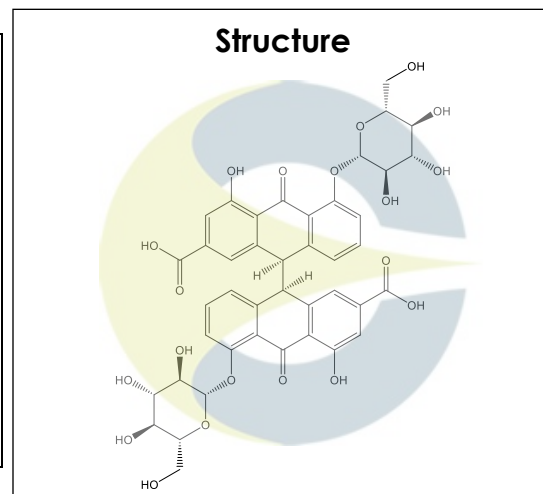


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<b>PRODUCT NAME</b>	Sennoside A
<b>PART NUMBER</b>	00019155
<b>STANDARD TYPE</b>	Primary (P)
<b>LOT NUMBER</b>	00019155-0901
<b>REPORT NUMBER</b>	CDXA-RSS-9683-00
<b>SAMPLE NUMBER</b>	CDXP-22-00043
<b>DATE OF SAMPLE</b>	01/14/2022
<b>DATE OF REPORT</b>	03/02/2022



<b>CHEMICAL NAMES</b>	(9R,9'R)-5,5'-bis(β-D-Glucopyranosyloxy)-9,9',10,10'-tetrahydro-4,4'-dihydroxy-10,10'-dioxo-[9,9'-bianthracene]-2,2'-dicarboxylic acid
<b>CHEMICAL FORMULA</b>	C <sub>42</sub> H <sub>38</sub> O <sub>20</sub>
<b>MOLECULAR WEIGHT (MW)</b>	862.74
<b>CHEMICAL FAMILY</b>	Anthraquinones
<b>CAS NUMBER</b>	[81-27-6]
<b>EC#(EINECS)</b>	201-339-9
<b>RTECS</b>	DT3712000

**ANALYTICAL RESULTS**

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	≥ 85%	93.5%
HPLC	0.700.10.2.METH22	≥ 90%	96.5%
NMR-Identity	0.700.12.4	Conforms to structure	Conforms to structure
NMR-Residual solvent	0.700.12.4	NA	Acetic acid: 1.0%**
Mass Spectrum	0.700.12.27	Conforms	Conforms
Residual Solvent*	USP <467>	NA	MeOH: 955 ppm
Water	0.700.12.37	NA	2.0%
Appearance	NA	NA	White powder

\*Testing performed at an ISO 17025 accredited subcontracted laboratory.

\*\*Estimated acetic acid content based on ratio of peaks in proton NMR spectrum.

