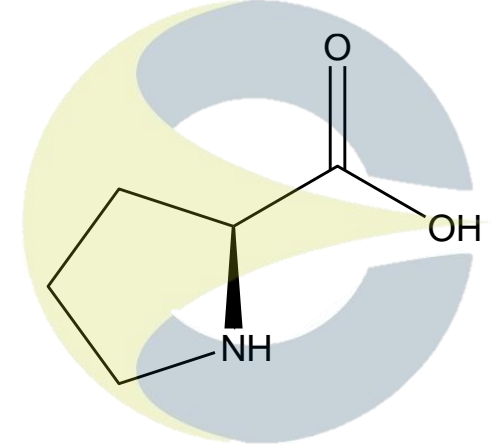


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<b>PRODUCT NAME</b>	L-Proline	<div style="text-align: center;"> <b>Structure</b>   </div>
<b>PART NUMBER</b>	00016256	
<b>STANDARD TYPE</b>	Primary (P)	
<b>LOT NUMBER</b>	00016256-096	
<b>REPORT NUMBER</b>	CDXA-RSS-3158-02	
<b>SAMPLE NUMBER</b>	CDXA-08-2499	
<b>DATE OF SAMPLE</b>	10/20/2008	
<b>DATE OF RE-EVALUATION</b>	05/31/2013 (1 <sup>st</sup> ); 04/24/2018(2 <sup>nd</sup> ); 03/16/2022 (3 <sup>rd</sup> )	
<b>DATE OF REPORT</b>	04/07/2022	

<b>CHEMICAL NAMES</b>	(-)-2-Pyrrolidinecarboxylic acid; (-)-Proline; ; L-(-)-Proline; L-Pyrrolidine-2-carboxylic acid; L-α-Pyrrolidinecarboxylic acid; Proline
<b>CHEMICAL FORMULA</b>	C <sub>5</sub> H <sub>9</sub> NO <sub>2</sub>
<b>MOLECULAR WEIGHT (MW)</b>	115.13
<b>CHEMICAL FAMILY</b>	Amino acids
<b>CAS NUMBER</b>	[147-85-3]
<b>EC#(EINECS)</b>	205-702-2
<b>RTECS</b>	TW3584000

**ANALYTICAL RESULTS**

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	≥ 85%	99.3%
HPLC	0.700.10.2.METH46	≥ 90%	99.9%
NMR	0.700.12.4	Conforms to structure	Conforms to structure
Mass Spectrum	Direct Infusion, ESI(-)	Conforms	Conforms
Residual Solvent*	99.1-CD-2.0-000115	NA	ND
Water	0.700.12.37	NA	0.6%
Appearance	NA	NA	White powder

\*Testing performed at an ISO 17025 accredited subcontracted laboratory.

ADJUSTED PURITY: 99.3% IS BASED ON (100 - 0.0 SOLVENTS - 0.6 WATER) X 99.9% HPLC

**STORAGE CONDITIONS**

<b>STORAGE</b>	Room Temperature in a dry place.
<b>EXPIRATION DATE</b>	03/2027 under the above conditions.

