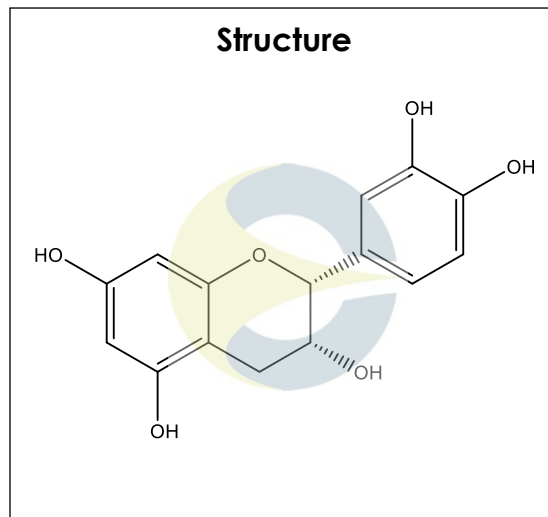


# Certificate of Analysis

*For Laboratory Use Only*

<b>PRODUCT NAME</b>	(-)-Epicatechin
<b>PART NUMBER</b>	00005125
<b>STANDARD TYPE</b>	Primary (P) – AHP Verified*
<b>LOT NUMBER</b>	00005125-002
<b>REPORT NUMBER</b>	CDXA-RSS-4942-02
<b>SAMPLE NUMBER</b>	CDXP-12-2442
<b>DATE OF SAMPLE</b>	04/20/2012
<b>DATE OF RE-EVALUATION</b>	04/13/2016(1 <sup>st</sup> ), 04/02/2020 (2 <sup>nd</sup> )
<b>DATE OF REPORT</b>	04/17/2020



<b>CHEMICAL NAMES</b>	(2R,3R)-2-(3,4-dihydroxyphenyl)-3,4-dihydro-, 2H-1-Benzopyran-3,5,7-triol; (-)-Epicatechol; (2R,3R)-(-)-Epicatechin; L-Epicatechin
<b>CHEMICAL FORMULA</b>	C <sub>15</sub> H <sub>14</sub> O <sub>6</sub>
<b>MOLECULAR WEIGHT (MW)</b>	290.27
<b>CHEMICAL FAMILY</b>	Catechins
<b>CAS NUMBER</b>	[490-46-0]
<b>EC#(EINECS)</b>	207-710-1
<b>RTECS</b>	KB3745000

## ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	NA	97.1%
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-5.0-000115	NA	Methanol – 0.5%
Water	0.700.12.37	NA	ND
Appearance	NA	NA	Tan powder

ADJUSTED PURITY: 97.1% IS BASED ON (100 - 0.0 WATER - 0.5 SOLVENTS) X 97.6% HPLC

## STORAGE CONDITIONS

<b>STORAGE</b>	+4 °C in a dry place.
<b>EXPIRATION DATE</b>	04/2025 under the above conditions.

