

Name:	Budesonide-D8
Lot#:	GR-19-297
Test Date:	10/23/2025 (re-test date:10/23/2030)
CAS No.:	1105542-94-6
MF:	C ₂₅ H ₂₆ D ₈ O ₆
MW:	438.58
Appearance:	White Solid
Purity:	98.3 % by HPLC (average of two sample preparations; sum of two isomers); >98% atom D
¹H-NMR:	Conforms (contains a trace of ACN)
MS-ESI (+)	Conforms (shows peaks at m/z = 439.29 [M+H] ⁺ , 421.28 [M-H ₂ O+H] ⁺ , 461.28 [M+Na] ⁺)
Storage	Store at -18°C in a dry place away from direct sunlight

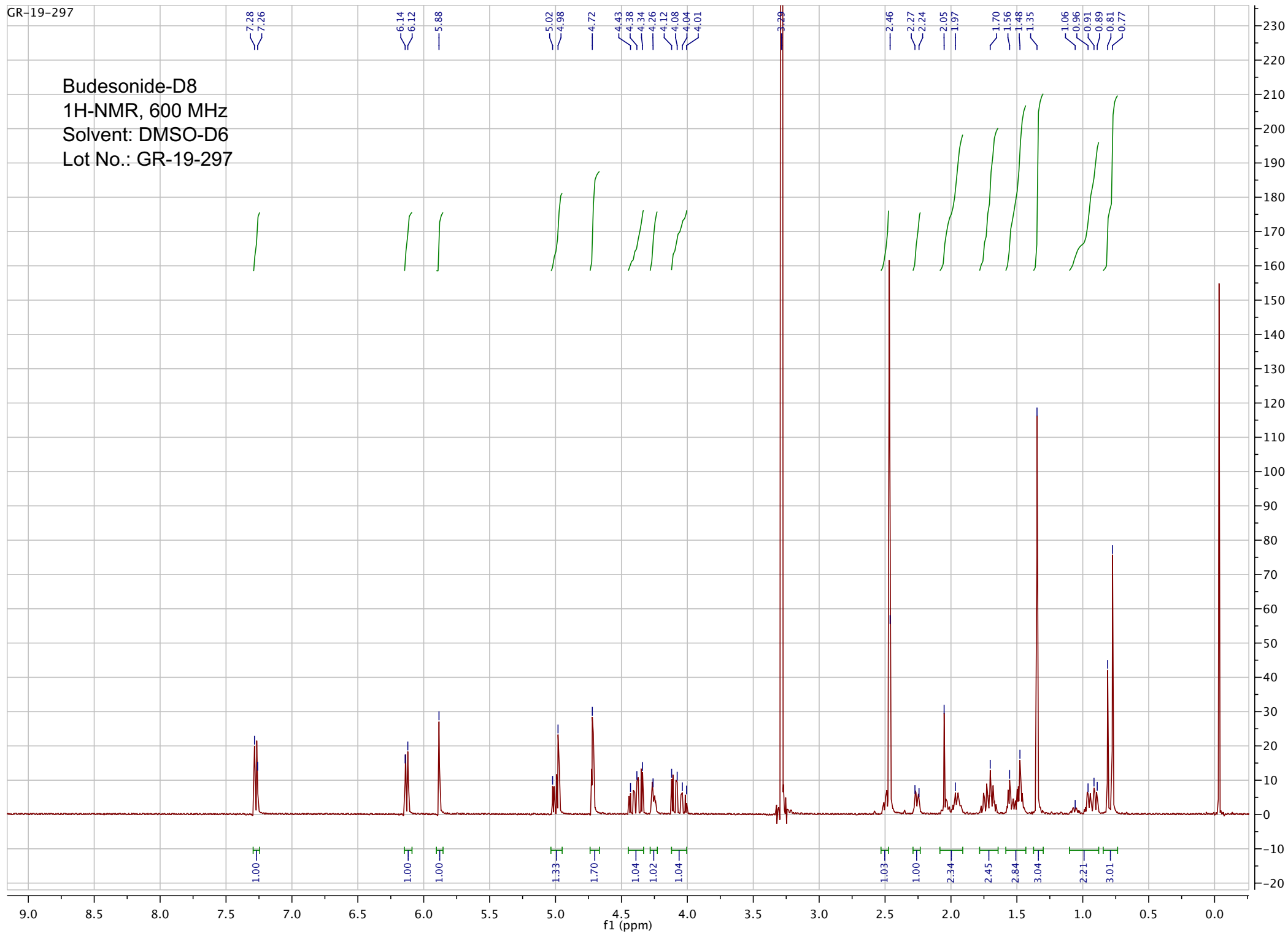
Approved by:

Date: 10/29/2025

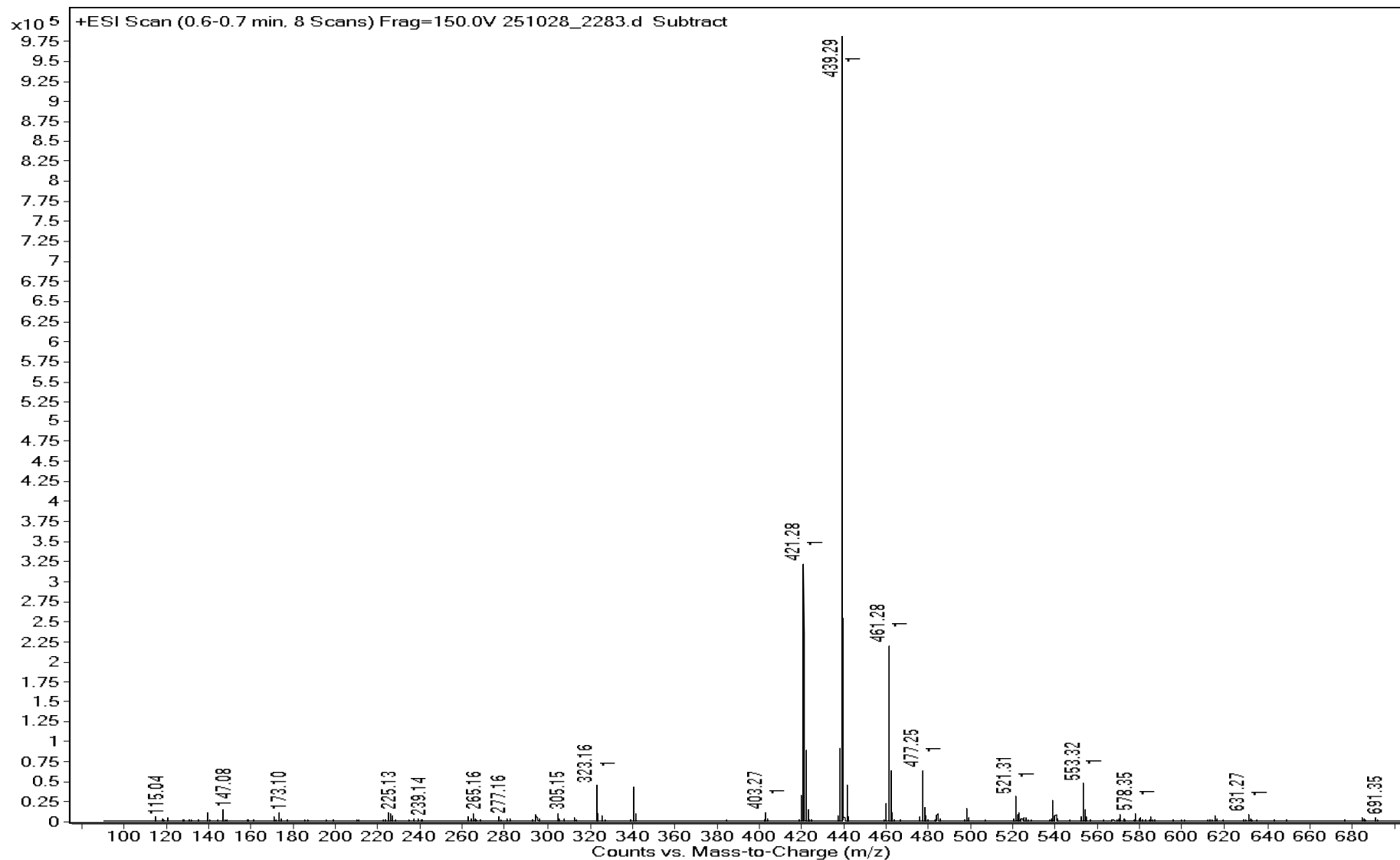
Viorica Rusu, QC/QA Manager

GR-19-297

Budesonide-D8
1H-NMR, 600 MHz
Solvent: DMSO-D6
Lot No.: GR-19-297



Sample Name	GR-19-297	Data File	251028_2283.d	Acq Method	HRMS.m
DA Method	AIMS_Accurate_Mass.m	Instrument	Agilent 6538 UHD	Acq Date, Time	28/10/2025 4:10:04 PM