ADJUSTED PURITY: 93.5% IS BASED ON (100 - 1.1 SOLVENTS - 2.0 WATER) X 96.5% HPLC

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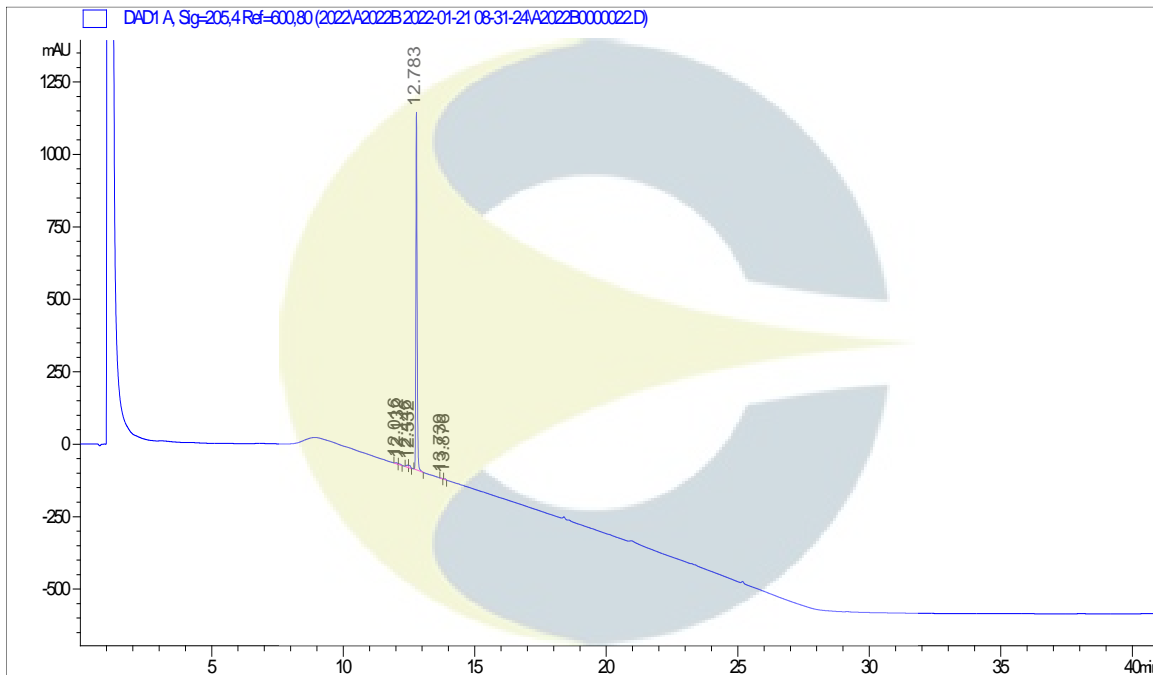
**STORAGE CONDITIONS**

**STORAGE** Room Temperature in a dry place.  
**EXPIRATION DATE** 01/2027 under the above conditions.

**ANALYTICAL CONDITIONS**

**INSTRUMENT** AGILENT 1260 HPLC UV-VIS (DAD); AB-SCIEX 6600 TRIPLE TOF  
**COLUMN** Phenomenex Luna C18(2) 150 x 2.00 mm, 5 µm particle size  
**MOBILE PHASE** 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, then decreasing to 5% B over 1 minute.  
**COLUMN TEMP.** 60 °C  
**FLOW RATE** 0.4 mL/minute  
**INJECTION VOL.** 0.4 µL  
**INJECTION CONC.** 1.0 mg/mL in dimethyl sulfoxide  
**DETECTION** 205 ± 2 nm

