

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL072920\
 Data File : VL035243.D
 Acq On : 29 Jul 2020 12:57
 Operator : SY/AP
 Sample : L3474-01
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 1-VOA

Manual Integrations
 APPROVED

MMDadoda
 7/30/2020 6:10:43 PM

Quant Time: Jul 30 11:08:08 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL072920AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Jul 29 2020
 QLast Update : Wed Jul 29 07:14:29 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1189746	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	2810907	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.12	117	2612754	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.46	95	2140462	10.25	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.50%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.00	85	39040m	0.275	ppbv	
4) Chloromethane	3.10	50	50956	0.688	ppbv	92
9) Propene	2.98	41	148900m	3.243	ppbv	
11) Trichlorofluoromethane	3.92	101	100137	0.524	ppbv	98
12) 1,1,2-Trichlorotrifluoroet	4.46	101	67246	0.496	ppbv	92
13) Ethanol	3.61	45	10192666	545.520	ppbv	97
15) Acetone	3.82	43	15409233	97.098	ppbv #	55
19) Isopropyl Alcohol	4.01	45	43999162m	420.383	ppbv	
20) Methylene Chloride	4.32	84	4557458	63.089	ppbv	93
26) Hexane	5.68	57	7819821	69.944	ppbv #	44
28) Methyl tert-Butyl Ether	5.01	73	626087	3.917	ppbv	99
29) Chloroform	5.75	83	6012892	32.067	ppbv	94
30) Cyclohexane	7.14	84	16173m	0.202	ppbv	
32) 1,1,1-Trichloroethane	6.52	97	13653m	0.071	ppbv	
34) 2-Butanone	5.24	43	150494m	1.052	ppbv	
35) Carbon Tetrachloride	7.02	117	15984m	0.085	ppbv	
36) Benzene	6.90	78	35311m	0.181	ppbv	
38) Trichloroethene	7.85	130	3165m	0.039	ppbv	
41) Tetrahydrofuran	6.05	42	43149m	0.616	ppbv	
44) 2,2,4-Trimethylpentane	7.88	57	92398	0.268	ppbv #	76
52) Tetrachloroethene	11.26	164	5970m	0.080	ppbv	
53) Toluene	9.83	91	1540466	7.420	ppbv	99
58) Ethyl Benzene	12.75	91	78934m	0.285	ppbv	
59) m/p-Xylene	13.00	91	310037m	1.204	ppbv	
60) o-Xylene	13.73	91	81733m	0.318	ppbv	
73) 1,3,5-Trimethylbenzene	16.03	105	32915m	0.117	ppbv	
74) 1,2,4-Trimethylbenzene	16.81	105	94789m	0.289	ppbv	
79) Naphthalene	22.27	128	29294m	0.112	ppbv	

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

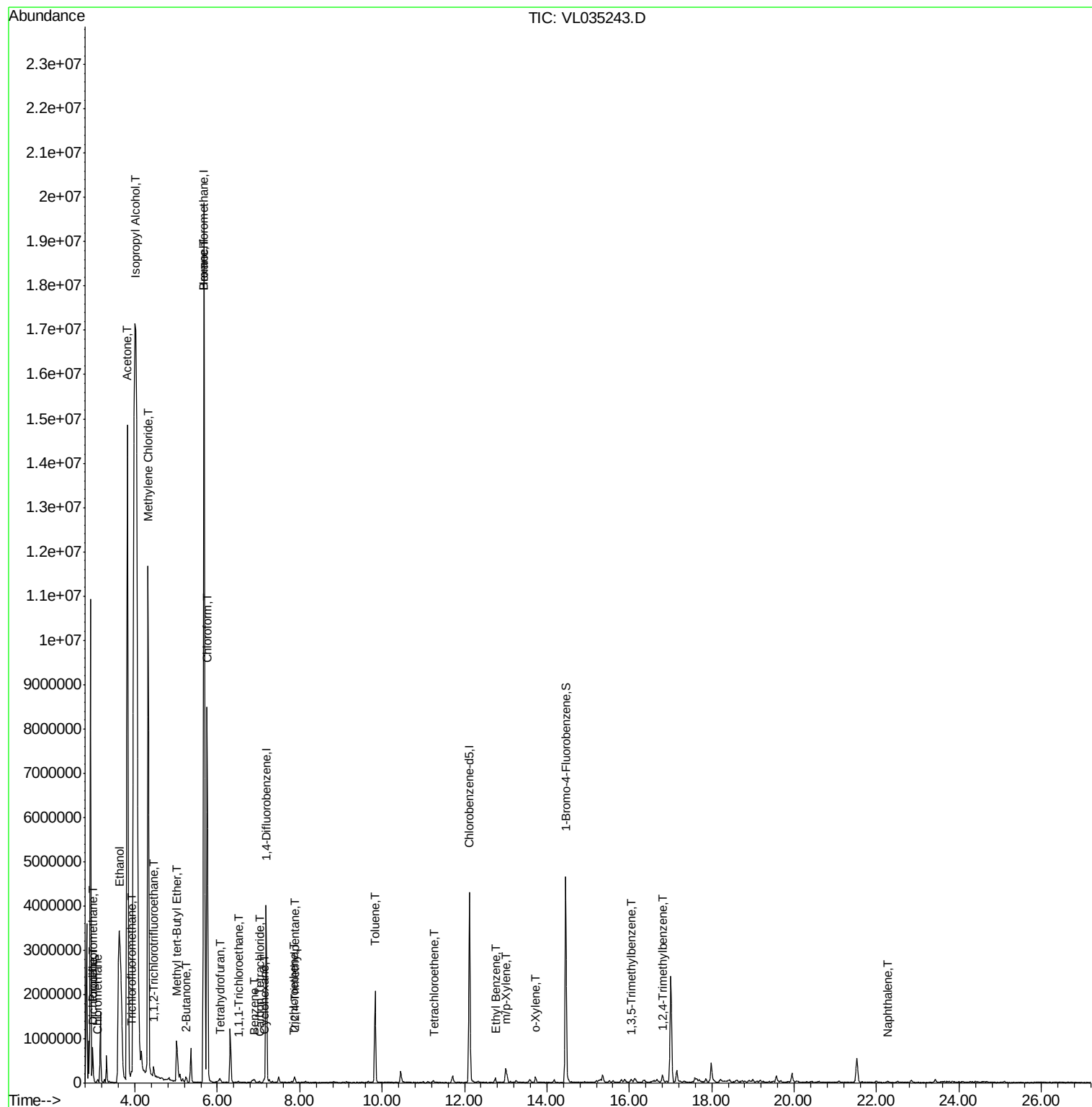
Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL072920\
Data File : VL035243.D
Acq On : 29 Jul 2020 12:57
Operator : SY/AP
Sample : L3474-01
Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

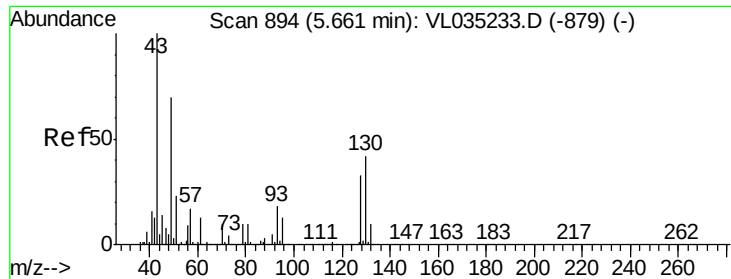
Instrument :
MSVOA_L
ClientSampleId :
1-VOA

Manual Integrations
APPROVED

MMDadoda
7/30/2020 6:10:43 PM

Quant Time: Jul 30 11:08:08 2020
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL072920AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Jul
QLast Update : Wed Jul 29 07:14:29 2020
Response via : Initial Calibration





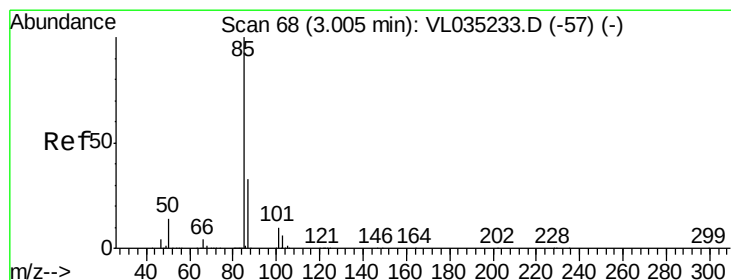
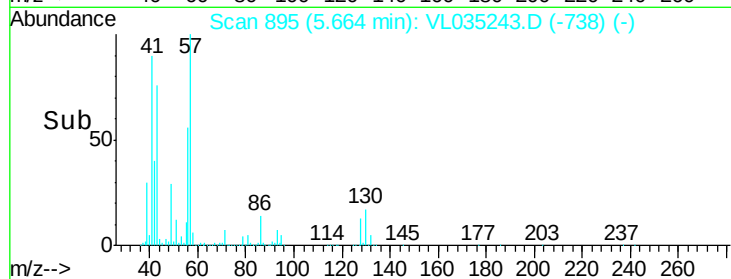
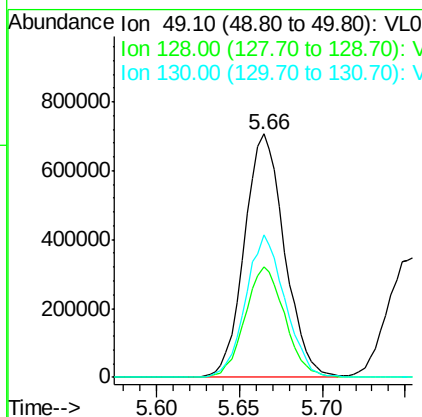
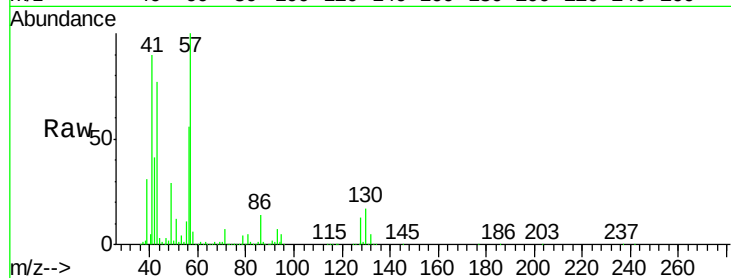
#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 5.66 min Scan# 895
Delta R.T. 0.00 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Instrument :
MSVOA_L
ClientSampleId :
1-VOA

Tot Ion: 49 Resp: 1189746
Ion Ratio Lower Upper
49 100
128 45.2 24.0 72.0
130 57.9 30.7 92.1

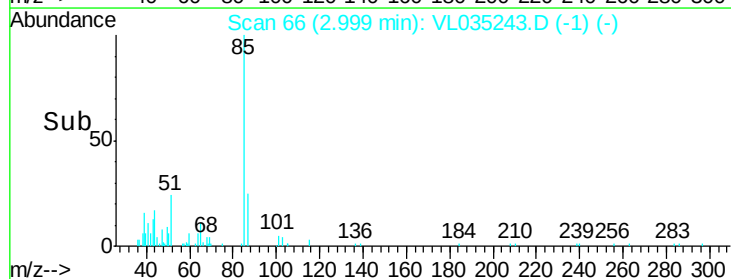
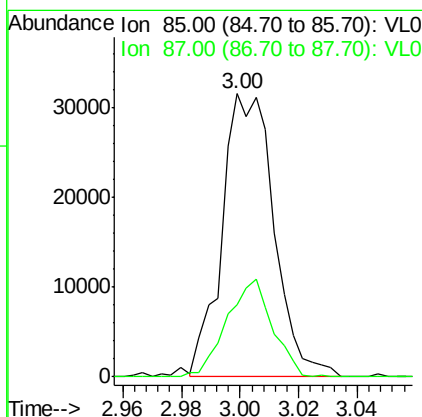
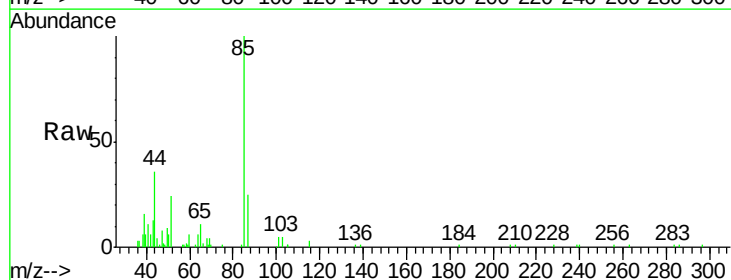
Manual Integrations
APPROVED

