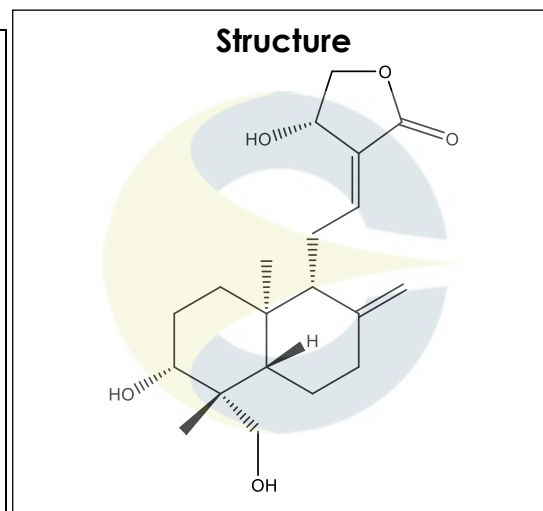


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<b>PRODUCT NAME</b>	Andrographolide
<b>PART NUMBER</b>	00001756
<b>STANDARD TYPE</b>	Primary (P)
<b>LOT NUMBER</b>	00001756-001
<b>REPORT NUMBER</b>	CDXA-RSS-5522-02
<b>SAMPLE NUMBER</b>	CDXA-13-2605
<b>DATE OF SAMPLE</b>	04/17/2013
<b>DATE OF RE-EVALUATION</b>	05/19/2017 (1 <sup>st</sup> ); 04/15/2021 (2 <sup>nd</sup> )
<b>DATE OF REPORT</b>	05/07/2021



<b>CHEMICAL NAMES</b>	[1R-[1 $\alpha$ [E(S*)], 4 $\alpha$ $\beta$ ,5 $\alpha$ ,6 $\alpha$ ,8 $\alpha$ ]]-3-[2-[Decahydro-6-hydroxy-5-(hydroxymethyl)-5,8 $\alpha$ -dimethyl-2-methylene-1-naphthaleny]ethylidene]dihydro-4-hydroxy-2(3H)-furanone; Andrographis
<b>CHEMICAL FORMULA</b>	C <sub>20</sub> H <sub>30</sub> O <sub>5</sub>
<b>MOLECULAR WEIGHT (MW)</b>	350.45
<b>CHEMICAL FAMILY</b>	Diterpenes
<b>CAS NUMBER</b>	[5508-58-7]
<b>EC#(EINECS)</b>	226-852-5
<b>RTECS</b>	LU3490750

**ANALYTICAL RESULTS**

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	≥ 85%	99.8%
HPLC	0.700.10.2.METH22	≥ 90%	99.8%
NMR	99.1-CD-1.0-000122	Conforms to structure	Conforms to structure
Mass Spectrum	Direct Infusion, APCI (+)	Conforms	Conforms
Residual Solvent	99.1-CD-6.0-0000115	NA	ND
Water	0.700.12.37	NA	ND
Appearance	NA	NA	White powder

ADJUSTED PURITY: 99.8% IS BASED ON (100 - 0.0 SOLVENTS - 0.0 WATER) X 99.8% HPLC

**STORAGE CONDITIONS**

<b>STORAGE</b>	Room Temperature in a dry place.
<b>EXPIRATION DATE</b>	04/2026 under the above conditions.

