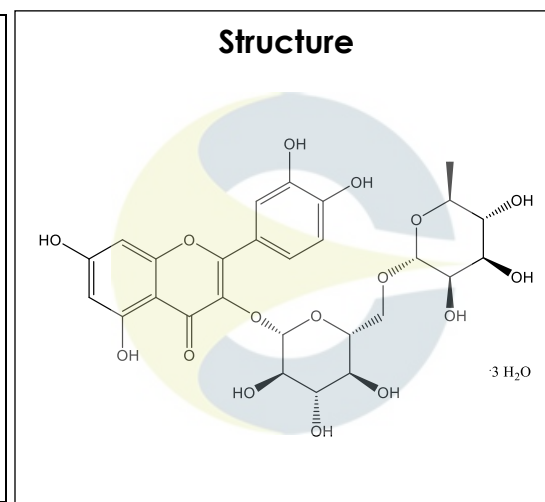


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PRODUCT NAME	Rutin Trihydrate
PART NUMBER	00018430
STANDARD TYPE	Primary (P) – Compendial Traceable
LOT NUMBER	00018430-002694
REPORT NUMBER	CDXA-RSS-7158-02
SAMPLE NUMBER	CDXA-16-003954
DATE OF SAMPLE	03/29/2016
DATE OF REEVALUATION	09/21/2020
DATE OF REPORT	10/16/2020



CHEMICAL NAMES	3-[[6-O-(6-Deoxy- α -L-mannopyranosyl)- β -D-glucopyranosyl]oxy]-2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-4H-1-benzopyran-4-one hydrate (1:3)
CHEMICAL FORMULA	C ₂₇ H ₃₀ O ₁₆ • 3H ₂ O
MOLECULAR WEIGHT (MW)	664.56
CHEMICAL FAMILY	Flavonoids
CAS NUMBER	[250249-75-3]
EC#(EINECS)	684-230-2
RTECS	N/A

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	≥ 85%	89.3%
HPLC	0.700.10.2.METH22	≥ 90%	97.2%
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-9.0-000115	NA	ND
Water	0.700.12.37	NA	8.1%*
Appearance	NA	NA	Yellow needles

ADJUSTED PURITY: 89.3% IS BASED ON (100 - 8.1 WATER - 0.0 SOLVENTS) X 97.2% HPLC

*Water result includes the bonded water of the hydrate form.

TRACEABLE SOURCE	LOT NUMBER	ASSAY RESULT
USP	R054J0	89.1% (as-is weight % of Rutin)

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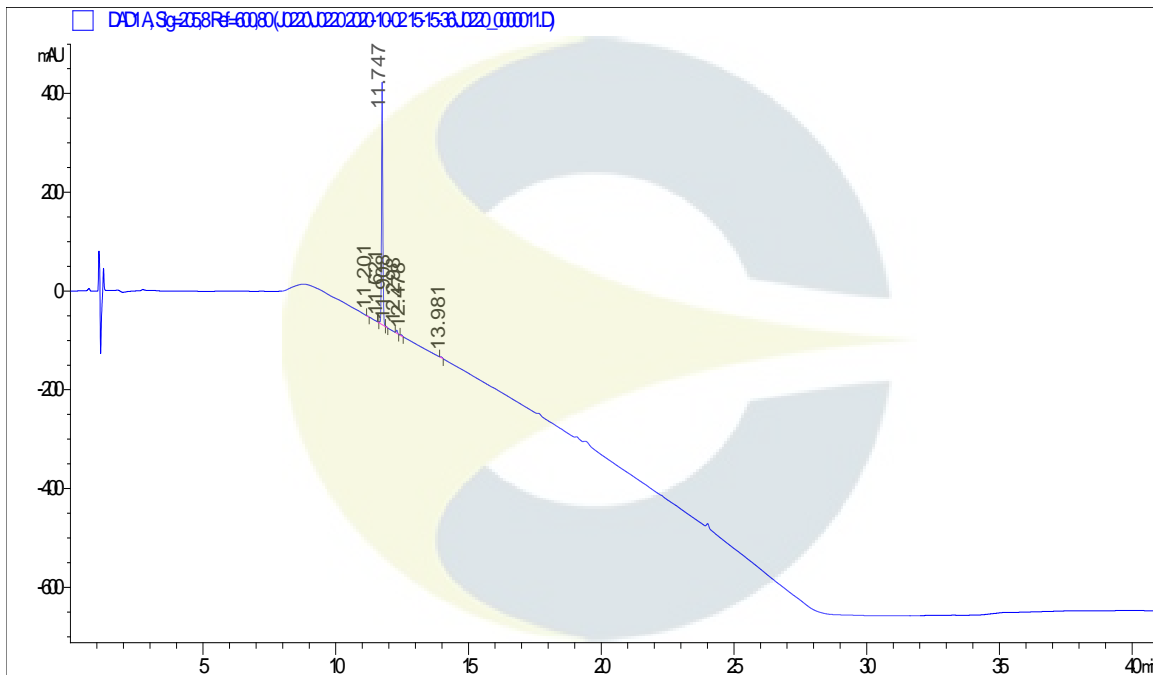
STORAGE CONDITIONS