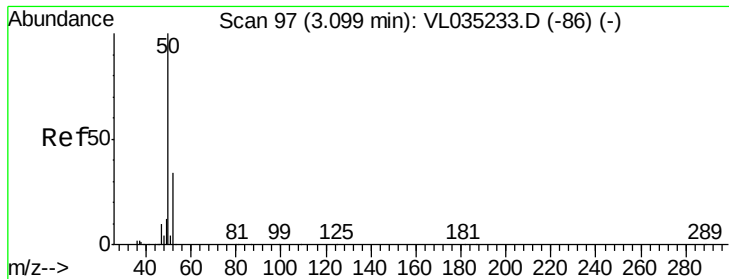
MMDadoda
7/30/2020 6:10:43 PM



#2
Dichlorodifluoromethane
Concen: 0.275 ppbv m
RT: 3.00 min Scan# 66
Delta R.T. -0.01 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Tgt Ion: 85 Resp: 39040
Ion Ratio Lower Upper
85 100
87 25.4 26.7 40.1#





#4

Chloromethane

Concen: 0.688 ppbv

RT: 3.10 min Scan# 97

Delta R.T. 0.00 min

Lab File: VL035243.D

Acq: 29 Jul 2020 12:57

Instrument :

MSVOA_L

ClientSampleId :

1-VOA

Tot Ion: 50 Resp: 50956

Ion Ratio Lower Upper

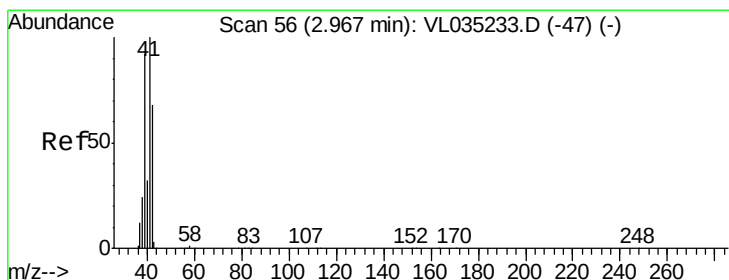
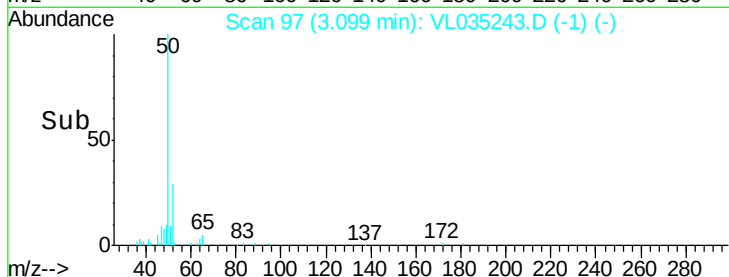
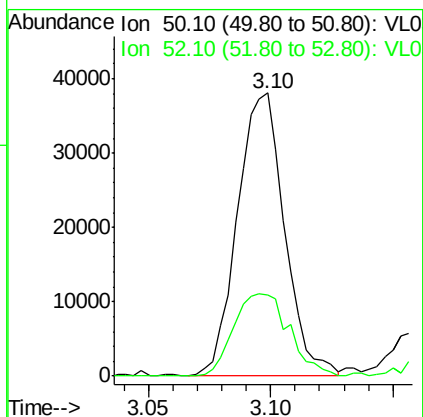
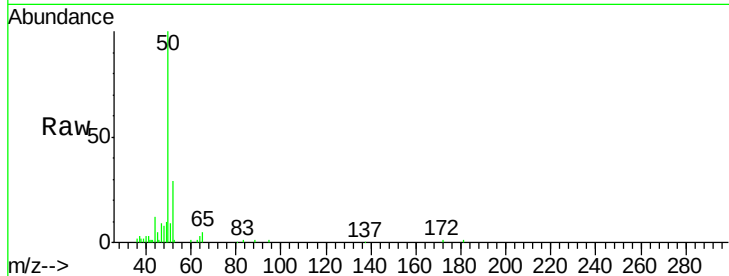
50 100

52 29.4 27.1 40.7

Manual Integrations
APPROVED

MMDadoda

7/30/2020 6:10:43 PM



#9

Propene

Concen: 3.243 ppbv m

RT: 2.98 min Scan# 59

Delta R.T. 0.01 min

Lab File: VL035243.D

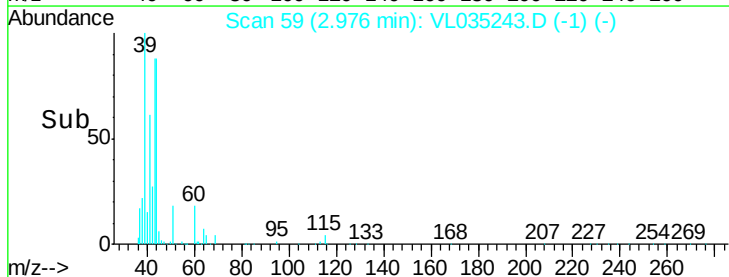
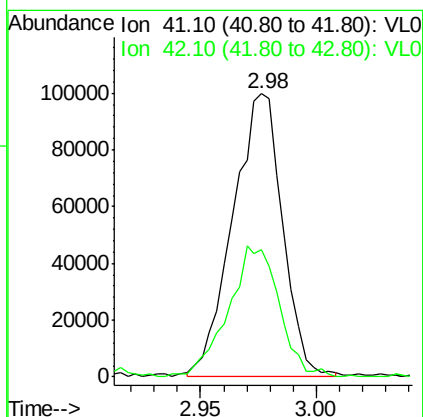
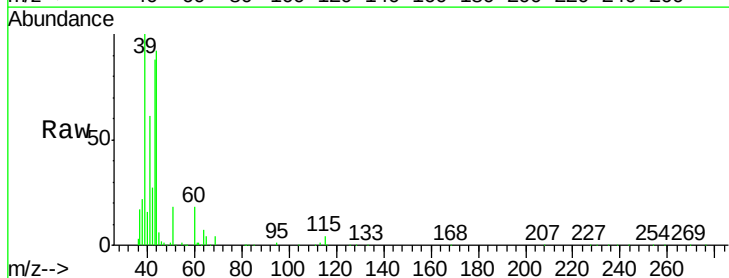
Acq: 29 Jul 2020 12:57

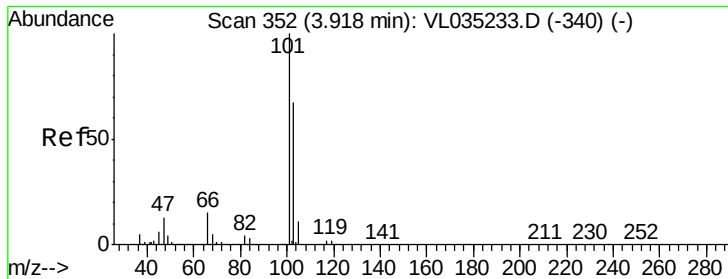
Tgt Ion: 41 Resp: 148900

Ion Ratio Lower Upper

41 100

42 181.8 55.0 82.6#





#11

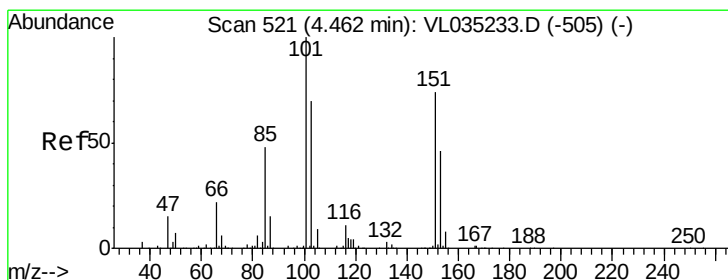
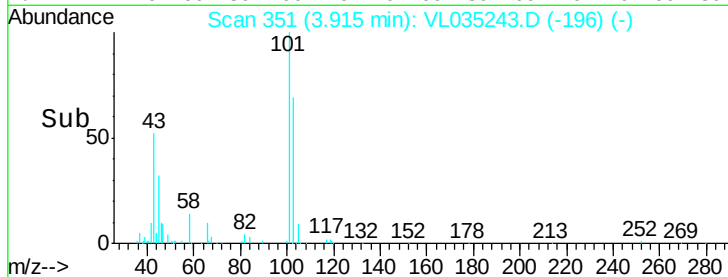
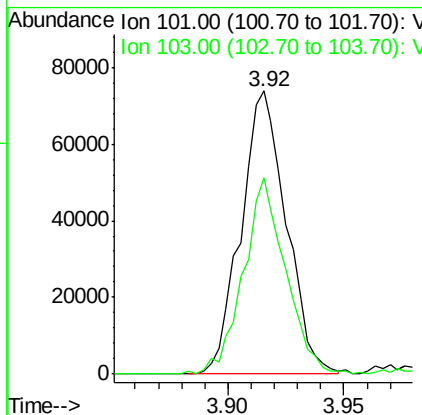
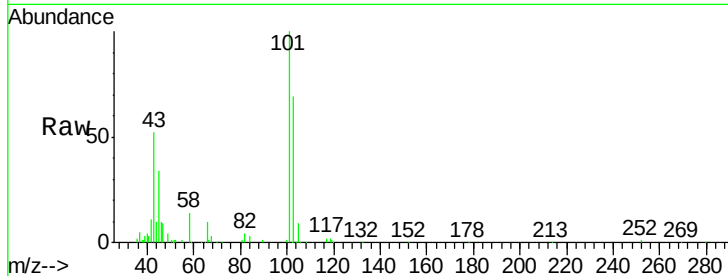
Trichlorofluoromethane
Concen: 0.524 ppbv
RT: 3.92 min Scan# 351
Delta R.T. -0.00 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Instrument :
MSVOA_L
ClientSampleId :
1-VOA

Tot Ion	Ratio	Lower	Upper
101	100		
103	68.3	53.4	80.0

Manual Integrations
APPROVED

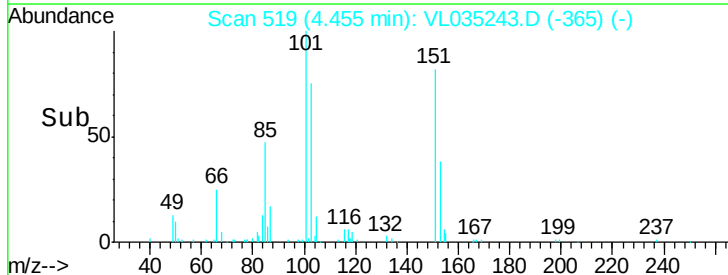
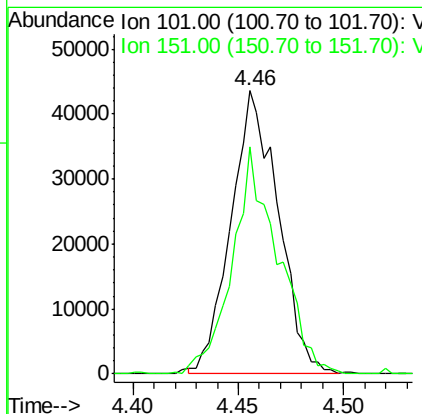
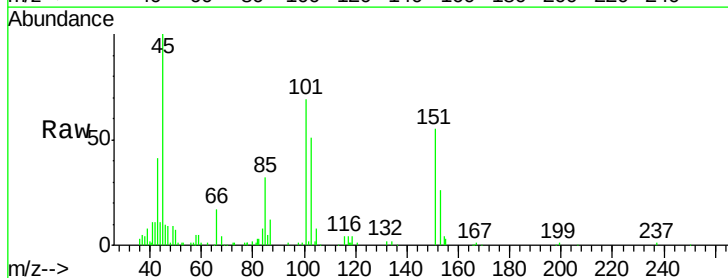
MMDadoda
7/30/2020 6:10:43 PM

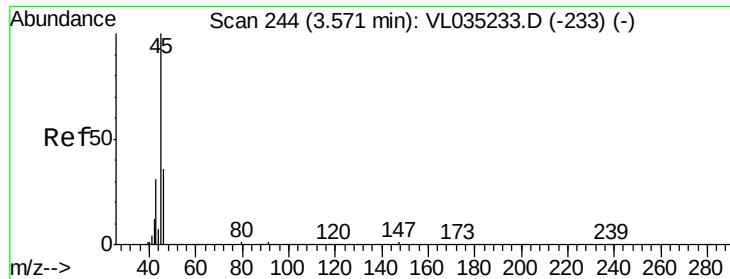


#12

1,1,2-Trichlorotrifluoroethane
Concen: 0.496 ppbv
RT: 4.46 min Scan# 519
Delta R.T. -0.01 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Tgt Ion	Ratio	Lower	Upper
101	100		
151	77.5	56.6	85.0





