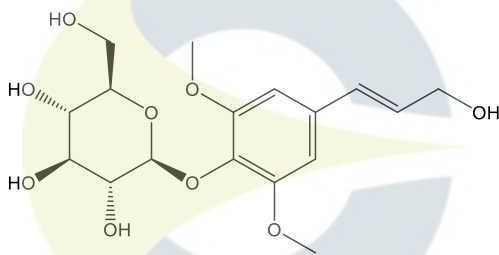


Certificate of Analysis

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PRODUCT NAME	Eleutheroside B	<div style="text-align: center;"> Structure  </div>
PART NUMBER	00005060	
STANDARD TYPE	Primary (P)	
LOT NUMBER	00005060-148	
REPORT NUMBER	CDXA-RSS-8369-01	
SAMPLE NUMBER	CDXP-18-01256	
DATE OF SAMPLE	11/19/2018	
DATE OF RE-EVALUATION	10/11/2022	
DATE OF REPORT	10/20/2022	

CHEMICAL NAMES (E)-4-(3-Hydroxy-1-propenyl)-2,6-dimethoxyphenyl β-D-glucopyranoside; Ilexanthin A; Ligustrin; Lilacin; Magnolenin; Methoxyconiferine; Syringin; Syringoside

CHEMICAL FORMULA C₁₇H₂₄O₉

MOLECULAR WEIGHT (MW) 372.37

CHEMICAL FAMILY Lignans

CAS NUMBER [118-34-3]

EC#(EINECS) 601-519-0

RTECS LZ5902100

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	≥ 85%	91.3%
HPLC	0.700.10.2.METH22	≥ 90%	96.2%
NMR	30.1-04-1.0-000733	Conforms to structure	Conforms to structure
Mass Spectrum	99.1-04-3.0-000126	Conforms	Conforms
Residual Solvent*	99.1-CDXA-3.0-000621	NA	EtOH – 0.2%; MeOH < 0.1%
Water	0.700.12.37	NA	4.9%
Appearance	NA	NA	White powder

*Testing performed at an ISO 17025 accredited subcontracted laboratory.

ADJUSTED PURITY: 91.3% IS BASED ON (100 - 0.2 SOLVENTS - 4.9 WATER) X 96.2% HPLC

STORAGE CONDITIONS

STORAGE -20 °C in a dry place.

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EXPIRATION DATE 10/2027 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 - 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