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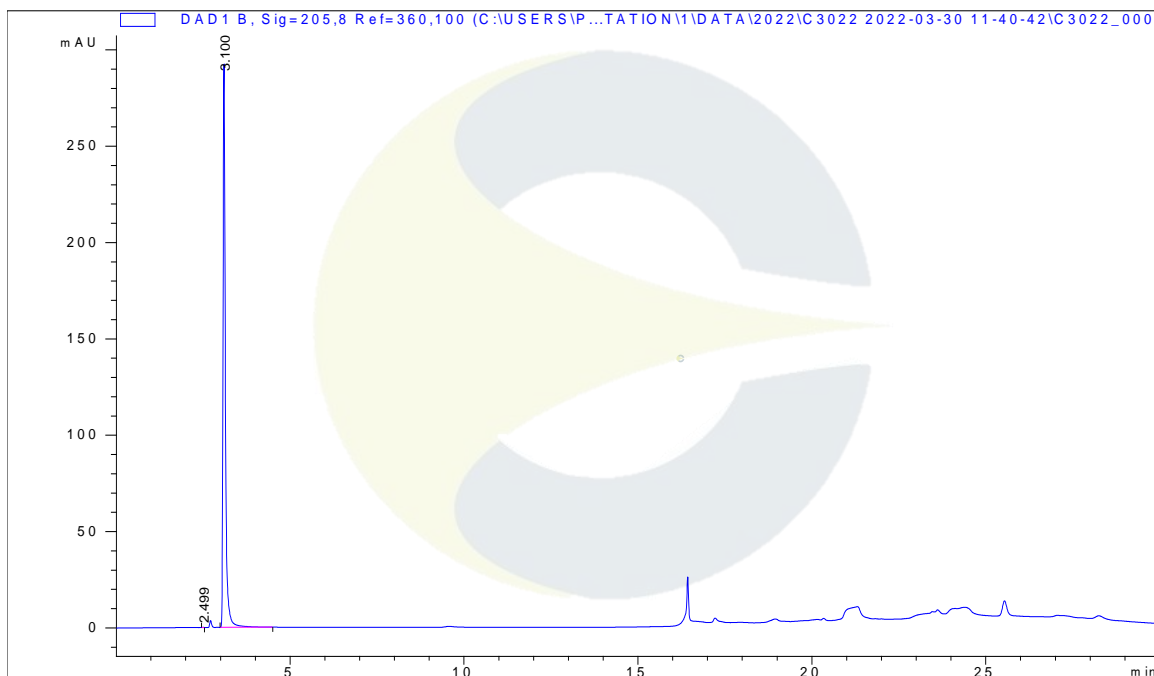
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