

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL022421\
 Data File : VL036368.D
 Acq On : 25 Feb 2021 2:45
 Operator : SY/AP
 Sample : M1463-10
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 NS-3

Manual Integrations
 APPROVED

MMDadoda
 2/26/2021 4:18:01 PM

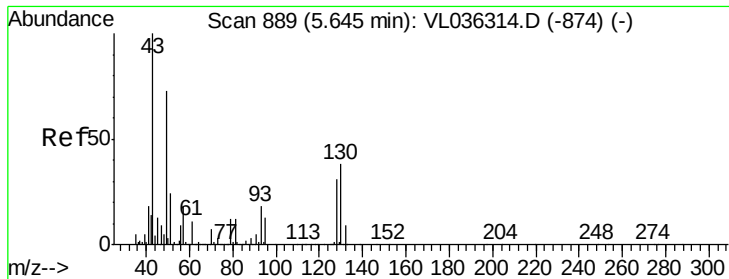
Quant Time: Feb 26 14:31:49 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL021021AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Feb 10
 QLast Update : Wed Feb 10 16:04:02 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.68	49	1667119	10.00	ppbv	0.03
33) 1,4-Difluorobenzene	7.19	114	3678357	10.00	ppbv	0.04
55) Chlorobenzene-d5	12.10	117	3433867	10.00	ppbv	0.05

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.43	95	2728118	9.66	ppbv	0.04
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.60%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.05	85	45529	0.183	ppbv	98
3) Chlorodifluoromethane	2.99	51	75310m	0.364	ppbv	
4) Chloromethane	3.14	50	65925	0.659	ppbv #	77
9) Propene	3.02	41	88253	1.143	ppbv #	81
10) Heptane	8.14	43	252156	1.108	ppbv	93
11) Trichlorofluoromethane	3.96	101	54932	0.225	ppbv	99
13) Ethanol	3.64	45	5336913	367.911	ppbv	90
15) Acetone	3.85	43	2662639	13.066	ppbv	100
17) tert-Butyl alcohol	4.33	59	76101m	0.481	ppbv	
19) Isopropyl Alcohol	4.00	45	5763665	51.050	ppbv #	98
20) Methylene Chloride	4.35	84	2800570	42.597	ppbv	98
26) Hexane	5.70	57	962835	5.957	ppbv #	41
30) Cyclohexane	7.14	84	50507m	0.376	ppbv	
34) 2-Butanone	5.26	43	125163	0.512	ppbv #	87
35) Carbon Tetrachloride	7.03	117	13954m	0.057	ppbv	
36) Benzene	6.91	78	138573	0.443	ppbv #	91
44) 2,2,4-Trimethylpentane	7.88	57	1533651	2.699	ppbv	90
52) Tetrachloroethene	11.23	164	8889m	0.078	ppbv	
53) Toluene	9.82	91	2257919	6.671	ppbv	99
58) Ethyl Benzene	12.73	91	542797	1.154	ppbv	99
59) m/p-Xylene	12.99	91	1369870	3.317	ppbv	96
60) o-Xylene	13.71	91	499572	1.265	ppbv	99
62) Isopropylbenzene	14.69	105	69339	0.117	ppbv	100
72) 4-Ethyltoluene	15.85	105	174675m	0.397	ppbv	
73) 1,3,5-Trimethylbenzene	16.01	105	103899m	0.244	ppbv	
74) 1,2,4-Trimethylbenzene	16.78	105	529098	1.217	ppbv #	73

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



#1

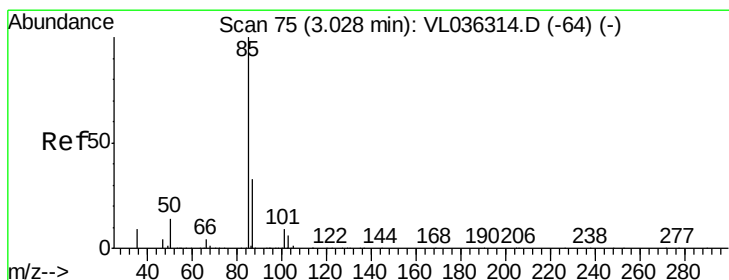
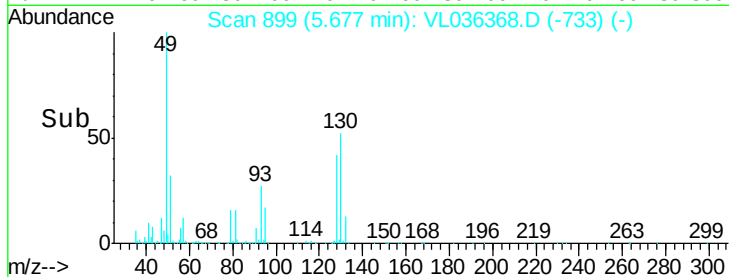
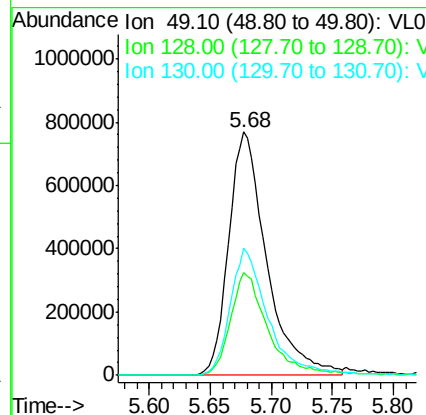
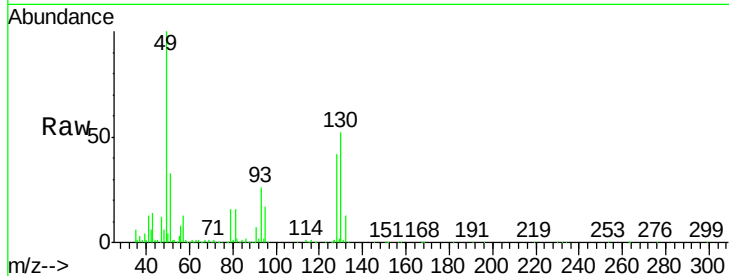
Bromochloromethane
Concen: 10.000 ppbv
RT: 5.68 min Scan# 899
Delta R.T. 0.03 min
Lab File: VL036368.D
Acq: 25 Feb 2021 2:45

Instrument :
MSVOA_L
ClientSampled :
NS-3

Tot Ion	Ratio	Lower	Upper
49	100		
128	42.1	20.8	62.5
130	53.0	26.7	80.1

Manual Integrations
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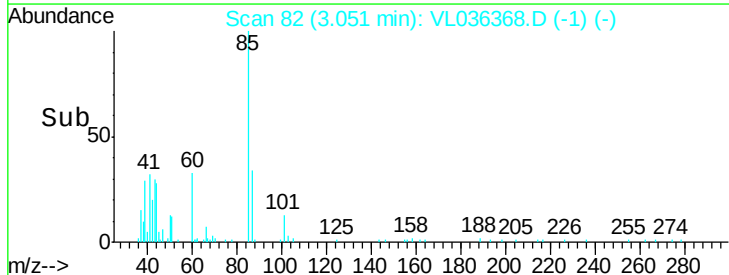
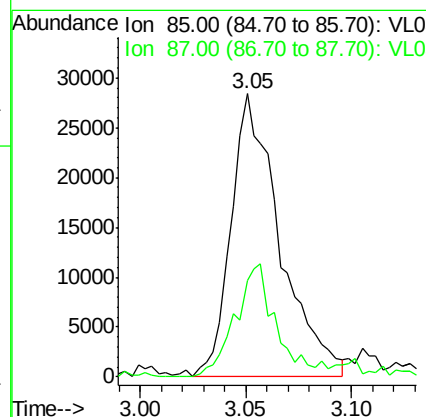
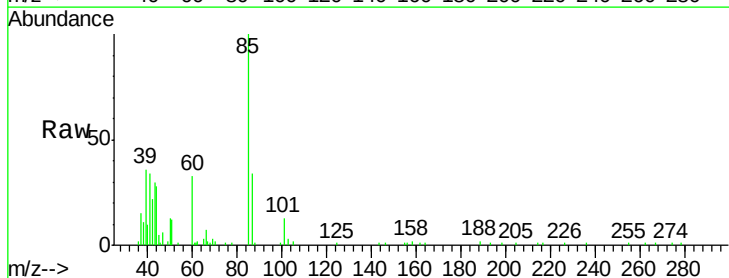
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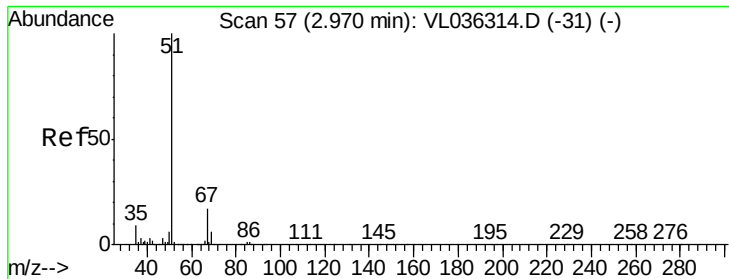


#2

Dichlorodifluoromethane
Concen: 0.183 ppbv
RT: 3.05 min Scan# 82
Delta R.T. 0.02 min
Lab File: VL036368.D
Acq: 25 Feb 2021 2:45

Tgt Ion	Ratio	Lower	Upper
85	100		
87	34.2	26.5	39.7





#3

Chlorodifluoromethane

Concen: 0.364 ppbv

RT: 2.99 min Scan# 64

Delta R.T. 0.02 min

Lab File: VL036368.D

Acq: 25 Feb 2021 2:45

Instrument :

MSVOA_L

ClientSampleId :

NS-3

Tot Ion: 51 Resp: 75310

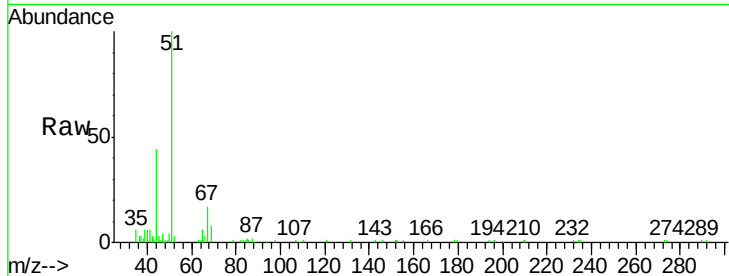
Ion Ratio Lower Upper

51 100

67 0.6 14.7 22.1#

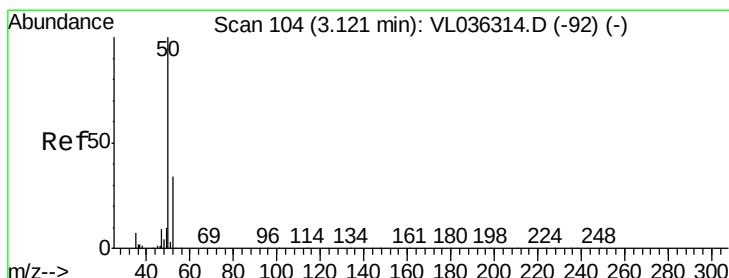
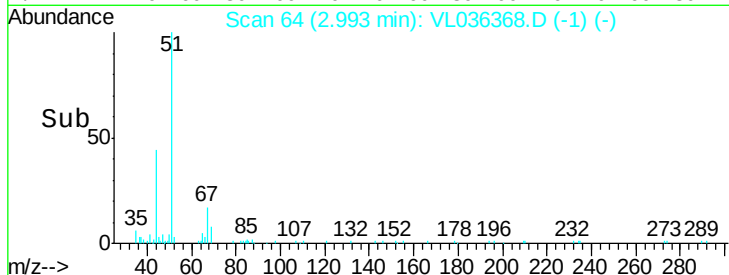
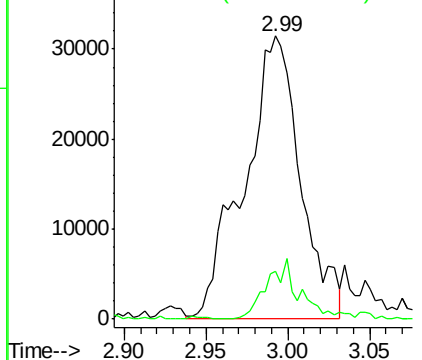
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Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.659 ppbv

