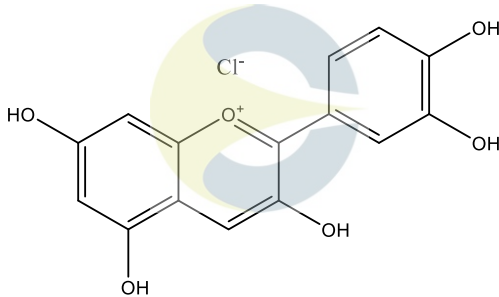


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PRODUCT NAME	Cyanidin chloride	<div style="text-align: center;"> Structure  </div>
PART NUMBER	00003955	
STANDARD TYPE	Primary (P)	
LOT NUMBER	00003955-041	
REPORT NUMBER	CDXA-RSS-6979-01	
SAMPLE NUMBER	CDXA-15-010507	
DATE OF SAMPLE	12/17/2015	
DATE OF RE-EVALUATION	01/28/2020	
DATE OF REPORT	02/07/2020	

CHEMICAL NAMES	2-(3,4-Dihydroxyphenyl)-3,5,7-trihydroxy-1-benzopyrylium chloride; 3,3'4',5,7-Pentahydroxyflavylium chloride; Cyanidol chloride
CHEMICAL FORMULA	C ₁₅ H ₁₁ O ₆ Cl
MOLECULAR WEIGHT (MW)	322.70
CHEMICAL FAMILY	Anthocyanidins
CAS NUMBER	[528-58-5]
EC#(EINECS)	208-438-6
RTECS	LK9824000

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	NA	92.1%
HPLC	0.700.10.2.METH22	NA	97.6%
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-9.0-000115	NA	MeOH: 0.4%
Water	0.700.12.37	NA	5.2%
Appearance	NA	NA	Black powder

ADJUSTED PURITY: 92.1% IS BASED ON (100 - 0.4 SOLVENTS - 5.2 WATER) X 97.6% HPLC

STORAGE CONDITIONS

STORAGE	-20 °C in a dry place.
EXPIRATION DATE	01/2025 under the above conditions.

