

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL091620\
 Data File : VL035632.D
 Acq On : 16 Sep 2020 17:07
 Operator : SY/AP
 Sample : L4026-02
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 TRC-IA-02

Manual Integrations
 APPROVED

MMDadoda
 9/17/2020 1:52:31 PM

Quant Time: Sep 17 10:35:54 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL082720AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Sep 14 2020
 QLast Update : Mon Sep 14 15:19:50 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1033947	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	4035351	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	4101124	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	3128530	10.74	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	107.40%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	55066	0.307	ppbv	94
3) Chlorodifluoromethane	2.98	51	47680m	0.417	ppbv	
4) Chloromethane	3.13	50	33945	0.554	ppbv	96
9) Propene	3.01	41	24375	0.553	ppbv #	82
11) Trichlorofluoromethane	3.94	101	70128	0.268	ppbv	89
13) Ethanol	3.60	45	1365641	124.939	ppbv	97
15) Acetone	3.84	43	535379	4.695	ppbv	99
19) Isopropyl Alcohol	3.97	45	191231	2.811	ppbv #	93
20) Methylene Chloride	4.34	84	256216	3.017	ppbv	94
26) Hexane	5.68	57	96091	0.842	ppbv #	51
34) 2-Butanone	5.24	43	37754	0.315	ppbv	92
35) Carbon Tetrachloride	7.01	117	16135	0.080	ppbv	90
36) Benzene	6.89	78	35292	0.135	ppbv #	95
44) 2,2,4-Trimethylpentane	7.87	57	36366m	0.106	ppbv	
52) Tetrachloroethene	11.22	164	8384m	0.055	ppbv	
53) Toluene	9.81	91	339352	1.033	ppbv	96
58) Ethyl Benzene	12.72	91	55039	0.130	ppbv	90
59) m/p-Xylene	12.97	91	242996m	0.688	ppbv	
60) o-Xylene	13.70	91	94608m	0.266	ppbv	
72) 4-Ethyltoluene	15.85	105	60474m	0.134	ppbv	
73) 1,3,5-Trimethylbenzene	16.00	105	97591	0.233	ppbv #	85
74) 1,2,4-Trimethylbenzene	16.77	105	295845	0.644	ppbv #	68
76) 1,4-Dichlorobenzene	17.15	146	40579	0.121	ppbv #	79
79) Naphthalene	22.23	128	51360	0.101	ppbv #	92

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

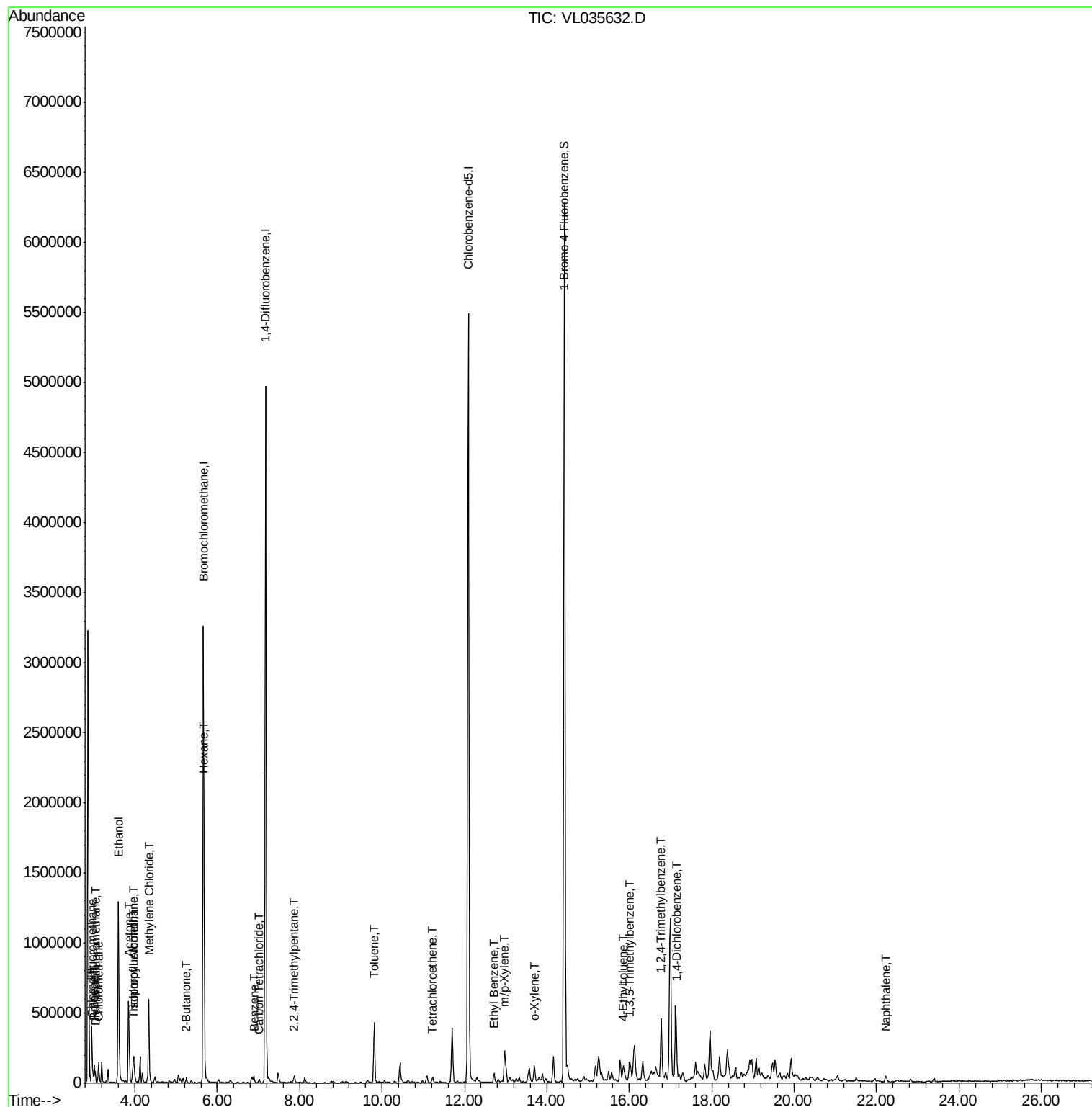
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL091620\
Data File : VL035632.D
Acq On : 16 Sep 2020 17:07
Operator : SY/AP
Sample : L4026-02
Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
TRC-IA-02

Manual Integrations
APPROVED

MMDadoda
9/17/2020 1:52:31 PM

Quant Time: Sep 17 10:35:54 2020
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL082720AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Sep
QLast Update : Mon Sep 14 15:19:50 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.00 min

Lab File: VL035632.D

Acq: 16 Sep 2020 17:07

Instrument :

MSVOA_L

ClientSampleId :

TRC-IA-02

Tot Ion: 49 Resp: 1033947

Ion Ratio Lower Upper

49 100

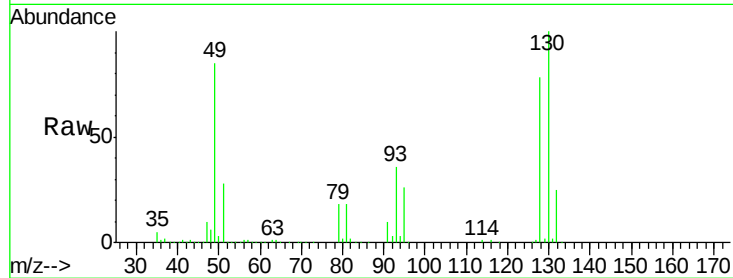
128 89.5 50.0 150.1

130 115.4 64.4 193.2

Manual Integrations
APPROVED

MMDadoda

9/17/2020 1:52:31 PM



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0

800000

600000

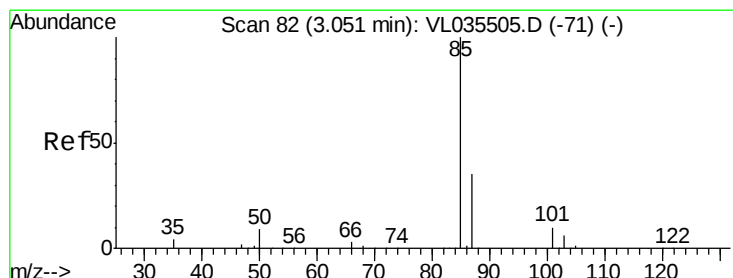
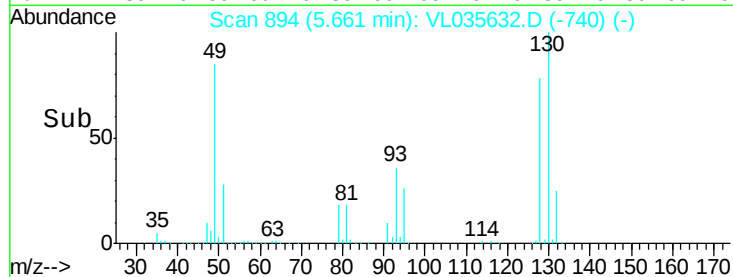
400000

