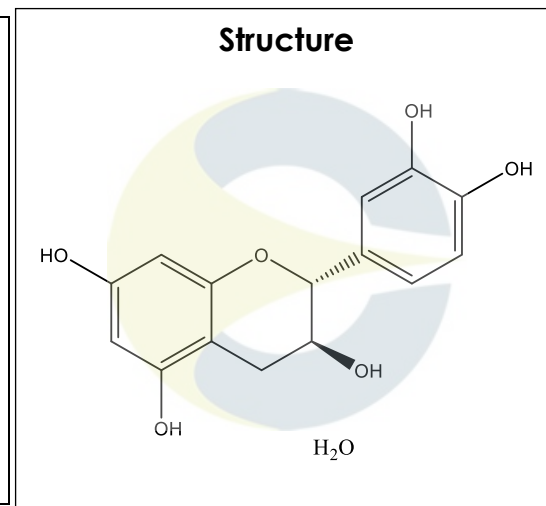


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PRODUCT NAME	(+)-Catechin hydrate
PART NUMBER	00003310
STANDARD TYPE	Primary (P)
LOT NUMBER	00003310-QIA
REPORT NUMBER	CDXA-RSS-7382-01
SAMPLE NUMBER	CDXA-16-015951
DATE OF SAMPLE	12/06/2016
DATE OF RE-EVALUATION	01/06/2021
DATE OF REPORT	02/11/2021



CHEMICAL NAMES	(2R,3S)-2-(3,4-dihydroxyphenyl)-3,4-dihydro-2H-1-Benzopyran-3,5,7-triol hydrate (1:1); (+)-Catechin monohydrate
CHEMICAL FORMULA	C ₁₅ H ₁₄ O ₆ · H ₂ O
MOLECULAR WEIGHT (MW)	308.28
CHEMICAL FAMILY	Flavanols
CAS NUMBER	[88191-48-4]
EC#(EINECS)	NA
RTECS	NA

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	≥ 85%	93.2%
HPLC	0.700.10.2.METH22	≥ 90%	99.6%
NMR	4.5.3-CD-4.0-000338	Conforms to structure	Conforms to structure
Mass Spectrum	99.1-CDXA-2.0-000126	Conforms	Conforms
Residual Solvent	99.1-CD-10.0-000115	NA	ND
Water	0.700.12.37	NA	6.4%
Appearance	NA	NA	Off white powder

ADJUSTED PURITY: 93.2% IS BASED ON (100 - 0.0 SOLVENTS - 6.4 WATER) X 99.6% HPLC

STORAGE CONDITIONS

STORAGE	Room Temperature in a dry place.
EXPIRATION DATE	01/2026 under the above conditions.