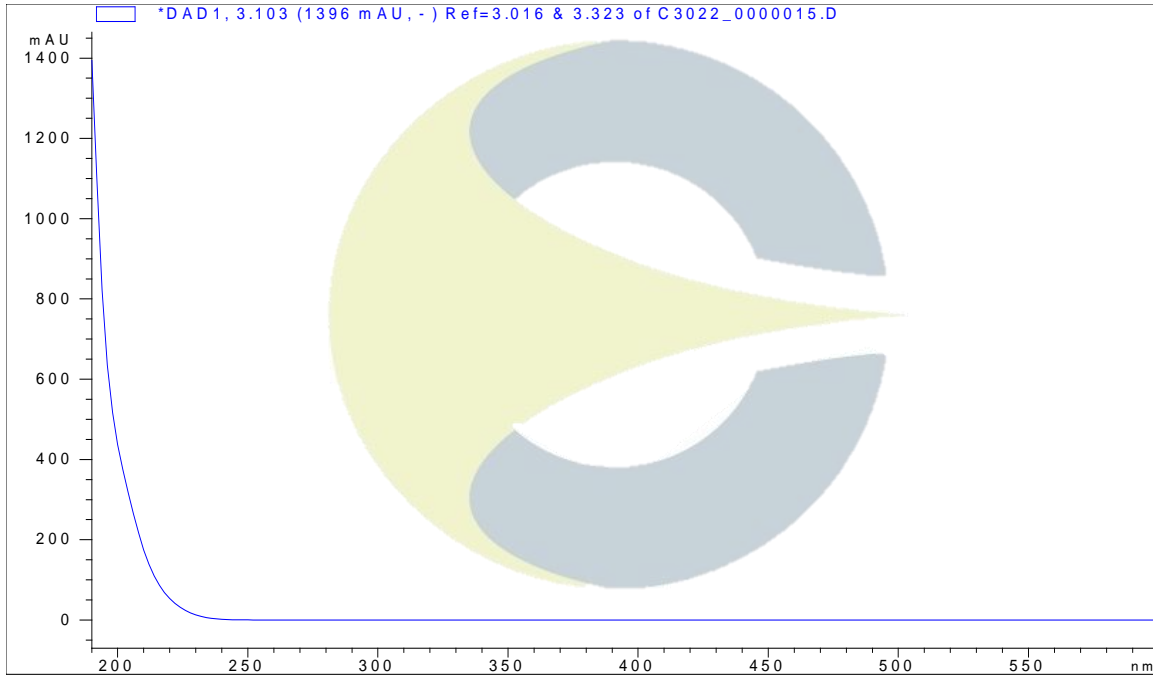
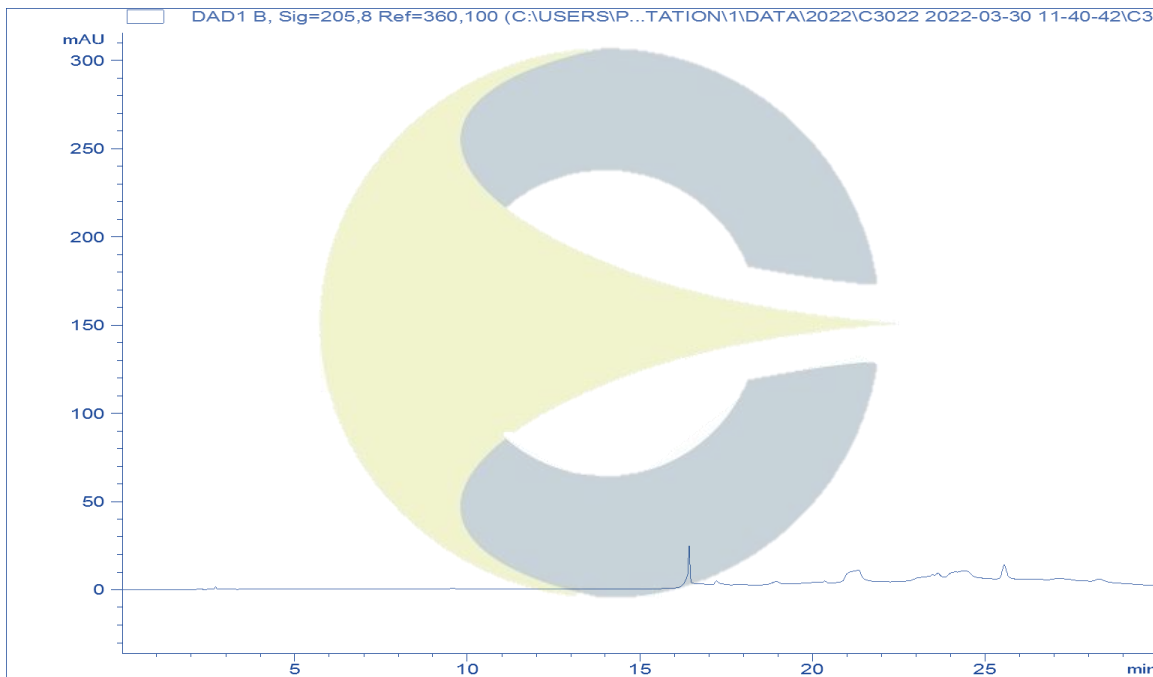
### ANALYTICAL CONDITIONS