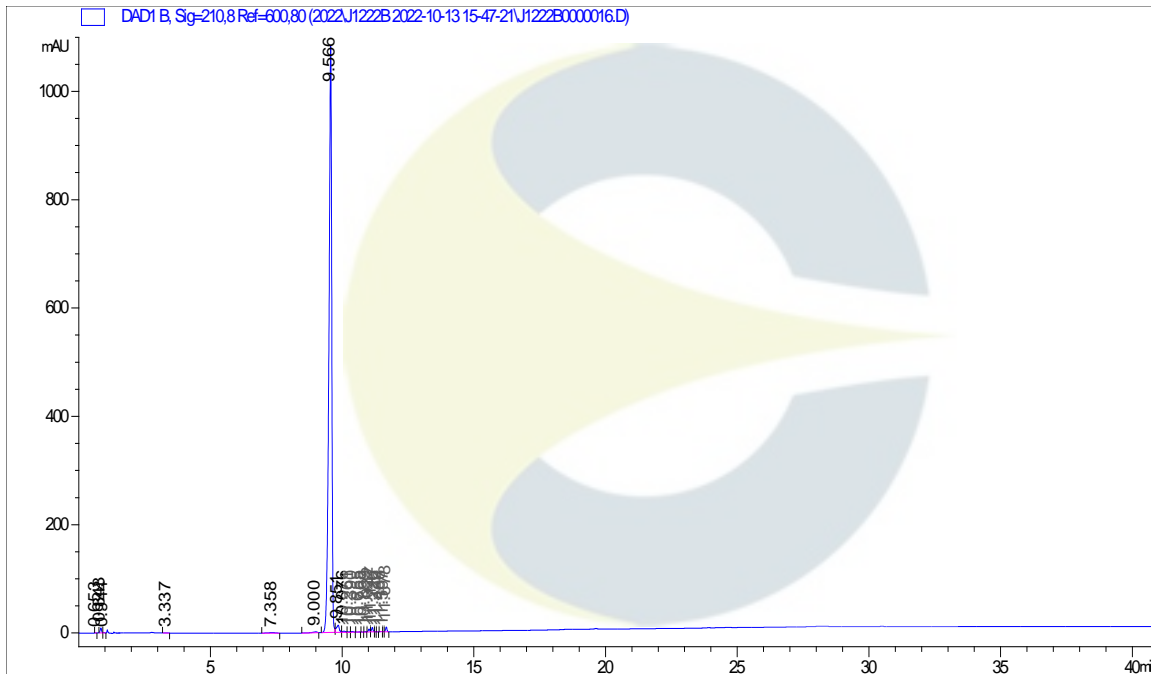
FLOW RATE 0.4 mL/minute

INJECTION VOL. 1.0 µL

INJECTION CONC. 1.0 mg/mL in Methanol

DETECTION 210 ± 4 nm

HPLC CHROMATOGRAM OF ELEUTHEROSIDE B (CDXP-18-01256)

