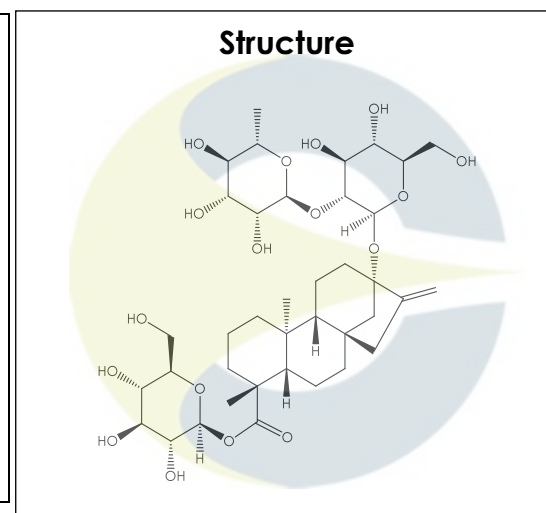


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PRODUCT NAME	Dulcoside A
PART NUMBER	00004949
STANDARD TYPE	Primary (P)
LOT NUMBER	00004949-910
REPORT NUMBER	CDXA-RSS-8449-01
SAMPLE NUMBER	CDXP-18-01354
DATE OF SAMPLE	12/26/2018
DATE OF RE-EVALUATION	11/02/2022
DATE OF REPORT	11/10/2022



CHEMICAL NAMES	(4 α)-13-[[2-O-(6-Deoxy- α -L-mannopyranosyl)- β -D-glucopyranosyl]oxy]-kaur-16-en-18-oic acid- β -D-glucopyranosyl ester
CHEMICAL FORMULA	C ₃₈ H ₆₀ O ₁₇
MOLECULAR WEIGHT (MW)	788.87
CHEMICAL FAMILY	Diterpene glycosides
CAS NUMBER	[64432-06-0]
EC#(EINECS)	NA
RTECS	NZ8174620

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	≥ 85%	86.3%
HPLC	0.700.10.2.METH86	≥ 90%	96.3%
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	MeOH – 1.1%; EtOH – 0.1%
Water	0.700.12.37	NA	9.2%
Appearance	NA	NA	White powder

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*Testing performed at an ISO 17025 accredited subcontracted laboratory.

ADJUSTED PURITY: 86.3% IS BASED ON (100 - 1.2 SOLVENTS - 9.2 WATER) X 96.3% HPLC

STORAGE CONDITIONS

STORAGE +4 °C in a dry place.

EXPIRATION DATE 11/2027 under the above conditions.

ANALYTICAL CONDITIONS

INSTRUMENT AGILENT 1260 HPLC UV-VIS (DAD) ; AB-SCIEX 6600 TRIPLE TOF

COLUMN Phenomenex Synergi Hydro-RP 250 x 4.60 mm, 4 µm particle size

MOBILE PHASE A – Ultrapure water, B – Acetonitrile;
Isocratic 20% B for 5 minutes, then increasing to 30% B over 10 minutes, then increasing to 35% B over 15 minutes, then increasing to 80% B over 10 minutes, then increasing to 90% B over 5 minutes. Hold at 90% B for 5 minutes.