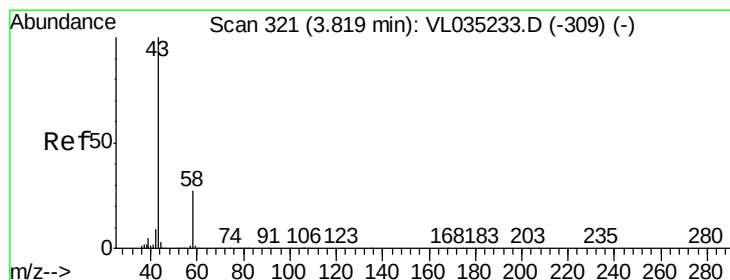
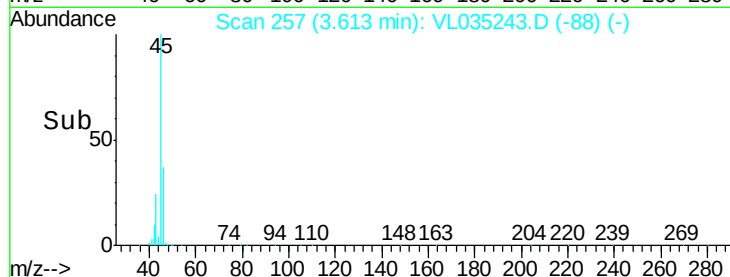
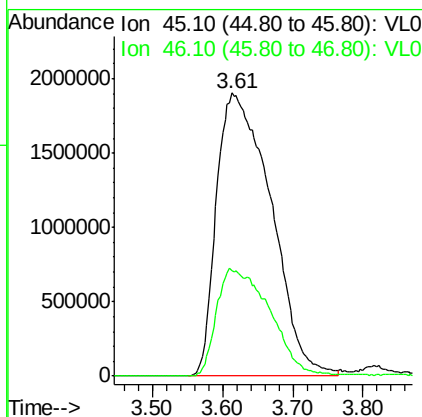
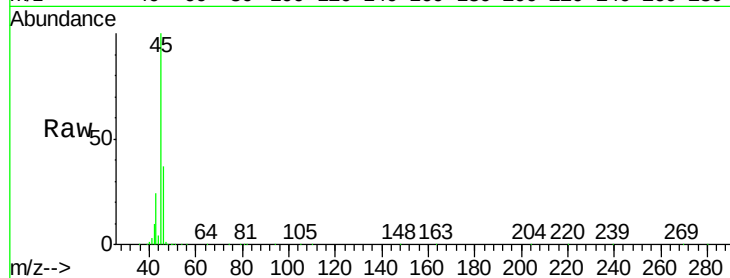
#13
Ethanol
Concen: 545.520 ppbv
RT: 3.61 min Scan# 257
Delta R.T. 0.04 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Instrument :
MSVOA_L
ClientSampleId :
1-VOA

Tot Ion: 45 Resp:10192666
Ion Ratio Lower Upper
45 100
46 37.5 15.8 63.4

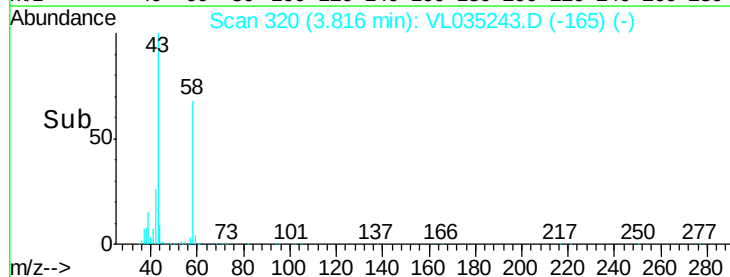
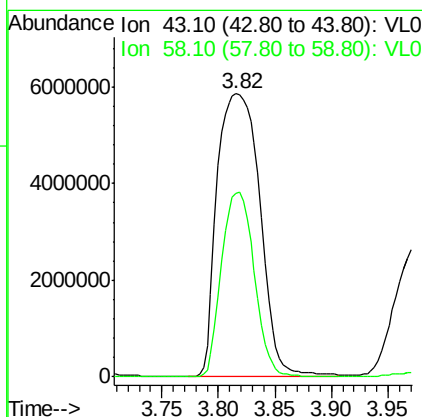
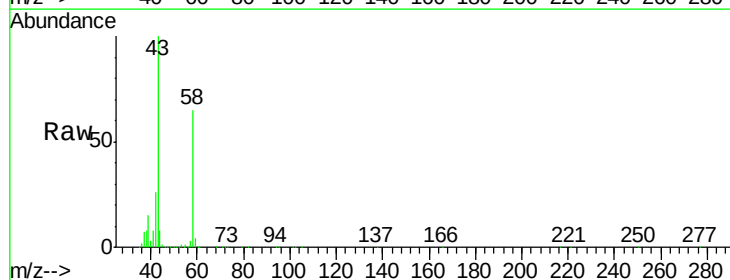
Manual Integrations
APPROVED

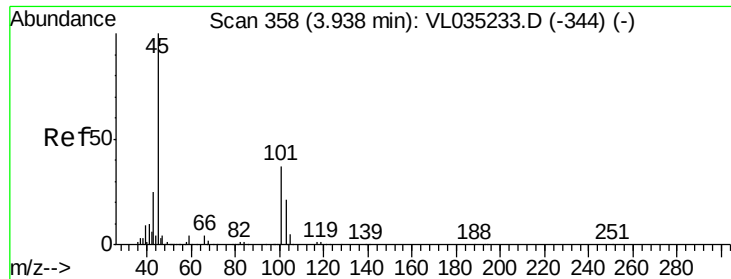
MMDadoda
7/30/2020 6:10:43 PM



#15
Acetone
Concen: 97.098 ppbv
RT: 3.82 min Scan# 320
Delta R.T. -0.00 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Tgt Ion: 43 Resp:15409233
Ion Ratio Lower Upper
43 100
58 50.4 21.8 32.6#





#19

Isopropyl Alcohol

Concen: 420.383 ppbv m

RT: 4.01 min Scan# 381

Delta R.T. 0.07 min

Lab File: VL035243.D

Acq: 29 Jul 2020 12:57

Tot Ion: 45 Resp: 43999162

Ion Ratio Lower Upper

45 100

58 1.5 1.9 2.9#

Instrument :

MSVOA_L

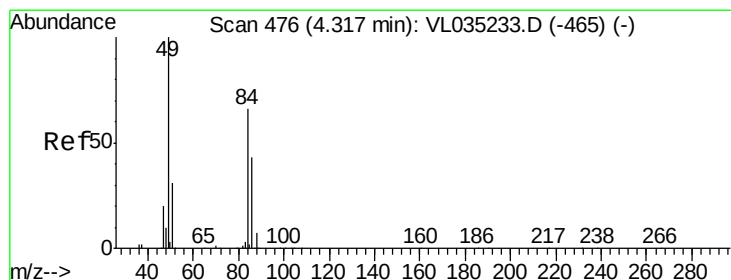
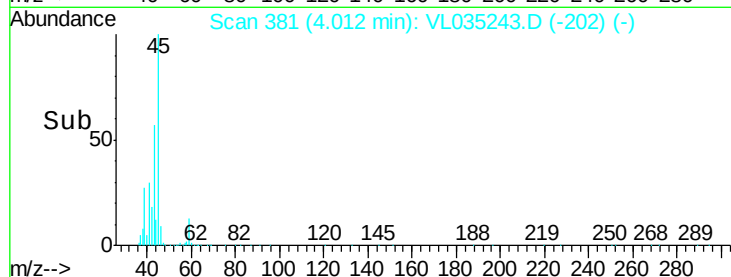
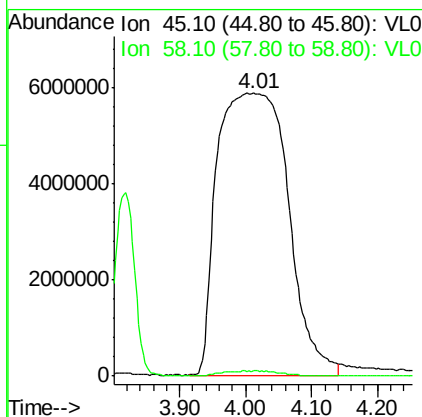
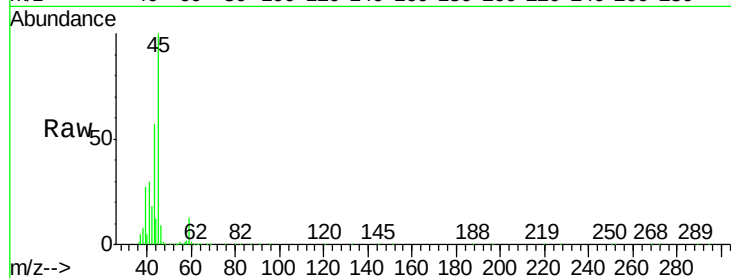
ClientSampleId :

1-VOA

Manual Integrations
APPROVED

MMDadoda

7/30/2020 6:10:43 PM



#20

Methylene Chloride

Concen: 63.089 ppbv

RT: 4.32 min Scan# 477

Delta R.T. 0.00 min

Lab File: VL035243.D

Acq: 29 Jul 2020 12:57

Tgt Ion: 84 Resp: 4557458

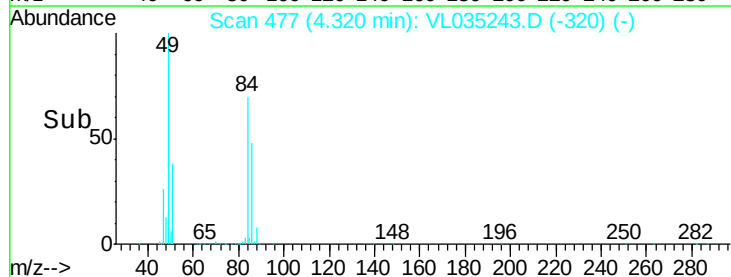
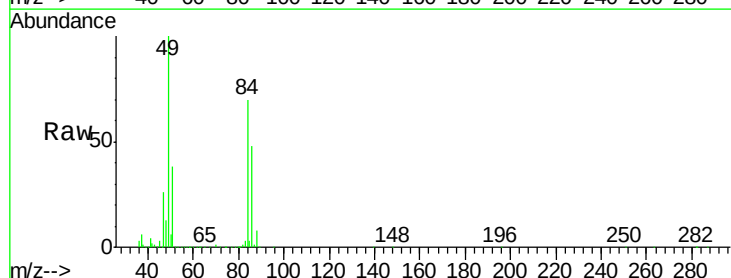
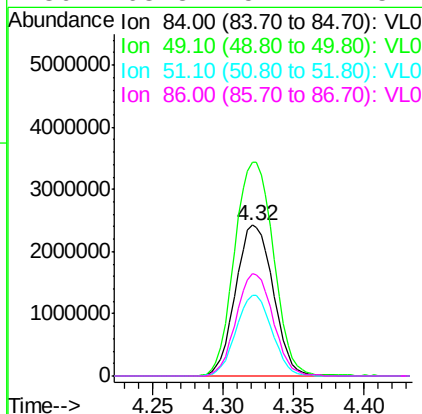
Ion Ratio Lower Upper