RT: 3.14 min Scan# 111

Delta R.T. 0.02 min

Lab File: VL036368.D

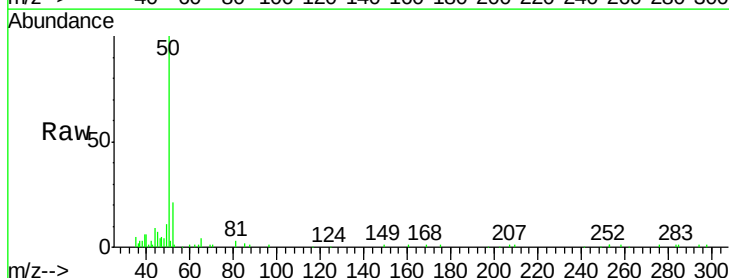
Acq: 25 Feb 2021 2:45

Tgt Ion: 50 Resp: 65925

Ion Ratio Lower Upper

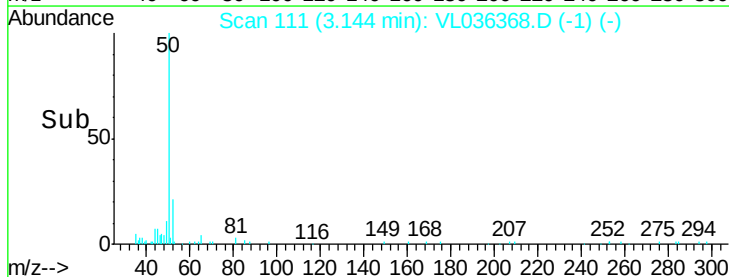
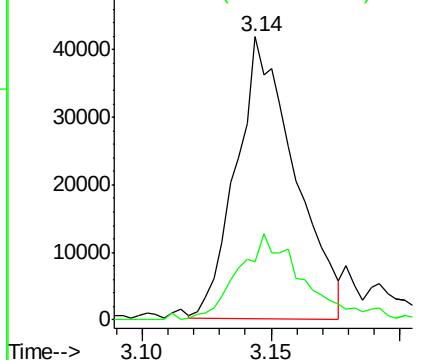
50 100

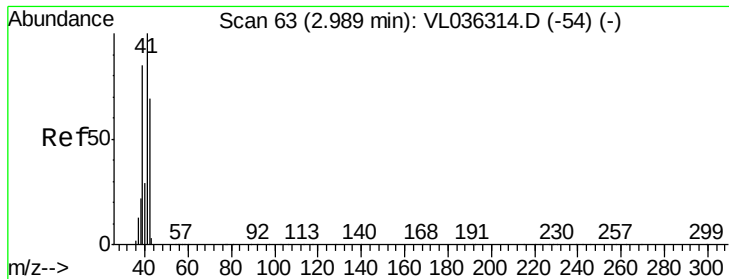
52 20.4 27.0 40.4#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 1.143 ppbv

RT: 3.02 min Scan# 74

Delta R.T. 0.04 min

Lab File: VL036368.D

Acq: 25 Feb 2021 2:45

Instrument :

MSVOA_L

ClientSampled :

NS-3

Tot Ion: 41 Resp: 88253

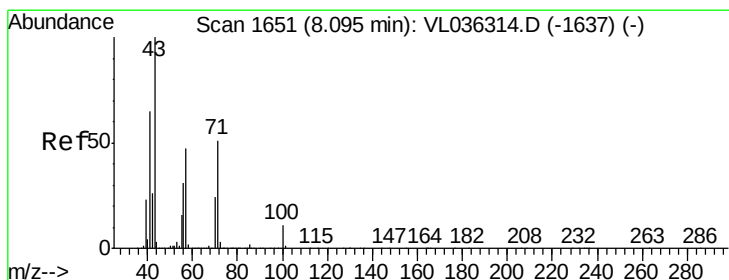
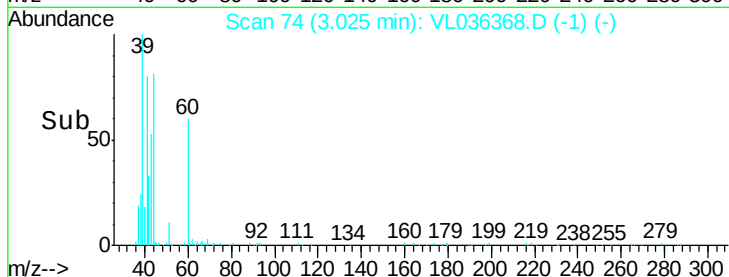
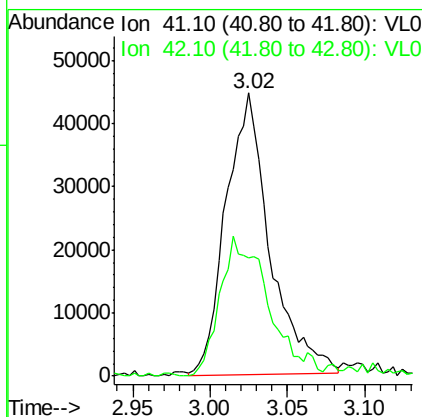
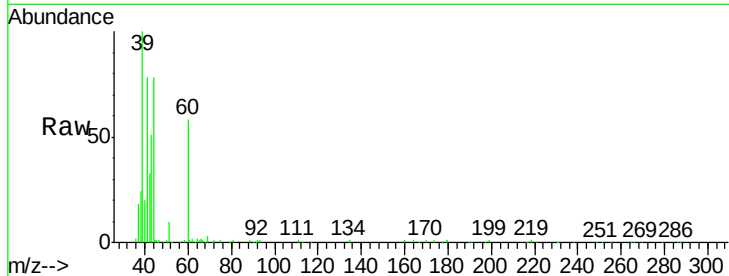
Ion Ratio Lower Upper

41 100

42 54.9 56.2 84.2#

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#10

Heptane

Concen: 1.108 ppbv

RT: 8.14 min Scan# 1665

Delta R.T. 0.05 min

Lab File: VL036368.D

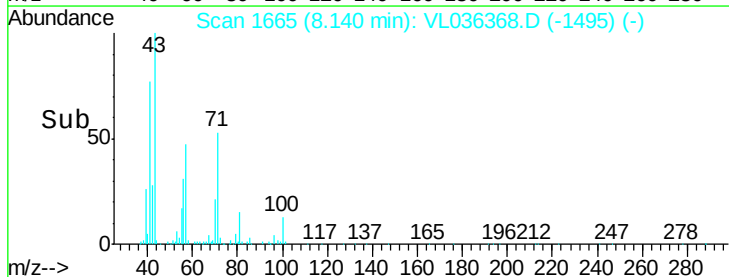
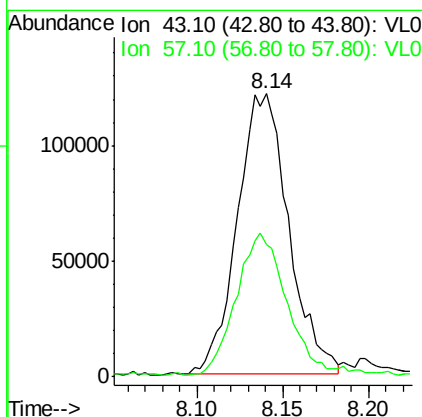
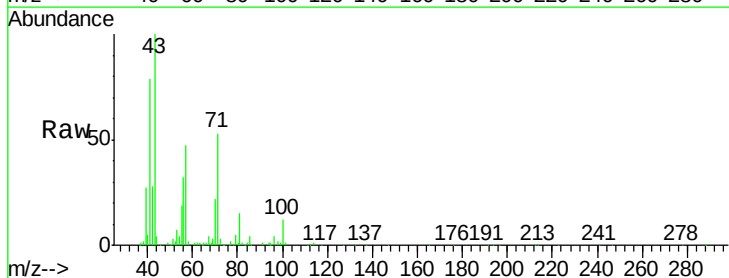
Acq: 25 Feb 2021 2:45

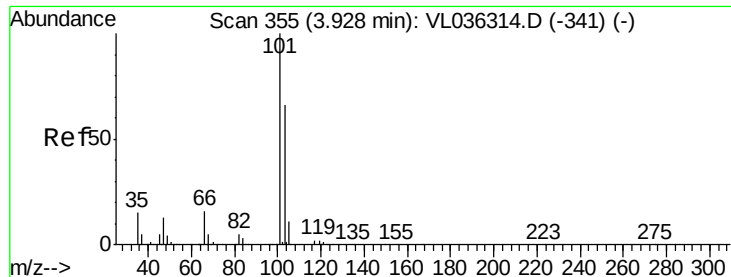
Tgt Ion: 43 Resp: 252156

Ion Ratio Lower Upper

43 100

57 54.1 39.4 59.2





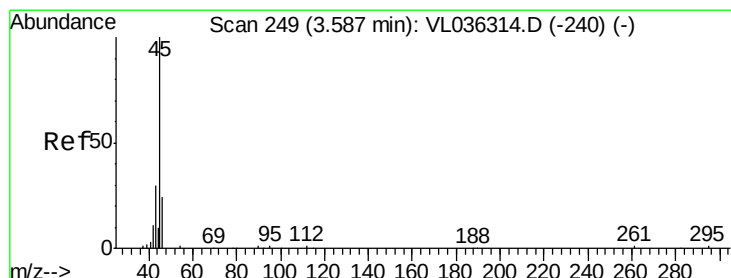
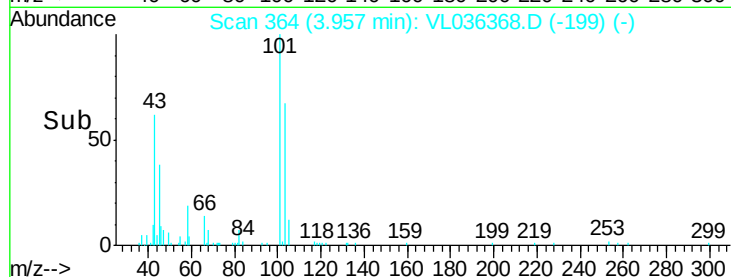
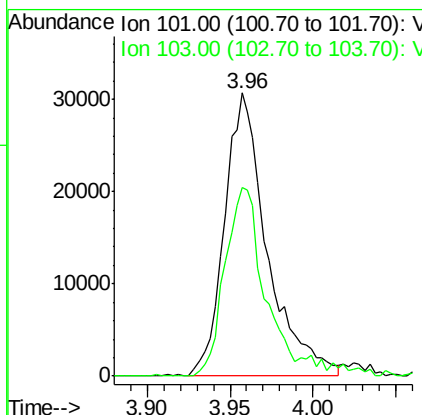
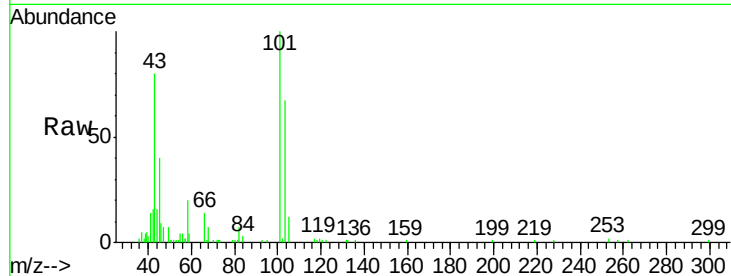
#11
 Trichlorofluoromethane
 Concen: 0.225 ppbv
 RT: 3.96 min Scan# 364
 Delta R.T. 0.03 min
 Lab File: VL036368.D
 Acq: 25 Feb 2021 2:45

