

## **Certificate of Analysis**

Name: 10β-Hydroxy Norethindrone

**Lot#:** GR-8-021

**Test Date:** 10/28/2020 (re-test date: 10/28/2025)

**CAS No.:** 1236-00-6

MF:  $C_{20}H_{26}O_3$ 

**MW:** 314.42

Appearance: White solid

**Purity:** 98.4% by HPLC (average of two sample preparations)

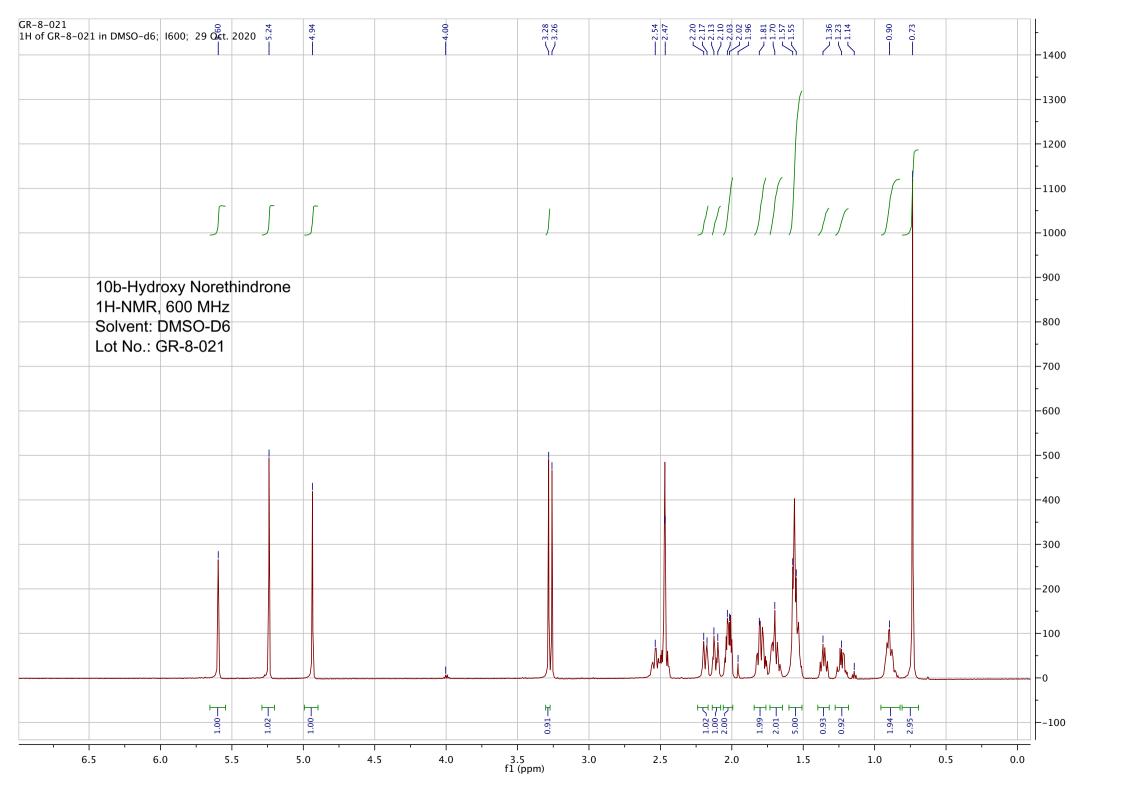
**1H-NMR:** Conforms (contains a trace of EtOAc)

**MS-ESI (+)** Conforms (shows peak at  $m/z = 315.20 [M+H]^+$ )

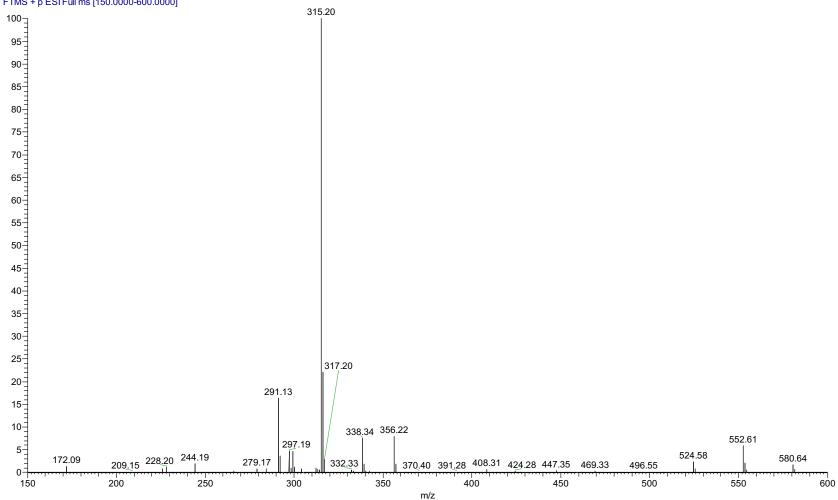
**Storage** Long term store at 0 - 5° C in a dry place away from direct sunlight

Approved by: Date: 11/05/2020

Viorica Rusu, QC/QA Manager







ESI-MS spectrum for sample GR-8-021. Shows monoisotopic [M+H]+ mass.

