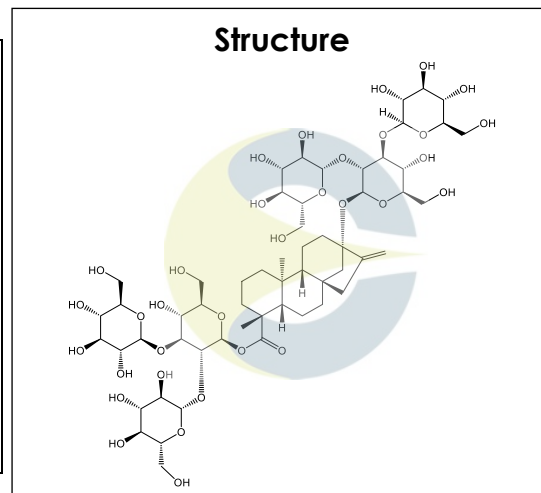


Certificate of Analysis – Certified Reference Material

For Laboratory Use Only

PRODUCT NAME	Rebaudioside M ≥ 90%
PART NUMBER	00018314
STANDARD TYPE	Primary Certified Reference Material
LOT NUMBER	00018314-218-1
REPORT NUMBER	CDXA-RSS-9051-00
SAMPLE NUMBER	CDXP-20-00206
DATE OF SAMPLE	04/02/2020
DATE OF REPORT	07/29/2020



CHEMICAL NAMES	(4 α)-O- β -D-Glucopyranosyl-(1 \rightarrow 2)-O-[β -D-glucopyranosyl-(1 \rightarrow 3)]- β -D-glucopyranosyl ester 13-[(O- β -D-glucopyranosyl-(1 \rightarrow 2)-O-[β -D-glucopyranosyl-(1 \rightarrow 3)]- β -D-glucopyranosyl)oxy]-kaur-16-en-18-oic acid; Rebaudioside X
CHEMICAL FORMULA	C ₅₆ H ₉₀ O ₃₃
MOLECULAR WEIGHT (MW)	1291.29
CHEMICAL FAMILY	Diterpene glycosides
CAS NUMBER	[1220616-44-3]
EC#(EINECS)	NA
RTECS	NA
INTENDED USE	This Certified Reference Material is suitable for the identification, calibration, and quantification of the analyte in analytical and R&D applications. Not suitable for human or animal consumption.
INSTRUCTIONS FOR USE	The material is stored in a capped, amber glass vial. Allow the capped vial to equilibrate to room temperature before opening. Quantitatively transfer a desired amount of material using established good laboratory practices. Minimize exposure to the atmosphere to ensure no changes in water content. It is recommended to prepare solutions fresh before use. Reseal and return unused material to the storage conditions documented below. Units are suitable for multi-use when stored appropriately.
SAFETY	See Safety Data Sheet, available through ChromaDex.
MINIMUM SAMPLE SIZE	For quantitative applications, the minimum sample size for intended use is 1 mg.



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ANALYTICAL RESULTS

CERTIFIED RESULTS			
TEST	METHOD	SPECIFICATION	RESULT
HPLC	0.700.10.2.METH86	≥ 90%	98.3% ± 0.6%

ADDITIONAL RESULTS			
Adjusted Purity	NA	NA	94.6%
NMR	0.700.12.4	Conforms to structure	Conforms to structure
Mass Spectrum	0.700.12.27	Conforms	Conforms
Residual Solvent*	USP <467>	NA	ND
Water	0.700.12.37	NA	3.8%
Appearance†	NA	NA	White powder

ADJUSTED PURITY: 94.6% IS BASED ON (100 - 0.0 SOLVENTS - 3.8 WATER) X 98.3% HPLC

*Testing performed at an ISO/IEC 17025:2017 accredited subcontracted laboratory.

†Test not in the scope of accreditation to ISO/IEC 17025:2017.

UNCERTAINTY

The combined uncertainty of the HPLC chromatographic purity is in accordance with ISO 17034 at the approximate 95% confidence interval using a coverage factor of k=2 and has been calculated by a statistical analysis of our characterization process. The combined uncertainty incorporates uncertainty of the test method analysis, sample homogeneity, stability, and transport. Additional certification information available upon request.