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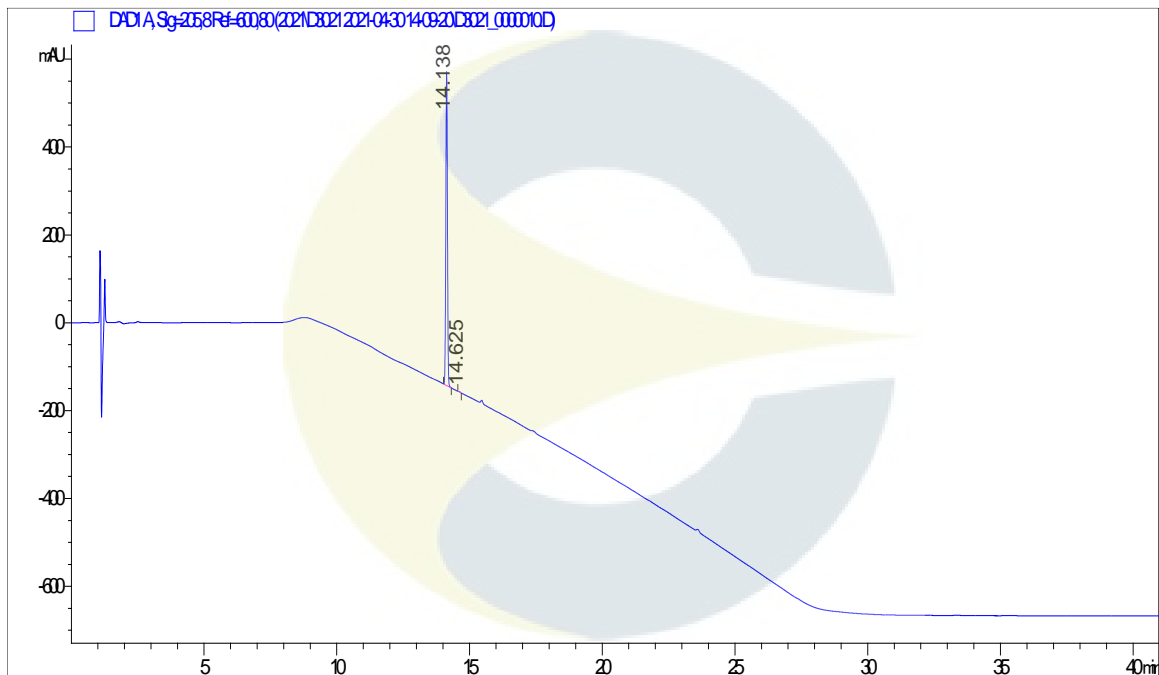
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### ANALYTICAL CONDITIONS

<b>INSTRUMENT</b>	AGILENT 1260 HPLC UV-VIS (DAD); AGILENT 1100 ION TRAP
<b>COLUMN</b>	Phenomenex Luna C18(2) 150 x 2.00 mm, 5 µm particle size
<b>MOBILE PHASE</b>	A - 0.1% Trifluoroacetic acid in Ultrapure water, B - Acetonitrile; Isocratic 5% B for 5 minutes, then increasing to 95% B over 20 minutes. Hold at 95% B for 15 minutes.
<b>COLUMN TEMP.</b>	60 °C
<b>FLOW RATE</b>	0.4 mL/minute
<b>INJECTION VOL.</b>	0.5 µL
<b>INJECTION CONC.</b>	1.3 mg/mL in Methanol
<b>DETECTION</b>	205 ± 4 nm