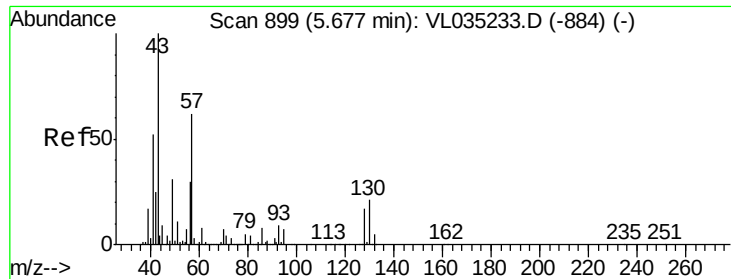
84 100

49 141.9 121.0 181.4

51 53.9 37.7 56.5

86 68.3 52.2 78.4





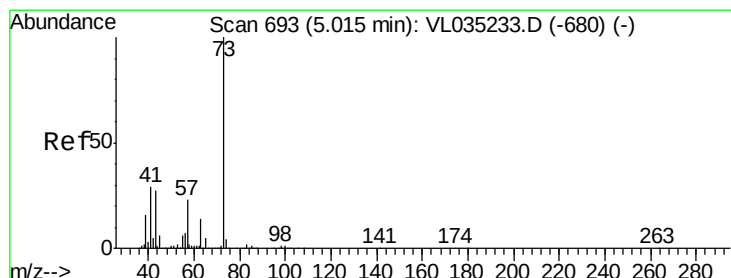
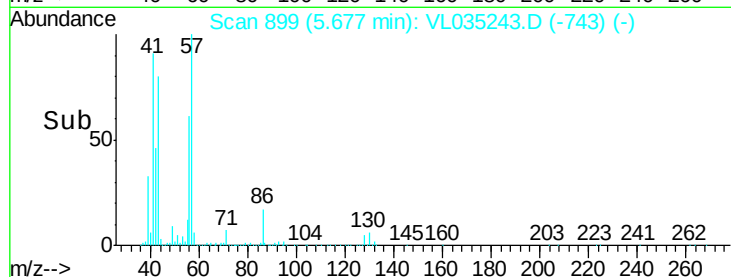
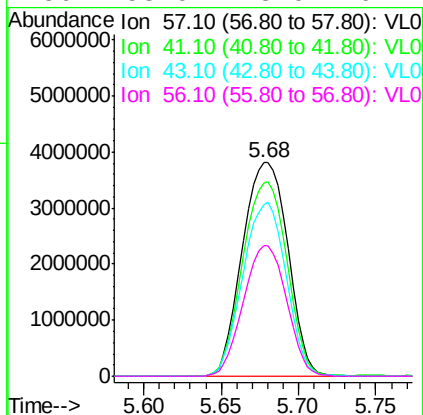
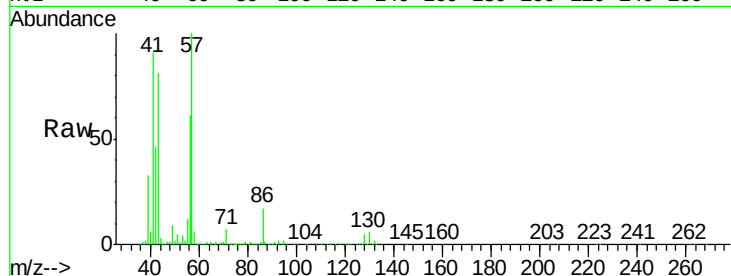
#26
Hexane
Concen: 69.944 ppbv
RT: 5.68 min Scan# 899
Delta R.T. 0.00 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Instrument :
MSVOA_L
ClientSampleId :
1-VOA

Tot Ion	Ratio	Lower	Upper
57	100		
41	89.1	73.9	110.9
43	77.1	177.6	266.4#
56	58.0	43.0	64.4

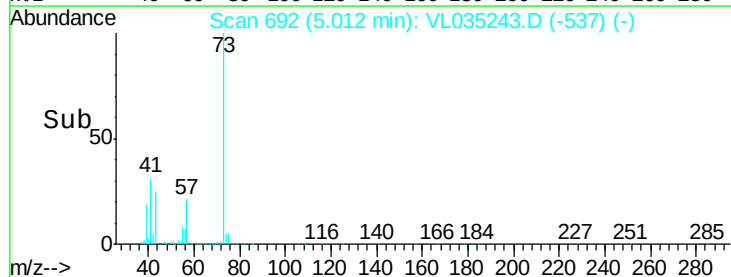
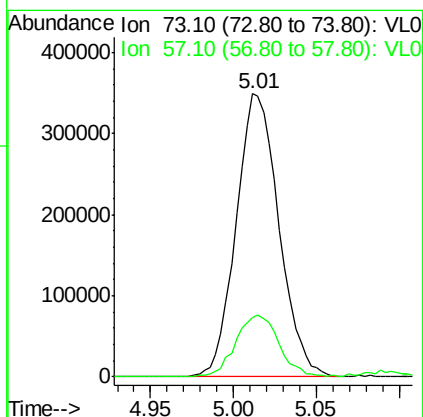
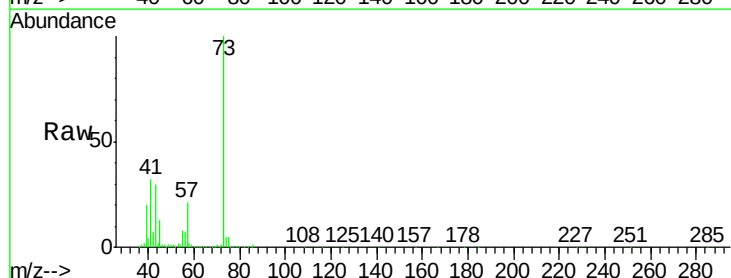
Manual Integrations
APPROVED

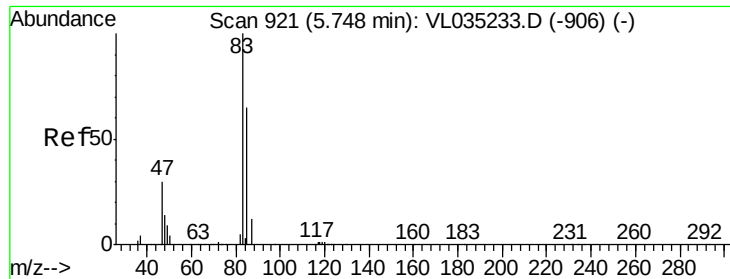
MMDadoda
7/30/2020 6:10:43 PM



#28
Methyl tert-Butyl Ether
Concen: 3.917 ppbv
RT: 5.01 min Scan# 692
Delta R.T. -0.00 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Tgt Ion	Ratio	Lower	Upper
73	100		
57	22.3	18.2	27.4





#29

Chloroform

Concen: 32.067 ppbv

RT: 5.75 min Scan# 922

Delta R.T. 0.00 min

Lab File: VL035243.D

Acq: 29 Jul 2020 12:57

Instrument :

MSVOA_L

ClientSampleId :

1-VOA

Tot Ion: 83 Resp: 6012892

Ion Ratio Lower Upper

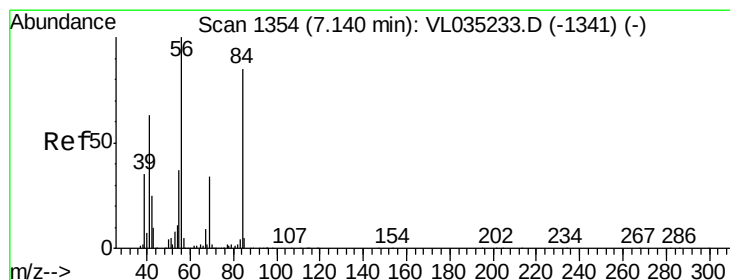
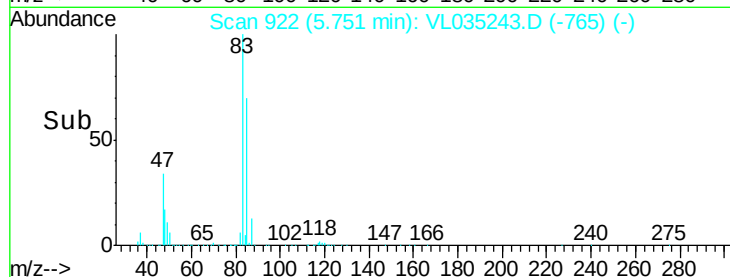
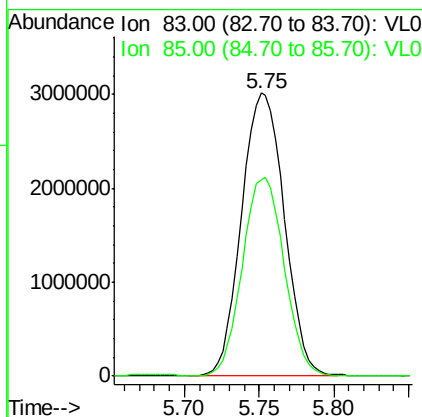
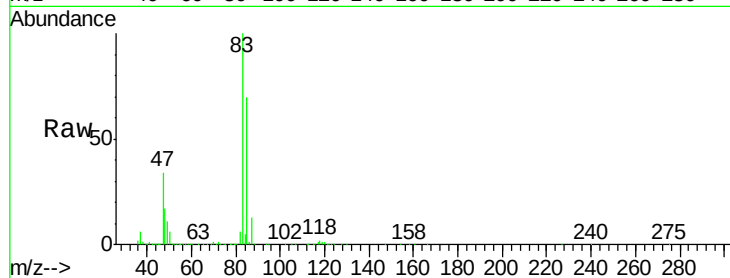
83 100

85 69.4 51.7 77.5

Manual Integrations
APPROVED

MMDadoda

7/30/2020 6:10:43 PM



#30

Cyclohexane

Concen: 0.202 ppbv m

RT: 7.14 min Scan# 1353

Delta R.T. -0.00 min

Lab File: VL035243.D

Acq: 29 Jul 2020 12:57

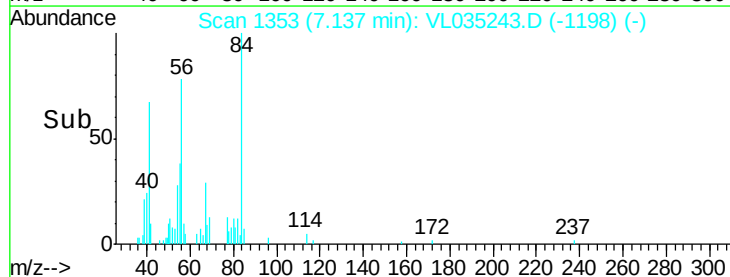
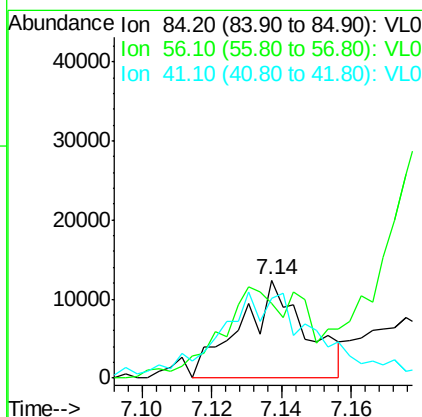
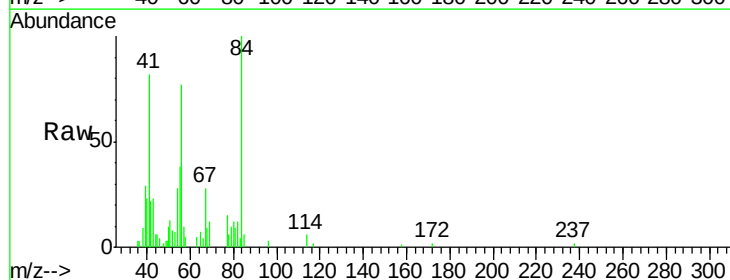
Tgt Ion: 84 Resp: 16173

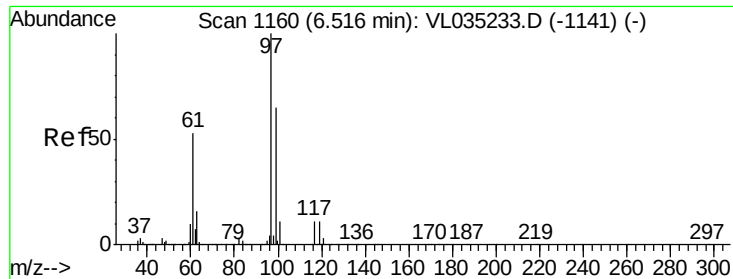
Ion Ratio Lower Upper

84 100

56 0.0 104.2 156.2#

41 0.0 63.7 95.5#





#32

1,1,1-Trichloroethane

Concen: 0.071 ppbv m

RT: 6.52 min Scan# 1160

Delta R.T. 0.00 min

Lab File: VL035243.D

Acq: 29 Jul 2020 12:57

Instrument :