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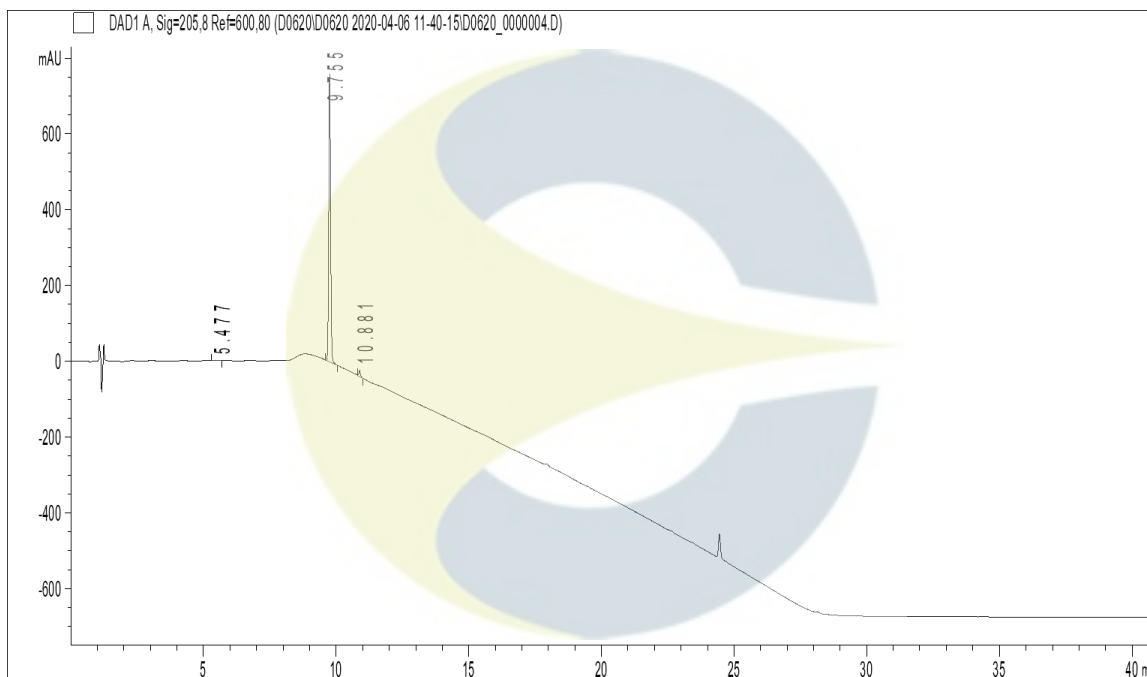
\*AMERICAN HERBAL PHARMACOPOEIA™ BOTANICAL AND CHEMICAL REFERENCE STANDARD VERIFICATION PROGRAM AVAILABLE THROUGH CHROMADEX

American Herbal Pharmacopoeia™ botanical reference standards are now available. Each American Herbal Pharmacopoeia Verified™ chemical reference is subjected to independent verification for identity and level of purity by American Herbal Pharmacopoeia Verified™ collaborating laboratories. The corresponding data package is similarly archived at the American Herbal Pharmacopoeia Verified™. Corresponding certificates of analyses are available through the authorized licensees of American Herbal Pharmacopoeia Verified™ standards.

## ANALYTICAL CONDITIONS

<b>INSTRUMENT</b>	AGILENT 1260 HPLC UV-VIS (DAD); AGILENT 6510 QTOF
<b>COLUMN</b>	Phenomenex Luna C18(2) 150 x 2.00 mm, 5 µm particle size
<b>MOBILE PHASE</b>	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.
<b>COLUMN TEMP.</b>	60 °C
<b>FLOW RATE</b>	0.4 mL/minute
<b>INJECTION VOL.</b>	0.1 µL
<b>INJECTION CONC.</b>	1.1 mg/mL in Methanol
<b>DETECTION</b>	205 ± 4 nm

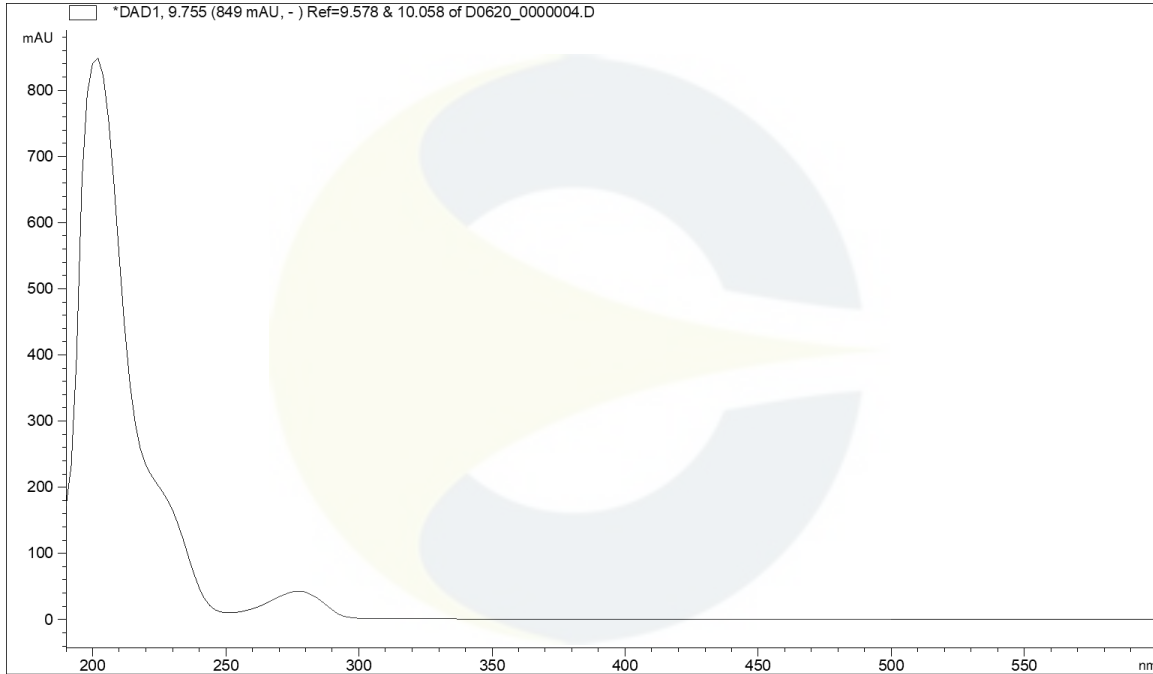
## HPLC CHROMATOGRAM OF (-)-EPICATECHIN (CDXP-12-2442)



