

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL072920\
 Data File : VL035247.D
 Acq On : 29 Jul 2020 15:33
 Operator : SY/AP
 Sample : L3474-02
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 VOA-HALLWAY

Manual Integrations
 APPROVED

MMDadoda
 7/30/2020 6:11:49 PM

Quant Time: Jul 30 11:13:16 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	1092417	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	2634096	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.12	117	2538724	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.46	95	2131479	10.51	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.10%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.01	85	34411	0.264	ppbv	96
4) Chloromethane	3.10	50	40141	0.590	ppbv	97
9) Propene	2.98	41	155092m	3.679	ppbv	
10) Heptane	8.14	43	18706m	0.164	ppbv	
11) Trichlorofluoromethane	3.92	101	84104	0.479	ppbv	92
12) 1,1,2-Trichlorotrifluoroet	4.46	101	56178	0.451	ppbv	100
13) Ethanol	3.61	45	15056487	877.631	ppbv	99
15) Acetone	3.82	43	15890106	109.050	ppbv #	53
19) Isopropyl Alcohol	4.01	45	50575533m	526.268	ppbv	
20) Methylene Chloride	4.33	84	1606157	24.215	ppbv	97
26) Hexane	5.68	57	8135333	79.249	ppbv #	45
28) Methyl tert-Butyl Ether	5.02	73	672777	4.585	ppbv	96
29) Chloroform	5.75	83	3563793	20.699	ppbv	99
30) Cyclohexane	7.13	84	12481m	0.170	ppbv	
32) 1,1,1-Trichloroethane	6.53	97	8588m	0.049	ppbv	
34) 2-Butanone	5.24	43	124897	0.932	ppbv	98
35) Carbon Tetrachloride	7.04	117	13120m	0.074	ppbv	
36) Benzene	6.89	78	35956m	0.196	ppbv	
38) Trichloroethene	7.86	130	4568m	0.060	ppbv	
44) 2,2,4-Trimethylpentane	7.88	57	165124m	0.512	ppbv	
52) Tetrachloroethene	11.25	164	9807m	0.140	ppbv	
53) Toluene	9.83	91	1500956	7.715	ppbv	99
58) Ethyl Benzene	12.75	91	102256	0.380	ppbv	97
59) m/p-Xylene	13.00	91	473503	1.892	ppbv	96
60) o-Xylene	13.73	91	110377m	0.442	ppbv	
73) 1,3,5-Trimethylbenzene	16.04	105	30356m	0.111	ppbv	
74) 1,2,4-Trimethylbenzene	16.81	105	100880	0.316	ppbv #	73

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

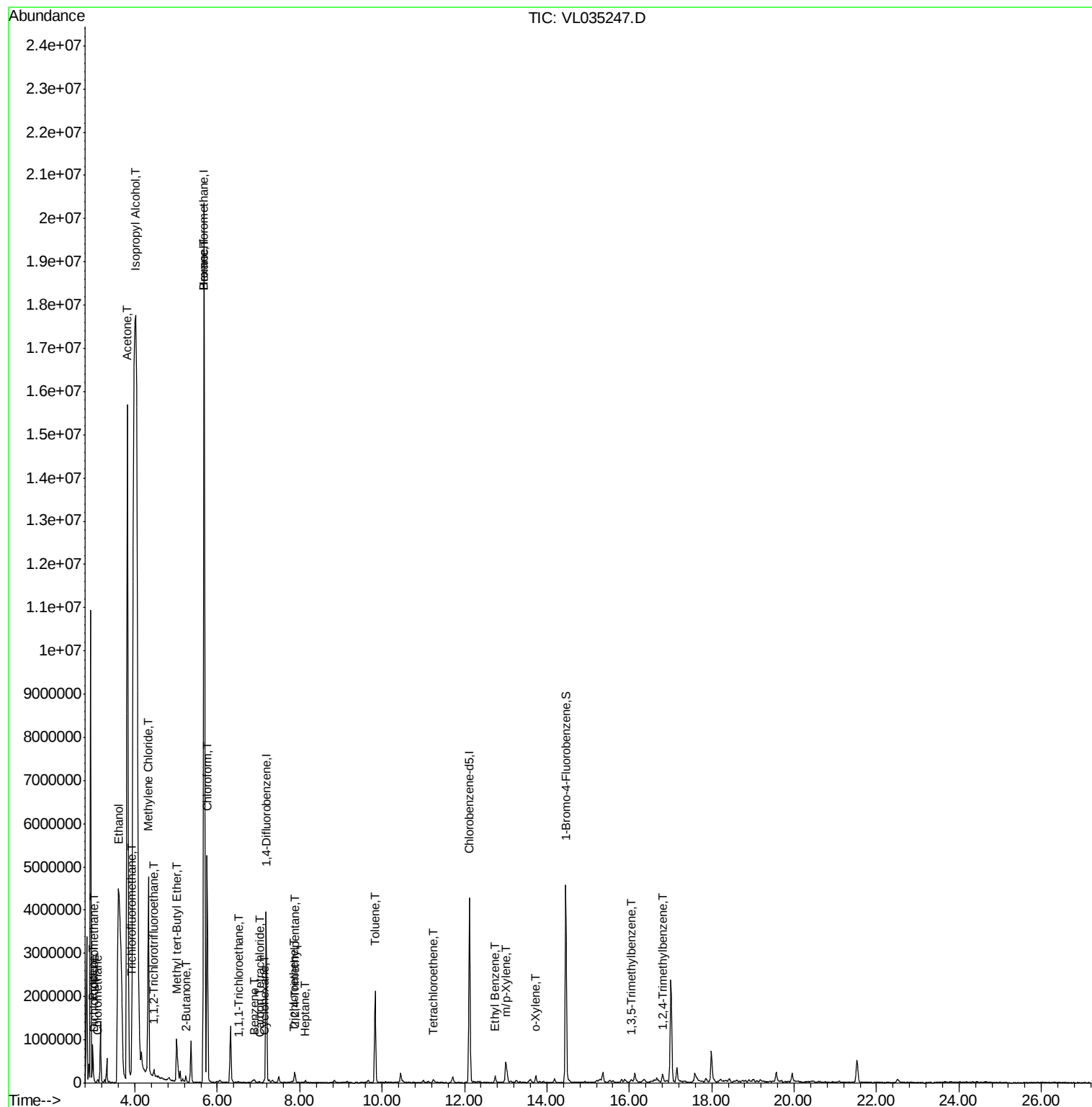
Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL072920\
Data File : VL035247.D
Acq On : 29 Jul 2020 15:33
Operator : SY/AP
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Misc : 400ml/MSVOA L
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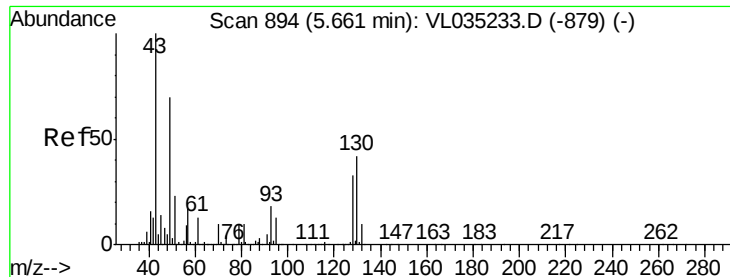
Instrument :
MSVOA_L
ClientSampleId :
VOA-HALLWAY

Manual Integrations
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Quant Time: Jul 30 11:13:16 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: VL035247.D

Acq: 29 Jul 2020 15:33

Instrument :

MSVOA_L

ClientSampleId :

VOA-HALLWAY

Tot Ion: 49 Resp: 1092417

Ion Ratio Lower Upper

49 100

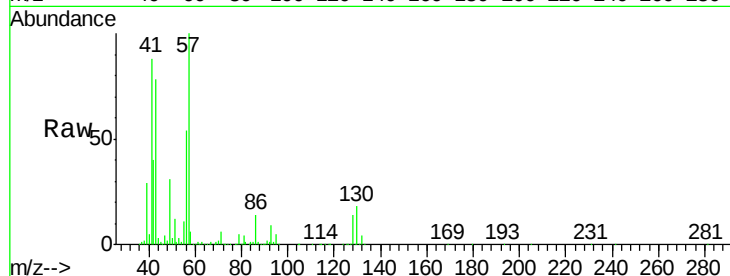
128 46.0 24.0 72.0

130 59.2 30.7 92.1

Manual Integrations
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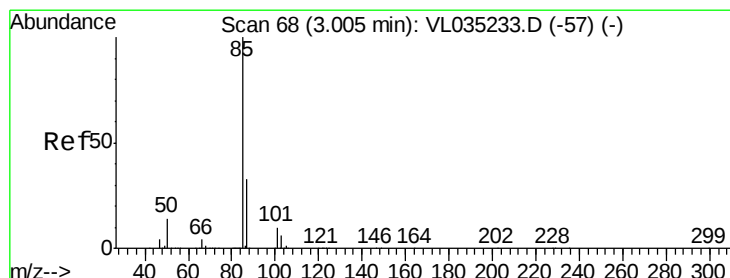
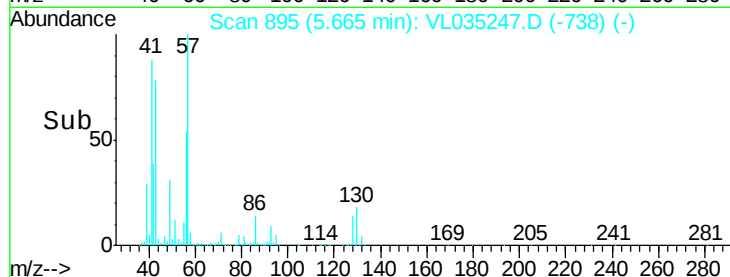
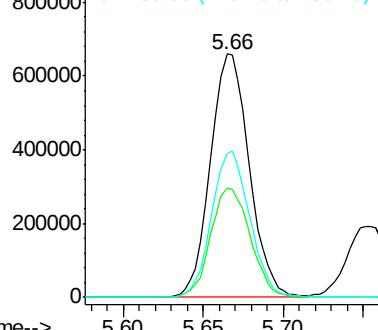
7/30/2020 6:11:49 PM



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: 0.264 ppbv

RT: 3.01 min Scan# 68

Delta R.T. 0.00 min

Lab File: VL035247.D

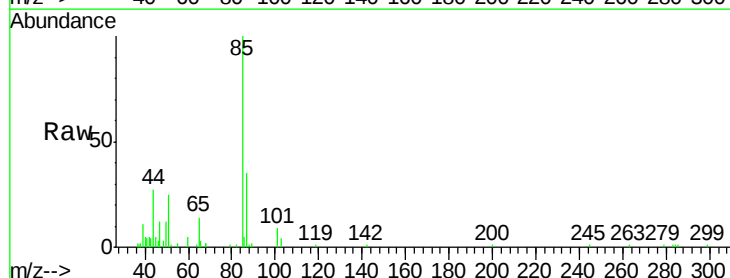
Acq: 29 Jul 2020 15:33

Tgt Ion: 85 Resp: 34411

Ion Ratio Lower Upper

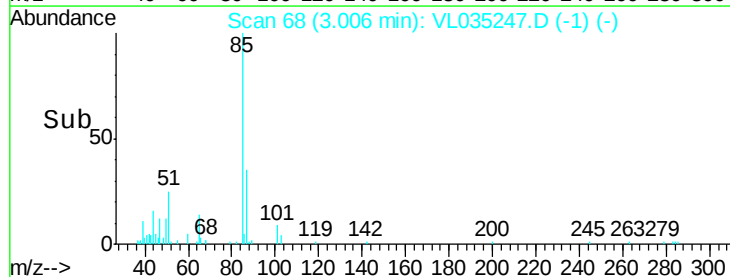
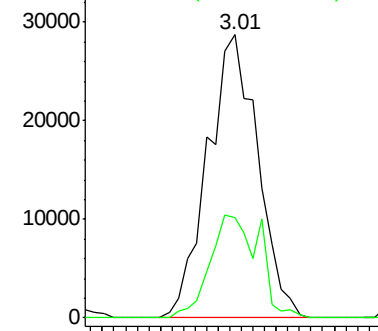
85 100