STORAGE Room Temperature in a dry place.
EXPIRATION DATE 09/2025 under the above conditions.

ANALYTICAL CONDITIONS

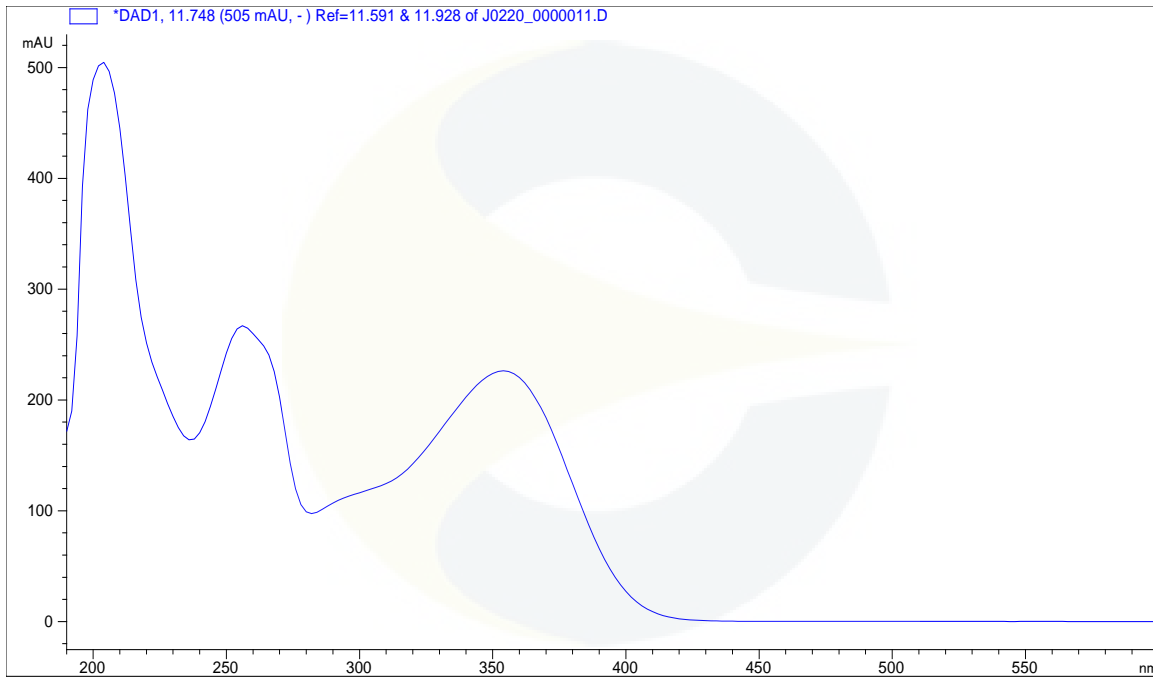
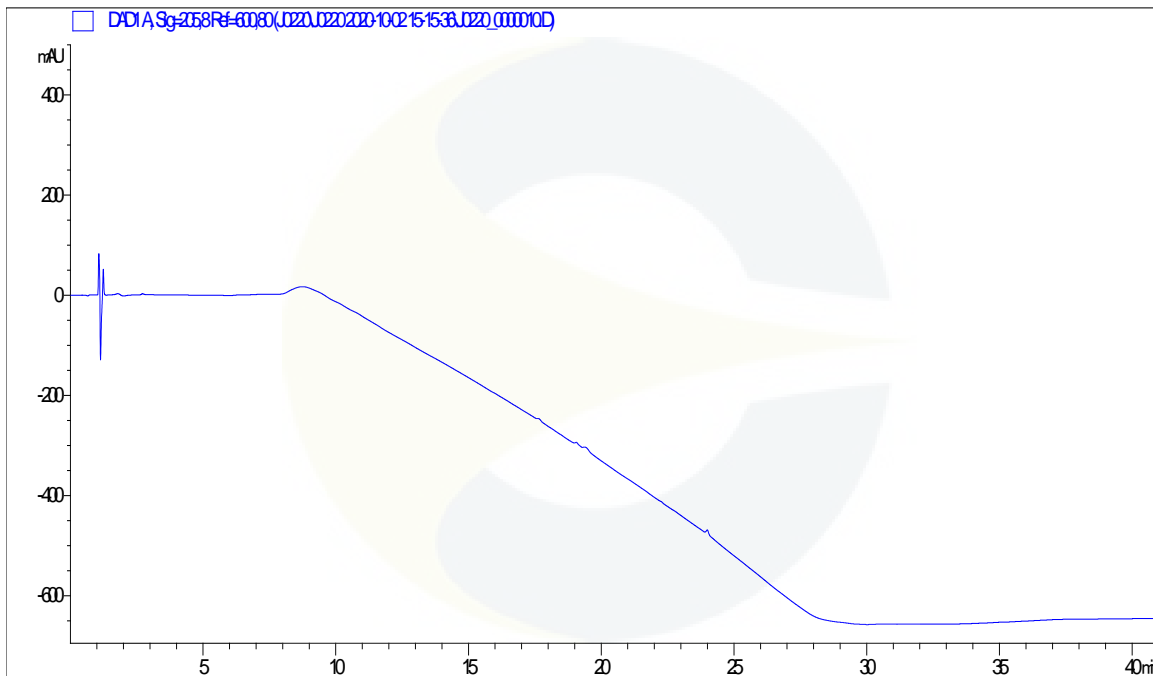
INSTRUMENT AGILENT 1260 HPLC UV-VIS (DAD); AGILENT 6510 QTOF
COLUMN Phenomenex Luna C18(2) 150 x 2.00 mm, 5 µm particle size
MOBILE PHASE A - 0.1% Trifluoroacetic acid in Milli-Q water, B - Acetonitrile;
 Isocratic 5% B for 5 minutes, then increasing to 95% B over 20 minutes. Hold at 95% B for 15 minutes, then decreasing to 5% B over 1 minutes.
COLUMN TEMP. 60 °C
FLOW RATE 0.4 mL/minute
INJECTION VOL. 0.2 µL
INJECTION CONC. 1.1 mg/mL in Methanol
DETECTION 205 ± 4 nm

HPLC CHROMATOGRAM OF RUTIN TRIHYDRATE (CDXA-16-003954)