Comment	ESI+				



ESI-MS Report

Molecular Formula Generation (MFG)

Sample Name GR-19-297
Acq Method HRMS.m
Instrument Agilent 6538 UHD
Comment ESI+

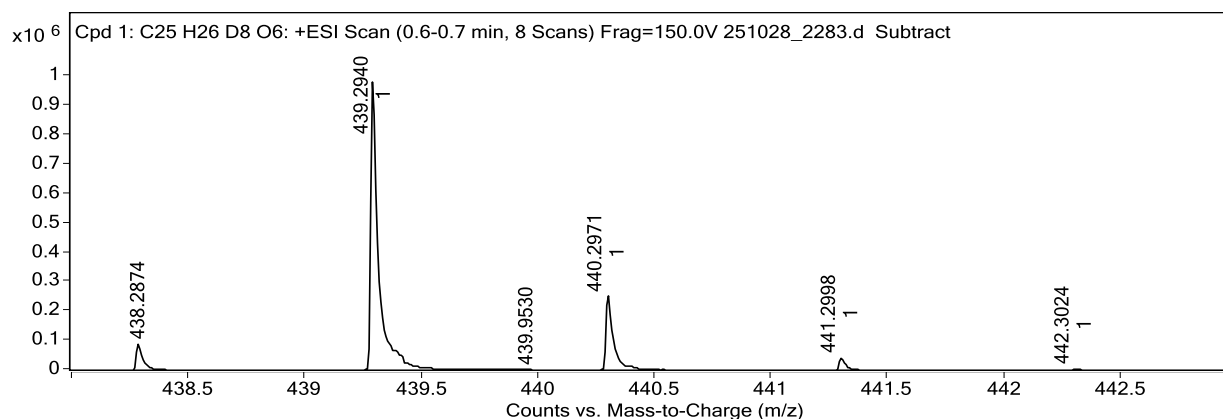
Data File 251028_2283.d
DA Method AIMS_Accurate_Mass.m
Acq Date, Time 28/10/2025 4:10:04 PM