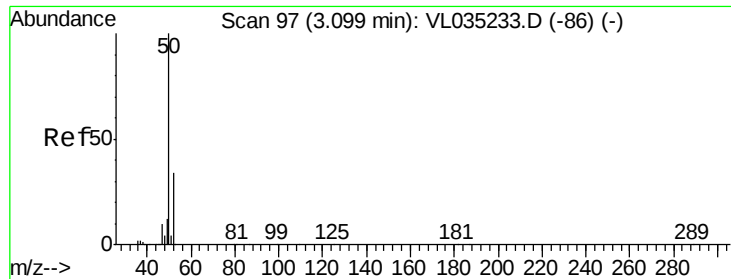
87 35.5 26.7 40.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#4

Chloromethane

Concen: 0.590 ppbv

RT: 3.10 min Scan# 96

Delta R.T. -0.00 min

Lab File: VL035247.D

Acq: 29 Jul 2020 15:33

Instrument :

MSVOA_L

ClientSampleId :

VOA-HALLWAY

Tot Ion: 50 Resp: 40141

Ion Ratio Lower Upper

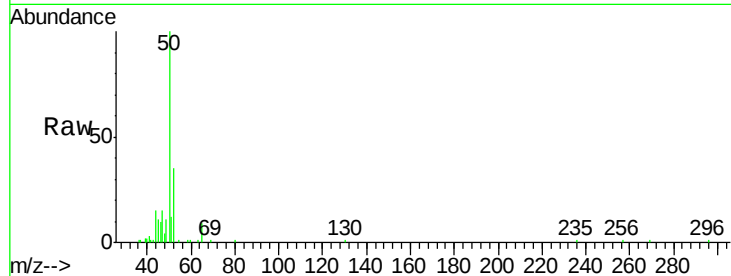
50 100

52 35.4 27.1 40.7

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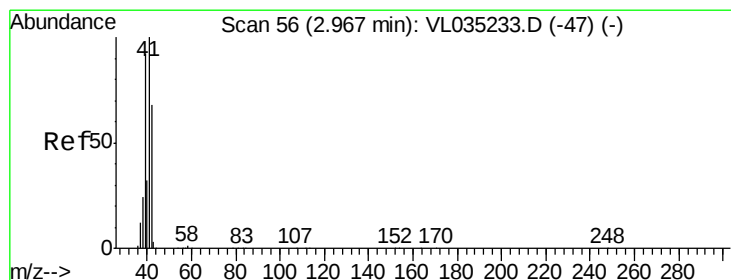
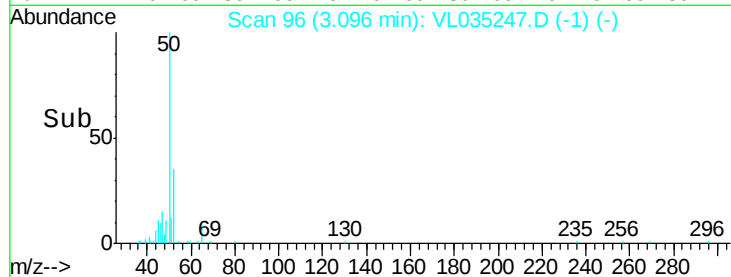
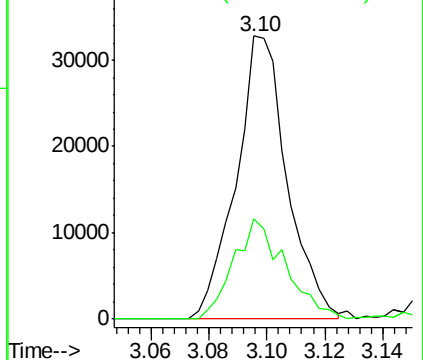
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Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0



#9

Propene

Concen: 3.679 ppbv m

RT: 2.98 min Scan# 60

Delta R.T. 0.01 min

Lab File: VL035247.D

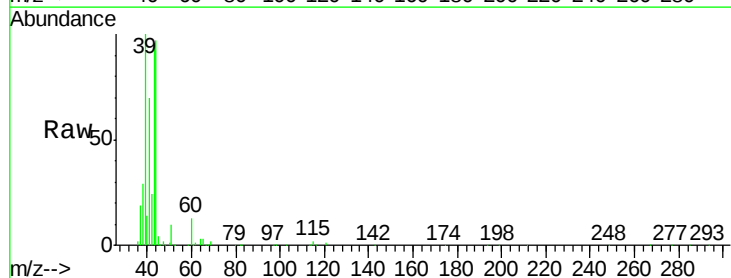
Acq: 29 Jul 2020 15:33

Tgt Ion: 41 Resp: 155092

Ion Ratio Lower Upper

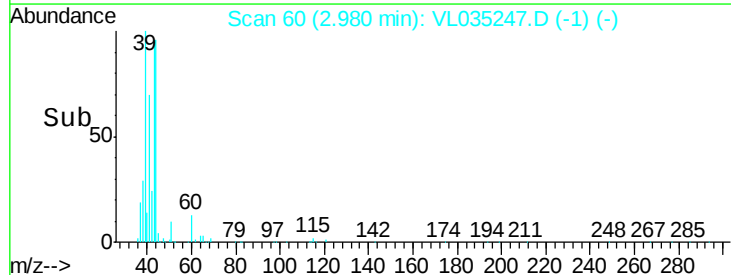
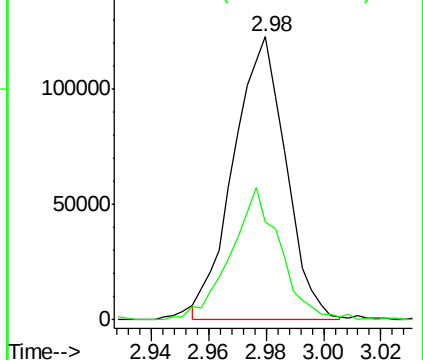
41 100

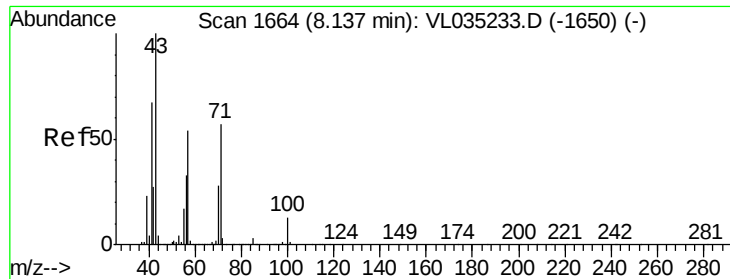
42 153.6 55.0 82.6#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#10

Heptane

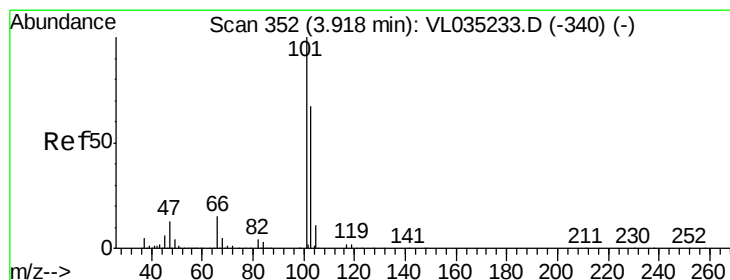
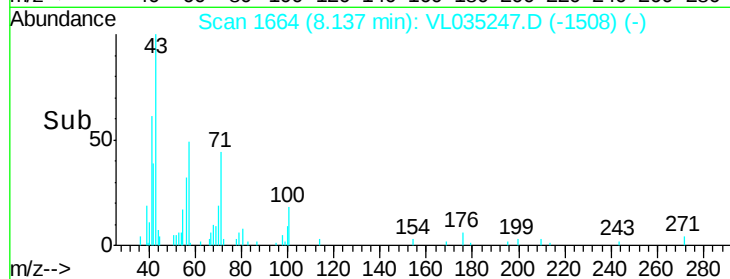
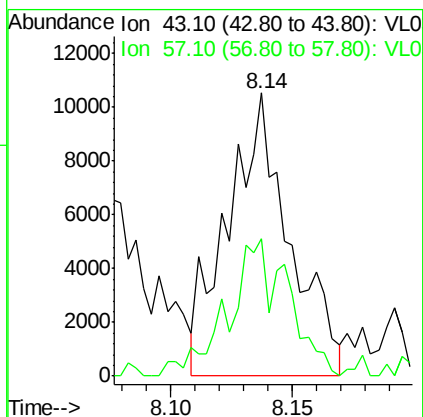
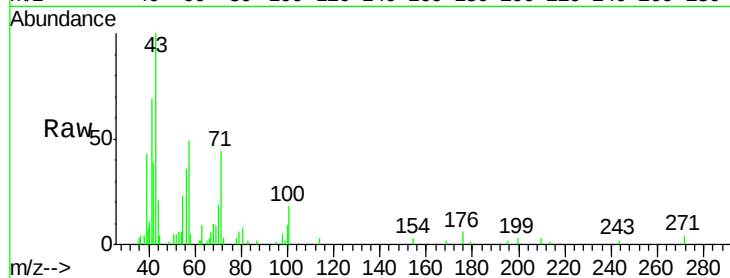
Concen: 0.164 ppbv m
 RT: 8.14 min Scan# 1664
 Delta R.T. 0.00 min
 Lab File: VL035247.D
 Acq: 29 Jul 2020 15:33

Instrument :
 MSVOA_L
 ClientSampleId :
 VOA-HALLWAY

Tot Ion: 43 Resp: 18706
 Ion Ratio Lower Upper
 43 100
 57 49.3 43.0 64.4

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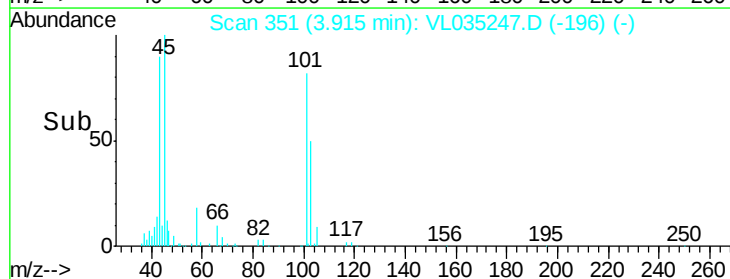
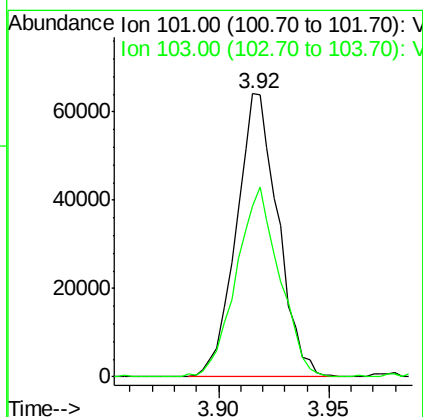
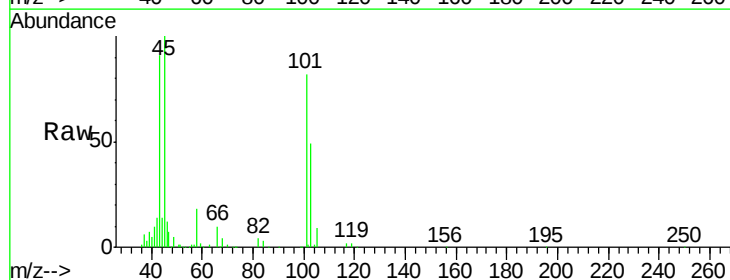


