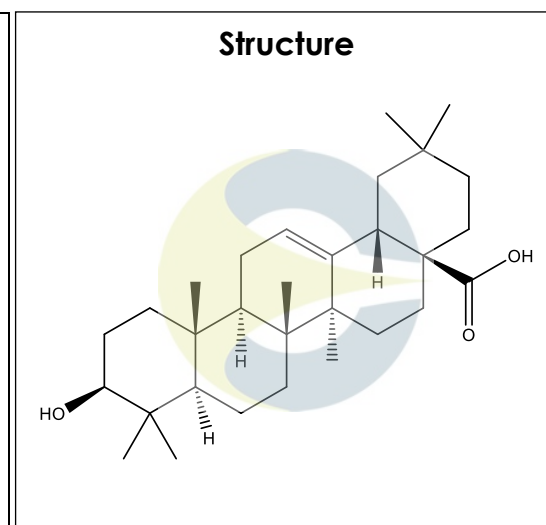


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<b>PRODUCT NAME</b>	Oleanolic acid
<b>PART NUMBER</b>	00015303
<b>STANDARD TYPE</b>	Primary (P)
<b>LOT NUMBER</b>	00015303-109
<b>REPORT NUMBER</b>	CDXA-RSS-1879-02
<b>SAMPLE NUMBER</b>	CDXA-07-1760
<b>DATE OF SAMPLE</b>	07/13/2007
<b>DATE OF RE-EVALUATION</b>	12/01/2011 (1 <sup>st</sup> ); 07/21/2015 (2 <sup>nd</sup> ); 04/06/2020 (3 <sup>rd</sup> )
<b>DATE OF REPORT</b>	05/01/2020



<b>CHEMICAL NAMES</b>	3 $\beta$ -3-Hydroxy-olean-12-en-28-oic acid; Astrantiagenin C; Caryophyllin; Giganteumgenin C; Virgaureagenin B
<b>CHEMICAL FORMULA</b>	C <sub>30</sub> H <sub>48</sub> O <sub>3</sub>
<b>MOLECULAR WEIGHT (MW)</b>	456.70
<b>CHEMICAL FAMILY</b>	Triterpenes
<b>CAS NUMBER</b>	[508-02-1]
<b>EC#(EINECS)</b>	208-081-6
<b>RTECS</b>	RK0177965

**ANALYTICAL RESULTS**

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	NA	93.2%
HPLC	0.700.10.2.METH22	NA	96.5%
NMR	NA	Conforms to structure	Conforms to structure
Mass Spectrum	Direct Infusion, ESI (+)	Conforms	Conforms
Residual Solvent	CDXA-AM-001-04	NA	ND
Water	0.700.12.37	NA	3.4%
Appearance	NA	NA	White powder

ADJUSTED PURITY: 93.2% IS BASED ON (100 - 0.0 SOLVENTS - 3.4 WATER) X 96.5% HPLC

**STORAGE CONDITIONS**

<b>STORAGE</b>	Room Temperature in a dry place.
<b>EXPIRATION DATE</b>	04/2025 under the above conditions.

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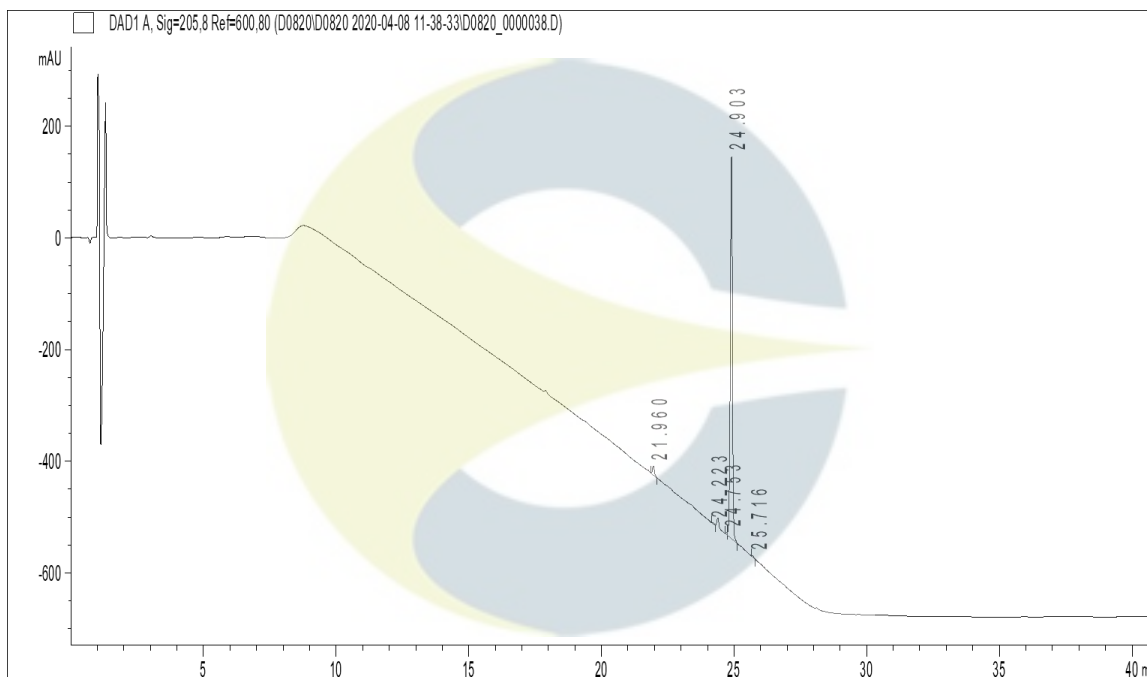
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## ANALYTICAL CONDITIONS

