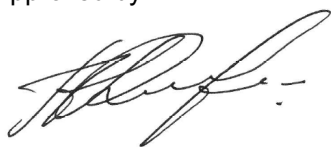


Name:	Rapamycin-D3 (D0 undetected)
Lot#:	GR-19-153
Test Date:	06/19/2024 (re-test date: 06/19/2029)
CAS No.:	392711-19-2
MF:	C ₅₁ H ₇₆ D ₃ NO ₁₃
MW:	917.21
Appearance:	White solid
Purity:	97.0% by HPLC (average of two sample preparations); >99.5% atom D
¹H-NMR:	Conforms
MS-ESI (+)	Conforms (shows peaks at m/z = 934.61 [M+NH ₄] ⁺ , 939.56 [M+Na] ⁺)
MS-ESI (-)	Conforms (shows peaks at m/z = 915.56 [M-H] ⁻ , 961.57 [M+HCOOH-H] ⁻)
Storage	Store at -20°C in a dry place away from direct sunlight under nitrogen

Approved by:

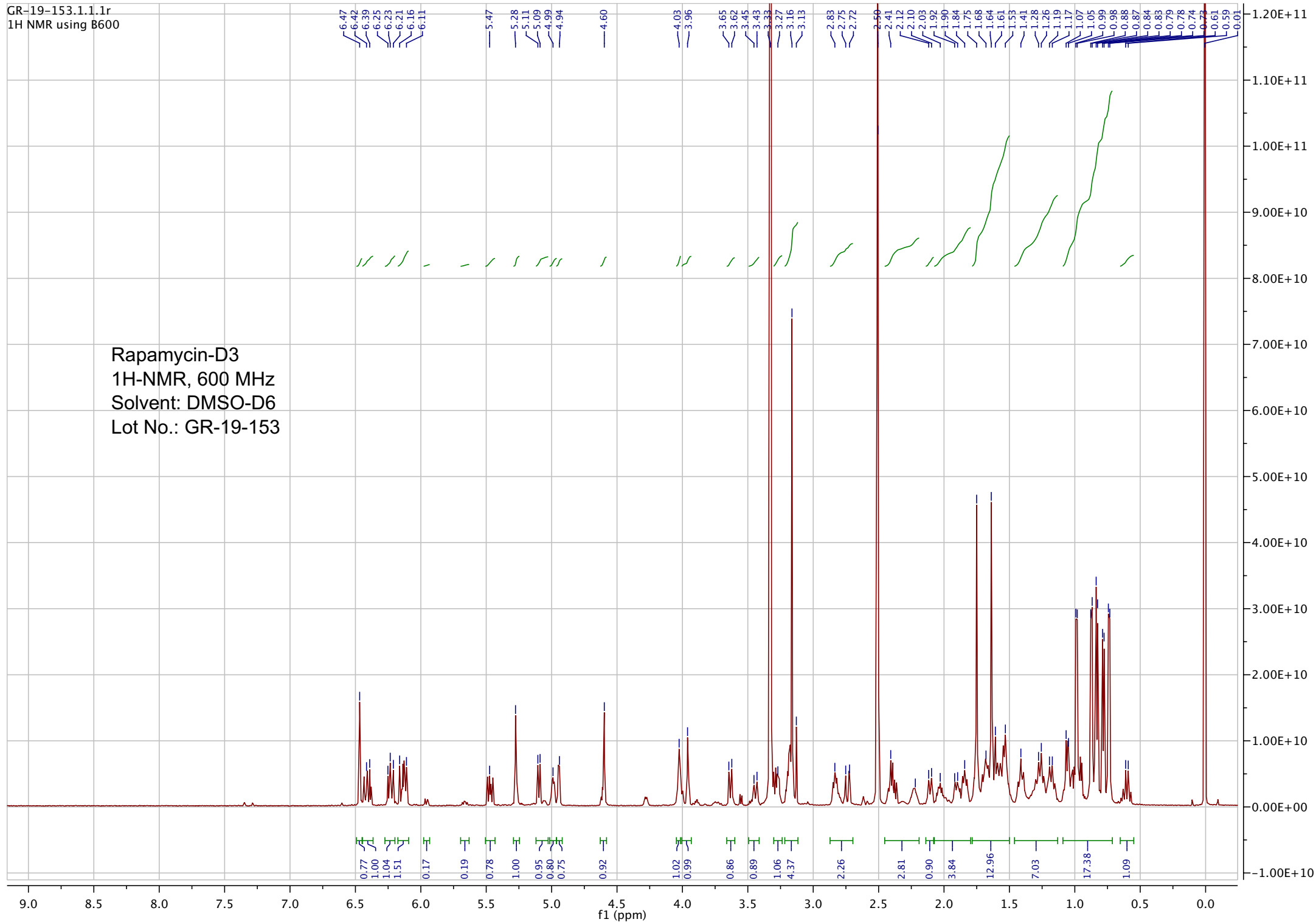
Date: 06/24/2024



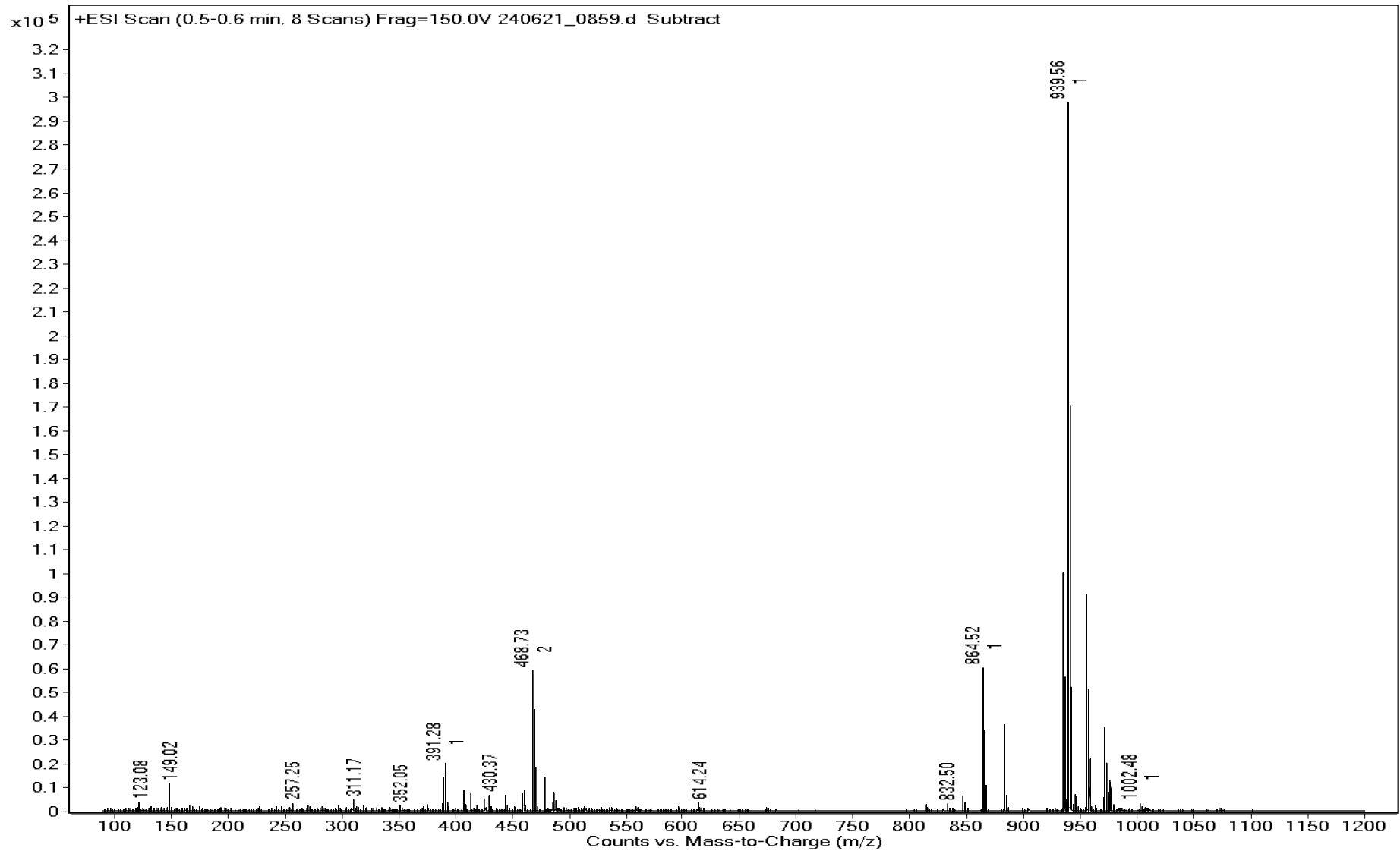
Viorica Rusu, QC/QA Manager

GR-19-153.1.1.1r
1H NMR using B600

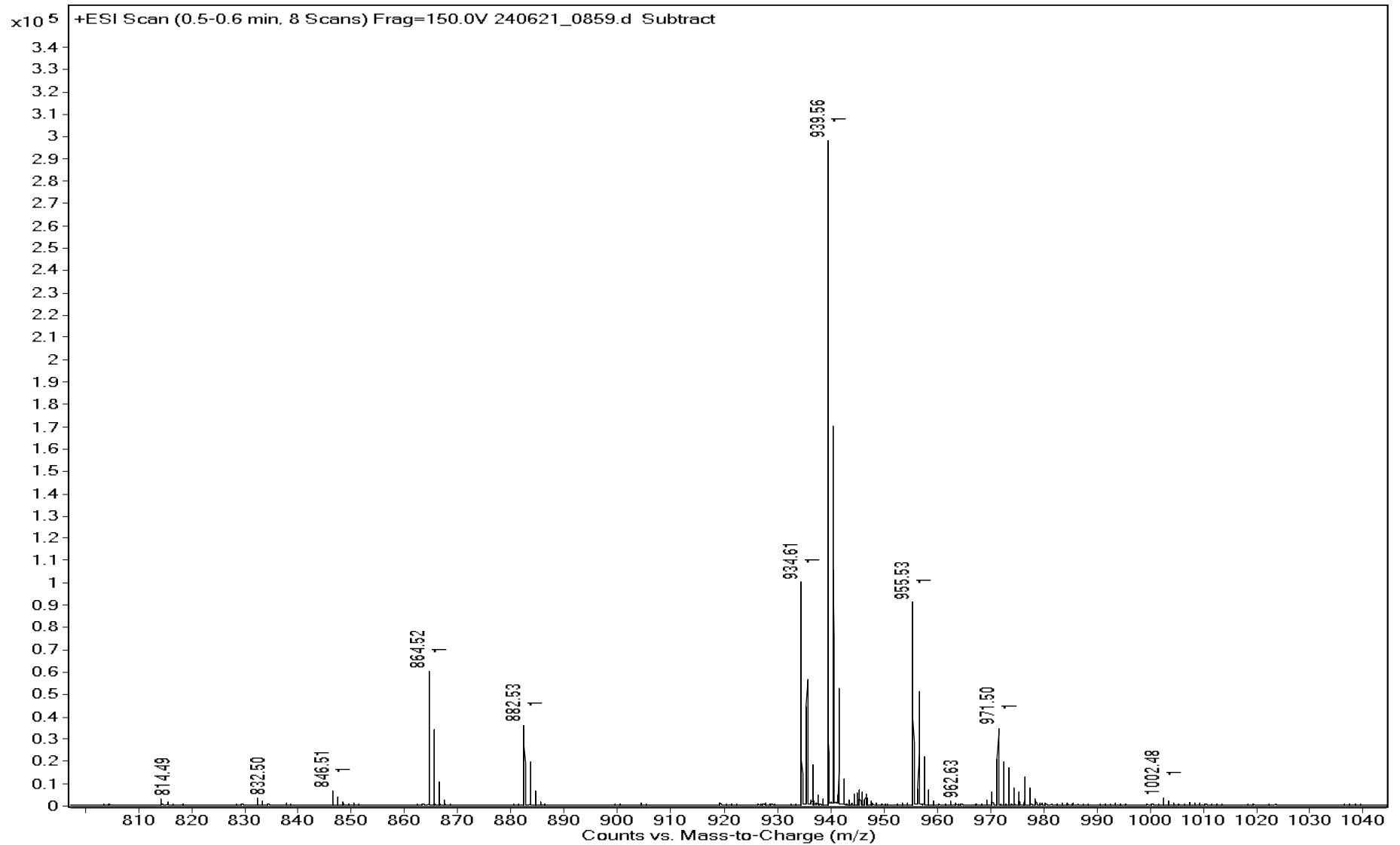
Rapamycin-D3
1H-NMR, 600 MHz
Solvent: DMSO-D6
Lot No.: GR-19-153