MSVOA_L

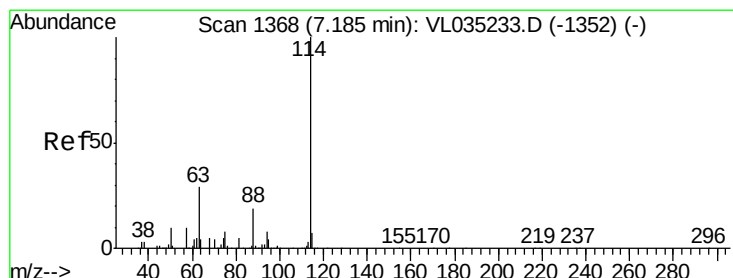
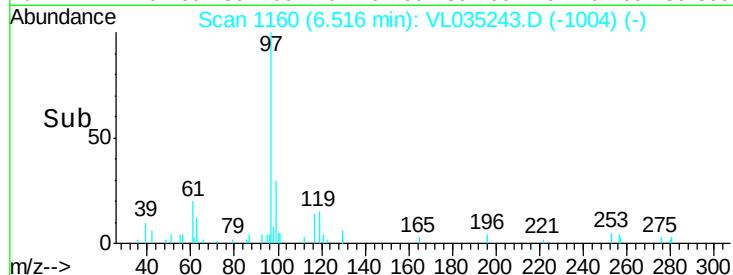
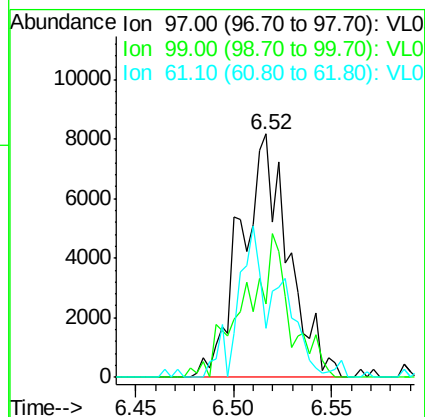
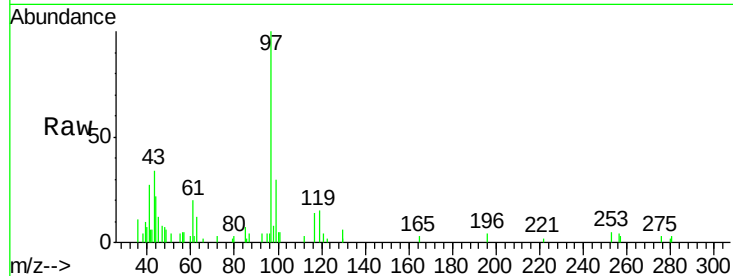
ClientSampleId :

1-VOA

Tot Ion:	97	Resp:	13653
Ion	Ratio	Lower	Upper
97	100		
99	56.1	51.4	77.0
61	55.5	40.4	60.6

Manual Integrations
APPROVED

MMDadoda
7/30/2020 6:10:43 PM



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

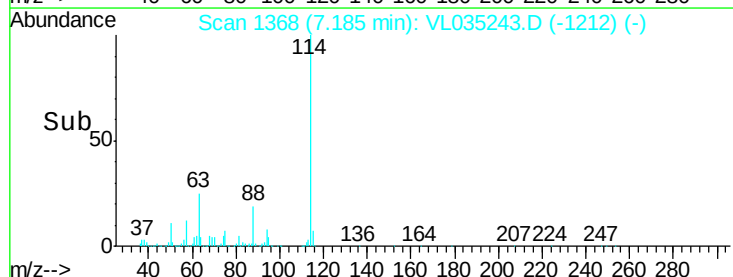
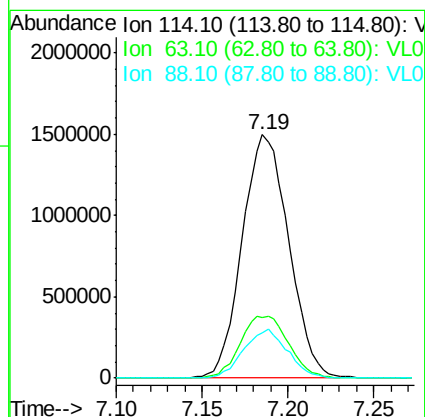
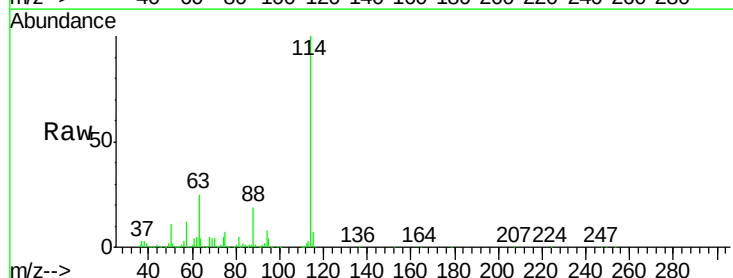
RT: 7.19 min Scan# 1368

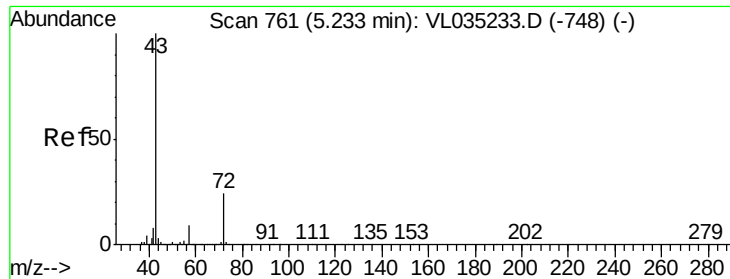
Delta R.T. 0.00 min

Lab File: VL035243.D

Acq: 29 Jul 2020 12:57

Tgt Ion:	114	Resp:	2810907
Ion	Ratio	Lower	Upper
114	100		
63	26.6	22.2	33.2
88	19.1	15.4	23.0





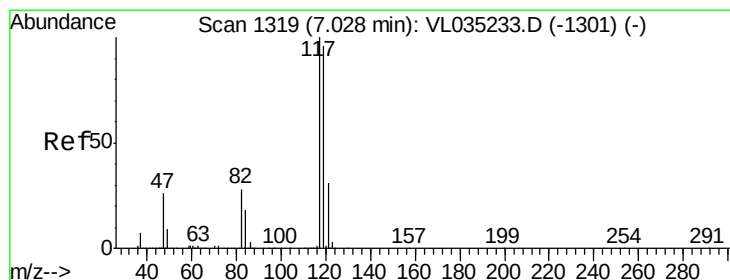
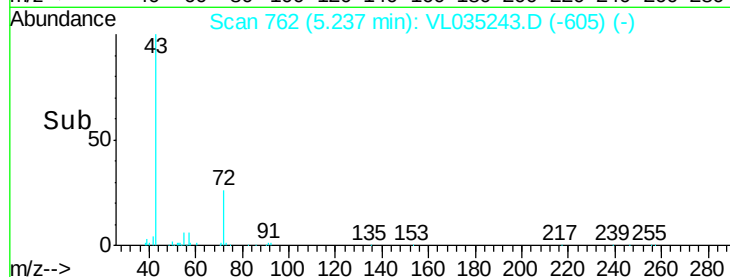
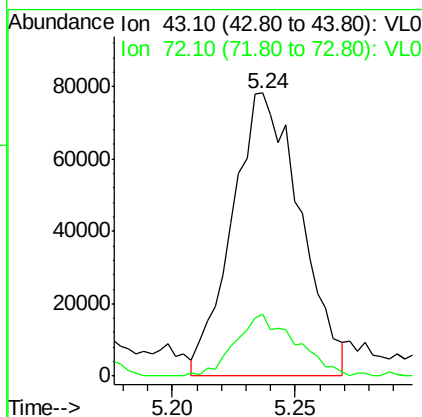
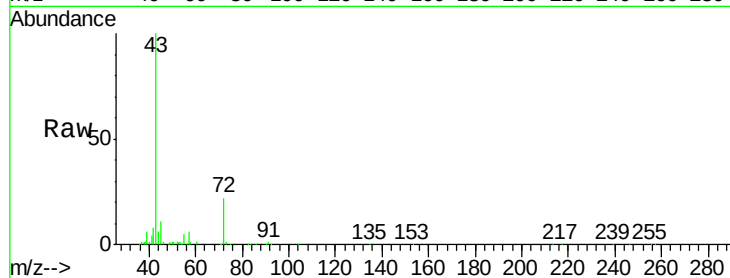
#34
2-Butanone
Concen: 1.052 ppbv m
RT: 5.24 min Scan# 762
Delta R.T. 0.00 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Instrument :
MSVOA_L
ClientSampleId :
1-VOA

Tot Ion: 43 Resp: 150494
Ion Ratio Lower Upper
43 100
72 19.7 19.2 28.8

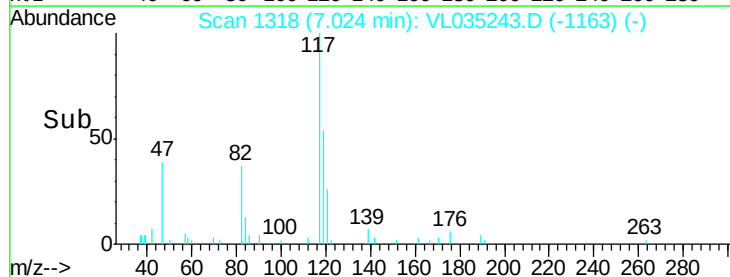
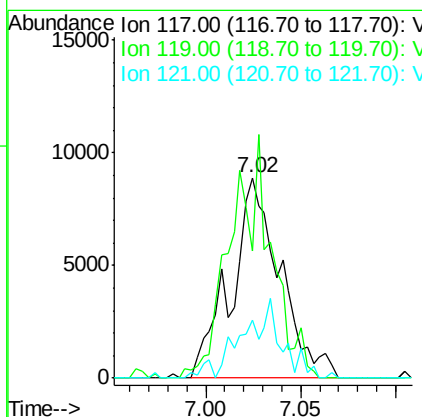
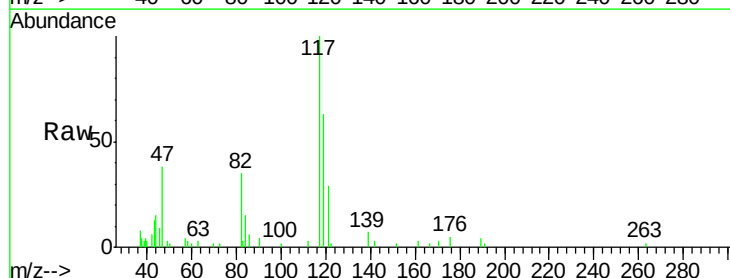
Manual Integrations
APPROVED

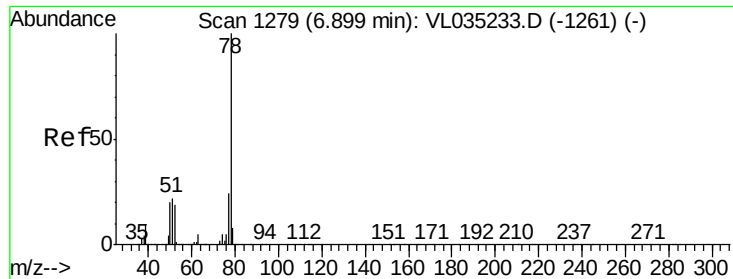
MMDadoda
7/30/2020 6:10:43 PM



#35
Carbon Tetrachloride
Concen: 0.085 ppbv m
RT: 7.02 min Scan# 1318
Delta R.T. -0.00 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Tgt Ion: 117 Resp: 15984
Ion Ratio Lower Upper
117 100
119 63.4 76.8 115.2#
121 29.1 24.5 36.7





#36

Benzene

Concen: 0.181 ppbv m

RT: 6.90 min Scan# 1279

Delta R.T. 0.00 min

Lab File: VL035243.D

Acq: 29 Jul 2020 12:57

Instrument :

MSVOA_L

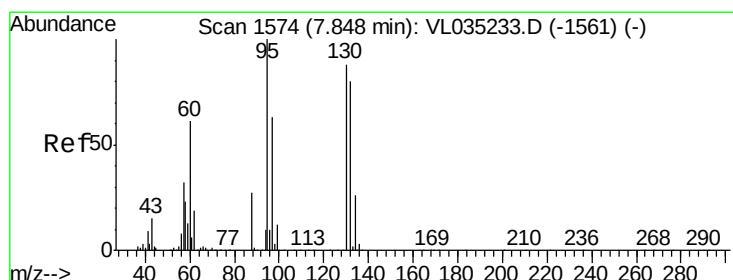
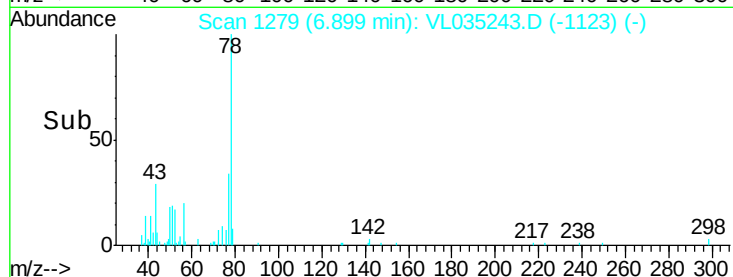
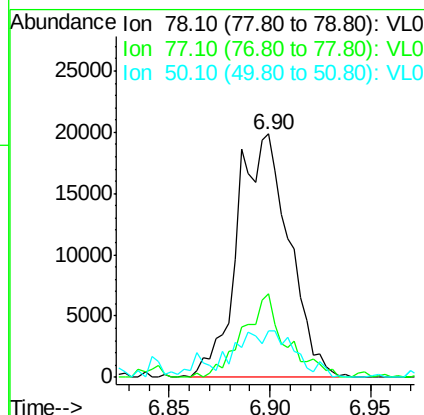
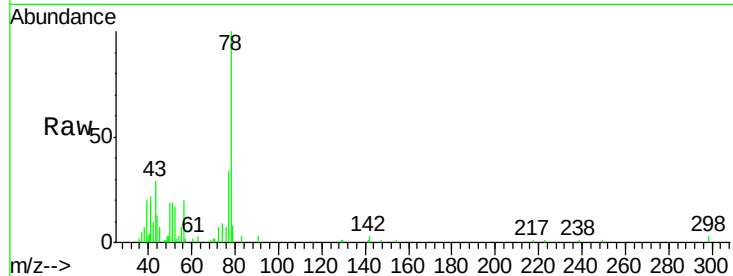
ClientSampled :

