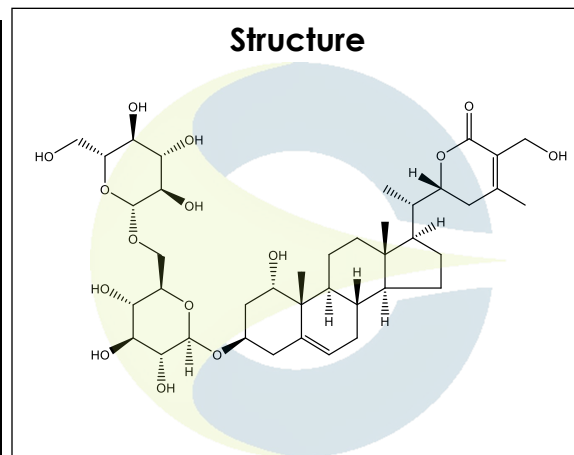


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PRODUCT NAME	Withanoside IV
PART NUMBER	00023253
STANDARD TYPE	Primary (P)
LOT NUMBER	00023253-1A1
REPORT NUMBER	CDXA-RSS-9763-00
SAMPLE NUMBER	CDXP-22-00309
DATE OF SAMPLE	04/06/2022
DATE OF REPORT	04/29/2022



CHEMICAL NAMES	(1 α ,3 β ,22R)-3-[(6-O- β -D-Glucopyranosyl- β -D-glucopyranosyl)oxy]-1,22,27-trihydroxy-ergosta-5,24-dien-26-oic acid δ -lactone
CHEMICAL FORMULA	C ₄₀ H ₆₂ O ₁₅
MOLECULAR WEIGHT (MW)	782.91
CHEMICAL FAMILY	Steroids
CAS NUMBER	[362472-81-9]
EC#(EINECS)	NA
RTECS	NA

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	≥ 85%	92.7%
HPLC	0.700.10.2.METH22	≥ 90%	95.8%
NMR	0.700.12.4	Conforms to structure	Conforms to structure
Mass Spectrum	0.700.12.27	Conforms	Conforms
Residual Solvent*	USP <467>	NA	Methanol: 14800 ppm
Water	0.700.12.37	NA	1.7%
Appearance	NA	NA	Yellow powder

*Testing performed at an ISO 17025 accredited subcontracted laboratory.
 ADJUSTED PURITY: 92.7% IS BASED ON (100 - 1.5 SOLVENTS - 1.7 WATER) X 95.8% HPLC

STORAGE CONDITIONS

STORAGE	+4 °C in a dry place.
EXPIRATION DATE	04/2027 under the above conditions.



Digitally signed by
Tiffany Rodgers
 Date: 2022.04.29
 16:47:21 -06'00'

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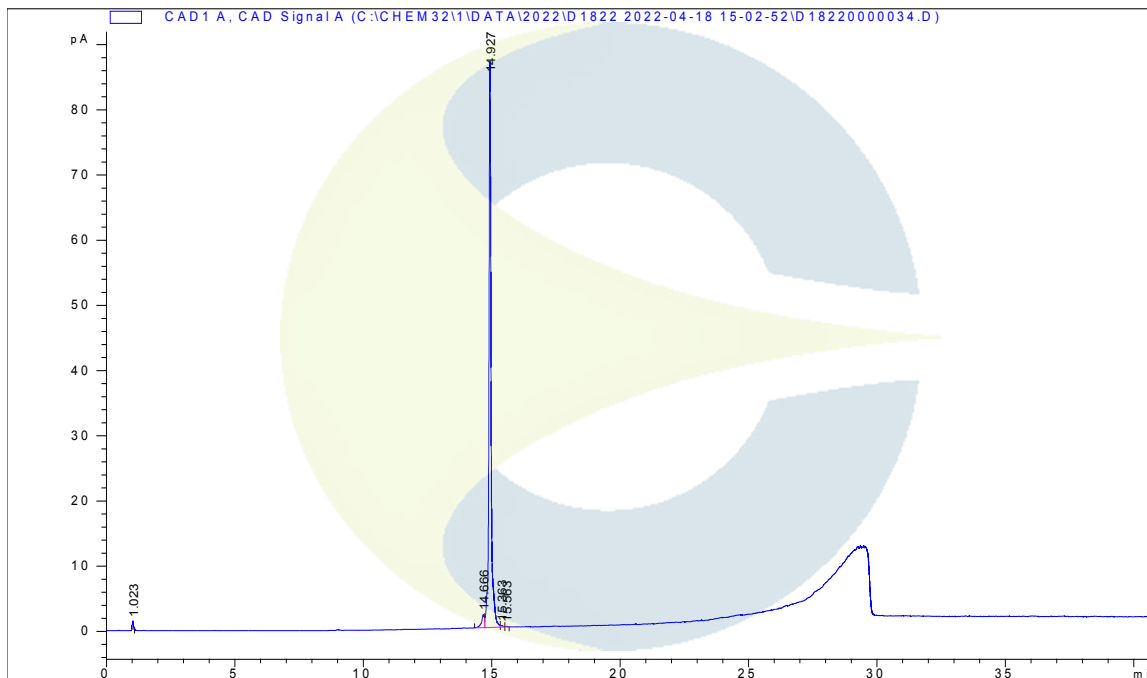
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ANALYTICAL CONDITIONS