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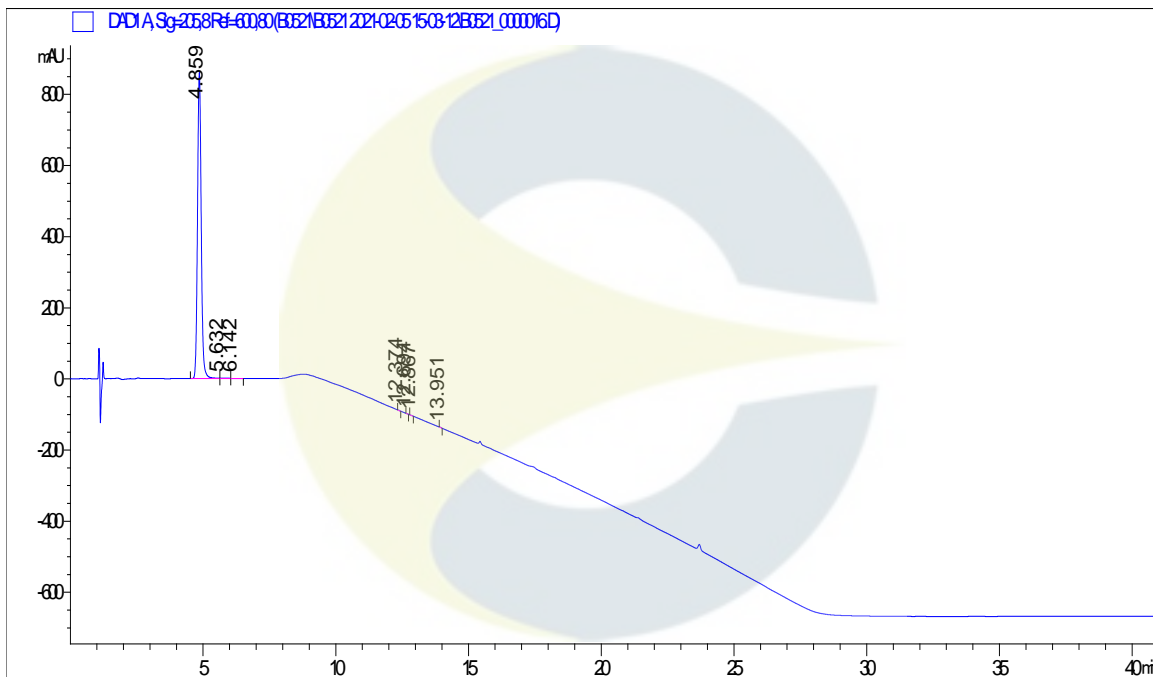
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