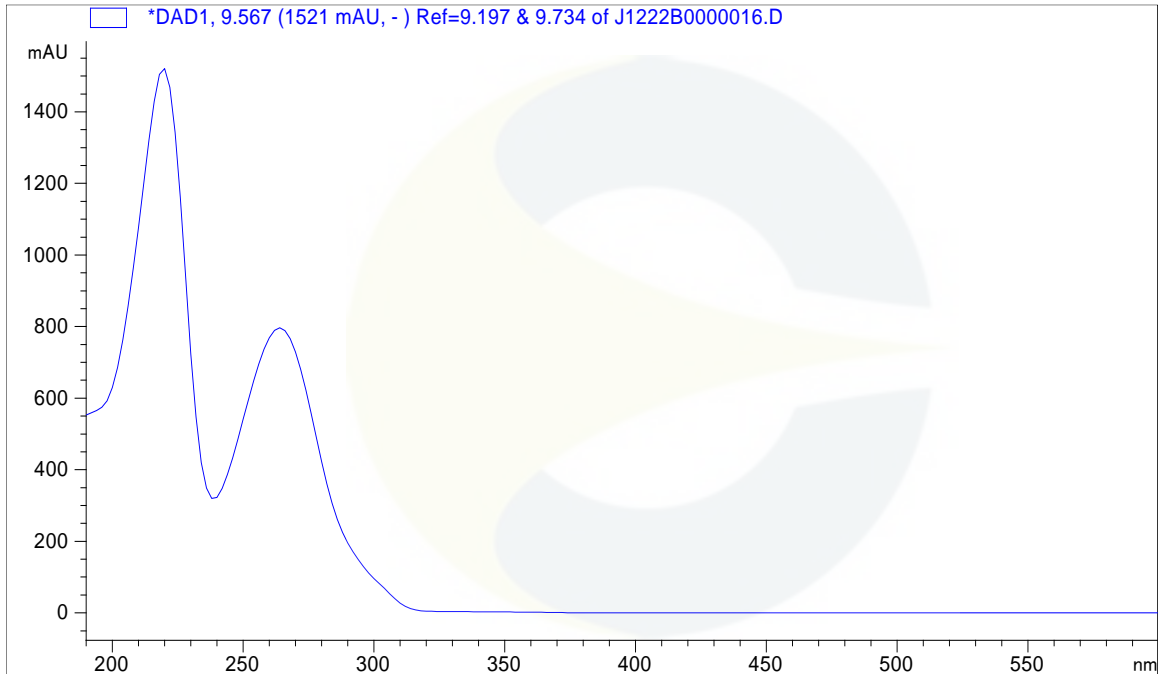


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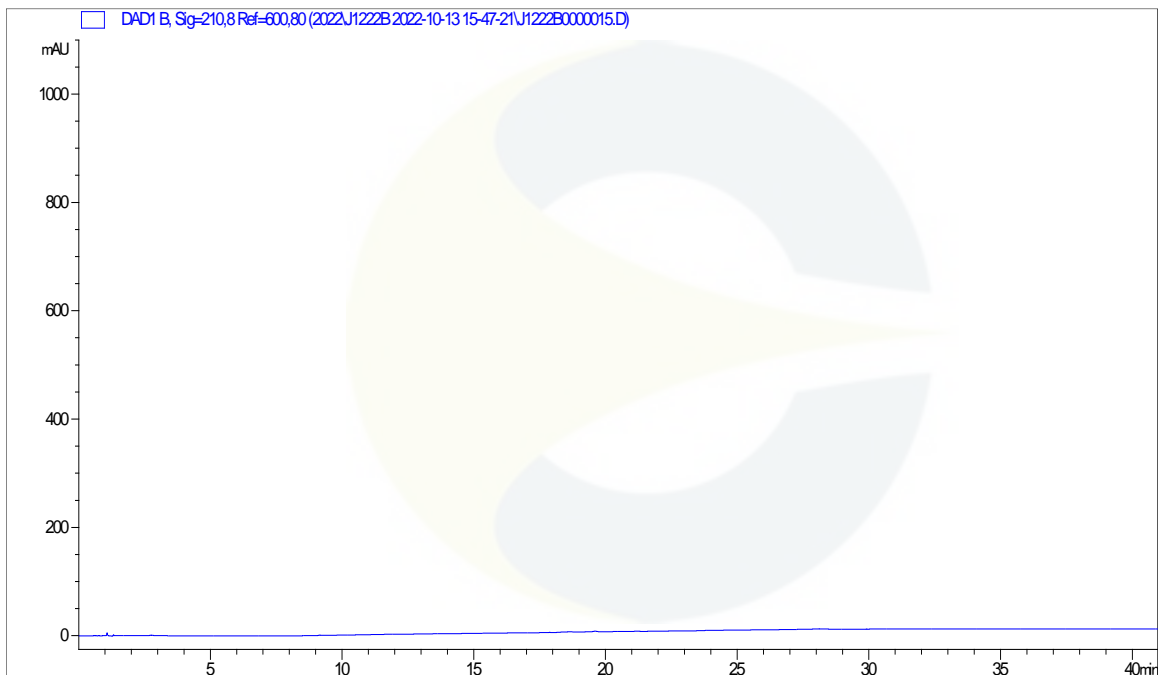
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UV SPECTRUM AT RT = 9.6 MINUTES