Instrument :
 MSVOA_L
 ClientSampleId :
 NS-3

Tot Ion	Ratio	Lower	Upper
101	100		
103	66.8	52.9	79.3

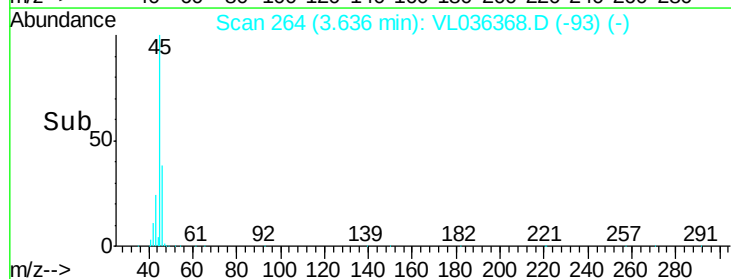
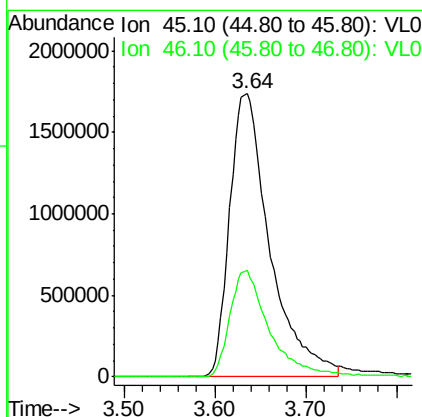
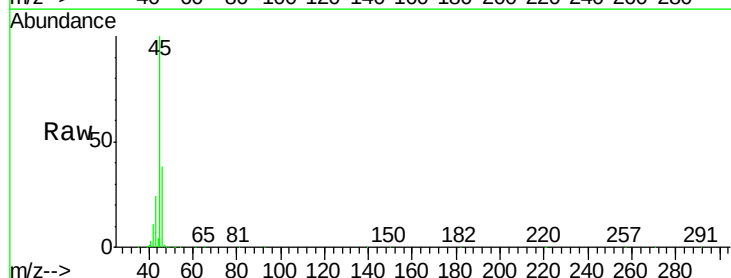
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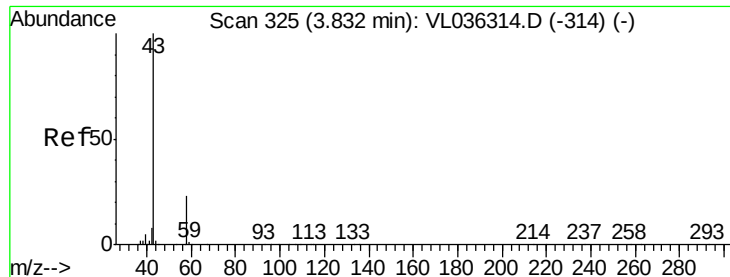
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#13
 Ethanol
 Concen: 367.911 ppbv
 RT: 3.64 min Scan# 264
 Delta R.T. 0.05 min
 Lab File: VL036368.D
 Acq: 25 Feb 2021 2:45

Tgt Ion	Ratio	Lower	Upper
45	100		
46	37.6	17.7	70.7





#15

Acetone

Concen: 13.066 ppbv

RT: 3.85 min Scan# 332

Delta R.T. 0.02 min

Lab File: VL036368.D

Acq: 25 Feb 2021 2:45

Instrument :

MSVOA_L

ClientSampled :

NS-3

Tot Ion: 43 Resp: 2662639

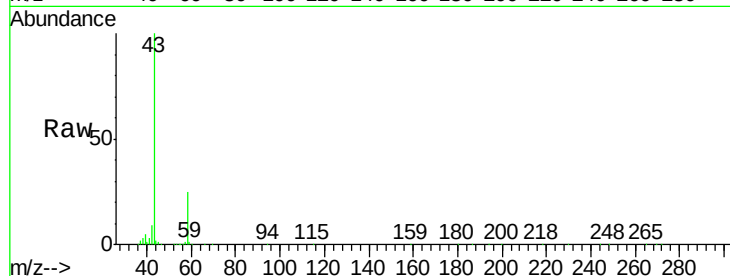
Ion Ratio Lower Upper

43 100

58 25.6 20.3 30.5

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Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

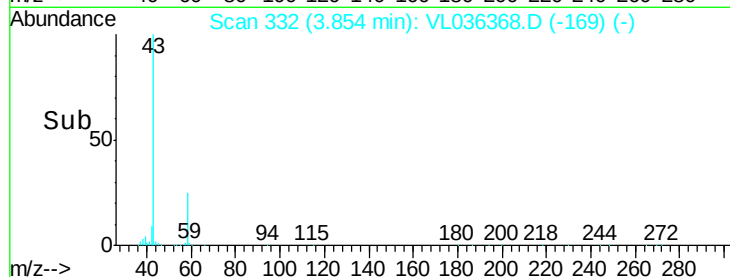
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1000000

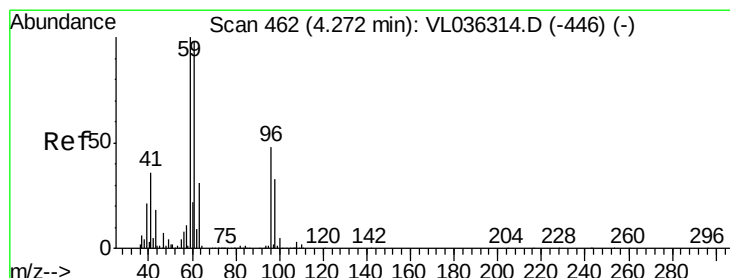
500000

0

Time-->



Time-->



#17

tert-Butyl alcohol

Concen: 0.481 ppbv m

RT: 4.33 min Scan# 479

Delta R.T. 0.05 min

Lab File: VL036368.D

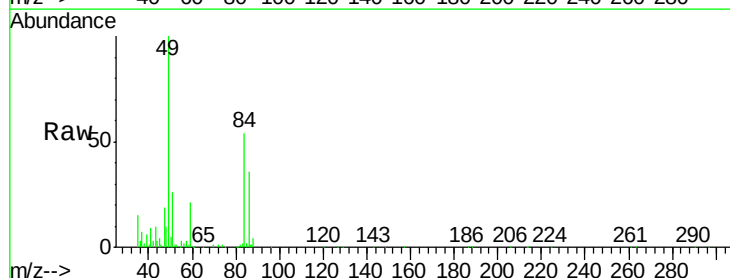
Acq: 25 Feb 2021 2:45

Tgt Ion: 59 Resp: 76101

Ion Ratio Lower Upper

59 100

57 30.0 9.0 13.4#



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

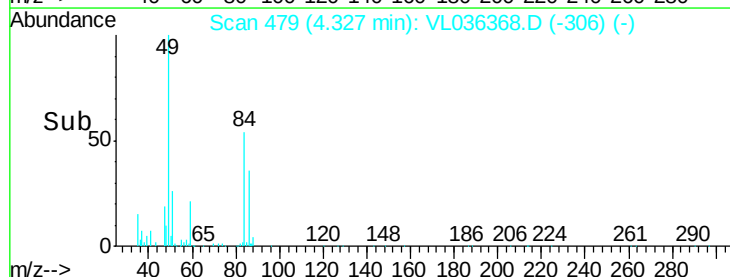
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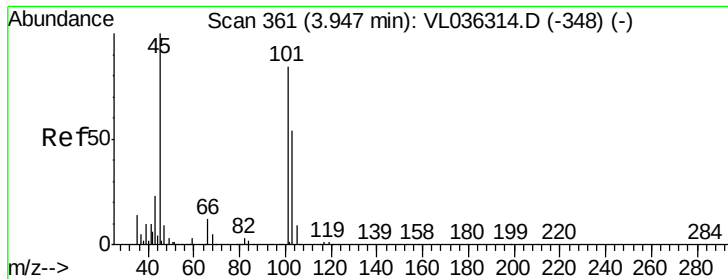
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Time-->





#19

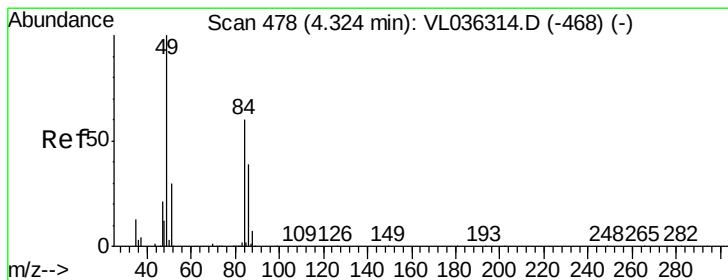
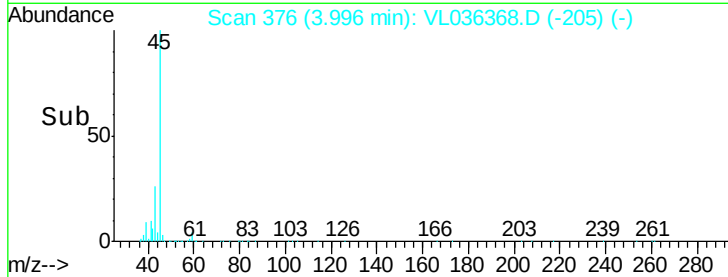
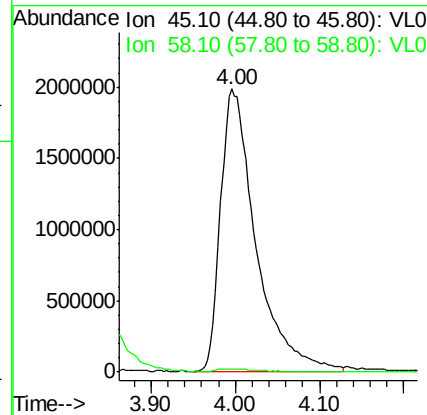
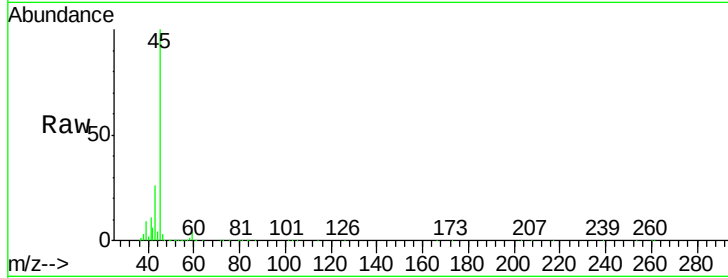
Isopropyl Alcohol
 Concen: 51.050 ppbv
 RT: 4.00 min Scan# 376
 Delta R.T. 0.05 min
 Lab File: VL036368.D
 Acq: 25 Feb 2021 2:45

