

<b>Name:</b>	<b>6-Hydroxy Levonorgestrel</b>
<b>Lot#:</b>	GR-19-065
<b>Test Date:</b>	02/02/2024 (re-test date: 02/02/2029)
<b>CAS No.:</b>	40915-05-7
<b>MF:</b>	C <sub>21</sub> H <sub>28</sub> O <sub>3</sub>
<b>MW:</b>	328.45
<b>Appearance:</b>	White Solid
<b>Purity:</b>	99.6% by HPLC (sum of 6alpha- and 6beta- isomers, average of two sample preparations)
<b><sup>1</sup>H-NMR:</b>	Conforms
<b>MS-DART (+)</b>	Conforms (shows peak at m/z = 329.2 [M+H] <sup>+</sup> )
<b>Storage</b>	Store at 0-5°C in a dry place away from direct sunlight

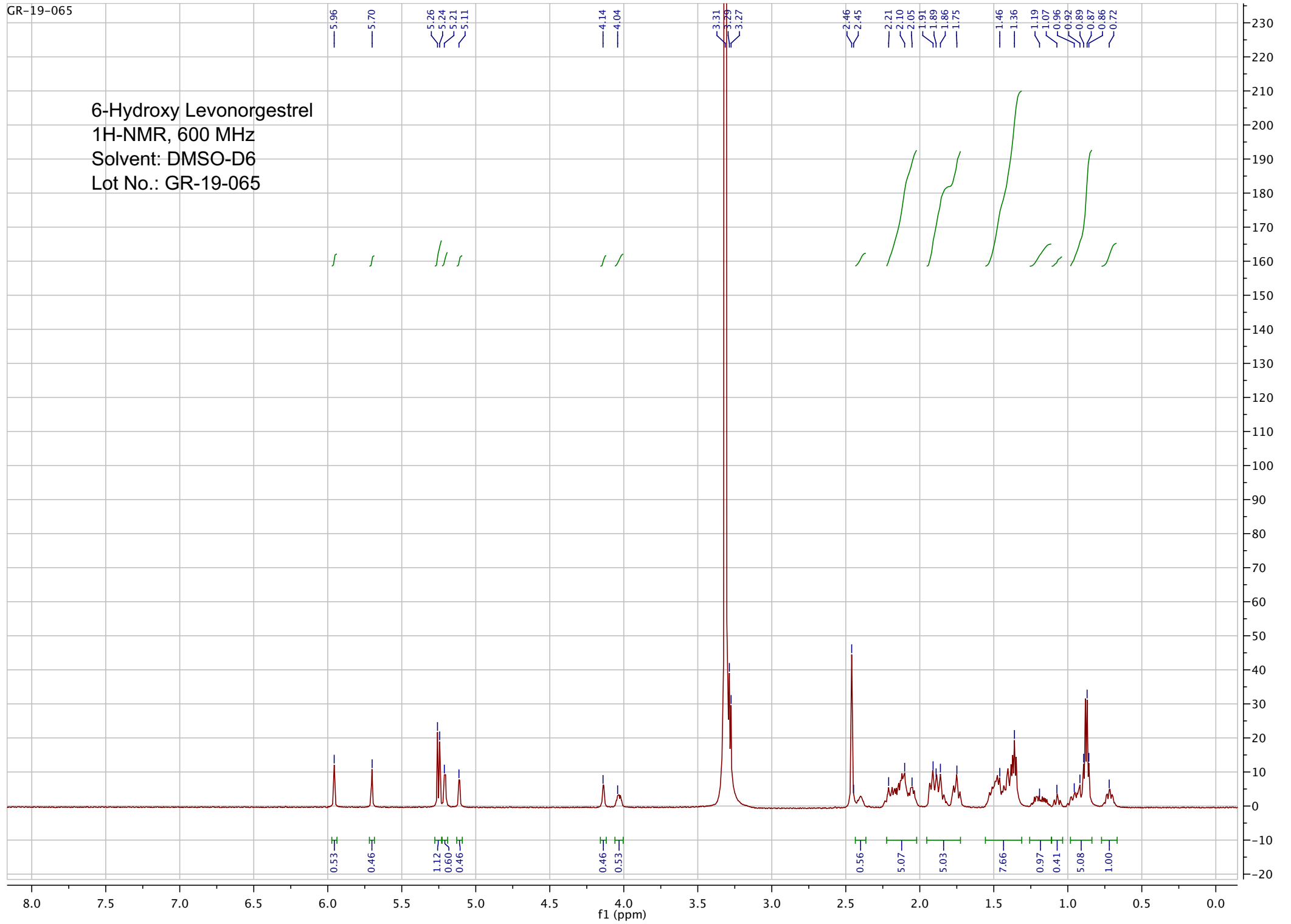
Approved by:

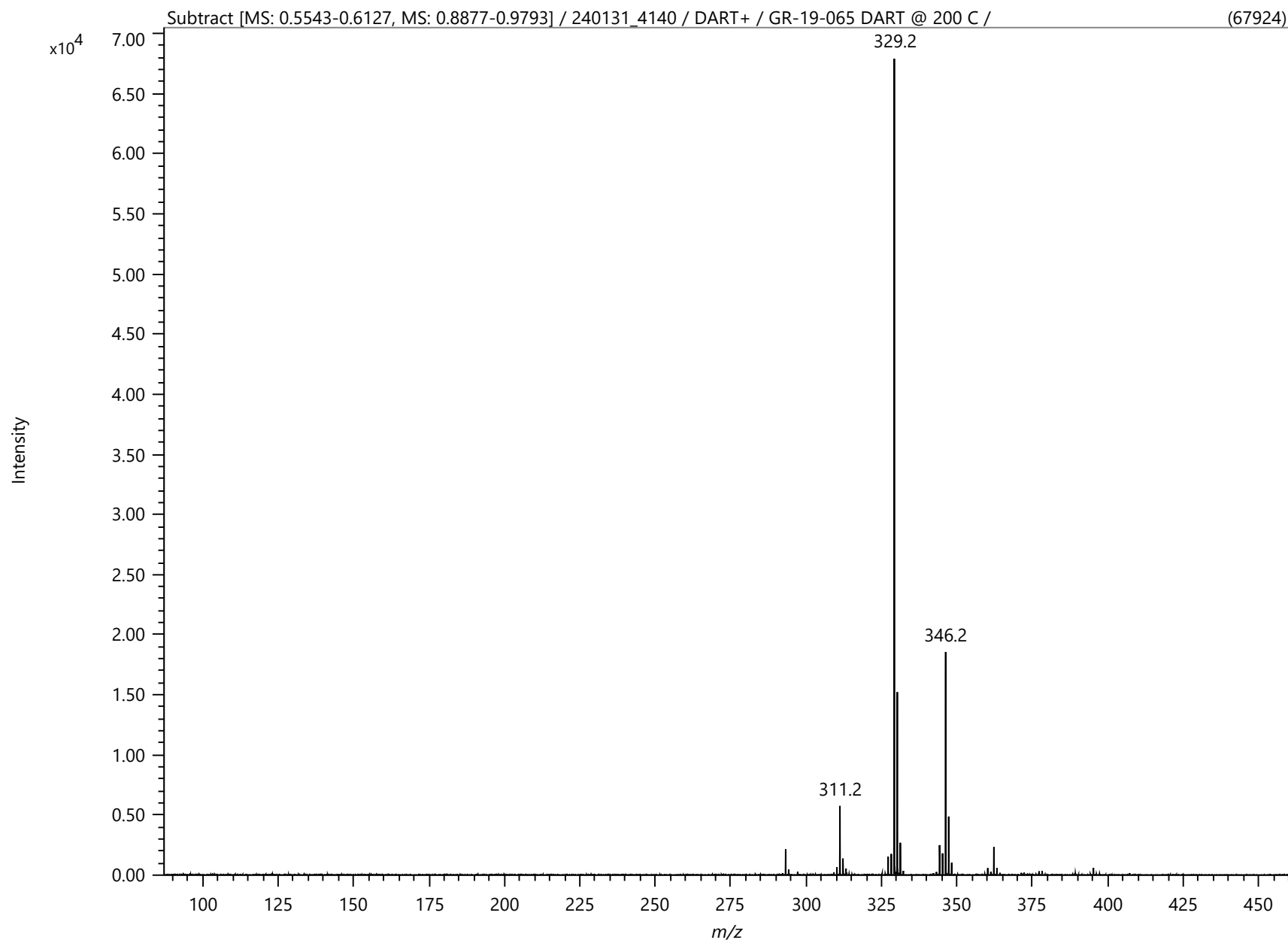
Date: 02/06/2024



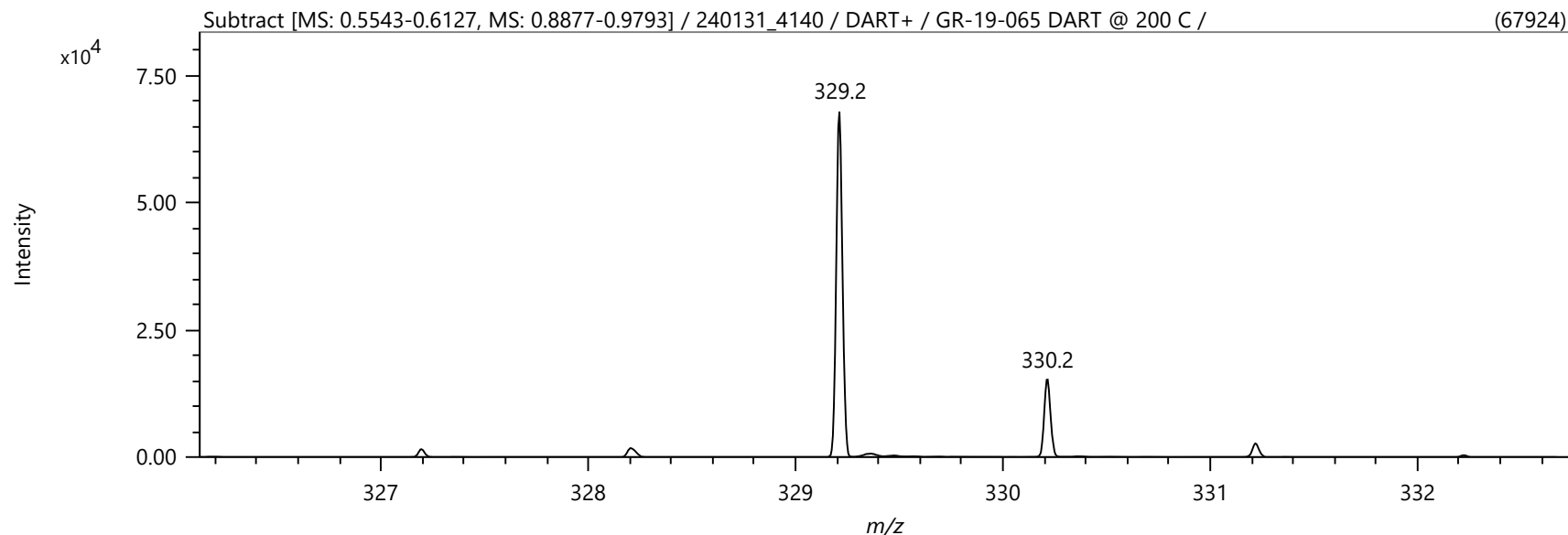
Viorica Rusu, QC/QA Manager

6-Hydroxy Levonorgestrel  
1H-NMR, 600 MHz  
Solvent: DMSO-D6  
Lot No.: GR-19-065





Spectrum



Elemental Composition

Parameters

Tolerance: ±5.00 mDa  
 Electron: Odd/Even  
 Charge: +1  
 DBE: -1.5 - 100.0

Elements Set 1:

Symbol	C	H	O	N
Min	0	0	0	0
Max	100	200	20	10

Results

Mass	Intensity	Formula	Calculated Mass	Mass Difference [mDa]	Mass Difference [ppm]	DBE
329.21132	67924.06	C <sub>21</sub> H <sub>29</sub> O <sub>3</sub>	329.21112	0.20	0.61	7.5
		C <sub>19</sub> H <sub>27</sub> N <sub>3</sub> O <sub>2</sub>	329.20978	1.54	4.69	8.0
		C <sub>8</sub> H <sub>27</sub> N <sub>9</sub> O <sub>5</sub>	329.21297	-1.64	-4.99	0.0
		C <sub>24</sub> H <sub>27</sub> N	329.21380	-2.48	-7.53	12.0
		C <sub>17</sub> H <sub>25</sub> N <sub>6</sub> O	329.20844	2.89	8.77	8.5
		C <sub>10</sub> H <sub>29</sub> N <sub>6</sub> O <sub>6</sub>	329.21431	-2.99	-9.07	-0.5

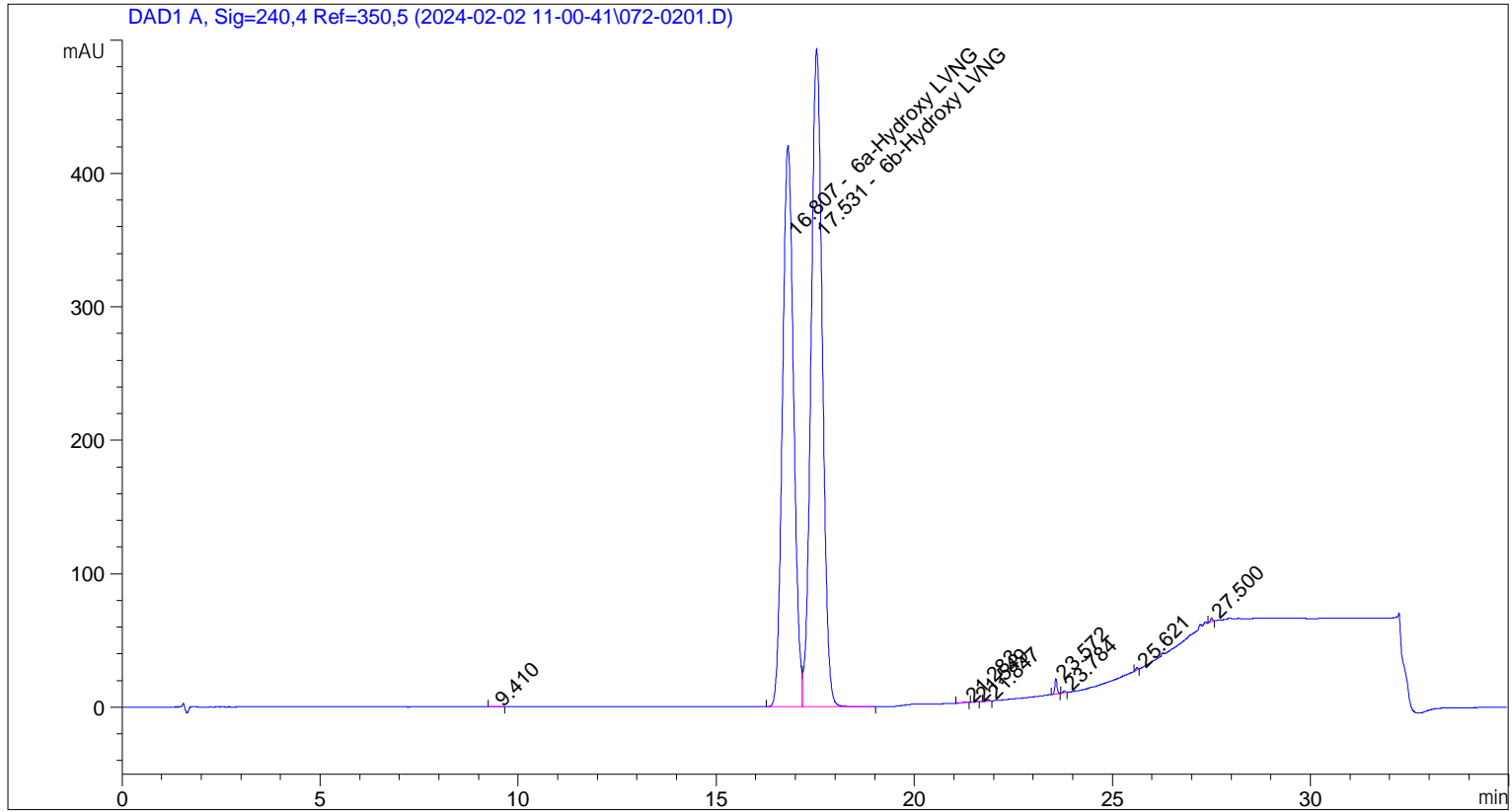
Mass	Intensity	Formula	Calculated Mass	Mass Difference [mDa]	Mass Difference [ppm]	DBE
		C16 H29 N2 O5	329.20710	4.22	12.83	3.5
		C15 H23 N9	329.20709	4.23	12.85	9.0
		C11 H25 N10 O2	329.21565	-4.32	-13.13	4.5
		C12 H31 N3 O7	329.21565	-4.33	-13.15	-1.0