<b>INSTRUMENT</b>	AGILENT 1260 HPLC UV-VIS (DAD); FINNIGAN LCQ-DECA
<b>COLUMN</b>	Phenomenex Synergi Hydro-RP 250 x 4.6 mm, 4 μm particle size
<b>MOBILE PHASE</b>	A - Acetonitrile, B – 10 mM monobasic Potassium phosphate (pH – 2.9); Isocratic 100% B for 10 minutes, decreasing to 70% B over 10 minutes, hold at 70% B for 4 minutes, increasing to 100% B over 0.1 minutes.
<b>COLUMN TEMP.</b>	22 °C
<b>FLOW RATE</b>	1.0 mL/minute
<b>INJECTION VOL.</b>	5.0 μL
<b>INJECTION CONC.</b>	7.1 mg/mL in UltraPure Water
<b>DETECTION</b>	205 ± 4 nm

### HPLC CHROMATOGRAM OF L-PROLINE (CDXA-08-2499)



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**UV SPECTRUM AT RT = 3.1 MINUTES**

**HPLC CHROMATOGRAM OF DILUENT BLANK**


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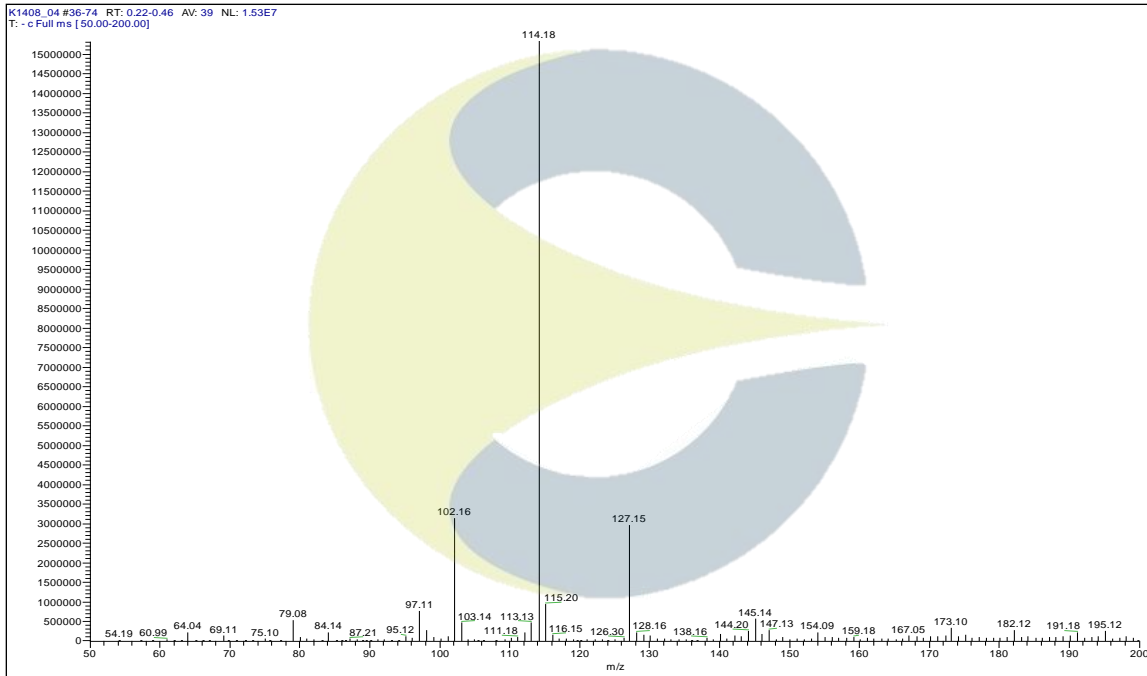
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 Email: [customerservice@lifetechindia.com](mailto:customerservice@lifetechindia.com) Website: [www.lifetechindia.com](http://www.lifetechindia.com)

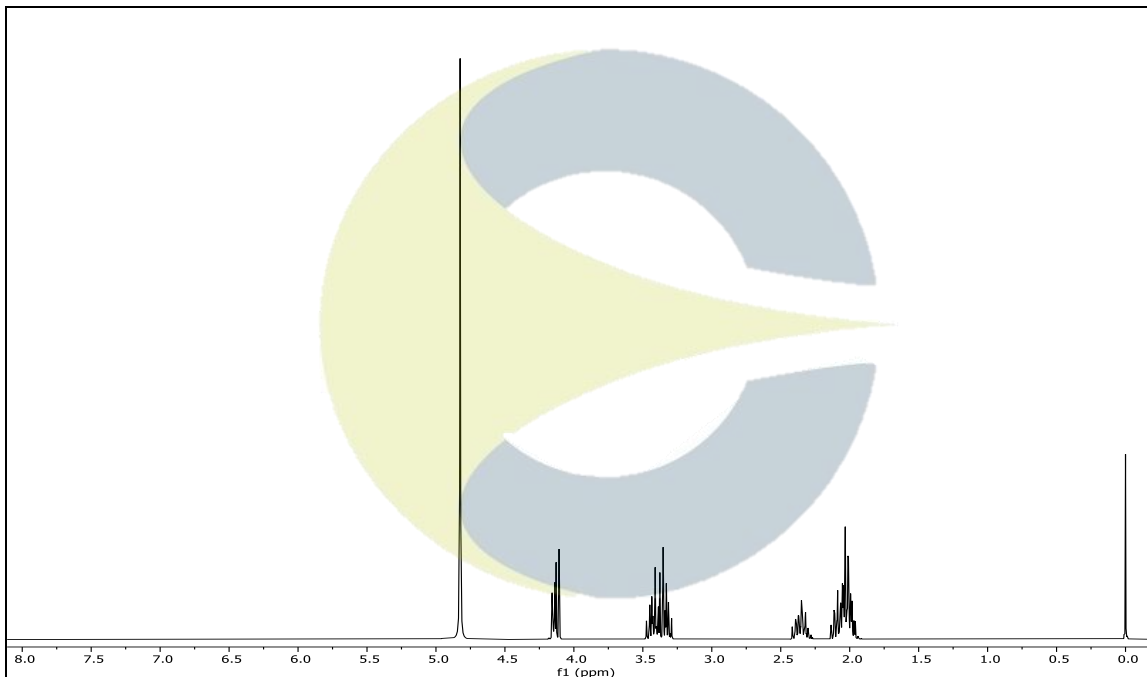
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**MASS SPECTRUM OF L-PROLINE (CDXA-08-2499)**