200000

0

5.60 5.65 5.70 5.75

Time-->



#2

Dichlorodifluoromethane

Concen: 0.307 ppbv

RT: 3.04 min Scan# 79

Delta R.T. 0.01 min

Lab File: VL035632.D

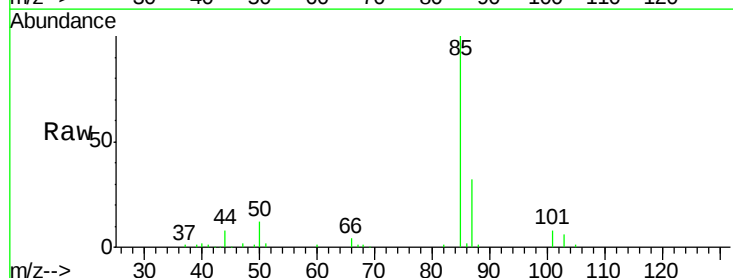
Acq: 16 Sep 2020 17:07

Tgt Ion: 85 Resp: 55066

Ion Ratio Lower Upper

85 100

87 31.7 28.0 42.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

50000

40000

30000

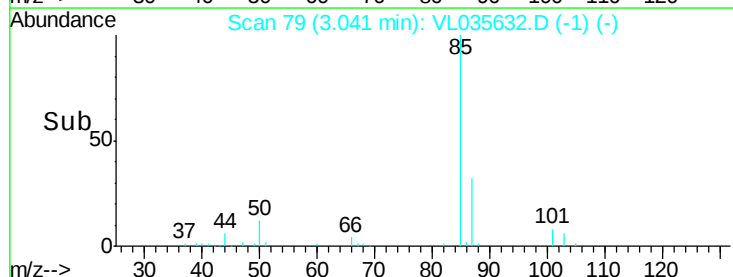
20000

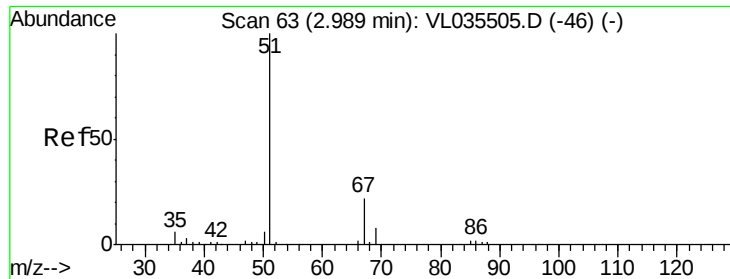
10000

0

3.00 3.05

Time-->





#3

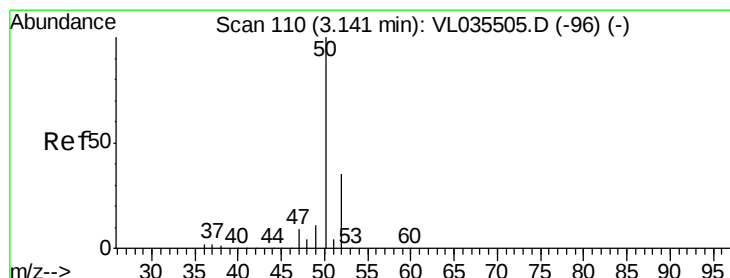
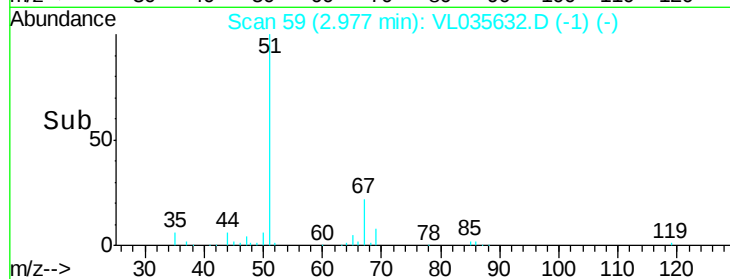
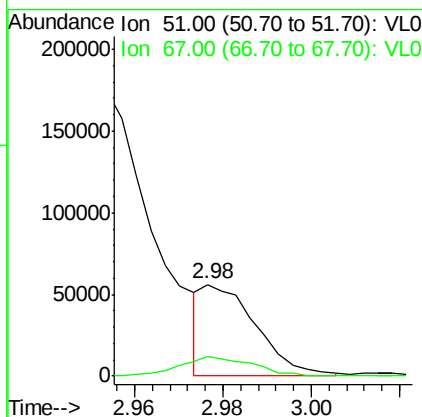
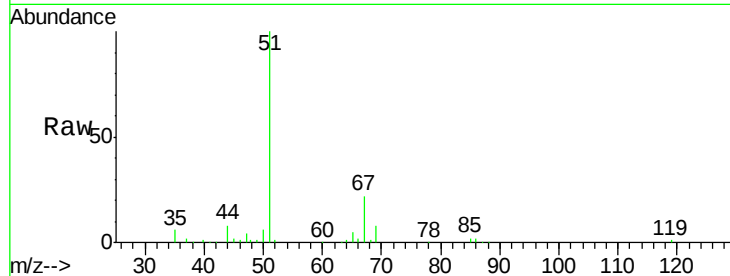
Chlorodifluoromethane
Concen: 0.417 ppbv
RT: 2.98 min Scan# 59
Delta R.T. 0.00 min
Lab File: VL035632.D
Acq: 16 Sep 2020 17:07

Instrument :
MSVOA_L
ClientSampleId :
TRC-IA-02

Tot Ion	51	Resp	47680
Ion Ratio	100	Lower	Upper
51	100		
67	29.7	17.8	26.8#

Manual Integrations
APPROVED

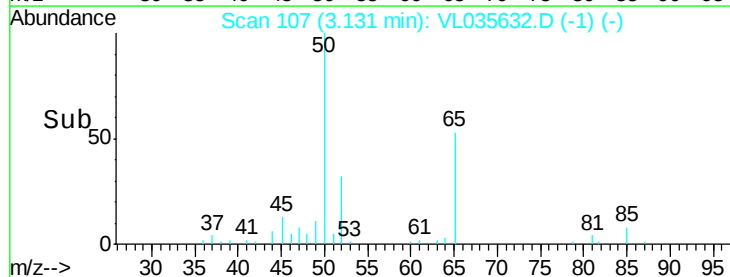
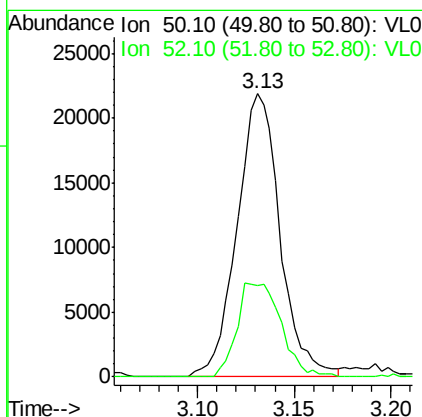
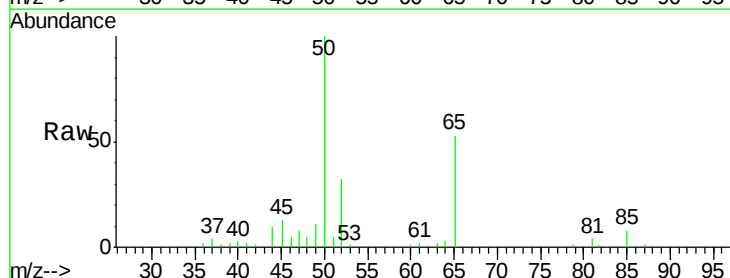
MMDadoda
9/17/2020 1:52:31 PM

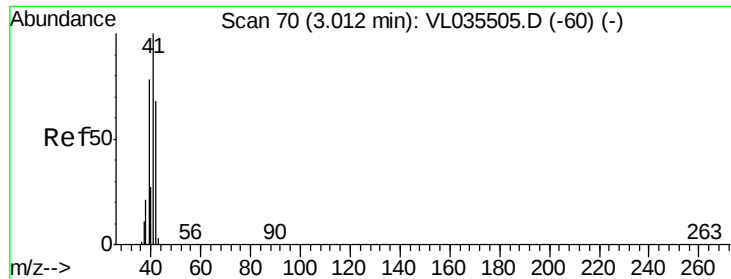


#4

Chloromethane
Concen: 0.554 ppbv
RT: 3.13 min Scan# 107
Delta R.T. 0.00 min
Lab File: VL035632.D
Acq: 16 Sep 2020 17:07

Tgt Ion	50	Resp	33945
Ion Ratio	100	Lower	Upper
50	100		
52	32.5	27.7	41.5





#9

Propene

Concen: 0.553 ppbv

RT: 3.01 min Scan# 70

Delta R.T. 0.02 min

Lab File: VL035632.D

Acq: 16 Sep 2020 17:07

Instrument :

MSVOA_L

ClientSampleId :

TRC-IA-02

Tot Ion: 41 Resp: 24375

Ion Ratio Lower Upper

41 100

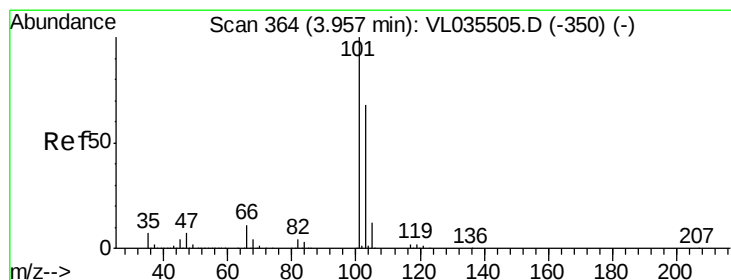
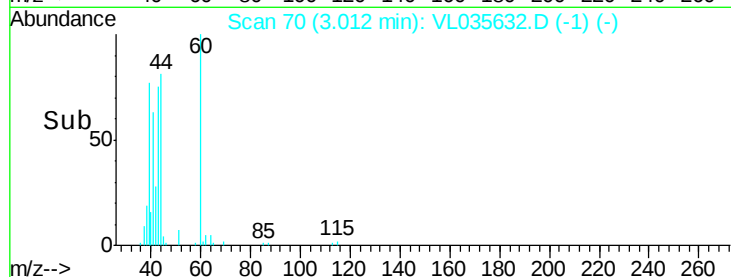
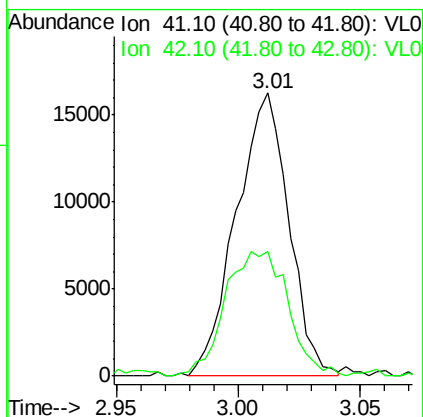
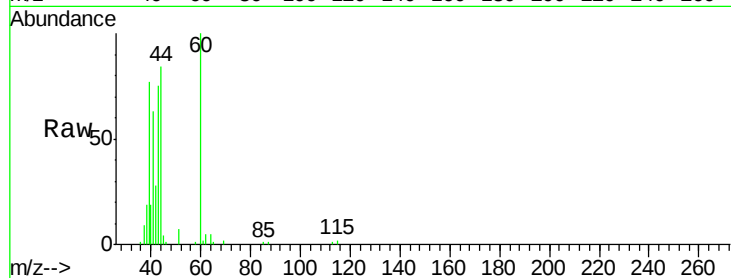
42 55.4 56.3 84.5#