Target Ion Species

Ion Species	m/z	Ionic Formula
(M+H)+	439.294	C25 H27 D8 O6

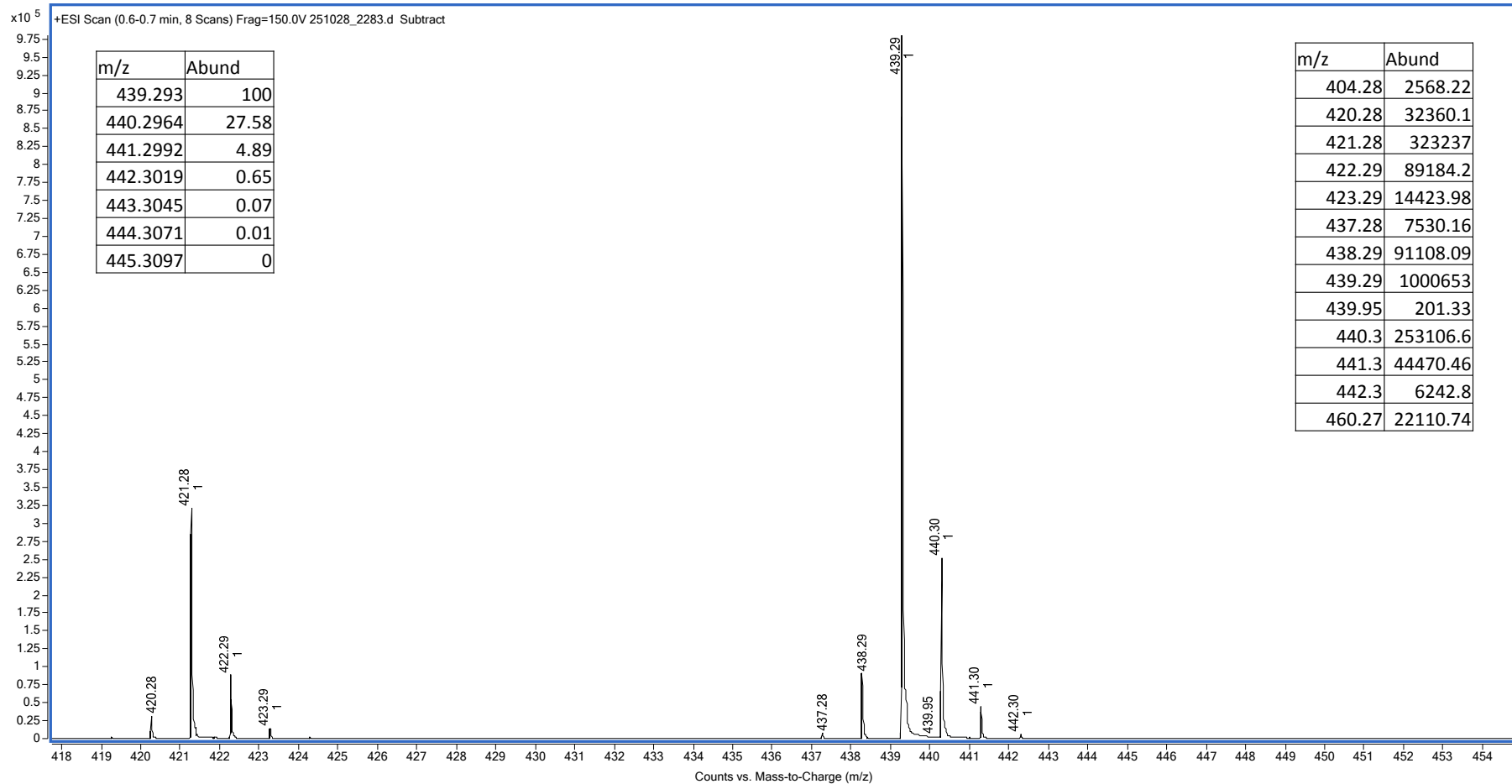
MFG Calculator Results

Target m/z	Ionic Formula	Calc m/z	+/- (mDa)	+/- (ppm)	DBE	MFG Score
439.2940	C25 H27 D8 O6	439.2930	1.0	2.3	9.0	96.95
439.2940	C26 H23 D8 N4 O2	439.2944	-0.4	-0.9	14.0	96.34
439.2940	C22 H19 D8 N10	439.2917	2.3	5.2	15.0	85.57
439.2940	C14 H27 D8 N6 O9	439.2962	-2.2	-5.0	1.0	81.03
439.2940	C21 H23 D8 N6 O4	439.2903	3.7	8.4	10.0	75.59
439.2940	C15 H23 D8 N10 O5	439.2976	-3.6	-8.2	6.0	74.20
439.2940	C31 H23 D8 N2	439.2984	-4.4	-10.0	18.0	59.80