Sample Name	GR-19-153	Data File	240621_0859.d	Acq Method	HRMS.m
DA Method	AIMS_Accurate_Mass.m	Instrument	Agilent 6538 UHD	Acq Date, Time	21/06/2024 10:57:57 AM
Comment	ESI+				



Sample Name	GR-19-153	Data File	240621_0859.d	Acq Method	HRMS.m
DA Method	AIMS_Accurate_Mass.m	Instrument	Agilent 6538 UHD	Acq Date, Time	21/06/2024 10:57:57 AM
Comment	ESI+				



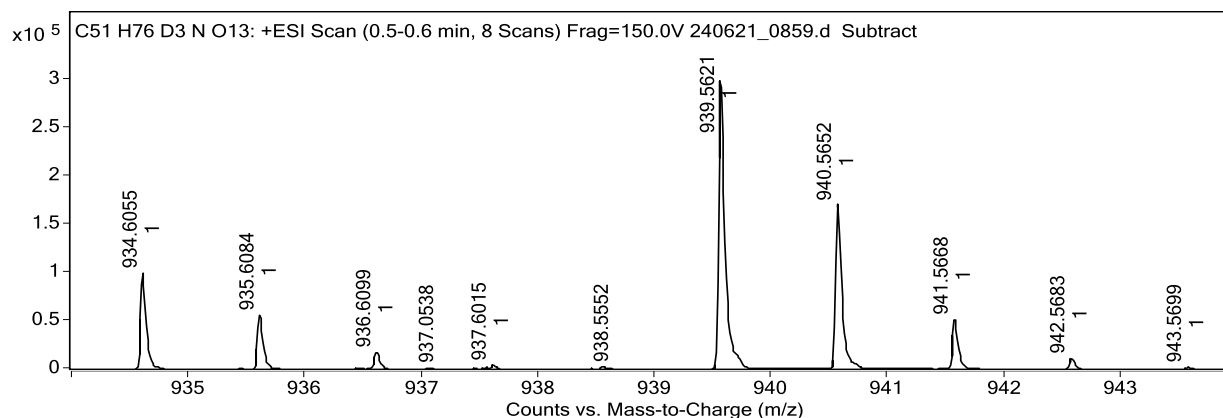
Sample Name	GR-19-153	Data File	240621_0859.d
Acq Method	HRMS.m	DA Method	AIMS_Accurate_Mass.m
Instrument	Agilent 6538 UHD	Acq Date, Time	21/06/2024 10:57:57 AM
Comment	ESI+		

Target Ion Species

Ion Species	m/z	Ionic Formula
(M+Na)+	939.5621	C51 H76 D3 N Na O13

MFG Calculator Results

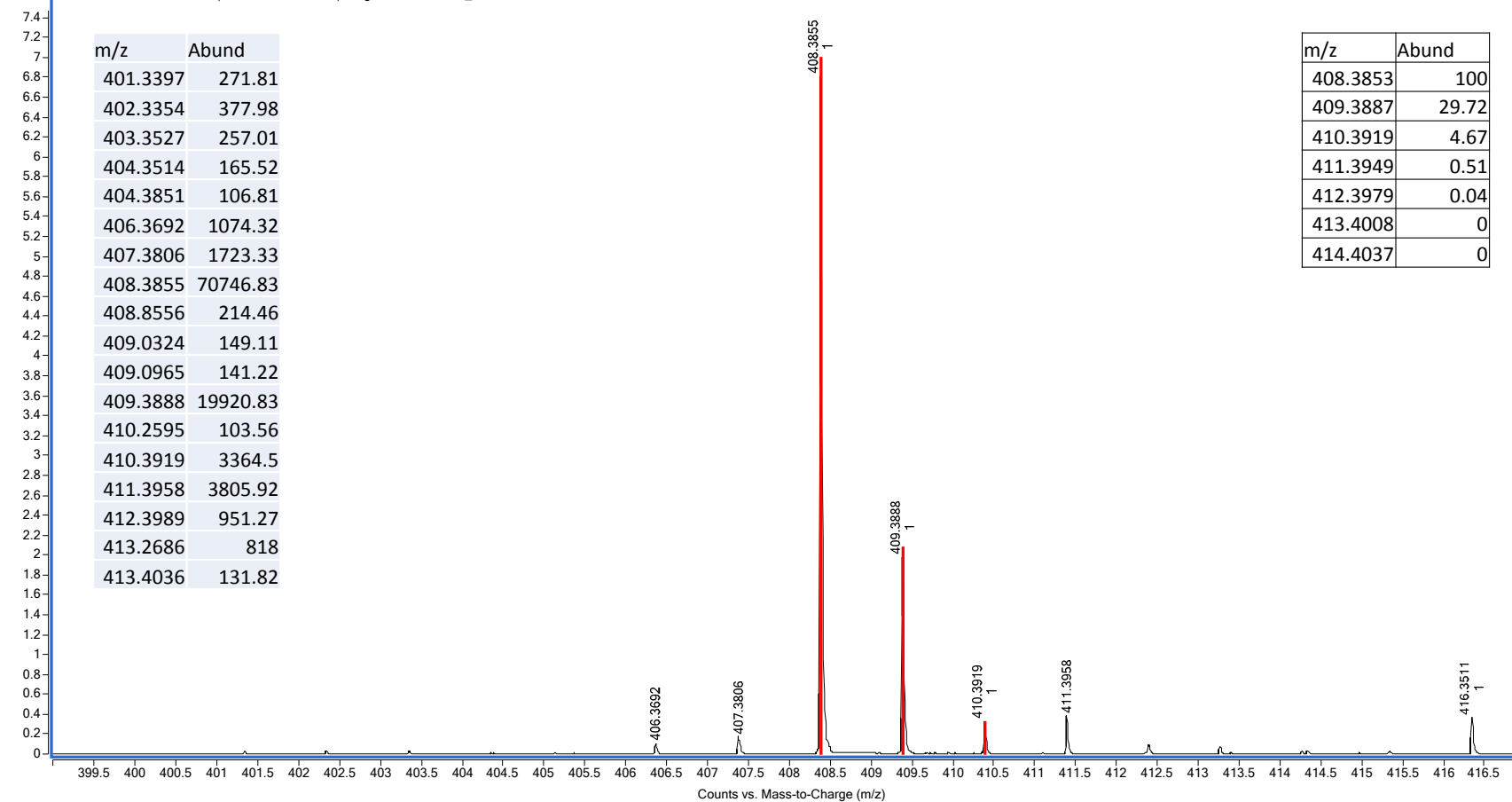
Target m/z	Ionic Formula	Calc m/z	+/- (mDa)	+/- (ppm)	DBE	MFG Score
939.5621	C48 H80 D2 Na O16	939.5621	0.0	0.0	8.0	98.44
939.5621	C46 H80 D N3 Na O15	939.5623	-0.2	-0.2	8.0	98.14
939.5621	C45 H72 D2 N10 Na O10	939.5607	1.4	1.5	14.0	97.70
939.5621	C44 H80 N6 Na O14	939.5625	-0.4	-0.4	8.0	97.61
939.5621	C47 H72 D3 N7 Na O11	939.5605	1.6	1.7	14.0	97.60
939.5621	C51 H76 D3 N Na O13	939.5632	-1.1	-1.2	13.0	97.48
939.5621	C49 H76 D2 N4 Na O12	939.5634	-1.3	-1.4	13.0	97.32
939.5621	C47 H76 D N7 Na O11	939.5636	-1.5	-1.6	13.0	96.95
939.5621	C45 H76 N10 Na O10	939.5638	-1.7	-1.8	13.0	96.34
939.5621	C57 H72 N8 Na O3	939.5620	0.1	0.1	26.0	96.14