### HPLC CHROMATOGRAM OF ANDROGRAPHOLIDE (CDXA-13-2605)

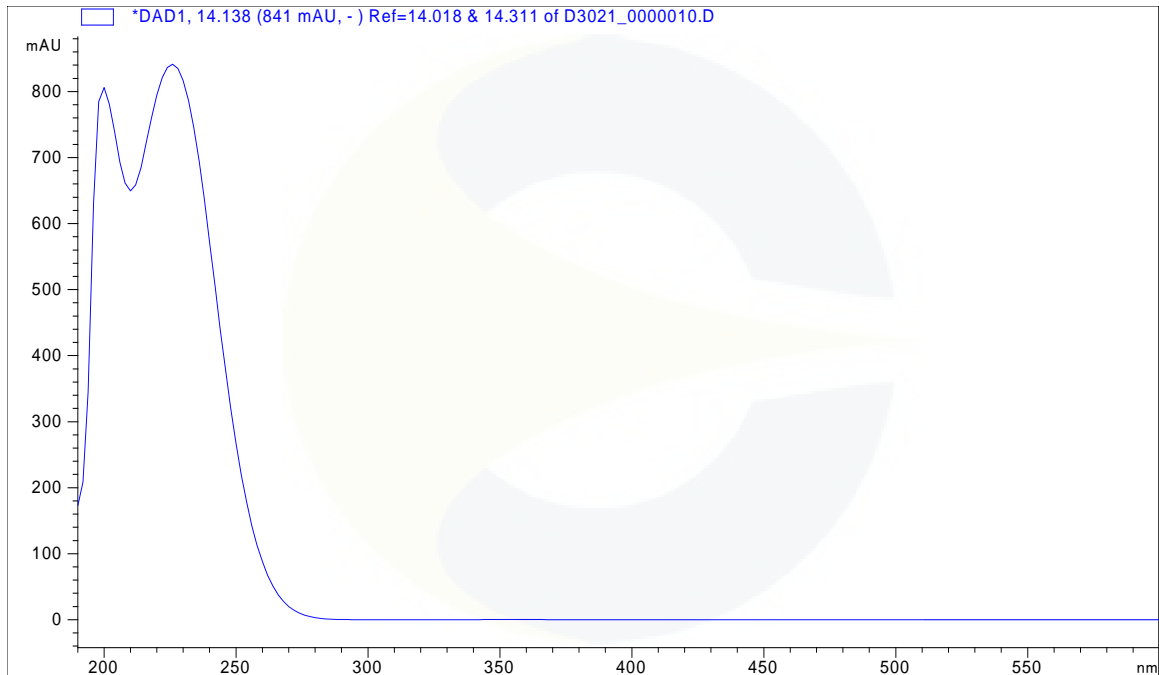


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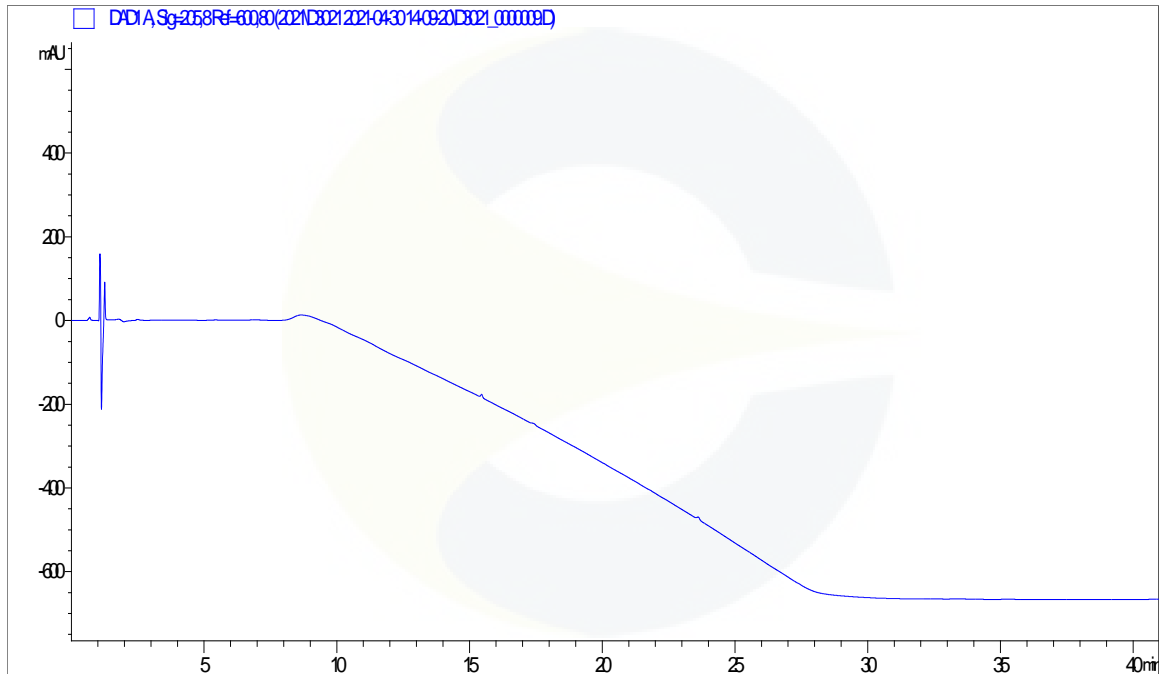
