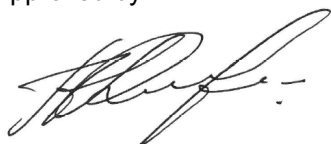


<b>Name:</b>	<b>Sonidegib Hydrazo Impurity-D8</b>
<b>Lot#:</b>	GR-17-131-1
<b>Test Date:</b>	04/14/2022 (re-test date: 04/14/2027)
<b>CAS No.:</b>	NA
<b>MF:</b>	C <sub>37</sub> H <sub>33</sub> D <sub>8</sub> F <sub>3</sub> N <sub>6</sub> O <sub>4</sub>
<b>MW:</b>	698.80
<b>Appearance:</b>	Light Green Solid
<b>Purity:</b>	98.3% by HPLC (average of two sample preparations); 99% atom D
<b><sup>1</sup>H-NMR:</b>	Conforms (contains a trace of EtOAc)
<b>MS-ESI (+)</b>	Conforms (shows peak at m/z = 699.39 [M+H] <sup>+</sup> )
<b>Storage</b>	Store at -18°C in a dry place away from direct sunlight

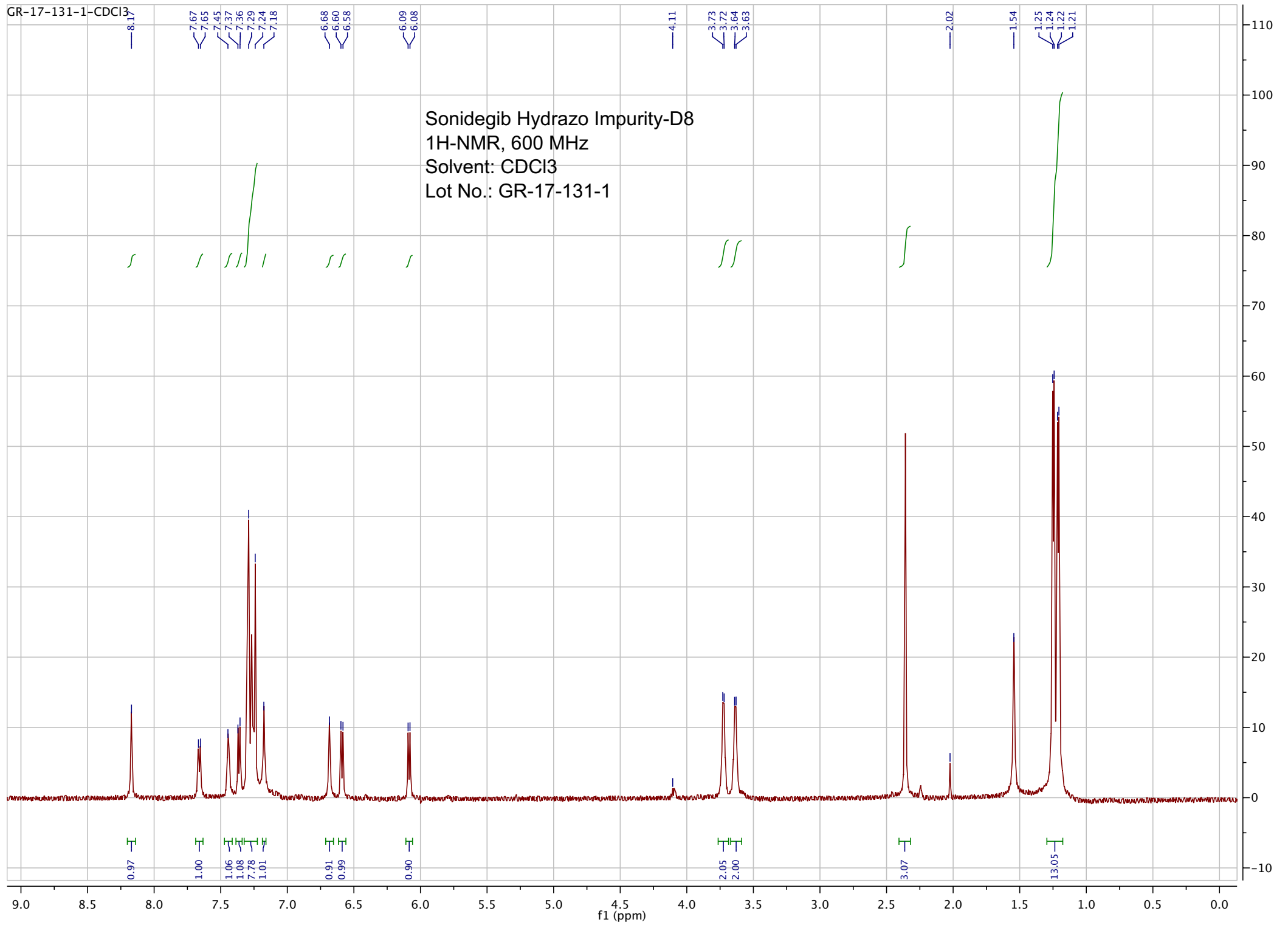
Approved by:

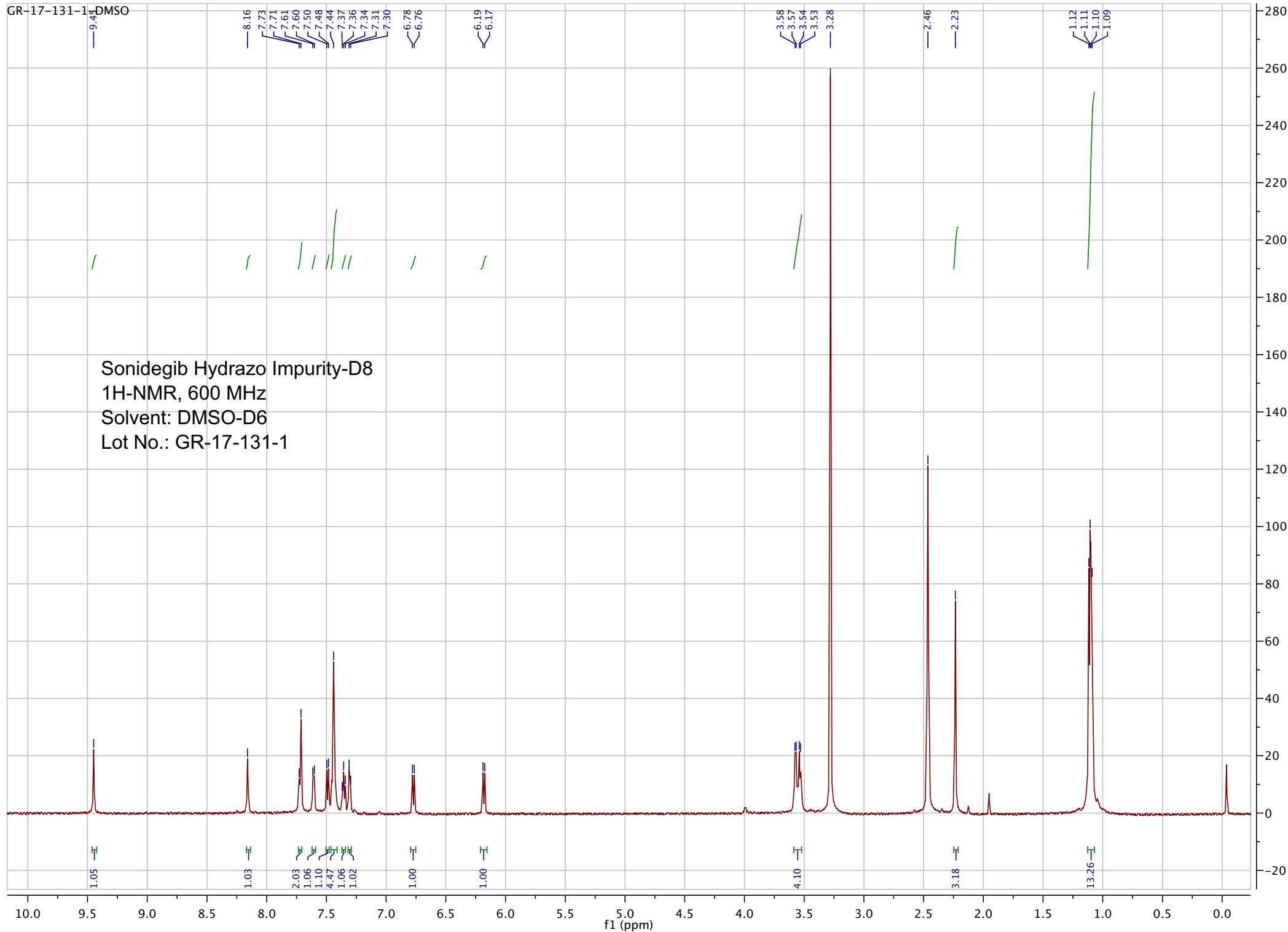
Date: 04/21/2022



Viorica Rusu, QC/QA Manager

GR-17-131-1-CDCl3



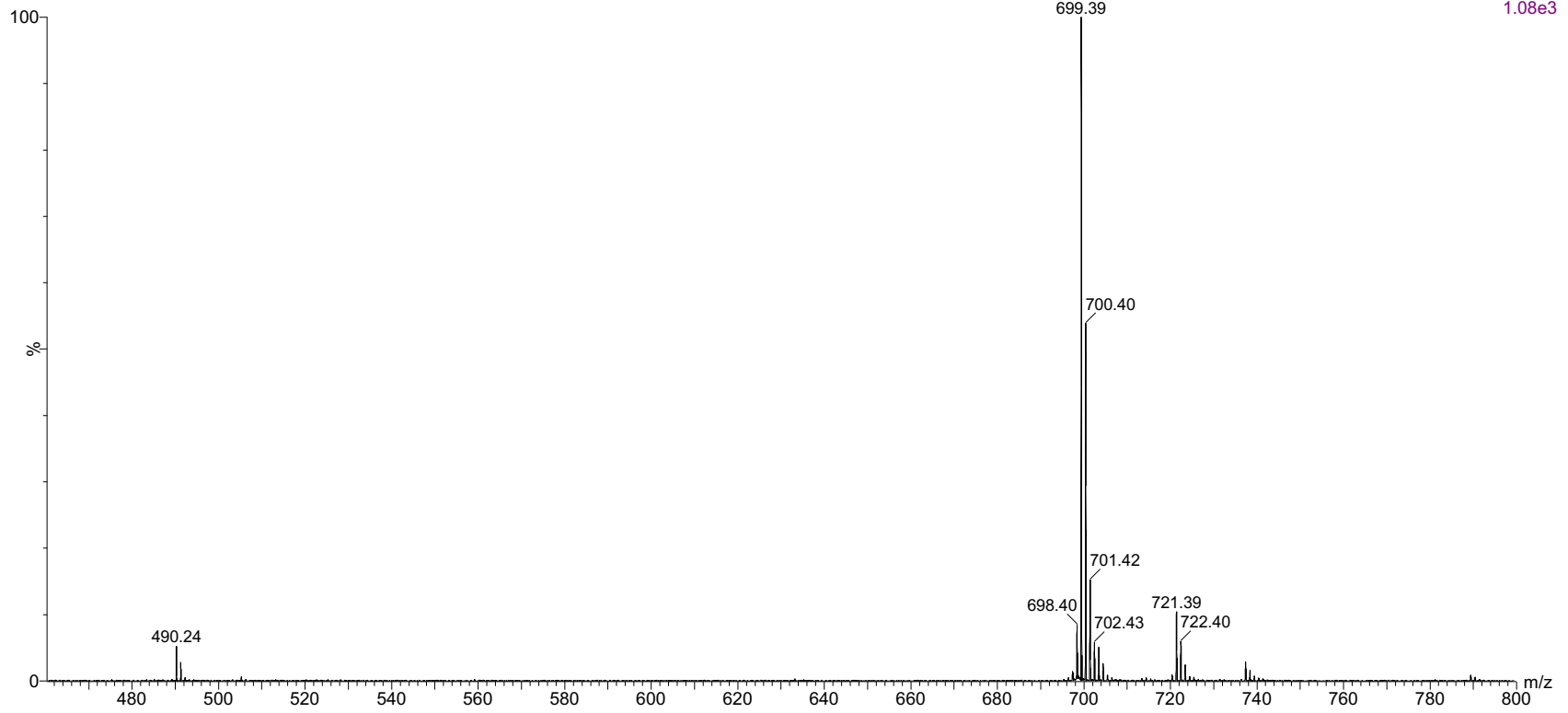


