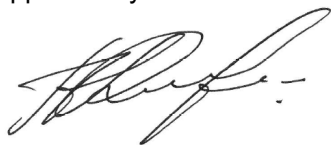


Name:	Lercanidipine-D3 Hydrochloride
Lot#:	GR-18-249
Test Date:	09/29/2023 (re-test date: 09/29/2028)
CAS No.:	1189954-18-4
MF:	C ₃₆ H ₃₉ D ₃ ClN ₃ O ₆
MW:	651.21
Appearance:	Pale yellow Solid
Purity:	98.2% by HPLC (average of two sample preparations); 99.5% atom D
¹H-NMR:	Conforms
MS-ESI (+)	Conforms (shows peak at m/z = 615.32 [M _(free base) +H] ⁺)
Storage	Store at -18°C in a dry place away from direct sunlight

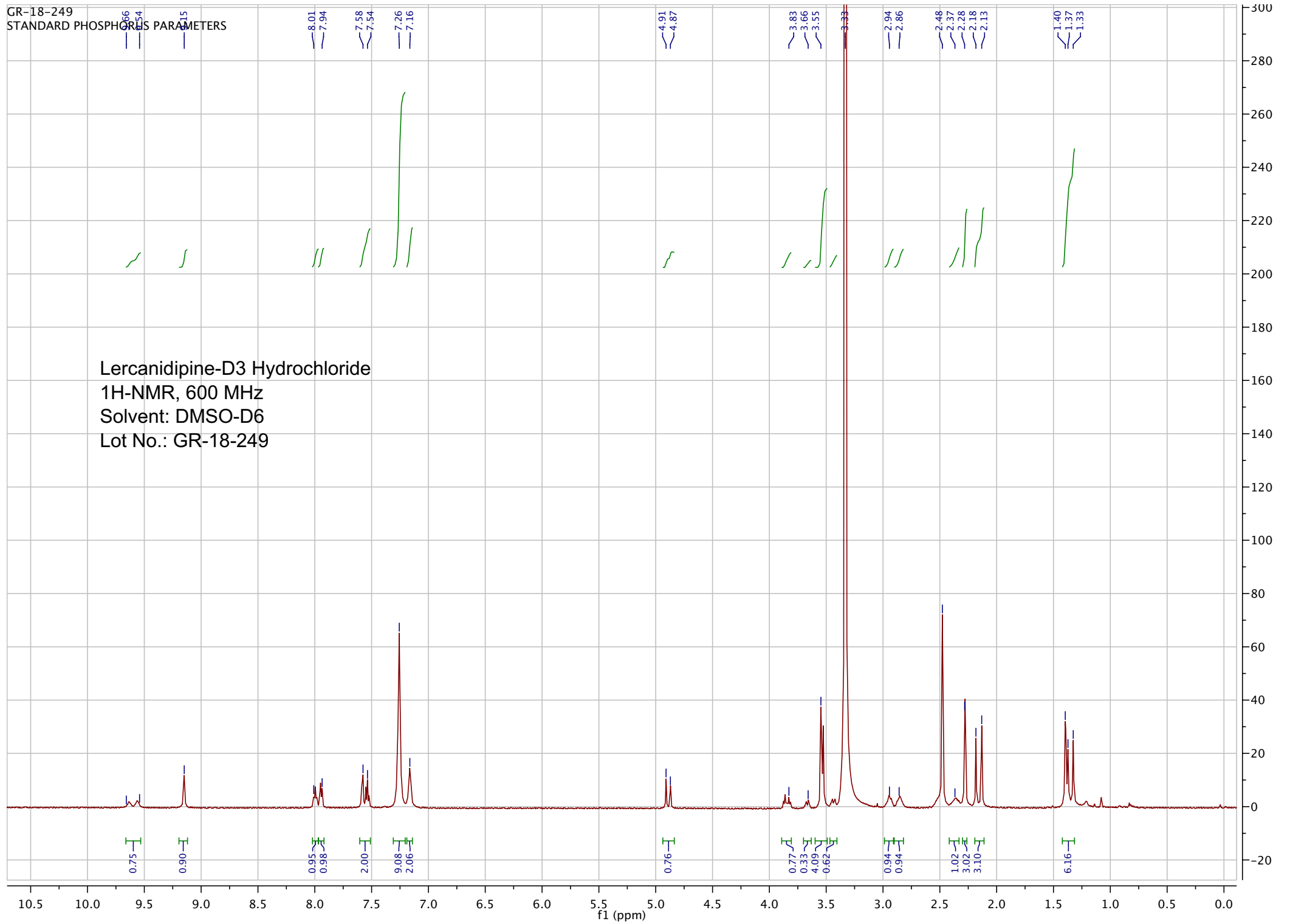
Approved by:

Date: 11/06/2023

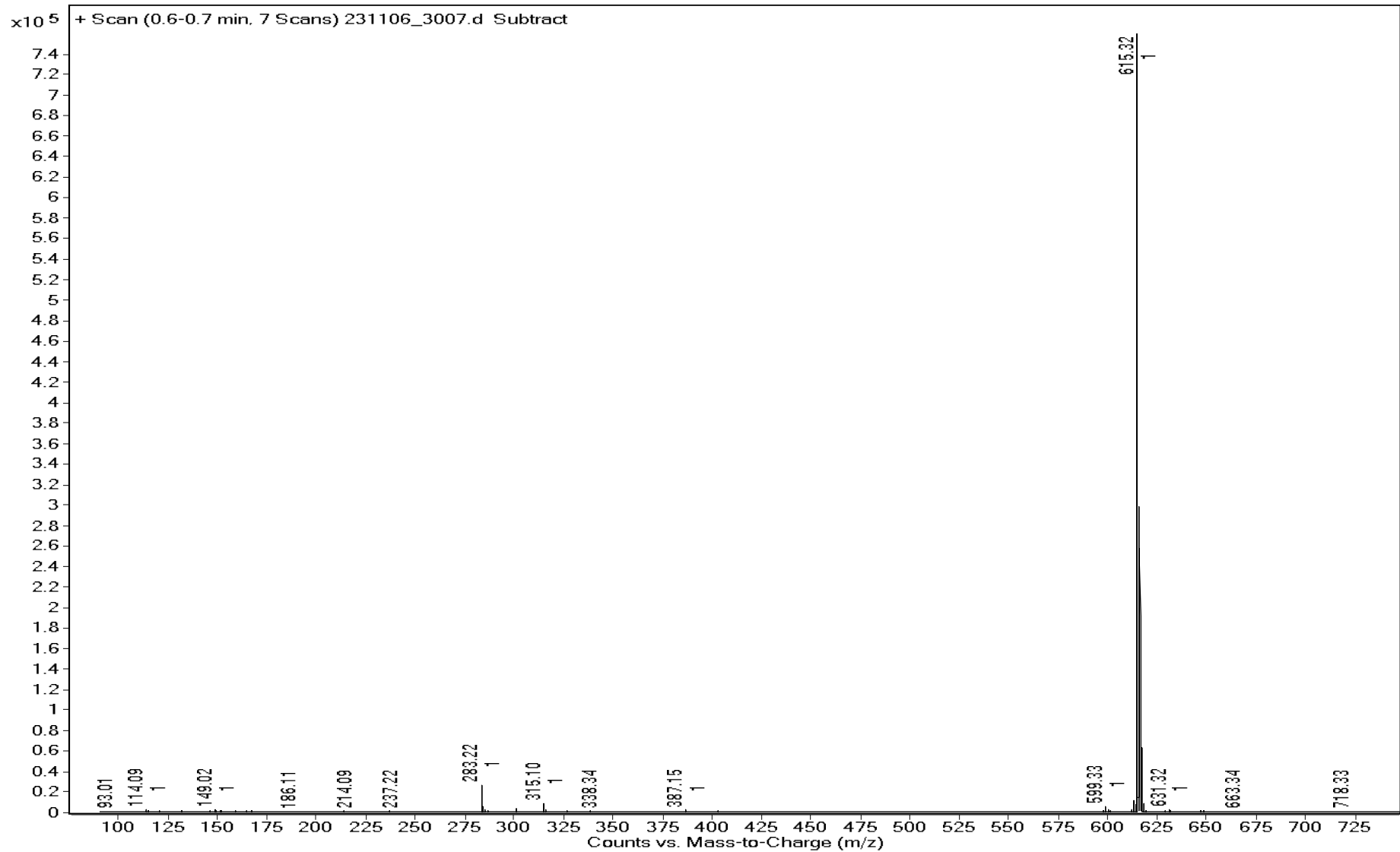


Viorica Rusu, QC/QA Manager

GR-18-249
STANDARD PHOSPHORUS PARAMETERS



Sample Name	GR-18-249	Data File	231106_3007.d	Acq Method	HRMS.m
DA Method	AIMS_Accurate_Mass.m	Instrument	Agilent 6538 UHD	Acq Date, Time	06/11/2023 11:45:42 AM
Comment	ESI+				



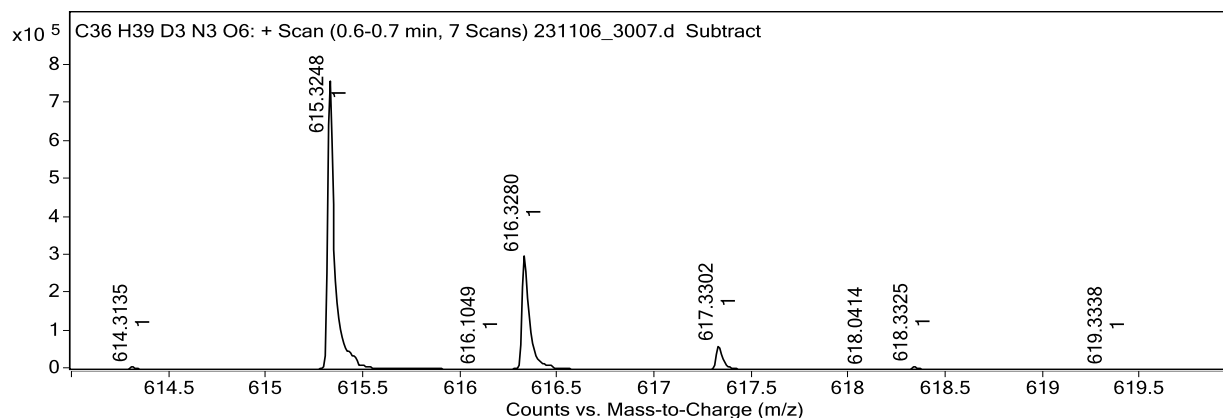
Sample Name	GR-18-249	Data File	231106_3007.d
Acq Method	HRMS.m	DA Method	AIMS_Accurate_Mass.m
Instrument	Agilent 6538 UHD	Acq Date, Time	06/11/2023 11:45:42 AM
Comment	ESI+		

Target Ion Species

Ion Species	m/z	Ionic Formula
M+	615.3248	C36 H39 [2H]3 N3 O6

MFG Calculator Results

Target m/z	Ionic Formula	Calc m/z	+/- (mDa)	+/- (ppm)	DBE	MFG Score
615.3248	C36 H39 [2H]3 N3 O6	615.3256	-0.8	-1.3	17.5	98.30
615.3248	C32 H35 [2H]3 N9 O4	615.3230	1.8	2.9	18.5	94.37
615.3248	C37 H35 [2H]3 N7 O2	615.3270	-2.2	-3.6	22.5	91.50
615.3248	C29 H39 [2H]3 N9 O4 S	615.3263	-1.5	-2.4	13.5	89.83
615.3248	C28 H43 [2H]3 N5 O8 S	615.3250	-0.2	-0.3	8.5	89.12
615.3248	C40 H39 [2H]3 N3 O S	615.3231	1.7	2.8	21.5	87.40
615.3248	C31 H39 [2H]3 N5 O8	615.3216	3.2	5.2	13.5	85.04
615.3248	C27 H47 [2H]3 N O12 S	615.3237	1.1	1.8	3.5	82.75
615.3248	C23 H47 [2H]3 N O17	615.3262	-1.4	-2.3	-0.5	80.65
615.3248	C24 H43 [2H]3 N5 O13	615.3275	-2.7	-4.4	4.5	78.02