Predicted Isotope Match Table

Isotope	m/z	Calc m/z	Diff (mDa)	Abund (%)	Calc Abund (%)	+/-
1	439.2940	439.2930	1.0	100.0	100.0	0.0
2	440.2971	440.2964	0.7	25.3	27.6	2.3
3	441.2998	441.2992	0.6	4.4	4.9	0.5

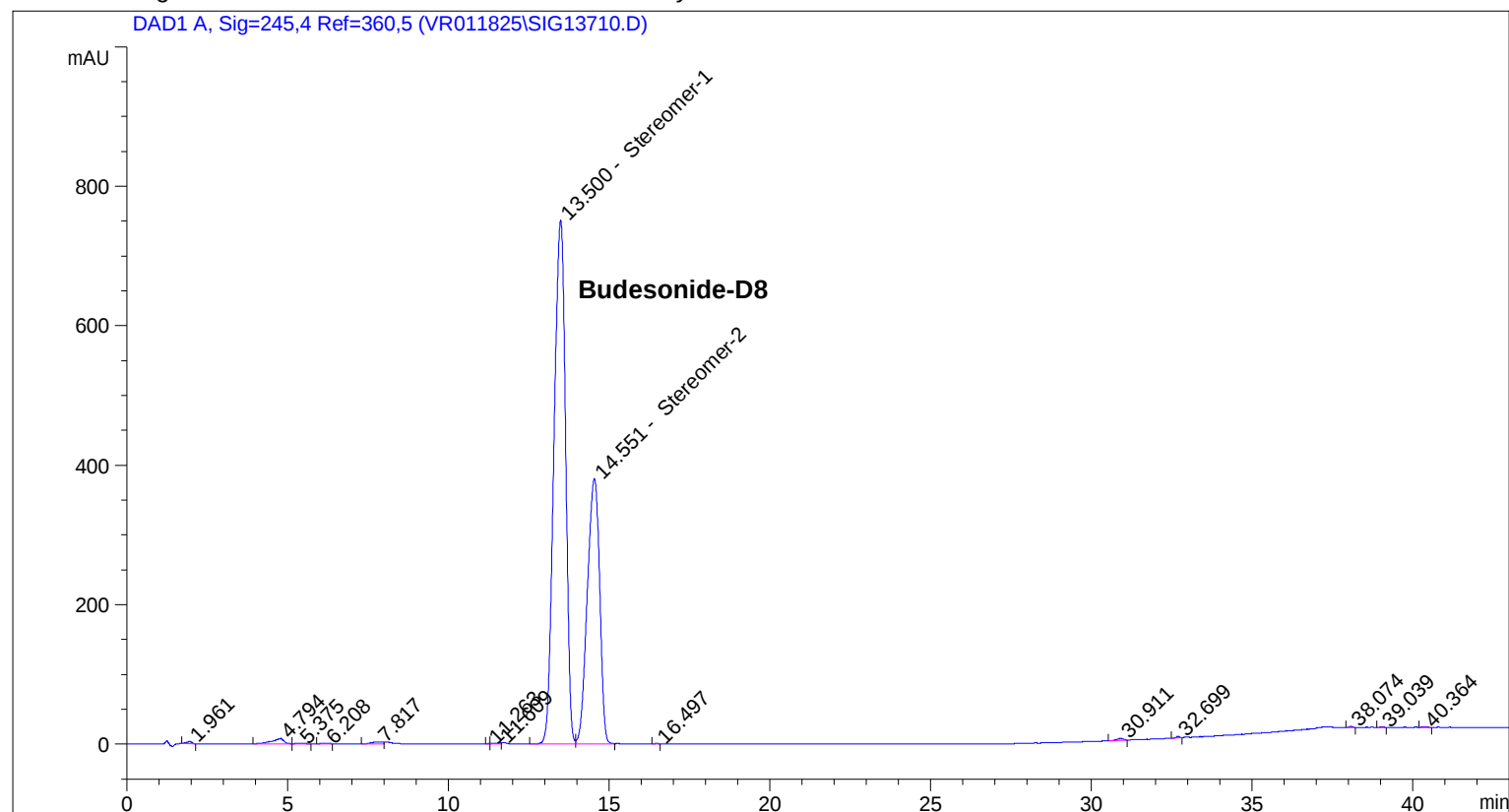


Sample Name: GR-19-297

=====

Acq. Operator : vrusu
Acq. Instrument : Instrument 1 Location : Vial 52
Injection Date : 10/22/2025 4:18:11 PM Inj Volume : 30.0 µl

Acq. Method : C:\CHEM32\1\METHODS\VR102225_297.M
Last changed : 10/22/2025 4:16:29 PM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR102325_297PM.M
Last changed : 10/23/2025 10:38:04 AM by vrusu



=====

Area Percent Report

=====

Sorted By : Signal
Calib. Data Modified : 10/23/2025 10:37:43 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=245,4 Ref=360,5

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	1.961	BB	0.1681	32.64742	0.1109	?
2	4.794	BV	0.3433	200.17920	0.6801	?
3	5.375	VB	0.2507	23.27414	0.0791	?
4	6.208	BB	0.1830	13.92651	0.0473	?
5	7.817	BH	0.3023	67.97762	0.2309	?
6	11.263	HH	0.0841	3.07358	0.0104	?
7	11.609	HH	0.1759	20.99063	0.0713	?
8	13.500	BH	0.4087	1.88396e4	64.0039	Stereomer-1

Sample Name: GR-19-297

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
9	14.551	HH	0.4369	1.01432e4	34.4596	Stereomer-2
10	16.497	HH	0.1456	6.51731	0.0221	?
11	30.911	BV	0.2381	44.49211	0.1512	?
12	32.699	BV	0.1151	15.14684	0.0515	?
13	38.074	BB	0.0929	8.73785	0.0297	?
14	39.039	BB	0.1230	4.78001	0.0162	?
15	40.364	BB	0.1414	10.53429	0.0358	?

