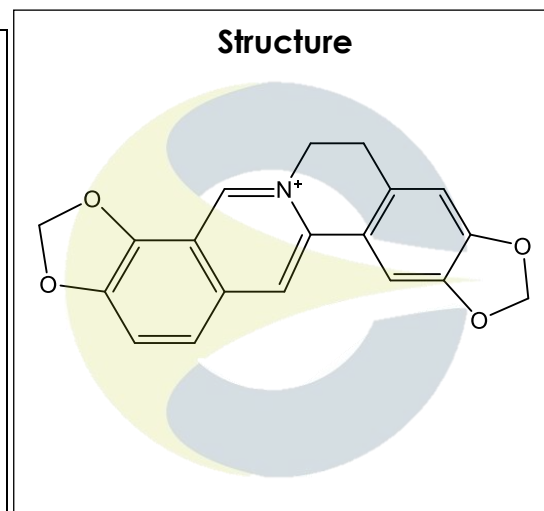


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PRODUCT NAME	Coptisine
PART NUMBER	00003772
STANDARD TYPE	Primary (P)
LOT NUMBER	00003772-430
REPORT NUMBER	CDXA-RSS-5946-02
SAMPLE NUMBER	CDXA-13-8765
DATE OF SAMPLE	11/21/2013
DATE OF RE-EVALUATION	02/28/2018 (1 st); 01/06/2022 (2 nd)
DATE OF REPORT	02/02/2022



CHEMICAL NAMES	7,8,13,13a-Tetradehydro-2,3:9,10-bis(methylenedioxy)-berbinium
CHEMICAL FORMULA	C ₁₉ H ₁₄ NO ₄
MOLECULAR WEIGHT (MW)	320.32
CHEMICAL FAMILY	Alkaloids
CAS NUMBER	[3486-66-6]
EC#(EINECS)	N/A
RTECS	DX1080000

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	≥ 85%	93.2%
HPLC	0.700.10.2.METH22	≥ 90%	94.2%
NMR	99.1-CD-1.0-000122	Conforms to structure	Conforms to structure
Mass Spectrum	Direct Infusion, ESI (+)	Conforms	Conforms
Residual Solvent*	99.1-CD-7.0-000115	NA	ND
Water	0.700.12.37	NA	1.1%
Appearance	NA	NA	Red brown powder

ADJUSTED PURITY: 93.2% IS BASED ON (100 - 0.0 SOLVENTS - 1.1 WATER) X 94.2% HPLC

STORAGE CONDITIONS

STORAGE	+4 °C in a dry place.
EXPIRATION DATE	01/2027 under the above conditions.

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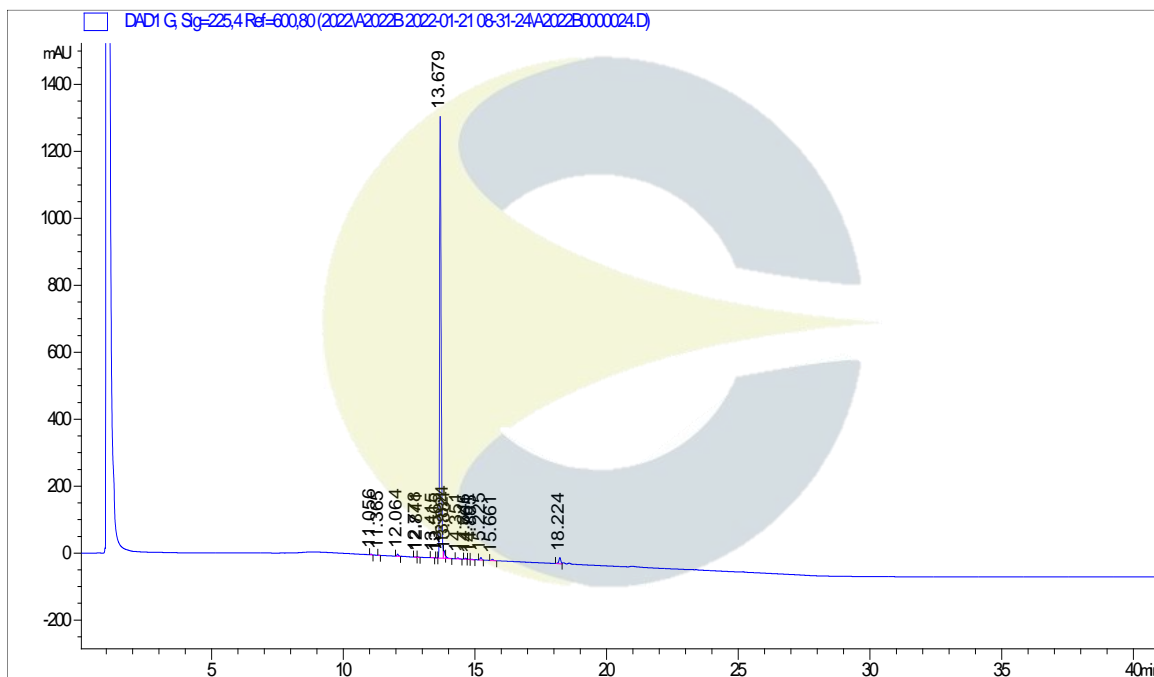
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ANALYTICAL CONDITIONS