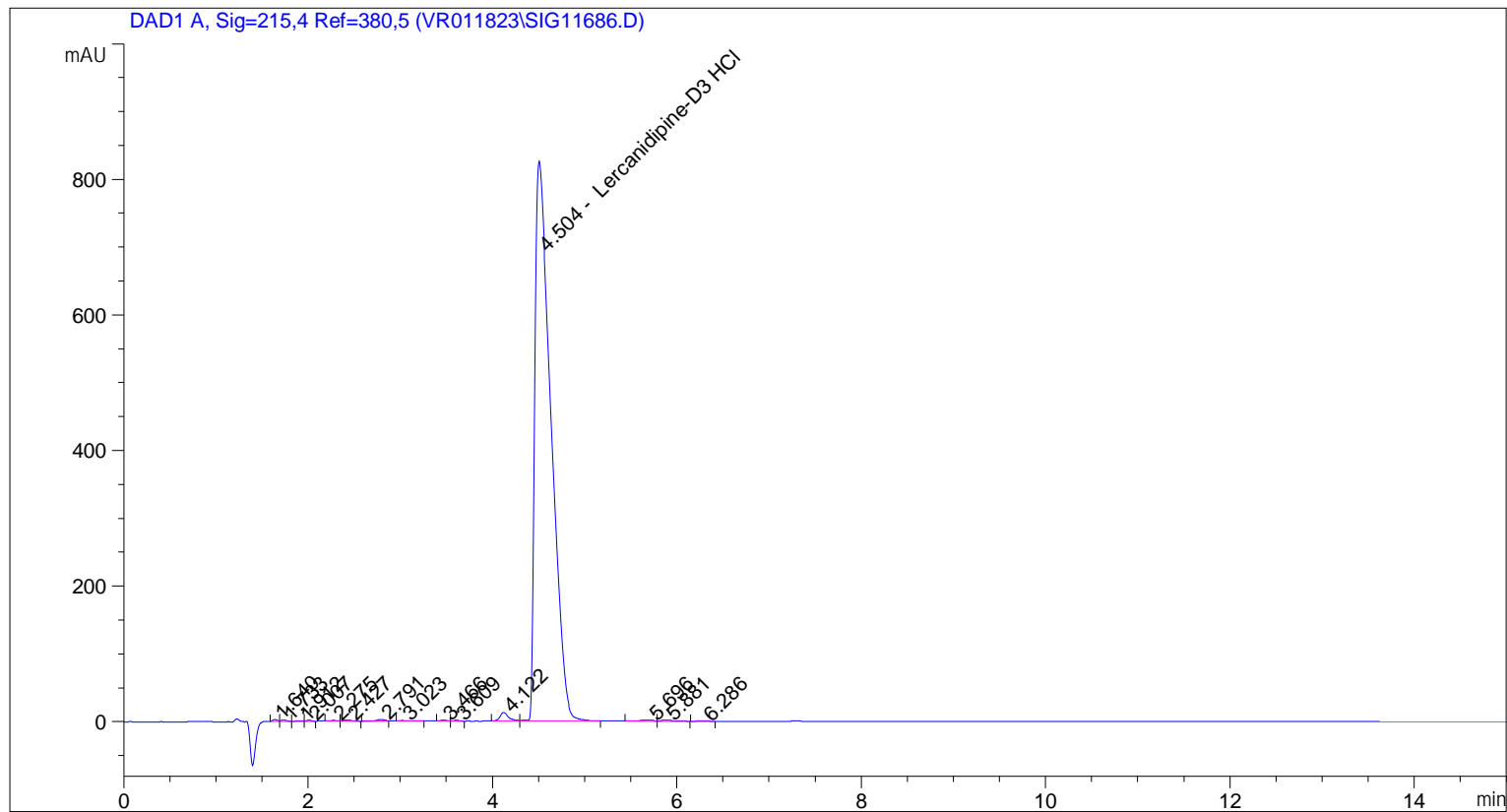


Predicted Isotope Match Table

Isotope	m/z	Calc m/z	Diff (mDa)	Abund (%)	Calc Abund (%)	+/-
1	615.3248	615.3256	-0.8	100.0	100.0	0.0
2	616.3280	616.3289	-0.9	39.4	40.7	1.3
3	617.3302	617.3318	-1.6	8.4	9.3	0.9
4	618.3325	618.3346	-2.1	1.2	1.5	0.3

```

=====
Acq. Operator   : vrusu
Acq. Instrument : Instrument 1                Location : Vial 2
Injection Date  : 9/29/2023 9:11:18 AM
                                           Inj Volume : 10.0 µl
Acq. Method    : C:\CHEM32\1\METHODS\VR092923_249.M
Last changed   : 9/29/2023 9:10:13 AM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR02923_249PM.M
Last changed   : 9/29/2023 10:03:40 AM by vrusu
  
```



Area Percent Report

```

Sorted By           : Signal
Calib. Data Modified : 9/29/2023 10:00:51 AM
Multiplier:         : 1.0000