1-VOA

Tot Ion:	78	Resp:	35311
Ion	Ratio	Lower	Upper
78	100		
77	34.1	18.9	28.3#
50	19.1	16.1	24.1

Manual Integrations
APPROVED

MMDadoda
7/30/2020 6:10:43 PM



#38

Trichloroethene

Concen: 0.039 ppbv m

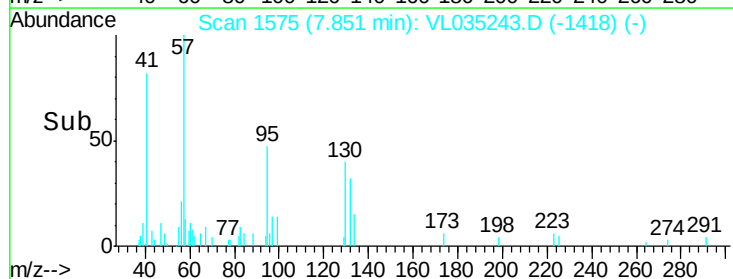
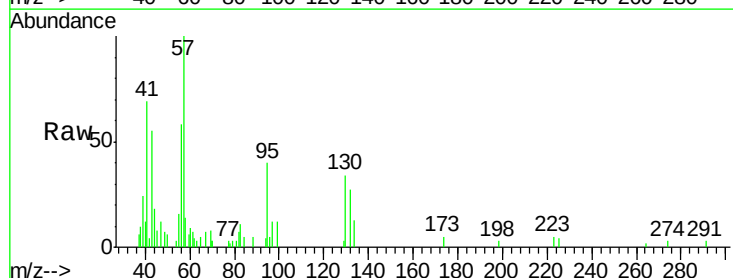
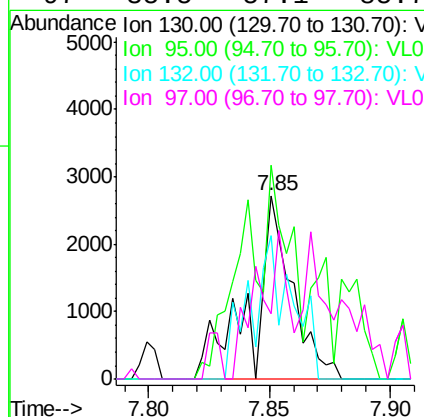
RT: 7.85 min Scan# 1575

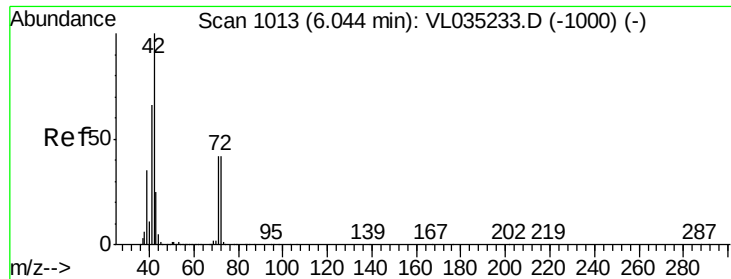
Delta R.T. 0.00 min

Lab File: VL035243.D

Acq: 29 Jul 2020 12:57

Tgt Ion:	130	Resp:	3165
Ion	Ratio	Lower	Upper
130	100		
95	116.4	90.7	136.1
132	78.3	72.9	109.3
97	35.5	57.1	85.7#





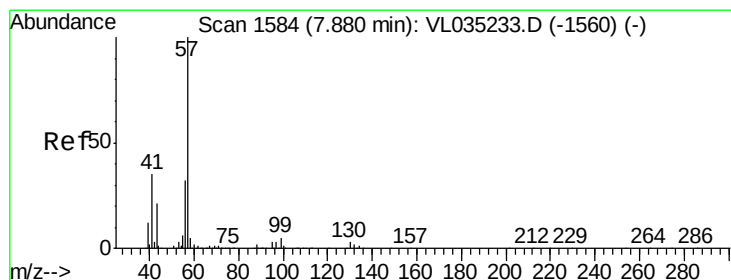
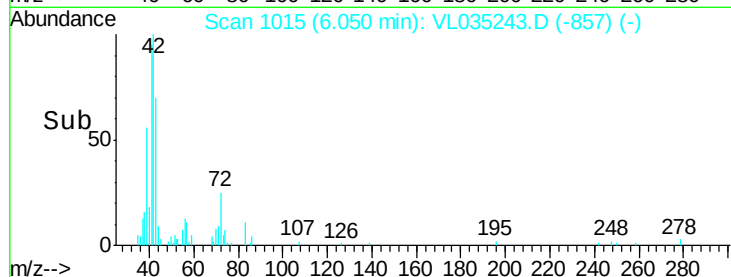
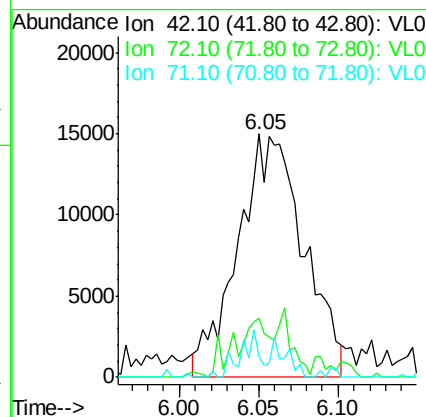
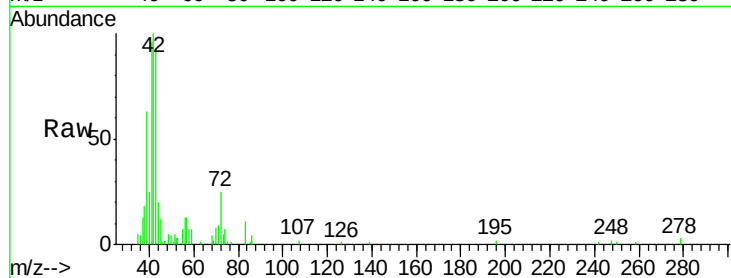
#41
Tetrahydrofuran
Concen: 0.616 ppbv m
RT: 6.05 min Scan# 1015
Delta R.T. 0.01 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Instrument :
MSVOA_L
ClientSampleId :
1-VOA

Tot Ion	Ratio	Lower	Upper
42	100		
72	0.0	34.2	51.2#
71	0.0	33.2	49.8#

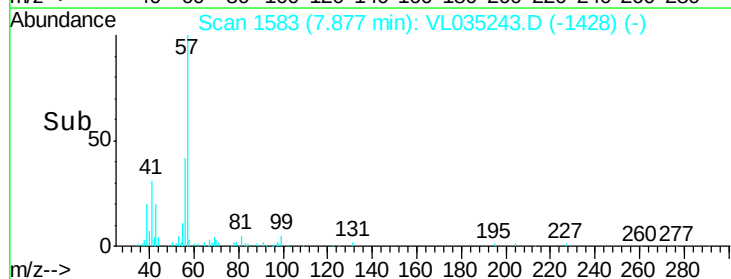
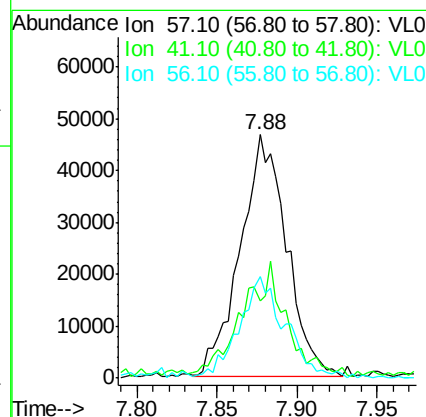
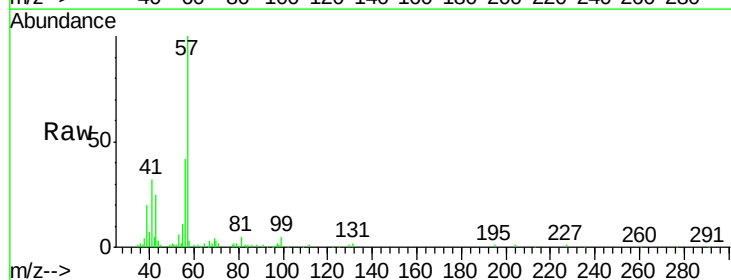
Manual Integrations
APPROVED

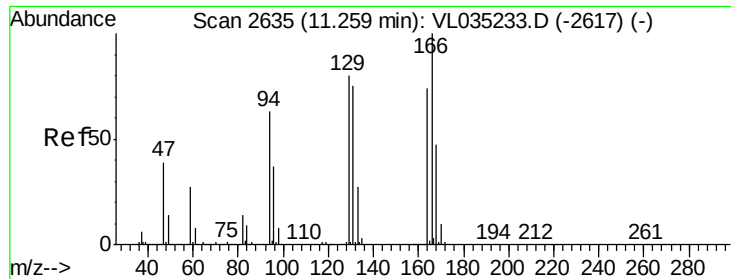
MMDadoda
7/30/2020 6:10:43 PM



#44
2,2,4-Trimethylpentane
Concen: 0.268 ppbv
RT: 7.88 min Scan# 1583
Delta R.T. -0.00 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Tgt Ion	Ratio	Lower	Upper
57	100		
41	50.5	27.0	40.4#
56	41.9	25.6	38.4#





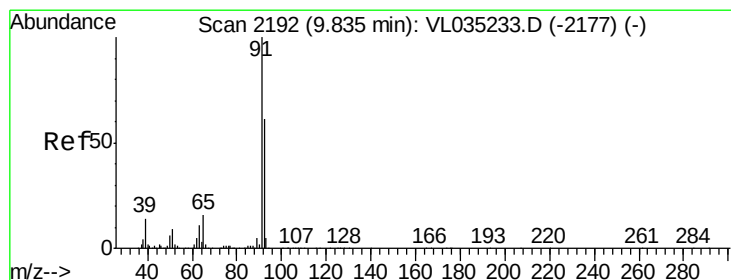
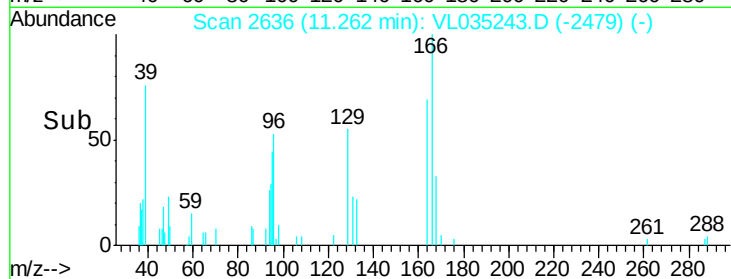
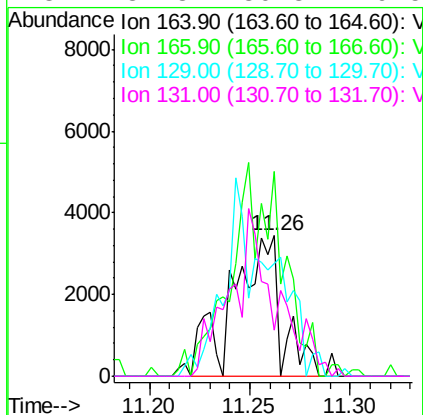
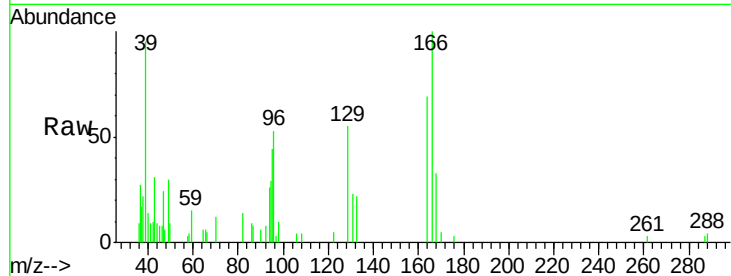
#52
Tetrachloroethene
Concen: 0.080 ppbv m
RT: 11.26 min Scan# 2636
Delta R.T. 0.00 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Instrument :
MSVOA_L
ClientSampled :
1-VOA

