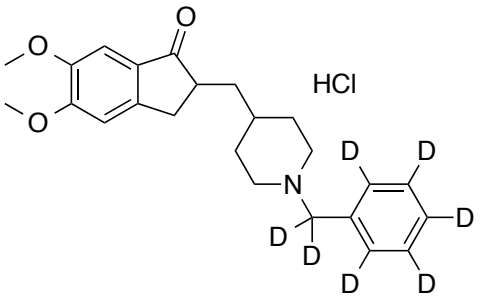
Certificate of Analysis



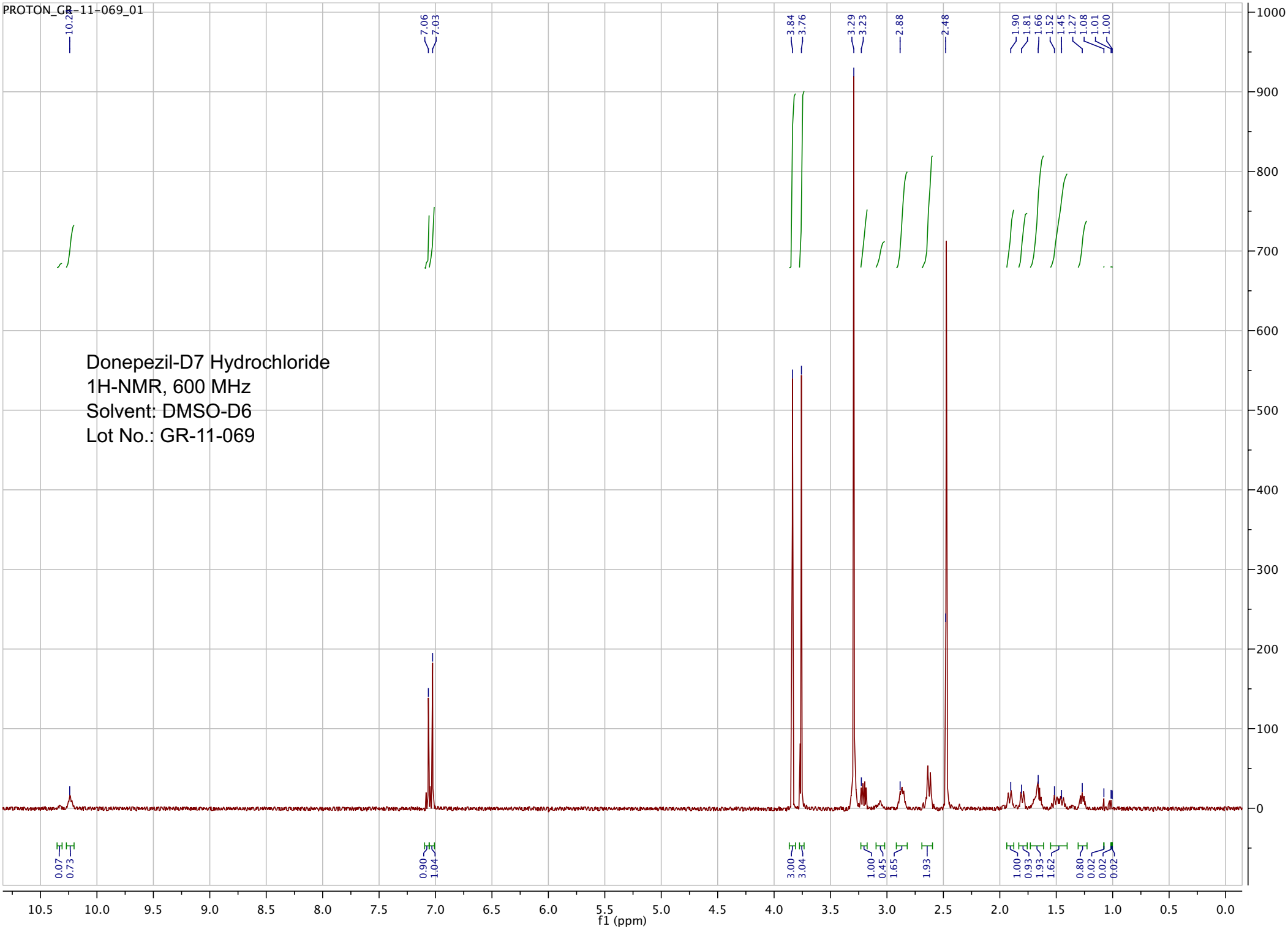
Name:	**Donepezil-D7 Hydrochloride**
Lot#:	GR-11-069
Test Date:	02/07/2023 (re-test date: 02/07/2028)
CAS No.:	1261394-20-0
MF:	$C_{24}H_{23}D_7ClNO_3$
MW:	423.00
Appearance:	White solid
Purity:	98.9% by HPLC; >98% atom D
^{1}H-NMR:	Conforms (shows the presence of salt rotamers missing in the NMR of the free base, and a trace of IPA and MTBE)
MS-ESI (+)	Conforms (shows peak at m/z = 387.26 $[M_{(free\ base)}+H]^+$)
Storage	Store at -18°C in a dry place away from direct sunlight