Sample Name: GR-19-065

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=====
Acq. Operator   : vrusu                               Seq. Line :    2
Acq. Instrument : Instrument 1                         Location  : Vial 72
Injection Date  : 2/2/2024 11:38:16 AM                Inj       :    1
                                                    Inj Volume: 10.0 µl
Acq. Method     : C:\CHEM32\1\DATA\2024-02-02 11-00-41\VR02024_065.M
Last changed    : 2/2/2024 10:25:53 AM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR020224_065_PM.M
Last changed    : 2/2/2024 1:56:02 PM by vrusu
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                          Area Percent Report
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Sorted By           :      Signal
Calib. Data Modified :      Friday, February 02, 2024 1:53:49 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

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Signal 1: DAD1 A, Sig=240,4 Ref=350,5

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	16.807	BV	0.3089	8250.53711	45.4427	6a-Hydroxy LVNG
2	17.531	VB	0.3088	9827.29883	54.1272	6b-Hydroxy LVNG

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Totals :                               1.80778e4   99.5699
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Uncalibrated Peaks:

Sample Name: GR-19-065

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	9.410	BB	0.1616	1.58195	8.713e-3	?
2	21.283	BB	0.1059	3.55173	0.0196	?
3	21.549	BB	0.0898	2.96003	0.0163	?
4	21.847	BB	0.0790	5.41493	0.0298	?
5	23.572	BB	0.0614	43.04863	0.2371	?
6	23.784	BB	0.0645	6.06362	0.0334	?
7	25.621	BB	0.0583	5.86962	0.0323	?
8	27.500	BB	0.0591	9.59752	0.0529	?