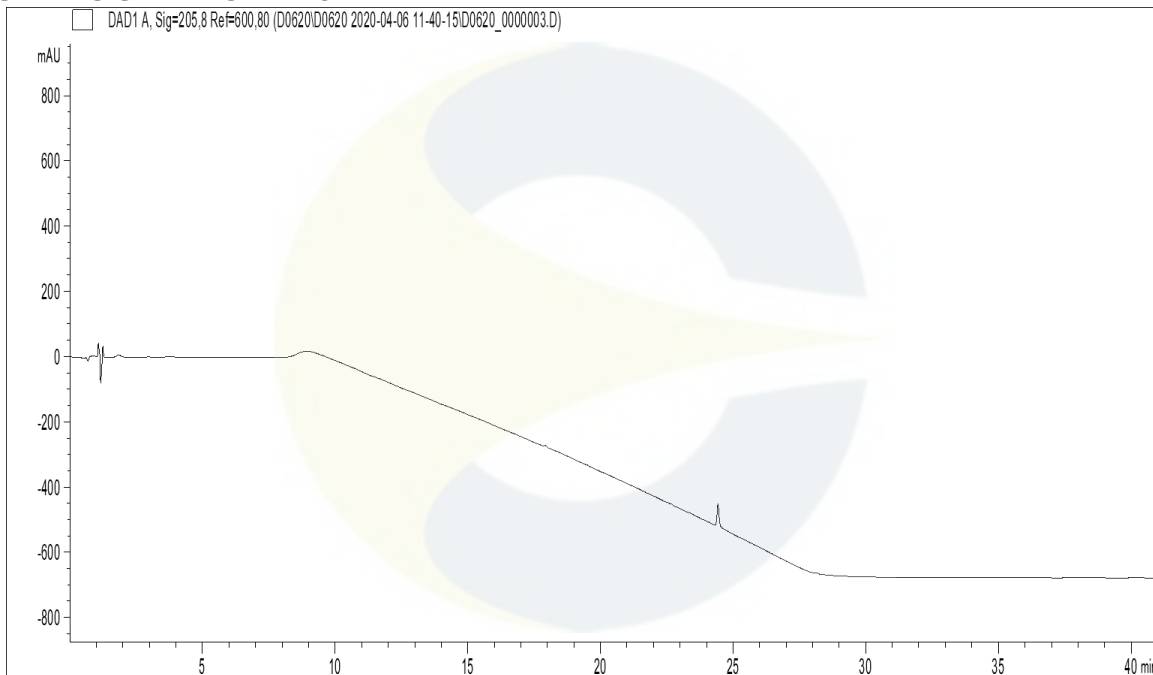
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Certificate of Analysis
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