INSTRUMENT	AGILENT 1260 HPLC UV-VIS (DAD); AGILENT 6510 QTOF
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.
COLUMN TEMP.	60 °C
FLOW RATE	0.4 mL/minute
INJECTION VOL.	0.8 µL
INJECTION CONC.	1.0 mg/mL in Dimethyl sulfoxide
DETECTION	225 ± 2 nm

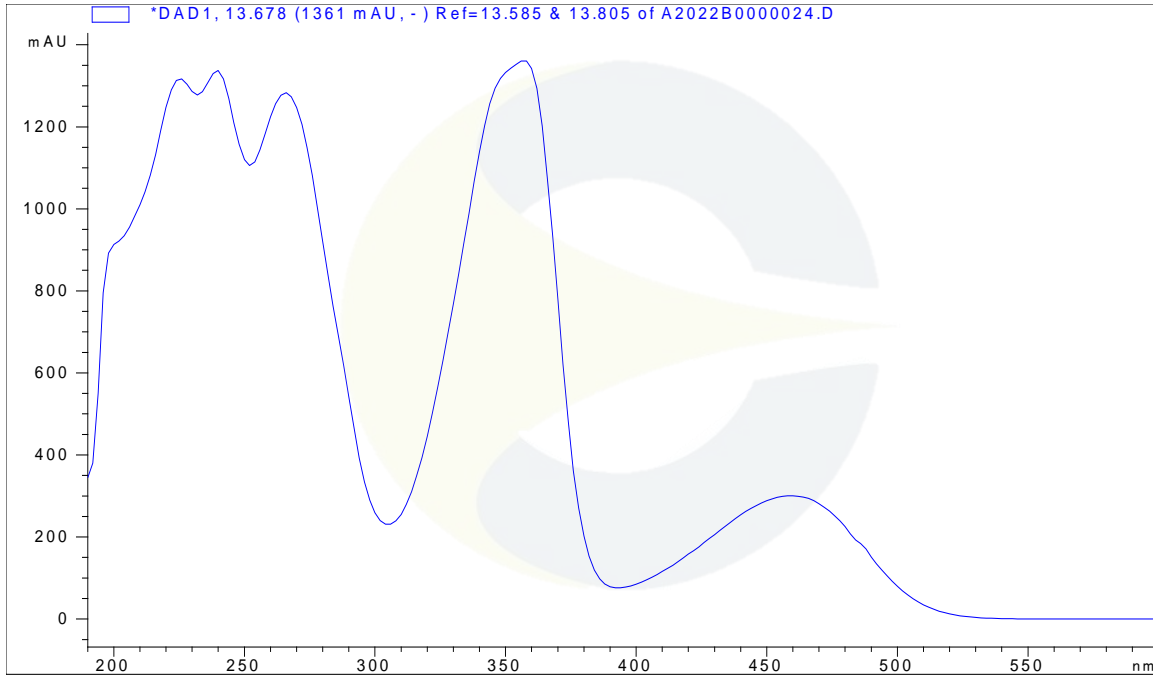
HPLC CHROMATOGRAM OF COPTISINE (CDXA-13-8765)