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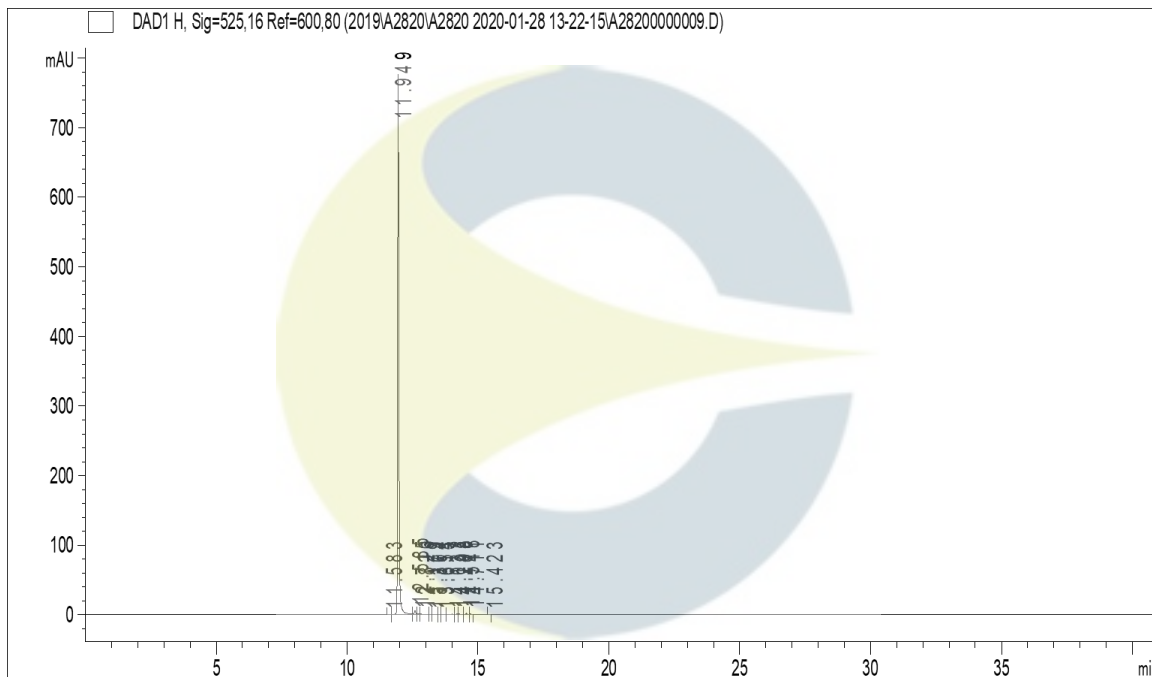
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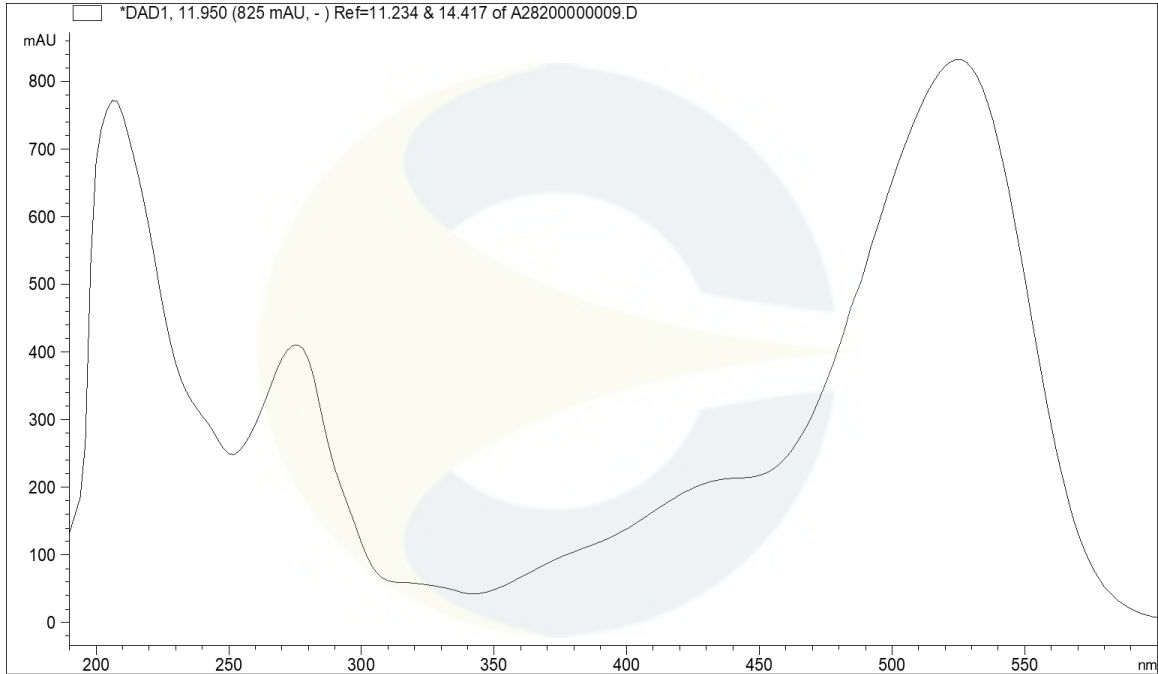
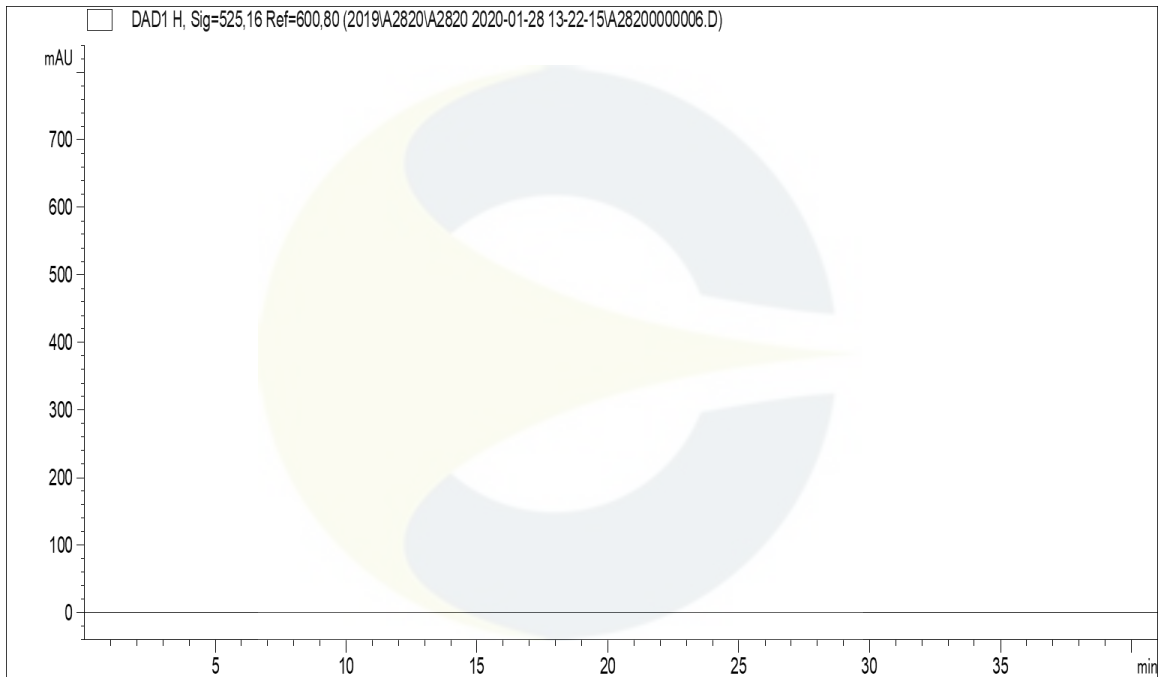
ANALYTICAL CONDITIONS