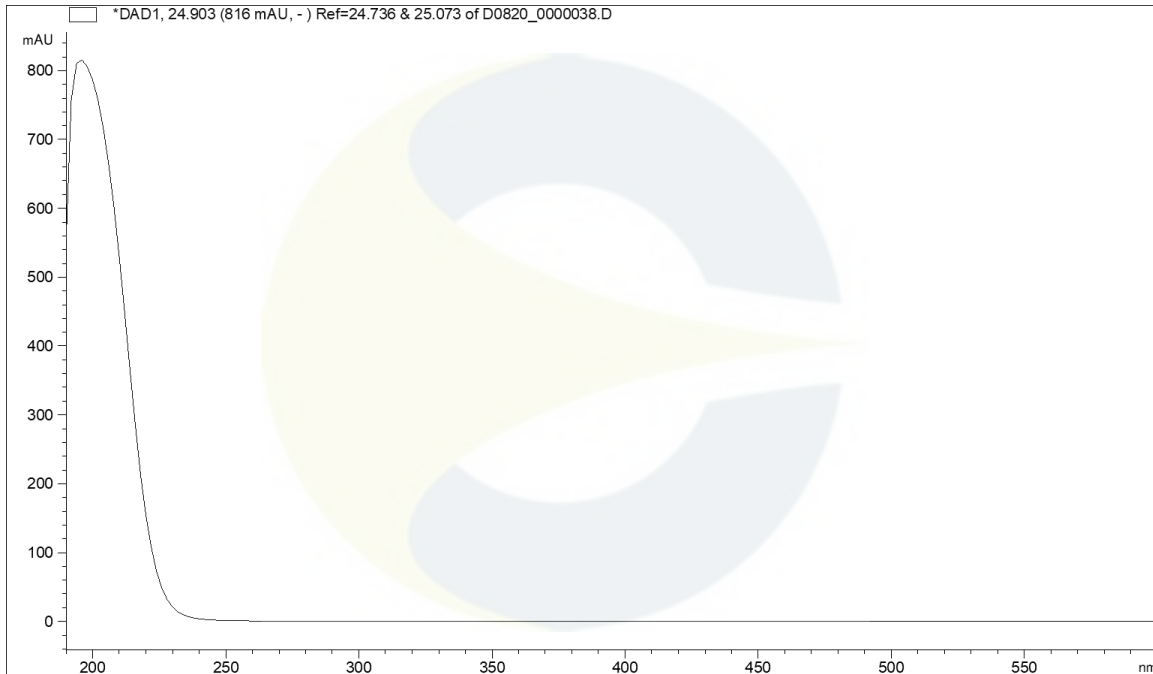
<b>INSTRUMENT</b>	AGILENT 1260 HPLC UV-VIS (DAD); FINNIGAN LCQ-DECA
<b>COLUMN</b>	Phenomenex Luna C18(2) 150 x 2.00 mm, 5 µm particle size
<b>MOBILE PHASE</b>	A - 0.1% Trifluoroacetic acid in Ultrapure water, B - Acetonitrile; Isocratic 5% B for 5 minutes, then increasing to 95% B over 20 minutes. Hold at 95% B for 15 minutes.
<b>COLUMN TEMP.</b>	60 °C
<b>FLOW RATE</b>	0.4 mL/minute
<b>INJECTION VOL.</b>	2.0 µL
<b>INJECTION CONC.</b>	1.1 mg/mL in Methanol
<b>DETECTION</b>	205 ± 4 nm