Totals : 2.94351e4

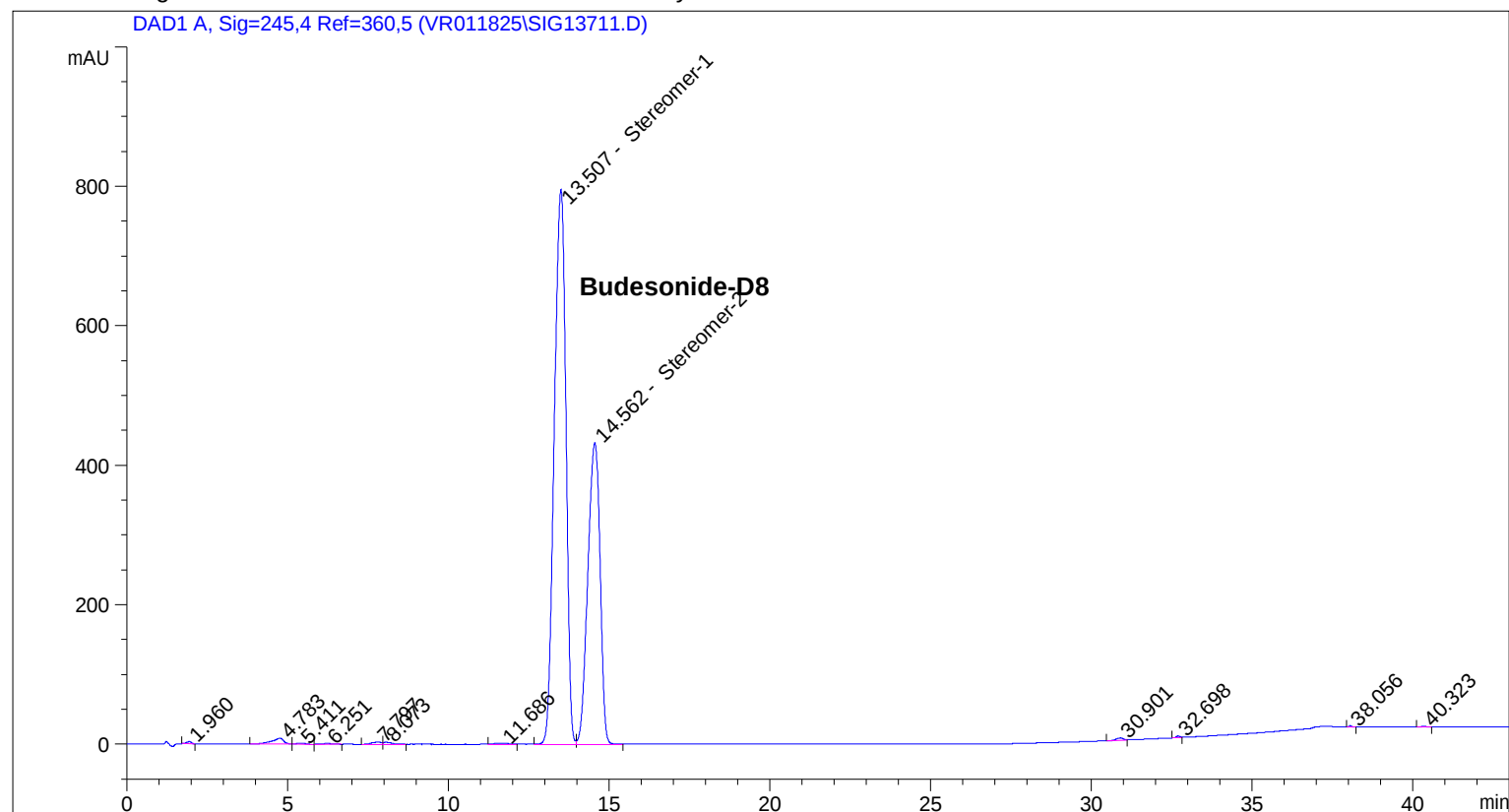
=====
*** End of Report ***

Sample Name: GR-19-297 spl-2

=====

Acq. Operator : vrusu
Acq. Instrument : Instrument 1 Location : Vial 53
Injection Date : 10/23/2025 9:13:52 AM Inj Volume : 30.0 µl

Acq. Method : C:\CHEM32\1\METHODS\VR102225_297.M
Last changed : 10/23/2025 9:12:09 AM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR102325_297PM.M
Last changed : 10/23/2025 10:38:04 AM by vrusu



=====

Area Percent Report

=====

Sorted By : Signal
Calib. Data Modified : 10/23/2025 10:37:43 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=245,4 Ref=360,5

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	1.960	BB	0.1612	34.41982	0.1078	?
2	4.783	BV	0.3653	236.68848	0.7415	?
3	5.411	VB	0.2424	28.87435	0.0905	?
4	6.251	BB	0.2530	24.94574	0.0781	?
5	7.797	BH	0.2735	66.04604	0.2069	?
6	8.073	HH	0.2521	57.43793	0.1799	?
7	11.686	HH	0.3415	50.65478	0.1587	?
8	13.507	HH	0.4092	1.98588e4	62.2120	Stereomer-1

Sample Name: GR-19-297 spl-2

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
9	14.562	HH	0.4336	1.14770e4	35.9543	Stereomer-2
10	30.901	BV	0.2387	49.69282	0.1557	?
11	32.698	BV	0.1217	17.92205	0.0561	?
12	38.056	BB	0.0969	8.39233	0.0263	?
13	40.323	BB	0.1503	10.26966	0.0322	?

Totals : 3.19211e4

*** End of Report ***