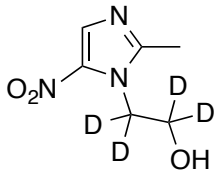
Certificate of Analysis



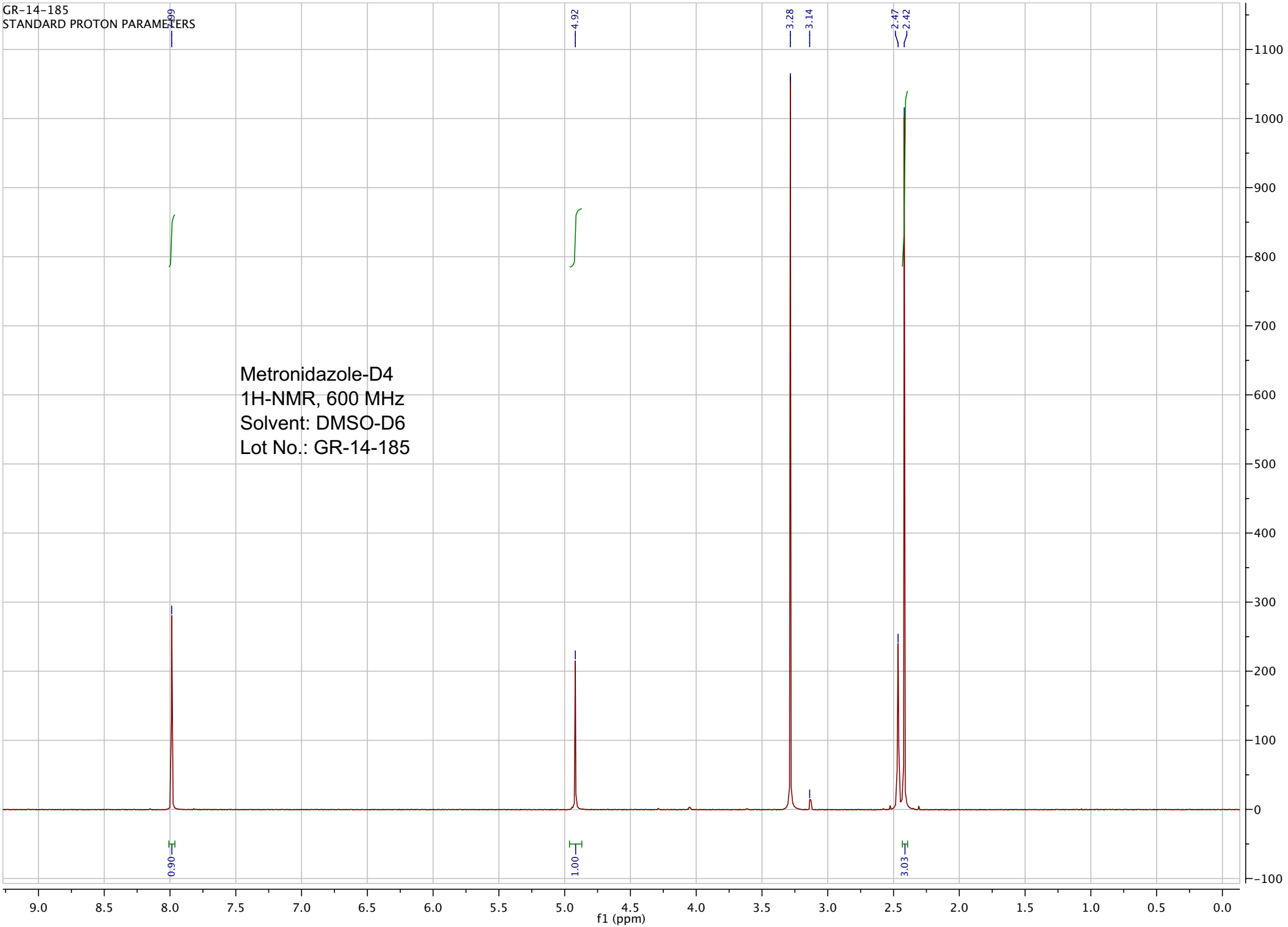
Name:	**Metronidazole-D4**
Lot#:	GR-14-185
Test Date:	01/22/2020 (re-test date:01/22/2025)
CAS No.:	1261392-47-5
MF:	$C_6H_5D_4N_3O_3$
MW:	175.18
Appearance:	Off-White Solid
Purity:	99.6% by HPLC; 99.3% atom D
^{1}H-NMR:	Conforms (shows a trace of MeOH)
MS-ESI (+)	Conforms (shows peak at m/z = 176.10 $[M+H]^+$)