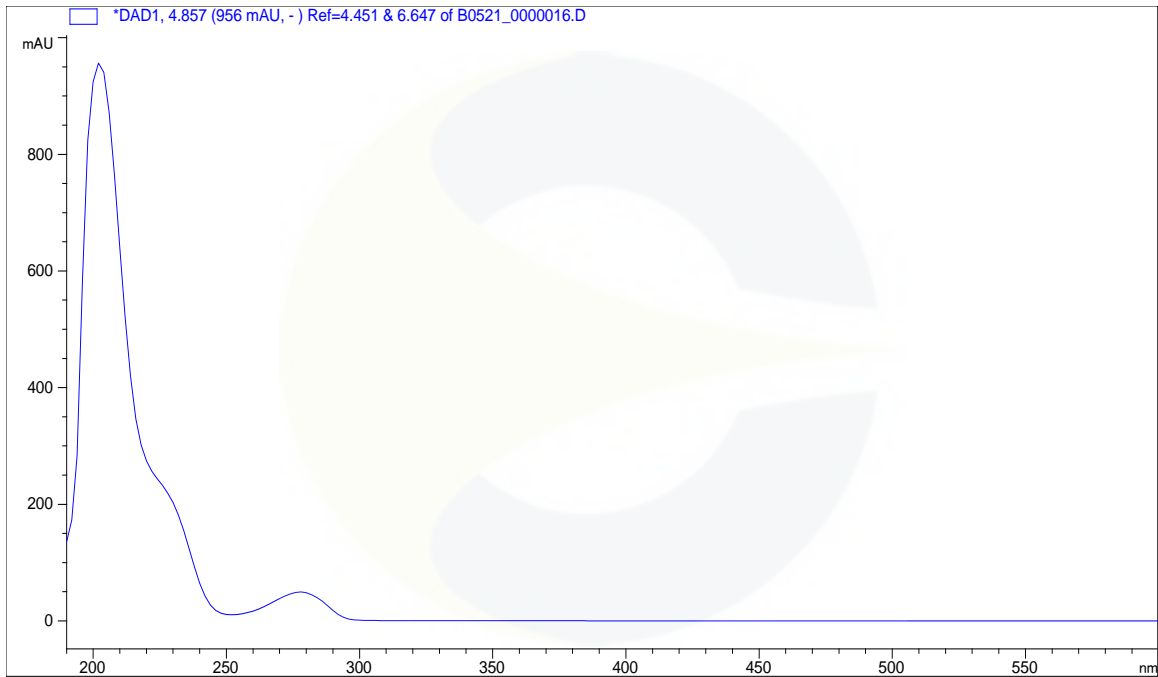
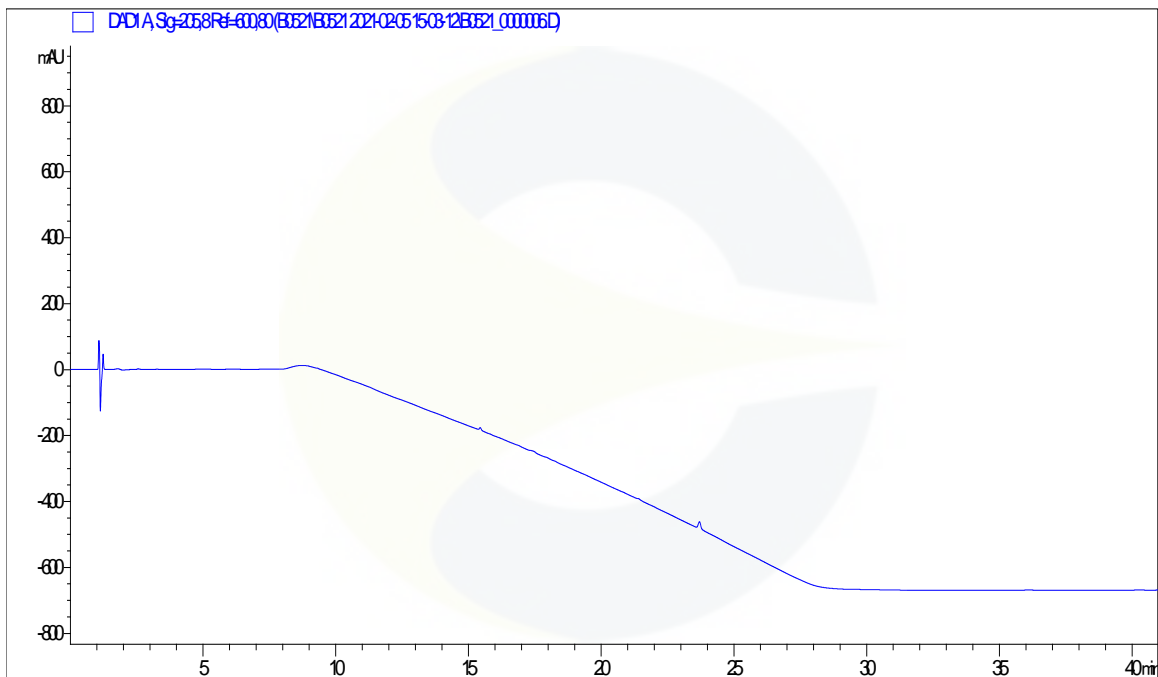
ANALYTICAL CONDITIONS