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.	1.0 mg/mL in Methanol
DETECTION	525 ± 8 nm

HPLC CHROMATOGRAM OF CYANIDIN CHLORIDE (CDXA-15-010507)



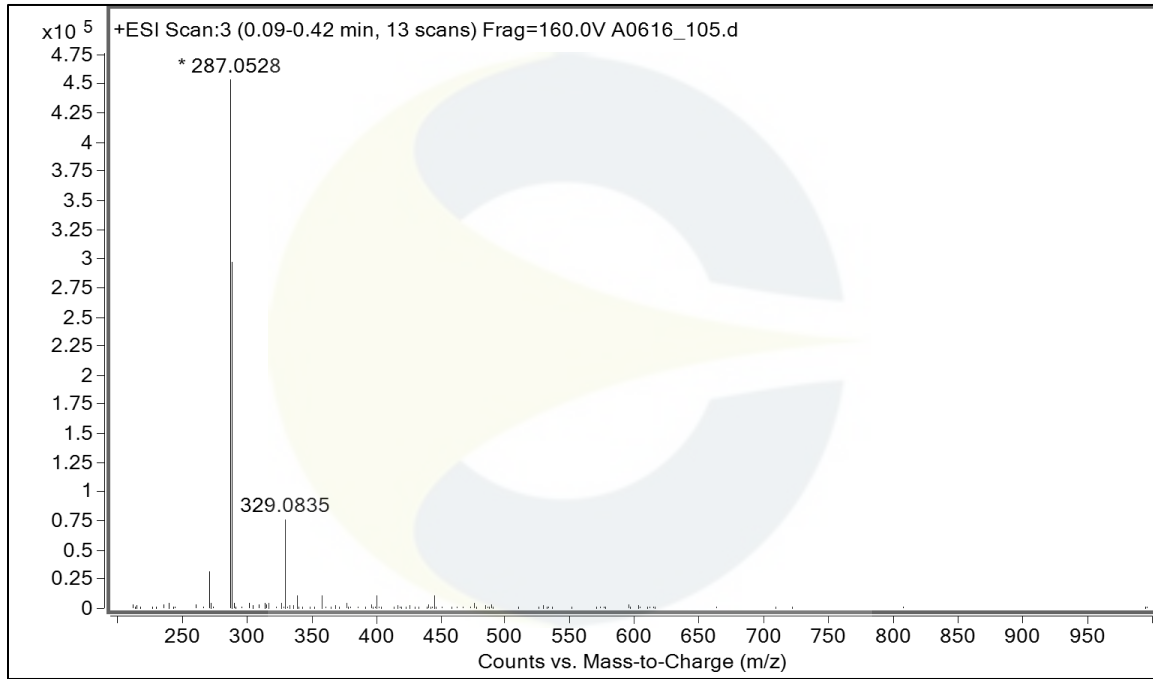
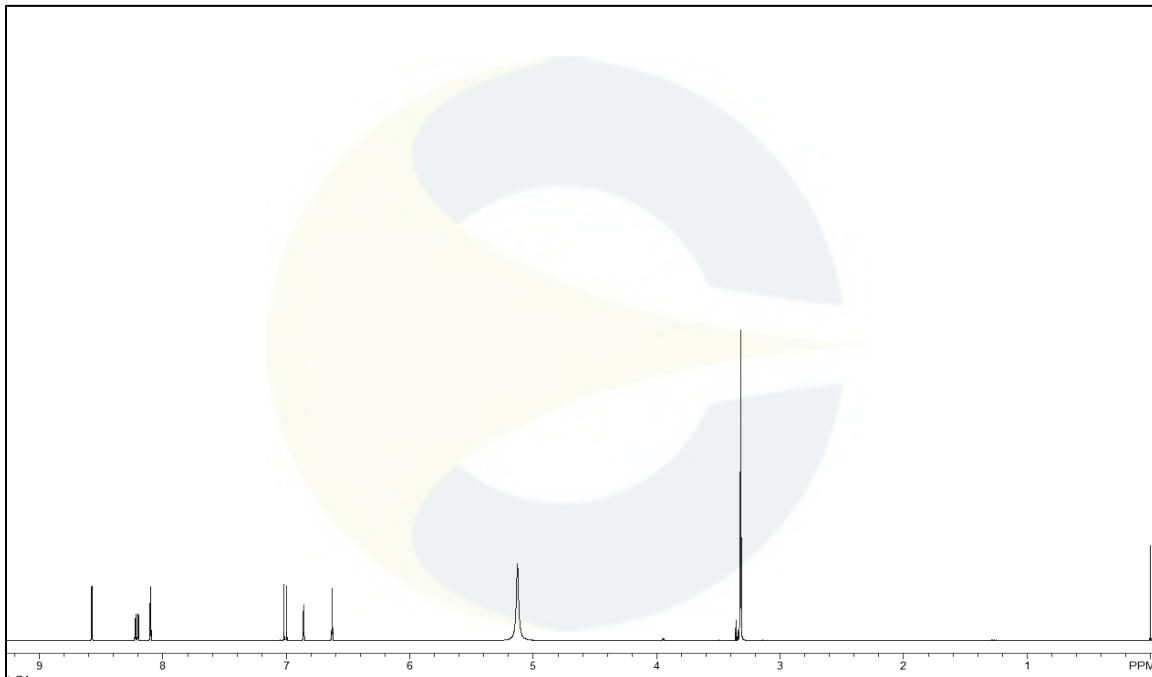
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UV SPECTRUM AT RT 12.0 MINUTES