Dilution:           : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: DAD1 A, Sig=215,4 Ref=380,5

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	1.640	BV	0.0553	8.34657	0.0816	?
2	1.733	VB	0.0630	6.85223	0.0670	?
3	1.912	BV	0.0625	4.10642	0.0401	?
4	2.007	VB	0.0562	5.53177	0.0541	?
5	2.275	BV	0.0929	5.44681	0.0533	?
6	2.427	VB	0.0827	10.47354	0.1024	?
7	2.791	BV	0.0973	17.55614	0.1716	?
8	3.023	VB	0.0972	5.90515	0.0577	?

Sample Name: GR-18-249

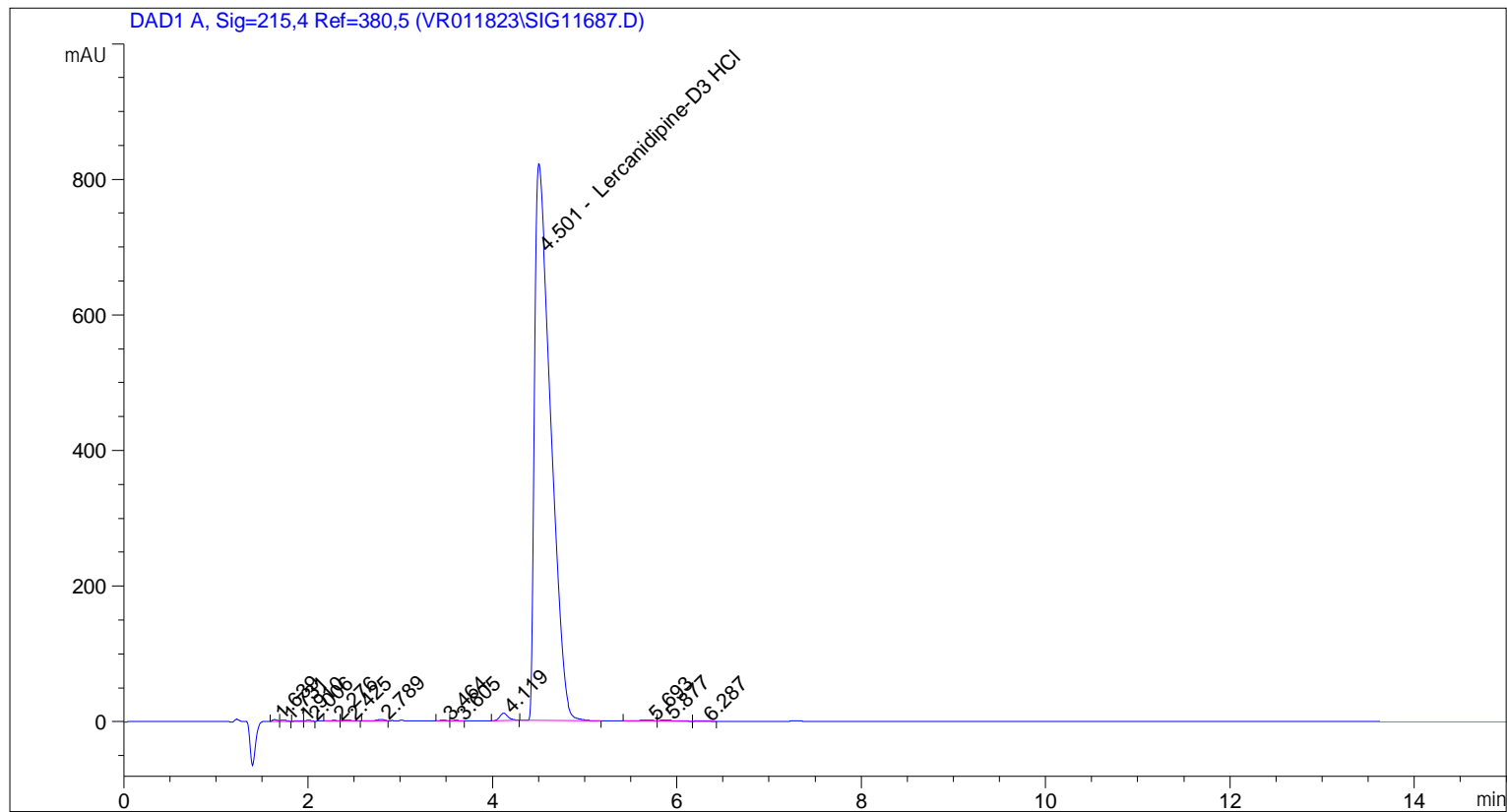
Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
9	3.466	VV	0.0749	7.42880	0.0726	?
10	3.609	VB	0.0779	5.41752	0.0530	?
11	4.122	BB	0.0897	74.10969	0.7245	?
12	4.504	BB	0.1820	1.00384e4	98.1424	Lercanidipine-D3 HCl
13	5.696	BV	0.1400	15.35922	0.1502	?
14	5.881	VB	0.1295	16.78676	0.1641	?
15	6.286	BB	0.1198	6.68554	0.0654	?

Totals : 1.02284e4

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