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.	0.2 µL
INJECTION CONC.	1.2 mg/mL in Methanol
DETECTION	205 ± 4 nm

HPLC CHROMATOGRAM OF (+)-CATECHIN HYDRATE (CDXA-16-015951)



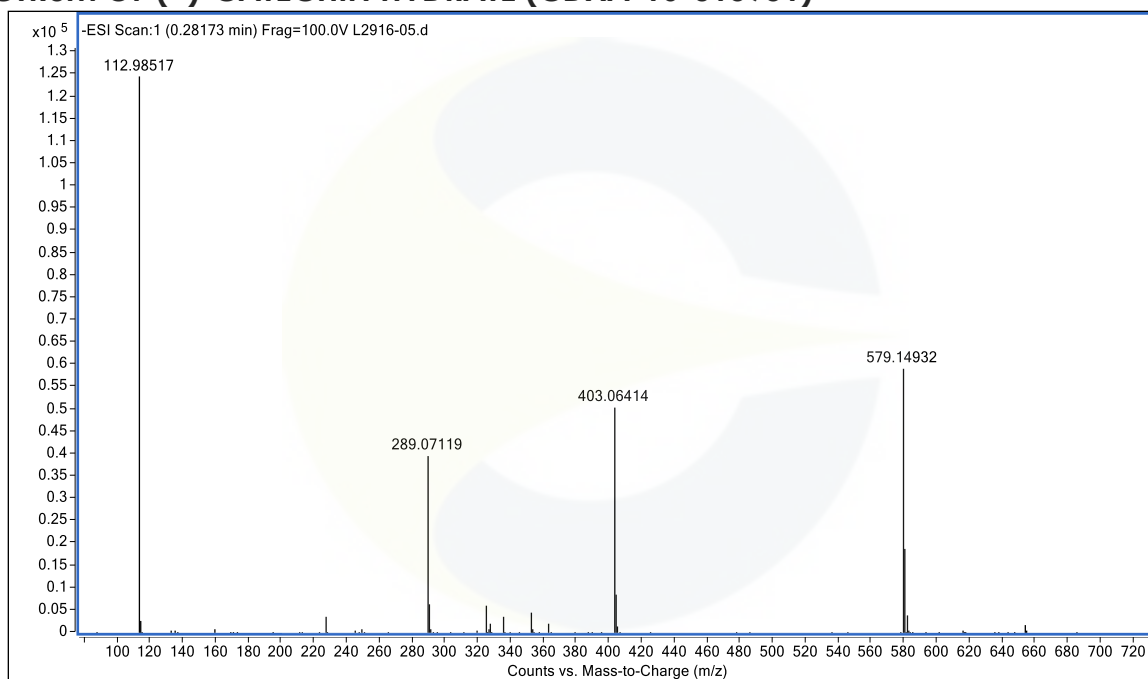
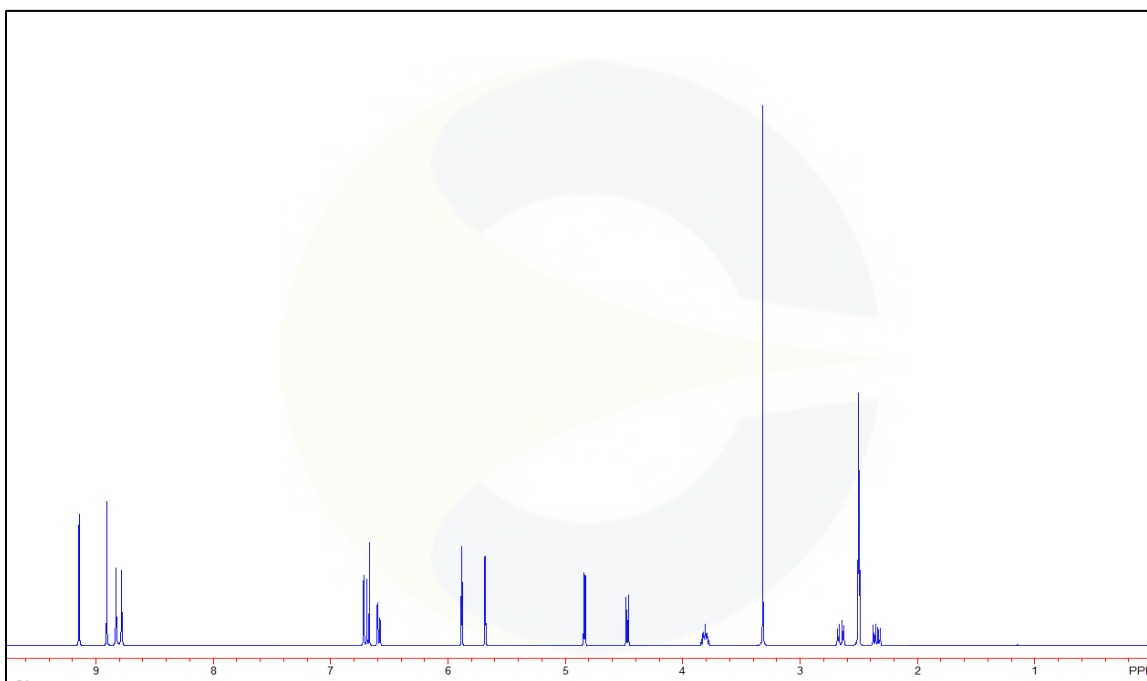
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UV SPECTRUM AT RT = 4.9 MINUTES