Predicted Isotope Match Table

Isotope	m/z	Calc m/z	Diff (mDa)	Abund (%)	Calc Abund (%)	+/-
1	939.5621	939.5632	-1.1	100.0	100.0	0.0
2	940.5652	940.5666	-1.4	56.4	56.9	0.5
3	941.5668	941.5696	-2.8	17.3	18.6	1.3
4	942.5683	942.5724	-4.1	3.9	4.4	0.5

C27 H37 D7 O2: +ESI Scan (0.6-0.8 min, 8 Scans) Frag=150.0V 240621_0858.d Subtract

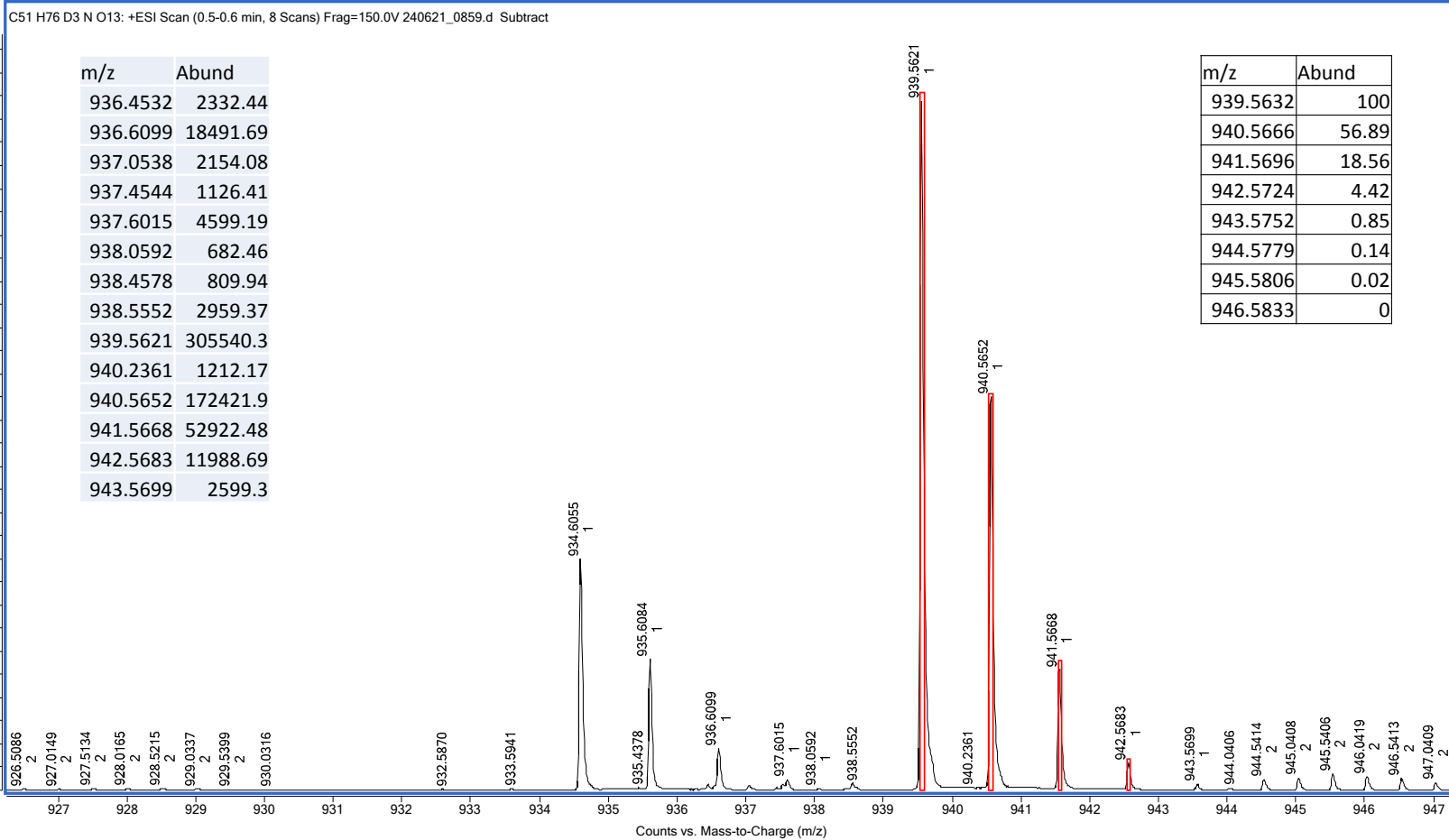


C51 H76 D3 N O13: +ESI Scan (0.5-0.6 min, 8 Scans) Frag=150.0V 240621_0859.d Subtract