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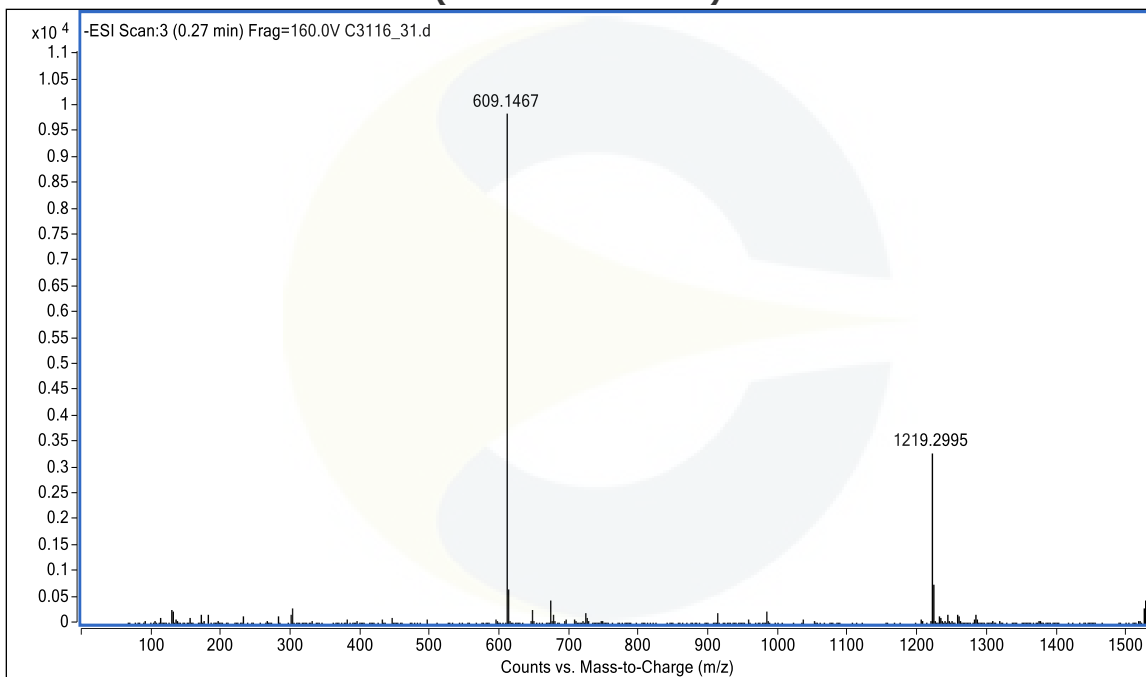
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UV SPECTRUM AT 11.7 MINUTES

HPLC CHROMATOGRAM OF BLANK


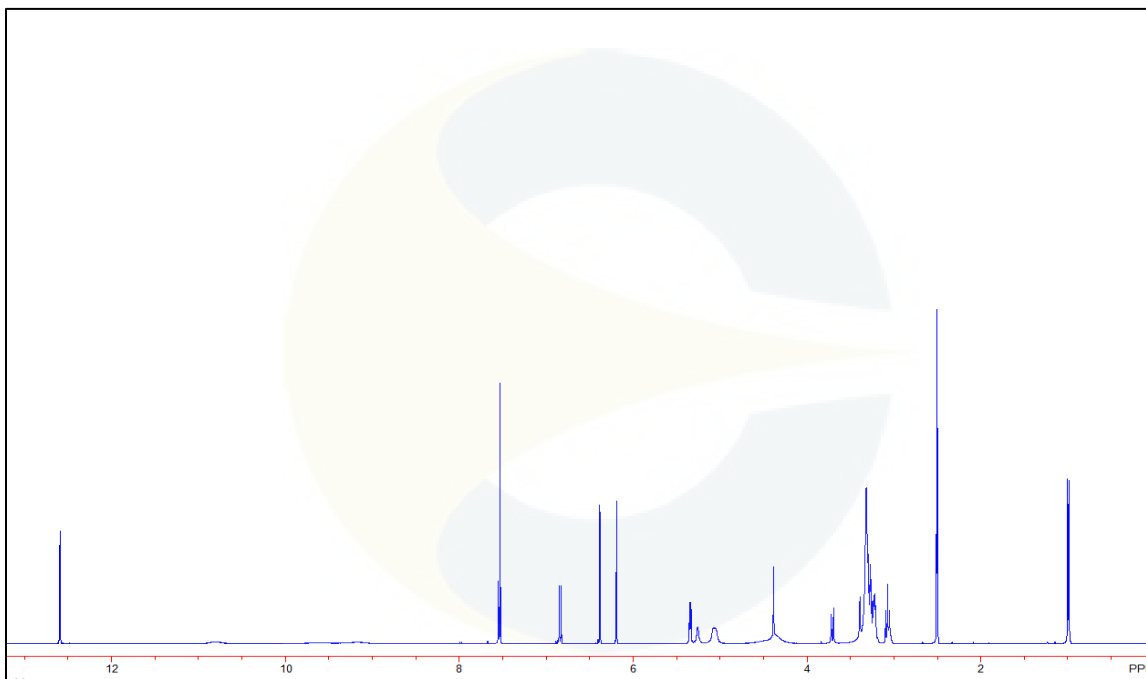
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MASS SPECTRUM OF RUTIN TRIHYDRATE (CDXA-16-003954)