INSTRUMENT	AGILENT 1260 HPLC CONNECTED TO DIONEX CORONA VEO CHARGED AEROSOL DETECTOR (CAD); 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.	2.0 µL
INJECTION CONC.	1.0 mg/mL in Methanol
DETECTION	CAD

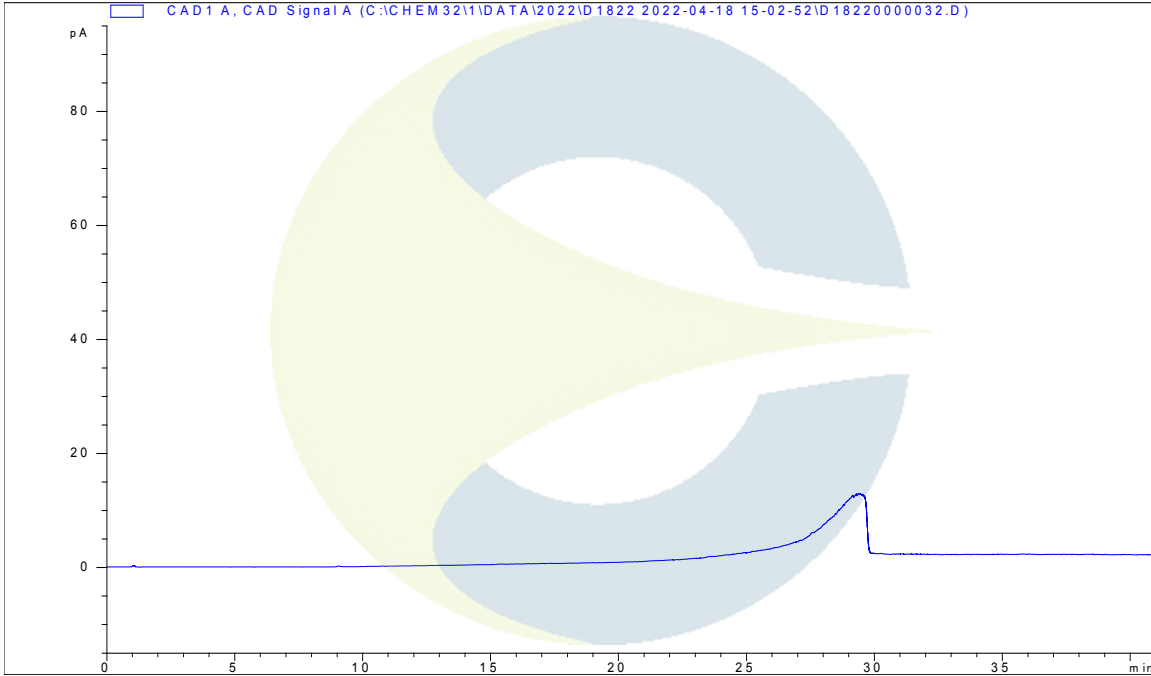
HPLC CHROMATOGRAM OF WITHANOSIDE IV (CDXP-22-00309)