Manual Integrations

APPROVED

MMDadoda

9/17/2020 1:52:31 PM



#11

Trichlorofluoromethane

Concen: 0.268 ppbv

RT: 3.94 min Scan# 360

Delta R.T. 0.00 min

Lab File: VL035632.D

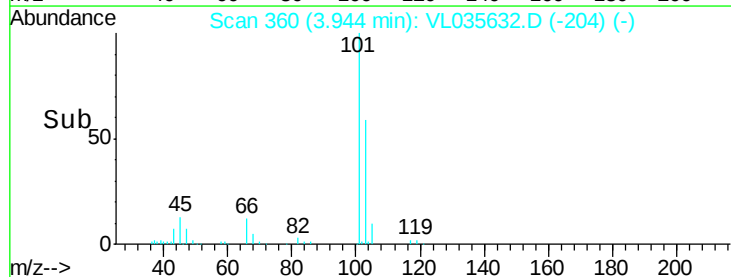
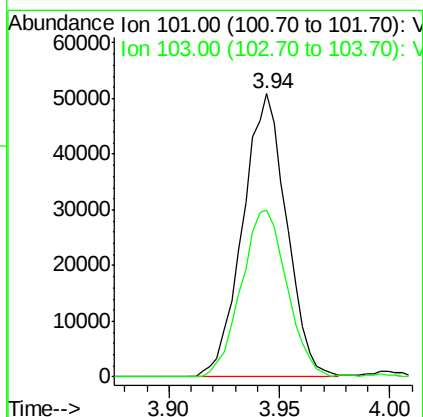
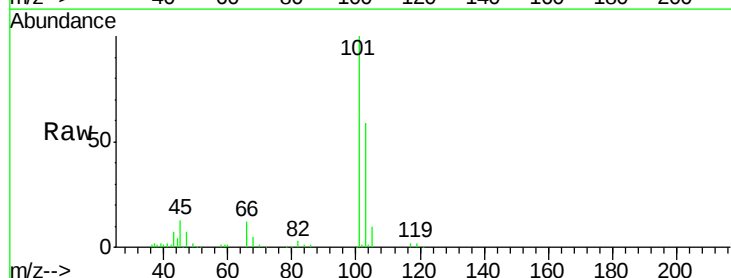
Acq: 16 Sep 2020 17:07

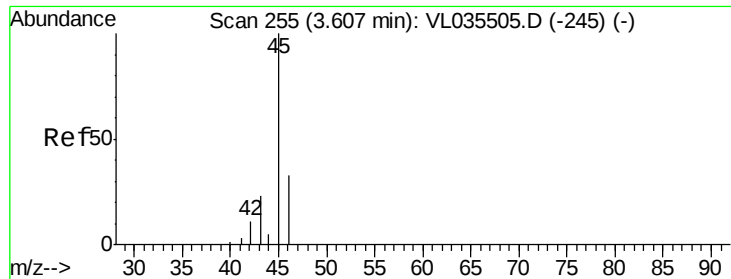
Tgt Ion: 101 Resp: 70128

Ion Ratio Lower Upper

101 100

103 59.1 54.5 81.7





#13

Ethanol

Concen: 124.939 ppbv

RT: 3.60 min Scan# 252

Delta R.T. -0.00 min

Lab File: VL035632.D

Acq: 16 Sep 2020 17:07

Instrument :

MSVOA_L

ClientSampleId :

TRC-IA-02

Tot Ion: 45 Resp: 1365641

Ion Ratio Lower Upper

45 100

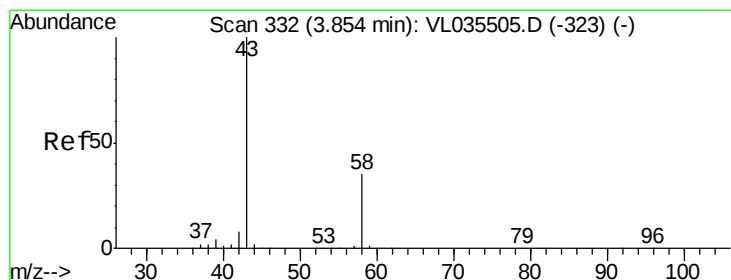
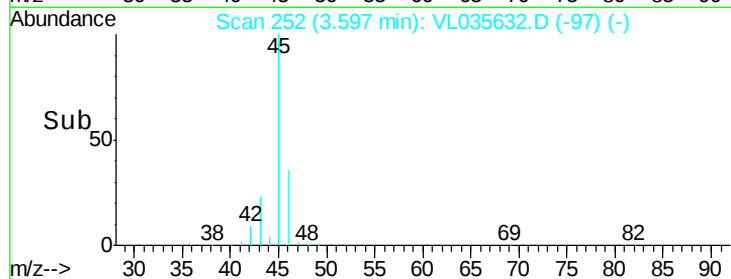
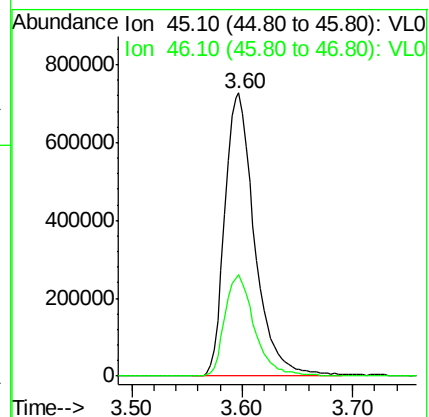
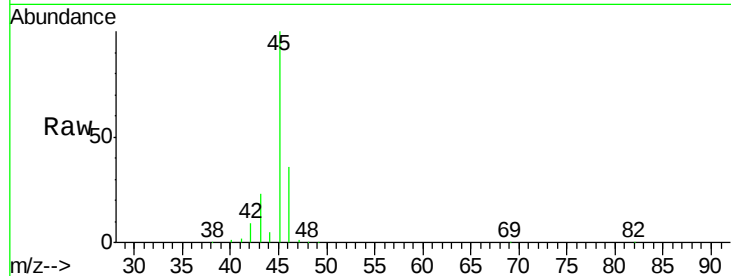
46 35.9 15.2 60.6

Manual Integrations

APPROVED

MMDadoda

9/17/2020 1:52:31 PM



#15

Acetone

Concen: 4.695 ppbv

RT: 3.84 min Scan# 329

Delta R.T. 0.01 min

Lab File: VL035632.D

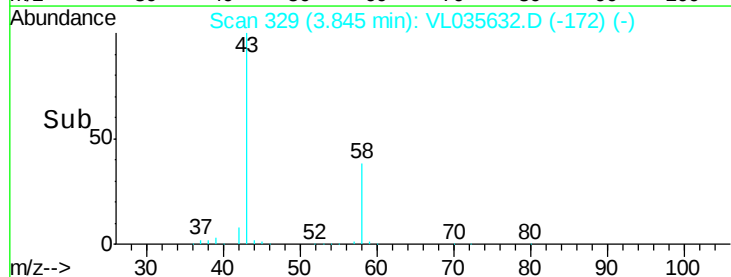
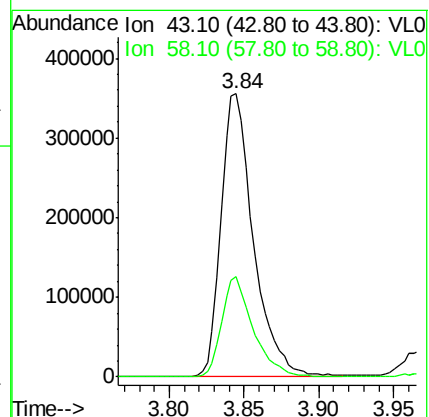
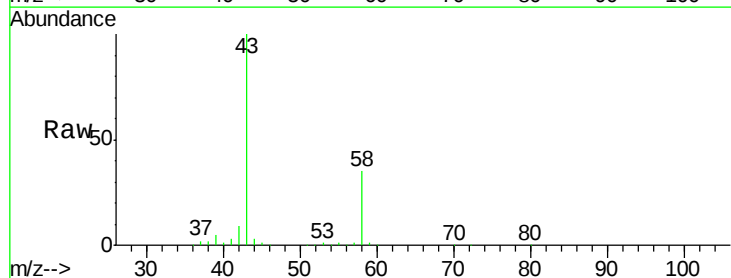
Acq: 16 Sep 2020 17:07

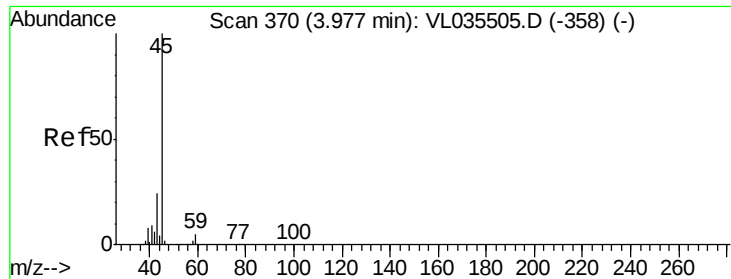
Tgt Ion: 43 Resp: 535379

Ion Ratio Lower Upper

43 100

58 34.8 28.4 42.6





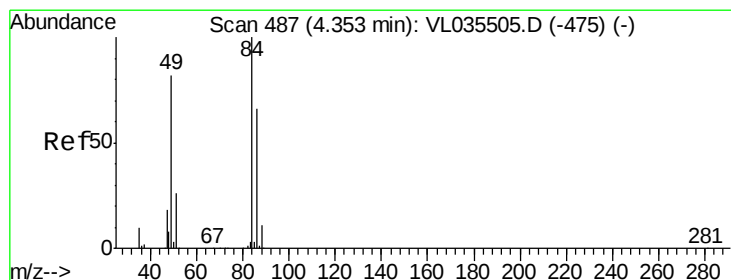
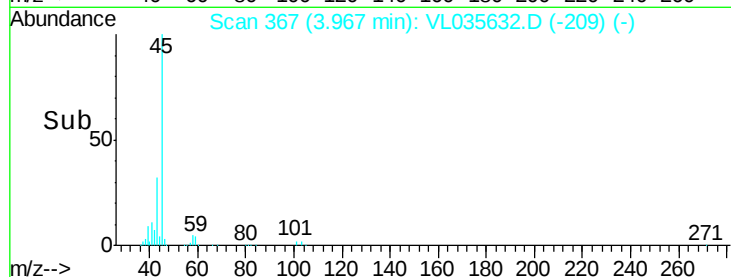
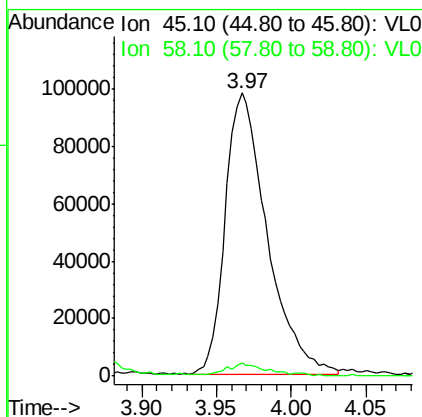
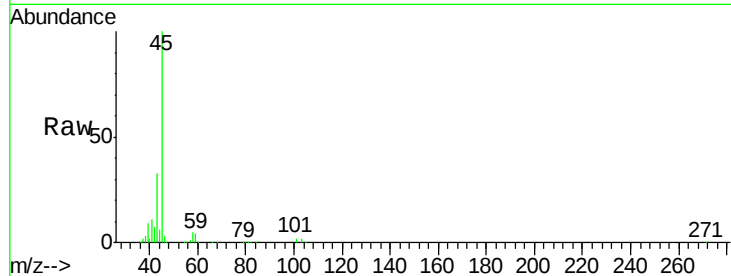
#19
Isopropyl Alcohol
Concen: 2.811 ppbv
RT: 3.97 min Scan# 367
Delta R.T. 0.01 min
Lab File: VL035632.D
Acq: 16 Sep 2020 17:07