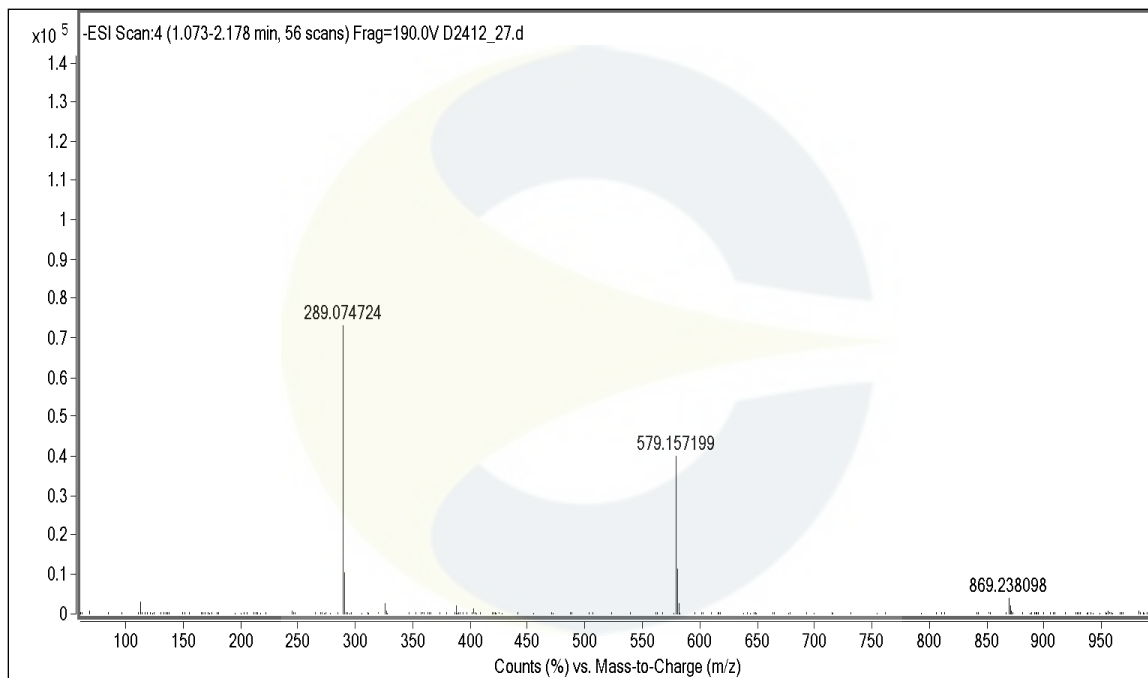
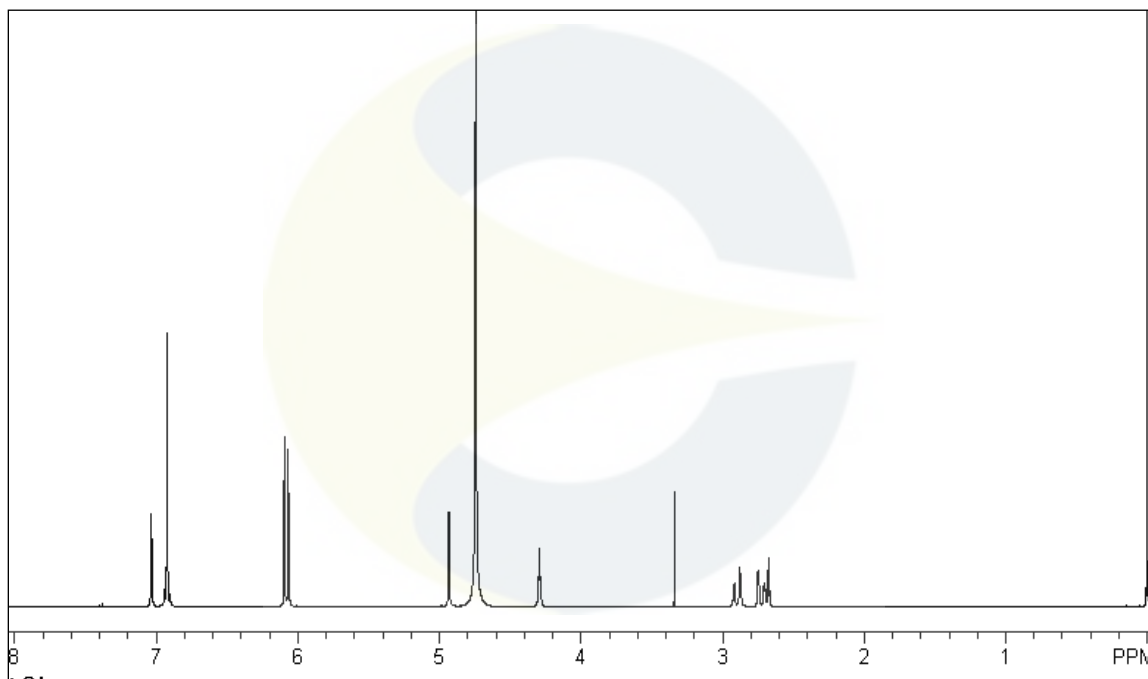
### UV SPECTRUM AT RT 9.8 MINUTES