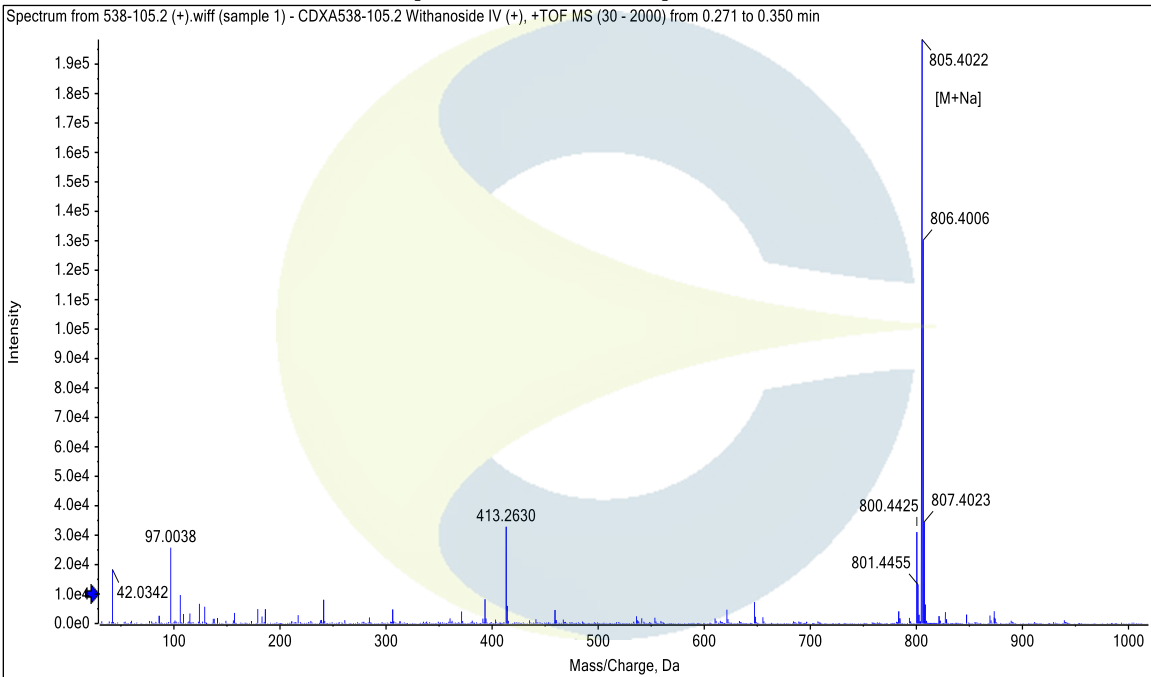
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HPLC CHROMATOGRAM OF DILUENT BLANK



MASS SPECTRUM OF WITHANOSIDE IV (CDXP-22-00309)