Instrument :
MSVOA_L
ClientSampleId :
TRC-IA-02

Tot Ion	Ratio	Lower	Upper
45	100		
58	4.8	2.0	3.0#

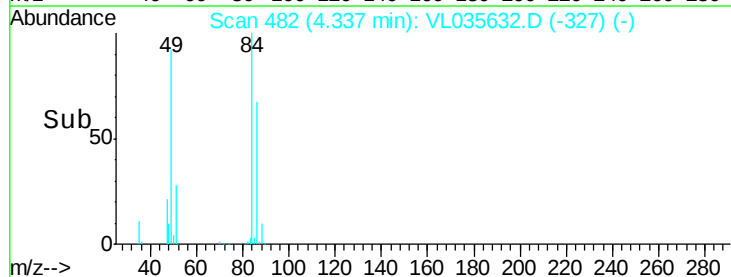
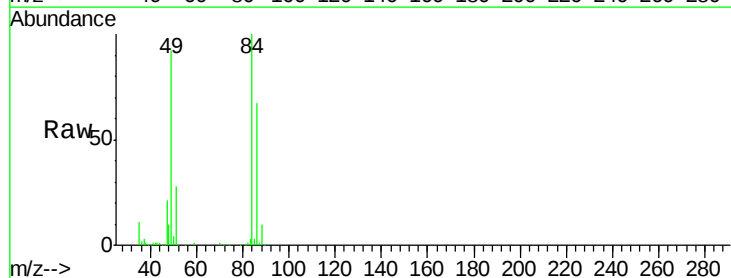
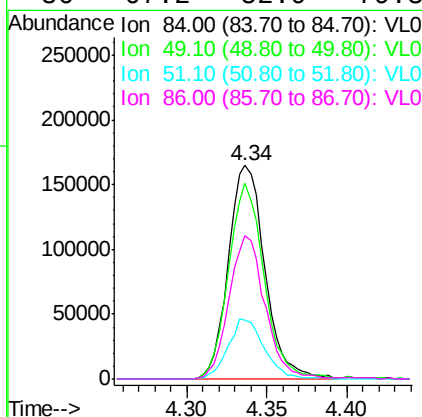
Manual Integrations
APPROVED

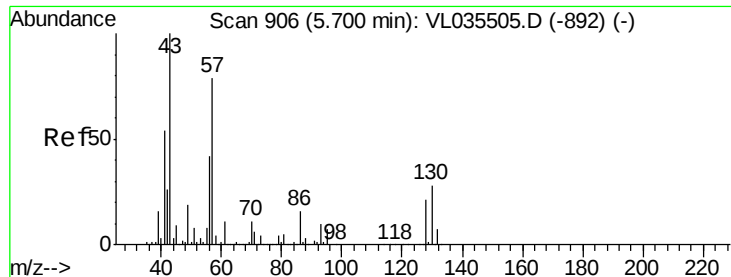
MMDadoda
9/17/2020 1:52:31 PM



#20
Methylene Chloride
Concen: 3.017 ppbv
RT: 4.34 min Scan# 482
Delta R.T. -0.00 min
Lab File: VL035632.D
Acq: 16 Sep 2020 17:07

Tgt Ion	Ratio	Lower	Upper
84	100		
49	91.5	65.4	98.0
51	27.5	21.5	32.3
86	67.2	52.9	79.3





#26

Hexane

Concen: 0.842 ppbv

RT: 5.68 min Scan# 901

Delta R.T. -0.00 min

Lab File: VL035632.D

Acq: 16 Sep 2020 17:07

Instrument :

MSVOA_L

ClientSampleId :

TRC-IA-02

Tot Ion: 57 Resp: 96091

Ion Ratio Lower Upper

57 100

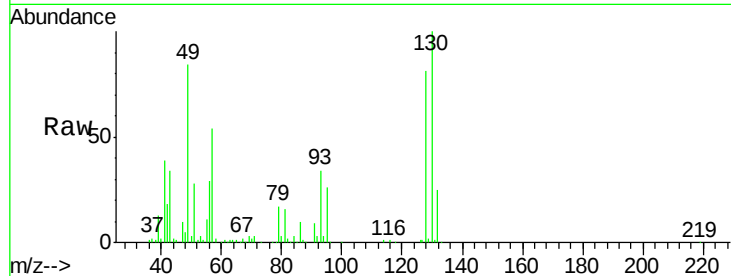
41 76.9 55.9 83.9

43 69.3 141.8 212.8#

56 58.5 41.8 62.8

Manual Integrations
APPROVED

MMDadoda
9/17/2020 1:52:31 PM

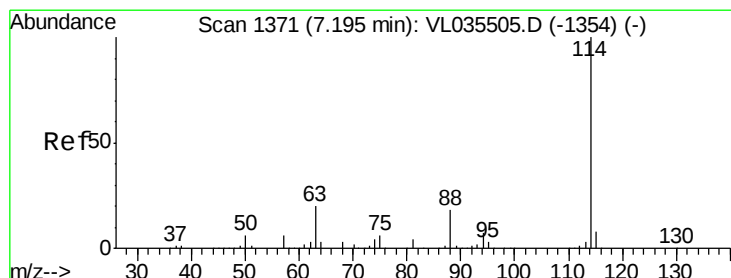
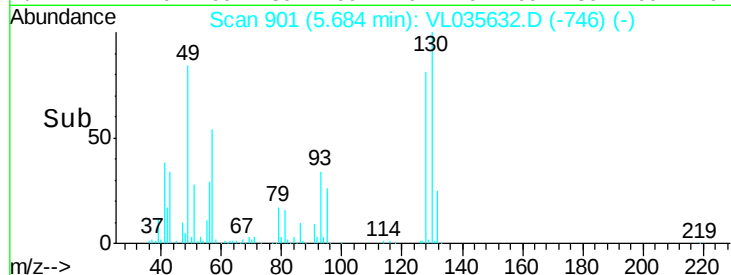
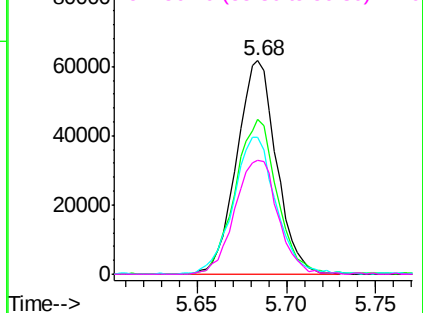


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 min Scan# 1364

Delta R.T. -0.00 min

Lab File: VL035632.D

Acq: 16 Sep 2020 17:07

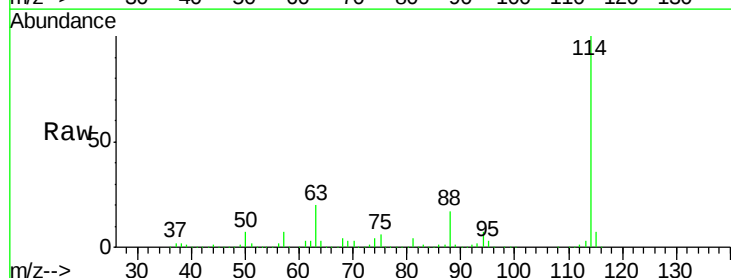
Tgt Ion: 114 Resp: 4035351

Ion Ratio Lower Upper

114 100

63 19.0 14.7 22.1

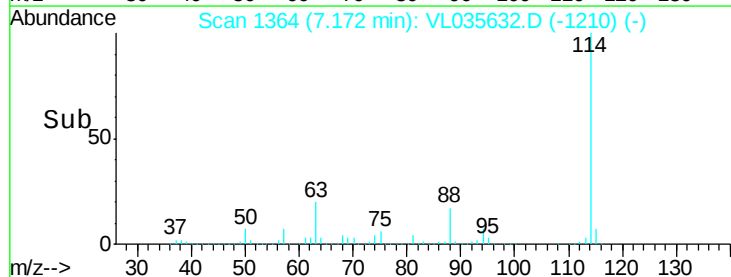
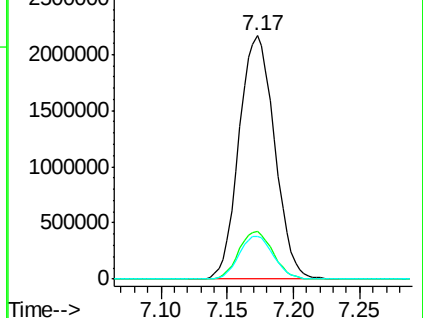
88 17.1 13.4 20.2

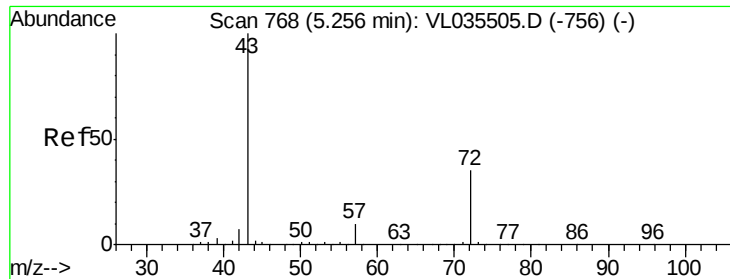


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0





#34

2-Butanone

Concen: 0.315 ppbv

RT: 5.24 min Scan# 764

Delta R.T. 0.00 min

Lab File: VL035632.D

Acq: 16 Sep 2020 17:07

Instrument :

MSVOA_L

ClientSampleId :

TRC-IA-02

Tot Ion: 43 Resp: 37754

Ion Ratio Lower Upper

43 100

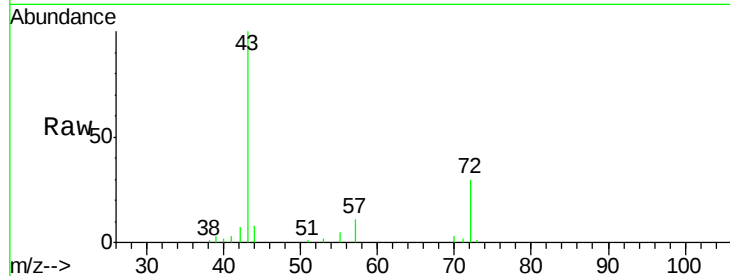
72 29.9 27.7 41.5

Manual Integrations

APPROVED

MMDadoda

9/17/2020 1:52:31 PM



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

25000

20000

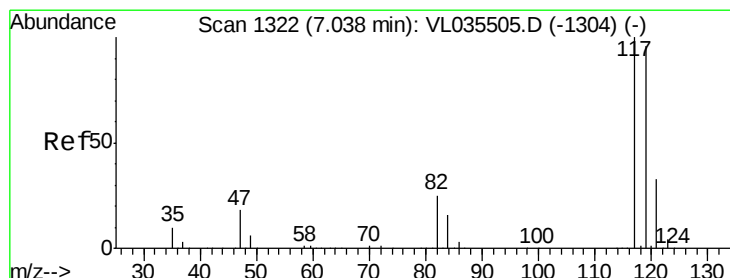
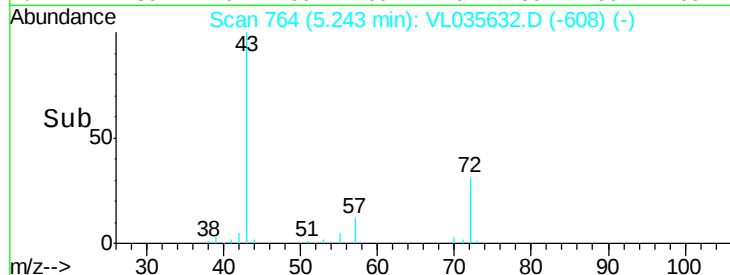
15000