**HPLC CHROMATOGRAM OF SENNOSIDE A (CDXP-22-00043)**

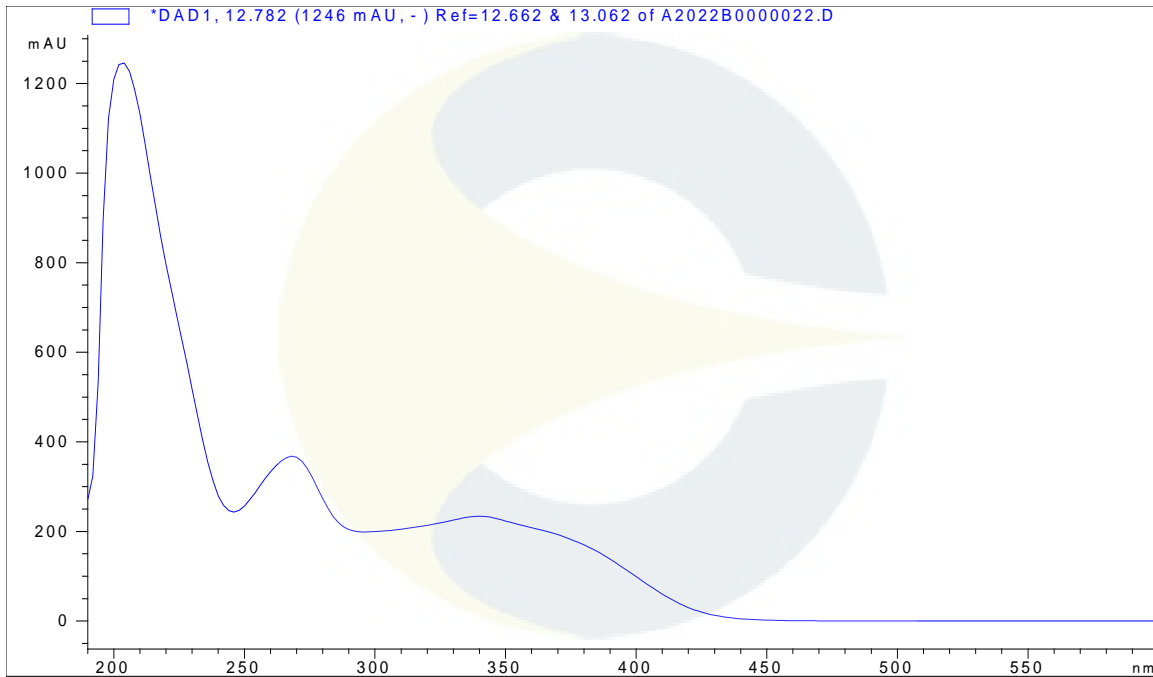


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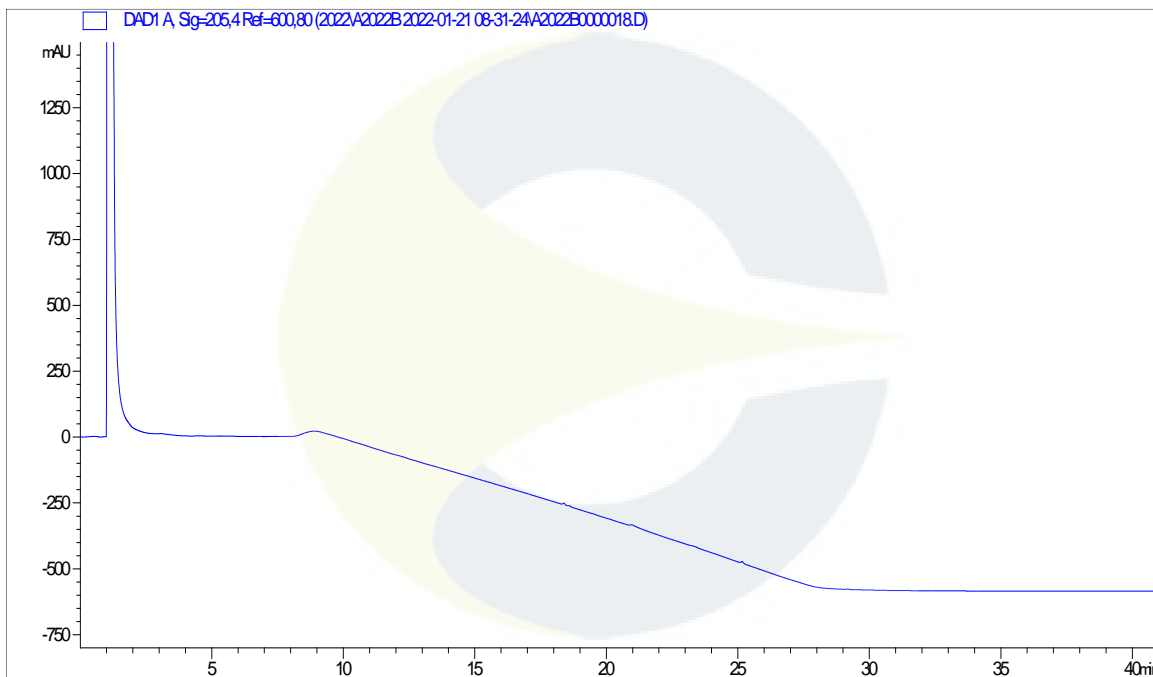
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**UV SPECTRUM 12.8 MINUTES**