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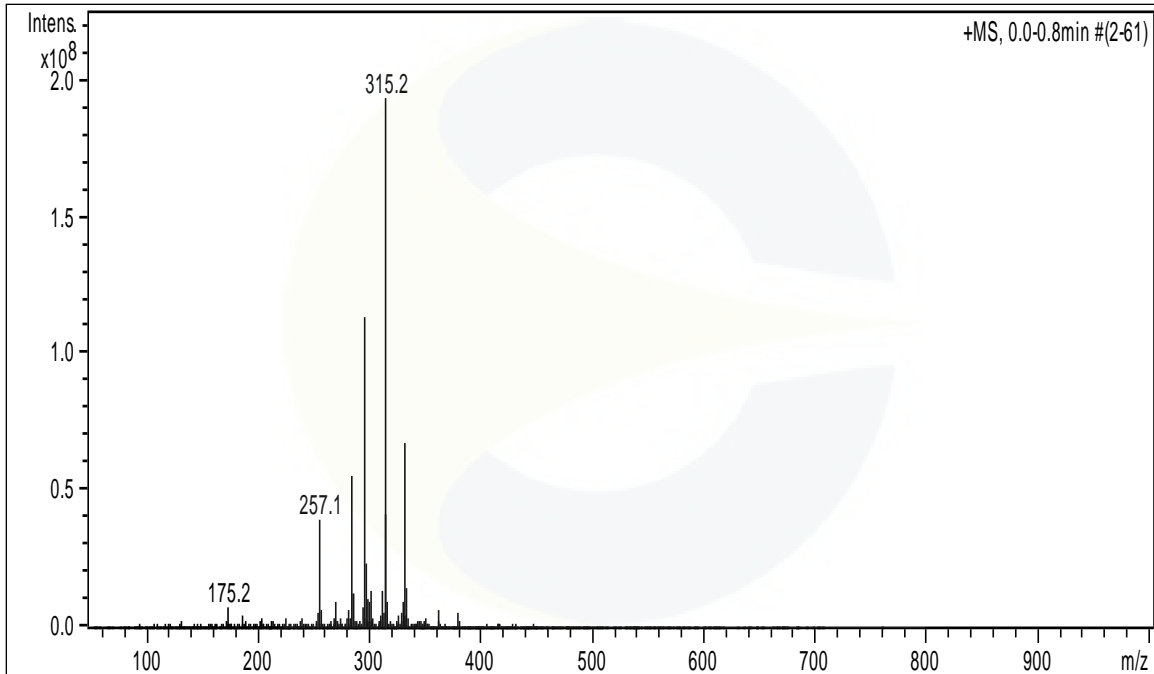
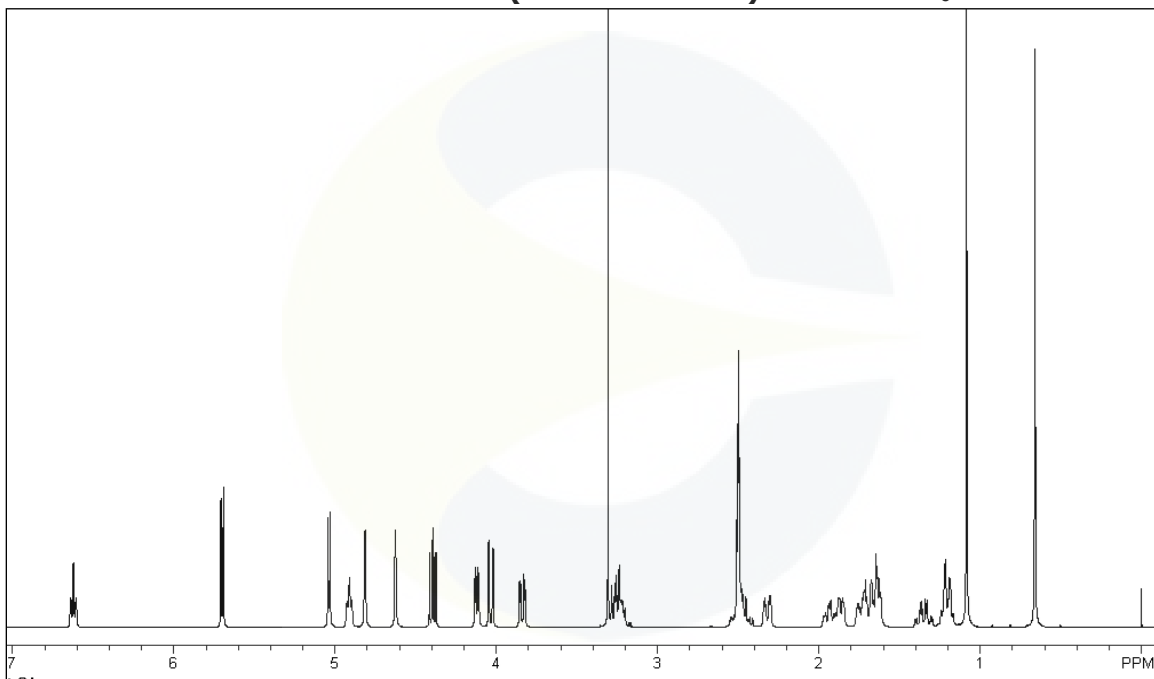
## UV SPECTRUM AT 14.1 MINUTES