## HPLC CHROMATOGRAM OF OLEANOLIC ACID (CDXA-07-1760)

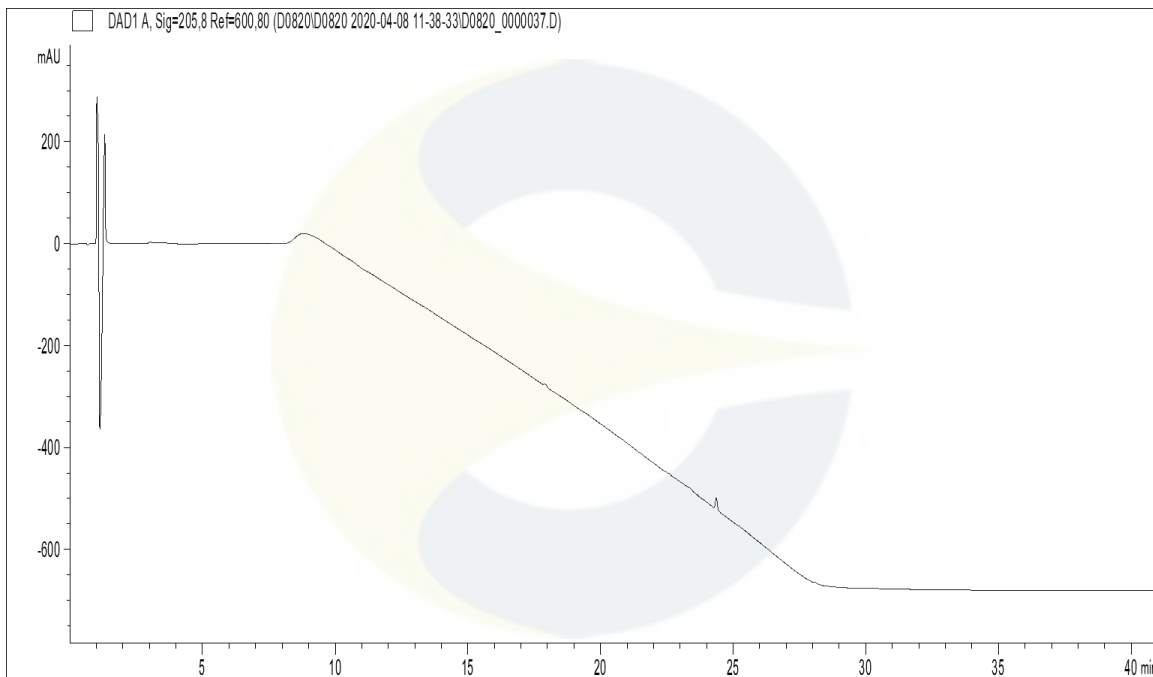


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**UV SPECTRUM AT RT 24.9 MINUTES**