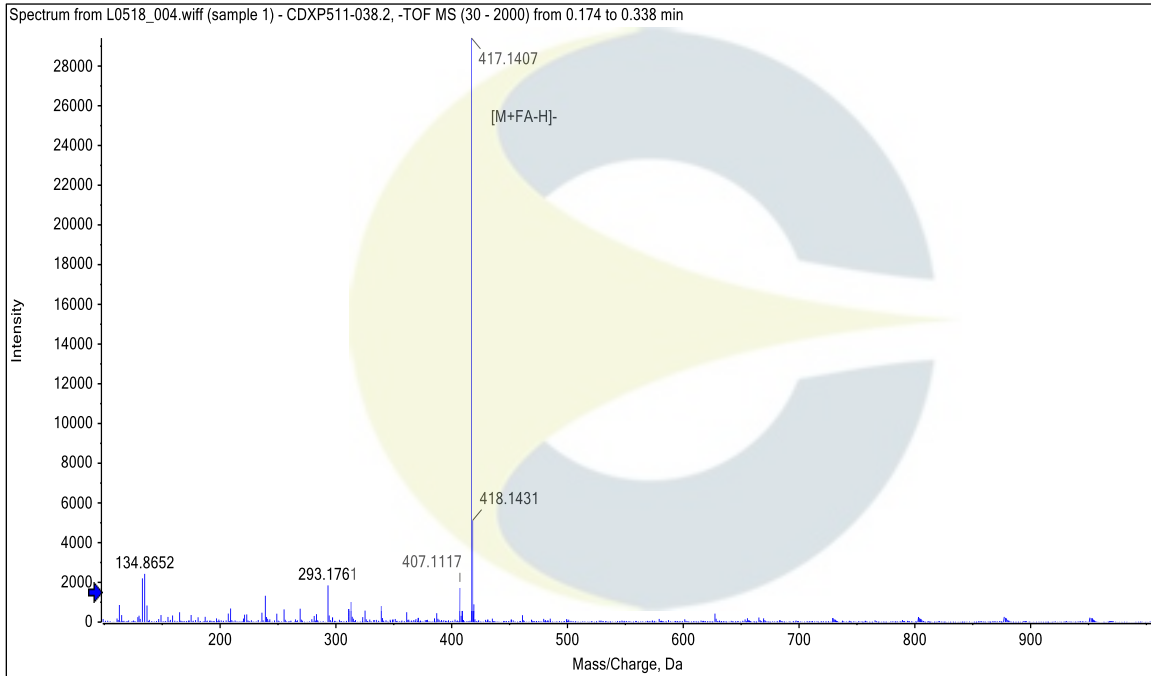


HPLC CHROMATOGRAM OF DILUENT BLANK

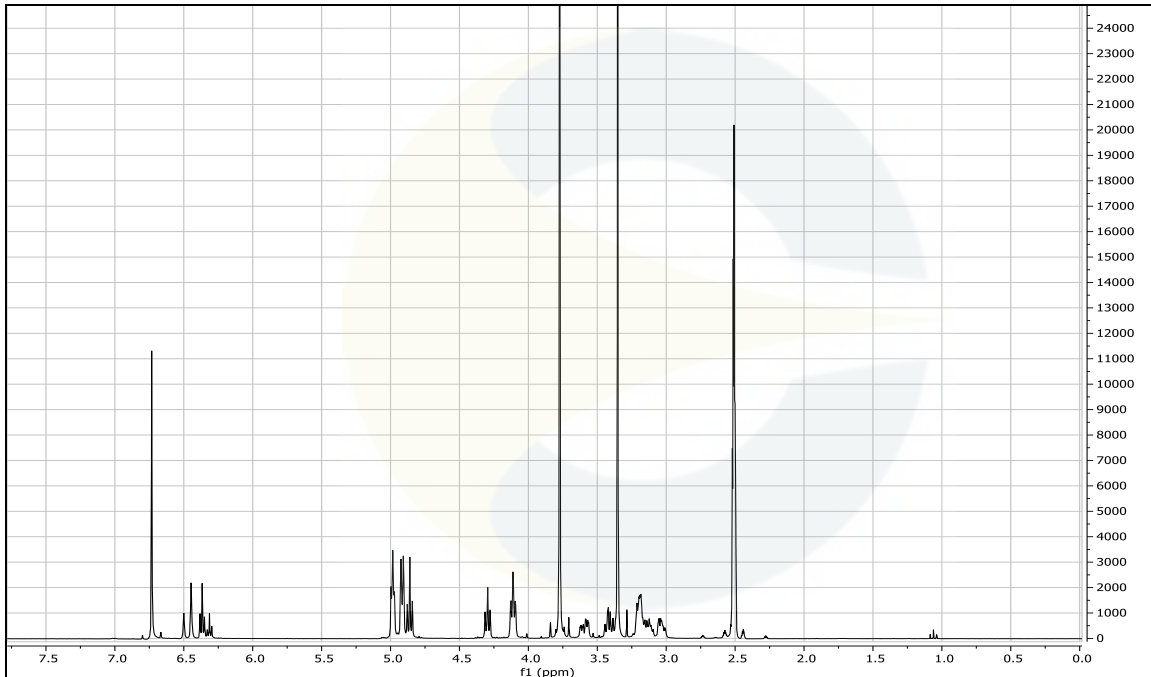