x10⁵
3.2
3.1
2.9
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0

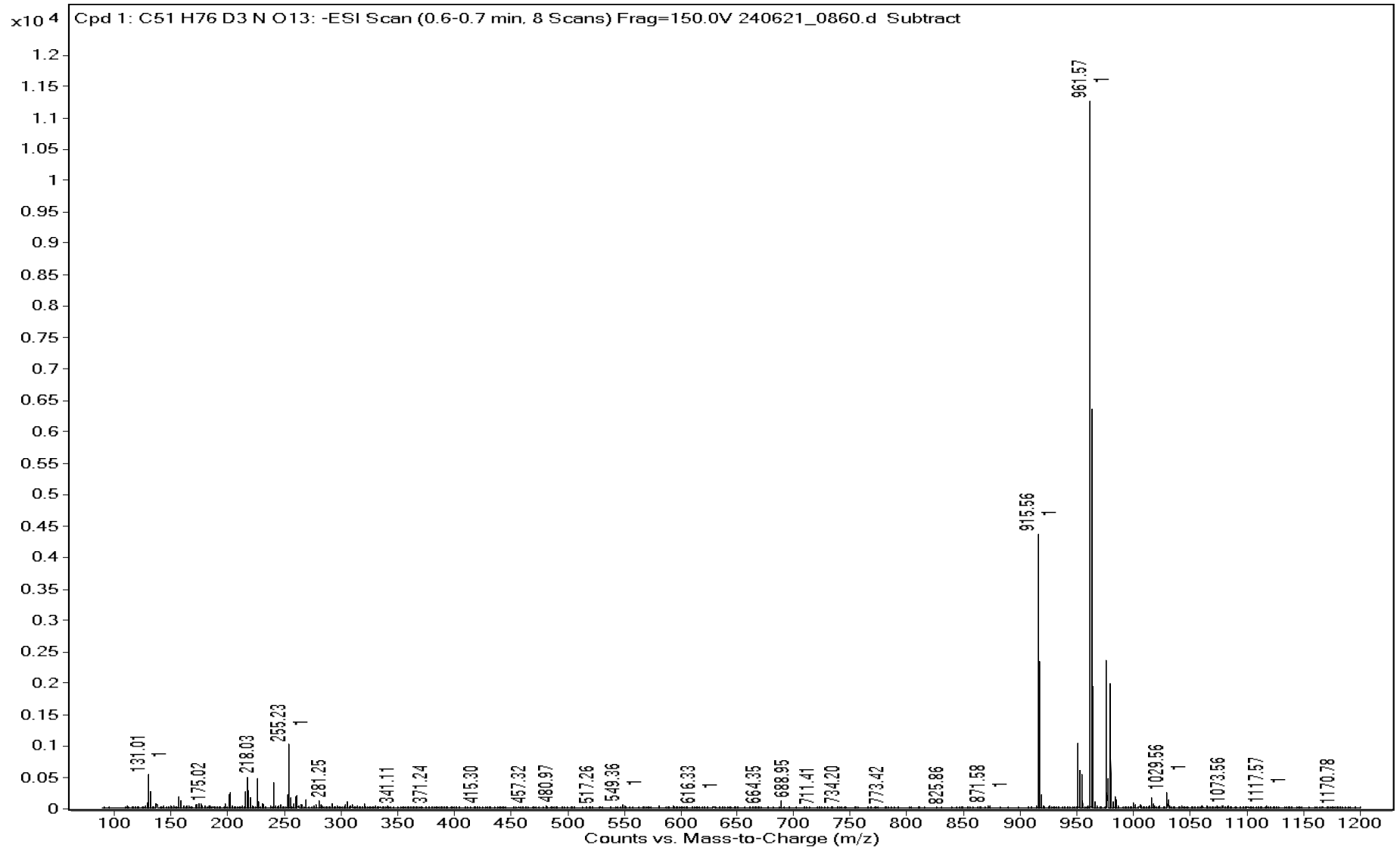
m/z	Abund
936.4532	2332.44
936.6099	18491.69
937.0538	2154.08
937.4544	1126.41
937.6015	4599.19
938.0592	682.46
938.4578	809.94
938.5552	2959.37
939.5621	305540.3
940.2361	1212.17
940.5652	172421.9
941.5668	52922.48
942.5683	11988.69
943.5699	2599.3

m/z	Abund
939.5632	100
940.5666	56.89
941.5696	18.56
942.5724	4.42
943.5752	0.85
944.5779	0.14
945.5806	0.02
946.5833	0