Data File C:\CHEM32\1\DATA\VR010820\SIG17248.D

Sample Name: GR-8-021

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Acq. Operator : vrusu

Acq. Instrument : Instrument 1 Location: Vial 88

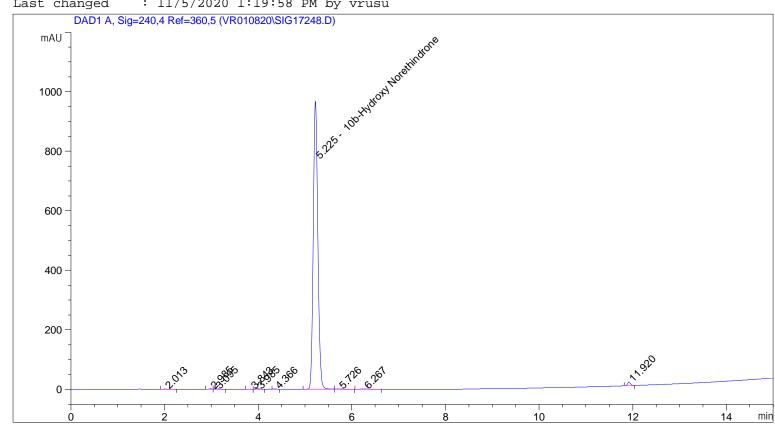
Injection Date : 10/28/2020 1:49:29 PM

Inj Volume : 3.0 μl

Acq. Method : C:\CHEM32\1\METHODS\VR102820\_021.M Last changed : 10/28/2020 1:47:37 PM by vrusu

Analysis Method: C:\CHEM32\1\METHODS\VR110520\_021PM.M

Last changed : 11/5/2020 1:19:58 PM by vrusu



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## Area Percent Report

Signal Sorted By

Calib. Data Modified : 11/5/2020 1:19:31 PM

Multiplier: 1.0000 Dilution: 1.0000 Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=240,4 Ref=360,5

Peak	${\tt RetTime}$	Type	Width	Area	Area	Name
#	[min]		[min]	[mAU*s]	%	
1	2.013	BB	0.0689	2.31086	0.0356	?
2	2.985	BV	0.0680	6.12247	0.0943	?
3	3.095	VB	0.0780	9.90708	0.1526	?
4	3.843	BV	0.0723	1.27253	0.0196	?
5	3.985	VB	0.0862	10.94928	0.1686	?
6	4.366	BB	0.0824	1.77011	0.0273	?
7	5.225	BV	0.1010	6393.84717	98.4634	10b-Hydroxy Norethindrone
8	5.726	VB	0.1333	6.73765	0.1038	?

Data File C:\CHEM32\1\DATA\VR010820\SIG17248.D

Sample Name: GR-8-021

Peak	RetTime	Type	Width	Area	Area	Name
#	[min]		[min]	[mAU*s]	%	
9	6.267	BB	0.1260	10.28996	0.1585	?
10	11.920	BB	0.0645	50.42385	0.7765	?

Totals : 6493.63095

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

Data File  $C:\CHEM32\1\DATA\VR010820\SIG17249.D$ 

Sample Name: GR-8-021

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Acq. Operator : vrusu

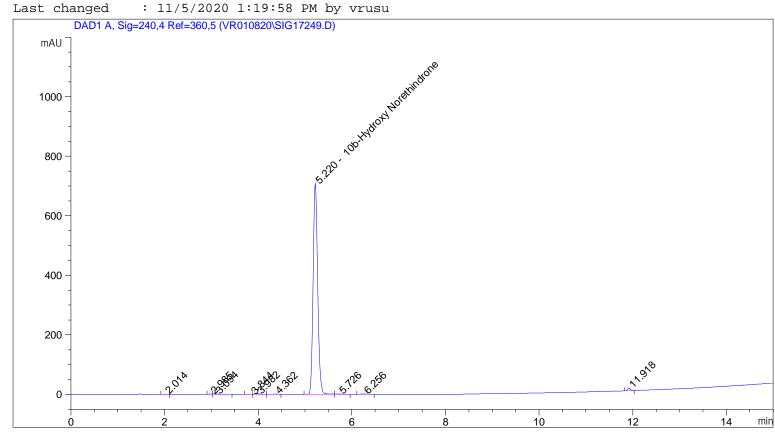
Acq. Instrument : Instrument 1 Location: Vial 89

Injection Date : 10/28/2020 2:13:52 PM

Inj Volume : 3.0 μl

Acq. Method : C:\CHEM32\1\METHODS\VR102820\_021.M Last changed : 10/28/2020 2:13:02 PM by vrusu

Analysis Method: C:\CHEM32\1\METHODS\VR110520\_021PM.M



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## Area Percent Report

Signal Sorted By

Calib. Data Modified : 11/5/2020 1:19:31 PM

Multiplier: 1.0000 Dilution: 1.0000 Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=240,4 Ref=360,5

Peak	${\tt RetTime}$	Type	Width	Area	Area	Name
#	[min]		[min]	[mAU*s]	%	
1	2.014	BB	0.0641	1.64747	0.0348	?
2	2.985	BV	0.0657	4.41932	0.0935	?
3	3.094	VB	0.0822	8.25558	0.1746	?
4	3.844	BV	0.0670	9.71910e-1	0.0206	?
5	3.982	VB	0.0889	8.55601	0.1809	?
6	4.362	BB	0.1177	2.90072	0.0613	?
7	5.220	BV	0.1028	4653.25146	98.3989	10b-Hydroxy Norethindrone
8	5.726	VB	0.1231	4.43122	0.0937	?

Data File C:\CHEM32\1\DATA\VR010820\SIG17249.D

Sample Name: GR-8-021

Peak	RetTime	Type	Width	Area	Area	Name
#	[min]		[min]	[mAU*s]	%	
9	6.256	BB	0.1261	7.47384	0.1580	?
10	11.918	BB	0.0644	37.05904	0.7837	?

Totals : 4728.96657

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