Instrument :
 MSVOA_L
 ClientSampleId :
 NS-3

Tot Ion: 45 Resp: 5763665
 Ion Ratio Lower Upper
 45 100
 58 1.6 1.9 2.9#

Manual Integrations
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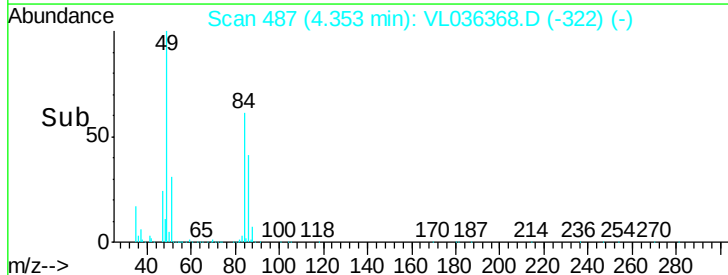
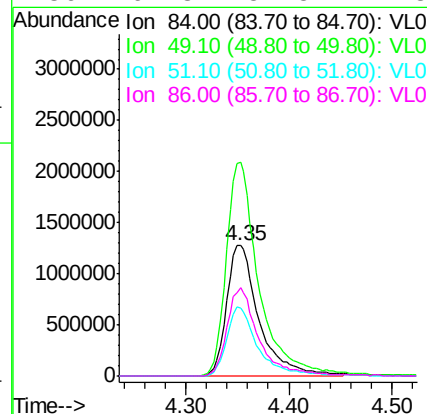
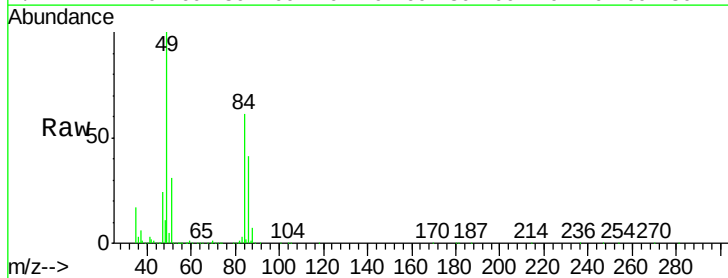
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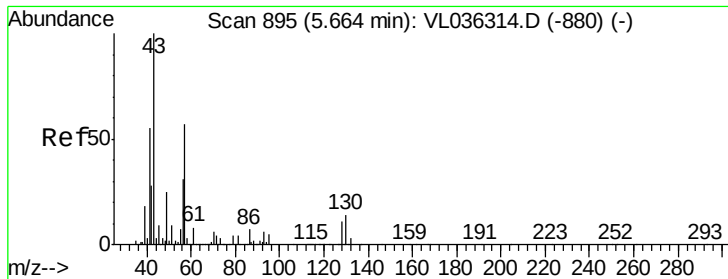


#20

Methylene Chloride
 Concen: 42.597 ppbv
 RT: 4.35 min Scan# 487
 Delta R.T. 0.03 min
 Lab File: VL036368.D
 Acq: 25 Feb 2021 2:45

Tgt Ion: 84 Resp: 2800570
 Ion Ratio Lower Upper
 84 100
 49 164.2 133.8 200.8
 51 51.7 41.4 62.0
 86 67.8 51.5 77.3





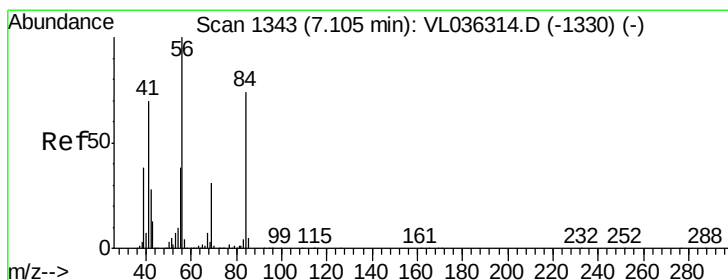
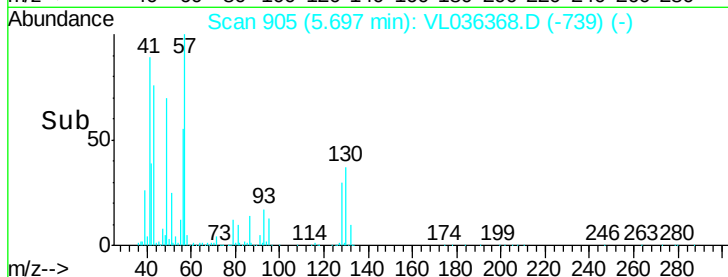
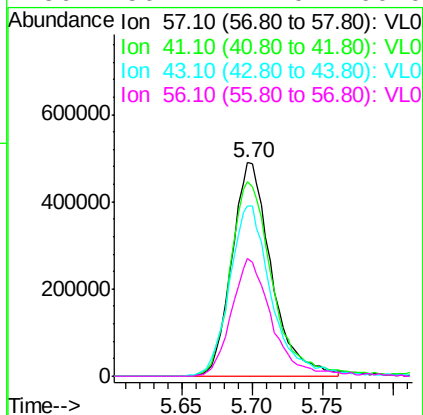
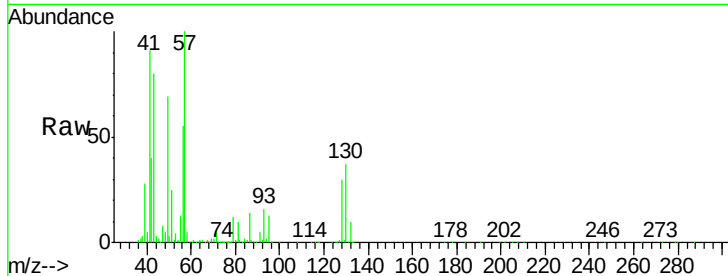
#26
Hexane
Concen: 5.957 ppbv
RT: 5.70 min Scan# 905
Delta R.T. 0.03 min
Lab File: VL036368.D
Acq: 25 Feb 2021 2:45

Instrument :
MSVOA_L
ClientSampled :
NS-3

Tot Ion	Ratio	Lower	Upper
57	100		
41	97.5	81.7	122.5
43	84.3	199.1	298.7#
56	56.7	44.0	66.0

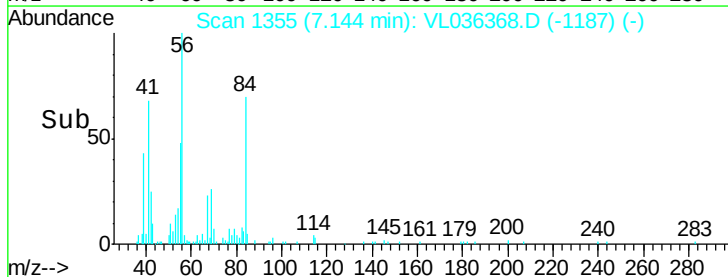
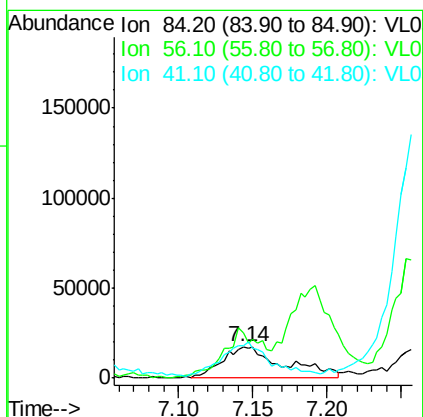
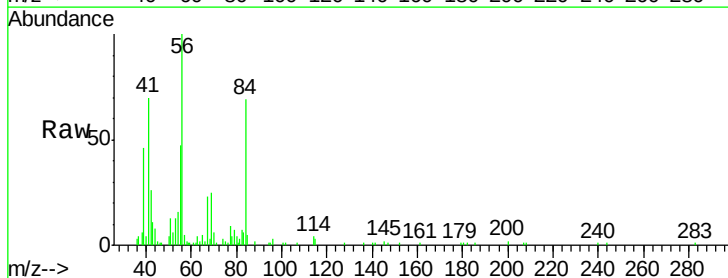
Manual Integrations
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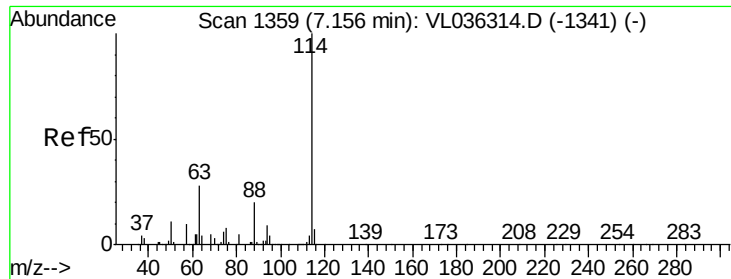
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2/26/2021 4:18:01 PM



#30
Cyclohexane
Concen: 0.376 ppbv m
RT: 7.14 min Scan# 1355
Delta R.T. 0.04 min
Lab File: VL036368.D
Acq: 25 Feb 2021 2:45

