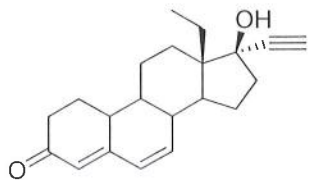



## Certificate of Analysis

<b>Name of Product:</b> delta-6(7)-Levonorgestrel		<b>Lot Number:</b> DBD-01-119-2-010821
<b>Manufacture Date:</b> 01/08/21	<b>Retested On:</b> 09/19/23	<b>Next Retest Date:</b> 09/18/28
<b>Recommended Storage Conditions:</b>		
<input type="checkbox"/> Ambient atmosphere <input checked="" type="checkbox"/> Inert atmosphere <input type="checkbox"/> Ambient temperature <input checked="" type="checkbox"/> 0-10°C (refrigeration) <input type="checkbox"/> -20°C or below (freezer)		

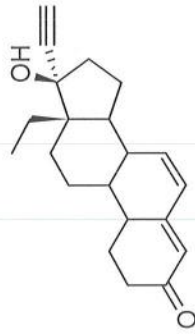
<b>Structure:</b>  	<b>Molecular Formula:</b> C <sub>21</sub> H <sub>26</sub> O <sub>2</sub>
	<b>Molecular Weight:</b> 310.44
	<b>CAS Number:</b> 51087-61-7

**Appearance:** Beige Solid  
**Identity:** <sup>1</sup>H-NMR - conforms to structure  
**MS(ESI+ve):** [M+H]<sup>+</sup> = 311.14 - conforms to structure  
**Purity:** 97.5% by AUC at 260 nm (HPLC)

Dalton Pharma Services hereby certifies that the above information is authentic and accurate.

 <hr style="width: 80%; margin: 0 auto;"/> Xuejun Liu, R&D Supervisor	<b>Date:</b> 09/22/23
---	-----------------------

DBD-01-119-2, 1H-NMR, DMSO-d6, 09/19/23 Retest



$C_{21}H_{26}O_2$

2.500  
2.332  
2.220  
1.986  
1.763  
1.759  
1.756  
1.420  
0.926

6.234  
5.710  
5.706  
5.363

3.338

3.0  
2.0  
1.0  
4.0  
1.0  
2.0  
1.0  
3.0  
3.0

1.0  
1.0  
0.2

1.0

VB  
09/19/23



DBD-01-119-2 #249-253 RT: 6.46-6.56 AV: 5 NL: 9.65E5  
T: + c ESI Full ms [50.00-2000.00]

311.14 [M+H]<sup>+</sup>

Lot#: DBD-01-119-2  
ESI(+ve)

VB  
09/20/23



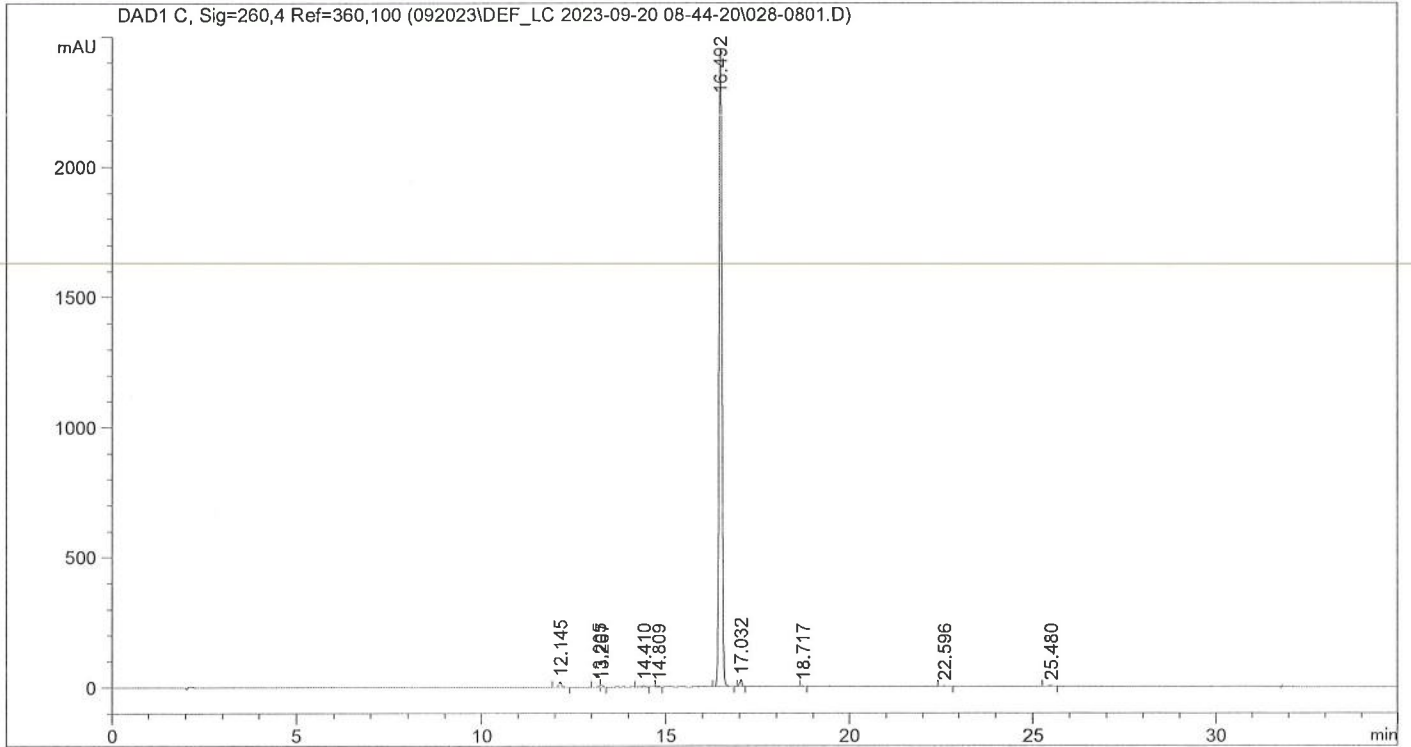
Sample Name: DBD-01-119-2

```

=====
Acq. Operator   : VPR                               Seq. Line :    8
Acq. Instrument : Instrument 1                       Location  : Vial 28
Injection Date  : 09/20/23 12:58:26 PM              Inj       :    1
                                                    Inj Volume: 10.000 µl

Acq. Method    : C:\CHEM32\1\DATA\092023\DEF_LC 2023-09-20 08-44-20\6-B-PEROXIDE.M
Last changed   : 09/20/23 8:13:25 AM by VPR
Analysis Method : C:\CHEM32\1\METHODS\OTS1.M
Last changed   : 09/21/23 6:28:46 AM by VPR
                (modified after loading)

Additional Info : Peak(s) manually integrated
    
```