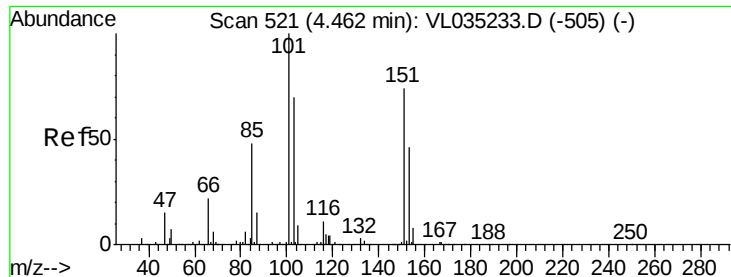
#11

Trichlorofluoromethane

Concen: 0.479 ppbv
 RT: 3.92 min Scan# 351
 Delta R.T. -0.00 min
 Lab File: VL035247.D
 Acq: 29 Jul 2020 15:33

Tgt Ion: 101 Resp: 84104
 Ion Ratio Lower Upper
 101 100
 103 60.5 53.4 80.0





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.451 ppbv

RT: 4.46 min Scan# 521

Delta R.T. 0.00 min

Lab File: VL035247.D

Acq: 29 Jul 2020 15:33

Instrument :

MSVOA_L

ClientSampleId :

VOA-HALLWAY

Tot Ion:101 Resp: 56178

Ion Ratio Lower Upper

101 100

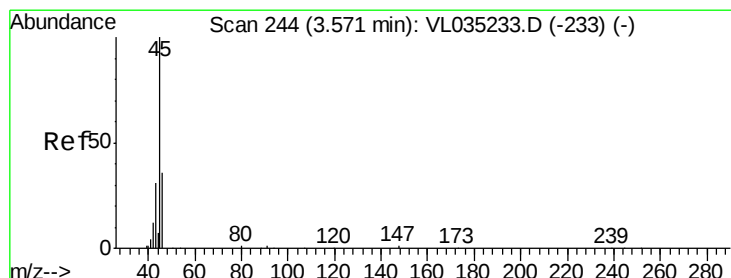
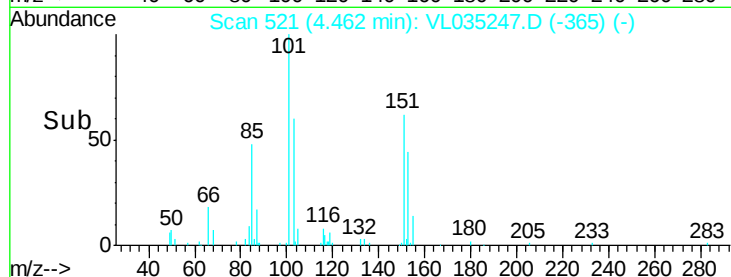
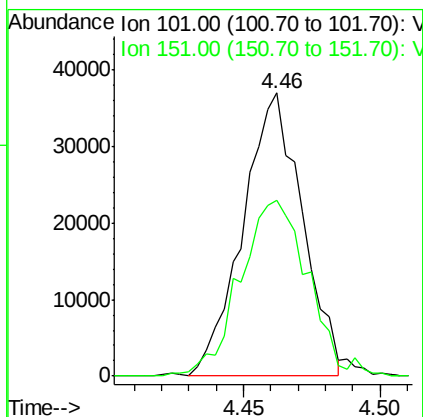
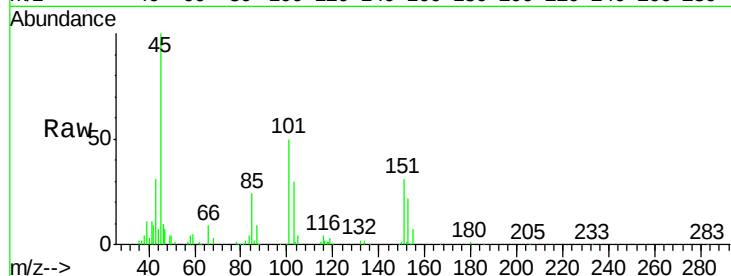
151 71.0 56.6 85.0

Manual Integrations

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#13

Ethanol

Concen: 877.631 ppbv

RT: 3.61 min Scan# 256

Delta R.T. 0.04 min

Lab File: VL035247.D

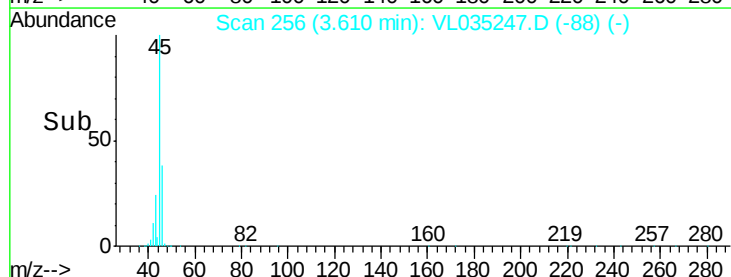
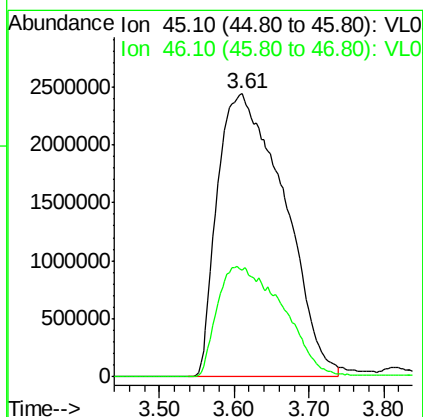
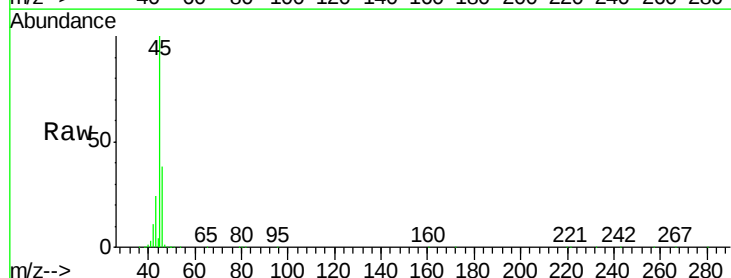
Acq: 29 Jul 2020 15:33

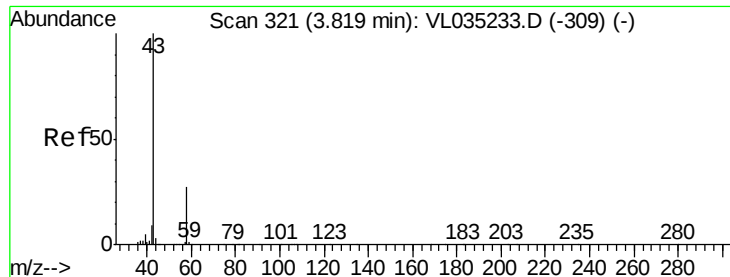
Tgt Ion: 45 Resp:15056487

Ion Ratio Lower Upper

45 100

46 38.7 15.8 63.4





#15

Acetone

Concen: 109.050 ppbv

RT: 3.82 min Scan# 320

Delta R.T. -0.00 min

Lab File: VL035247.D

Acq: 29 Jul 2020 15:33

Instrument :

MSVOA_L

ClientSampleId :

VOA-HALLWAY

Tot Ion: 43 Resp:15890106

Ion Ratio Lower Upper

43 100

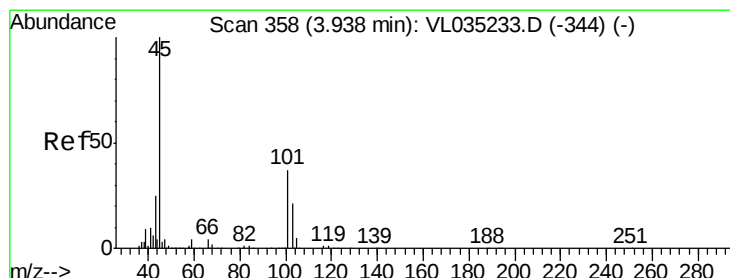
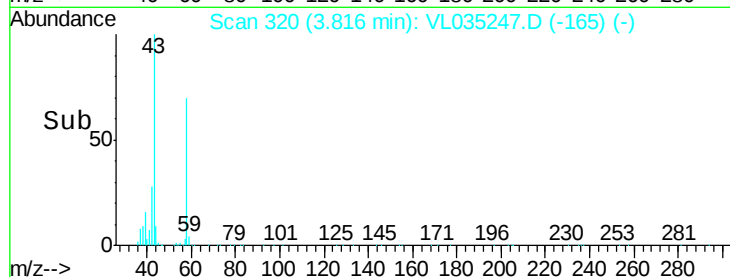
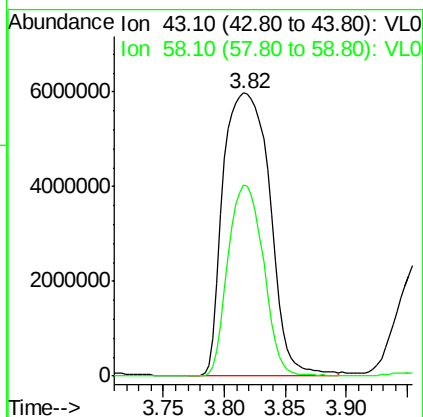
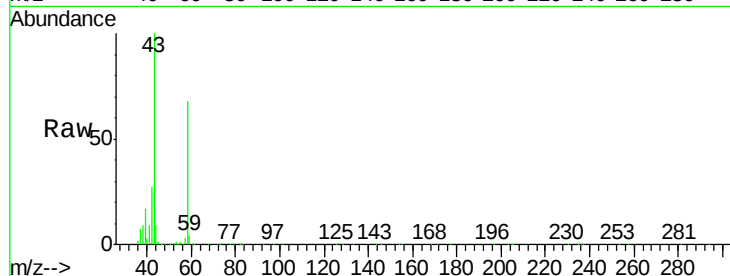
58 51.9 21.8 32.6#

Manual Integrations

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#19

Isopropyl Alcohol

Concen: 526.268 ppbv m

RT: 4.01 min Scan# 381

Delta R.T. 0.07 min

Lab File: VL035247.D

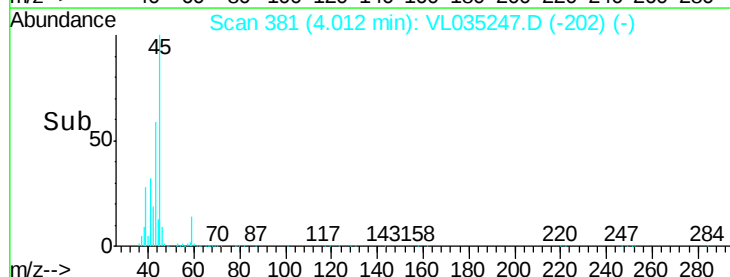
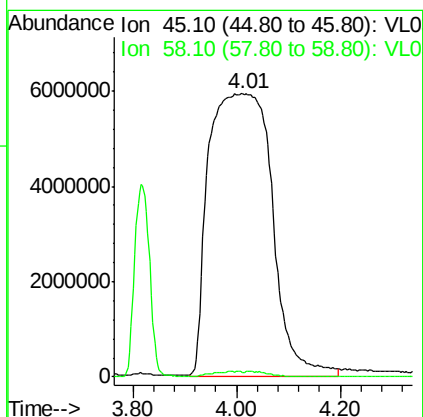
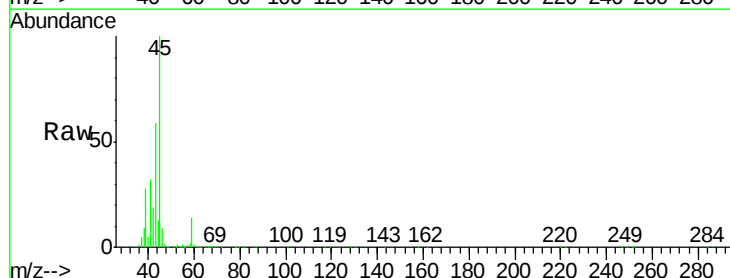
Acq: 29 Jul 2020 15:33