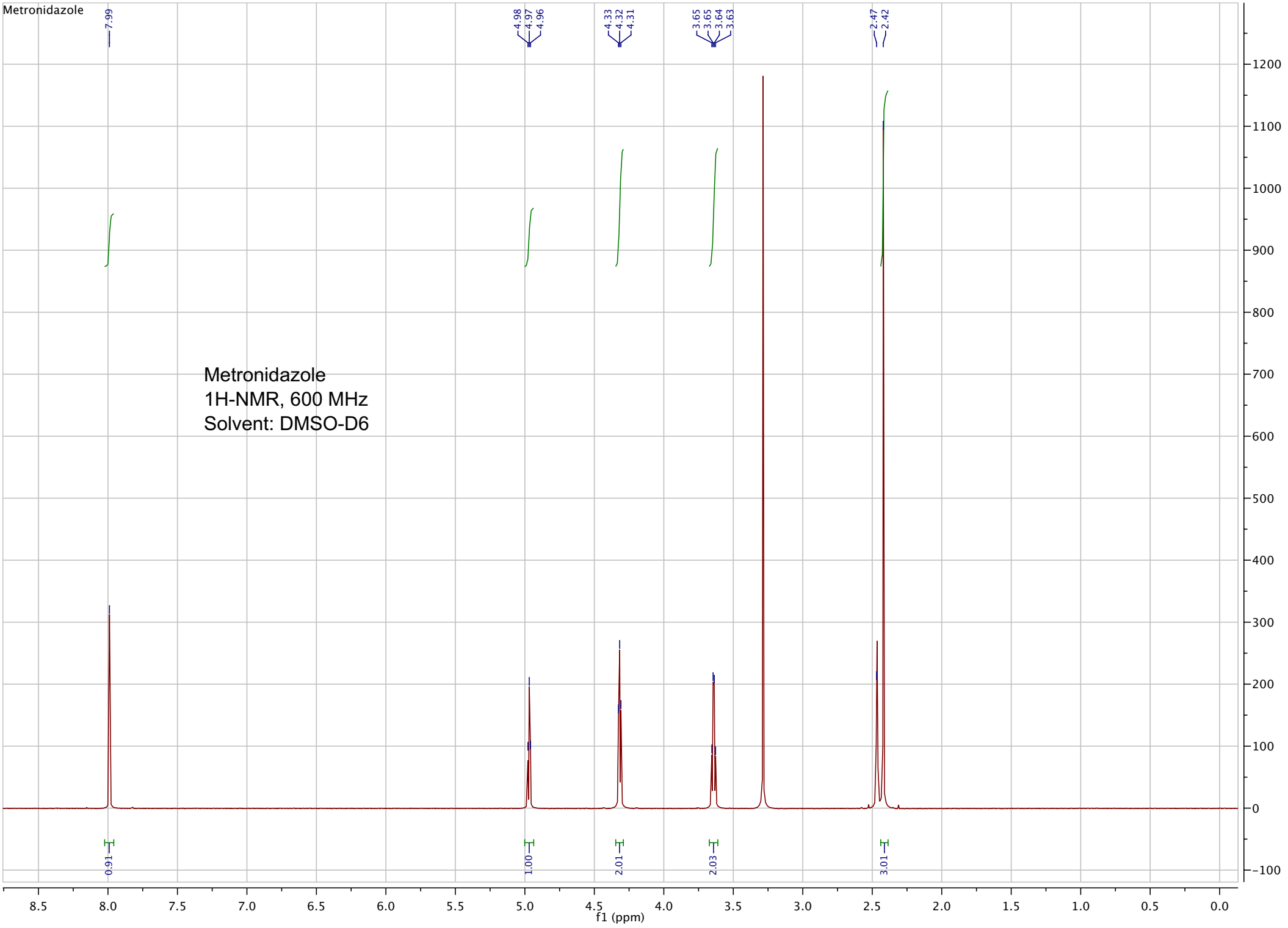
Approved by:

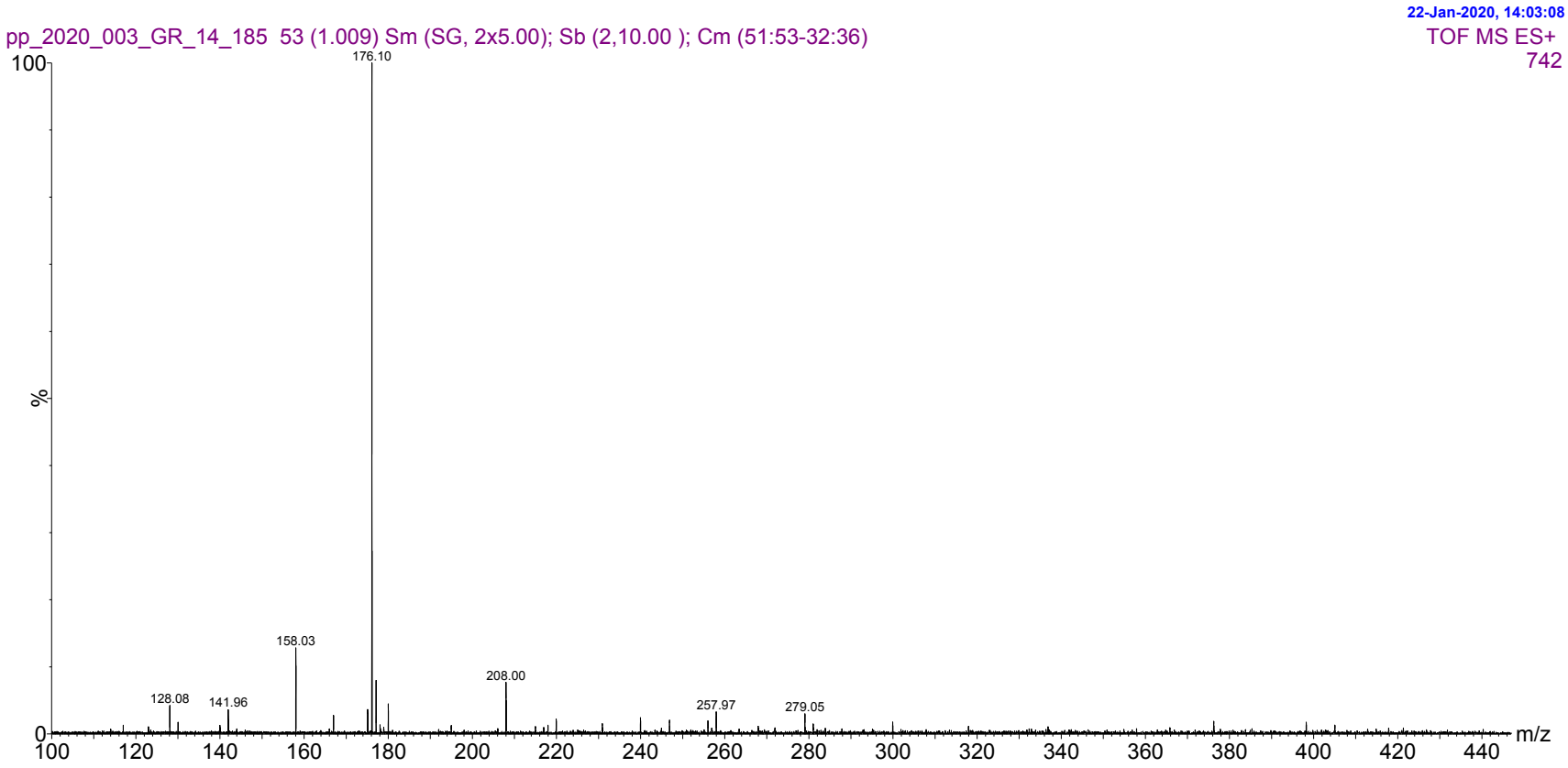
Date: 01/24/2020

Viorica Rusu, QC/QA Manager

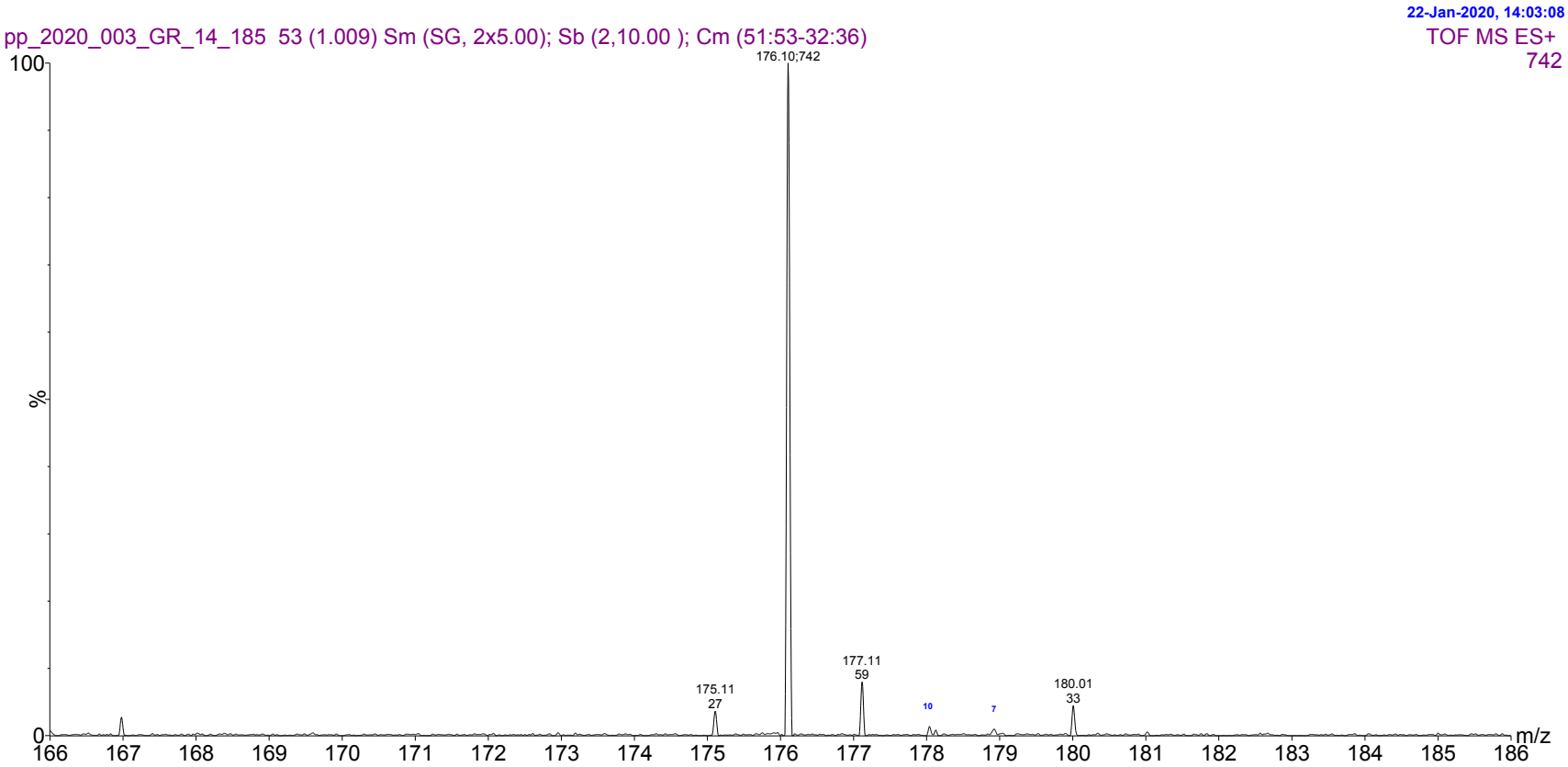
700, Collip Circle, The Research Park, London, ON, N6G 4X8
Ph: (647)4079078, e-mail: grusu@esschemco.com, www.esschemco.com


GR-14-185
STANDARD PROTON PARAMETERS
7.99
4.92
3.28
3.14
2.47
2.42
Metronidazole-D4
1H-NMR, 600 MHz
Solvent: DMSO-D6
Lot No.: GR-14-185
0.90
1.00
3.03
f1 (ppm)


Metronidazole
7.99
4.98
4.97
4.96
4.33
4.32
4.31
3.65
3.65
3.64
3.63
2.47
2.42
Metronidazole
1H-NMR, 600 MHz
Solvent: DMSO-D6
0.91
1.00
2.01
2.03
3.01
f1 (ppm)



ESI-MS spectrum for sample GR-14-185. Shows monoisotopic [M+H]+ mass.



Expansion of above showing intensity labels. Peak at 180.01 is likely a contaminant.