HPLC CHROMATOGRAM OF DILUENT BLANK


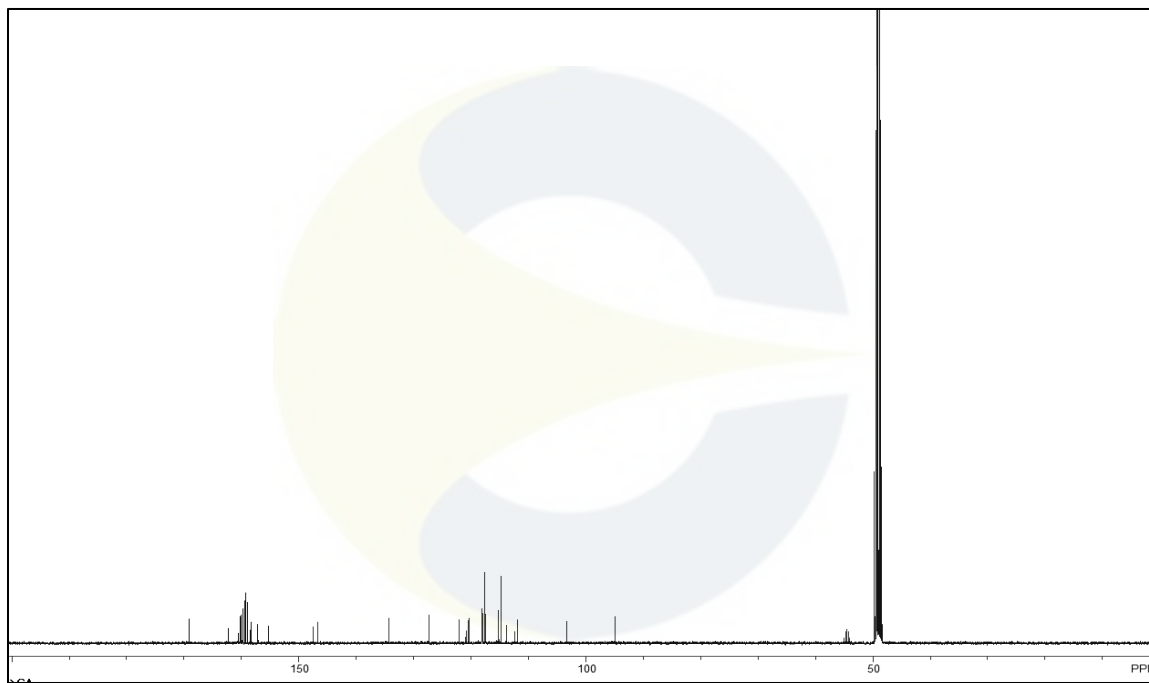
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 Email: customerservice@lifetechindia.com Website: www.lifetechindia.com