COLUMN TEMP. 60 °C

FLOW RATE 1.0 mL/minute

INJECTION VOL. 10.0 µL

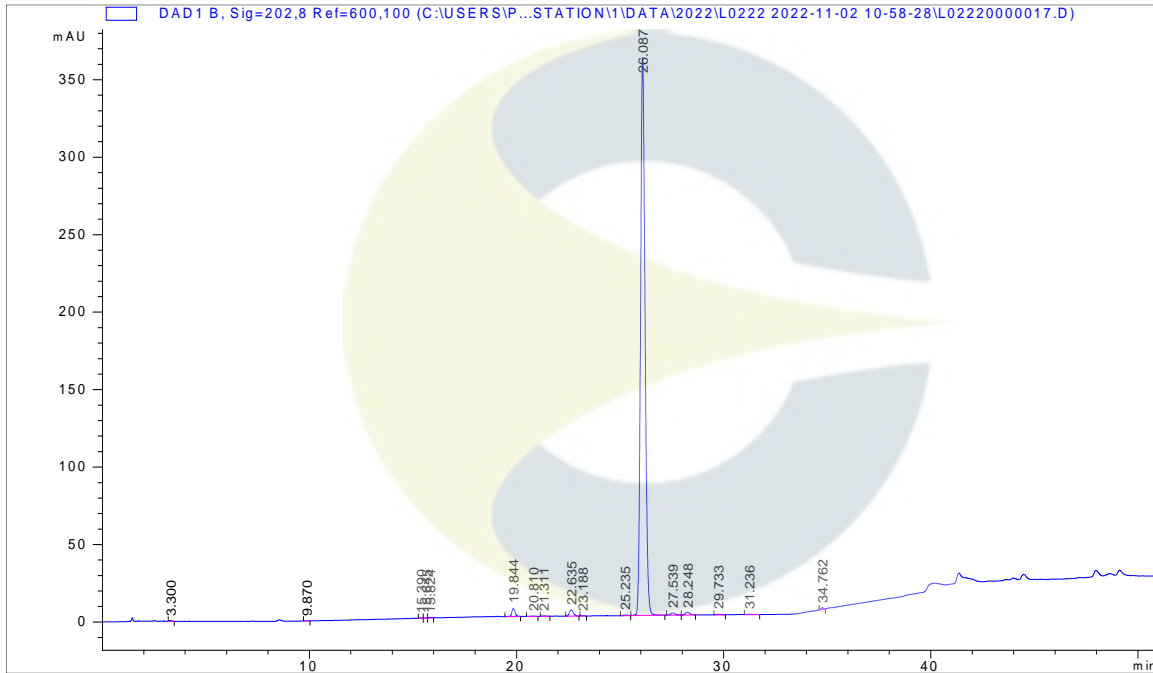
INJECTION CONC. 1.2 mg/mL in (70:30) Ultrapure water: Acetonitrile

DETECTION 202 ± 4 nm

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HPLC CHROMATOGRAM OF DULCOSIDE A (CDXP-18-01354)