Tgt Ion	Ratio	Lower	Upper
84	100		
56	98.5	120.2	180.4#
41	73.0	79.7	119.5#





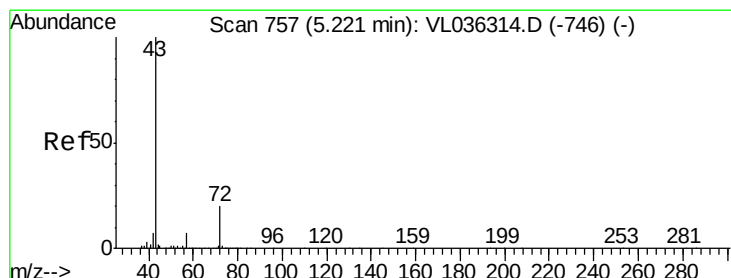
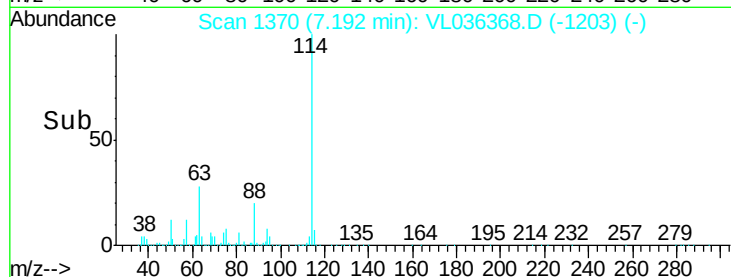
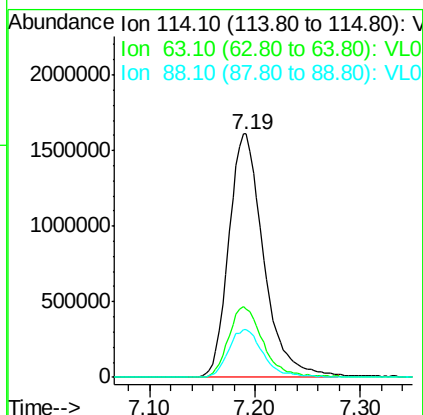
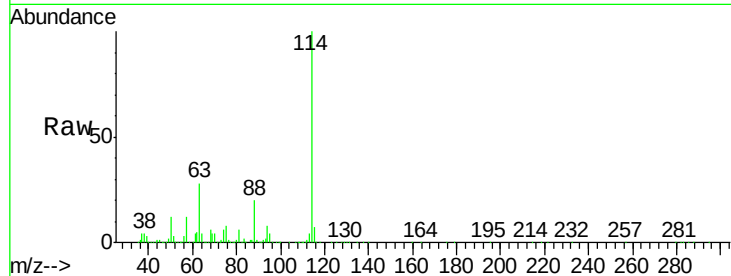
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.19 min Scan# 1370
 Delta R.T. 0.04 min
 Lab File: VL036368.D
 Acq: 25 Feb 2021 2:45

Instrument :
 MSVOA_L
 ClientSampleId :
 NS-3

Tot Ion	Ratio	Lower	Upper
114	100		
63	29.4	24.1	36.1
88	19.7	16.0	24.0

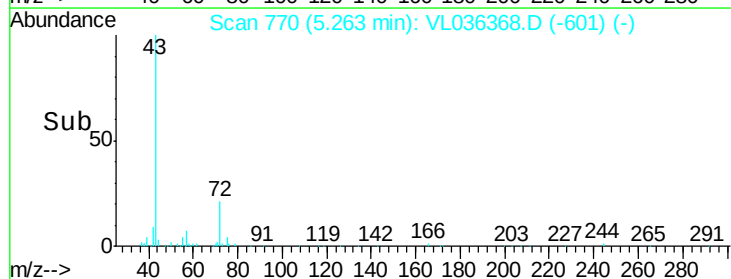
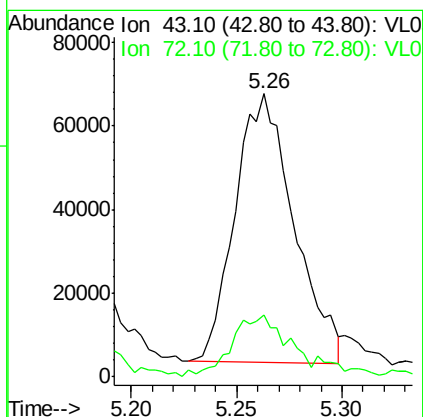
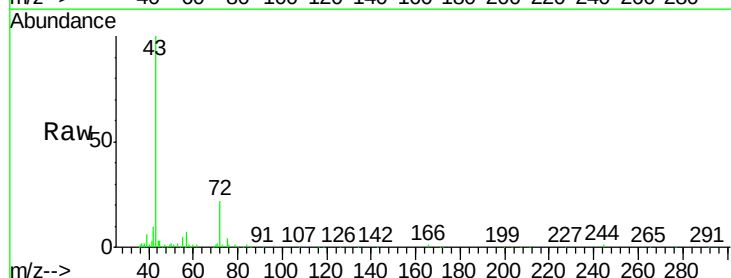
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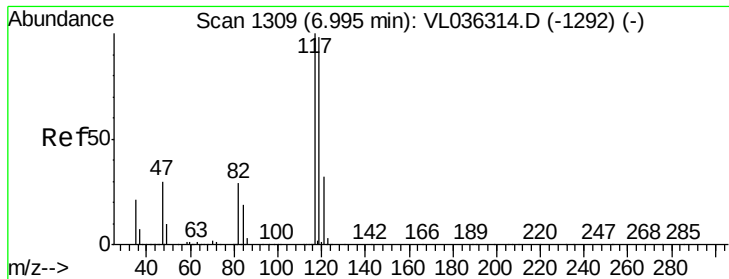
MMDadoda
 2/26/2021 4:18:01 PM



#34
 2-Butanone
 Concen: 0.512 ppbv
 RT: 5.26 min Scan# 770
 Delta R.T. 0.04 min
 Lab File: VL036368.D
 Acq: 25 Feb 2021 2:45

Tgt Ion	Ratio	Lower	Upper
43	100		
72	26.8	16.7	25.1#





#35

Carbon Tetrachloride

Concen: 0.057 ppbv m

RT: 7.03 min Scan# 1321

Delta R.T. 0.04 min

Lab File: VL036368.D

Acq: 25 Feb 2021 2:45

Instrument :

MSVOA_L

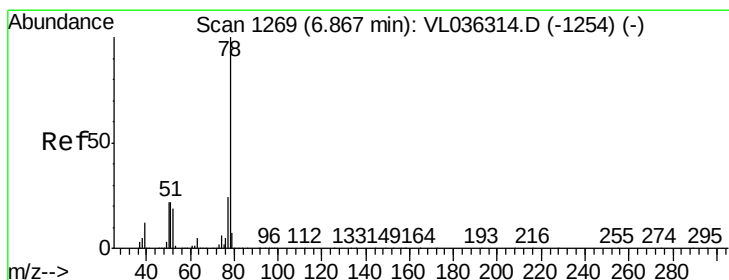
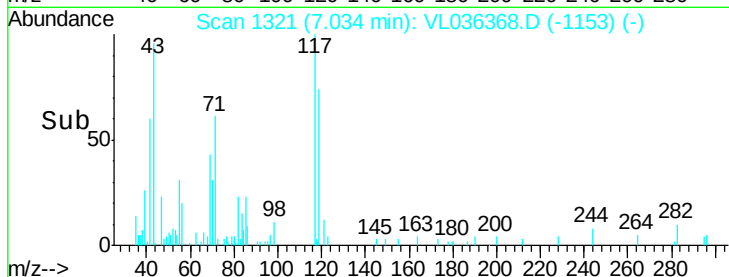
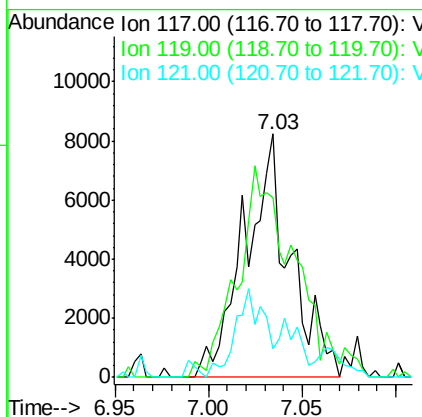
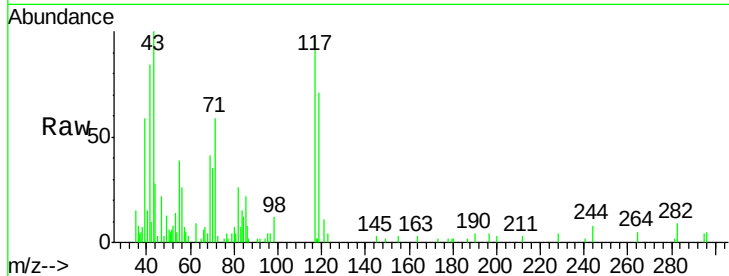
ClientSampled :

NS-3

Tot Ion:	117	Resp:	13954
Ion Ratio	Lower	Upper	
117	100		
119	74.0	78.1	117.1#
121	11.5	25.8	38.8#

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#36

Benzene

Concen: 0.443 ppbv

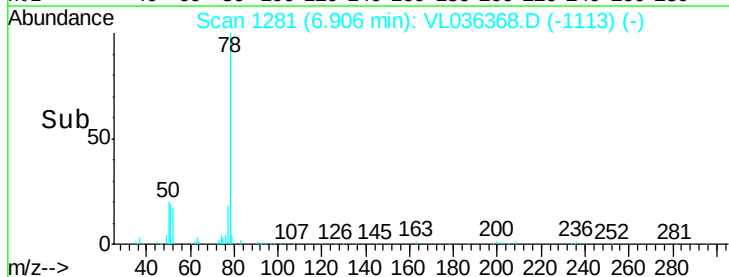
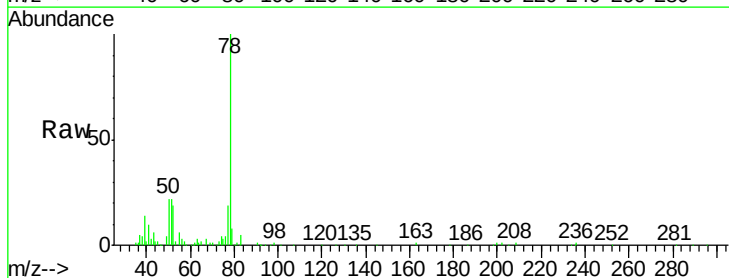
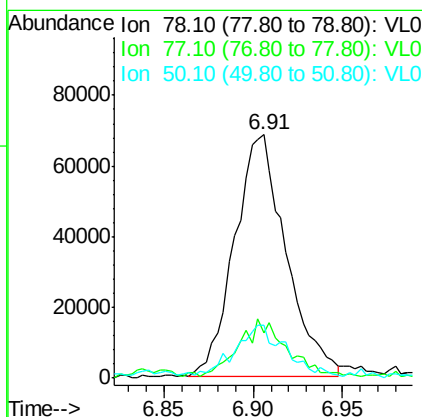
RT: 6.91 min Scan# 1281

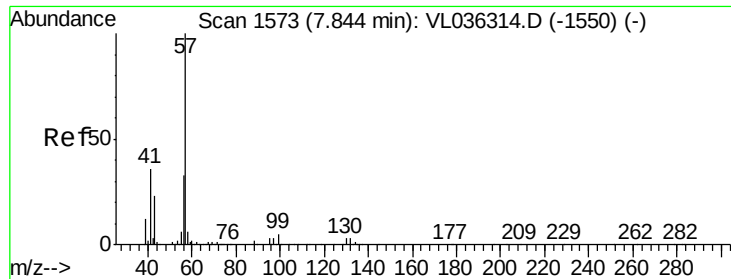
Delta R.T. 0.04 min

Lab File: VL036368.D

Acq: 25 Feb 2021 2:45

Tgt Ion:	78	Resp:	138573
Ion Ratio	Lower	Upper	
78	100		
77	16.2	18.9	28.3#
50	20.5	17.3	25.9