10000

5000

0

Time-->



#35

Carbon Tetrachloride

Concen: 0.080 ppbv

RT: 7.01 min Scan# 1314

Delta R.T. -0.01 min

Lab File: VL035632.D

Acq: 16 Sep 2020 17:07

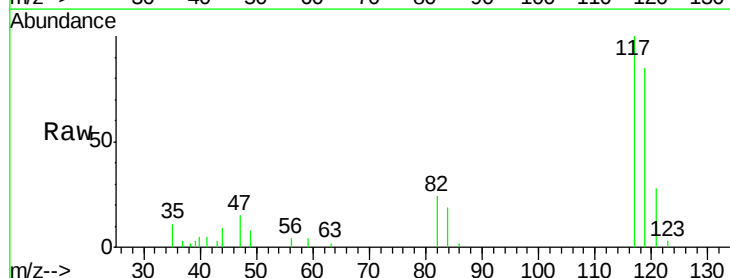
Tgt Ion: 117 Resp: 16135

Ion Ratio Lower Upper

117 100

119 85.3 77.2 115.8

121 28.3 26.1 39.1



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V

12000

10000

8000

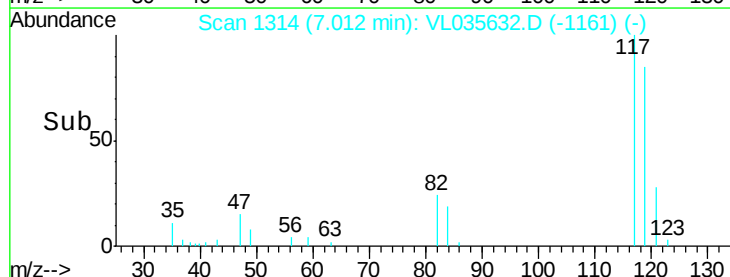
6000

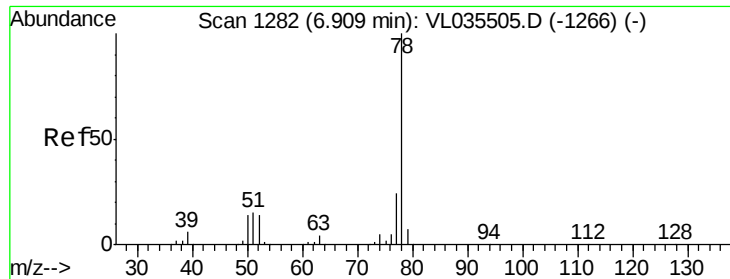
4000

2000

0

Time-->





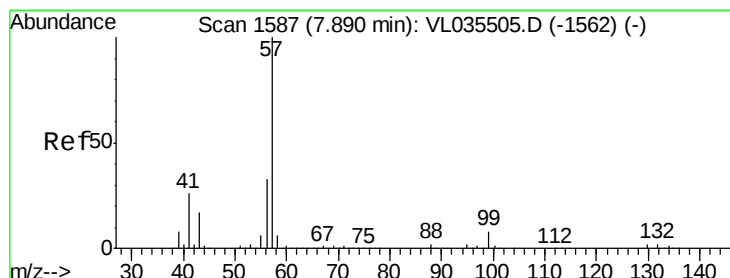
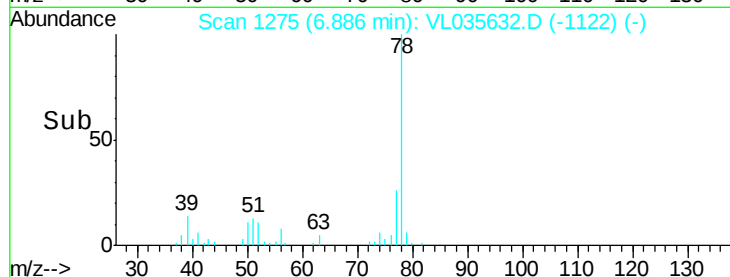
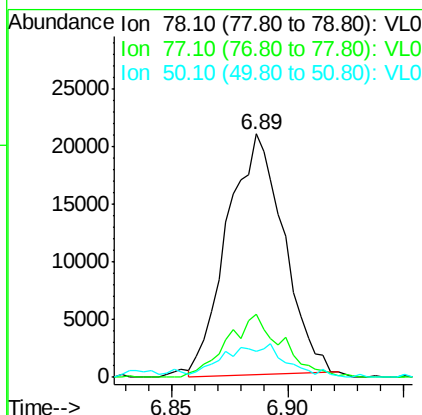
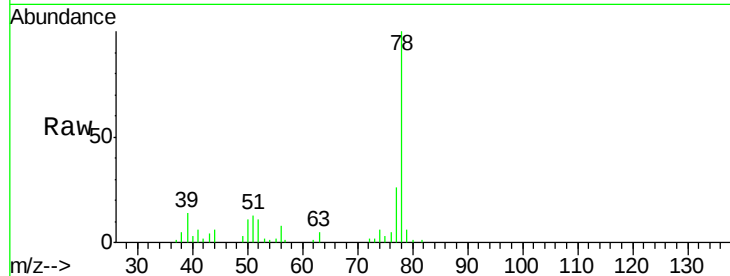
#36
Benzene
Concen: 0.135 ppbv
RT: 6.89 min Scan# 1275
Delta R.T. -0.01 min
Lab File: VL035632.D
Acq: 16 Sep 2020 17:07

Instrument :
MSVOA_L
ClientSampleId :
TRC-IA-02

Tot Ion	Ratio	Lower	Upper
78	100		
77	25.5	19.3	28.9
50	10.4	11.0	16.6

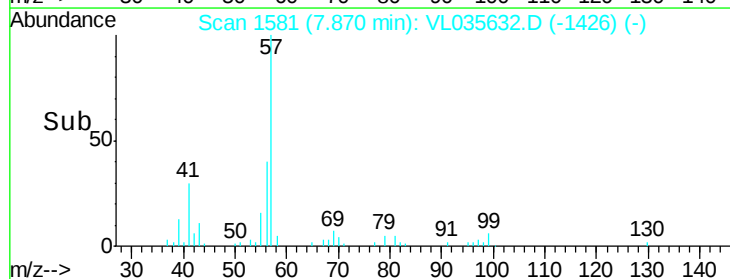
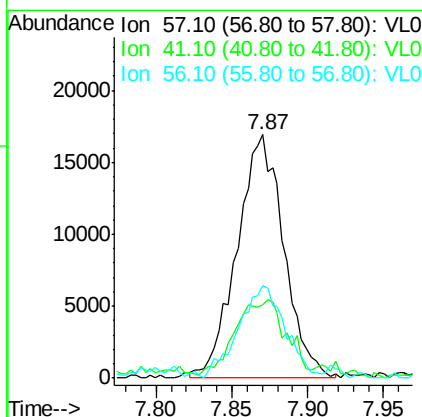
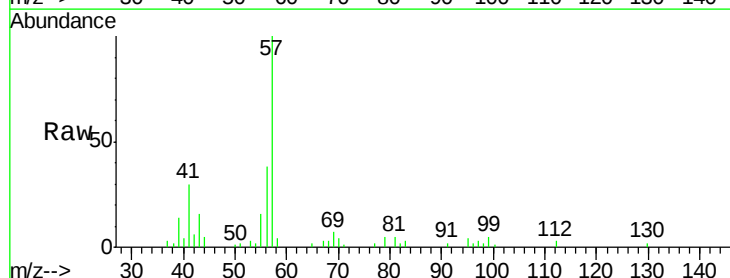
Manual Integrations
APPROVED

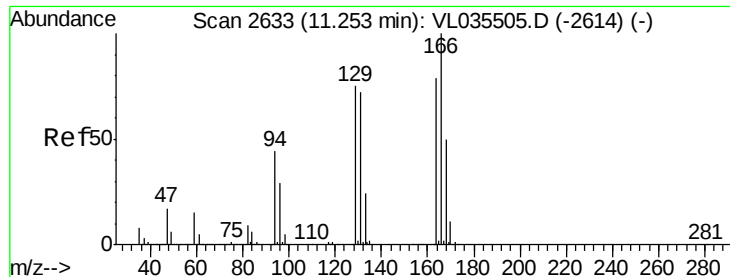
MMDadoda
9/17/2020 1:52:31 PM



#44
2,2,4-Trimethylpentane
Concen: 0.106 ppbv m
RT: 7.87 min Scan# 1581
Delta R.T. -0.00 min
Lab File: VL035632.D
Acq: 16 Sep 2020 17:07

Tgt Ion	Ratio	Lower	Upper
57	100		
41	0.0	20.5	30.7
56	40.0	25.3	37.9





#52

Tetrachloroethene

Concen: 0.055 ppbv m

RT: 11.22 min Scan# 2623

Delta R.T. -0.01 min

Lab File: VL035632.D

Acq: 16 Sep 2020 17:07

Instrument :

MSVOA_L

ClientSampleId :