METROLOGICAL TRACEABILITY

- This standard was prepared and certified under the ISO 17034 requirements. This standard meets the definition of a Certified Reference Material and a Primary Standard as defined by ISO Guide 30.
- The test method for the certified value is validated according to company procedures.
- The instruments used for analysis are qualified for their intended use according to company procedures.
- The standard was identified and thoroughly characterized through the use of the listed analytical techniques. Spectral data is provided on subsequent pages of this CofA.
- Additional traceability information available upon request.

STORAGE CONDITIONS

STORAGE -20 °C in a dry place protected from light.

SHIPPING AND TRANSPORT Pack on ice.

RETEST DATE 04/2025 under the above conditions.

Stability data supports transport of this product on ice and storage under the above conditions.

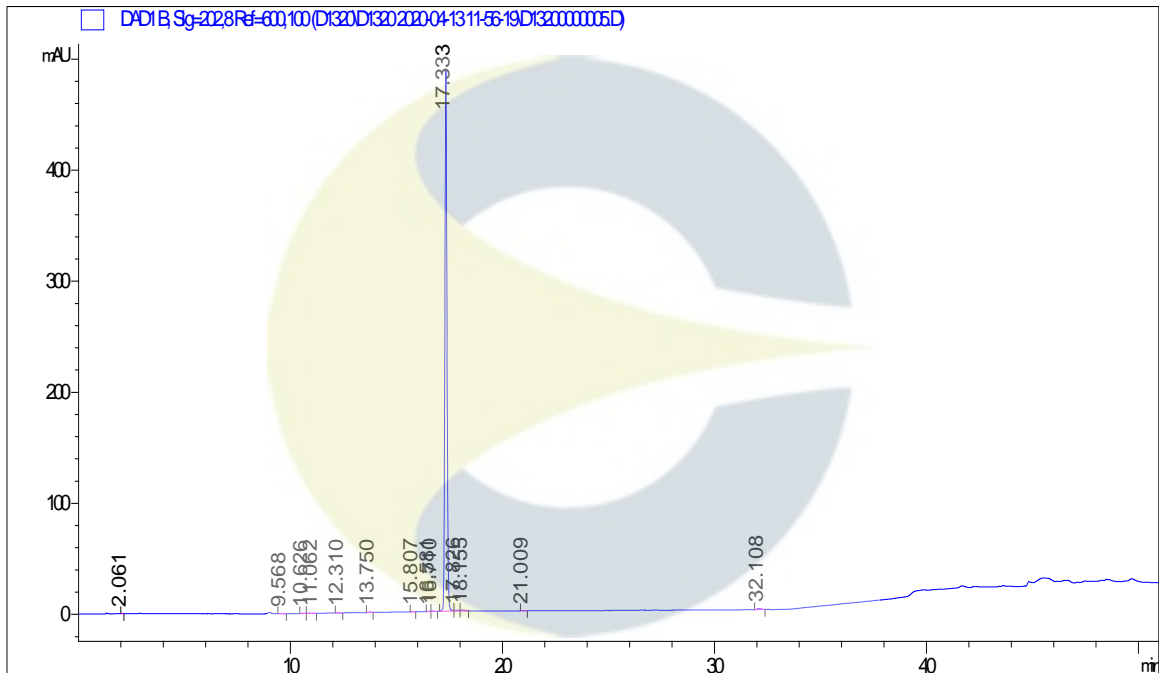
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ANALYTICAL CONDITIONS

INSTRUMENT	AGILENT 1260 HPLC UV-VIS (DAD); AB-SCIEX 6600 TRIPLE TOF
COLUMN	Phenomenex Synergi Hydro-RP: 250 x 4.6 mm, 4 µm particle size
MOBILE PHASE	A – High-purity water; B – Acetonitrile; Isocratic 20% B for 5 minutes, then increasing to 30% B over 10 minutes, increasing to 35% B over 15 minutes, increasing to 80% B over 10 minutes, increasing to 90% B over 5 minutes, hold at 90% B for 5 minutes, then return to 20% over 1 minute.
COLUMN TEMP.	60 °C
FLOW RATE	1.0 mL/minute
INJECTION VOL.	10.0 µL
INJECTION CONC.	1.0 mg/mL in 70:30 Water : Acetonitrile
DETECTION	202 ± 4 nm

HPLC CHROMATOGRAM OF REBAUDIOSIDE M (CDXP-20-00206)