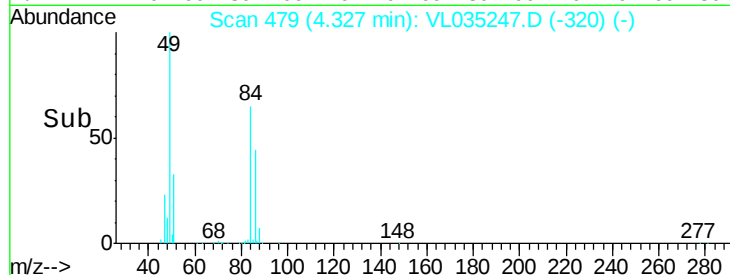
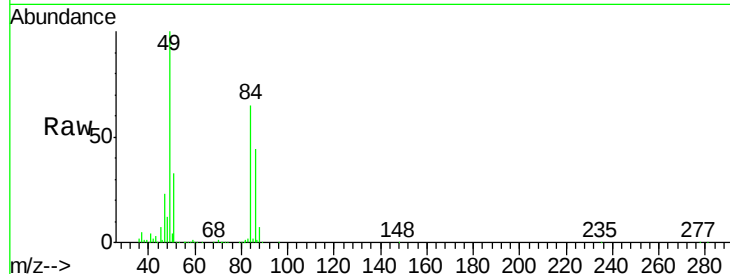
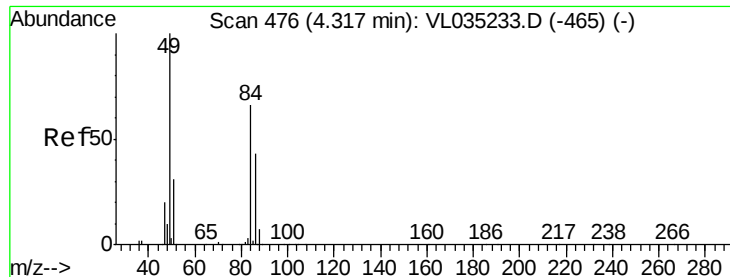
Tgt Ion: 45 Resp:50575533

Ion Ratio Lower Upper

45 100

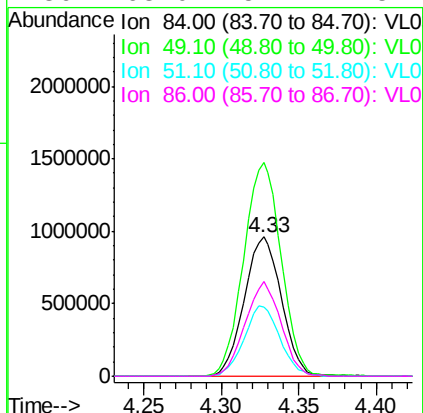
58 16.3 1.9 2.9#





#20
Methylene Chloride
Concen: 24.215 ppbv
RT: 4.33 min Scan# 479
Delta R.T. 0.01 min
Lab File: VL035247.D
Acq: 29 Jul 2020 15:33

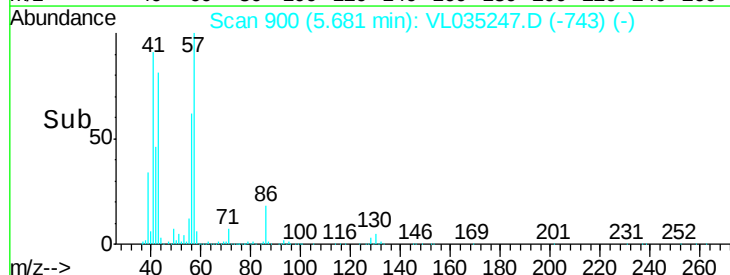
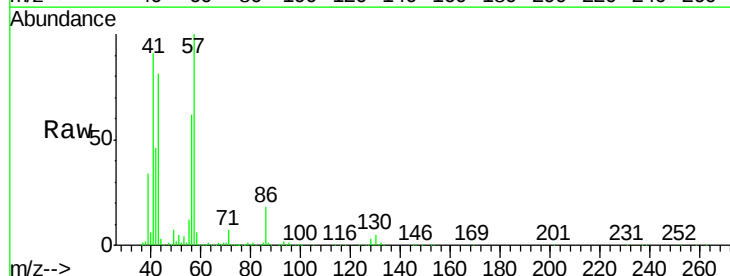
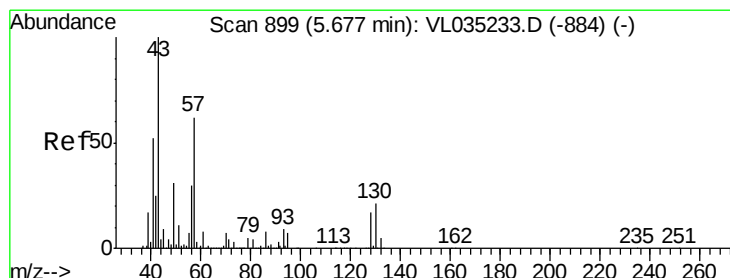
Tot Ion	Ratio	Lower	Upper
84	100		
49	153.7	121.0	181.4
51	50.1	37.7	56.5
86	68.0	52.2	78.4



Instrument :
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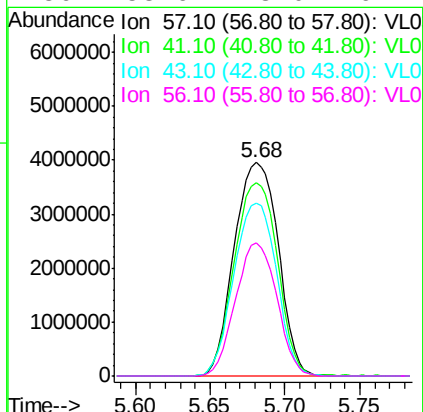
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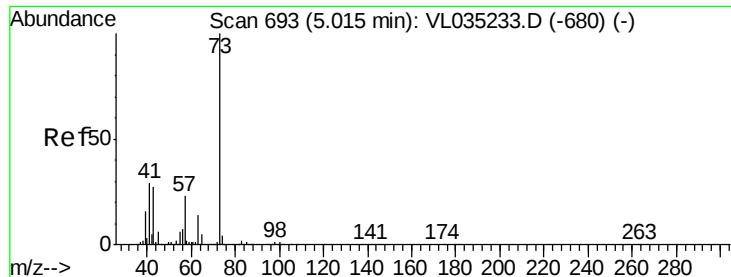
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#26
Hexane
Concen: 79.249 ppbv
RT: 5.68 min Scan# 900
Delta R.T. 0.00 min
Lab File: VL035247.D
Acq: 29 Jul 2020 15:33

Tgt Ion	Ratio	Lower	Upper
57	100		
41	89.6	73.9	110.9
43	78.6	177.6	266.4#
56	58.6	43.0	64.4





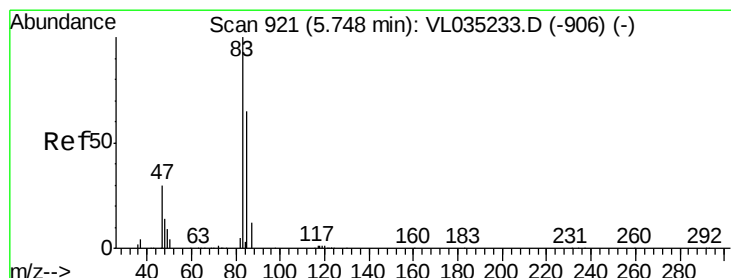
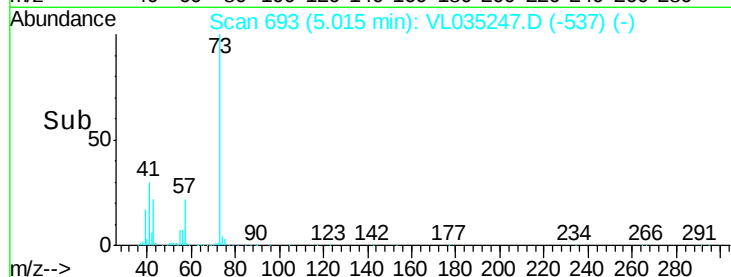
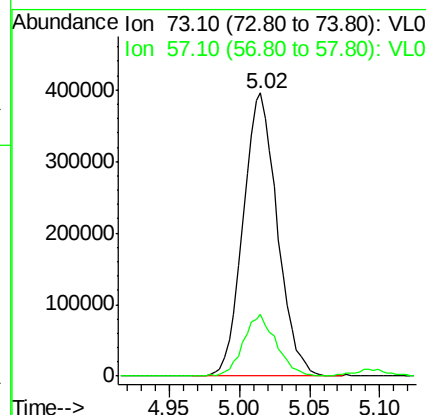
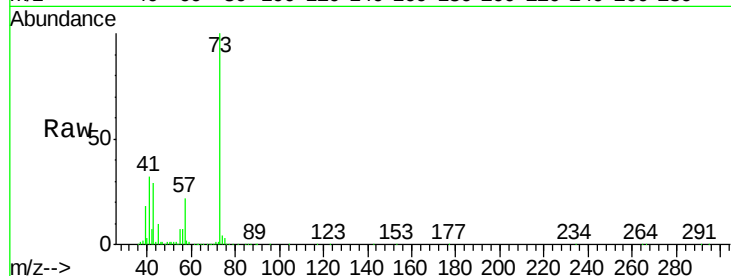
#28
Methvl tert-Butvl Ether
Concen: 4.585 ppbv
RT: 5.02 min Scan# 693
Delta R.T. 0.00 min
Lab File: VL035247.D
Acq: 29 Jul 2020 15:33

Instrument :
MSVOA_L
ClientSampleId :
VOA-HALLWAY

Tot Ion	Ratio	Lower	Upper
73	100		
57	20.9	18.2	27.4

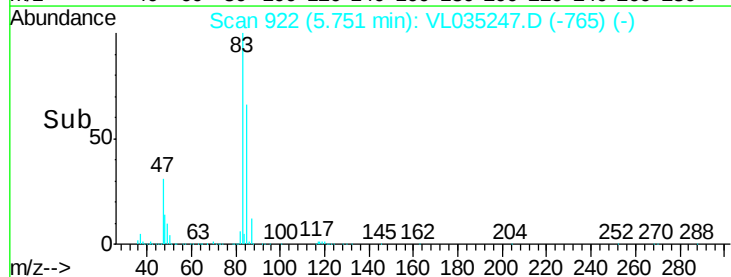
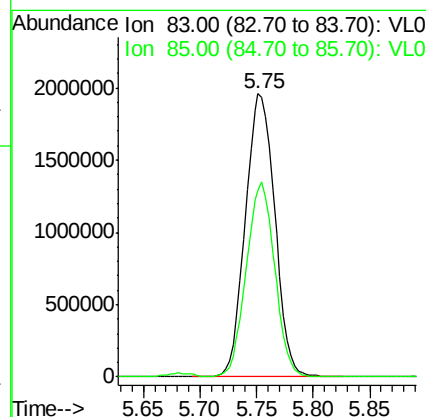
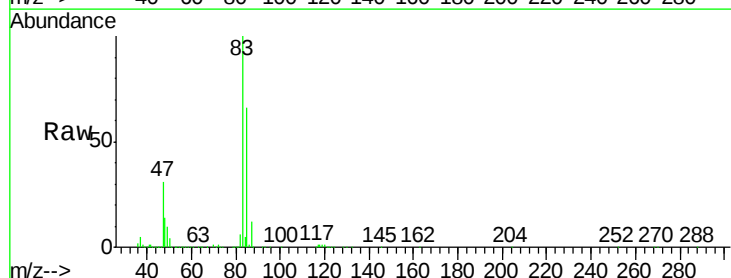
Manual Integrations
APPROVED

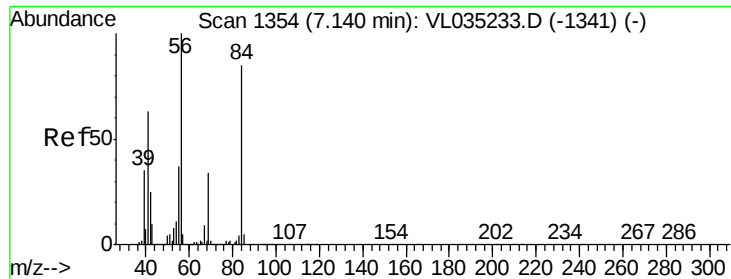
MMDadoda
7/30/2020 6:11:49 PM



#29
Chloroform
Concen: 20.699 ppbv
RT: 5.75 min Scan# 922
Delta R.T. 0.00 min
Lab File: VL035247.D
Acq: 29 Jul 2020 15:33