TRC-IA-02

Tot Ion:164 Resp: 8384

Ion Ratio Lower Upper

164 100

166 100.0 100.9 151.3#

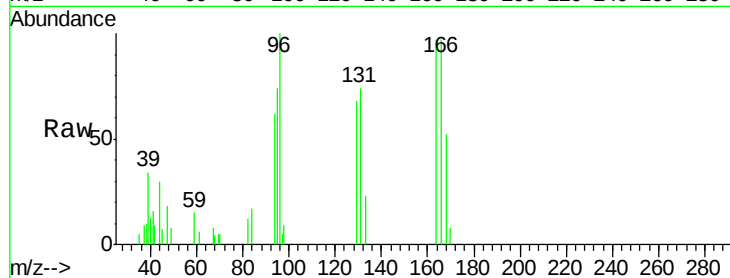
129 69.4 75.3 112.9#

131 75.7 73.0 109.4

Manual Integrations
APPROVED

MMDadoda

9/17/2020 1:52:31 PM

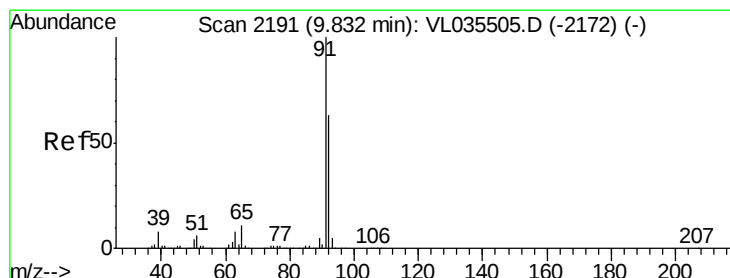
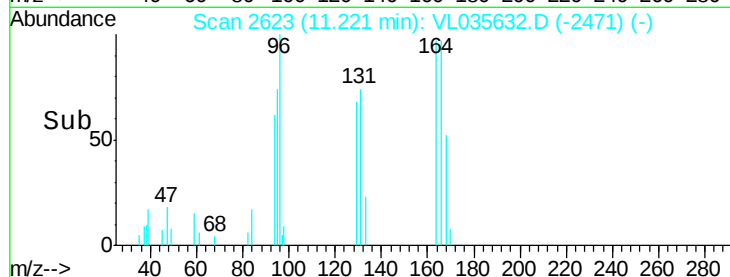
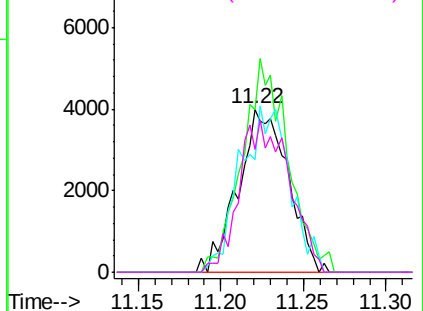


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 1.033 ppbv

RT: 9.81 min Scan# 2183

Delta R.T. -0.01 min

Lab File: VL035632.D

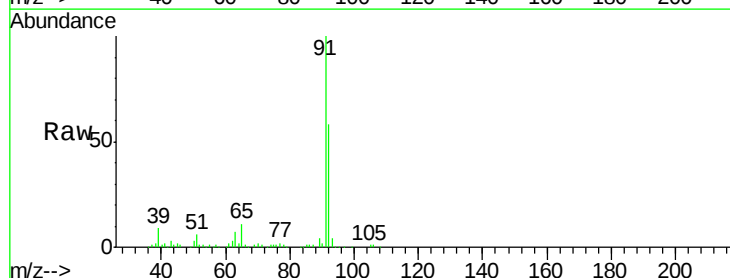
Acq: 16 Sep 2020 17:07

Tgt Ion: 91 Resp: 339352

Ion Ratio Lower Upper

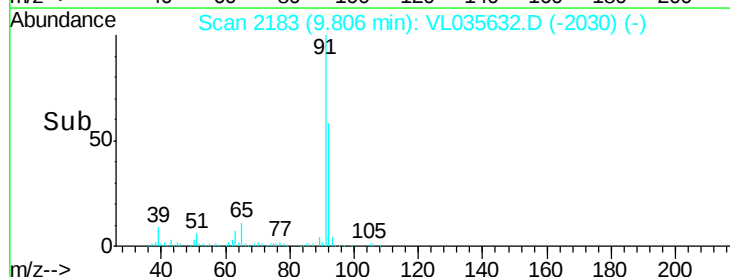
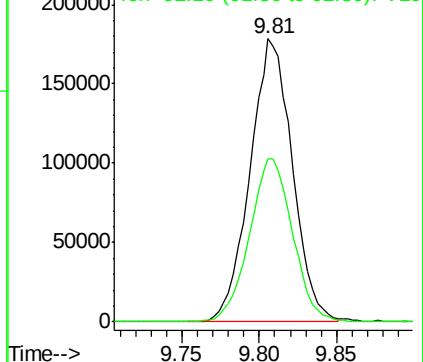
91 100

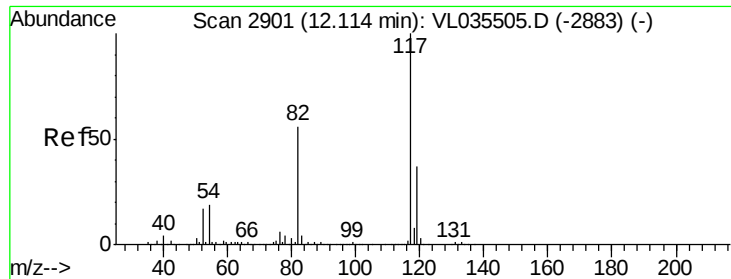
92 59.1 49.8 74.8



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0





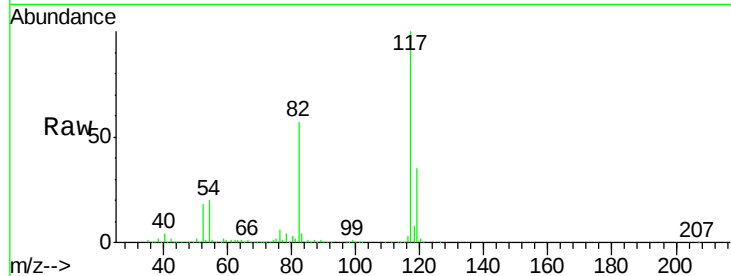
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.09 min Scan# 2894
Delta R.T. -0.00 min
Lab File: VL035632.D
Acq: 16 Sep 2020 17:07

Instrument :
MSVOA_L
ClientSampleId :
TRC-IA-02

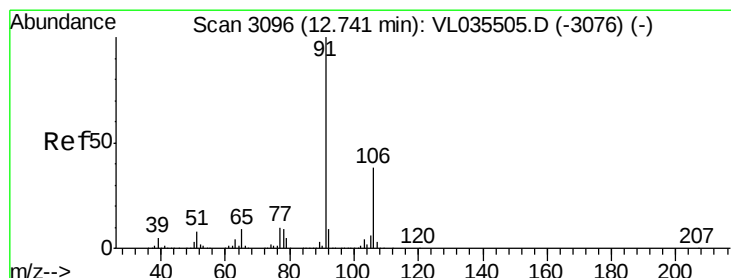
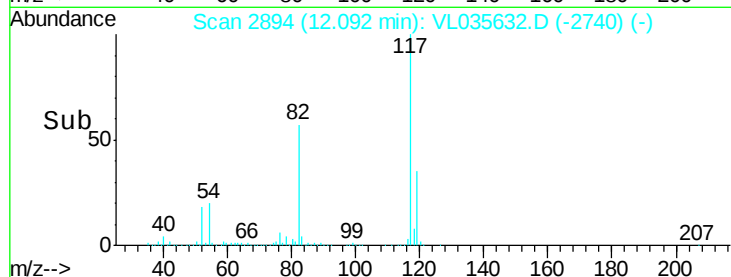
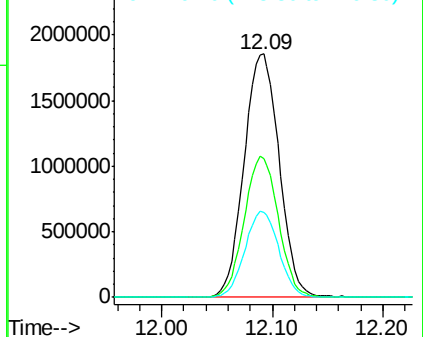
Tot Ion	Ratio	Lower	Upper
117	100		
82	56.8	41.6	62.4
119	34.4	29.3	43.9

Manual Integrations
APPROVED

MMDadoda
9/17/2020 1:52:31 PM

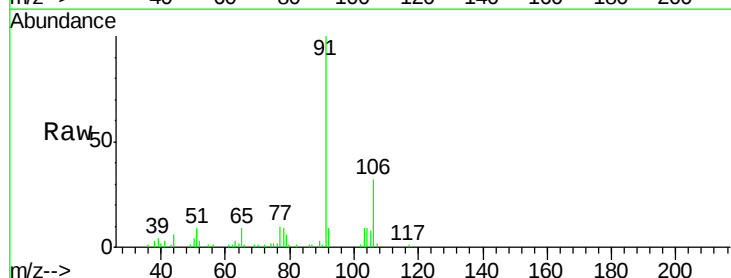


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): V
Ion 119.10 (118.80 to 119.80): V

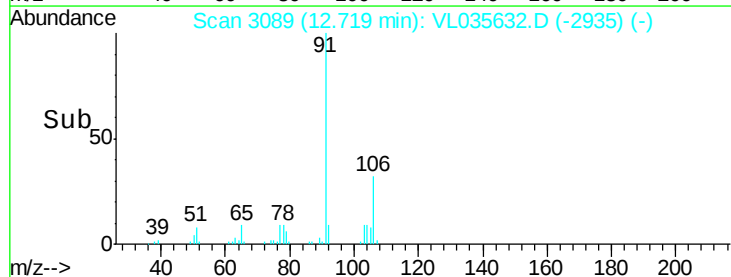
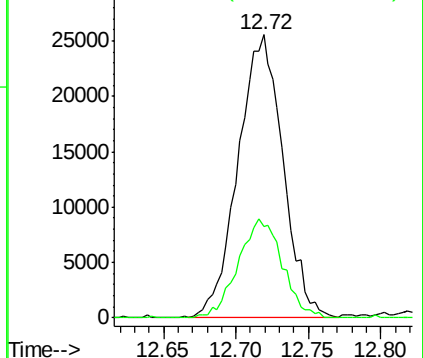


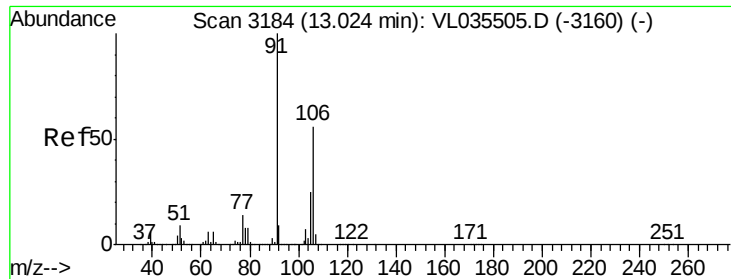
#58
Ethyl Benzene
Concen: 0.130 ppbv
RT: 12.72 min Scan# 3089
Delta R.T. -0.00 min
Lab File: VL035632.D
Acq: 16 Sep 2020 17:07