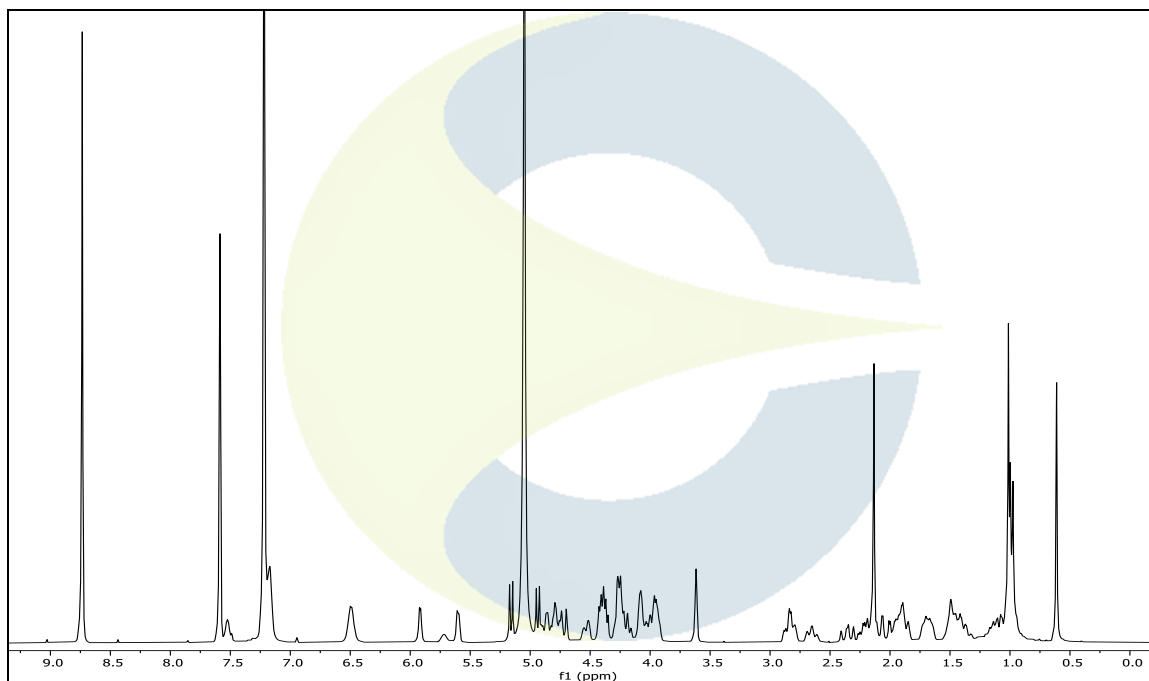
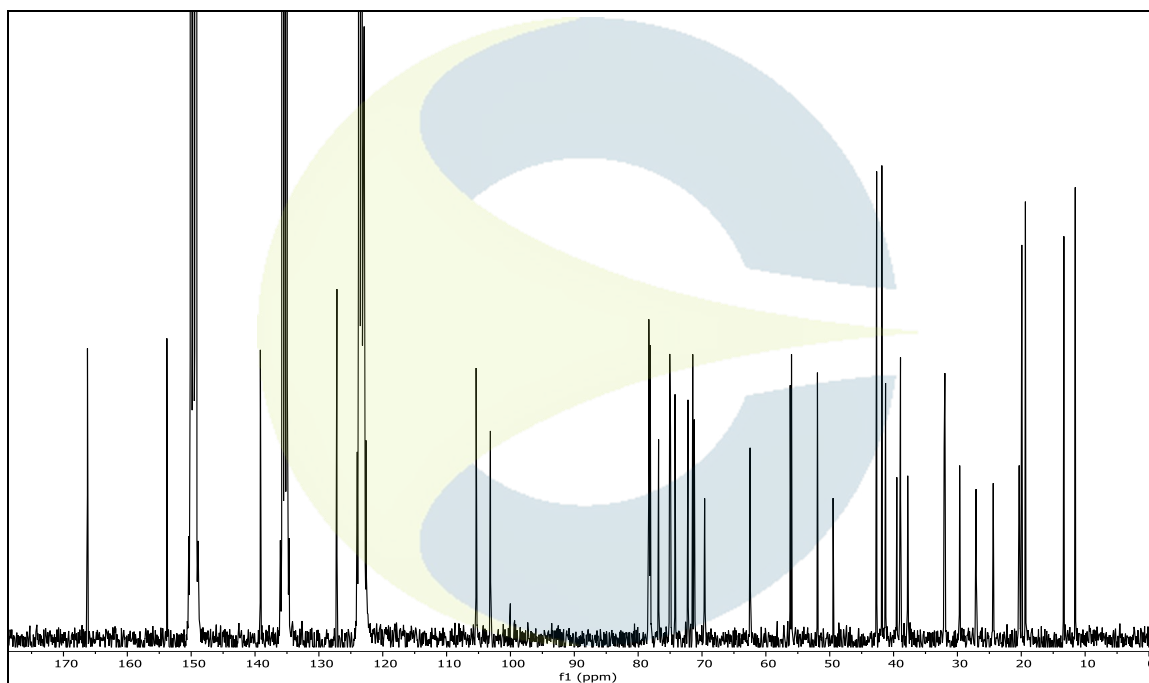
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¹H-NMR SPECTRUM OF WITHANOSIDE IV (CDXP-22-00309) IN PYRIDINE-*d*₅**¹³C-NMR SPECTRUM WITHANOSIDE IV (CDXP-22-00309) IN PYRIDINE-*d*₅**