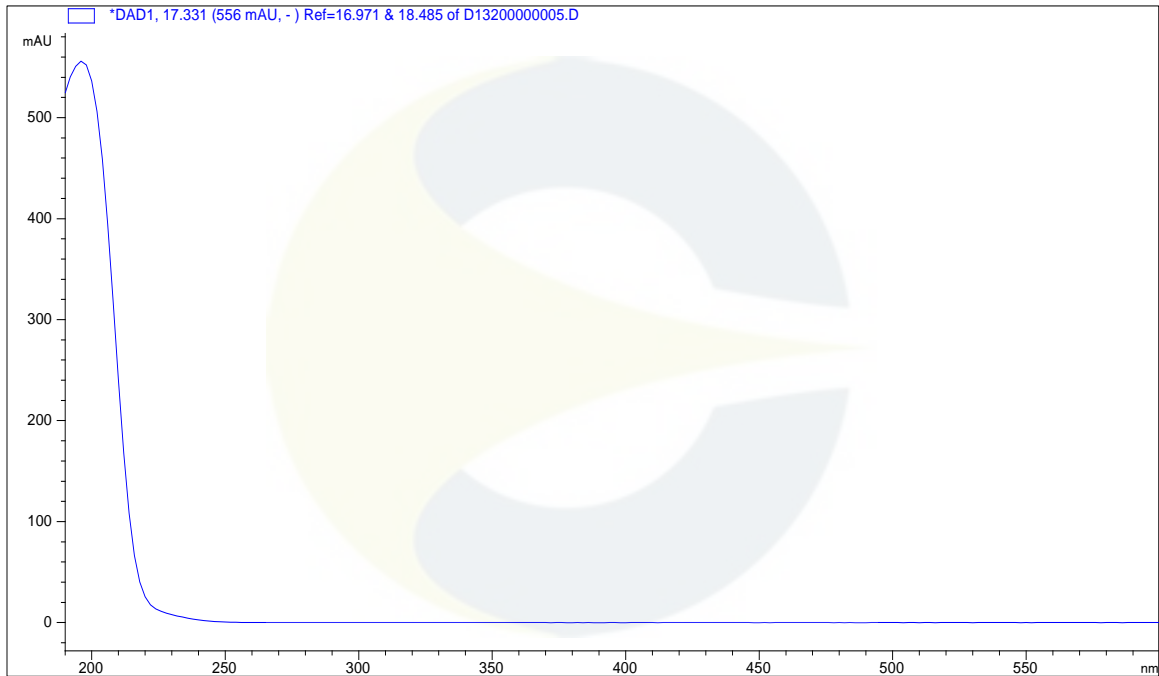


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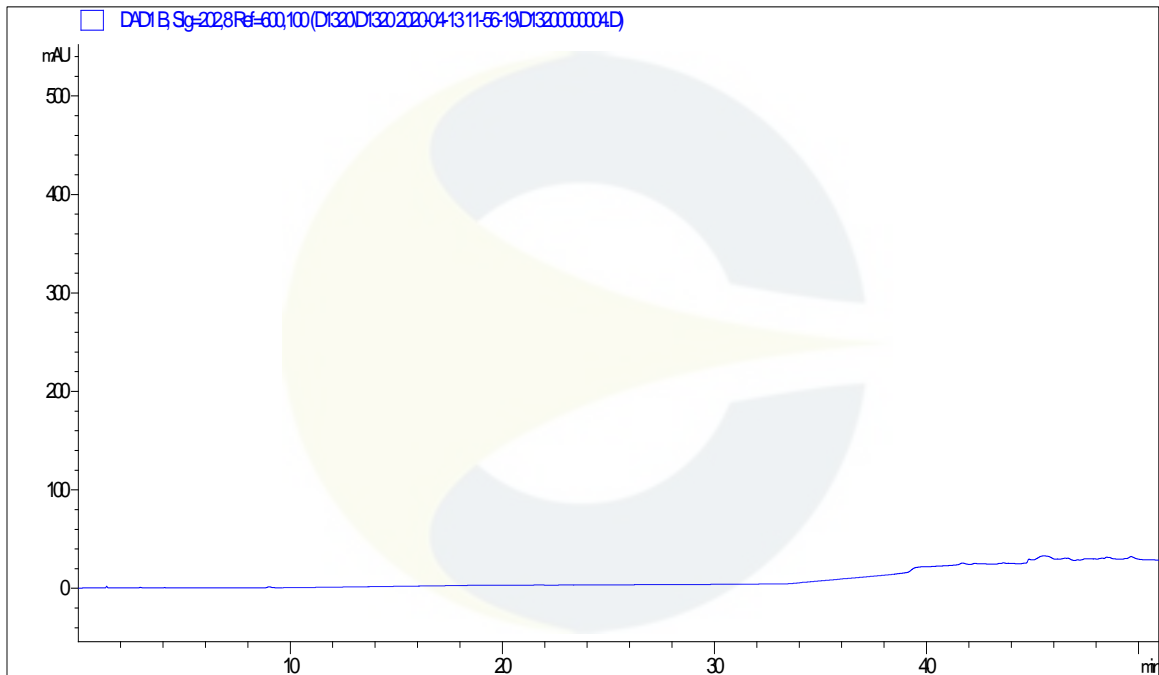
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UV SPECTRUM AT RT 17.3 MINUTES