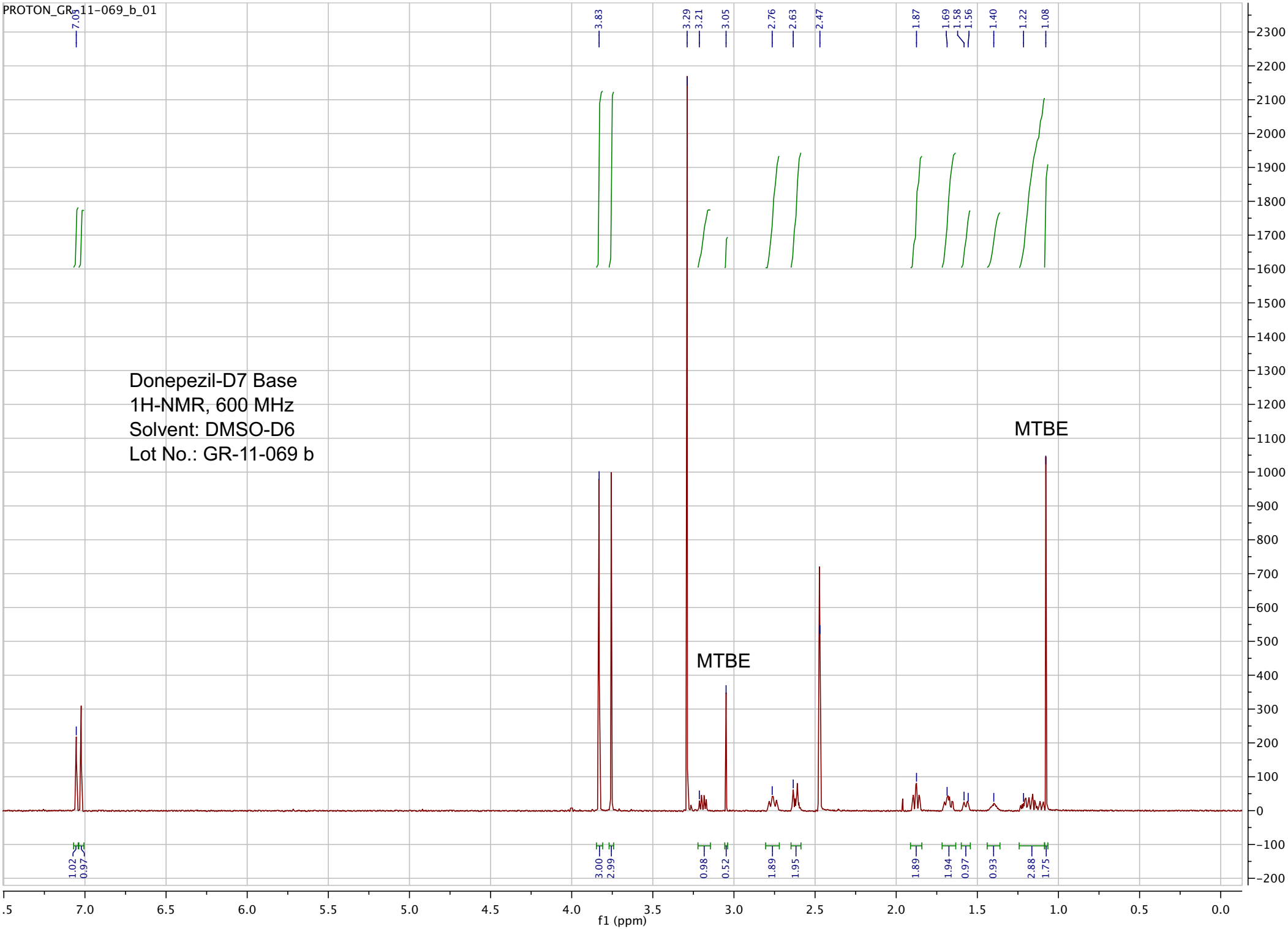
Approved by:

Date: 02/07/2023

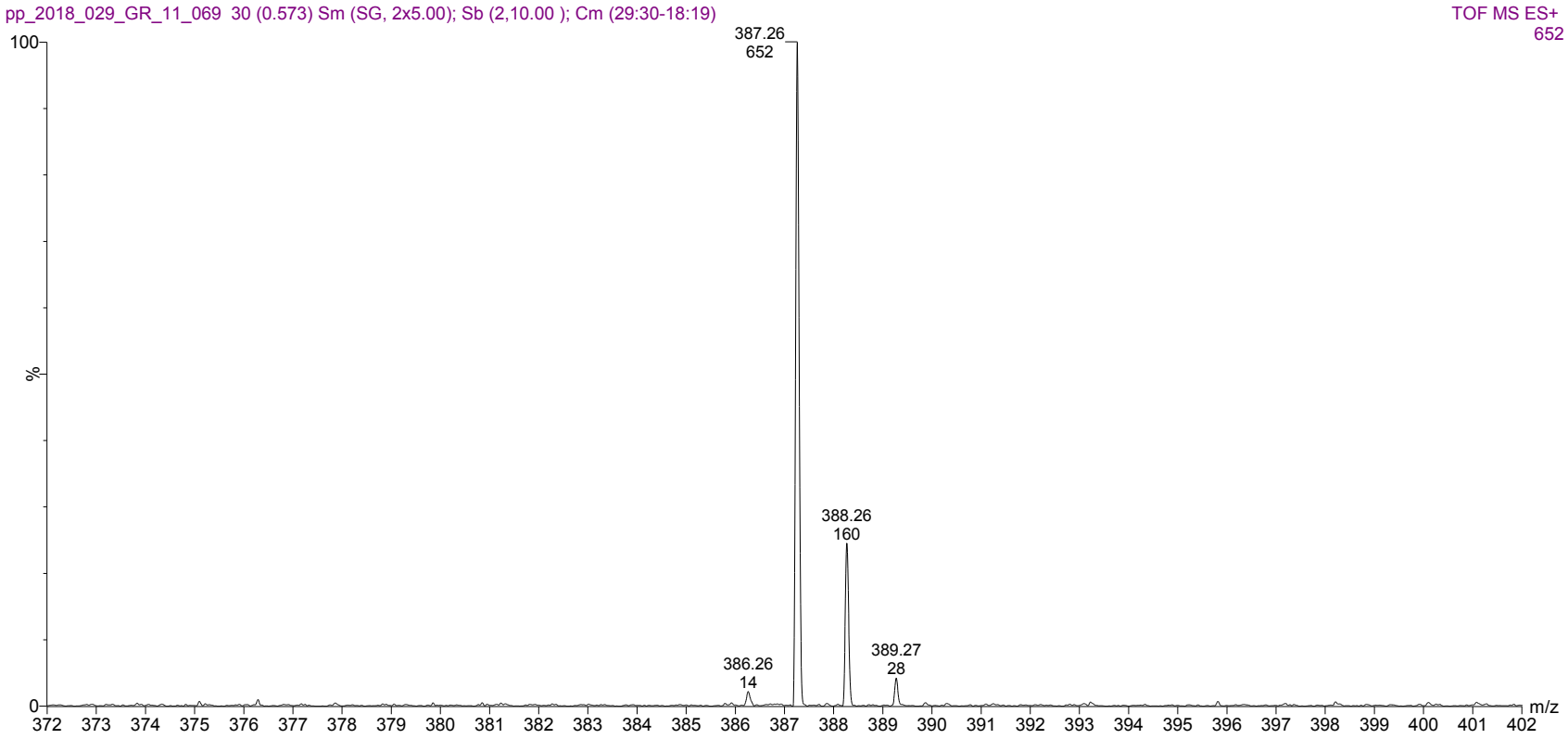
Viorica Rusu, QC/QA Manager

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


PROTON_GR-11-069_01
Donepezil-D7 Hydrochloride
1H-NMR, 600 MHz
Solvent: DMSO-D6
Lot No.: GR-11-069
10.24
7.06
7.03
3.84
3.76
3.29
3.23
2.88
2.48
1.90
1.81
1.66
1.52
1.45
1.27
1.08
1.01
1.00
0.07
0.73
0.90
1.04
3.00
3.04
1.00
0.45
1.65
1.93
1.00
0.93
1.93
1.62