Tot Ion	Ratio	Lower	Upper
164	100		
166	145.8	107.5	161.3
129	80.0	86.0	129.0#
131	32.8	80.3	120.5#

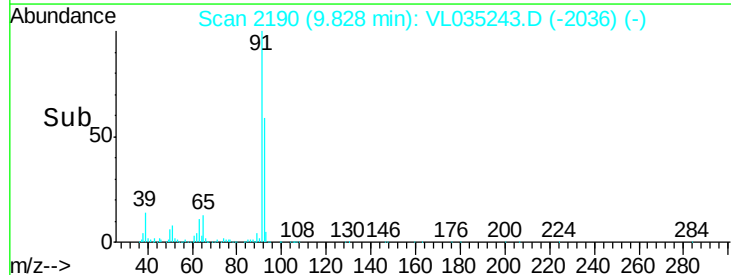
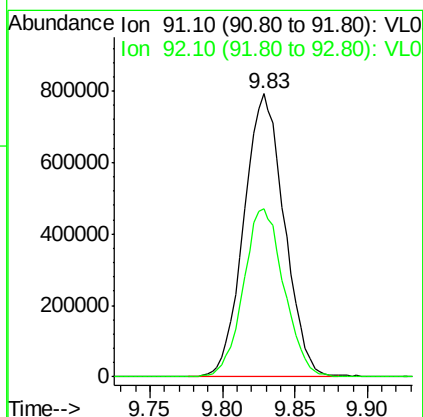
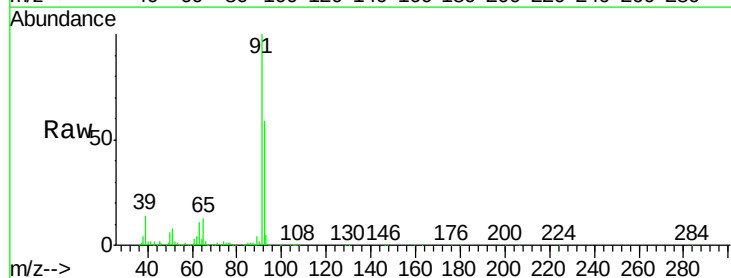
Manual Integrations
APPROVED

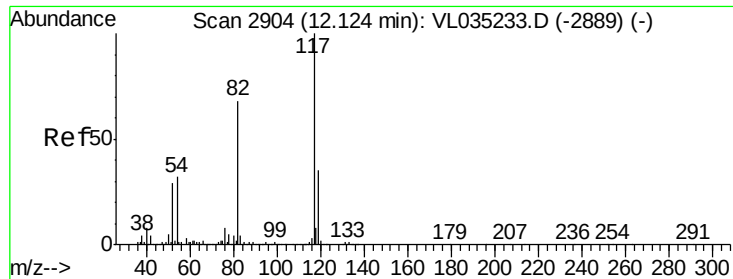
MMDadoda
7/30/2020 6:10:43 PM



#53
Toluene
Concen: 7.420 ppbv
RT: 9.83 min Scan# 2190
Delta R.T. -0.01 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Tgt Ion	Ratio	Lower	Upper
91	100		
92	59.6	48.5	72.7





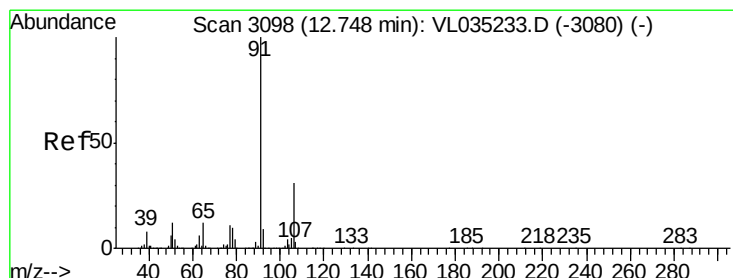
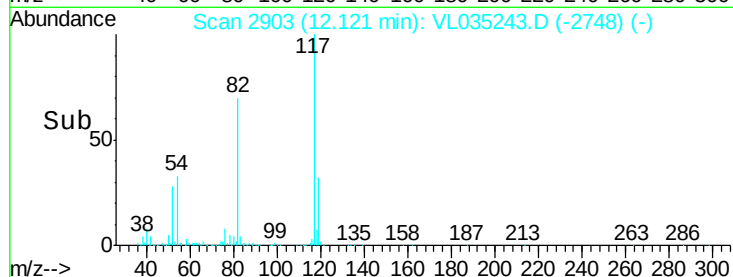
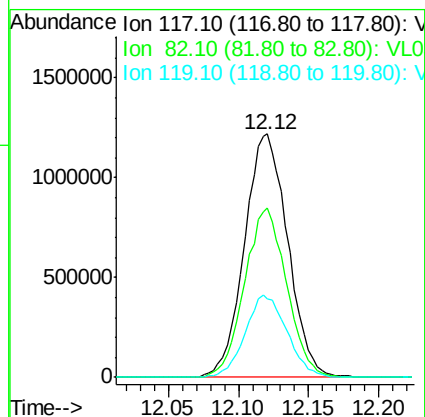
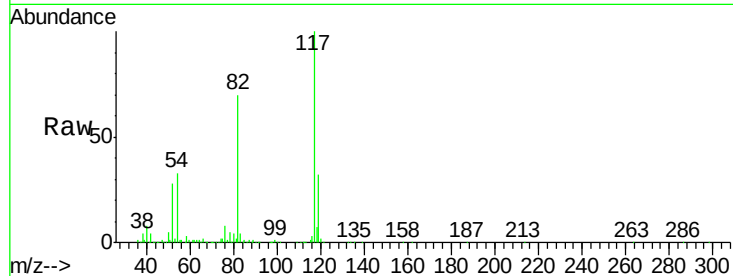
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.12 min Scan# 2903
Delta R.T. -0.00 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Instrument :
MSVOA_L
ClientSampleId :
1-VOA

Tot Ion:117 Resp: 2612754
Ion Ratio Lower Upper
117 100
82 68.0 52.4 78.6
119 33.0 24.6 36.8

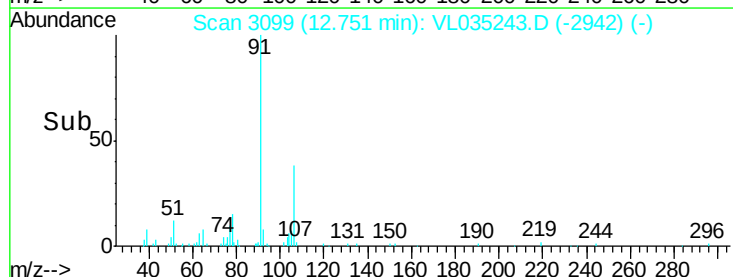
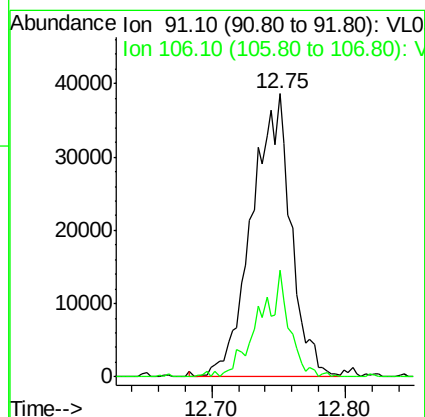
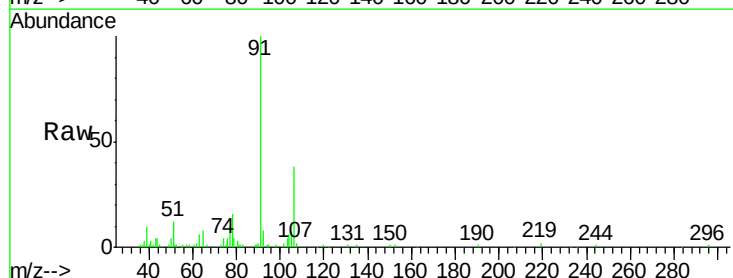
Manual Integrations
APPROVED

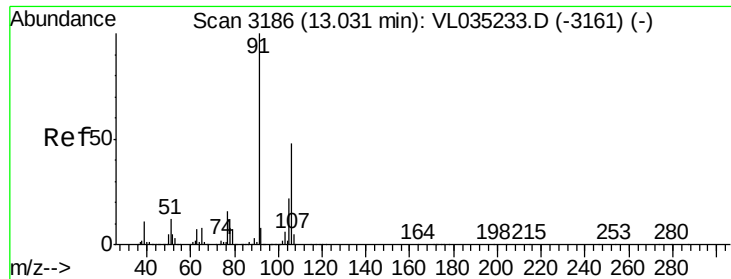
MMDadoda
7/30/2020 6:10:43 PM



#58
Ethyl Benzene
Concen: 0.285 ppbv m
RT: 12.75 min Scan# 3099
Delta R.T. 0.00 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Tgt Ion: 91 Resp: 78934
Ion Ratio Lower Upper
91 100
106 37.8 25.0 37.6#





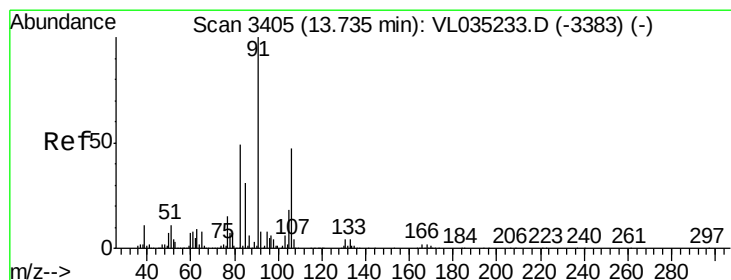
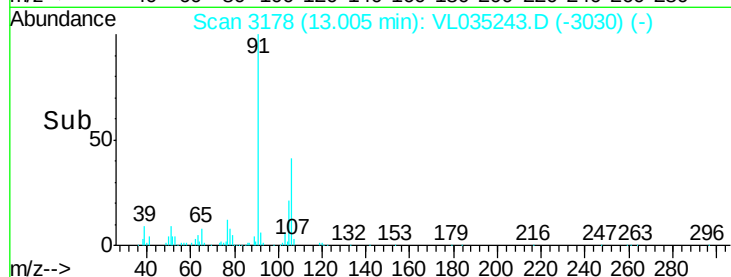
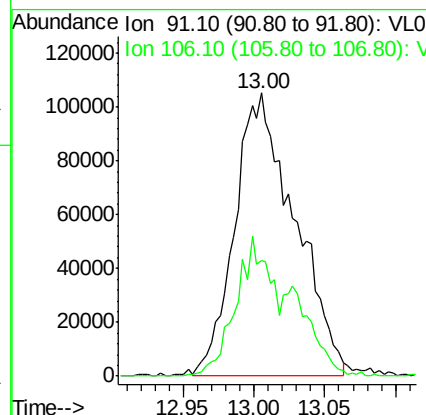
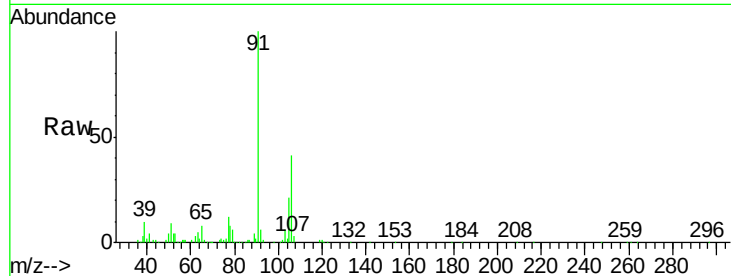
#59
m/p-Xylene
Concen: 1.204 ppbv m
RT: 13.00 min Scan# 3178
Delta R.T. -0.03 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Instrument :
MSVOA_L
ClientSampled :
1-VOA