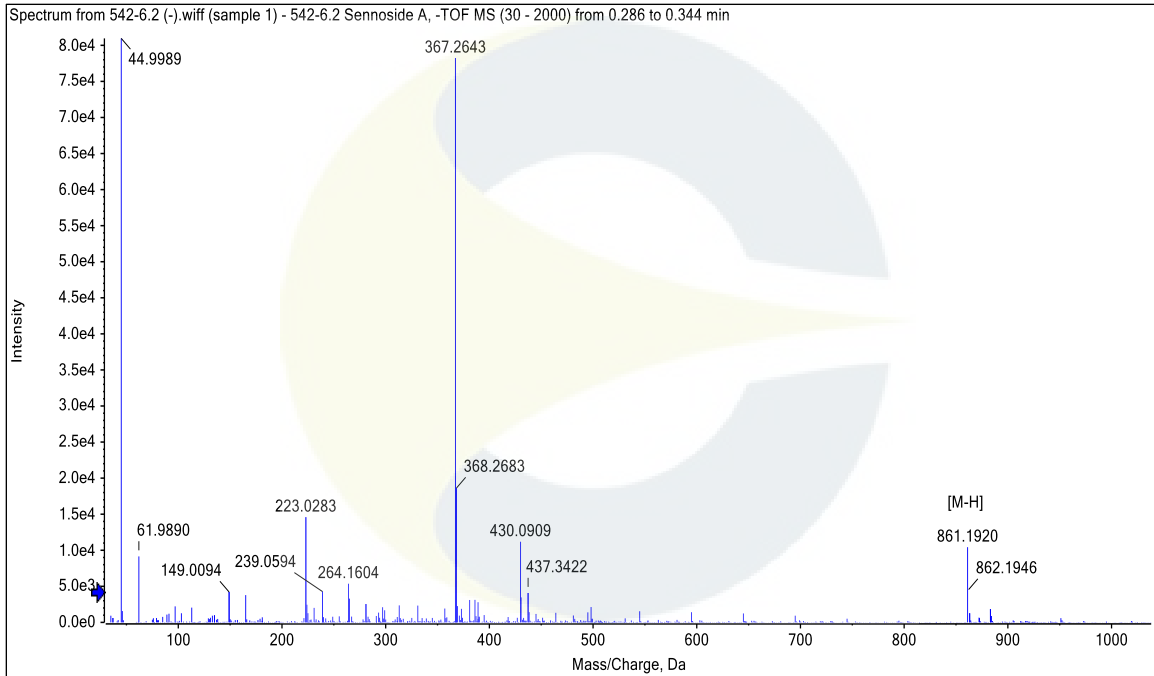
**HPLC CHROMATOGRAM OF DILUENT BLANK**



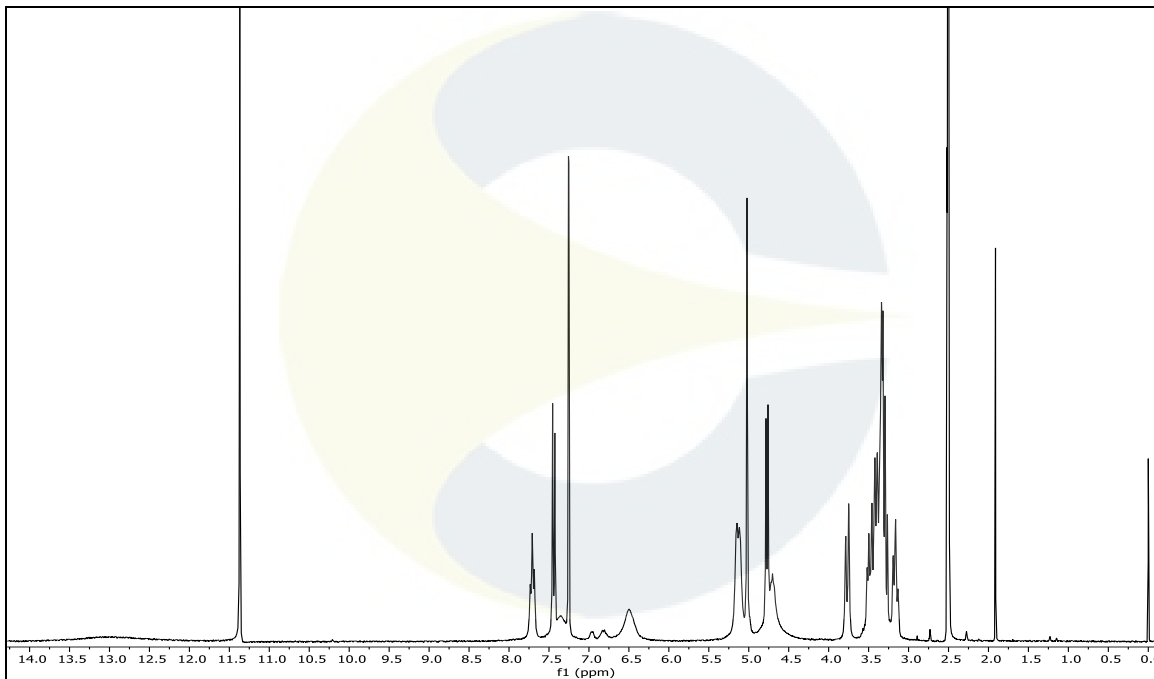
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**MASS SPECTRUM OF SENNOSIDE A (CDXP-22-00043)**