¹H-NMR SPECTRUM OF RUTIN TRIHYDRATE (CDXA-16-003954) IN DMSO-d₆

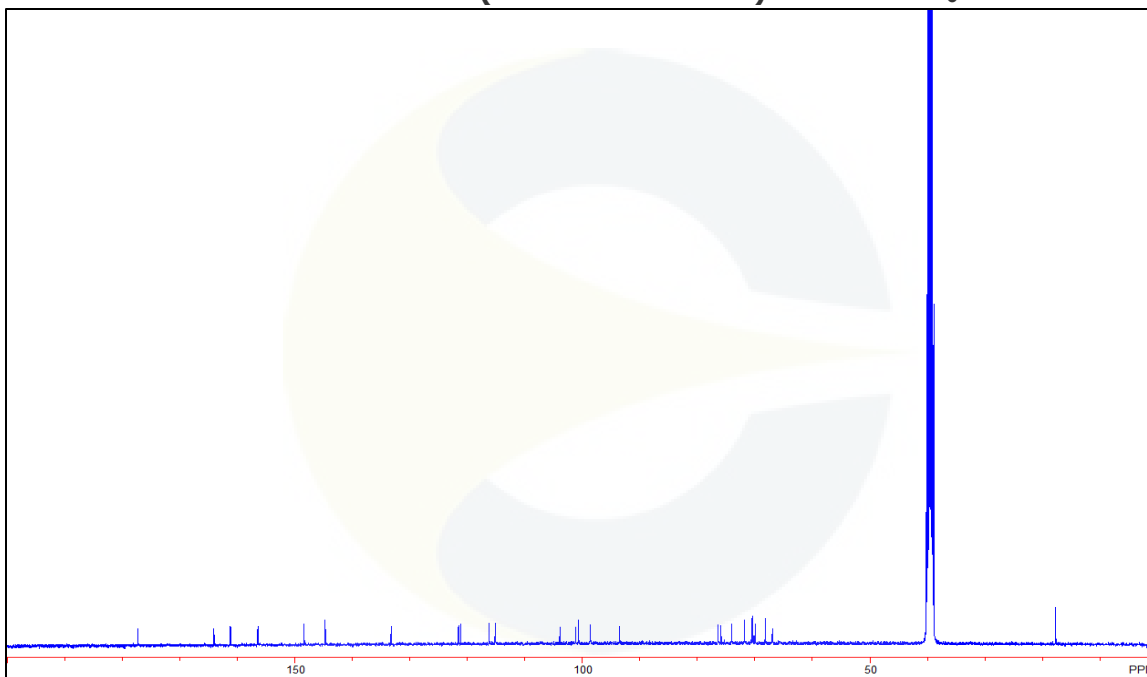


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Email: customerservice@lifetechindia.com Website: www.lifetechindia.com