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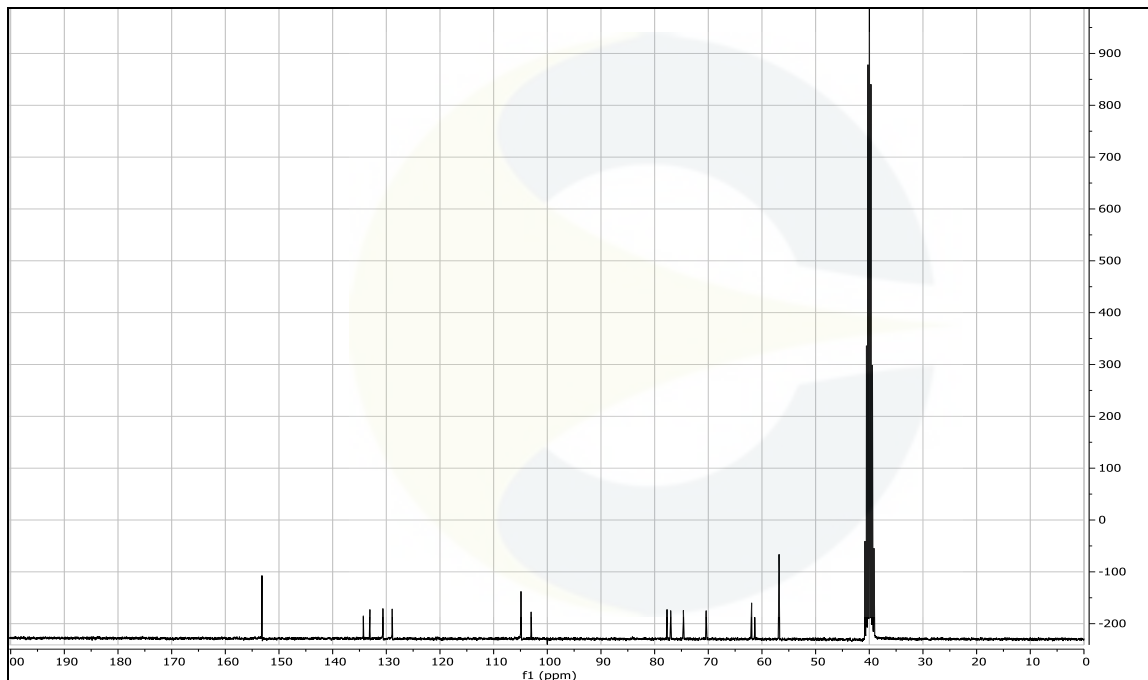
MASS SPECTRUM OF ELEUTHEROSIDE B (CDXP-18-01256)