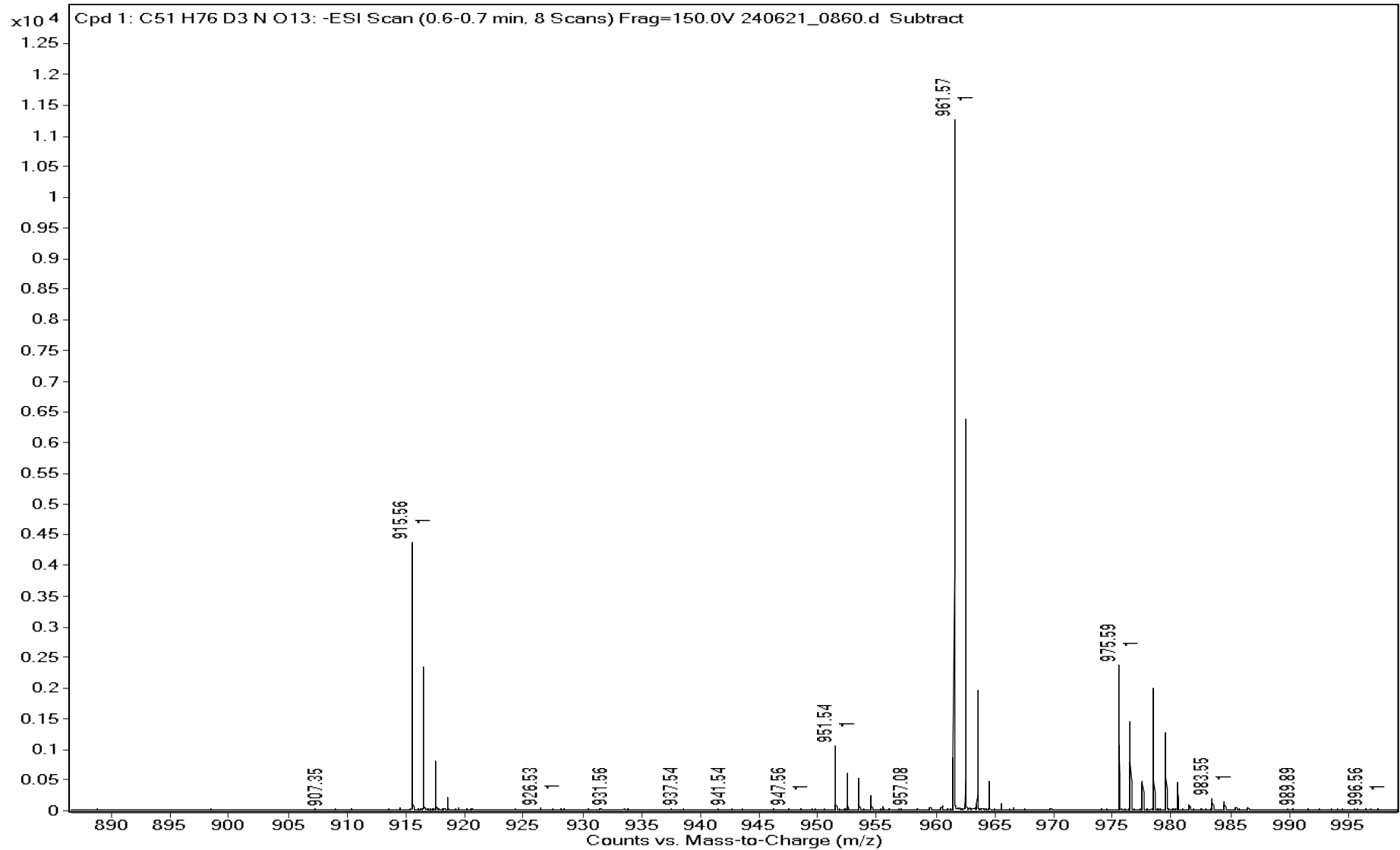


Counts vs. Mass-to-Charge (m/z)

Sample Name	GR-19-153	Data File	240621_0860.d	Acq Method	HRMS_Negative.m
DA Method	AIMS_Accurate_Mass.m	Instrument	Agilent 6538 UHD	Acq Date, Time	21/06/2024 12:30:21 PM
Comment	ESI-				



Sample Name	GR-19-153	Data File	240621_0860.d	Acq Method	HRMS_Negative.m
DA Method	AIMS_Accurate_Mass.m	Instrument	Agilent 6538 UHD	Acq Date, Time	21/06/2024 12:30:21 PM
Comment	ESI-				



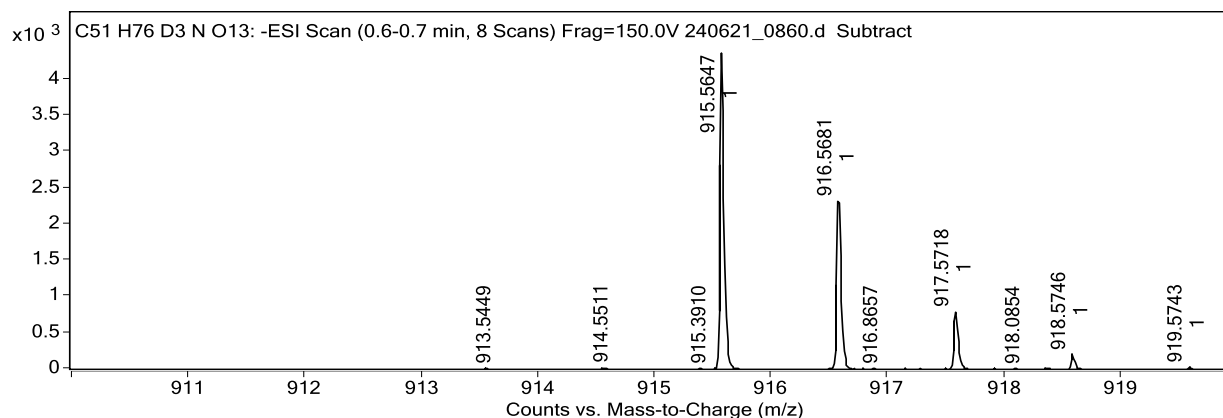
Sample Name	GR-19-153	Data File	240621_0860.d
Acq Method	HRMS_Negative.m	DA Method	AIMS_Accurate_Mass.m
Instrument	Agilent 6538 UHD	Acq Date, Time	21/06/2024 12:30:21 PM
Comment	ESI-		