Tgt Ion	Ratio	Lower	Upper
83	100		
85	65.5	51.7	77.5





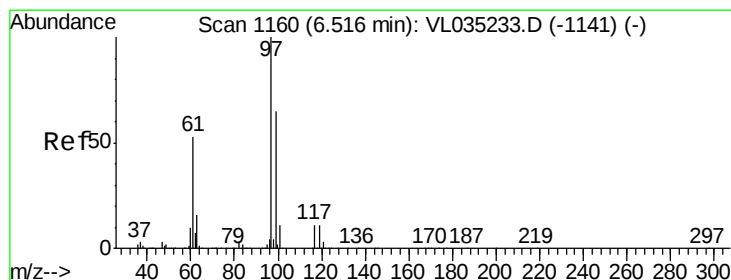
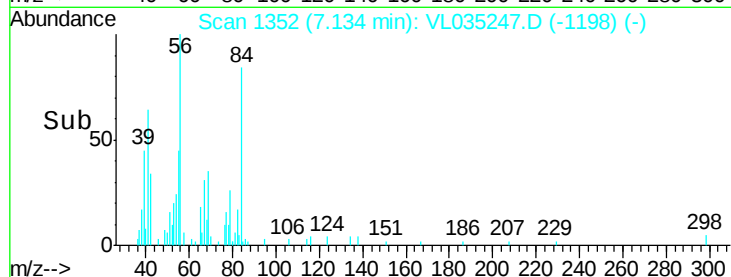
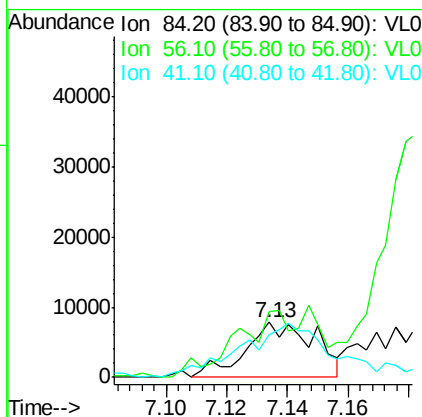
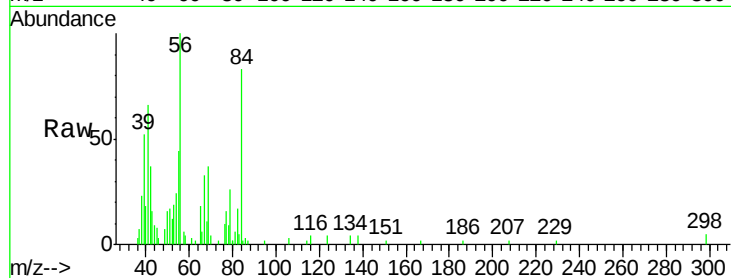
#30
Cyclohexane
Concen: 0.170 ppbv m
RT: 7.13 min Scan# 1352
Delta R.T. -0.01 min
Lab File: VL035247.D
Acq: 29 Jul 2020 15:33

Instrument :
MSVOA_L
ClientSampleId :
VOA-HALLWAY

Tot Ion	Ratio	Lower	Upper
84	100		
56	139.7	104.2	156.2
41	0.0	63.7	95.5#

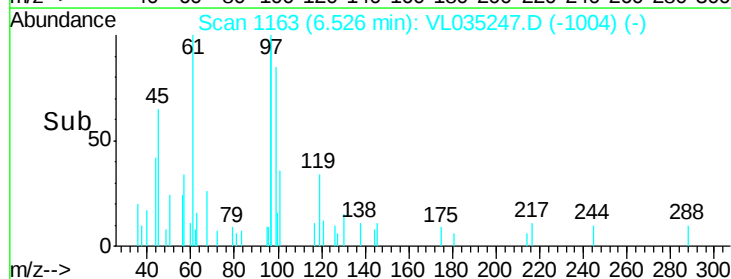
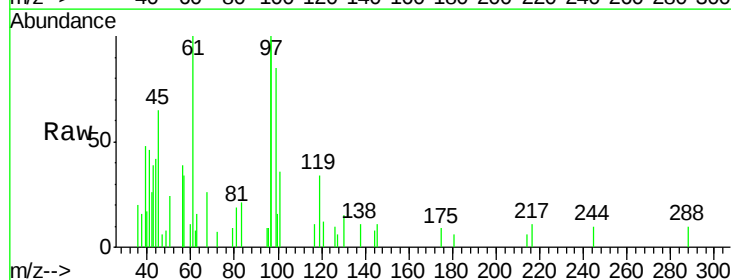
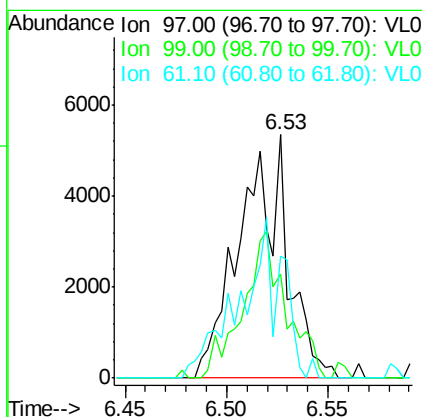
Manual Integrations
APPROVED

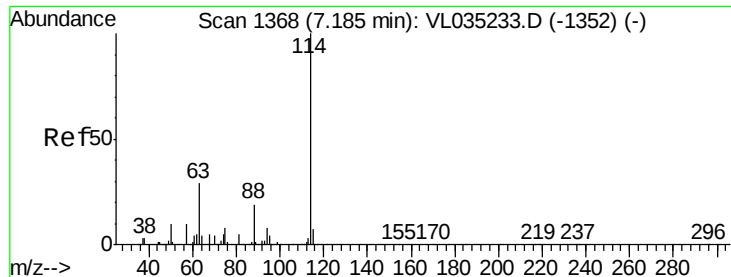
MMDadoda
7/30/2020 6:11:49 PM



#32
1,1,1-Trichloroethane
Concen: 0.049 ppbv m
RT: 6.53 min Scan# 1163
Delta R.T. 0.01 min
Lab File: VL035247.D
Acq: 29 Jul 2020 15:33

Tgt Ion	Ratio	Lower	Upper
97	100		
99	57.1	51.4	77.0
61	59.5	40.4	60.6





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.19 min Scan# 1369

Delta R.T. 0.00 min

Lab File: VL035247.D

Acq: 29 Jul 2020 15:33

Instrument :

MSVOA_L

ClientSampleId :

VOA-HALLWAY

Tot Ion:114 Resp: 2634096

Ion Ratio Lower Upper

114 100

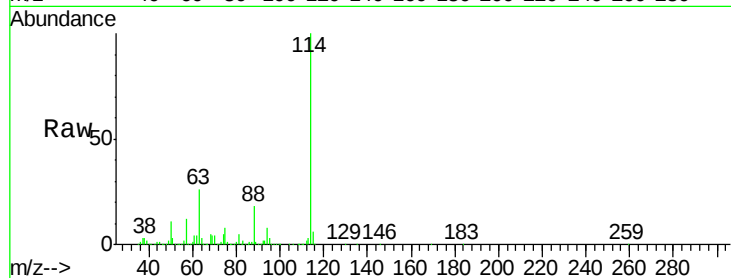
63 26.6 22.2 33.2

88 19.2 15.4 23.0

Manual Integrations
APPROVED

MMDadoda

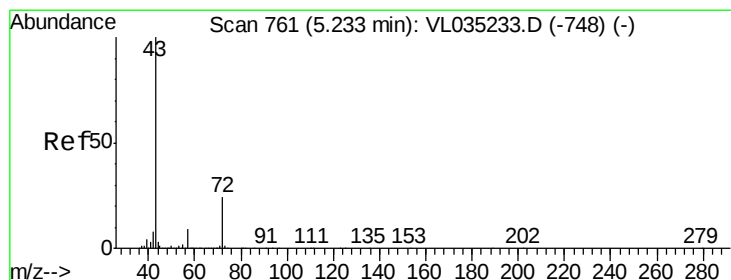
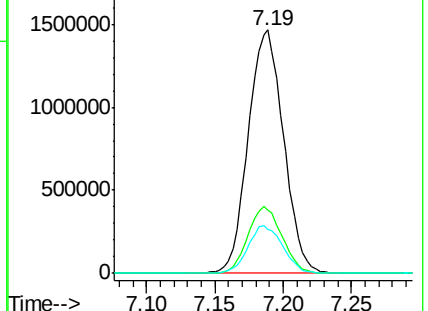
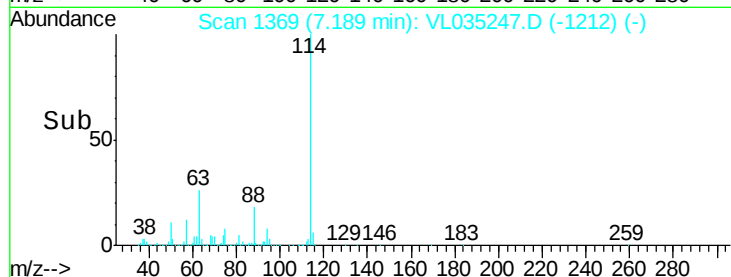
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Abundance Ion 114.10 (113.80 to 114.80): VL0

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



#34

2-Butanone

Concen: 0.932 ppbv

RT: 5.24 min Scan# 762

Delta R.T. 0.00 min

Lab File: VL035247.D

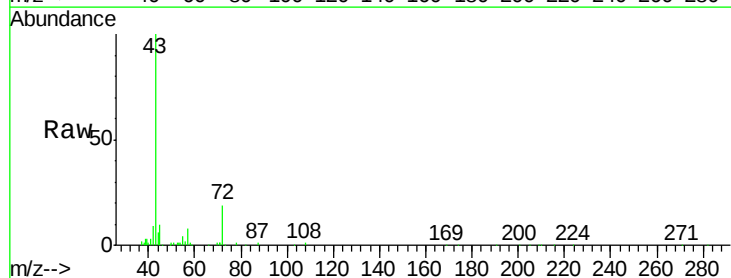
Acq: 29 Jul 2020 15:33

Tgt Ion: 43 Resp: 124897

Ion Ratio Lower Upper

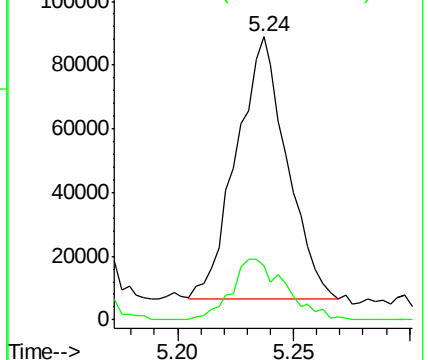
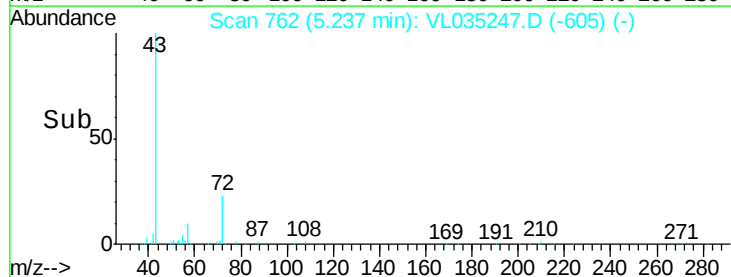
43 100