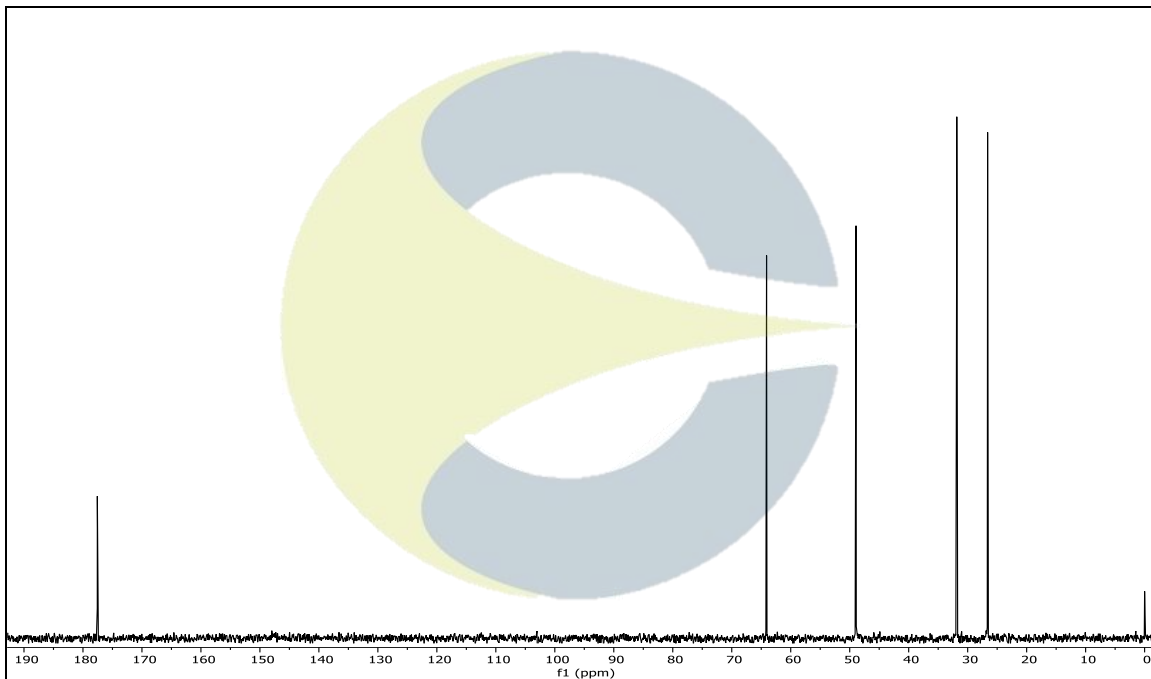
**<sup>1</sup>H-NMR SPECTRUM OF L-PROLINE (CDXA-08-2499) IN D<sub>2</sub>O + TMSP**