HPLC CHROMATOGRAM OF DILUENT BLANK


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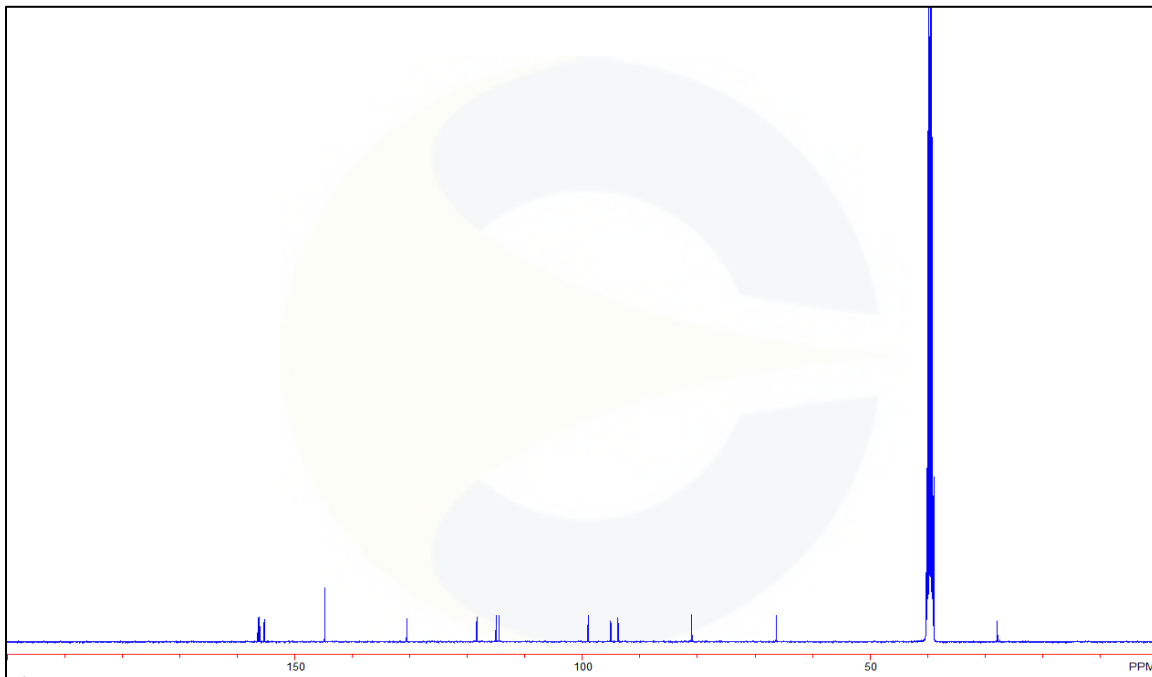
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MASS SPECTRUM OF (+)-CATECHIN HYDRATE (CDXA-16-015951)