Target Ion Species

Ion Species	m/z	Ionic Formula
(M-H) ⁻	915.5647	C51 H75 D3 N O13

MFG Calculator Results

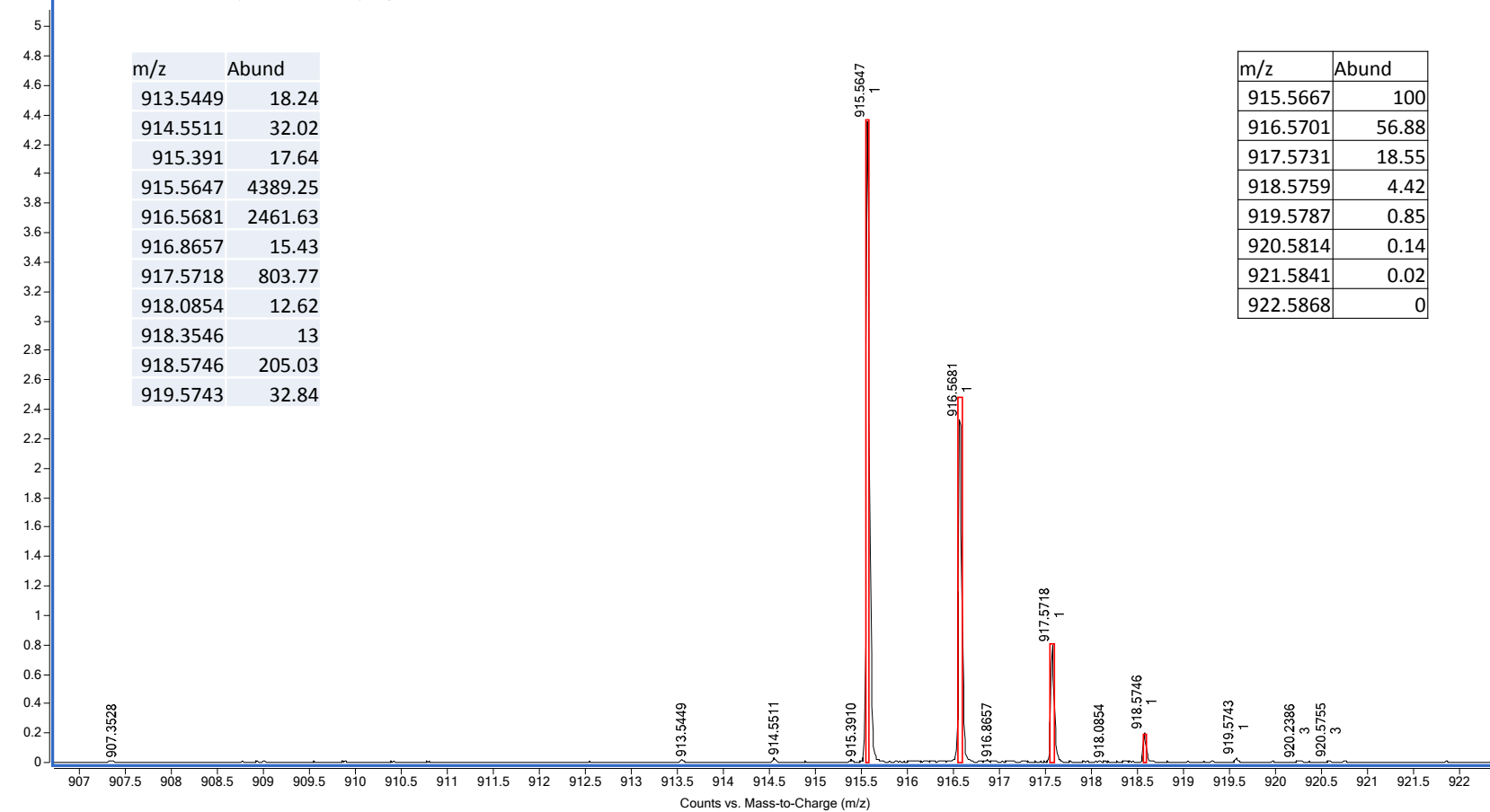
Target m/z	Ionic Formula	Calc m/z	+/- (mDa)	+/- (ppm)	DBE	MFG Score
915.5647	C48 H79 D2 O16	915.5656	-0.9	-1.0	8.0	98.67
915.5647	C47 H71 D3 N7 O11	915.5640	0.7	0.8	14.0	98.54
915.5647	C45 H71 D2 N10 O10	915.5642	0.5	0.5	14.0	98.19
915.5647	C46 H79 D N3 O15	915.5658	-1.1	-1.2	8.0	97.93
915.5647	C56 H75 N4 O7	915.5641	0.6	0.7	21.0	97.17
915.5647	C44 H79 N6 O14	915.5660	-1.3	-1.4	8.0	96.95
915.5647	C58 H75 D N O8	915.5639	0.8	0.9	21.0	96.42
915.5647	C51 H75 D3 N O13	915.5667	-2.0	-2.2	13.0	96.42
915.5647	C43 H83 N2 O18	915.5646	0.1	0.1	3.0	96.41
915.5647	C49 H75 D2 N4 O12	915.5669	-2.2	-2.4	13.0	95.82



Predicted Isotope Match Table

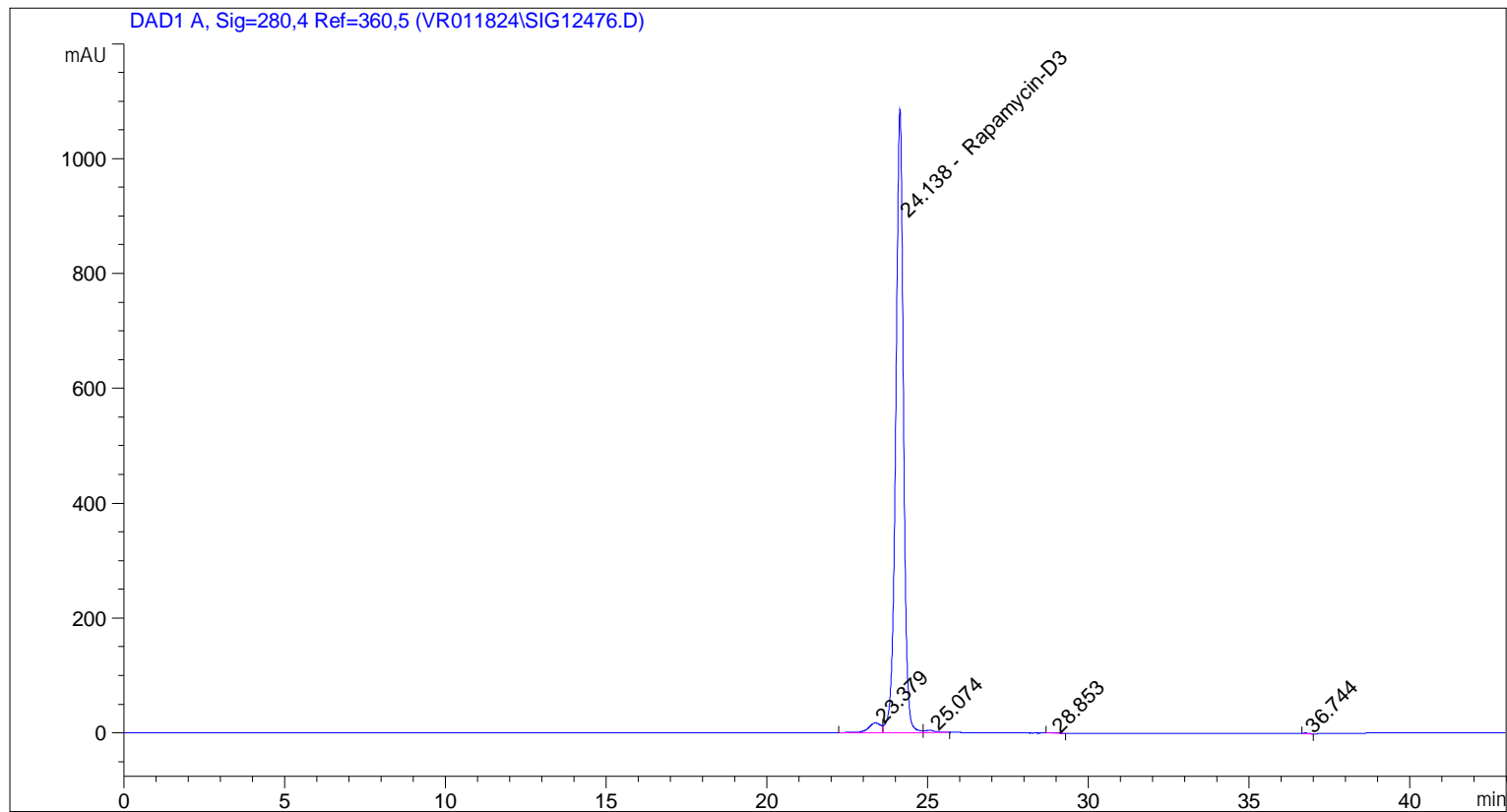
Isotope	m/z	Calc m/z	Diff (mDa)	Abund (%)	Calc Abund (%)	+/-
1	915.5647	915.5667	-2.0	100.0	100.0	0.0
2	916.5681	916.5701	-2.0	56.1	56.9	0.8
3	917.5718	917.5731	-1.3	18.3	18.6	0.3
4	918.5746	918.5759	-1.3	4.7	4.4	-0.3