## HPLC CHROMATOGRAM OF DILUENT BLANK



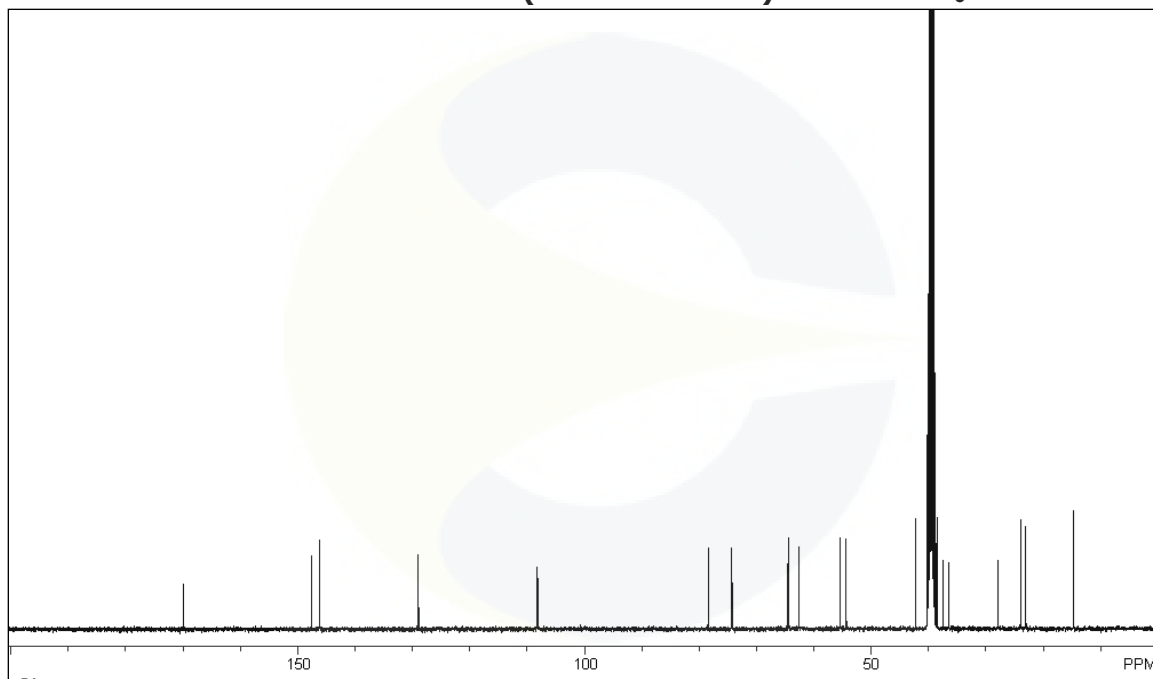
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**MASS SPECTRUM OF ANDROGRAPHOLIDE (CDXA-13-2605)****<sup>1</sup>H-NMR SPECTRUM OF ANDROGRAPHOLIDE (CDXA-13-2605) IN DMSO-d<sub>6</sub>**