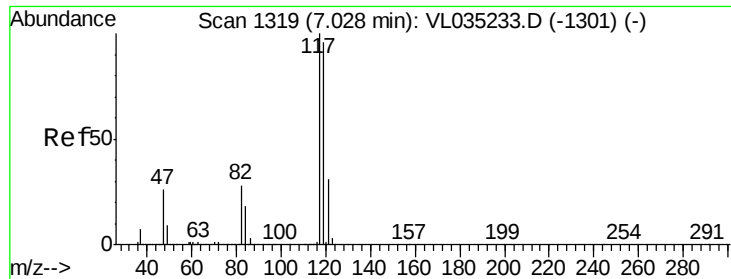
72 24.8 19.2 28.8



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





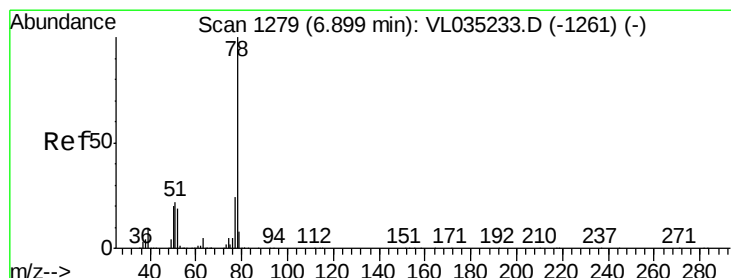
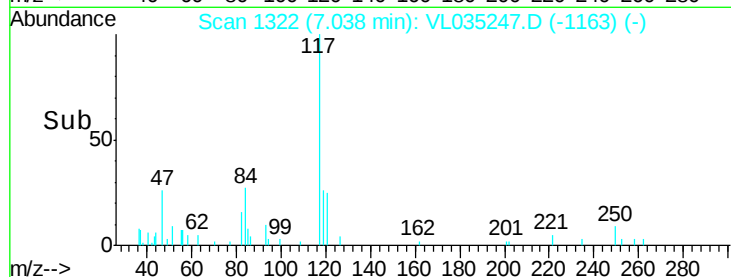
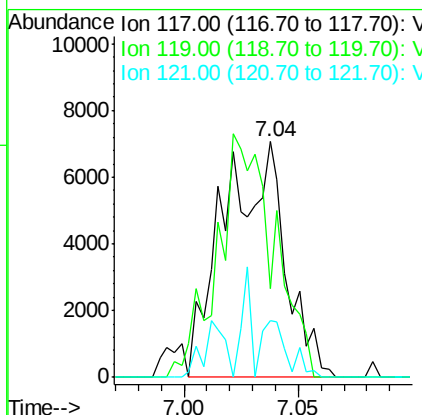
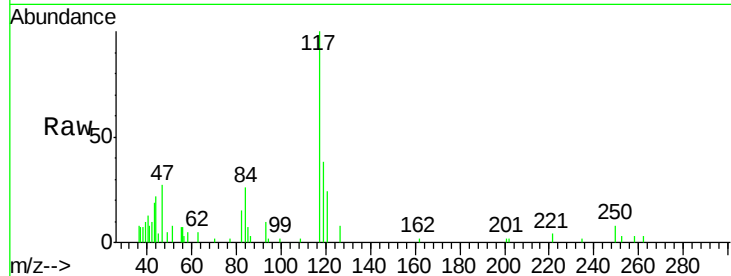
#35
Carbon Tetrachloride
Concen: 0.074 ppbv m
RT: 7.04 min Scan# 1322
Delta R.T. 0.01 min
Lab File: VL035247.D
Acq: 29 Jul 2020 15:33

Instrument :
MSVOA_L
ClientSampleId :
VOA-HALLWAY

Tot Ion	Ratio	Lower	Upper
117	100		
119	37.6	76.8	115.2#
121	24.2	24.5	36.7#

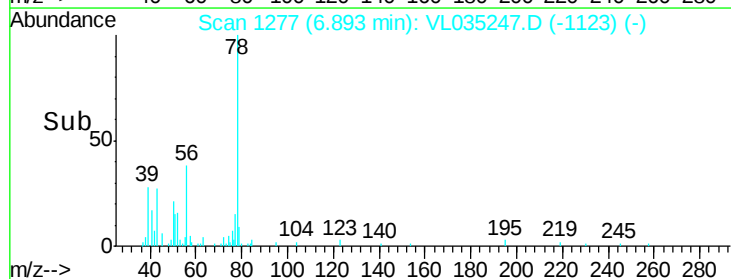
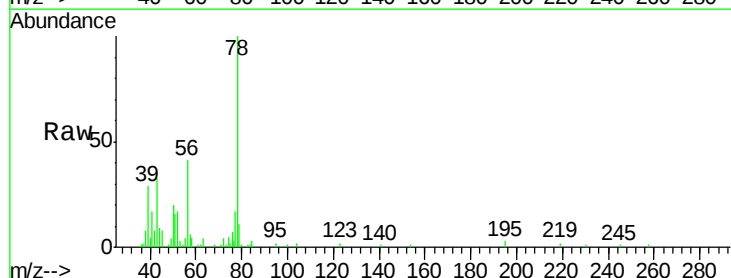
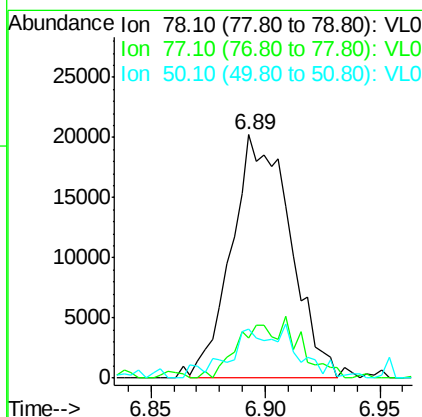
Manual Integrations
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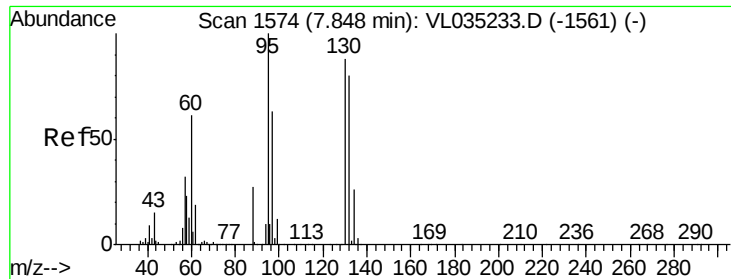
MMDadoda
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#36
Benzene
Concen: 0.196 ppbv m
RT: 6.89 min Scan# 1277
Delta R.T. -0.01 min
Lab File: VL035247.D
Acq: 29 Jul 2020 15:33

Tgt Ion	Ratio	Lower	Upper
78	100		
77	16.5	18.9	28.3#
50	20.3	16.1	24.1





#38

Trichloroethene

Concen: 0.060 ppbv m

RT: 7.86 min Scan# 1577

Delta R.T. 0.01 min

Lab File: VL035247.D

Acq: 29 Jul 2020 15:33

Instrument :

MSVOA_L

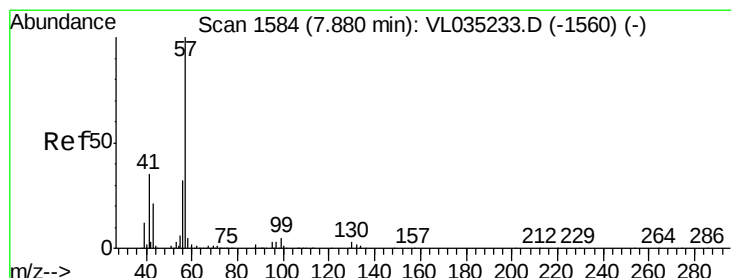
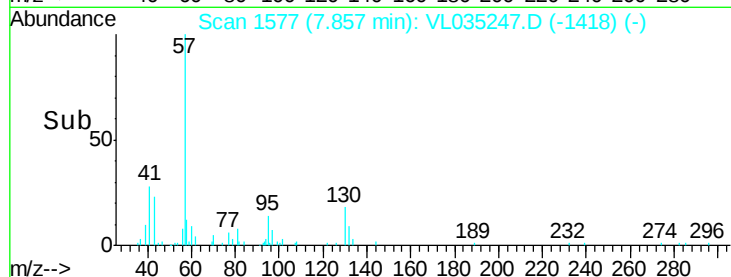
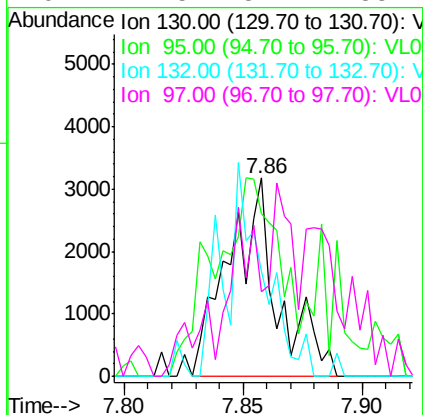
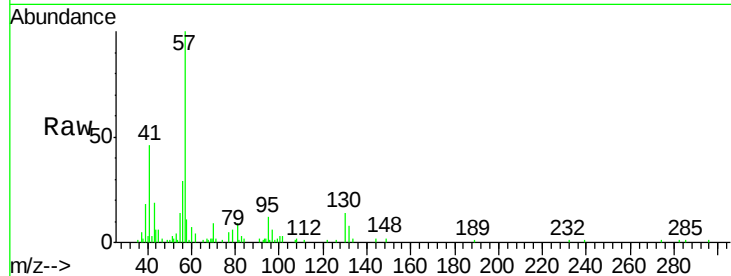
ClientSampleId :

VOA-HALLWAY

Tot Ion	Ratio	Lower	Upper
130	100		
95	82.3	90.7	136.1#
132	52.8	72.9	109.3#
97	42.5	57.1	85.7#

Manual Integrations
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#44

2,2,4-Trimethylpentane

Concen: 0.512 ppbv m

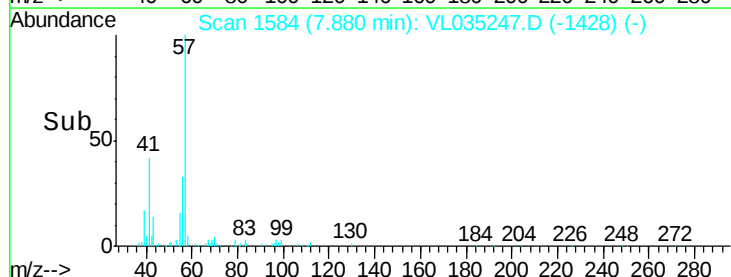
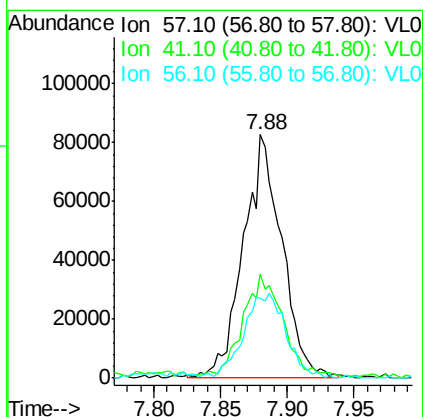
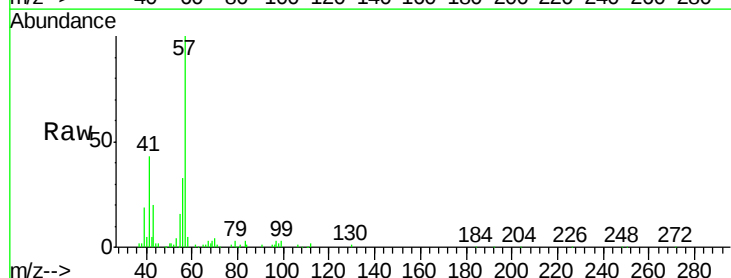
RT: 7.88 min Scan# 1584