¹H-NMR SPECTRUM OF (+)-CATECHIN HYDRATE (CDXA-16-015951) IN DMSO-d₆


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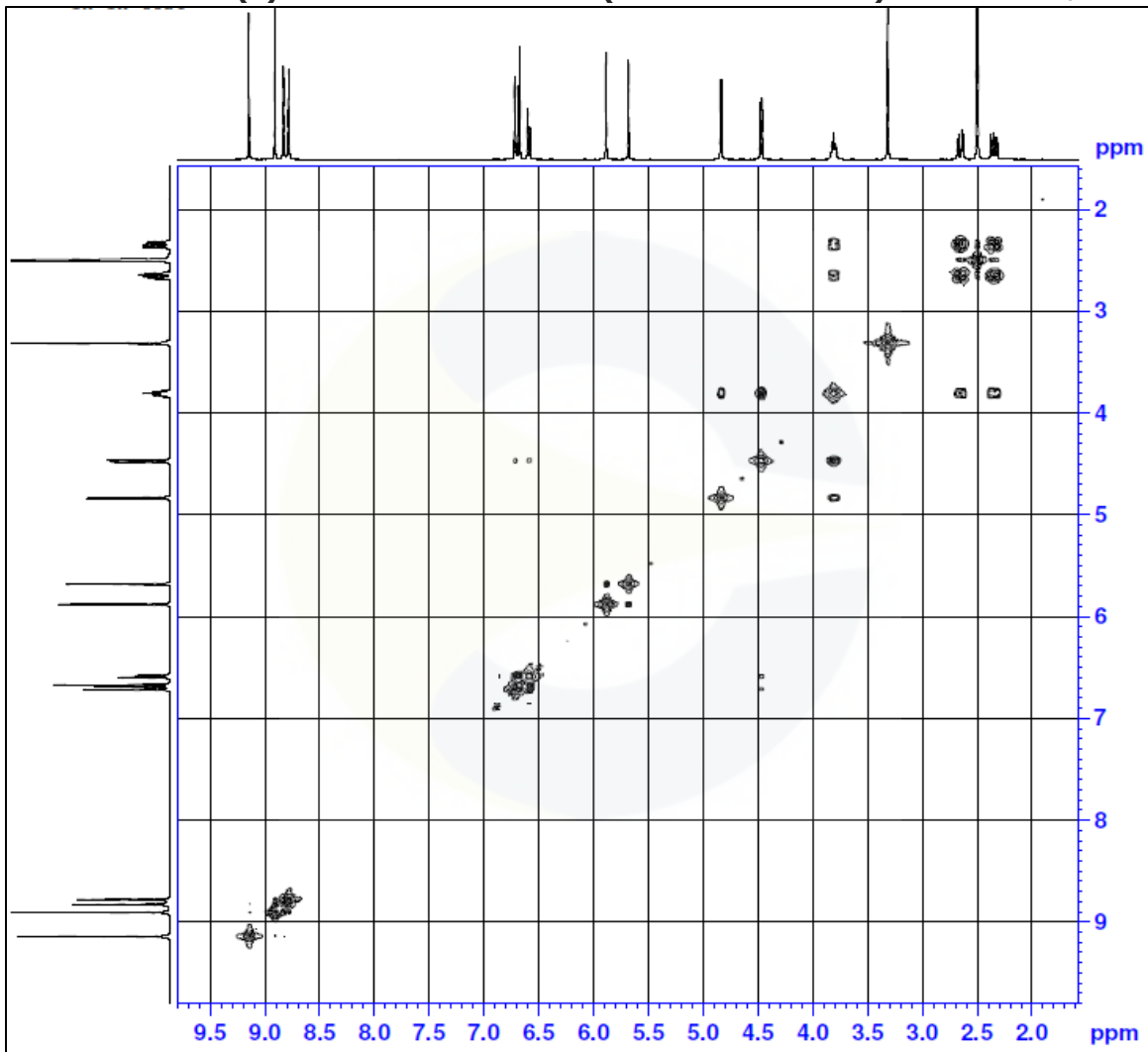
^{13}C -NMR SPECTRUM OF (+)-CATECHIN HYDRATE (CDXA-16-015951) IN $\text{DMSO-}d_6$



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COSY-NMR SPECTRUM OF (+)-CATECHIN HYDRATE (CDXA-16-015951) IN DMSO-*d*₆

REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	01/04/2017	New report
01	02/11/2021	Passed re-evaluation by HPLC, KF. Updated expiration date, analytical conditions, chromatograms and results. Removed melting point.

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