0.80
0.02
0.02
0.02
f1 (ppm)


PROTON_GR_11-069_b_01
Donepezil-D7 Base
1H-NMR, 600 MHz
Solvent: DMSO-D6
Lot No.: GR-11-069 b
MTBE
MTBE
7.05
3.83
3.29
3.21
3.05
2.76
2.63
2.47
1.87
1.69
1.58
1.56
1.40
1.22
1.08
1.02
0.97
3.00
2.99
0.98
0.52
1.89
1.95
1.89
1.94
0.97
0.93
2.88
1.75
f1 (ppm)

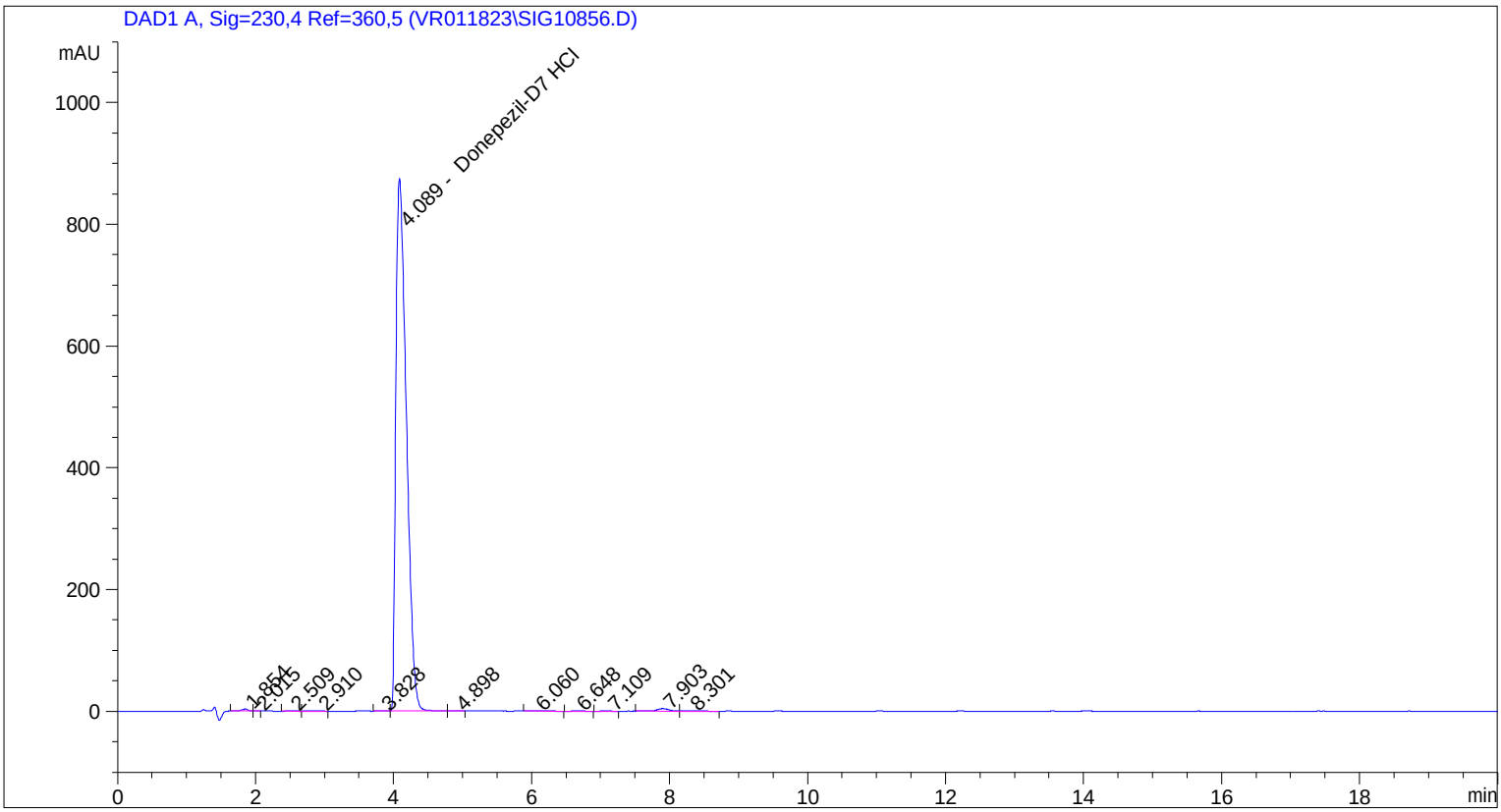
ESI-MS spectrum for sample GR-11-069. Shows monoisotopic [M+H]+ mass.