HPLC CHROMATOGRAM OF DILUENT BLANK

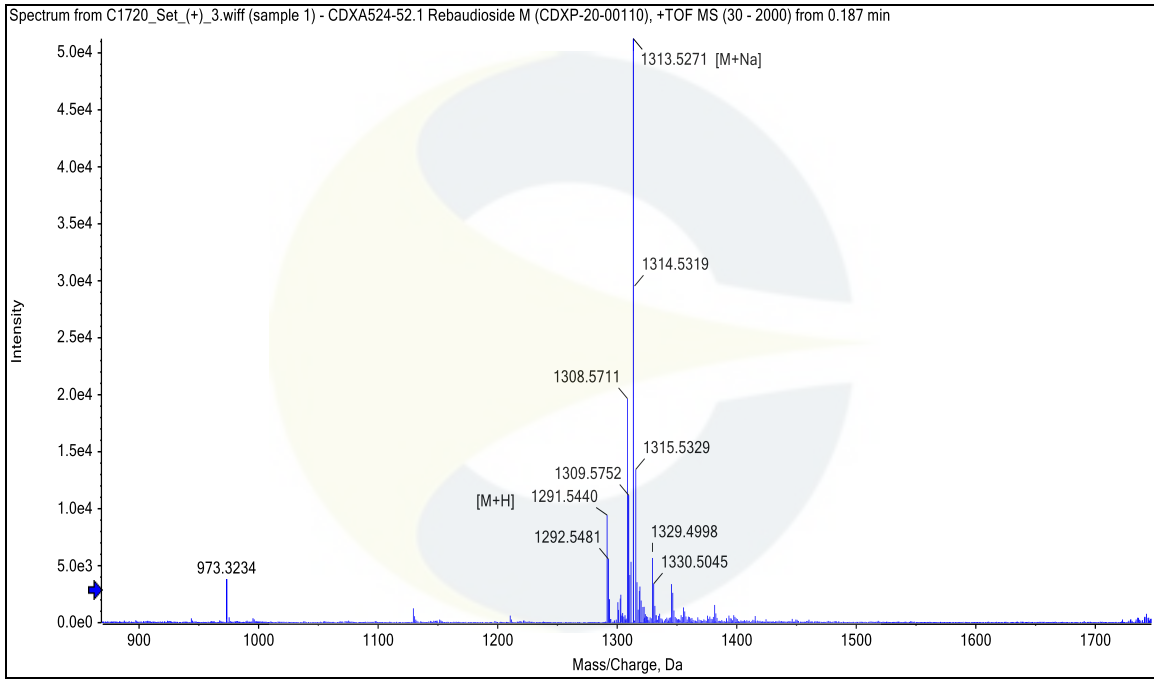


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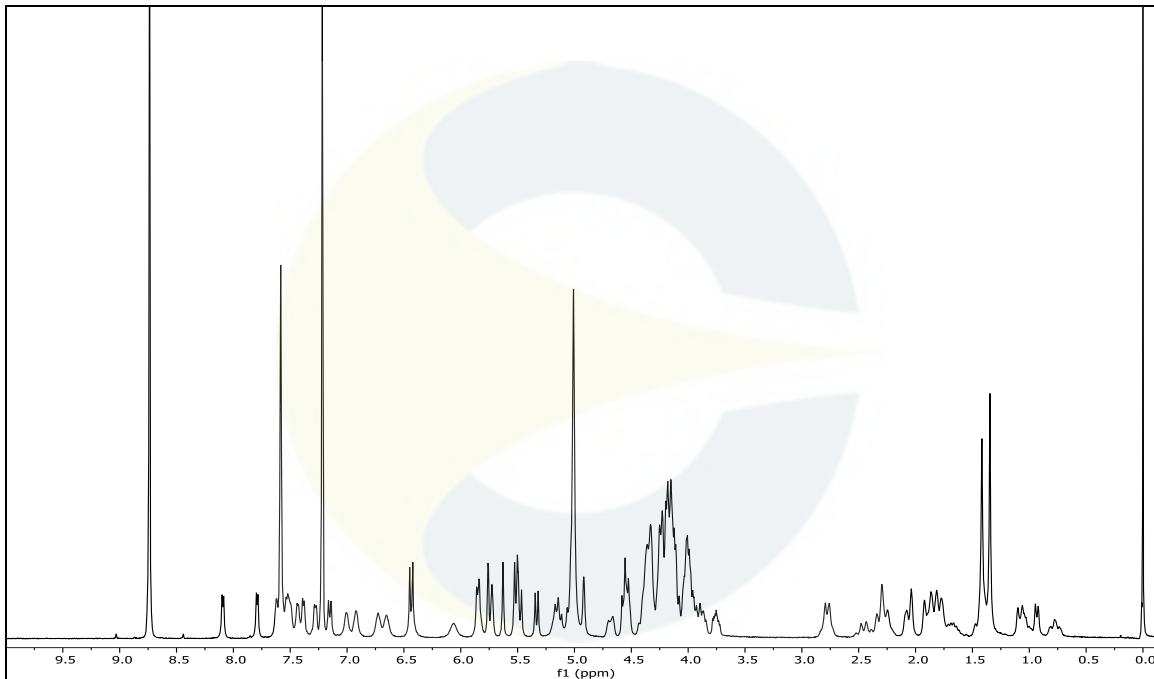
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MASS SPECTRUM OF REBAUDIOSIDE M (CDXP-20-00206)