Tgt Ion	Ratio	Lower	Upper
91	100		
106	32.1	30.3	45.5



Abundance Ion 91.10 (90.80 to 91.80): V
Ion 106.10 (105.80 to 106.80): V





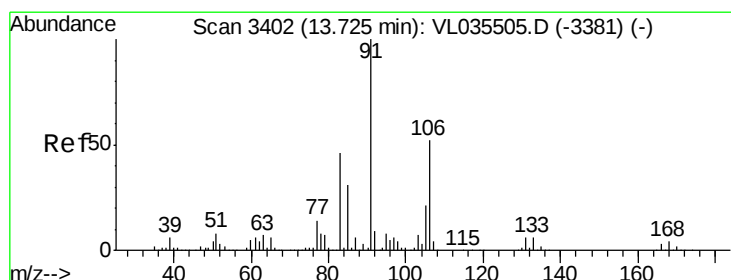
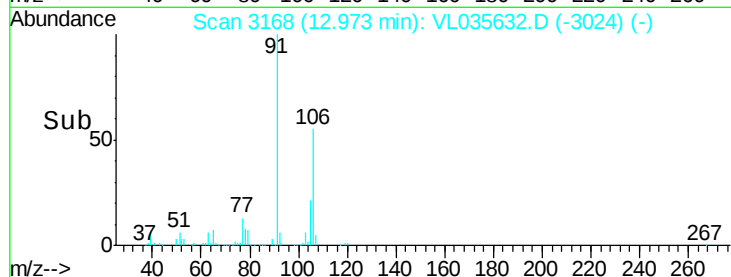
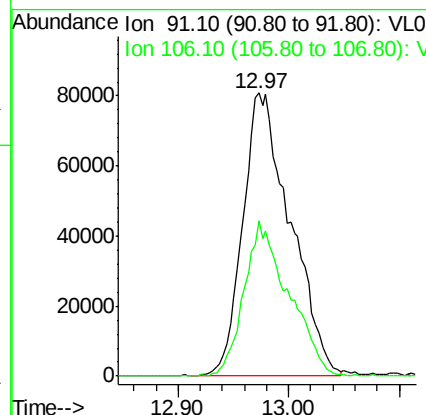
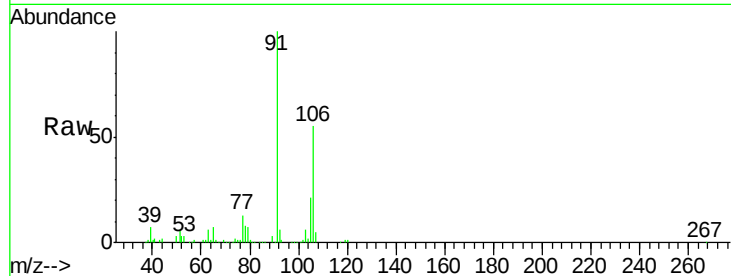
#59
m/p-Xylene
Concen: 0.688 ppbv m
RT: 12.97 min Scan# 3168
Delta R.T. -0.04 min
Lab File: VL035632.D
Acq: 16 Sep 2020 17:07

Instrument :
MSVOA_L
ClientSampleId :
TRC-IA-02

Tot Ion: 91 Resp: 242996
Ion Ratio Lower Upper
91 100
106 0.0 43.4 65.2#

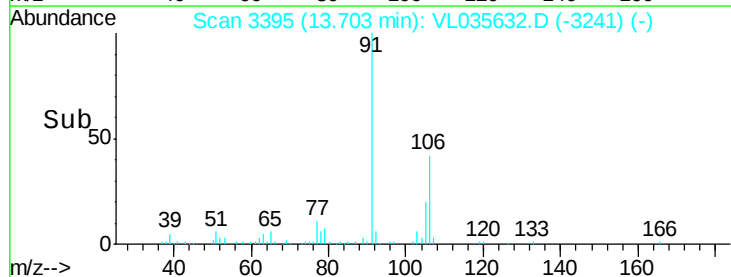
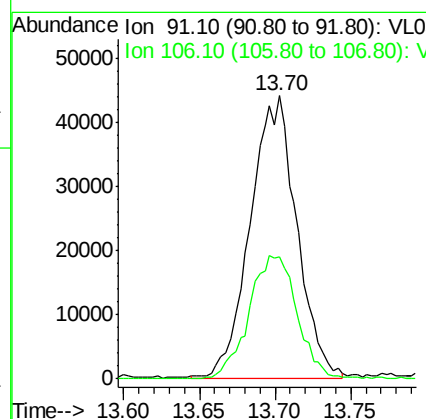
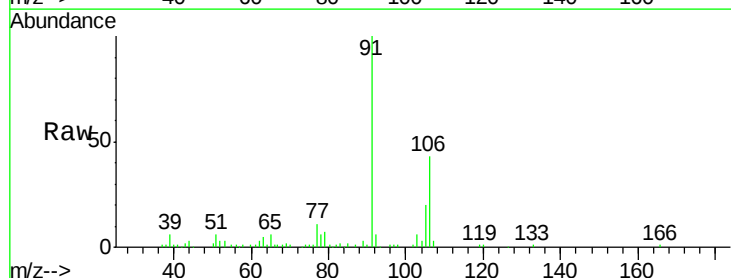
Manual Integrations
APPROVED

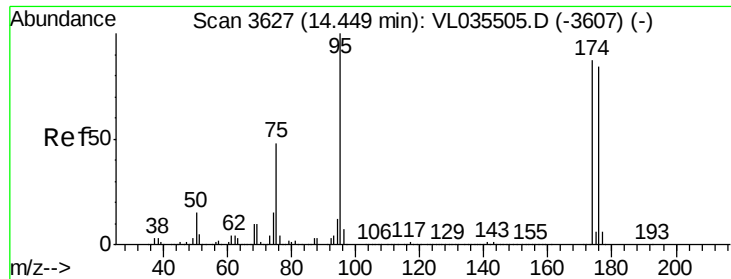
MMDadoda
9/17/2020 1:52:31 PM



#60
o-Xylene
Concen: 0.266 ppbv m
RT: 13.70 min Scan# 3395
Delta R.T. -0.00 min
Lab File: VL035632.D
Acq: 16 Sep 2020 17:07

Tgt Ion: 91 Resp: 94608
Ion Ratio Lower Upper
91 100
106 0.0 25.8 77.4#





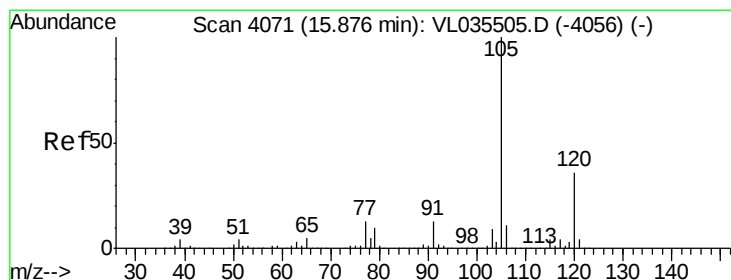
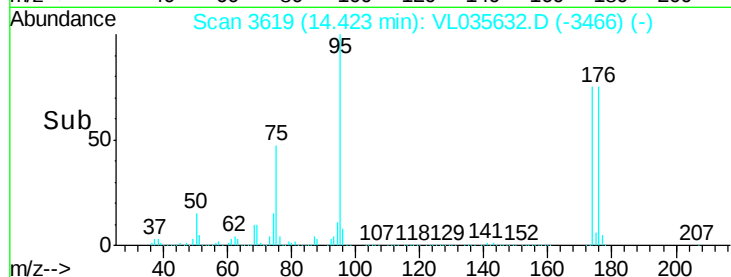
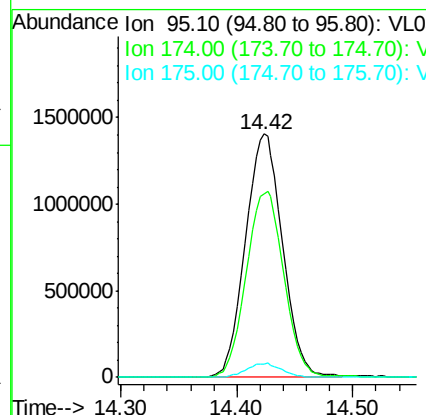
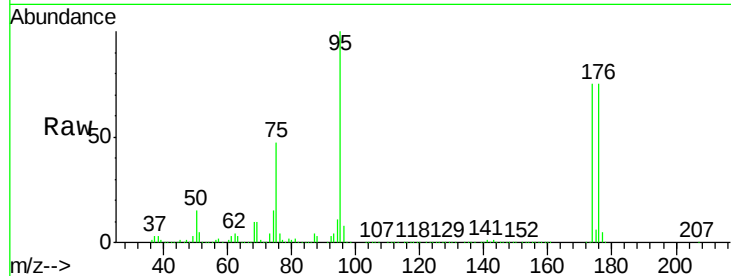
#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.742 ppbv
 RT: 14.42 min Scan# 3619
 Delta R.T. -0.01 min
 Lab File: VL035632.D
 Acq: 16 Sep 2020 17:07

Instrument :
 MSVOA_L
 ClientSampleId :
 TRC-IA-02

Tot Ion: 95 Resp: 3128530
 Ion Ratio Lower Upper
 95 100
 174 78.2 69.6 104.4
 175 5.6 5.1 7.7

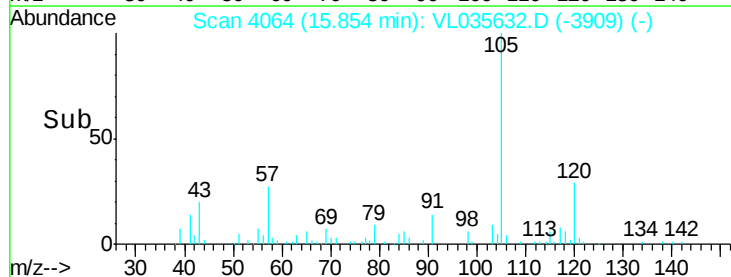
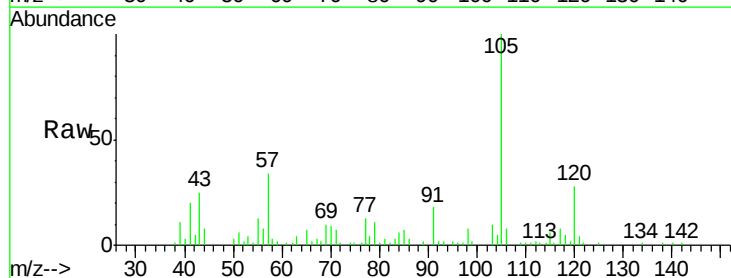
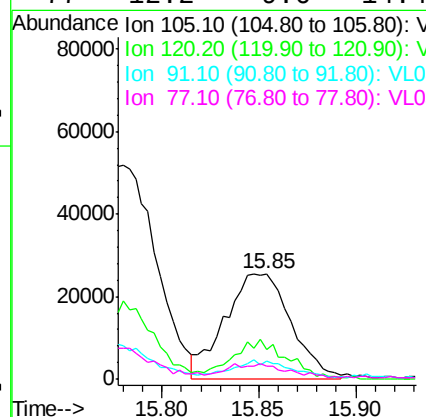
Manual Integrations
 APPROVED