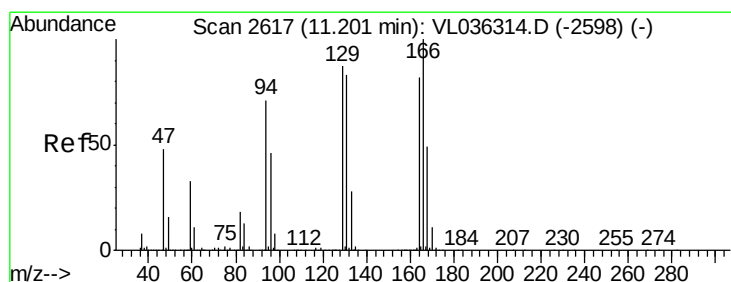
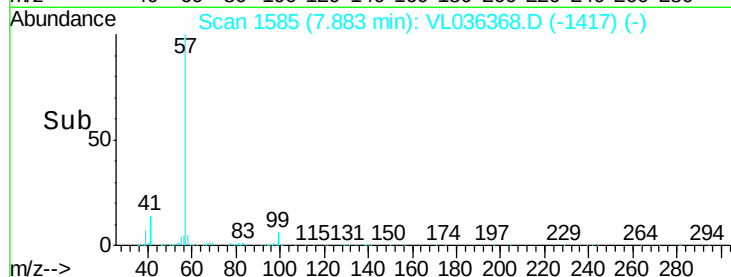
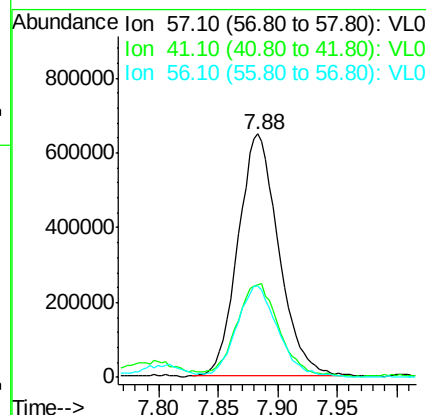
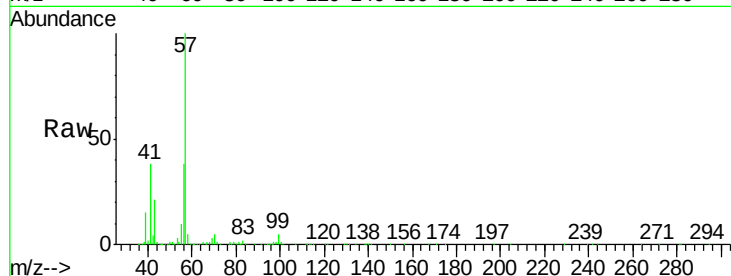
#44
2,2,4-Trimethylpentane
Concen: 2.699 ppbv
RT: 7.88 min Scan# 1585
Delta R.T. 0.04 min
Lab File: VL036368.D
Acq: 25 Feb 2021 2:45

Instrument :
MSVOA_L
ClientSampled :
NS-3

Tot Ion	Ratio	Lower	Upper
57	100		
41	41.5	28.8	43.2
56	38.4	25.8	38.6

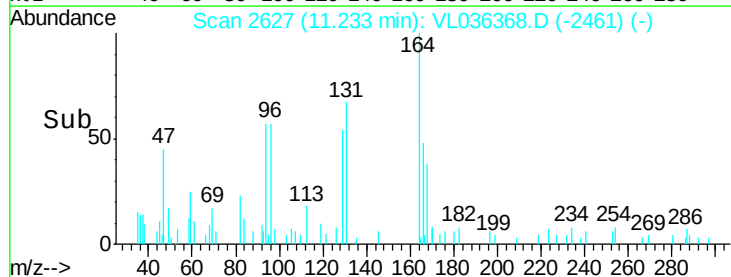
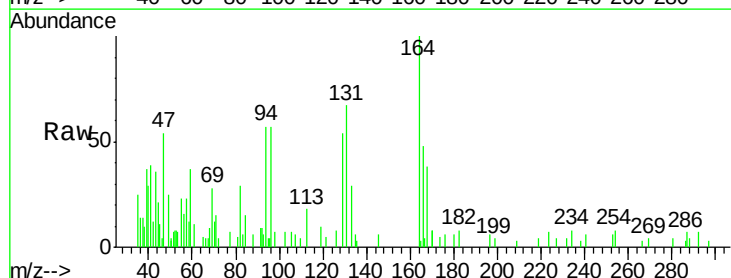
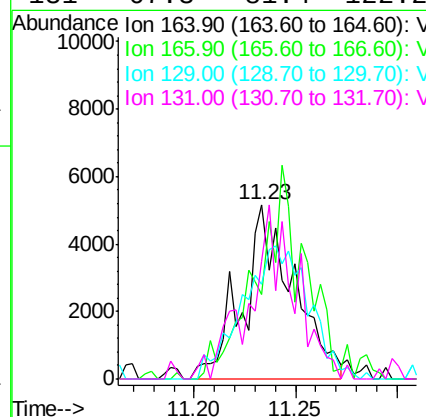
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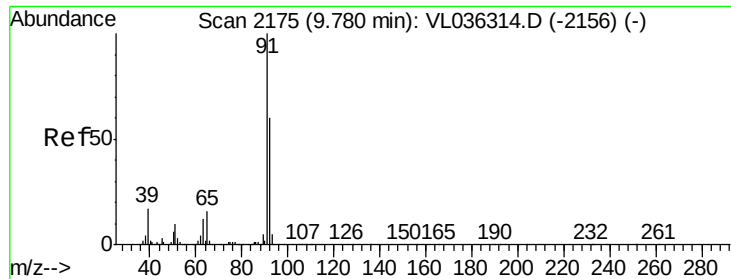
MMDadoda
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#52
Tetrachloroethene
Concen: 0.078 ppbv m
RT: 11.23 min Scan# 2627
Delta R.T. 0.03 min
Lab File: VL036368.D
Acq: 25 Feb 2021 2:45

Tgt Ion	Ratio	Lower	Upper
164	100		
166	48.3	97.8	146.8#
129	54.0	84.9	127.3#
131	67.3	81.4	122.2#





#53

Toluene

Concen: 6.671 ppbv

RT: 9.82 min Scan# 2188

Delta R.T. 0.04 min

Lab File: VL036368.D

Acq: 25 Feb 2021 2:45

Instrument :

MSVOA_L

ClientSampled :

NS-3

Tot Ion: 91 Resp: 2257919

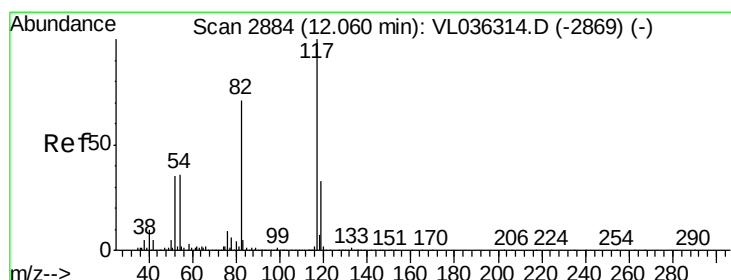
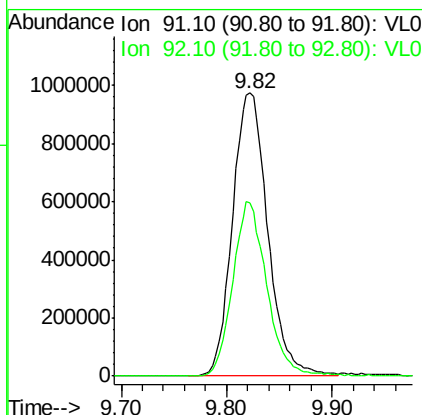
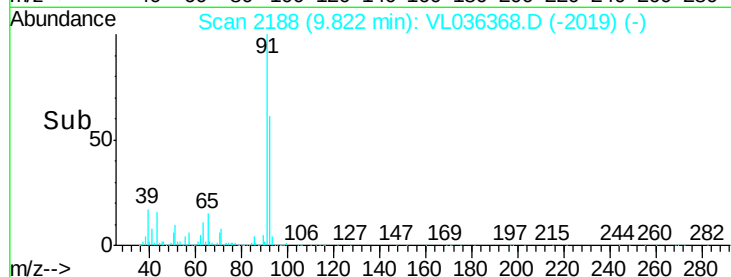
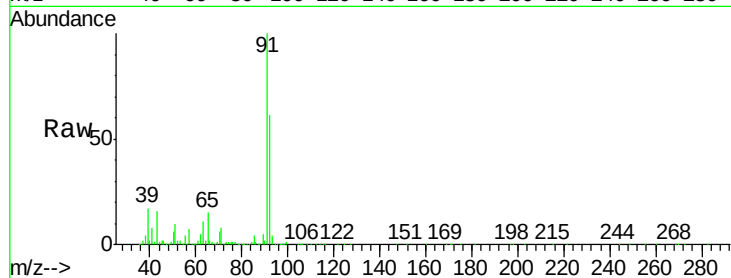
Ion Ratio Lower Upper

91 100

92 59.9 48.6 72.8

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#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.10 min Scan# 2898

Delta R.T. 0.05 min

Lab File: VL036368.D

Acq: 25 Feb 2021 2:45

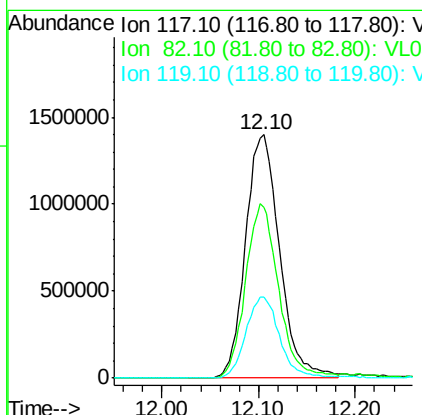
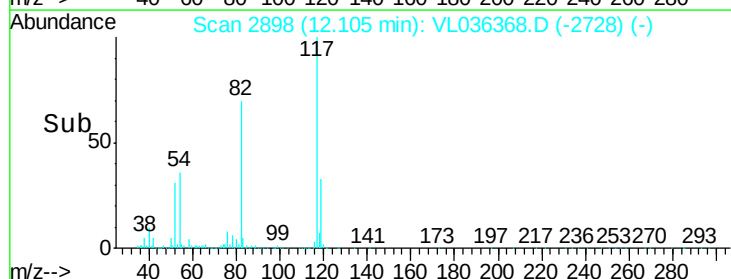
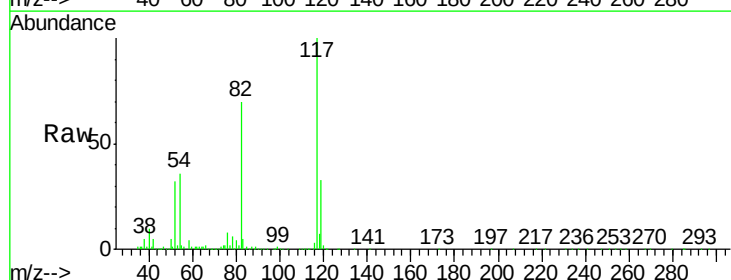
Tgt Ion: 117 Resp: 3433867