8.0000000

21-Apr-2022, 15:23:32

TOF MS ES+  
1.08e3

pp\_2022\_029\_GR\_17\_131\_1 33 (0.628) Sm (SG, 2x5.00); Sb (2,10.00 ); Cm (32:33-21:22)



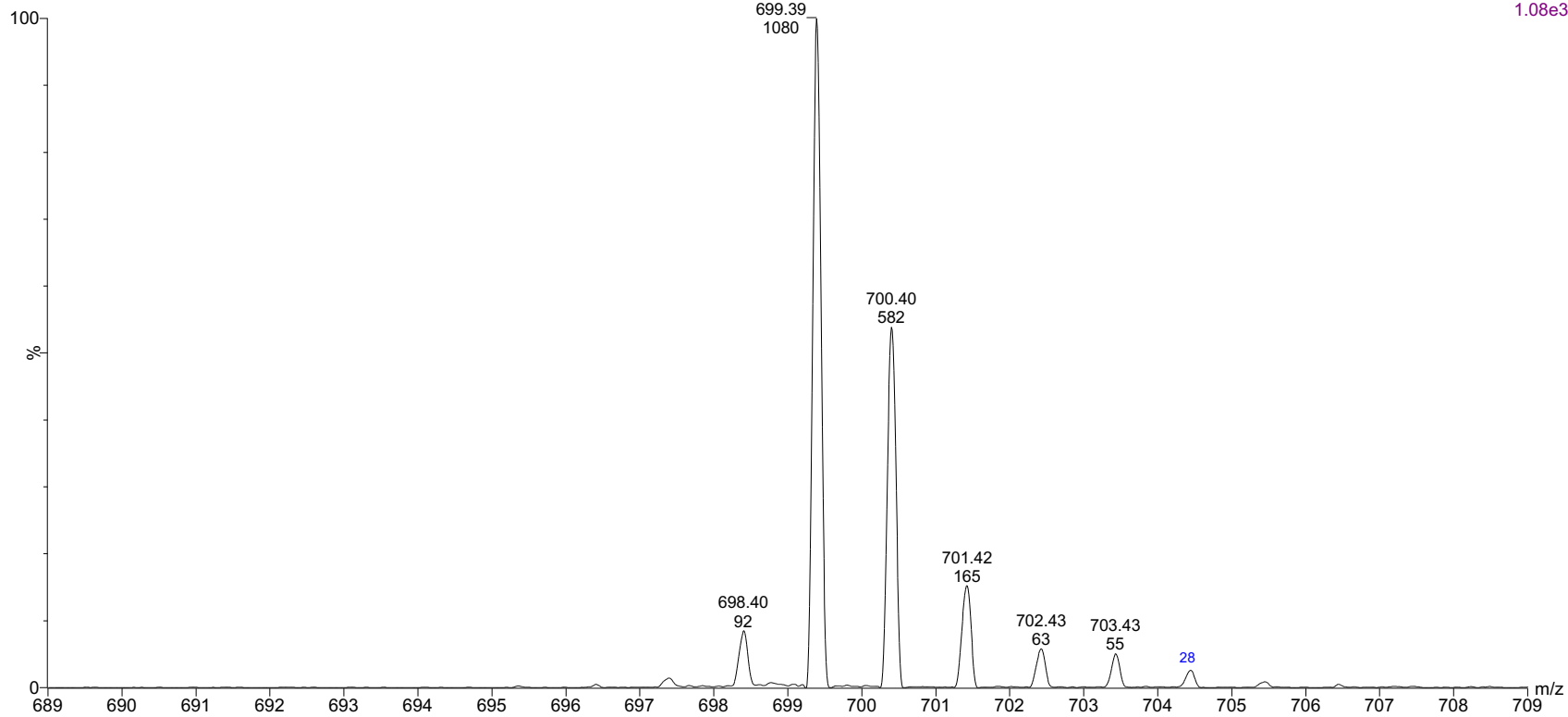
ESI-MS spectrum for sample GR-17-131-1. Shows monoisotopic [M+H]<sup>+</sup> mass.