¹H-NMR SPECTRUM OF REBAUDIOSIDE M (CDXP-20-00206) IN PYRIDINE-d₅ + TMS

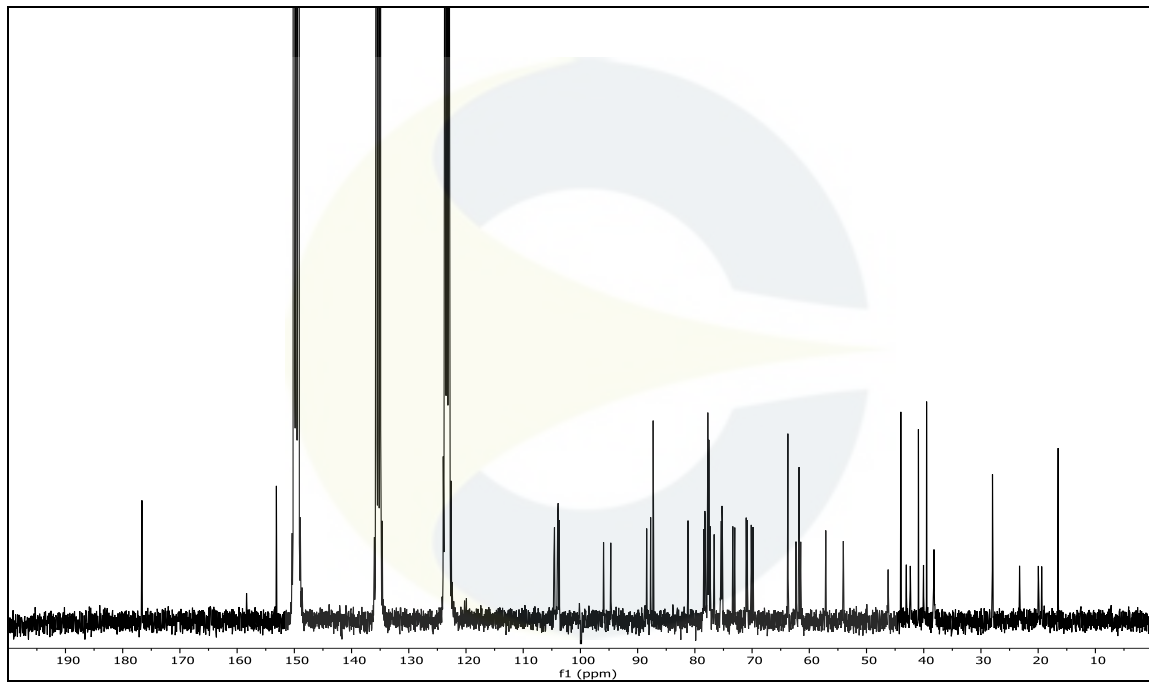


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¹³C-NMR SPECTRUM REBAUDIOSIDE M (CDXP-20-00206) IN PYRIDINE-*d*₅ + TMS