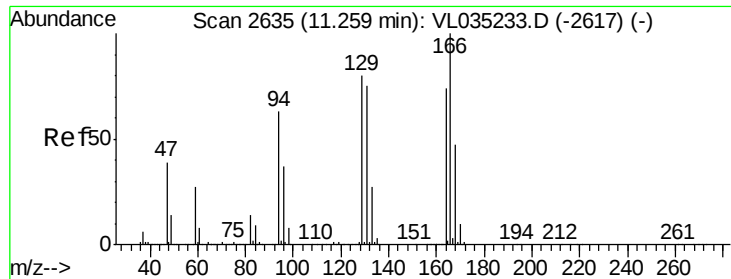
Delta R.T. 0.00 min

Lab File: VL035247.D

Acq: 29 Jul 2020 15:33

Tgt Ion	Ratio	Lower	Upper
57	100		
41	44.0	27.0	40.4#
56	40.2	25.6	38.4#





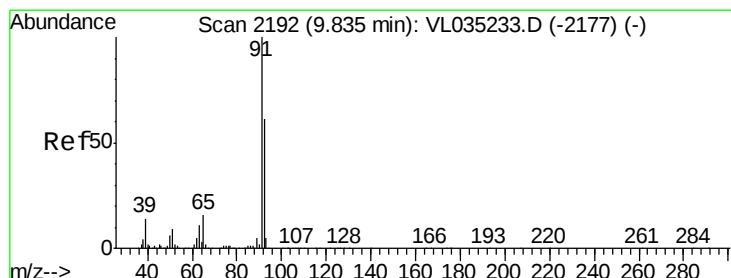
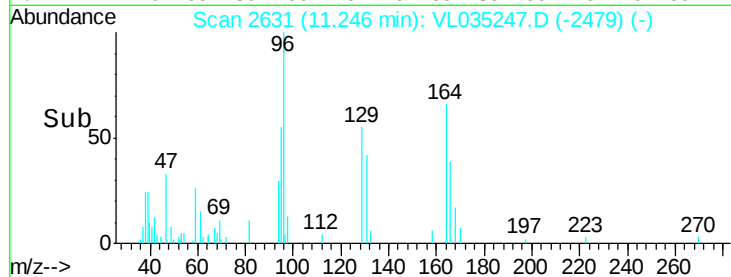
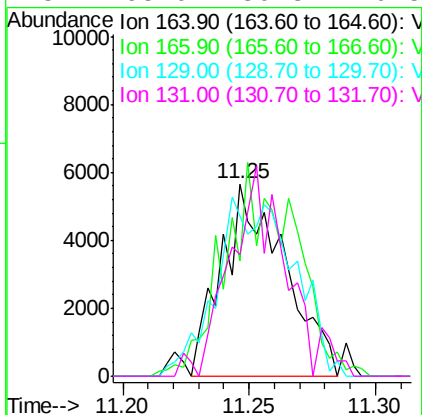
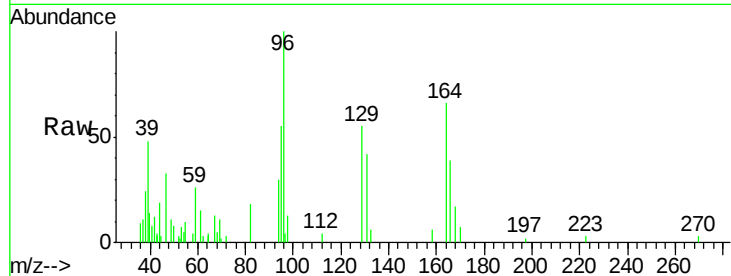
#52
Tetrachloroethene
Concen: 0.140 ppbv m
RT: 11.25 min Scan# 2631
Delta R.T. -0.01 min
Lab File: VL035247.D
Acq: 29 Jul 2020 15:33

Instrument :
MSVOA_L
ClientSampleId :
VOA-HALLWAY

Tot Ion	Ratio	Lower	Upper
164	100		
166	60.0	107.5	161.3#
129	83.7	86.0	129.0#
131	63.0	80.3	120.5#

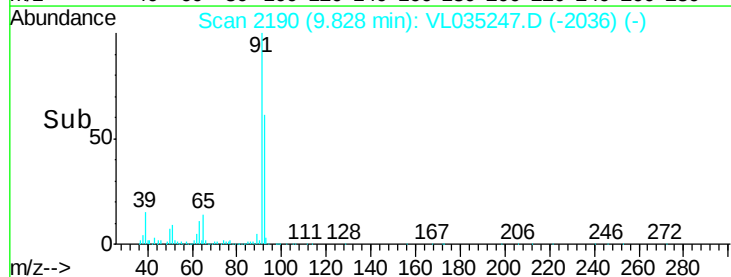
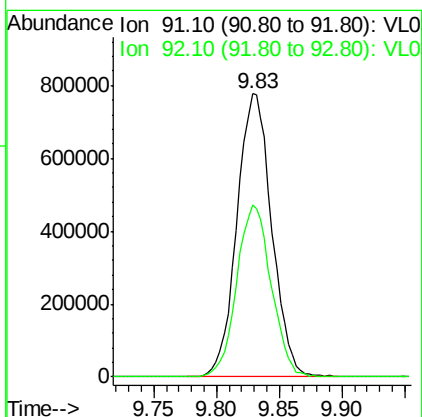
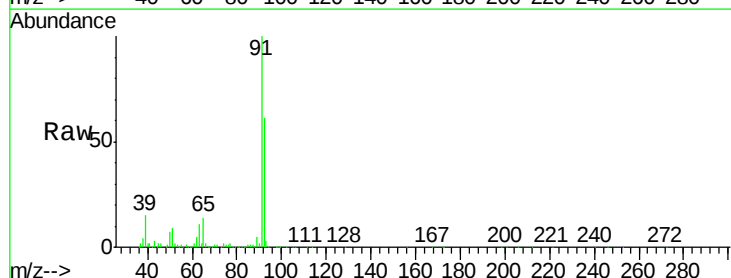
Manual Integrations
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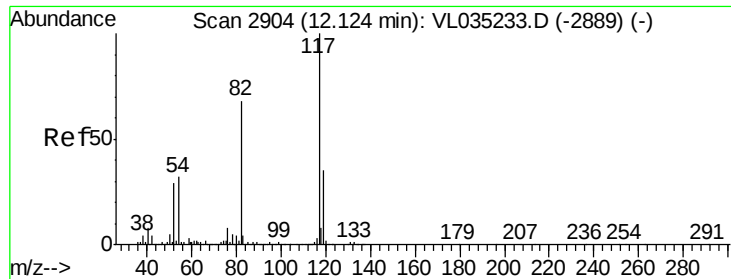
MMDadoda
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#53
Toluene
Concen: 7.715 ppbv
RT: 9.83 min Scan# 2190
Delta R.T. -0.01 min
Lab File: VL035247.D
Acq: 29 Jul 2020 15:33

Tgt Ion	Ratio	Lower	Upper
91	100		
92	60.2	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: VL035247.D

Acq: 29 Jul 2020 15:33

Instrument :

MSVOA_L

ClientSampleId :

VOA-HALLWAY

Tot Ion:117 Resp: 2538724

Ion Ratio Lower Upper

117 100

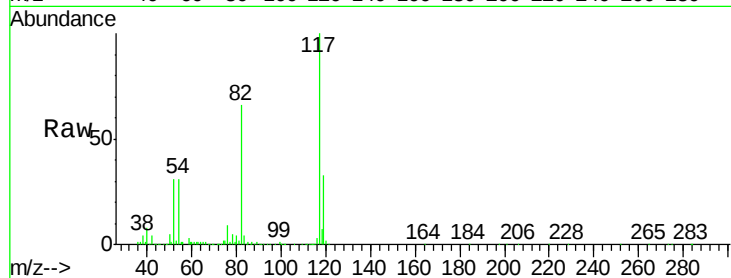
82 67.7 52.4 78.6

119 32.8 24.6 36.8

Manual Integrations
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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

12.12

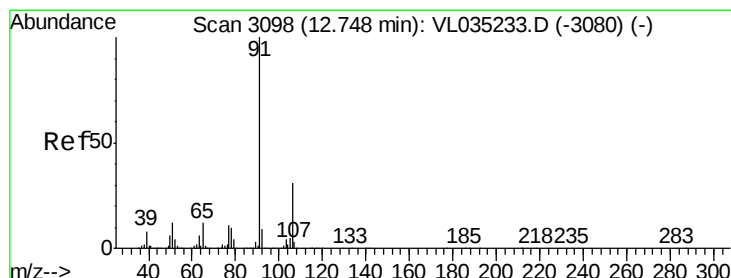
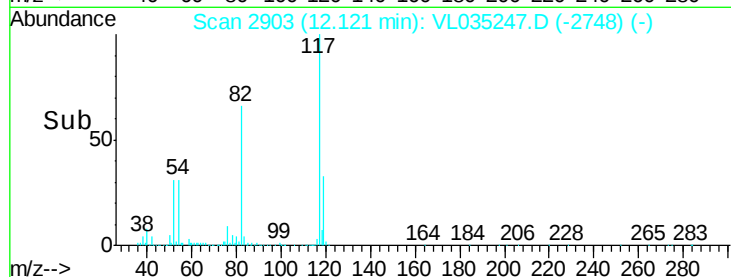
1500000