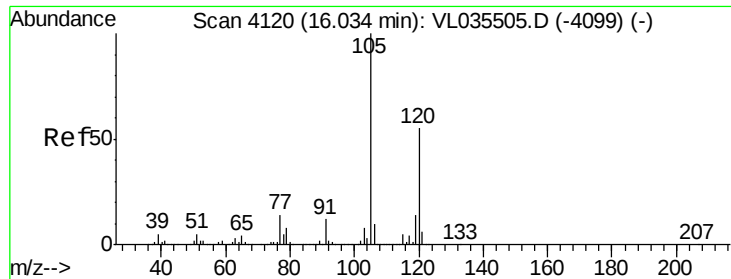
MMDadoda
 9/17/2020 1:52:31 PM



#72
 4-Ethyltoluene
 Concen: 0.134 ppbv m
 RT: 15.85 min Scan# 4064
 Delta R.T. -0.00 min
 Lab File: VL035632.D
 Acq: 16 Sep 2020 17:07

Tgt Ion: 105 Resp: 60474
 Ion Ratio Lower Upper
 105 100
 120 30.9 27.4 41.2
 91 0.0 9.7 14.5#
 77 12.2 9.6 14.4





#73

1,3,5-Trimethylbenzene

Concen: 0.233 ppbv

RT: 16.00 min Scan# 4111

Delta R.T. -0.01 min

Lab File: VL035632.D

Acq: 16 Sep 2020 17:07

Instrument :

MSVOA_L

ClientSampleId :

TRC-IA-02

Tot Ion:105 Resp: 97591

Ion Ratio Lower Upper

105 100

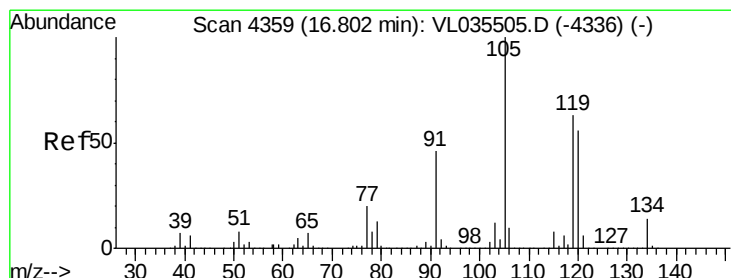
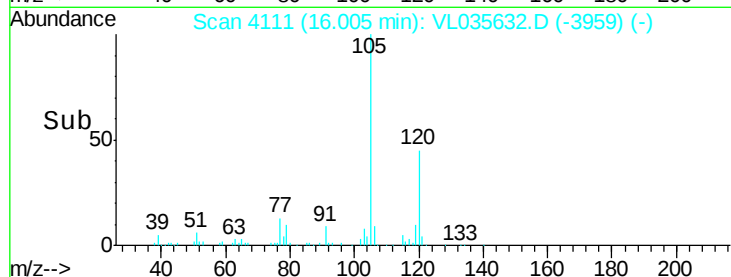
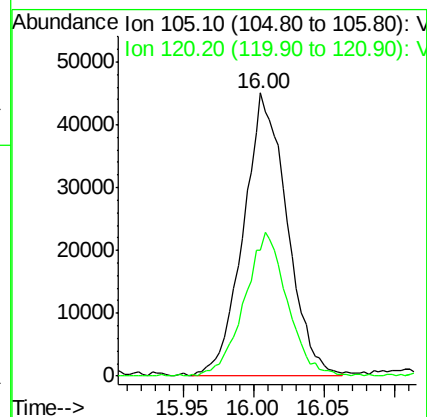
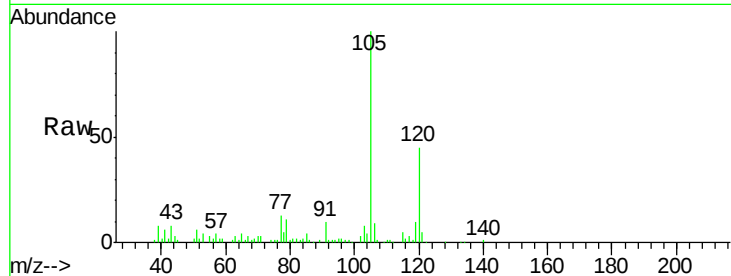
120 44.1 44.2 66.2#

Manual Integrations

APPROVED

MMDadoda

9/17/2020 1:52:31 PM



#74

1,2,4-Trimethylbenzene

Concen: 0.644 ppbv

RT: 16.77 min Scan# 4349

Delta R.T. -0.01 min

Lab File: VL035632.D

Acq: 16 Sep 2020 17:07

Tgt Ion:105 Resp: 295845

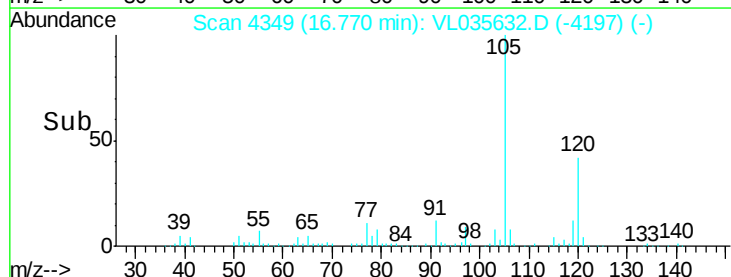
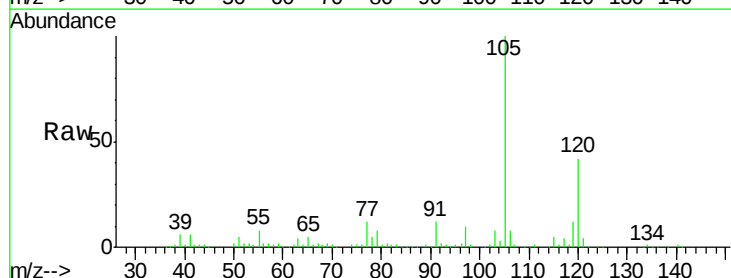
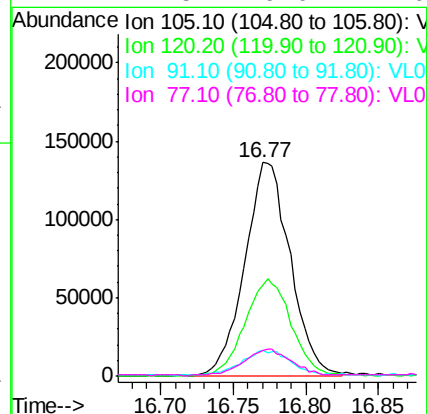
Ion Ratio Lower Upper

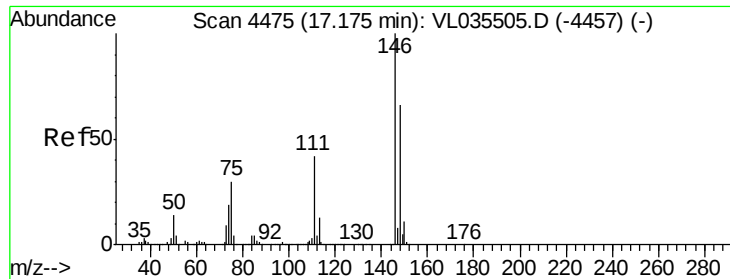
105 100

120 42.1 44.4 66.6#

91 11.3 37.1 55.7#

77 11.5 16.0 24.0#





#76

1,4-Dichlorobenzene

Concen: 0.121 ppbv

RT: 17.15 min Scan# 4467

Delta R.T. -0.01 min

Lab File: VL035632.D

Acq: 16 Sep 2020 17:07

Instrument :

MSVOA_L

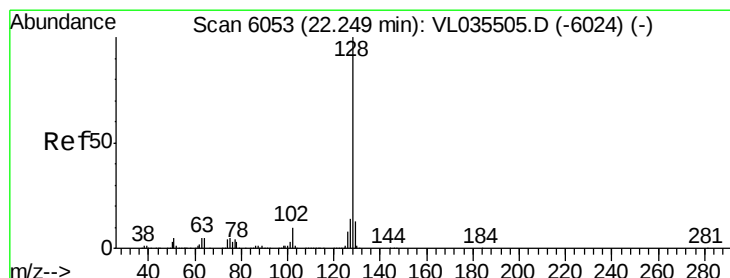
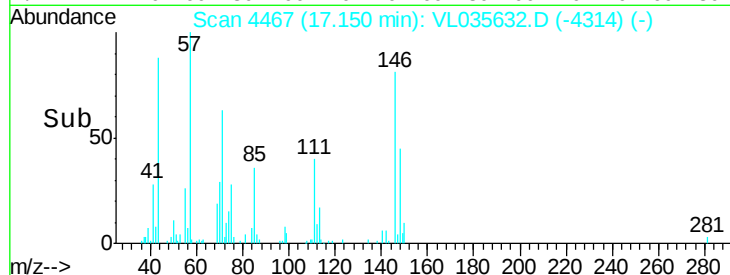
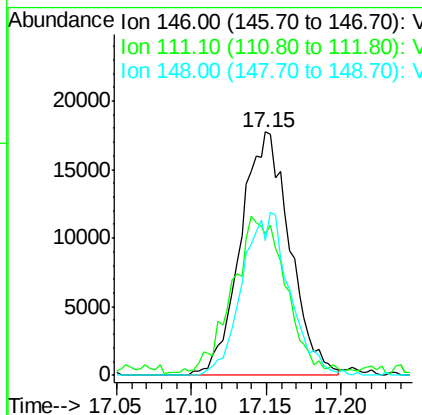
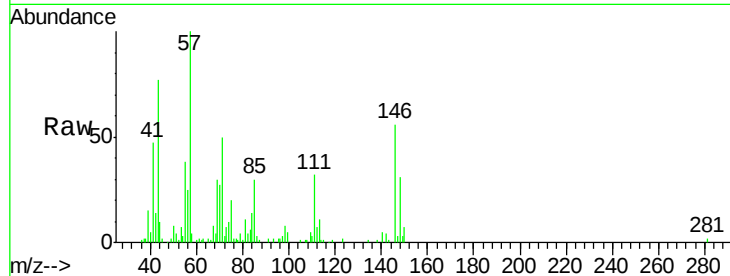
ClientSampleId :

TRC-IA-02

Tot Ion	Ratio	Lower	Upper
146	100		
111	71.9	20.0	60.0#
148	64.4	33.2	99.6

Manual Integrations
APPROVED

MMDadoda
9/17/2020 1:52:31 PM



#79

Naphthalene

Concen: 0.101 ppbv

RT: 22.23 min Scan# 6046

Delta R.T. 0.00 min

Lab File: VL035632.D

Acq: 16 Sep 2020 17:07

Tgt Ion	Ratio	Lower	Upper
128	100		
127	12.0	11.4	17.2
129	9.1	10.5	15.7#