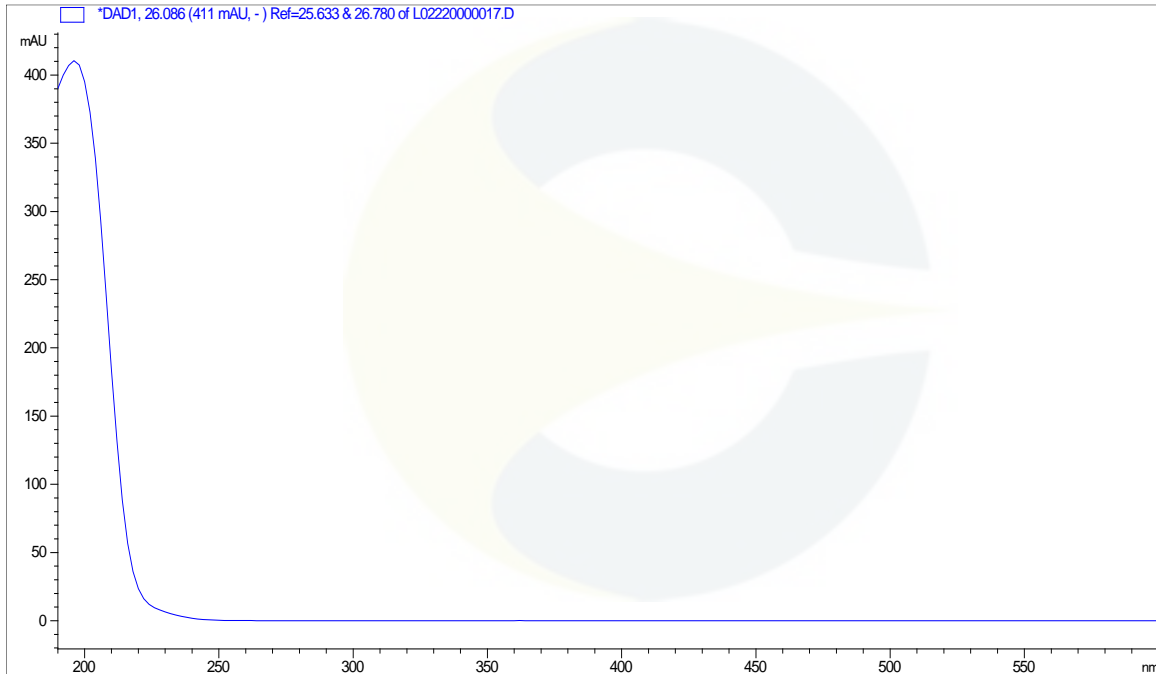


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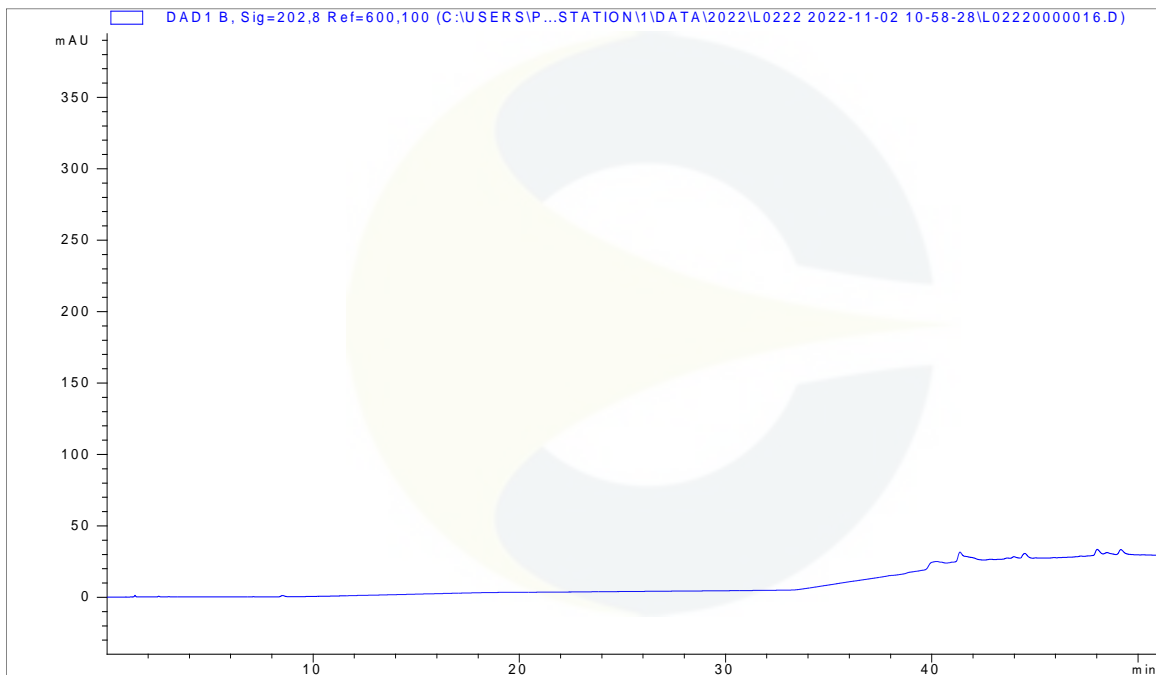