### HPLC CHROMATOGRAM OF DILUENT BLANK

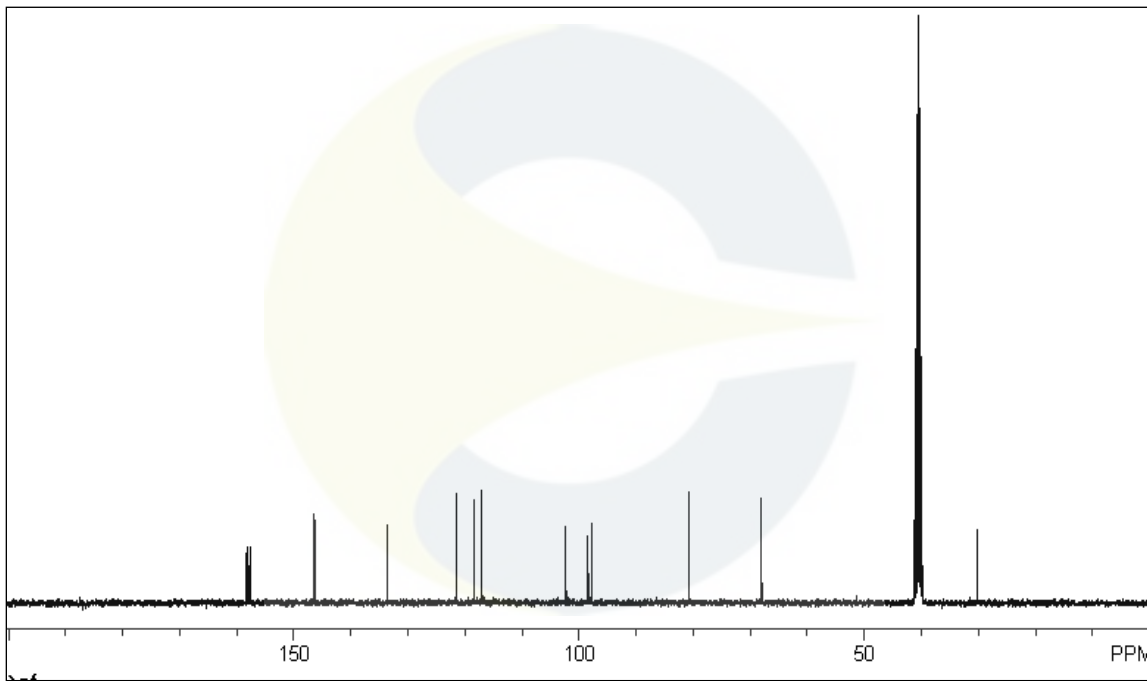


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**MASS SPECTRUM OF (-)-EPICATECHIN (CDXP-12-2442)**

**<sup>1</sup>H-NMR SPECTRUM OF (-)-EPICATECHIN (CDXP-12-2442) IN D<sub>2</sub>O + DMSO-d<sub>6</sub>**


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<sup>13</sup>C-NMR SPECTRUM OF (-)-EPICATECHIN (CDXP-12-2442) IN D<sub>2</sub>O + DMSO-d<sub>6</sub>