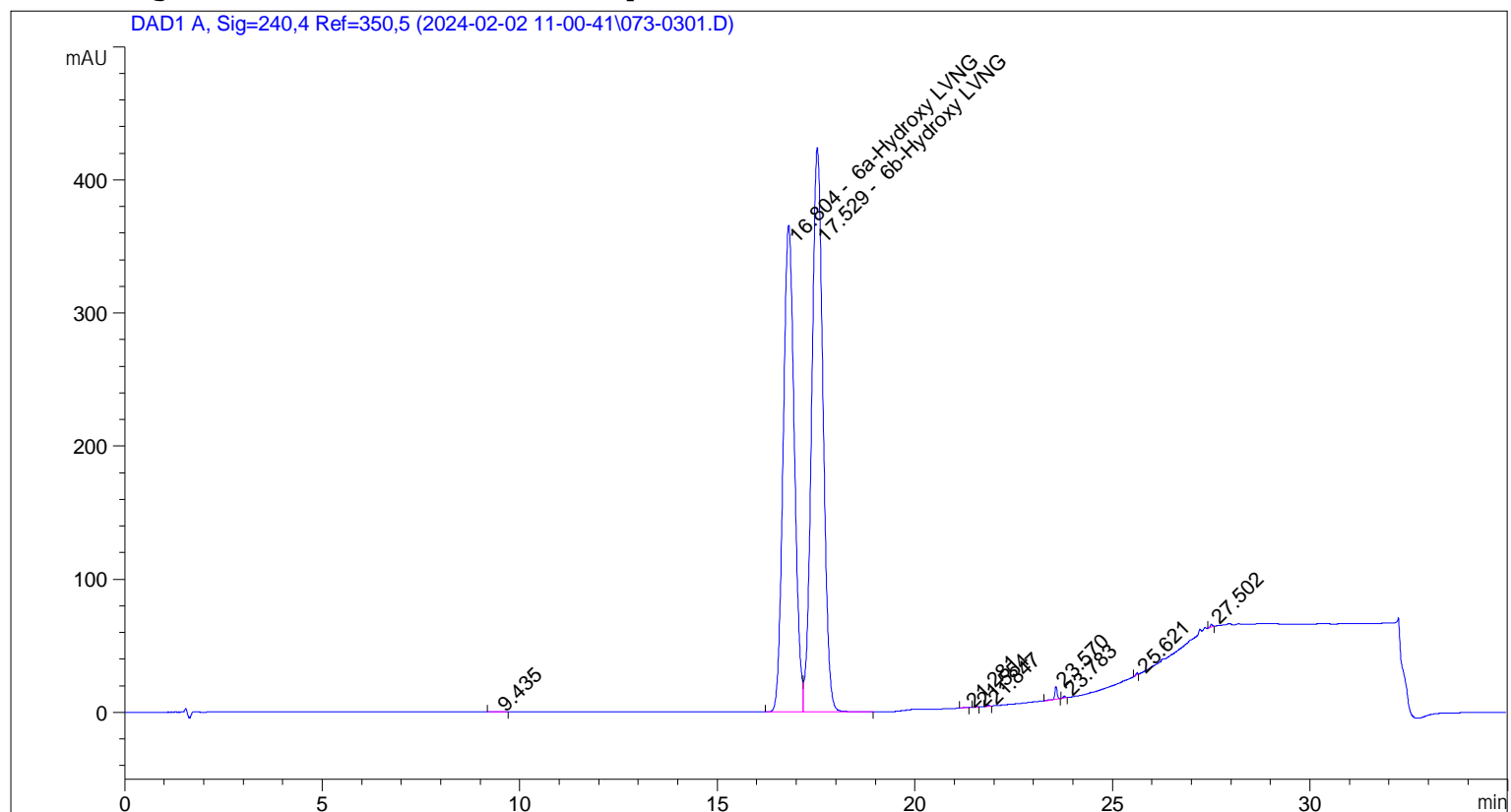
Uncalib. totals :                   78.08803   0.4301

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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

=====  
Acq. Operator : vrusu Seq. Line : 3  
Acq. Instrument : Instrument 1 Location : Vial 73  
Injection Date : 2/2/2024 12:14:36 PM Inj : 1  
Inj Volume : 10.0 µl  
Acq. Method : C:\CHEM32\1\DATA\2024-02-02 11-00-41\VR02024\_065.M  
Last changed : 2/2/2024 10:25:53 AM by vrusu  
Analysis Method : C:\CHEM32\1\METHODS\VR020224\_065\_PM.M  
Last changed : 2/2/2024 1:56:02 PM by vrusu



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

Sorted By : Signal  
Calib. Data Modified : Friday, February 02, 2024 1:53:49 PM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=240,4 Ref=350,5

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	16.804	BV	0.3053	7184.04053	45.7347	6a-Hydroxy LVNG
2	17.529	VB	0.3128	8457.43848	53.8414	6b-Hydroxy LVNG

Totals : 1.56415e4 99.5761

Uncalibrated Peaks:



Sample Name: GR-19-065 spl-2

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	9.435	BB	0.1625	2.00397	0.0128	?
2	21.281	BB	0.0936	2.35080	0.0150	?
3	21.554	BB	0.0861	1.97119	0.0125	?
4	21.847	BB	0.0722	3.74897	0.0239	?
5	23.570	BB	0.0628	38.22034	0.2433	?
6	23.783	BB	0.0649	5.39566	0.0343	?
7	25.621	BB	0.0563	4.82935	0.0307	?
8	27.502	BB	0.0585	8.06694	0.0514	?

Uncalib. totals :                   66.58722   0.4239

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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