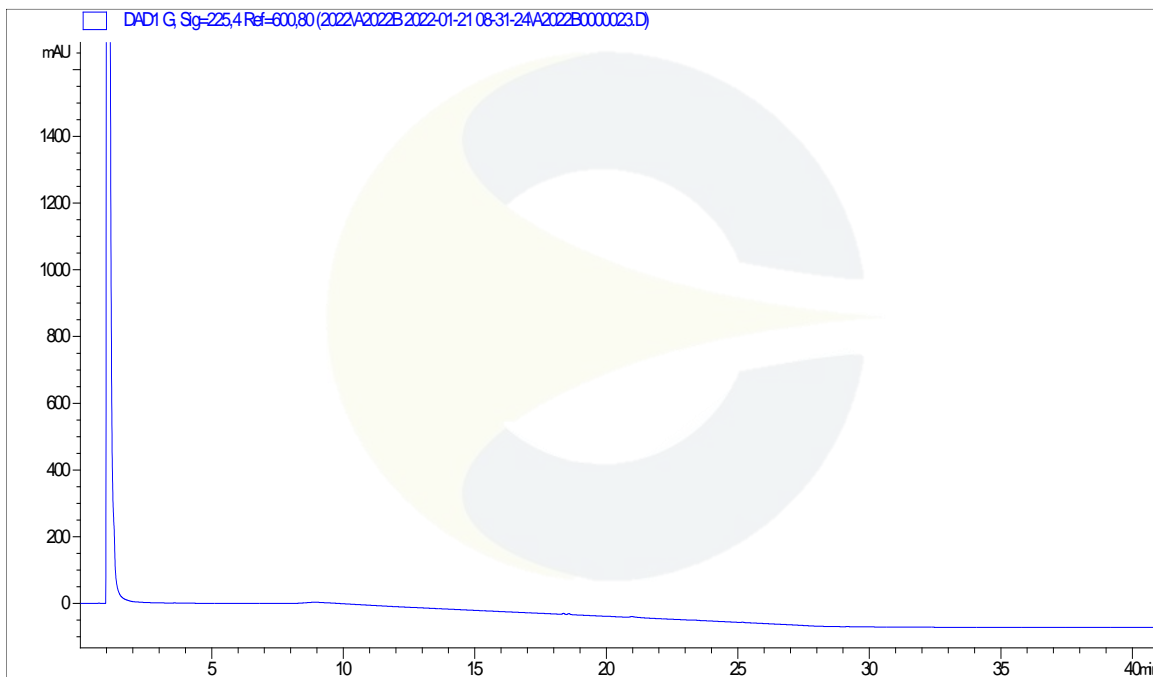
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UV SPECTRUM AT RT 13.7 MINUTES