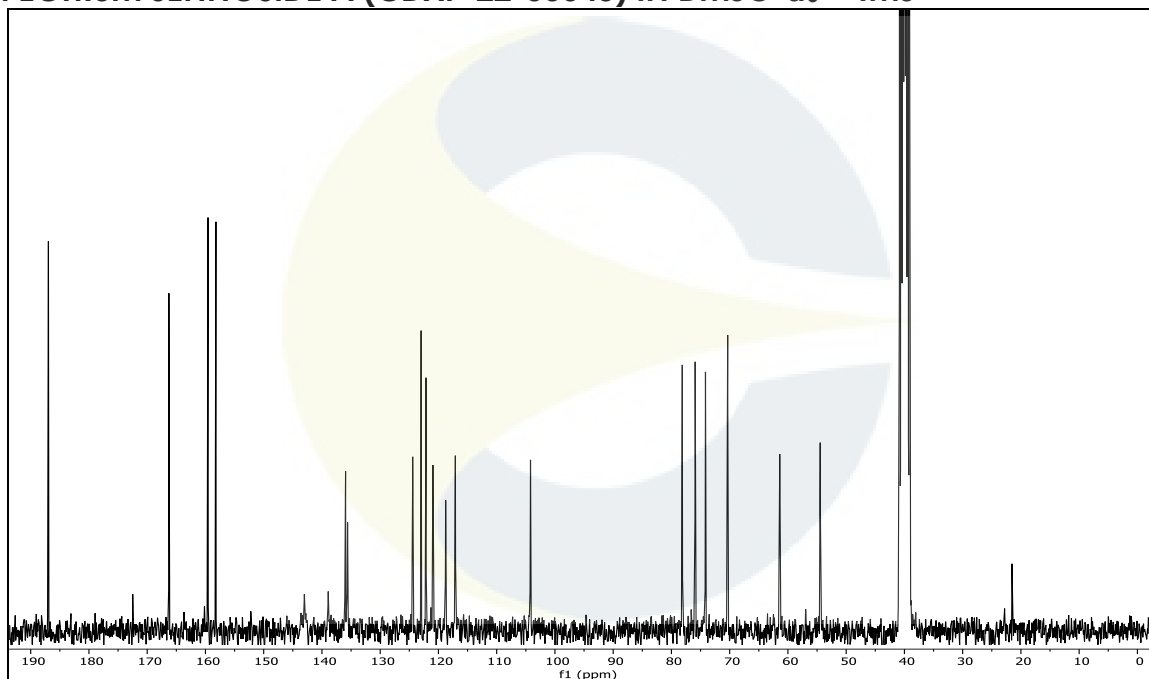
**<sup>1</sup>H-NMR SPECTRUM OF SENNOSIDE A (CDXP-22-00043) IN DMSO-d<sub>6</sub> + TMS**