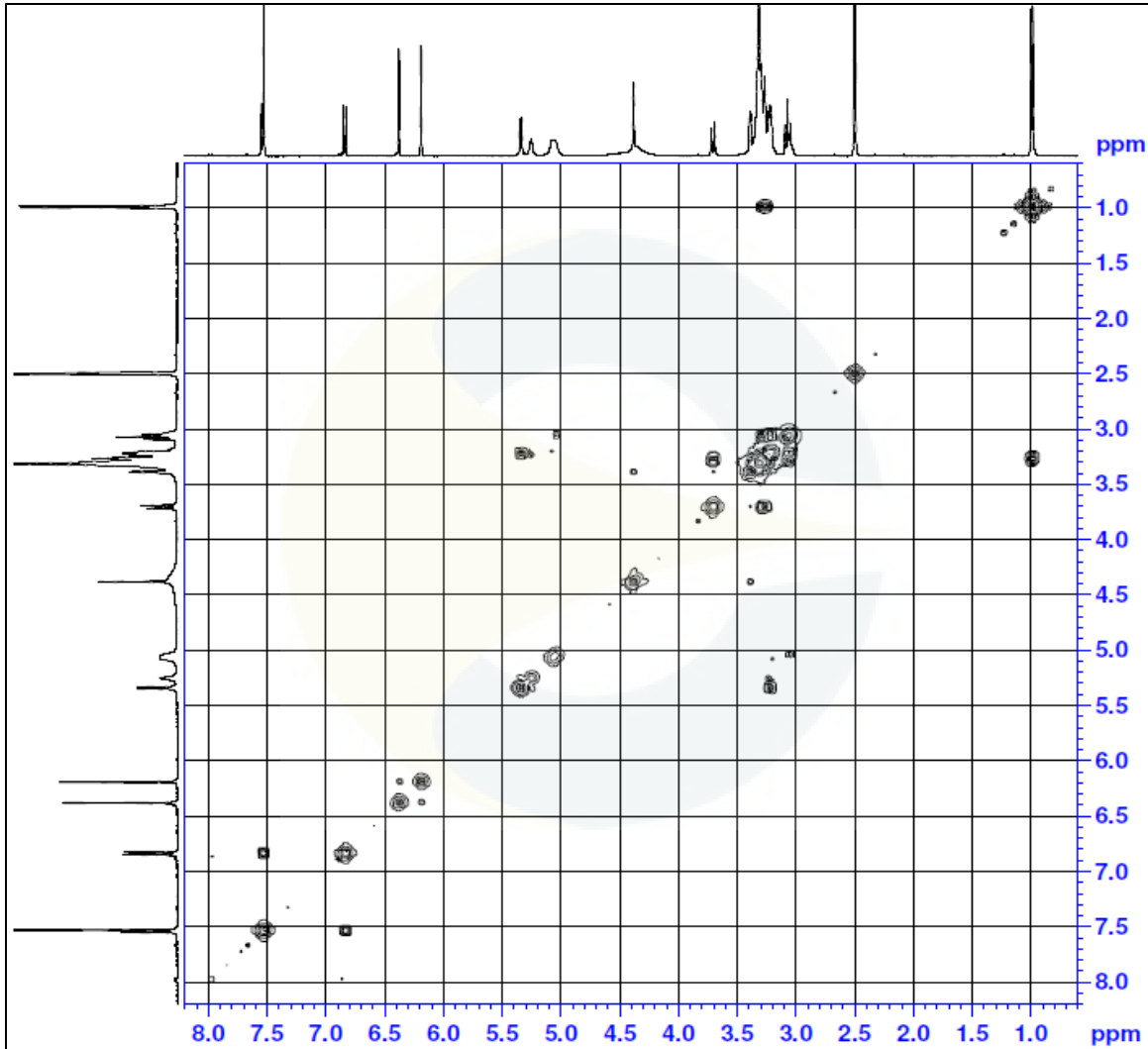
¹³C-NMR SPECTRUM OF RUTIN TRIHYDRATE (CDXA-16-003954) IN DMSO-d₆



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

COSY-NMR SPECTRUM OF RUTIN TRIHYDRATE (CDXA-16-003954) IN DMSO-d₆

REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	06/21/2016	New report
01	08/16/2017	Revision. Updated product and chemical names, chemical formula, molecular weight, structure, CAS number, EC#, and RTECS to reflect the trihydrate form. Removed melting point section.
02	10/16/2020	Material passed reevaluation by HPLC and KF. Updated EC#, analytical results, expiration date, analytical conditions, and chromatograms.

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