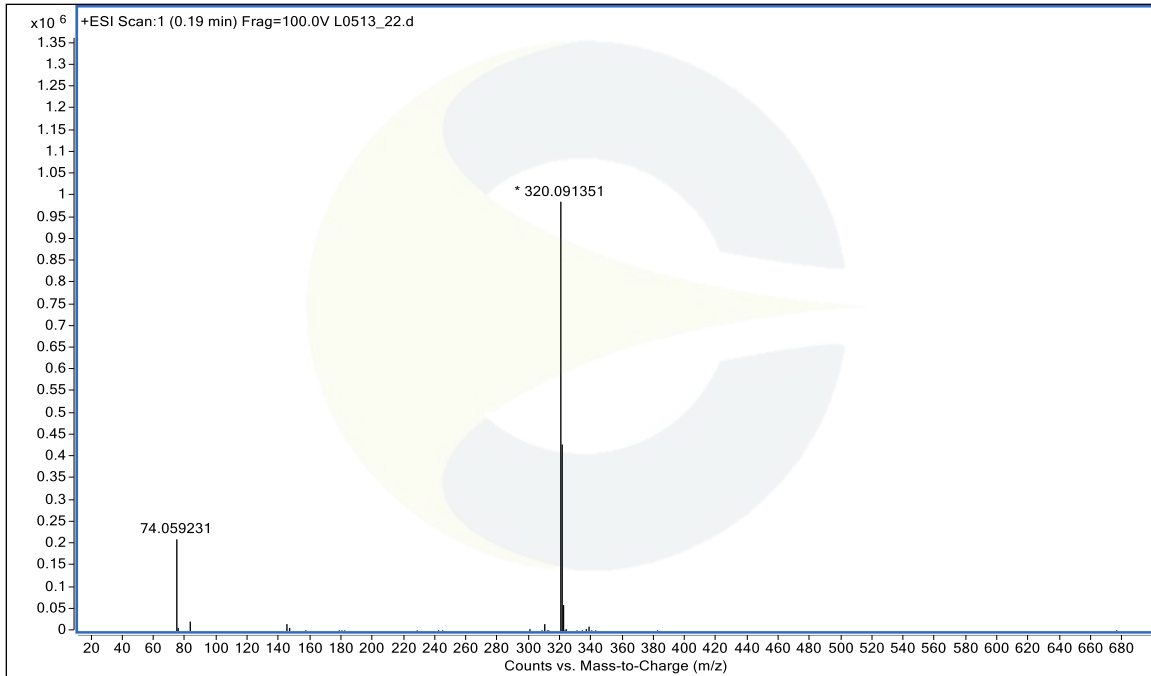
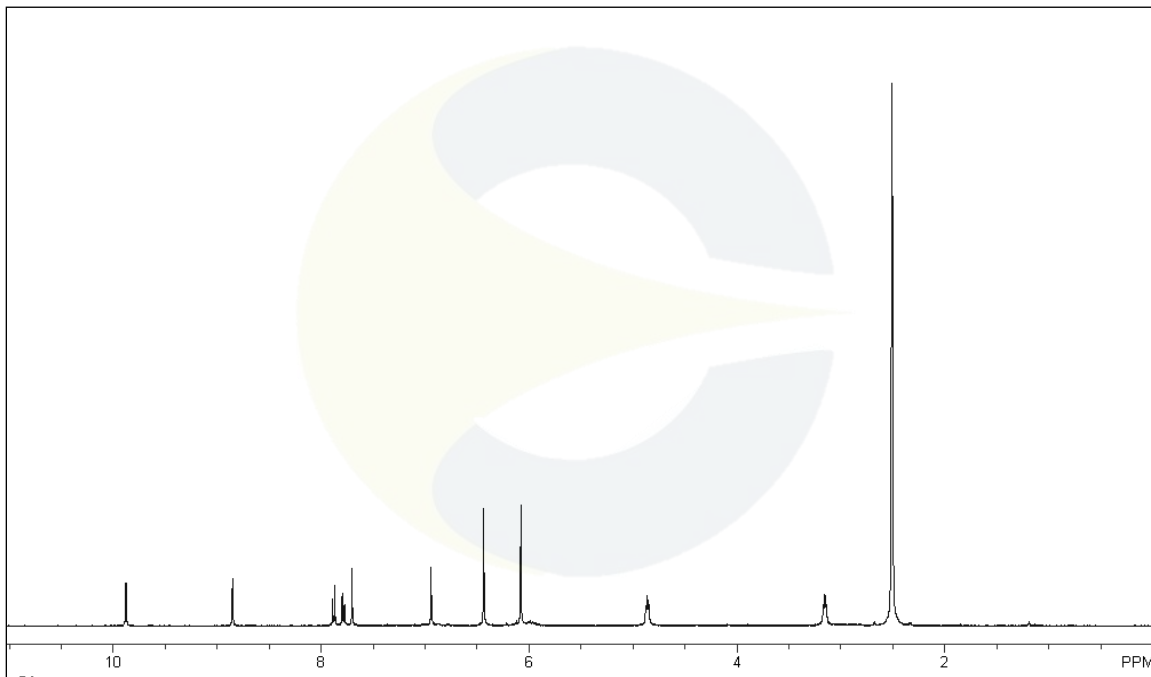
HPLC CHROMATOGRAM OF DILUENT BLANK