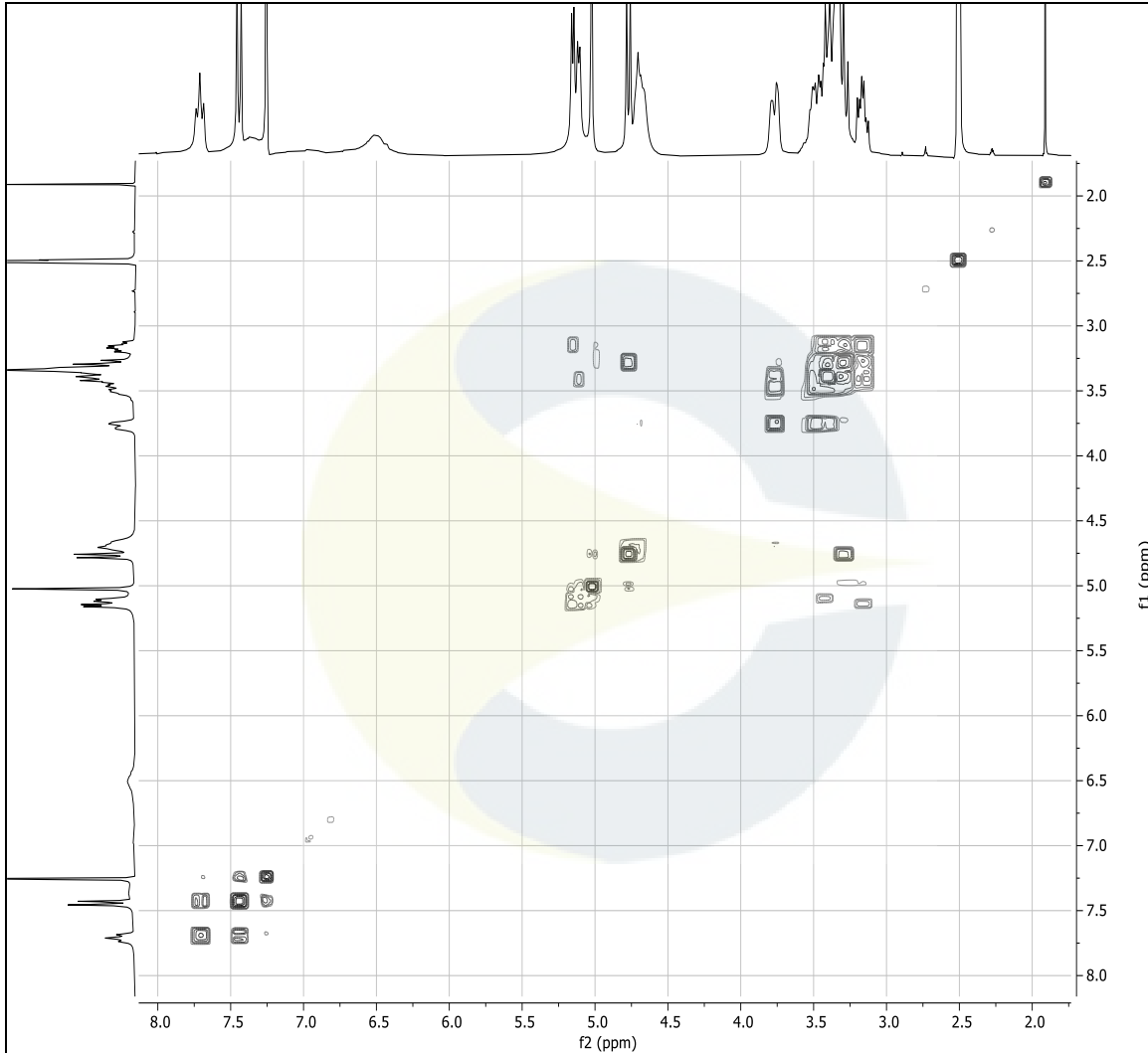
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 $^{13}\text{C}$ -NMR SPECTRUM SENNOSIDE A (CDXP-22-00043) IN DMSO- $d_6$  + TMS

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**COSY-NMR SPECTRUM OF SENNOSIDE A (CDXP-22-00043) IN DMSO- $d_6$  + TMS**

**REVISION HISTORY**

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	03/02/2022	New report

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