MASS SPECTRUM OF CYANIDIN CHLORIDE (CDXA-15-010507)**¹H-NMR SPECTRUM OF CYANIDIN CHLORIDE (CDXA-15-010507) IN CD₃OD + TFA-d**

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¹³C-NMR SPECTRUM OF CYANIDIN CHLORIDE (CDXA-15-010507) IN CD₃OD + TFA-d

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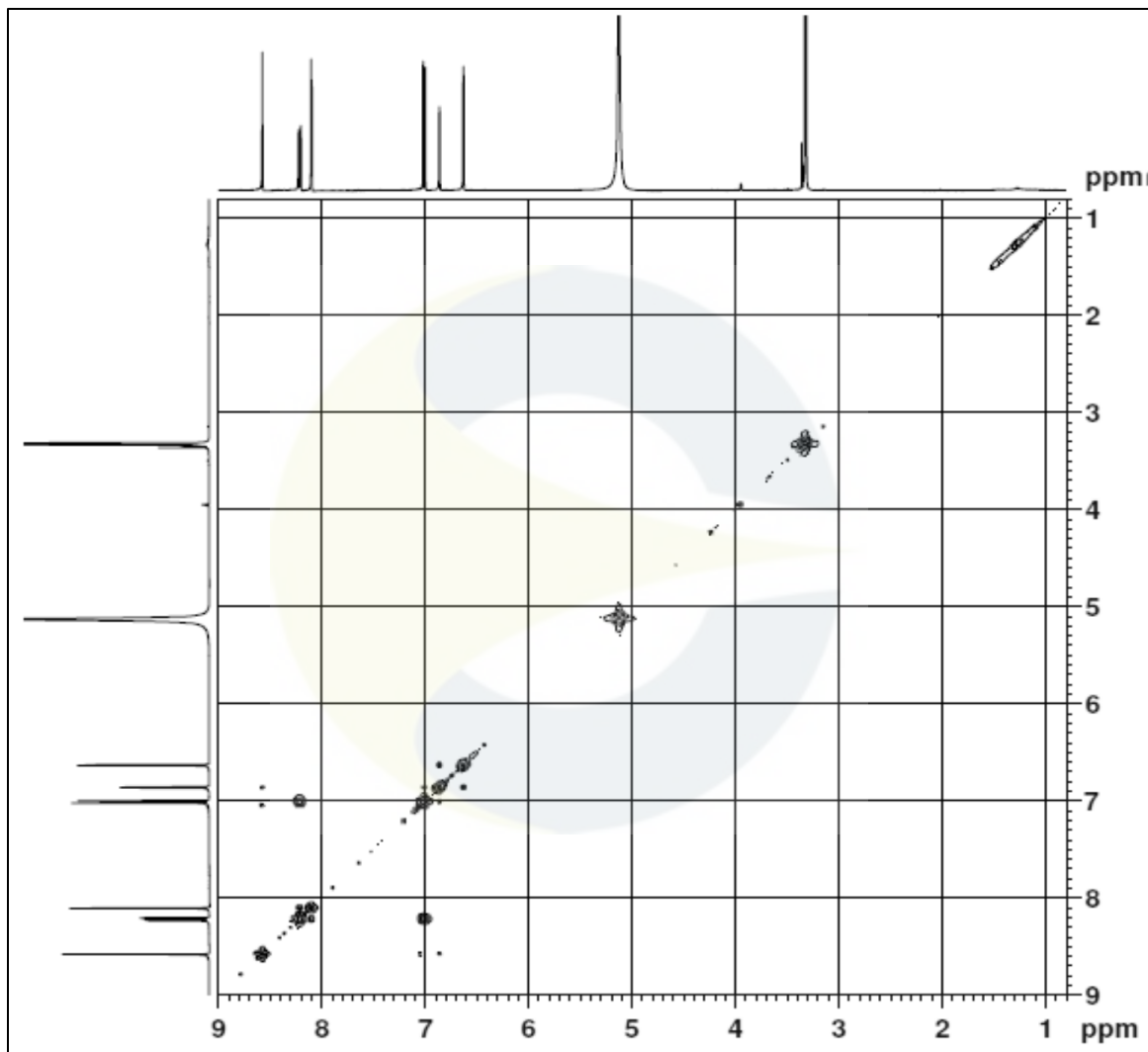
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COSY-NMR SPECTRUM OF CYANIDIN CHLORIDE (CDXA-15-010507) IN CD₃OD + TFA-d

REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	01/15/2016	New report
01	02/07/2020	Passed re-evaluation. Updated chromatographs, analytical method, purity, and expiration date. Removed melting point.

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