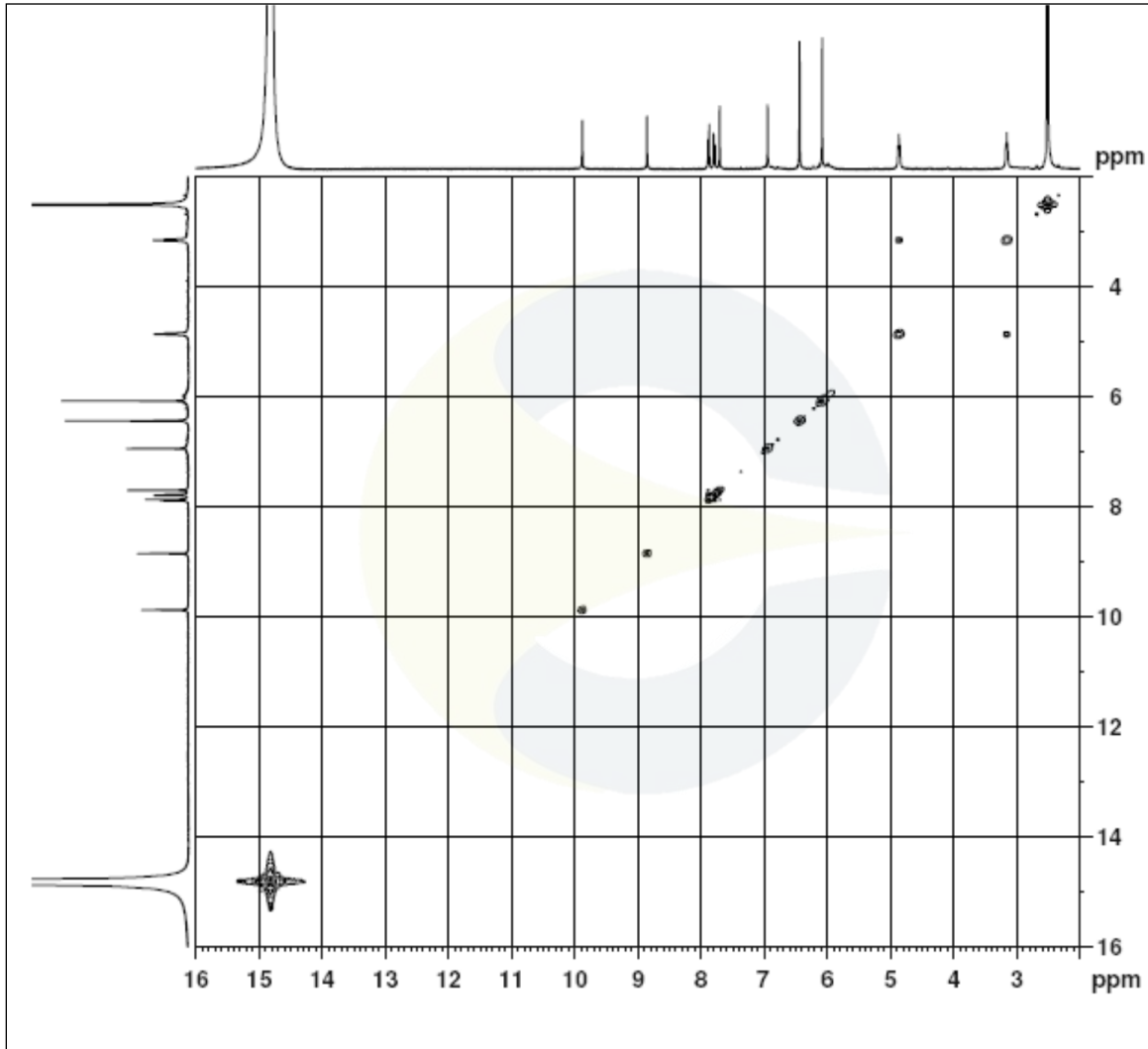
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MASS SPECTRUM OF COPTISINE (CDXA-13-8765)**¹H-NMR SPECTRUM OF COPTISINE (CDXA-13-8765) IN DMSO-d₆ + TFA-d**

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COSY-NMR SPECTRUM OF COPTISINE (CDXA-13-8765) IN DMSO-*d*₆ + TFA-*d*

REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	12/17/2013	New report
01	03/12/2018	Passed re-evaluation HPLC, KF. Updated expiration date, analytical conditions, chromatograms and results. Removed melting point.
02	02/02/2022	Passed re-evaluation by HPLC and KF. Updated analytical conditions, analytical results, chromatograms, and expiration date. Added RTECS.

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