Data File C:\CHEM32\1\DATA\VR010820\SIG16162.D
Sample Name: GR-14-185

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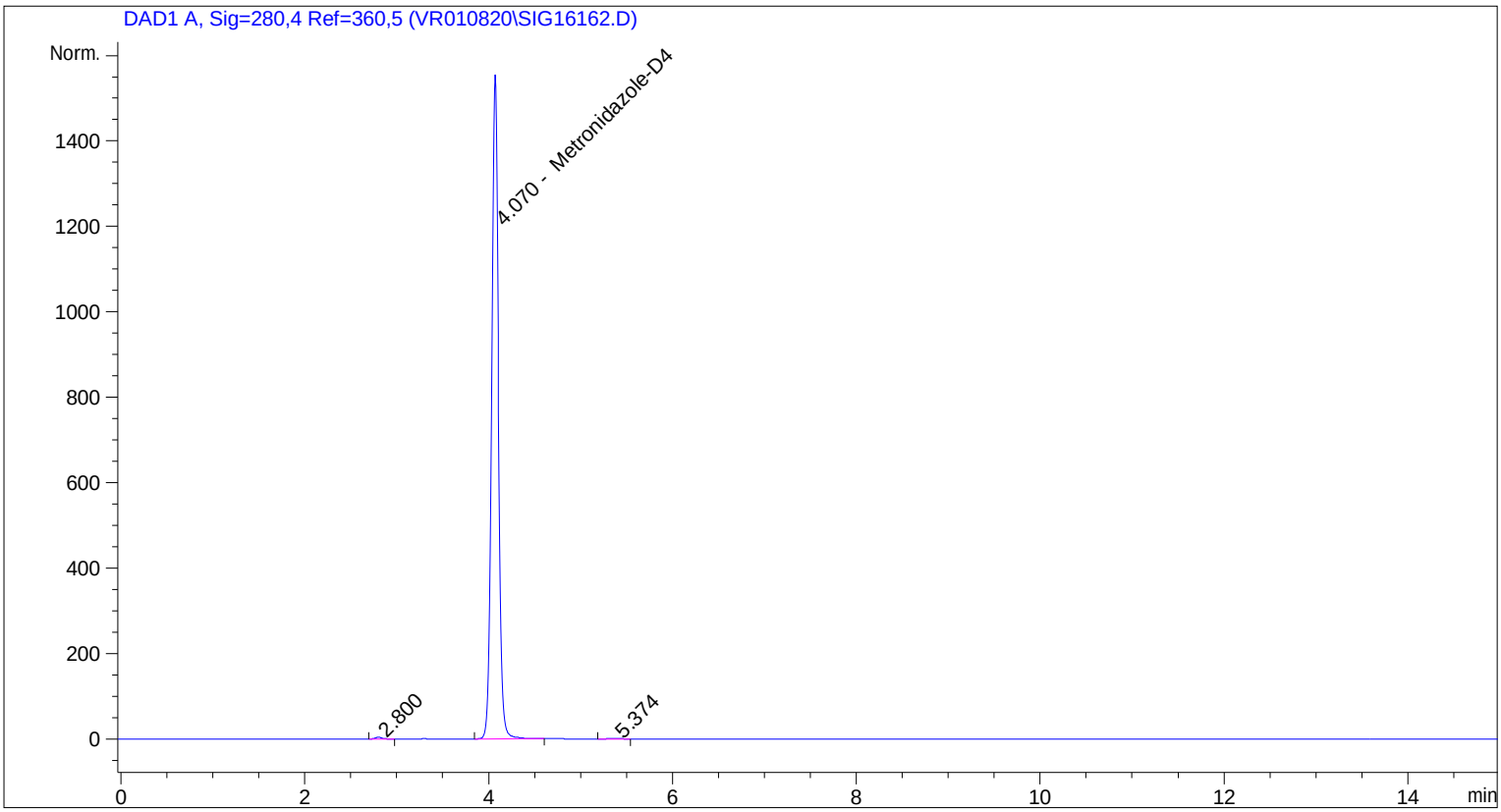
Acq. Operator : vrusu
Acq. Instrument : Instrument 1 Location : Vial 20
Injection Date : 1/22/2020 12:14:02 PM
Inj Volume : 5.0 µl
Acq. Method : C:\CHEM32\1\METHODS\VR012220_185.M
Last changed : 1/22/2020 12:12:59 PM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR012220_185PM.M
Last changed : 1/22/2020 12:26:01 PM by vrusu



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Area Percent Report

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Sorted By : Signal
Calib. Data Modified : 1/22/2020 12:25:29 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=280,4 Ref=360,5

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	2.800	BB	0.0694	19.74812	0.2429	?
2	4.070	BB	0.0788	8101.04980	99.6487	Metronidazole-D4
3	5.374	BB	0.1031	8.81214	0.1084	?

Totals : 8129.61006

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