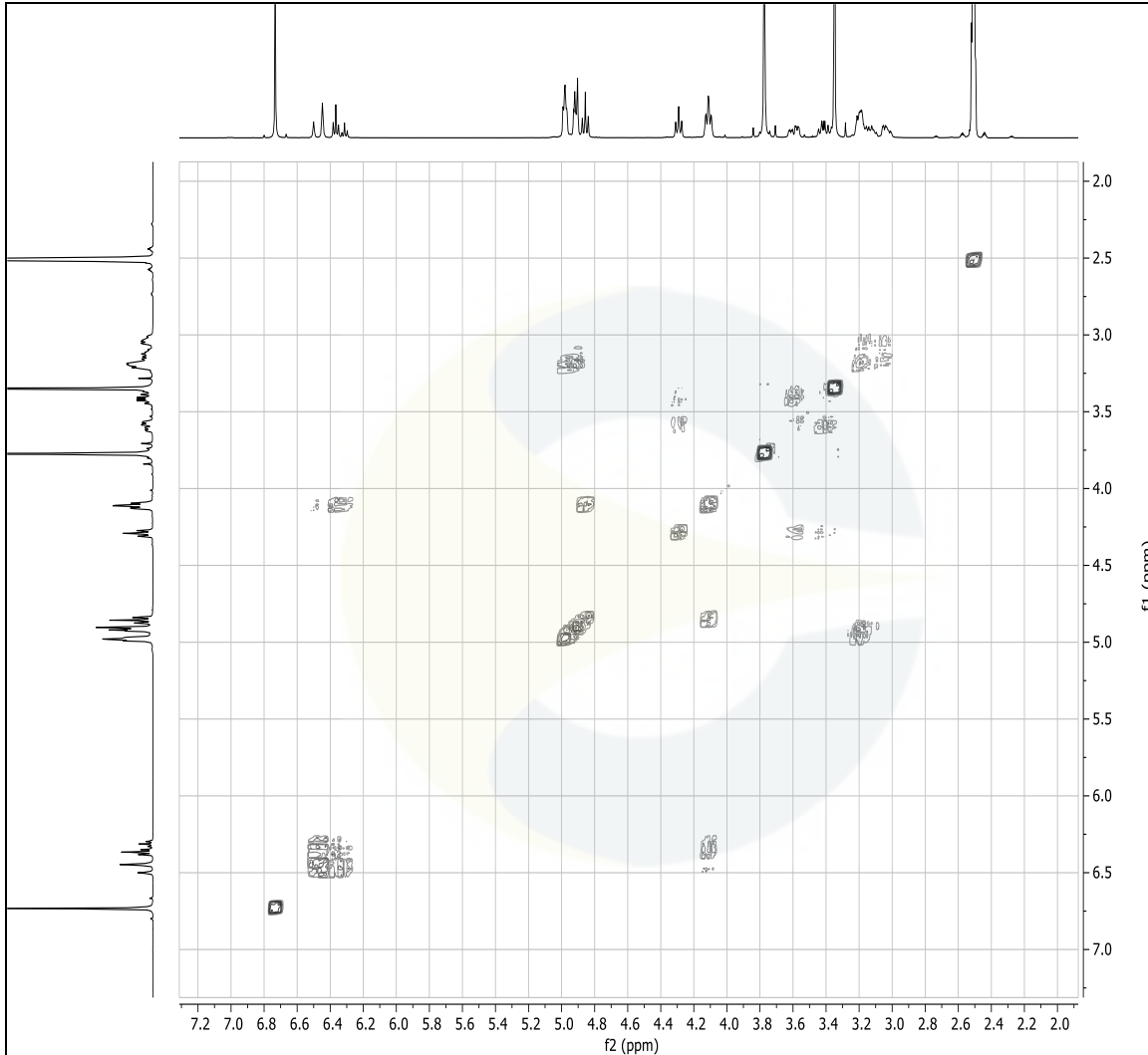
¹H-NMR SPECTRUM OF ELEUTHEROSIDE B (CDXP-18-01256) IN DMSO-d₆



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¹³C-NMR SPECTRUM OF ELEUTHEROSIDE B (CDXP-18-01256) IN DMSO-d₆

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COSY-NMR SPECTRUM OF ELEUTHEROSIDE B (CDXP-18-01256) IN DMSO- d_6

REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	12/18/2018	New report
01	10/20/2022	Passed re-evaluation by HPLC, KF. Updated expiration date, analytical results, analytical conditions, and chromatograms.

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