8.0000000

21-Apr-2022, 15:23:32

pp\_2022\_029\_GR\_17\_131\_1 33 (0.628) Sm (SG, 2x5.00); Sb (2,10.00 ); Cm (32:33-21:22)

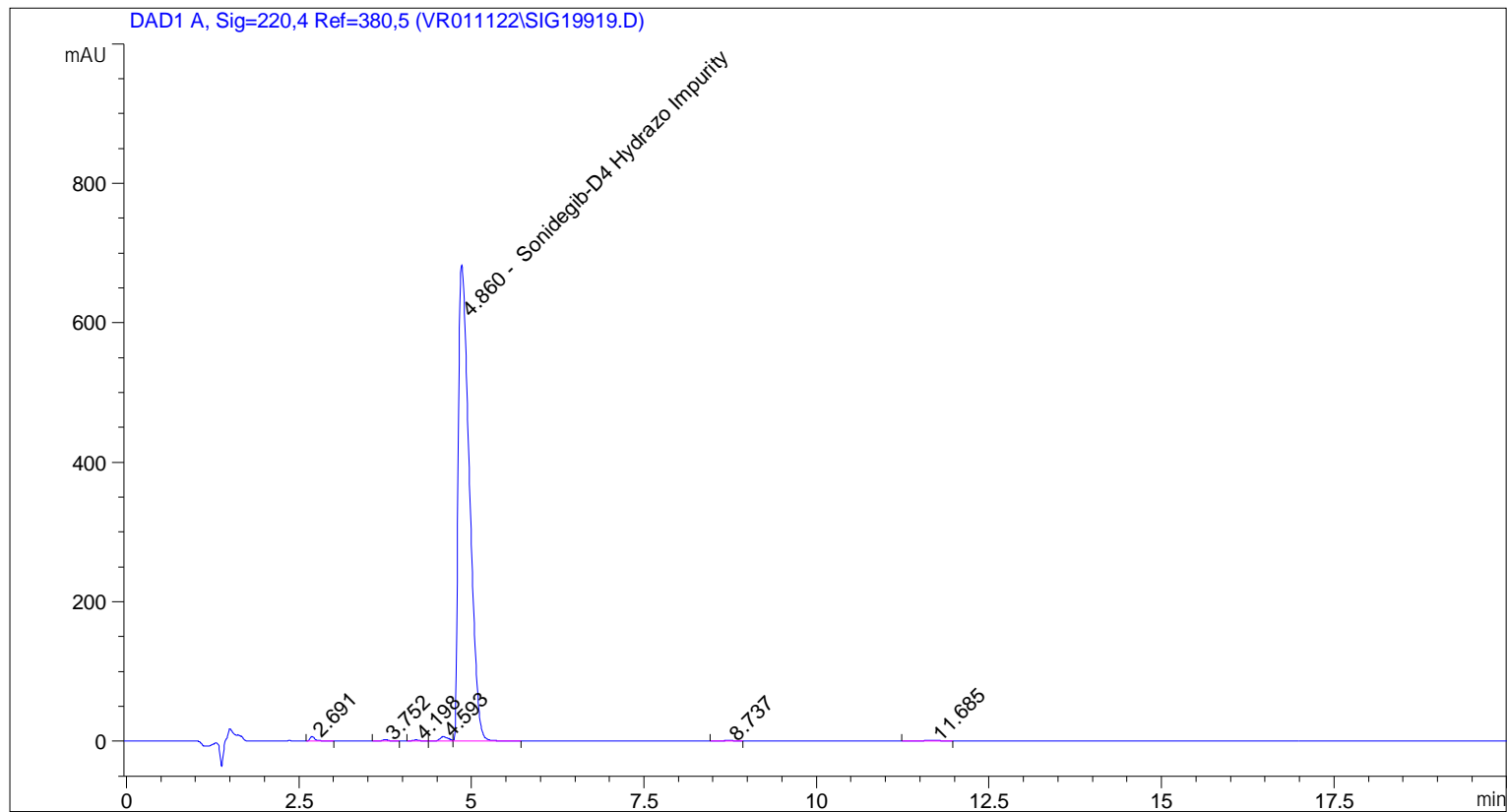
TOF MS ES+  
1.08e3



Expansion of above showing intensity labels.

```

=====
Acq. Operator   : vrusu
Acq. Instrument : Instrument 1                Location : Vial 24
Injection Date  : 4/14/2022 9:07:34 AM
                                           Inj Volume : 5.0 µl
Acq. Method     : C:\CHEM32\1\METHODS\VR041322_131.M
Last changed    : 4/14/2022 9:06:40 AM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR041422_131_1PM.M
Last changed    : 4/14/2022 9:59:41 AM by vrusu
  