Expansion of above showing intensity labels.

Data File C:\CHEM32\1\DATA\VR011823\SIG10856.D
Sample Name: GR-11-069

==========
Acq. Operator : vrusu
Acq. Instrument : Instrument 1 Location : Vial 3
Injection Date : 2/7/2023 9:59:55 AM
Inj Volume : 10.0 µl
Acq. Method : C:\CHEM32\1\METHODS\VR020723_069.M
Last changed : 2/7/2023 9:58:54 AM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR020723_069PM.M
Last changed : 2/7/2023 10:49:30 AM by vrusu



==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 2/7/2023 10:48:25 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=230,4 Ref=360,5

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	1.854	BV	0.1009	21.92945	0.2334	?
2	2.015	VB	0.0629	9.39065e-1	9.996e-3	?
3	2.509	BV	0.0985	3.69439	0.0393	?
4	2.910	VB	0.1877	3.00058	0.0319	?
5	3.828	BV	0.1443	3.68144	0.0392	?
6	4.089	VV	0.1680	9286.19141	98.8525	Donepezil-D7 HCl
7	4.898	VB	0.1373	2.72662	0.0290	?
8	6.060	BB	0.1834	6.42385	0.0684	?

Data File C:\CHEM32\1\DATA\VR011823\SIG10856.D
Sample Name: GR-11-069

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
9	6.648	BB	0.1547	2.56223	0.0273	?
10	7.109	BB	0.1295	2.23730	0.0238	?
11	7.903	BV	0.1771	48.24294	0.5136	?
12	8.301	VB	0.1942	12.35868	0.1316	?