```

=====
Acq. Operator   : vrusu
Acq. Instrument : Instrument 1                Location : Vial 3
Injection Date  : 9/29/2023 9:31:46 AM
                                           Inj Volume : 10.0 µl
Acq. Method    : C:\CHEM32\1\METHODS\VR092923_249.M
Last changed   : 9/29/2023 9:30:46 AM by vrusu
Analysis Method: C:\CHEM32\1\METHODS\VR02923_249PM.M
Last changed   : 9/29/2023 10:03:40 AM by vrusu
  
```



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

```

Sorted By           :      Signal
Calib. Data Modified :      9/29/2023 10:00:51 AM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: DAD1 A, Sig=215,4 Ref=380,5

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	1.639	BV	0.0555	7.80484	0.0766	?
2	1.731	VB	0.0605	6.81643	0.0669	?
3	1.910	BV	0.0613	3.92589	0.0385	?
4	2.006	VB	0.0565	5.78013	0.0567	?
5	2.276	BV	0.0933	5.58634	0.0548	?
6	2.425	VB	0.0854	10.09522	0.0991	?
7	2.789	BB	0.0827	11.46077	0.1125	?
8	3.464	VV	0.0743	7.77325	0.0763	?

Sample Name: GR-18-249 spl-2

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
9	3.605	VB	0.0738	5.04755	0.0495	?
10	4.119	BB	0.0915	70.15453	0.6886	?
11	4.501	BB	0.1841	1.00111e4	98.2647	Lercanidipine-D3 HCl
12	5.693	BV	0.1426	15.98147	0.1569	?
13	5.877	VV	0.1431	18.68398	0.1834	?
14	6.287	VB	0.1211	7.68198	0.0754	?

Totals : 1.01879e4

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