```



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

```

Sorted By           :      Signal
Calib. Data Modified :      4/14/2022 9:57:26 AM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: DAD1 A, Sig=220,4 Ref=380,5

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	2.691	BB	0.0714	31.93035	0.4090	?
2	3.752	BV	0.0919	12.10820	0.1551	?
3	4.198	BB	0.0991	10.04639	0.1287	?
4	4.593	BV	0.1191	51.48145	0.6594	?
5	4.860	VB	0.1732	7673.41943	98.2891	Sonidegib-D4 Hydrazo Impurity
6	8.737	BB	0.1542	9.54299	0.1222	?
7	11.685	BV	0.2001	18.45810	0.2364	?

Sample Name: GR-17-131-1

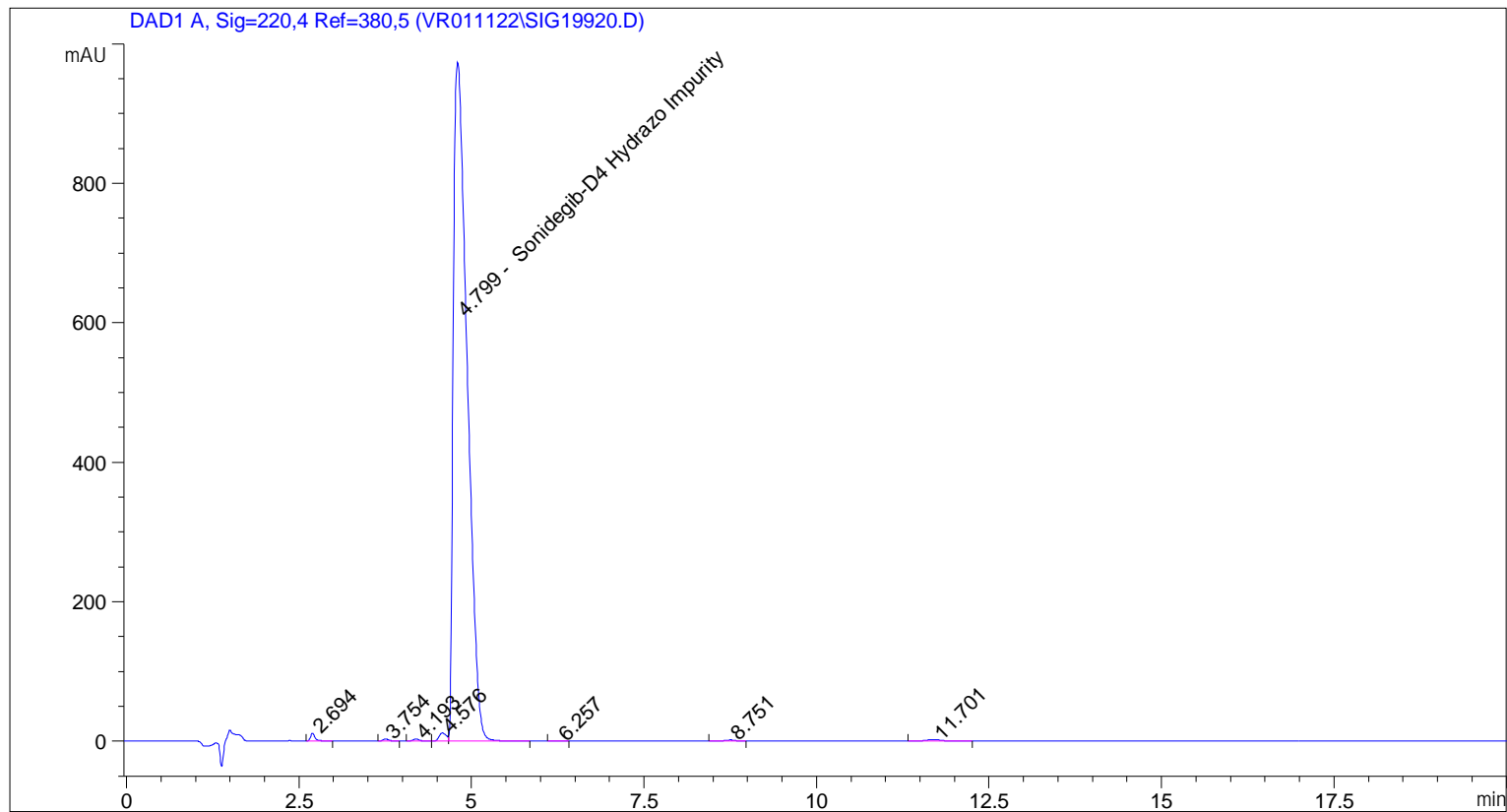
Totals : 7806.98691

=====

\*\*\* End of Report \*\*\*

```

=====
Acq. Operator   : vrusu
Acq. Instrument : Instrument 1                Location : Vial 25
Injection Date  : 4/14/2022 9:29:45 AM
                                           Inj Volume : 5.0 µl
Acq. Method    : C:\CHEM32\1\METHODS\VR041322_131.M
Last changed   : 4/14/2022 9:28:56 AM by vrusu
Analysis Method: C:\CHEM32\1\METHODS\VR041422_131_1PM.M
Last changed   : 4/14/2022 9:59:41 AM by vrusu
  
```



Area Percent Report

```

Sorted By      : Signal
Calib. Data Modified : 4/14/2022 9:57:26 AM
Multiplier:    : 1.0000
Dilution:     : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: DAD1 A, Sig=220,4 Ref=380,5

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	2.694	BB	0.0700	52.25458	0.3779	?
2	3.754	VV	0.0880	19.46885	0.1408	?
3	4.193	VB	0.0986	19.48582	0.1409	?
4	4.576	BV	0.1203	84.09445	0.6081	?
5	4.799	VB	0.2150	1.35987e4	98.3323	Sonidegib-D4 Hydrazo Impurity
6	6.257	BB	0.1237	2.10533	0.0152	?
7	8.751	BV	0.1610	17.00796	0.1230	?
8	11.701	VB	0.2264	36.21494	0.2619	?



Sample Name: GR-17-131-1 spl-2

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
Totals :				1.38294e4		

=====  
\*\*\* End of Report \*\*\*