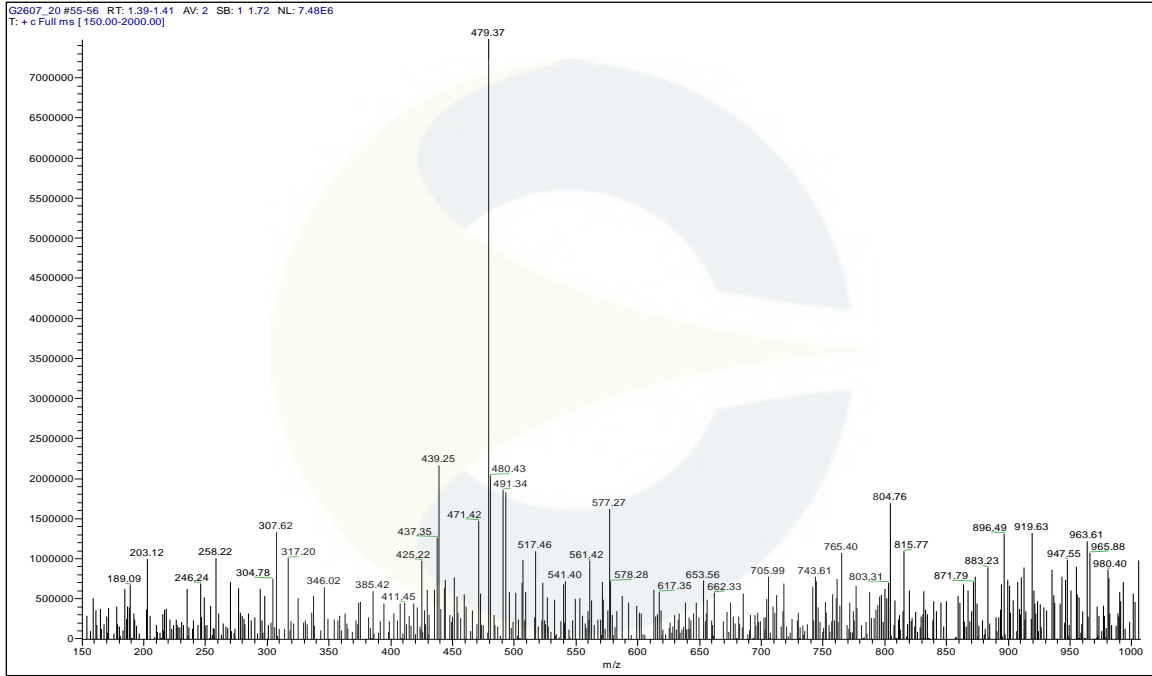


**HPLC CHROMATOGRAM OF DILUENT BLANK**

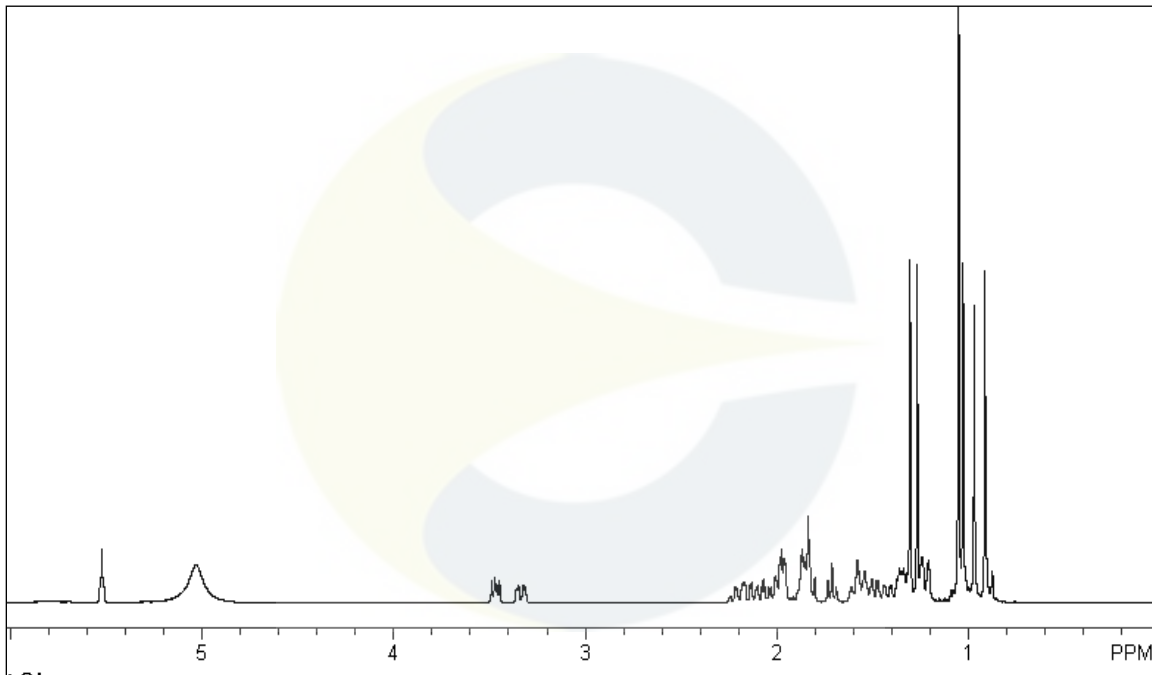


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**MASS SPECTRUM OF OLEANOLIC ACID (CDXA-07-1760)**



**<sup>1</sup>H-NMR SPECTRUM OF OLEANOLIC ACID (CDXA-07-1760) IN PYRIDINE-d<sub>5</sub>**



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## REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	12/01/2011	New report and first re-evaluation
01	07/31/2015	Passed second re-evaluation by HPLC, KF. Updated expiration date and melting point.
02	05/01/2020	Passed third re-evaluation by HPLC, KF. Updated expiration date, purity, analytical method, chromatograms, and removed melting point.

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