C51 H76 D3 N O13: -ESI Scan (0.6-0.7 min, 8 Scans) Frag=150.0V 240621_0860.d Subtract



```

=====
Acq. Operator   : vrusu
Acq. Instrument : Instrument 1          Location : Vial 4
Injection Date  : 6/19/2024 8:18:57 AM
                                           Inj Volume : 10.0 µl
Acq. Method     : C:\CHEM32\1\METHODS\VR061924_153.M
Last changed    : 6/19/2024 8:17:55 AM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR061924_153PM.M
Last changed    : 6/19/2024 9:26:37 AM by vrusu
  
```



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

```

Sorted By           :      Signal
Calib. Data Modified :      6/19/2024 9:25:52 AM
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	23.379	BV	0.3839	445.37088	2.3802	?
2	24.138	VV	0.2531	1.81538e4	97.0211	Rapamycin-D3
3	25.074	VB	0.3012	92.57738	0.4948	?
4	28.853	BB	0.1754	9.79080	0.0523	?
5	36.744	BB	0.0835	9.64661	0.0516	?

Totals : 1.87112e4

=====

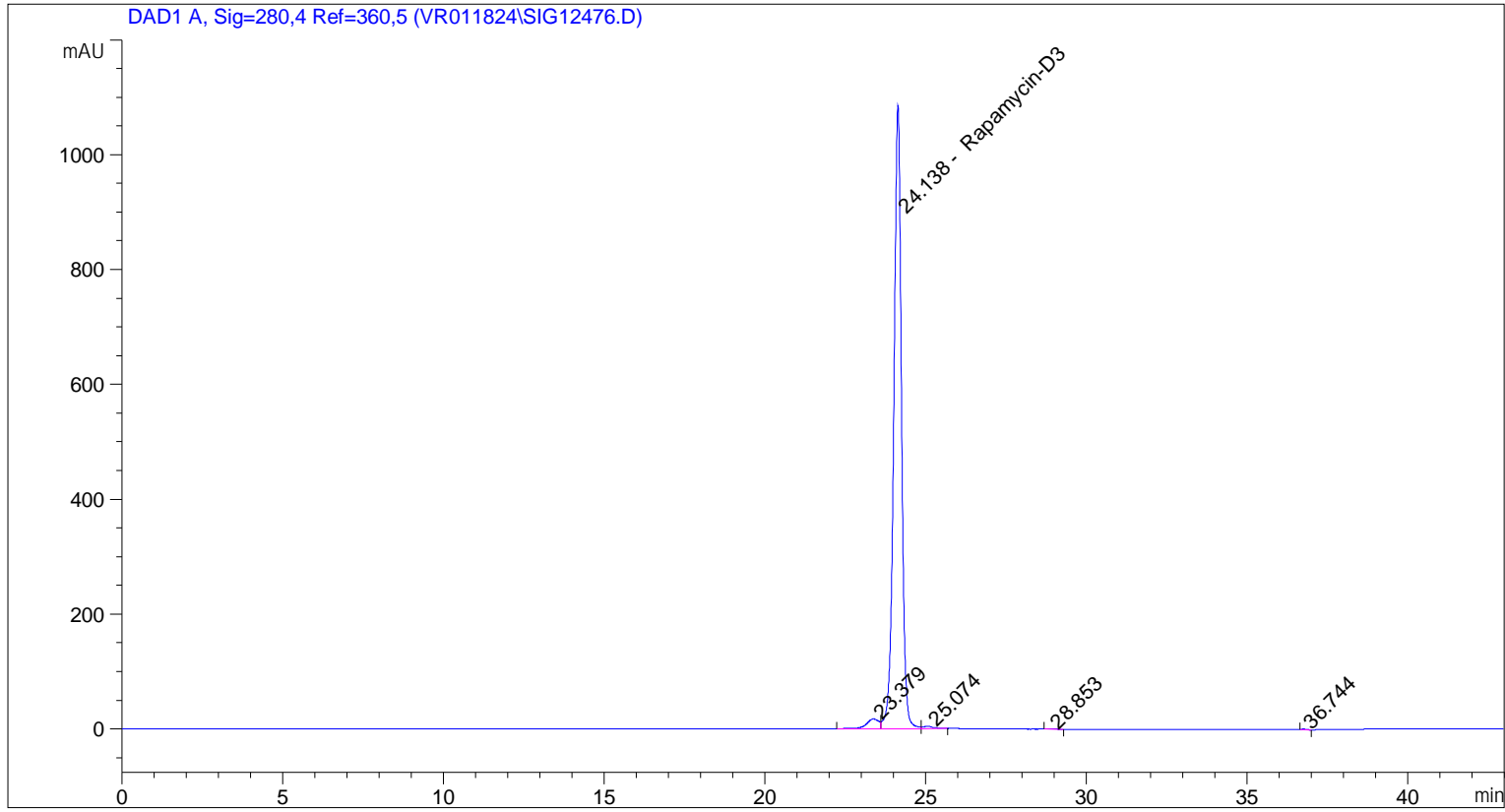
*** End of Report ***

Sample Name: GR-19-153

```

=====
Acq. Operator   : vrusu
Acq. Instrument : Instrument 1                Location : Vial 4
Injection Date  : 6/19/2024 8:18:57 AM
                                           Inj Volume : 10.0 µl
Acq. Method     : C:\CHEM32\1\METHODS\VR061924_153.M
Last changed    : 6/19/2024 8:17:55 AM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR061924_153PM.M
Last changed    : 6/19/2024 9:26:37 AM by vrusu

```



```

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

```

```

Sorted By           :      Signal
Calib. Data Modified :      6/19/2024 9:25:52 AM
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	23.379	BV	0.3839	445.37088	2.3802	?
2	24.138	VV	0.2531	1.81538e4	97.0211	Rapamycin-D3
3	25.074	VB	0.3012	92.57738	0.4948	?
4	28.853	BB	0.1754	9.79080	0.0523	?
5	36.744	BB	0.0835	9.64661	0.0516	?

Totals : 1.87112e4

=====

*** End of Report ***