Totals : 9393.98796

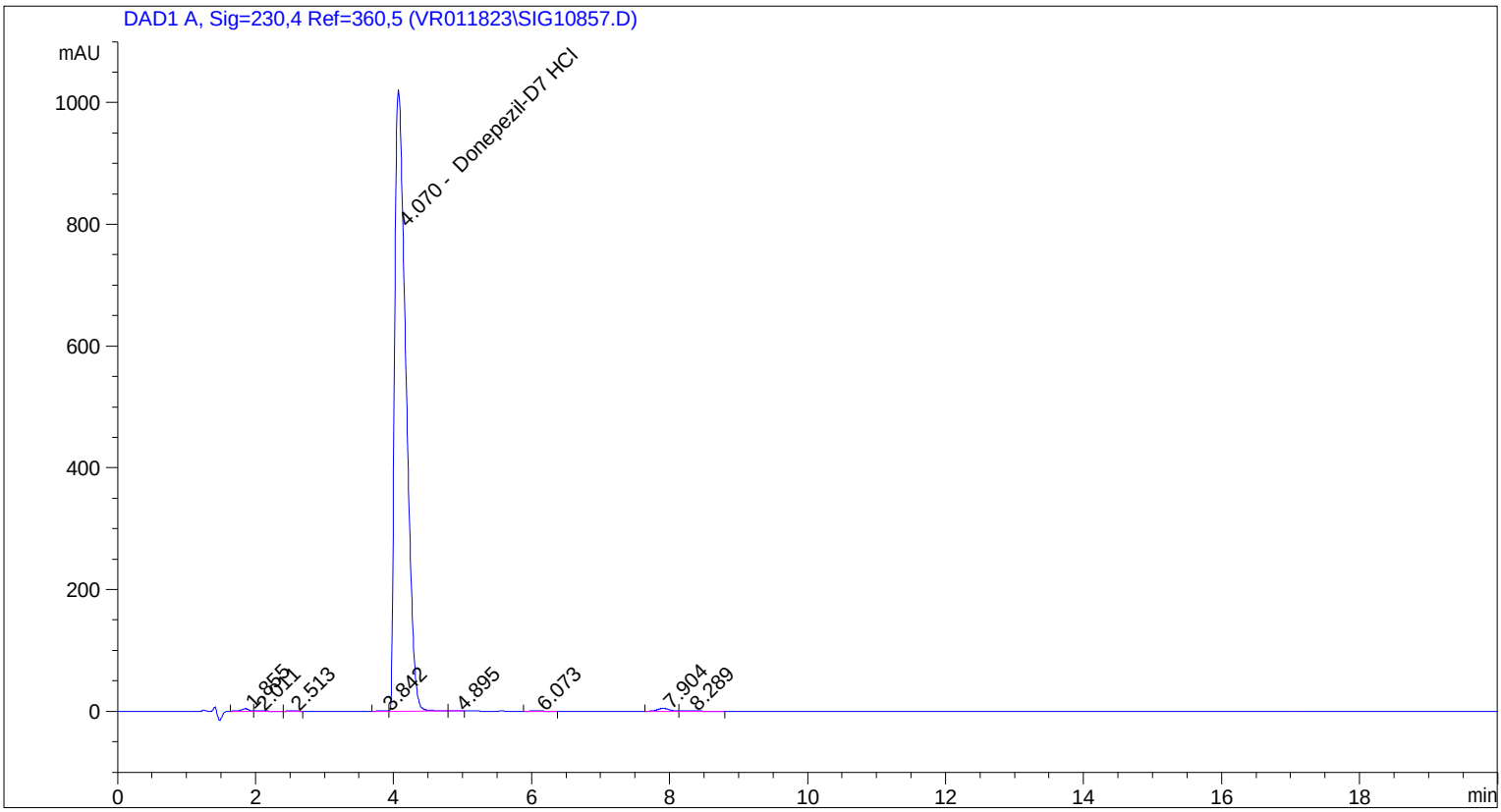
==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\VR011823\SIG10857.D
Sample Name: GR-11-069 spl-2

==========

Acq. Operator : vrusu
Acq. Instrument : Instrument 1 Location : Vial 4
Injection Date : 2/7/2023 10:22:01 AM
Inj Volume : 10.0 µl
Acq. Method : C:\CHEM32\1\METHODS\VR020723_069.M
Last changed : 2/7/2023 10:21:01 AM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR020723_069PM.M
Last changed : 2/7/2023 10:49:30 AM by vrusu



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Area Percent Report

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Sorted By : Signal
Calib. Data Modified : 2/7/2023 10:48:25 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=230,4 Ref=360,5

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	1.855	BV	0.1099	33.02454	0.2814	?
2	2.011	VB	0.1185	5.18746	0.0442	?
3	2.513	BB	0.1016	5.49736	0.0468	?
4	3.842	BV	0.1516	3.68641	0.0314	?
5	4.070	VV	0.1787	1.16093e4	98.9213	Donepezil-D7 HCl
6	4.895	VB	0.1213	2.67103	0.0228	?
7	6.073	BB	0.1543	7.20081	0.0614	?
8	7.904	BV	0.1757	55.18059	0.4702	?

Data File C:\CHEM32\1\DATA\VR011823\SIG10857.D
Sample Name: GR-11-069 spl-2

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
9	8.289	VB	0.2135	14.15039	0.1206	?

Totals : 1.17359e4

*** End of Report ***