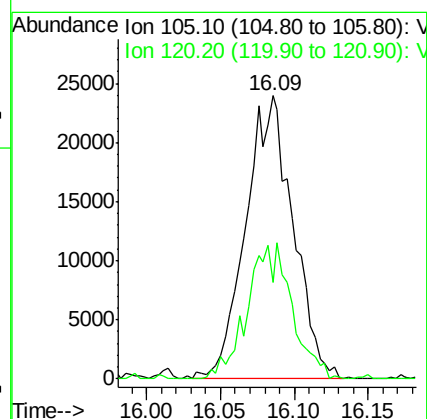
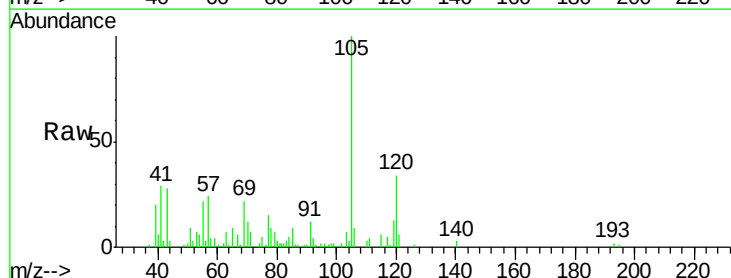
RT: 16.09 min Scan# 4136

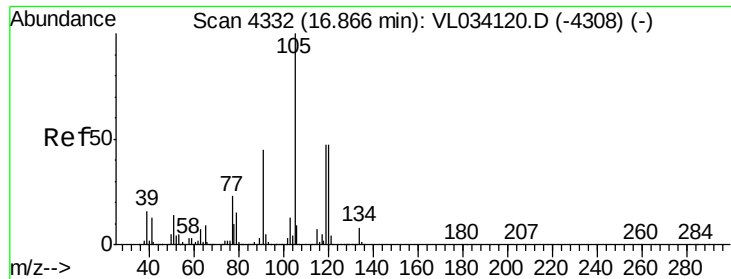
Delta R.T. -0.01 min

Lab File: VL034145.D

Acq: 10 Sep 2019 16:34

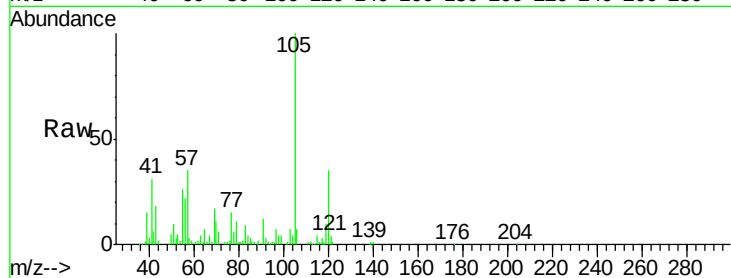
Tgt Ion:	105	Resp:	53286
Ion Ratio	Lower	Upper	
105	100		
120	34.0	35.8	53.8#





#74
 1,2,4-Trimethylbenzene
 Concen: 0.777 ppbv
 RT: 16.85 min Scan# 4374
 Delta R.T. -0.02 min
 Lab File: VL034145.D
 Acq: 10 Sep 2019 16:34

Instrument :
 MSVOA_L
 ClientSampleId :
 SV1DL



Tot Ion:	105	Resp:	179916
Ion Ratio		Lower	Upper
105	100		
120	34.6	37.7	56.5#
91	11.7	36.2	54.2#
77	13.3	18.5	27.7#

Manual Integrations
 APPROVED

MMDadoda
 9/12/2019 5:16:53 AM