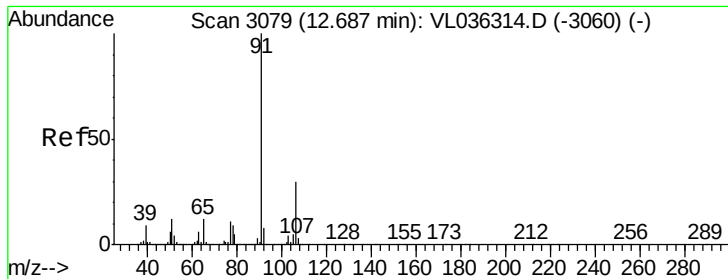
Ion Ratio Lower Upper

117 100

82 72.4 59.1 88.7

119 33.3 46.3 69.5#





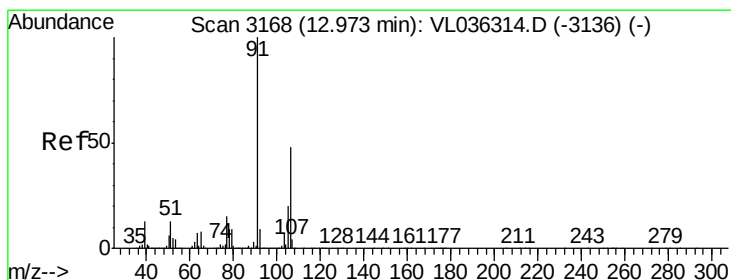
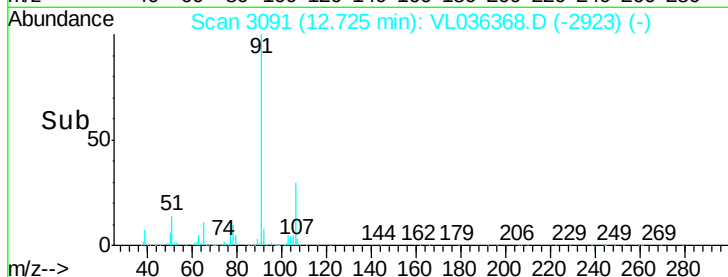
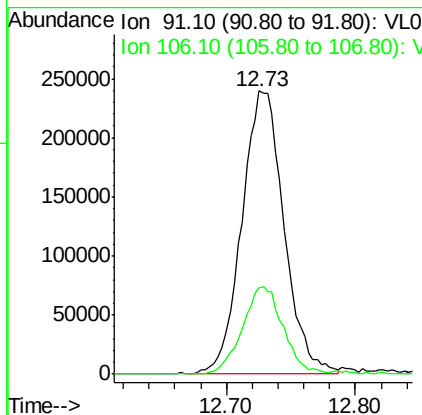
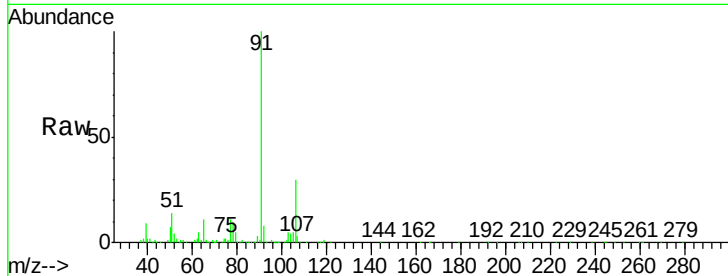
#58
Ethyl Benzene
Concen: 1.154 ppbv
RT: 12.73 min Scan# 3091
Delta R.T. 0.04 min
Lab File: VL036368.D
Acq: 25 Feb 2021 2:45

Instrument :
MSVOA_L
ClientSampled :
NS-3

Tot Ion: 91 Resp: 542797
Ion Ratio Lower Upper
91 100
106 30.5 23.8 35.6

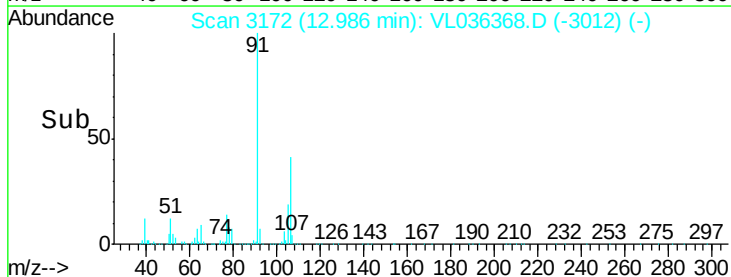
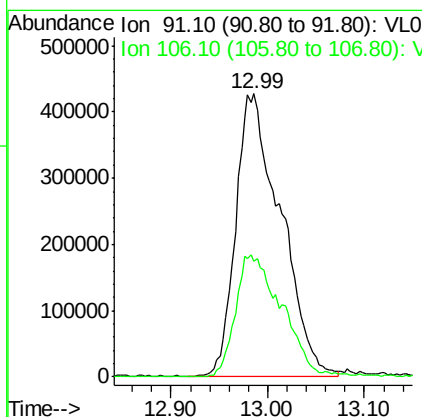
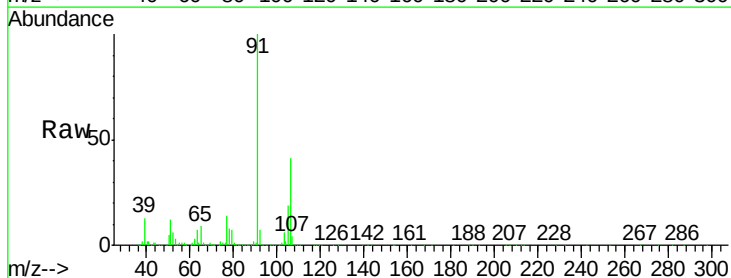
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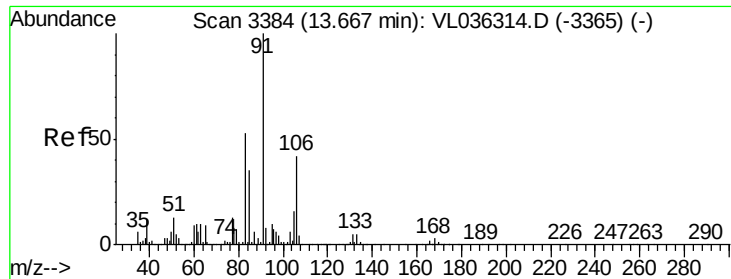
MMDadoda
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#59
m/p-Xylene
Concen: 3.317 ppbv
RT: 12.99 min Scan# 3172
Delta R.T. 0.01 min
Lab File: VL036368.D
Acq: 25 Feb 2021 2:45

Tgt Ion: 91 Resp: 1369870
Ion Ratio Lower Upper
91 100
106 45.5 34.2 51.2





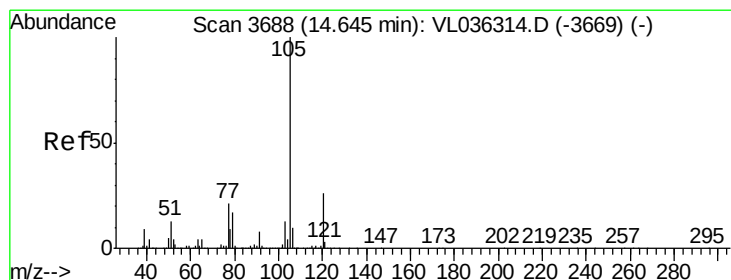
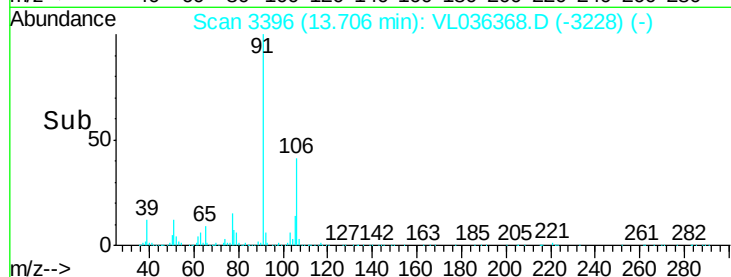
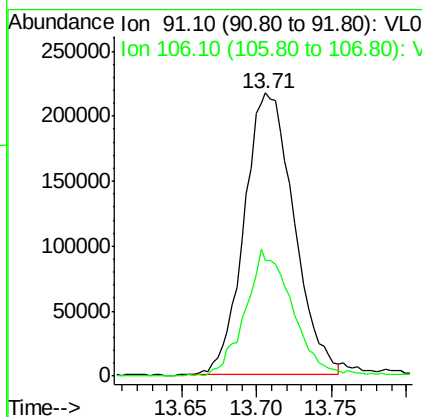
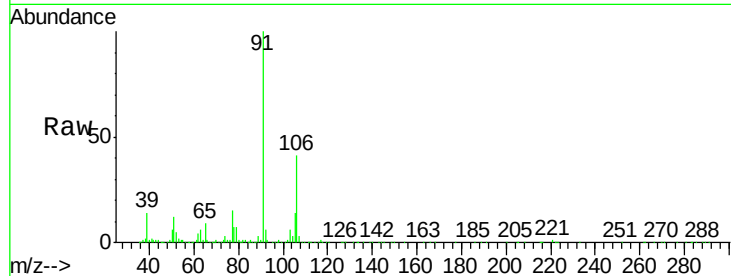
#60
o-Xylene
Concen: 1.265 ppbv
RT: 13.71 min Scan# 3396
Delta R.T. 0.04 min
Lab File: VL036368.D
Acq: 25 Feb 2021 2:45

Instrument :
MSVOA_L
ClientSampled :
NS-3

Tot Ion: 91 Resp: 499572
Ion Ratio Lower Upper
91 100
106 43.6 22.0 66.0

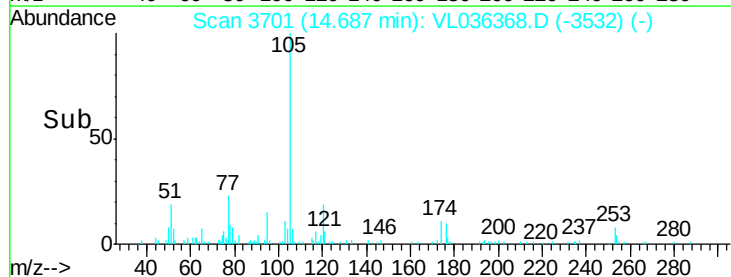
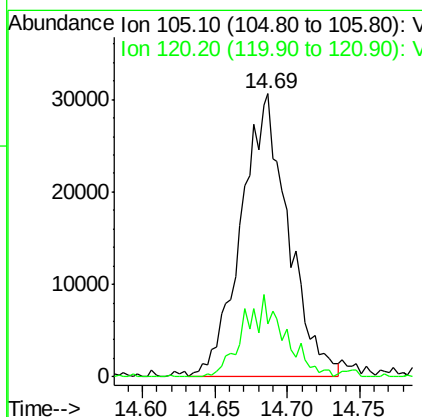
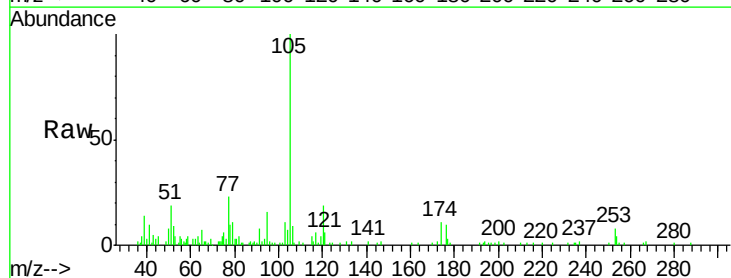
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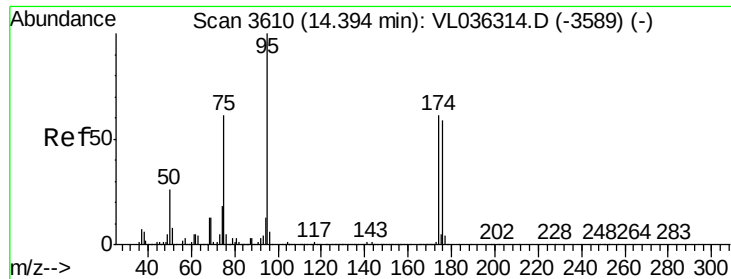
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#62
Isopropylbenzene
Concen: 0.117 ppbv
RT: 14.69 min Scan# 3701
Delta R.T. 0.04 min
Lab File: VL036368.D
Acq: 25 Feb 2021 2:45