1000000

500000

0

Time--> 12.00 12.10 12.20



#58

Ethyl Benzene

Concen: 0.380 ppbv

RT: 12.75 min Scan# 3098

Delta R.T. 0.00 min

Lab File: VL035247.D

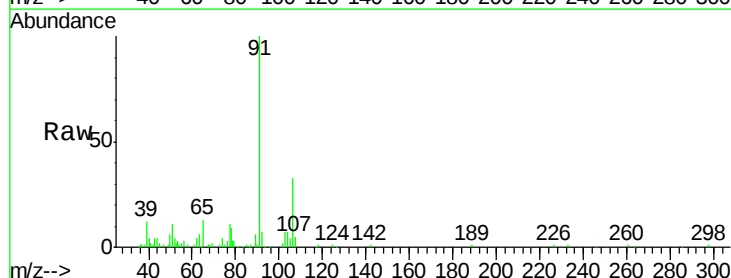
Acq: 29 Jul 2020 15:33

Tgt Ion: 91 Resp: 102256

Ion Ratio Lower Upper

91 100

106 32.8 25.0 37.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

12.75

50000

40000

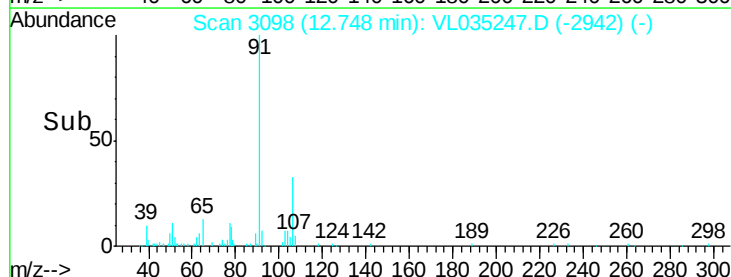
30000

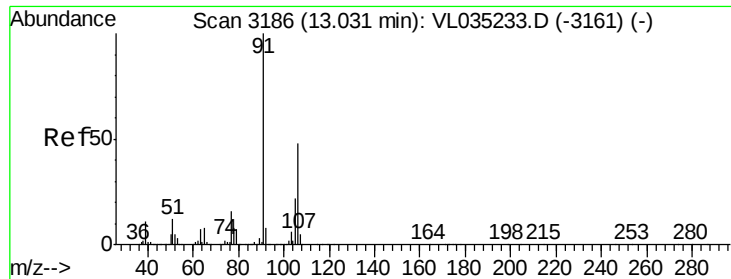
20000

10000

0

Time--> 12.70 12.75 12.80





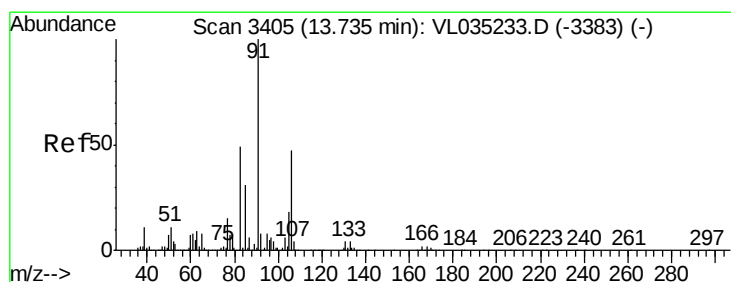
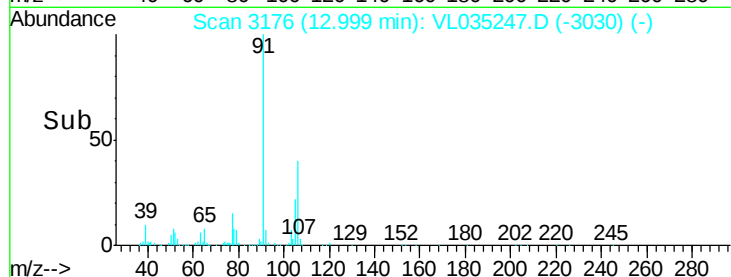
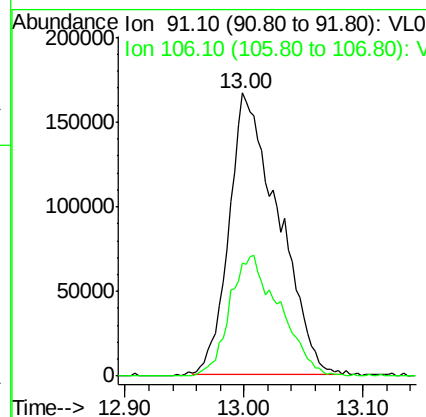
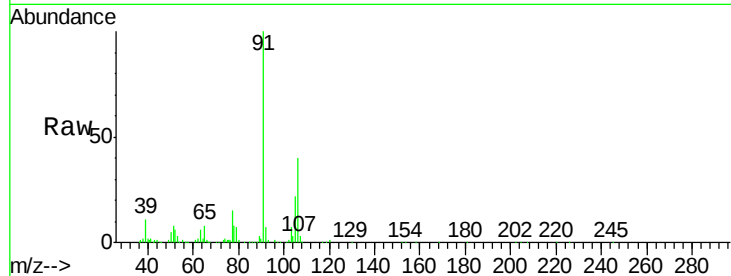
#59
m/p-Xylene
Concen: 1.892 ppbv
RT: 13.00 min Scan# 3176
Delta R.T. -0.03 min
Lab File: VL035247.D
Acq: 29 Jul 2020 15:33

Instrument :
MSVOA_L
ClientSampleId :
VOA-HALLWAY

Tot Ion: 91 Resp: 473503
Ion Ratio Lower Upper
91 100
106 43.8 37.2 55.8

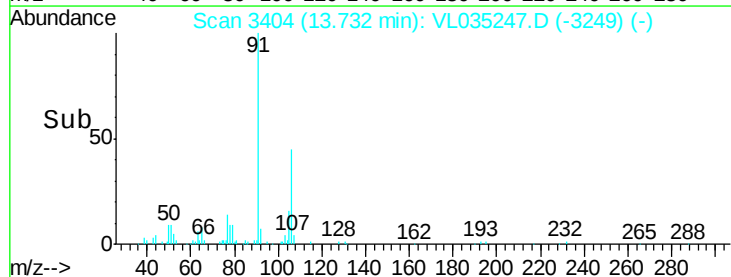
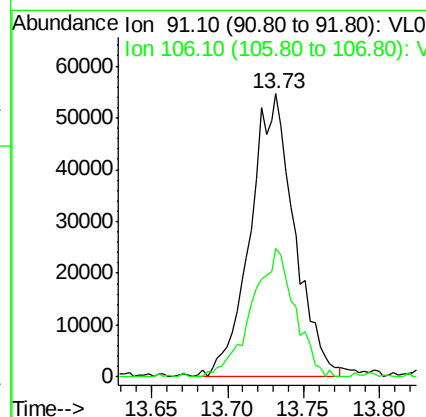
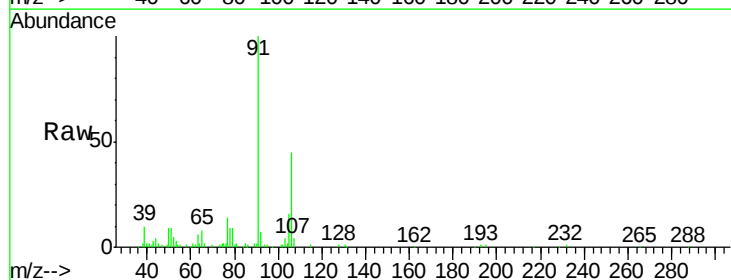
Manual Integrations
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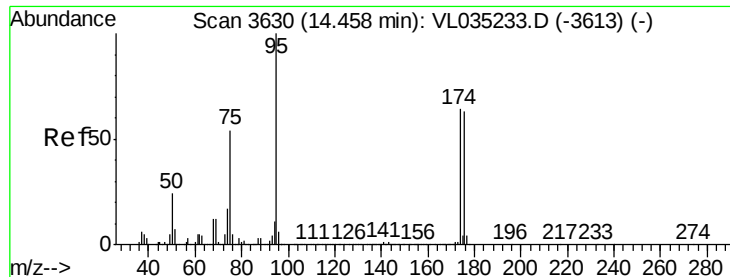
MMDadoda
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#60
o-Xylene
Concen: 0.442 ppbv m
RT: 13.73 min Scan# 3404
Delta R.T. -0.00 min
Lab File: VL035247.D
Acq: 29 Jul 2020 15:33

Tgt Ion: 91 Resp: 110377
Ion Ratio Lower Upper
91 100
106 43.9 22.4 67.0





#68

1-Bromo-4-Fluorobenzene

Concen: 10.507 ppbv

RT: 14.46 min Scan# 3630

Delta R.T. 0.00 min

Lab File: VL035247.D

Acq: 29 Jul 2020 15:33

Instrument :

MSVOA_L

ClientSampleId :

VOA-HALLWAY

Tot Ion: 95 Resp: 2131479

Ion Ratio Lower Upper

95 100

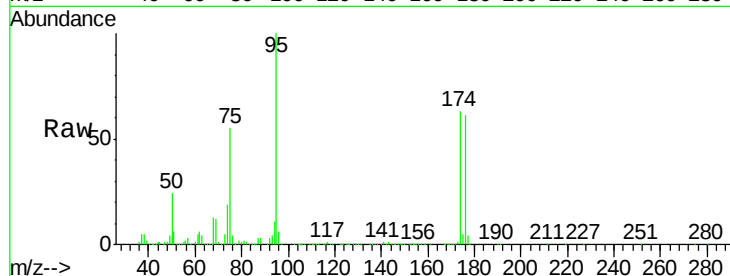
174 65.1 52.7 79.1

175 4.8 3.9 5.9

Manual Integrations
APPROVED

MMDadoda

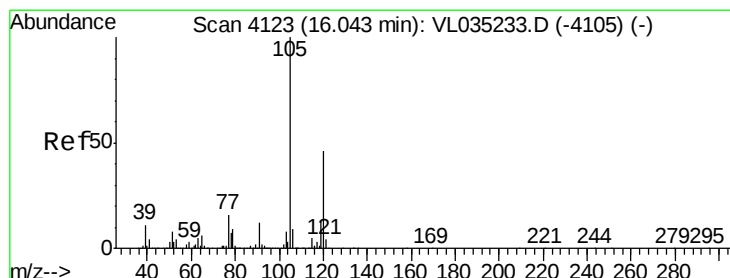
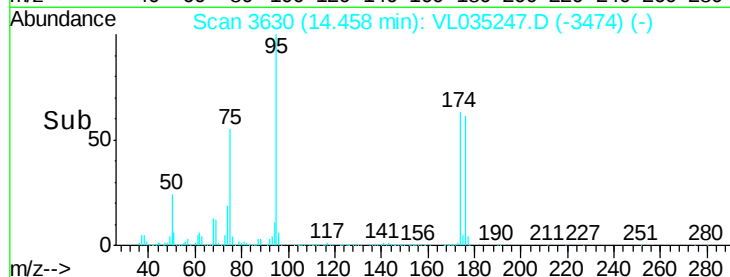
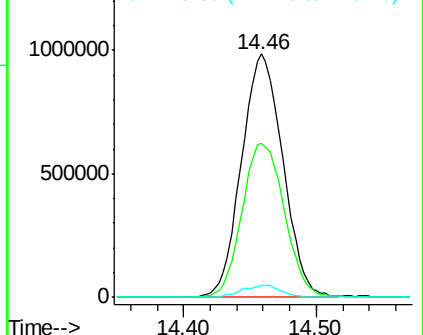
7/30/2020 6:11:49 PM



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V



#73

1,3,5-Trimethylbenzene

Concen: 0.111 ppbv m

RT: 16.04 min Scan# 4121

Delta R.T. -0.01 min

Lab File: VL035247.D

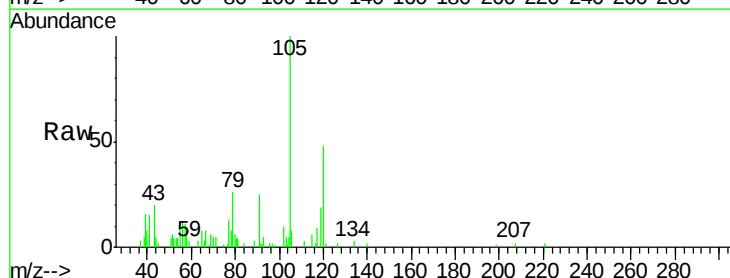
Acq: 29 Jul 2020 15:33

Tgt Ion: 105 Resp: 30356

Ion Ratio Lower Upper

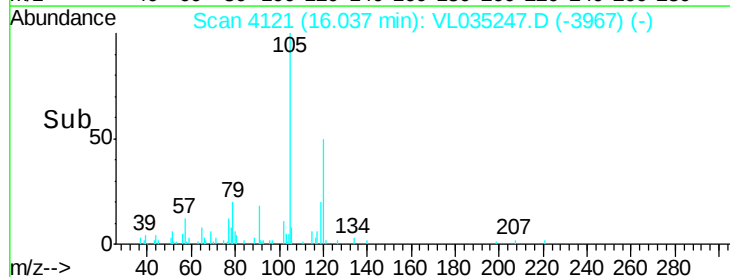
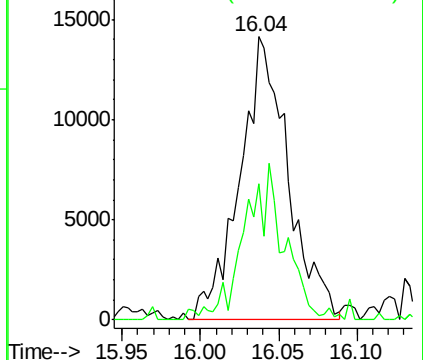
105 100

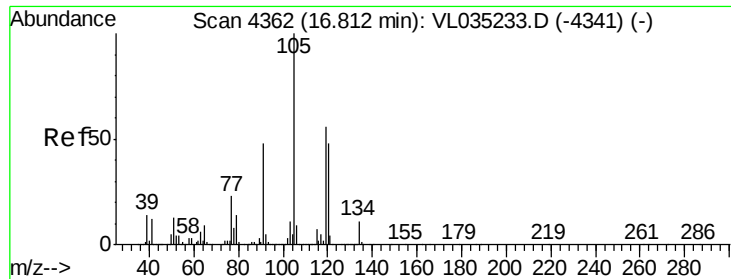
120 48.3 36.8 55.2



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#74
 1,2,4-Trimethylbenzene
 Concen: 0.316 ppbv
 RT: 16.81 min Scan# 4360
 Delta R.T. -0.01 min
 Lab File: VL035247.D
 Acq: 29 Jul 2020 15:33

Instrument :
 MSVOA_L
 ClientSampleId :
 VOA-HALLWAY

Tot Ion	Ratio	Resp Lower	Upper
105	100		
120	45.5	38.8	58.2
91	14.3	38.9	58.3#
77	11.2	18.4	27.6#

Manual Integrations
 APPROVED

MMDadoda
 7/30/2020 6:11:49 PM