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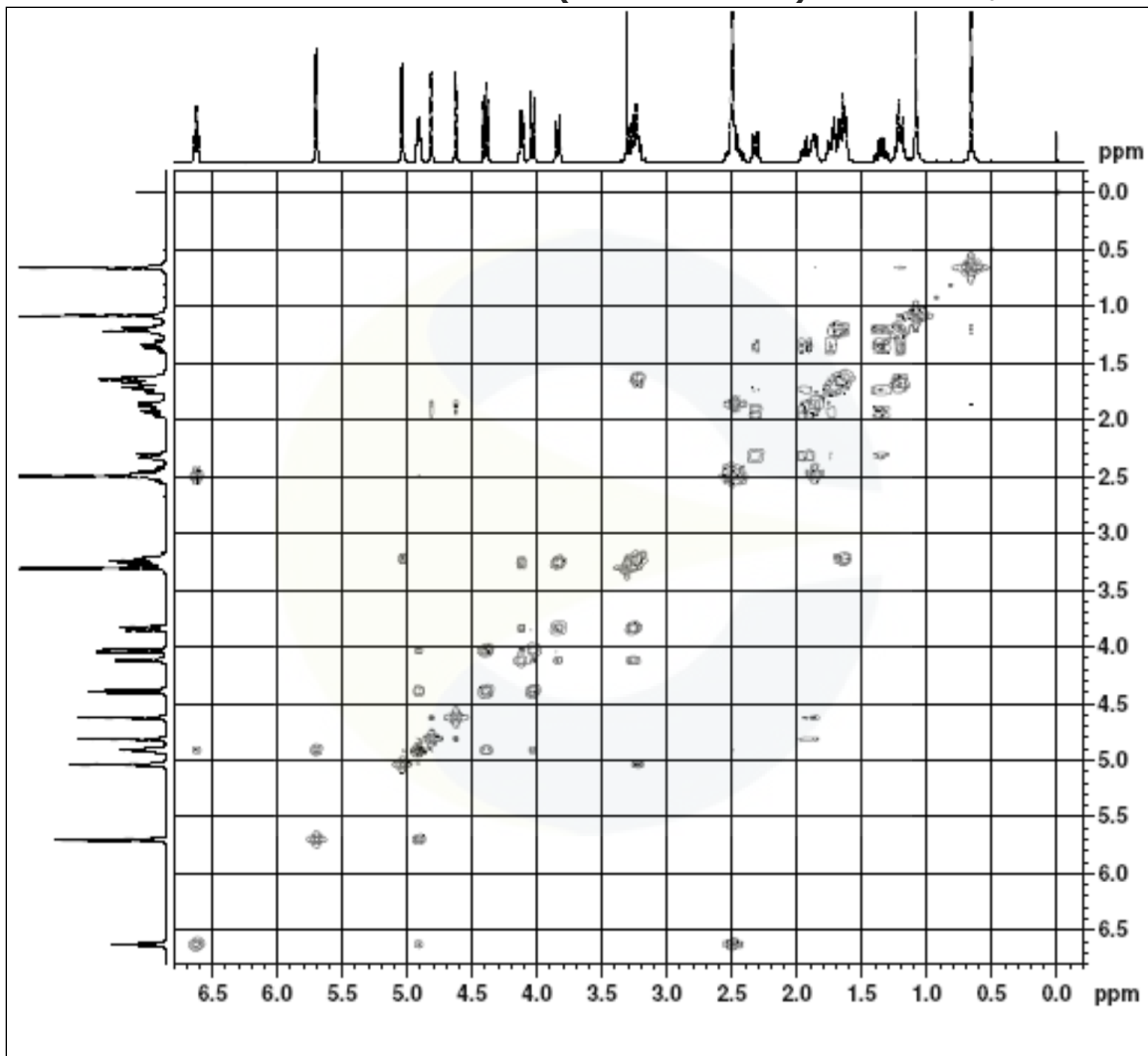
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**<sup>13</sup>C-NMR SPECTRUM OF ANDROGRAPHOLIDE (CDXA-13-2605) IN DMSO-d<sub>6</sub>**

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**COSY-NMR SPECTRUM OF ANDROGRAPHOLIDE (CDXA-13-2605) IN DMSO-d<sub>6</sub>**



**REVISION HISTORY**

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	04/26/2013	New report
01	06/12/2017	Passed re-evaluation by HPLC, KF. Updated expiration date, melting point, analytical conditions, chromatograms, and results.
02	05/07/2021	Passed second re-evaluation by HPLC and KF. Removed melting point. Updated expiration date, analytical results, analytical conditions, and chromatograms.

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