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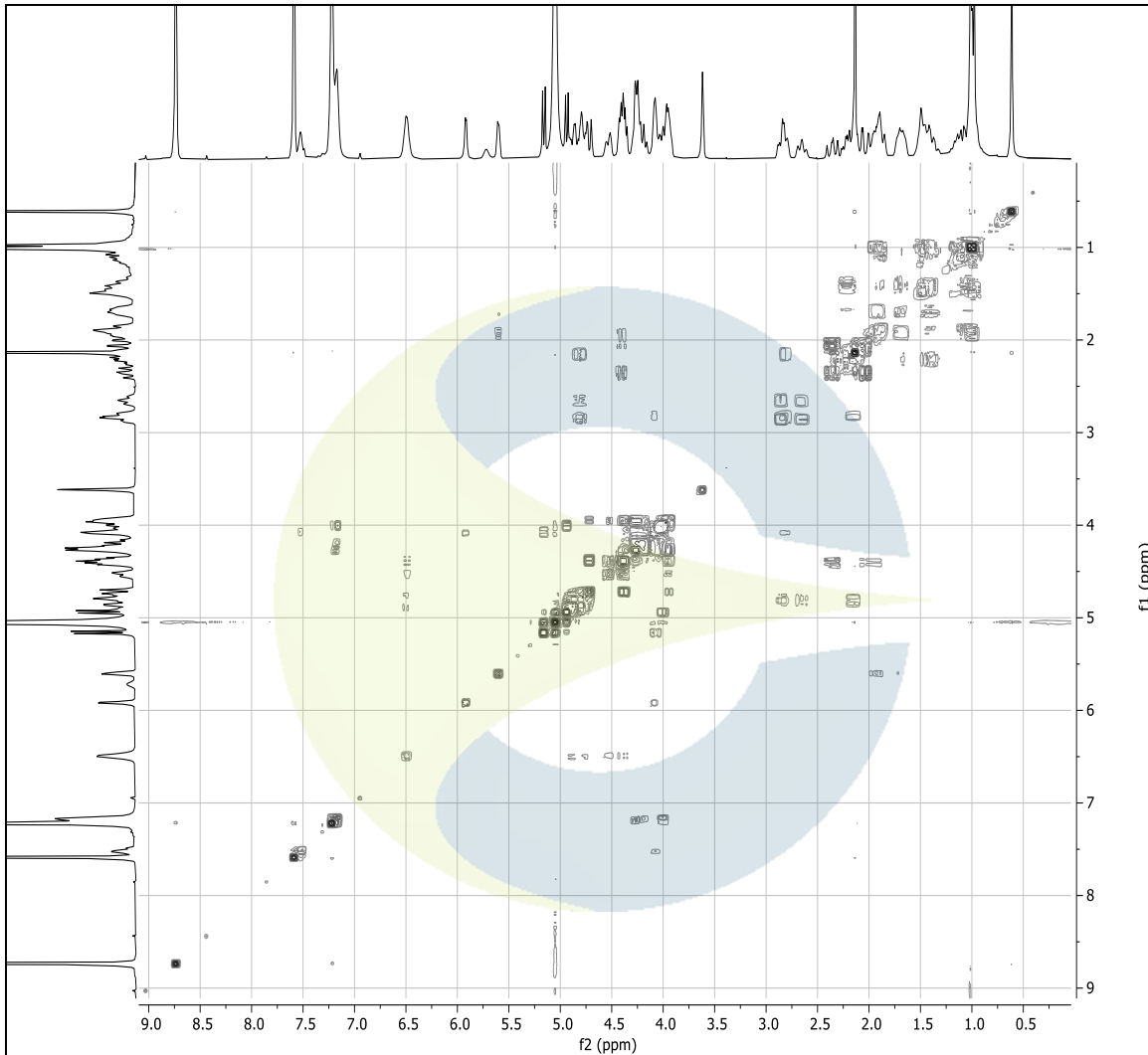
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COSY-NMR SPECTRUM OF WITHANOSIDE IV (CDXP-22-00309) IN PYRIDINE-d₅

REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	04/29/2022	New report

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