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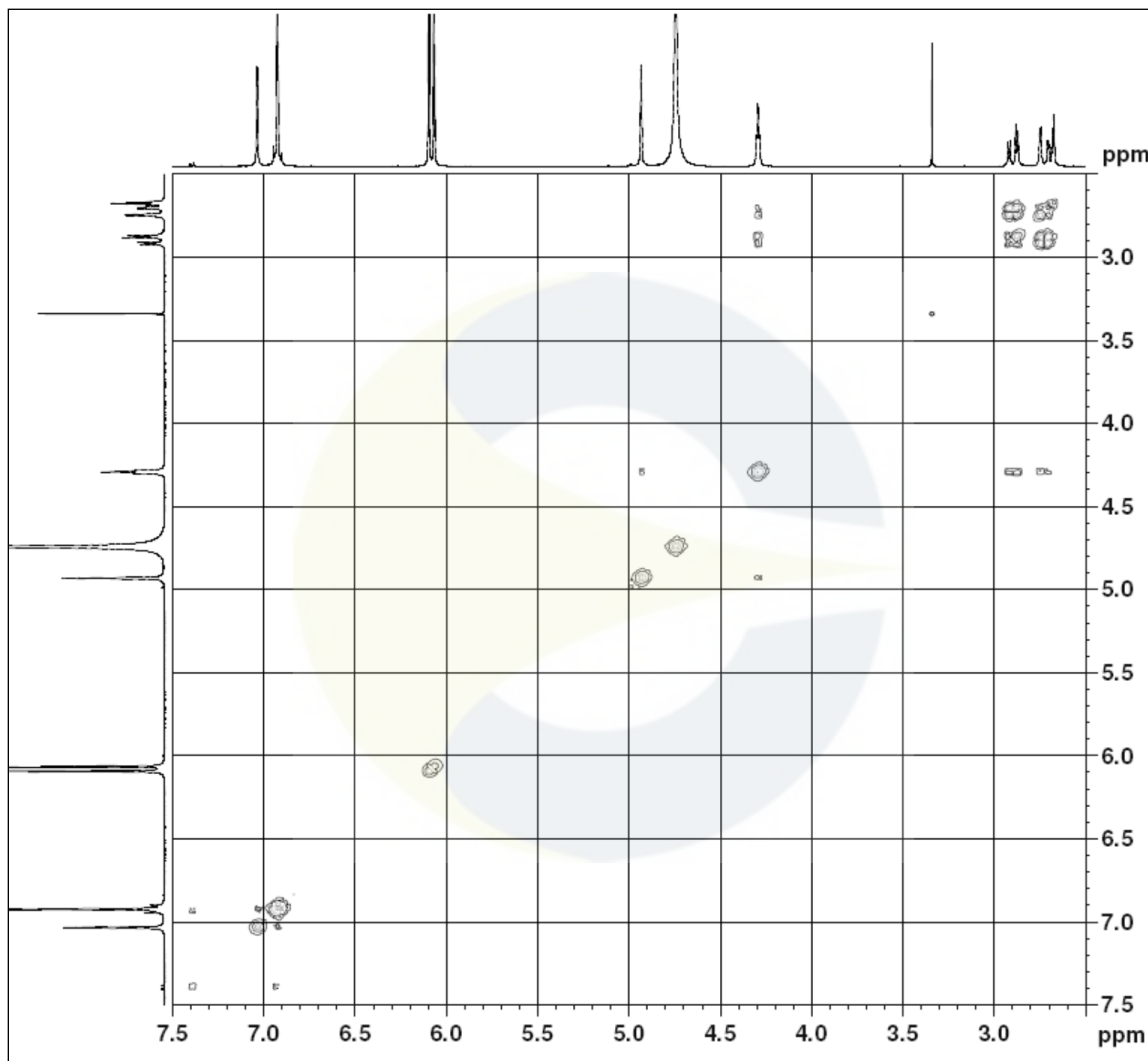
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Email: customerservice@lifetechindia.com Website: www.lifetechindia.com

## Certificate of Analysis

For Laboratory Use Only

**COSY-NMR SPECTRUM OF (-)-EPICATECHIN (CDXP-12-2442) IN D<sub>2</sub>O + DMSO-d<sub>6</sub>**

**REVISION HISTORY**

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	02/28/2013	New report and a revision.
01	04/29/2016	Passed re-evaluation by HPLC, KF. Updated expiration date.
02	04/17/2020	Passed re-evaluation by HPLC, KF. Updated expiration date, chromatograms, chemical names, structure, analytical methods, and removed melting point.

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