Area Percent Report

```

Sorted By      :      Signal
Multiplier:    :      1.0000
Dilution:     :      1.0000
Use Multiplier & Dilution Factor with ISTDs
    
```

Signal 1: DAD1 C, Sig=260,4 Ref=360,100

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.145	BB	0.0723	92.49435	19.89117	0.6506
2	13.205	BV	0.0581	20.78370	5.49219	0.1462
3	13.267	VB	0.0669	31.08550	6.85375	0.2187
4	14.410	VV	0.1022	35.42856	4.90730	0.2492
5	14.809	VB	0.0736	12.42167	2.70619	0.0874
6	16.492	BB	0.0919	1.38553e4	2453.14258	97.4634
7	17.032	BB	0.0746	120.38231	25.71788	0.8468

VPR  
09/21/23

Sample Name: DBD-01-119-2

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
8	18.717	VB	0.0843	13.37466	2.42676	0.0941
9	22.596	BB	0.0909	14.40721	2.43814	0.1013
10	25.480	BB	0.0990	20.22028	3.23365	0.1422

Totals : 1.42159e4 2526.80960

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

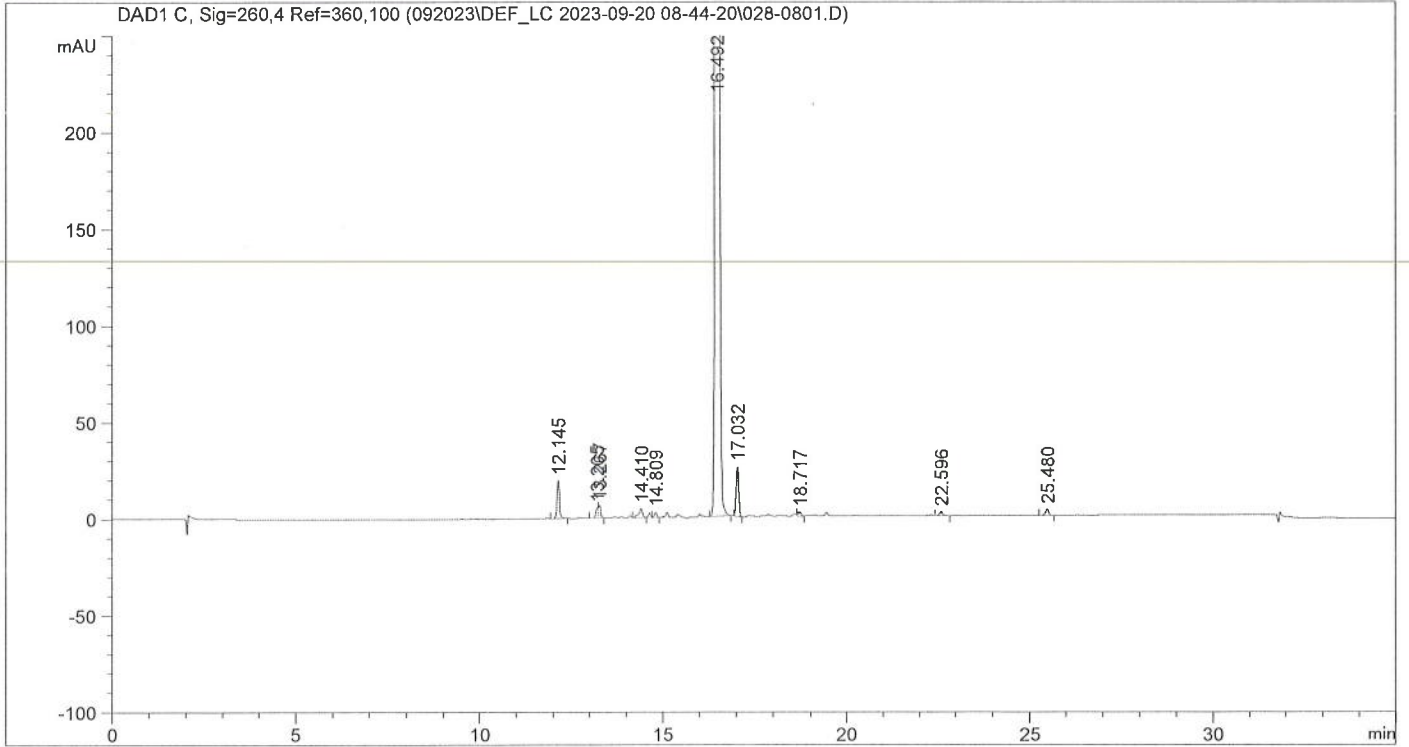
VPR  
09/21/23

```

=====
Acq. Operator   : VPR                               Seq. Line :    8
Acq. Instrument : Instrument 1                     Location  : Vial 28
Injection Date  : 09/20/23 12:58:26 PM           Inj       :    1
                                                    Inj Volume: 10.000 µl

Acq. Method     : C:\CHEM32\1\DATA\092023\DEF_LC 2023-09-20 08-44-20\6-B-PEROXIDE.M
Last changed    : 09/20/23 8:13:25 AM by VPR
Analysis Method : C:\CHEM32\1\METHODS\OTS1.M
Last changed    : 09/21/23 10:31:50 AM by VPR
                  (modified after loading)

Additional Info : Peak(s) manually integrated
  