Tgt Ion: 105 Resp: 69339
Ion Ratio Lower Upper
105 100
120 25.9 20.6 30.8





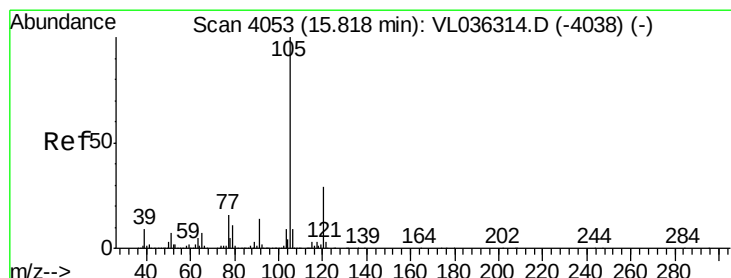
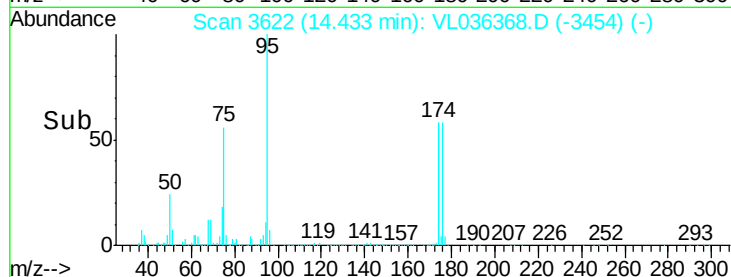
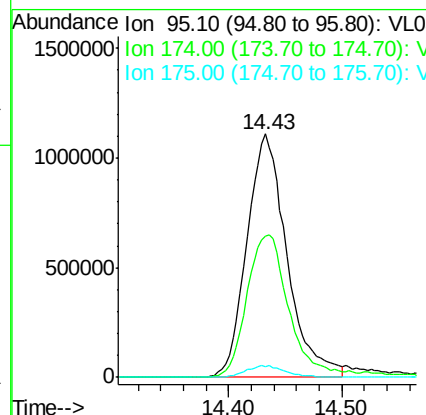
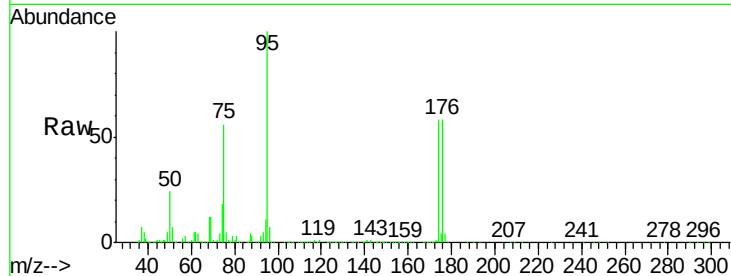
#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.656 ppbv
 RT: 14.43 min Scan# 3622
 Delta R.T. 0.04 min
 Lab File: VL036368.D
 Acq: 25 Feb 2021 2:45

Instrument :
 MSVOA_L
 ClientSampled :
 NS-3

Tot Ion: 95 Resp: 2728118
 Ion Ratio Lower Upper
 95 100
 174 64.8 49.8 74.6
 175 4.9 3.7 5.5

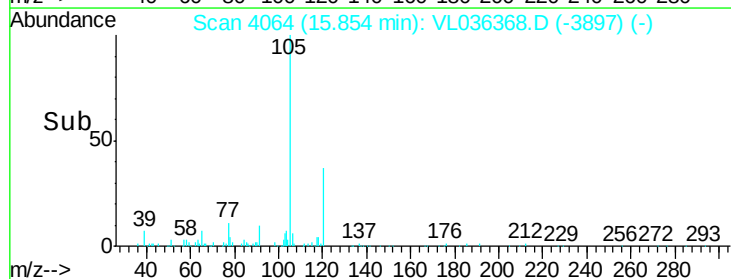
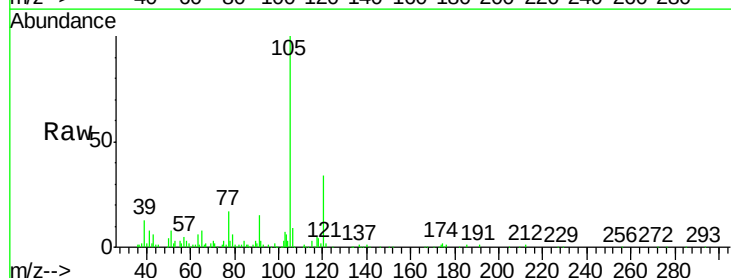
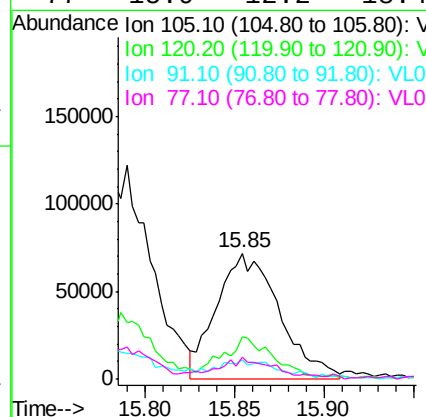
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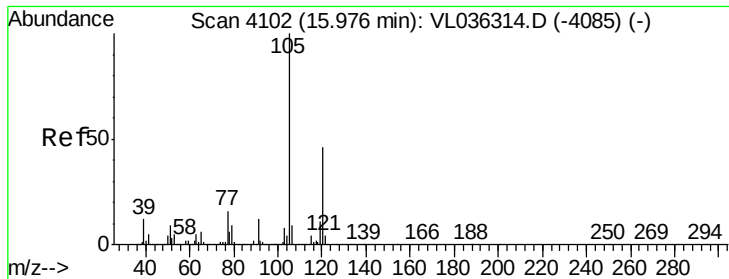
MMDadoda
 2/26/2021 4:18:01 PM



#72
 4-Ethyltoluene
 Concen: 0.397 ppbv m
 RT: 15.85 min Scan# 4064
 Delta R.T. 0.04 min
 Lab File: VL036368.D
 Acq: 25 Feb 2021 2:45

Tgt Ion: 105 Resp: 174675
 Ion Ratio Lower Upper
 105 100
 120 29.4 23.2 34.8
 91 14.0 11.0 16.4
 77 15.9 12.2 18.4





#73

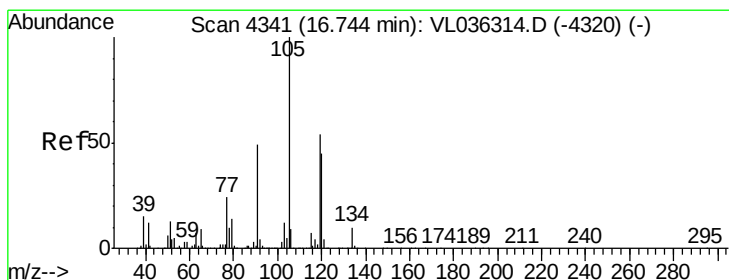
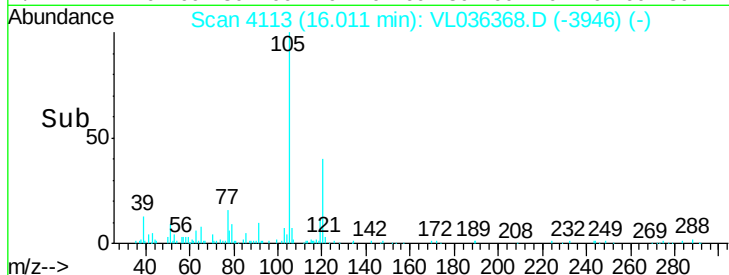
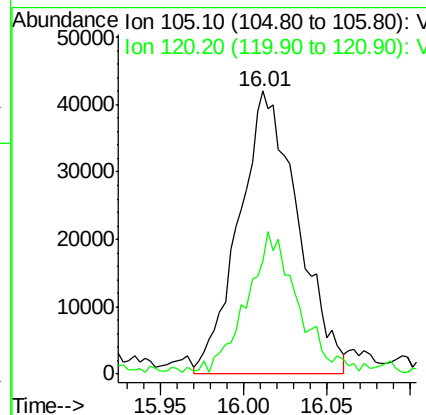
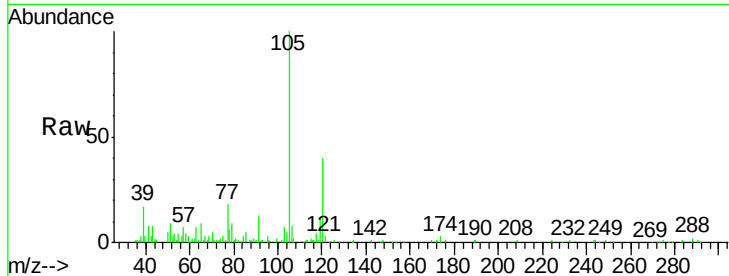
1,3,5-Trimethylbenzene
Concen: 0.244 ppbv m
RT: 16.01 min Scan# 4113
Delta R.T. 0.04 min
Lab File: VL036368.D
Acq: 25 Feb 2021 2:45

Instrument :
MSVOA_L
ClientSampled :
NS-3

Tot Ion	Ratio	Lower	Upper
105	100		
120	40.2	36.9	55.3

Manual Integrations
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#74

1,2,4-Trimethylbenzene
Concen: 1.217 ppbv
RT: 16.78 min Scan# 4352
Delta R.T. 0.04 min
Lab File: VL036368.D
Acq: 25 Feb 2021 2:45

Tgt Ion	Ratio	Lower	Upper
105	100		
120	42.2	35.8	53.6
91	12.0	39.8	59.6#
77	16.7	19.1	28.7#