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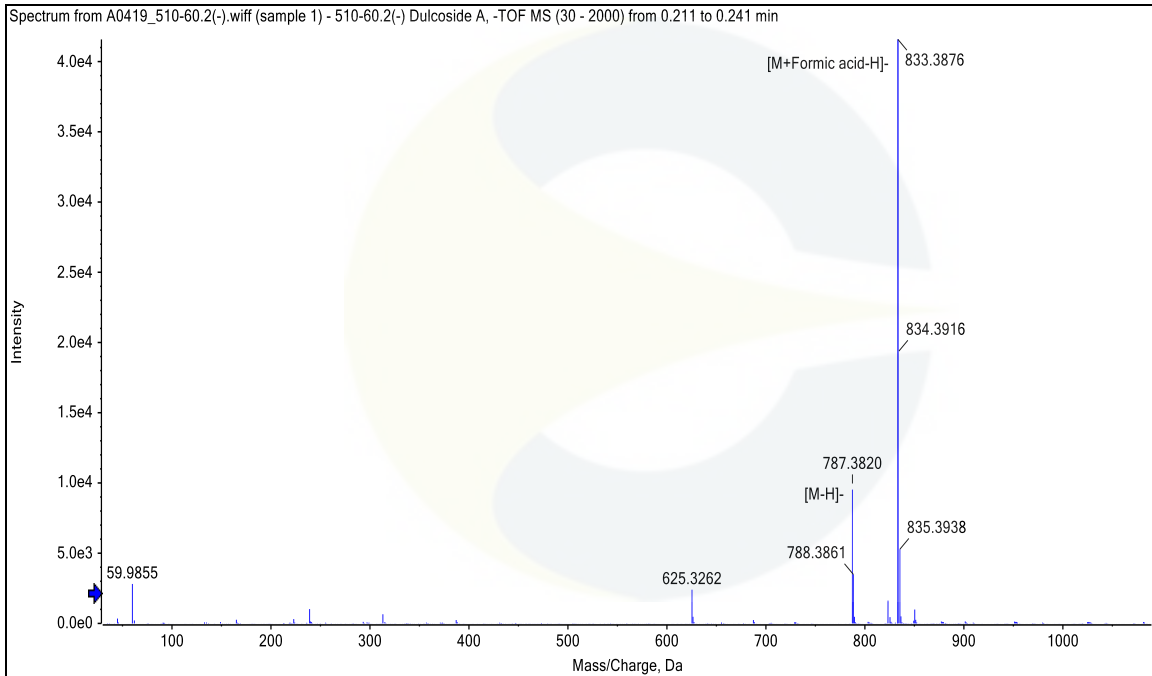
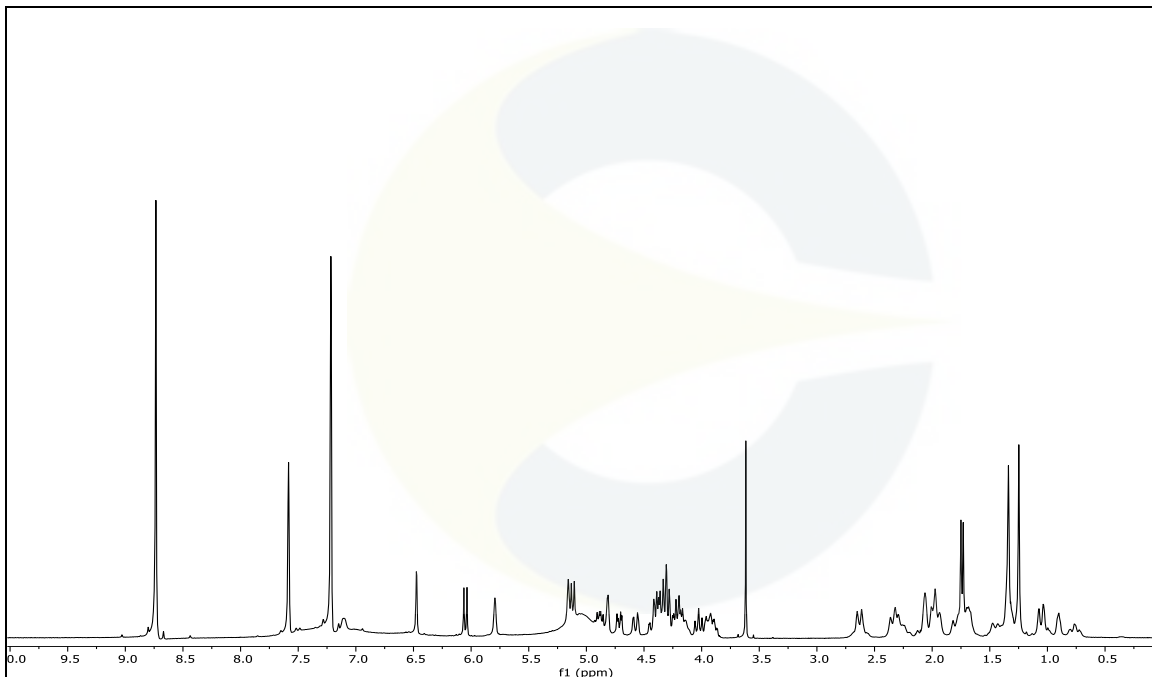
UV SPECTRUM AT RT = 26.1 MINUTES