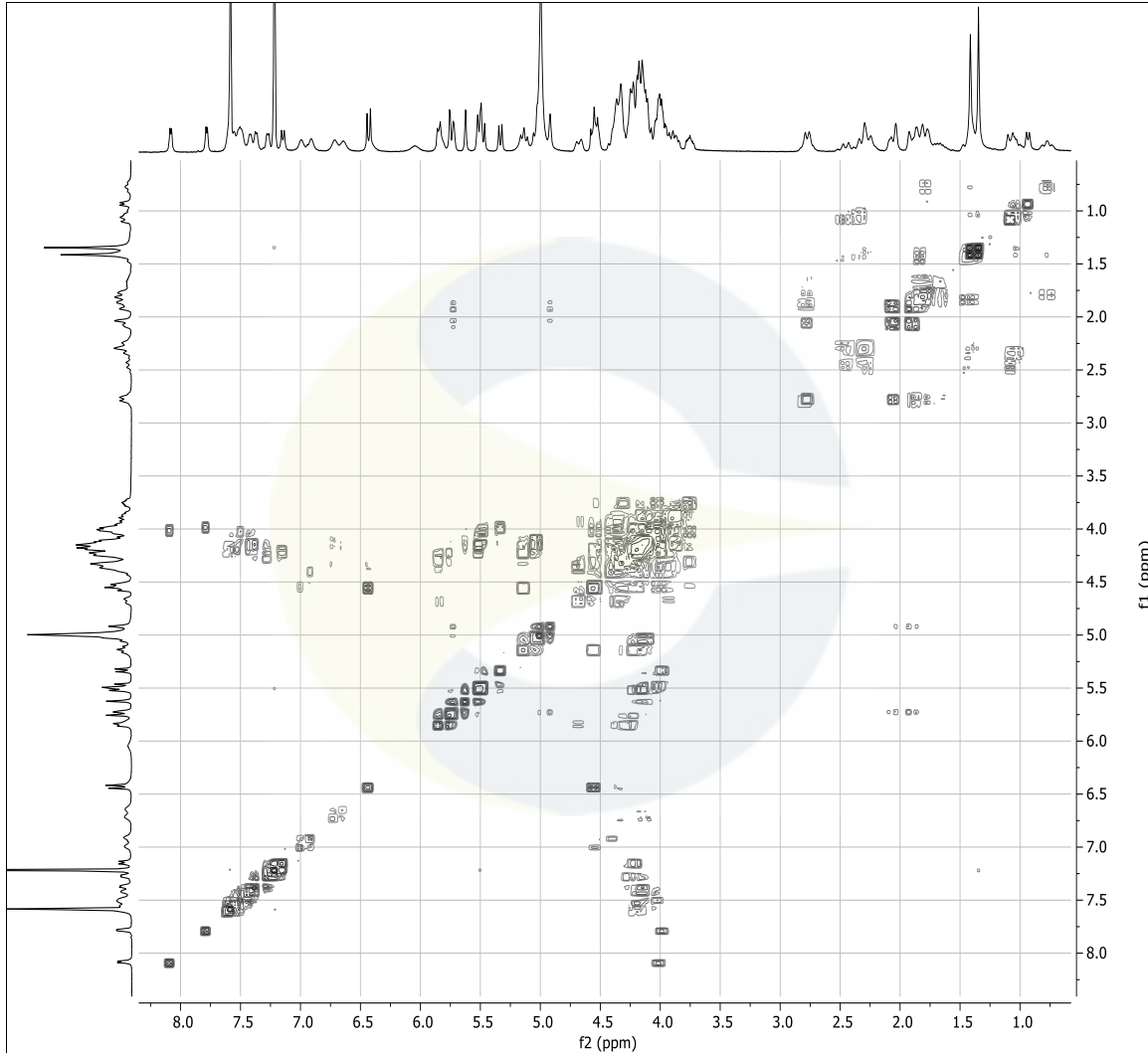


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COSY-NMR SPECTRUM OF REBAUDIOSIDE M (CDXP-20-00206) IN PYRIDINE-d₅ + TMS



REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	07/29/2020	New report

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