```



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

```

Sorted By      :      Signal
Multiplier:    :      1.0000
Dilution:      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: DAD1 C, Sig=260,4 Ref=360,100

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.145	BB	0.0723	92.49435	19.89117	0.6506
2	13.205	BV	0.0581	20.78370	5.49219	0.1462
3	13.267	VB	0.0669	31.08550	6.85375	0.2187
4	14.410	VV	0.1022	35.42856	4.90730	0.2492
5	14.809	VB	0.0736	12.42167	2.70619	0.0874
6	16.492	BB	0.0919	1.38553e4	2453.14258	97.4634
7	17.032	BB	0.0746	120.38231	25.71788	0.8468

*VPR*  
*09/21/23*

Sample Name: DBD-01-119-2

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
8	18.717	VB	0.0843	13.37466	2.42676	0.0941
9	22.596	BB	0.0909	14.40721	2.43814	0.1013
10	25.480	BB	0.0990	20.22028	3.23365	0.1422

Totals : 1.42159e4 2526.80960

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

VPR  
09/21/23

Sample Name: Blank

=====  
Acq. Operator : VPR Seq. Line : 9  
Acq. Instrument : Instrument 1 Location : Vial 11  
Injection Date : 09/20/23 1:34:33 PM Inj : 1  
 Inj Volume: 10.000 µl  
  
Acq. Method : C:\CHEM32\1\DATA\092023\DEF\_LC 2023-09-20 08-44-20\6-B-PEROXIDE.M  
Last changed : 09/20/23 8:13:25 AM by VPR  
Analysis Method : C:\CHEM32\1\METHODS\OTS1.M  
Last changed : 09/21/23 6:25:56 AM by VPR  
 (modified after loading)



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

Sorted By : Signal  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 C, Sig=260,4 Ref=360,100

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	2.087	BB	0.1270	95.26318	9.34300	80.8589
2	31.836	BB	0.0653	22.55097	4.93580	19.1411

Totals : 117.81414 14.27879

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

VPR  
09/21/23



Sample Name: Blank

```

=====
Acq. Operator   : VPR                               Seq. Line :    9
Acq. Instrument : Instrument 1                     Location  : Vial 11
Injection Date  : 09/20/23 1:34:33 PM             Inj       :    1
                                                    Inj Volume: 10.000 µl

Acq. Method     : C:\CHEM32\1\DATA\092023\DEF_LC 2023-09-20 08-44-20\6-B-PEROXIDE.M
Last changed    : 09/20/23 8:13:25 AM by VPR
Analysis Method : C:\CHEM32\1\METHODS\OTS1.M
Last changed    : 09/21/23 6:25:21 AM by VPR
                (modified after loading)
=====

```



```

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

```

```

Sorted By           :      Signal
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs

```

Signal 1: DAD1 C, Sig=260,4 Ref=360,100

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	2.087	BB	0.1270	95.26318	9.34300	80.8589
2	31.836	BB	0.0653	22.55097	4.93580	19.1411
Totals :				117.81414	14.27879	

09/21/23

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