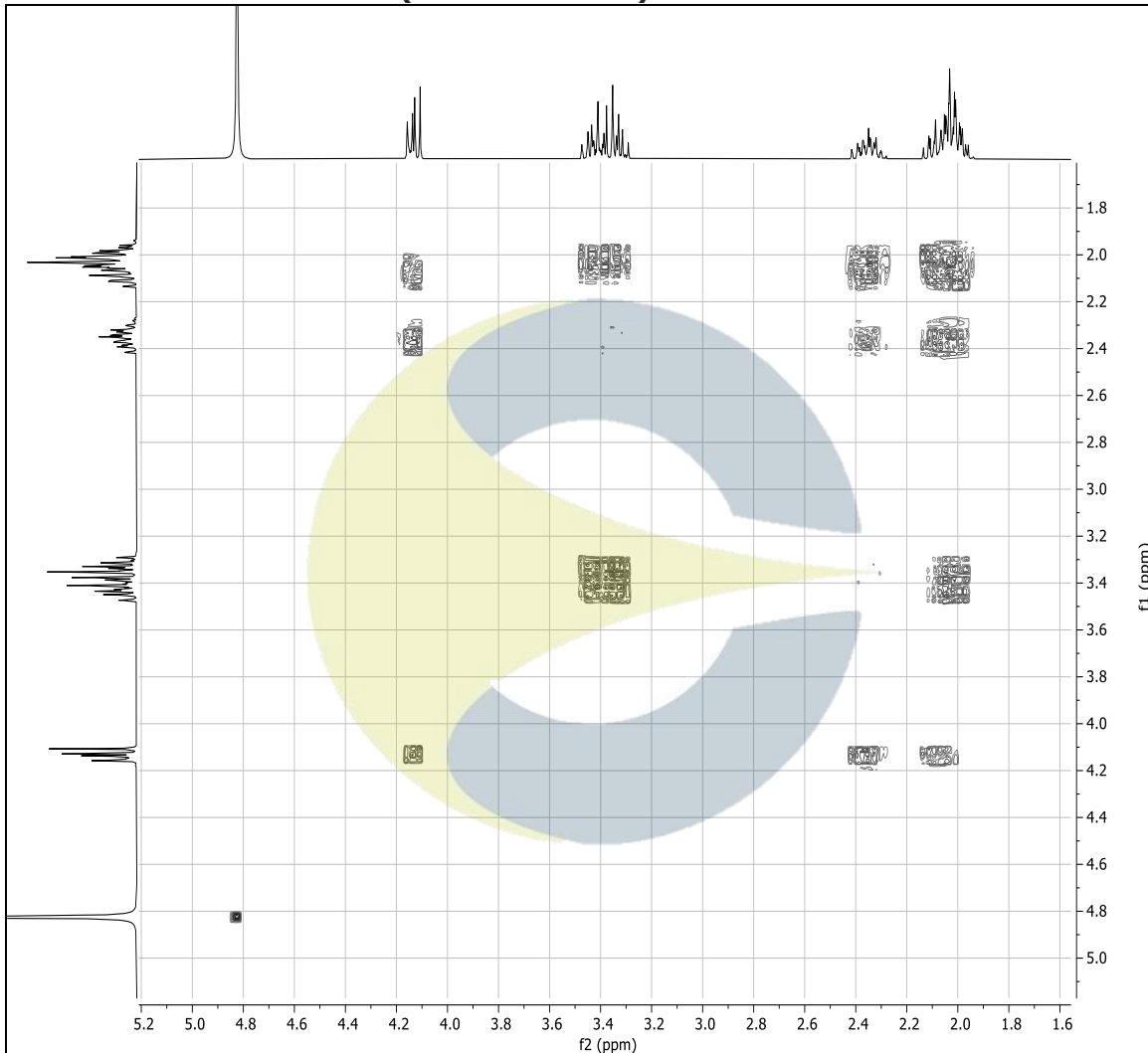
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Email: [customerservice@lifetechindia.com](mailto:customerservice@lifetechindia.com) Website: [www.lifetechindia.com](http://www.lifetechindia.com)

**<sup>13</sup>C-NMR SPECTRUM OF L-PROLINE (CDXA-08-2499) IN D<sub>2</sub>O + TMSP**

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**COSY-NMR SPECTRUM OF L-PROLINE (CDXA-08-2499) IN D<sub>2</sub>O +TMSP**

**REVISION HISTORY**

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	06/06/2013	New report; passed first re-evaluation by HPLC and KF. Updated chemical names, removed melting point.
01	05/21/2018	Passed second re-evaluation by HPLC and KF. Updated analytical conditions, results, chromatograms, and expiration date.
02	04/07/2022	Passed third re-evaluation by HPLC, KF and NMR. Updated analytical conditions, chromatograms, NMR spectra, expiration date, and results.

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