Tot Ion: 91 Resp: 310037
Ion Ratio Lower Upper
91 100
106 0.0 37.2 55.8#

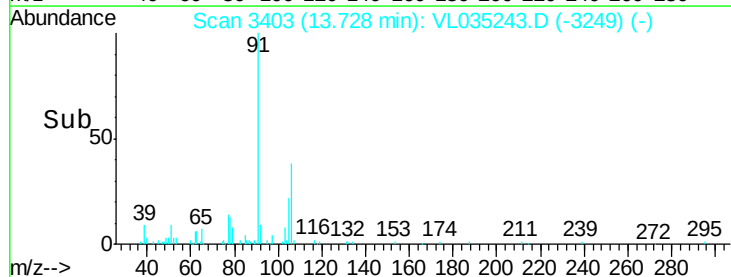
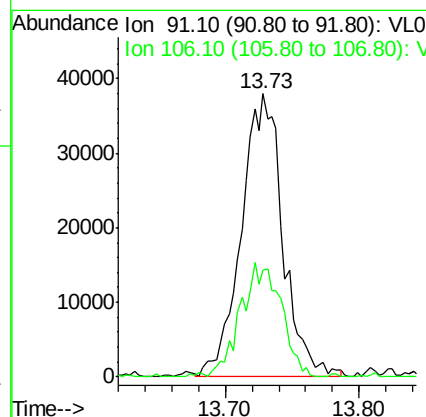
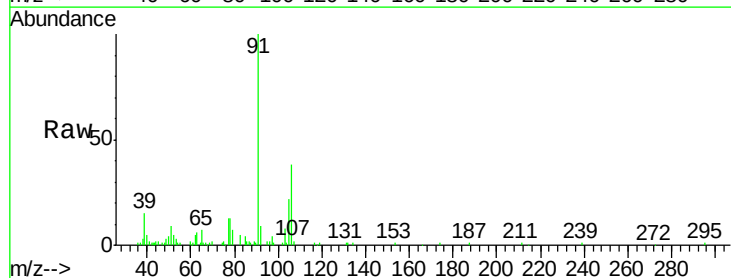
Manual Integrations
APPROVED

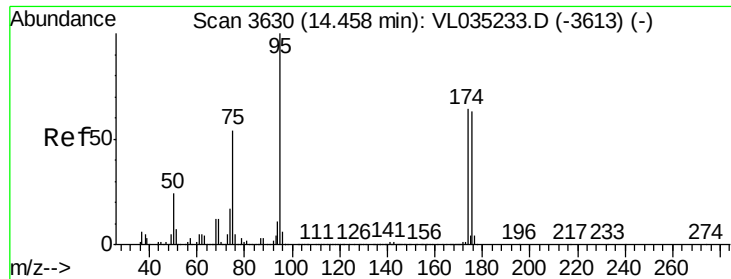
MMDadoda
7/30/2020 6:10:43 PM



#60
o-Xylene
Concen: 0.318 ppbv m
RT: 13.73 min Scan# 3403
Delta R.T. -0.01 min
Lab File: VL035243.D
Acq: 29 Jul 2020 12:57

Tgt Ion: 91 Resp: 81733
Ion Ratio Lower Upper
91 100
106 0.0 22.4 67.0#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.252 ppbv

RT: 14.46 min Scan# 3629

Delta R.T. -0.00 min

Lab File: VL035243.D

Acq: 29 Jul 2020 12:57

Instrument :

MSVOA_L

ClientSampled :

1-VOA

Tot Ion: 95 Resp: 2140462

Ion Ratio Lower Upper

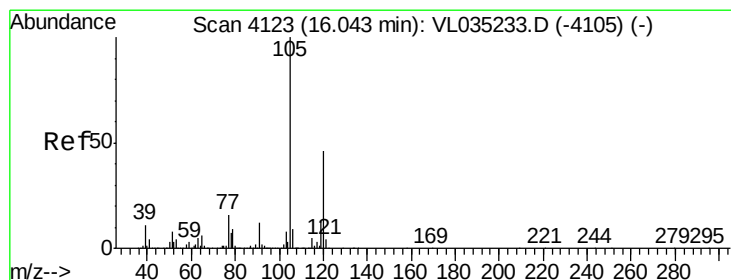
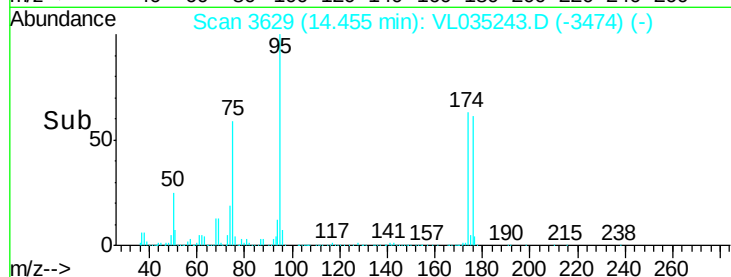
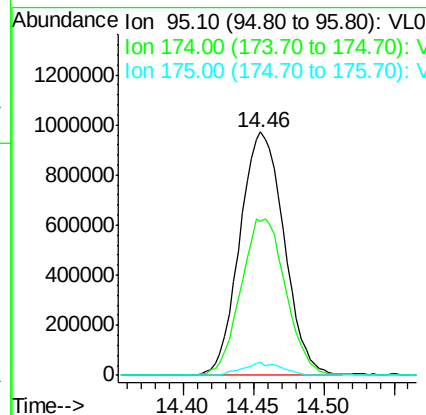
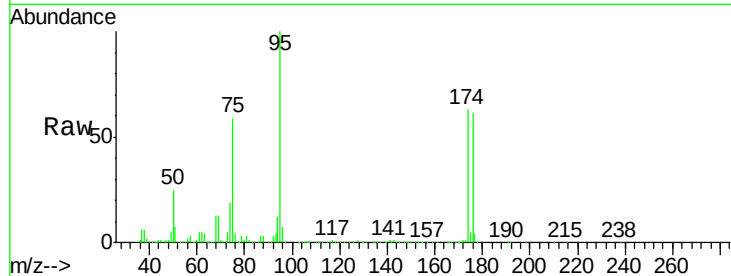
95 100

174 65.5 52.7 79.1

175 4.8 3.9 5.9

Manual Integrations
APPROVED

MMDadoda
7/30/2020 6:10:43 PM



#73

1,3,5-Trimethylbenzene

Concen: 0.117 ppbv m

RT: 16.03 min Scan# 4120

Delta R.T. -0.01 min

Lab File: VL035243.D

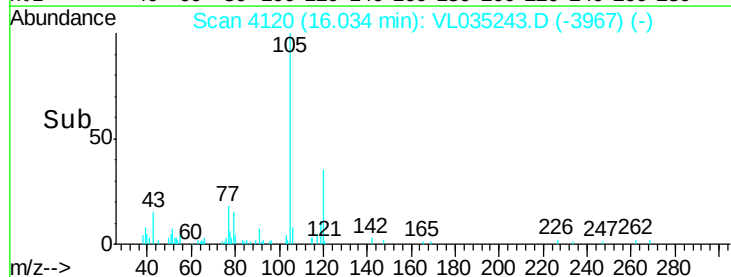
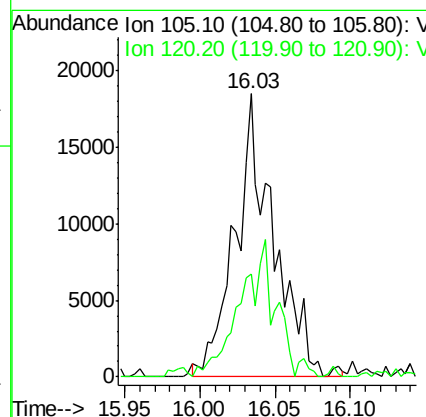
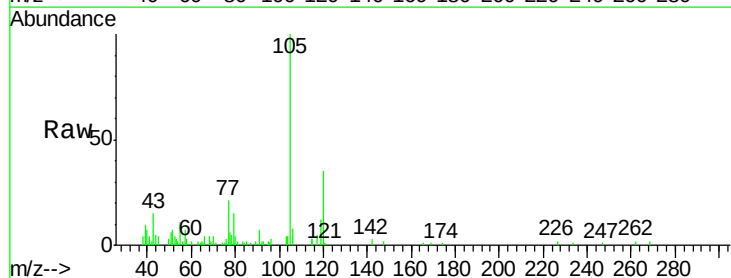
Acq: 29 Jul 2020 12:57

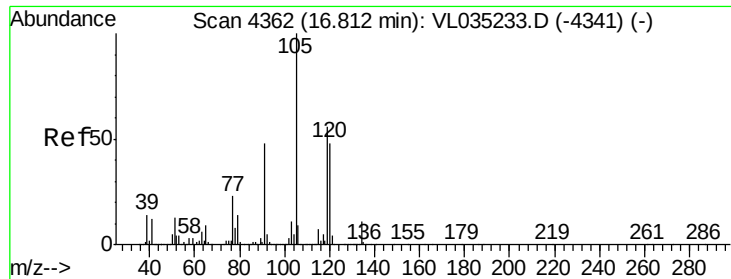
Tgt Ion: 105 Resp: 32915

Ion Ratio Lower Upper

105 100

120 34.9 36.8 55.2#





#74

1,2,4-Trimethylbenzene

Concen: 0.289 ppbv m

RT: 16.81 min Scan# 4362

Delta R.T. 0.00 min

Lab File: VL035243.D

Acq: 29 Jul 2020 12:57

Instrument :

MSVOA_L

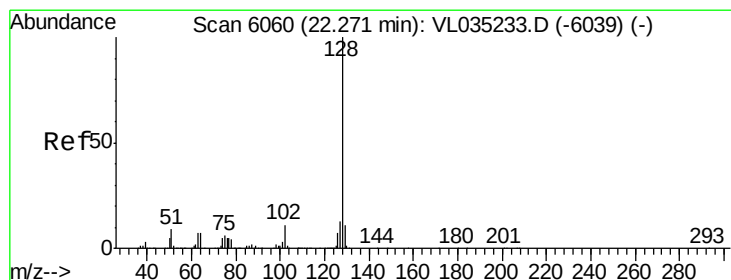
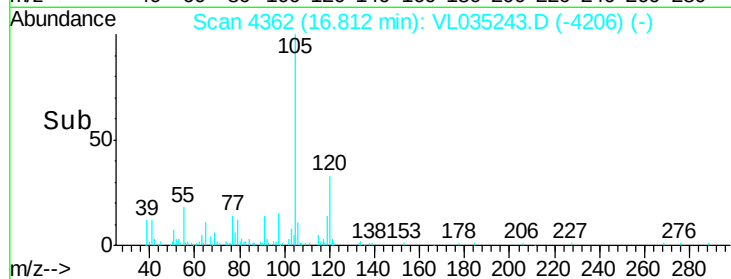
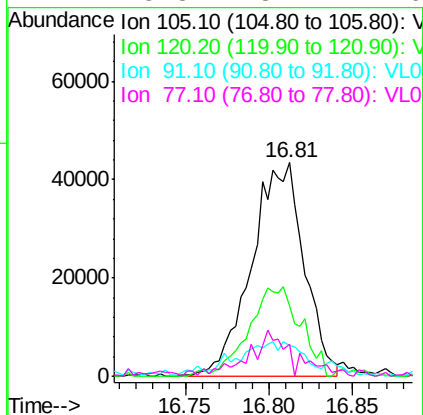
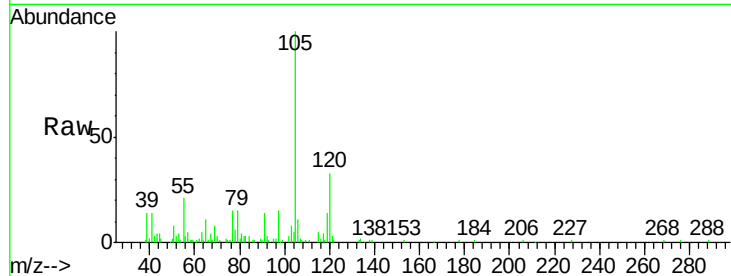
ClientSampleId :

1-VOA

Tot Ion	Ratio	Lower	Upper
105	100		
120	33.1	38.8	58.2#
91	14.2	38.9	58.3#
77	15.3	18.4	27.6#

Manual Integrations
APPROVED

MMDadoda
7/30/2020 6:10:43 PM



#79

Naphthalene

Concen: 0.112 ppbv m

RT: 22.27 min Scan# 6058

Delta R.T. -0.01 min

Lab File: VL035243.D

Acq: 29 Jul 2020 12:57

Tgt Ion	Ratio	Lower	Upper
128	100		
127	16.9	10.4	15.6#
129	8.2	8.5	12.7#