HPLC CHROMATOGRAM OF DILUENT BLANK

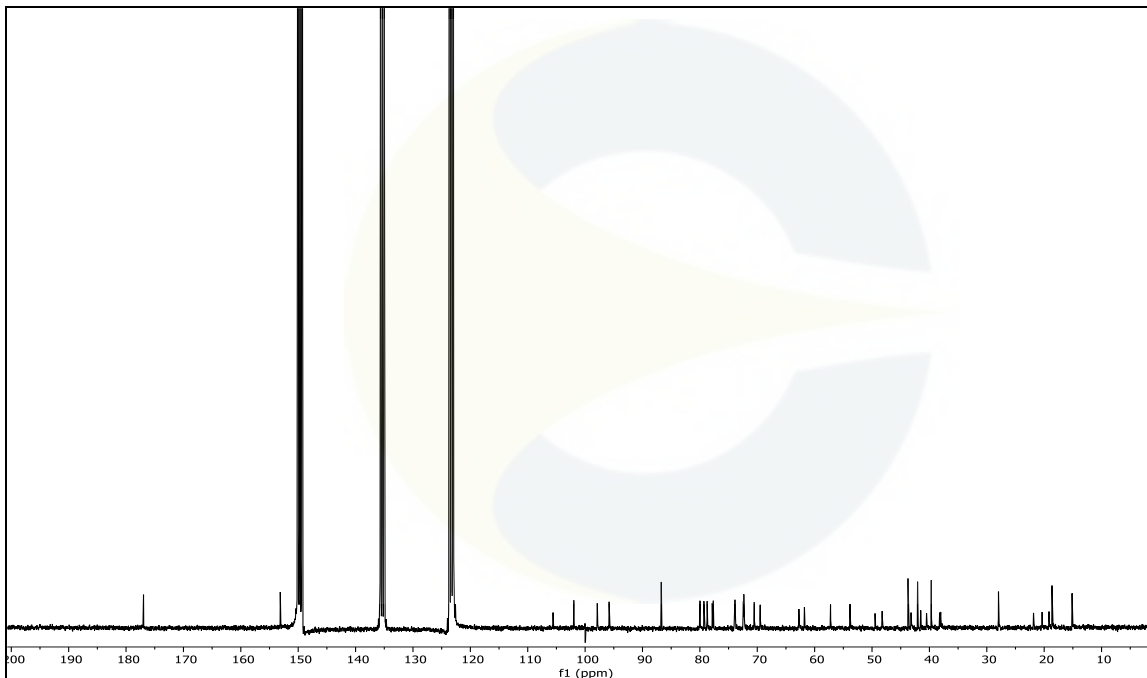


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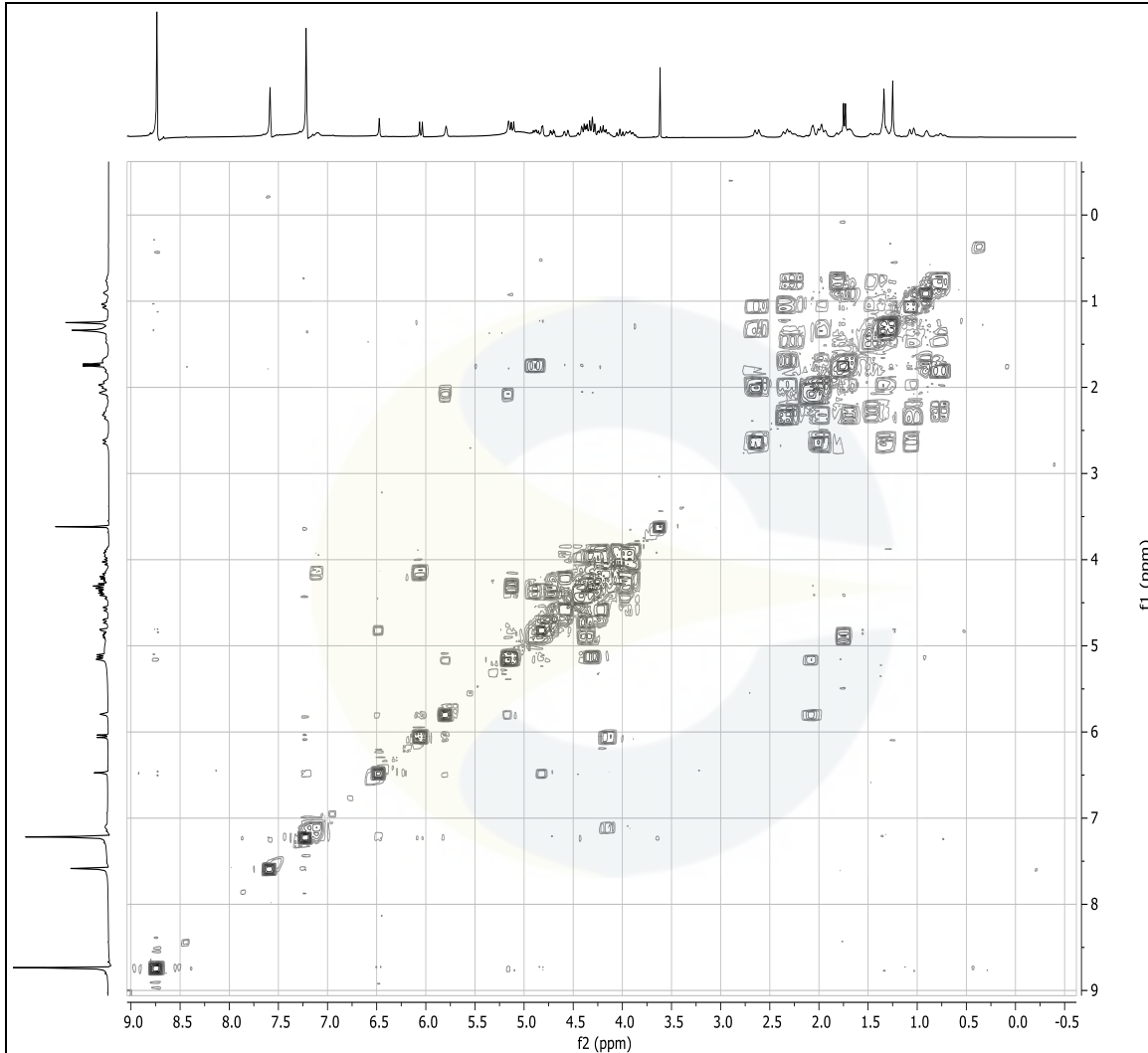
MASS SPECTRUM OF DULCOSIDE A (CDXP-18-01354)

¹H-NMR SPECTRUM OF DULCOSIDE A (CDXP-18-01354) IN PYRIDINE-d₅


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¹³C-NMR SPECTRUM OF DULCOSIDE A (CDXP-18-01354) IN PYRIDINE-d₅



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COSY-NMR SPECTRUM OF DULCOSIDE A (CDXP-18-01354) IN PYRIDINE-d₅

REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	01/10/2019	New report
01	11/10/2022	Passed re-evaluation by HPLC, KF. Updated expiration date, analytical results, analytical conditions, and chromatograms.

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