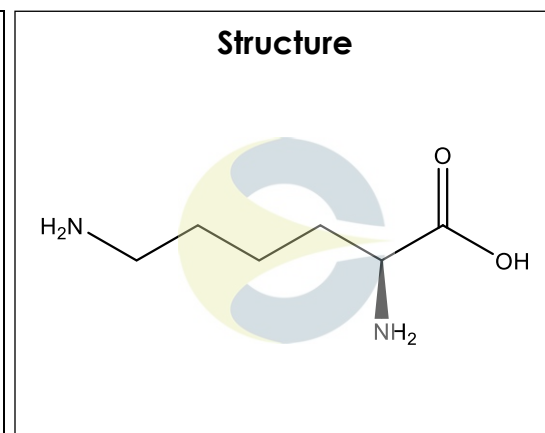


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<b>PRODUCT NAME</b>	L-(+)-Lysine
<b>PART NUMBER</b>	00012606
<b>STANDARD TYPE</b>	Primary (P)
<b>LOT NUMBER</b>	00012606-WOM
<b>REPORT NUMBER</b>	CDXA-RSS-8664-00
<b>SAMPLE NUMBER</b>	CDXP-19-00566
<b>DATE OF SAMPLE</b>	09/23/2019
<b>DATE OF REPORT</b>	10/17/2019



<b>CHEMICAL NAMES</b>	Lysine; (S)-Lysine; 2,6-Diaminohexanoic acid; Aminutrin; 6-Amino-L-norleucine; Lysine acid; α-Lysine
<b>CHEMICAL FORMULA</b>	C <sub>6</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub>
<b>MOLECULAR WEIGHT (MW)</b>	146.19
<b>CHEMICAL FAMILY</b>	Amino acids
<b>CAS NUMBER</b>	[56-87-1]
<b>EC#(EINECS)</b>	200-294-2
<b>RTECS</b>	OL5540000

**ANALYTICAL RESULTS**

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	NA	88.9%
HPLC	0.700.10.2 METH 46	NA	91.6%
NMR	0.700.12.4	Conforms to structure	Conforms to structure
Mass Spectrum	0.700.12.27 V.4	Conforms	Conforms
Residual Solvent	TM6740 V.1	NA	ND
Water	0.700.12.37 V.11	NA	3.0%
Appearance	NA	NA	White powder

ADJUSTED PURITY: 88.9% IS BASED ON (100 - 0.0 SOLVENTS - 3.0 WATER) X 91.6% HPLC

**STORAGE CONDITIONS**

<b>STORAGE</b>	Room Temperature in a dry place.
<b>EXPIRATION DATE</b>	09/2024 under the above conditions.

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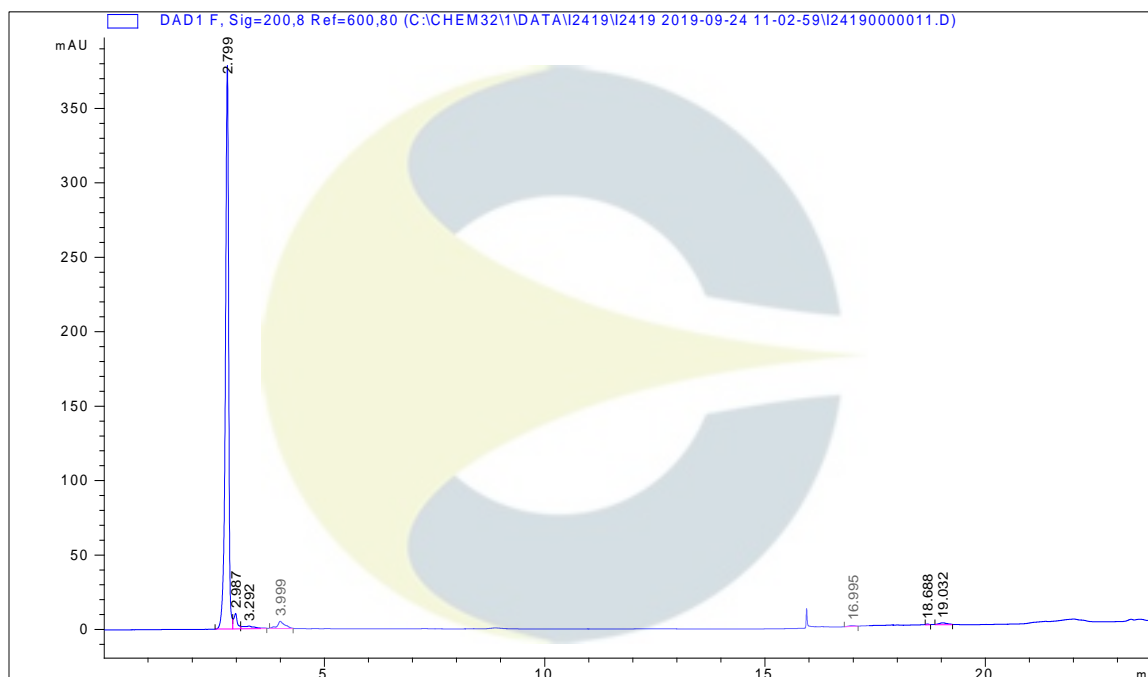
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### ANALYTICAL CONDITIONS

<b>INSTRUMENT</b>	AGILENT 1260 HPLC UV-VIS (DAD); AB-SCIEX 6600 TRIPLE TOF
<b>COLUMN</b>	Phenomenex Synergi Hydro-RP 250 x 4.6 mm, 4 µm particle size
<b>MOBILE PHASE</b>	A – 10 mM Potassium phosphate monobasic (pH = 2.91), B - Acetonitrile Isocratic 0% B for 10 minutes increasing to 20% B over 10 minutes and holding for 4 minutes. Decreasing to 0% B over 0.1 minutes to starting conditions
<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>	8.2 mg/mL in Milli-Q Water
<b>DETECTION</b>	200 ± 4 nm

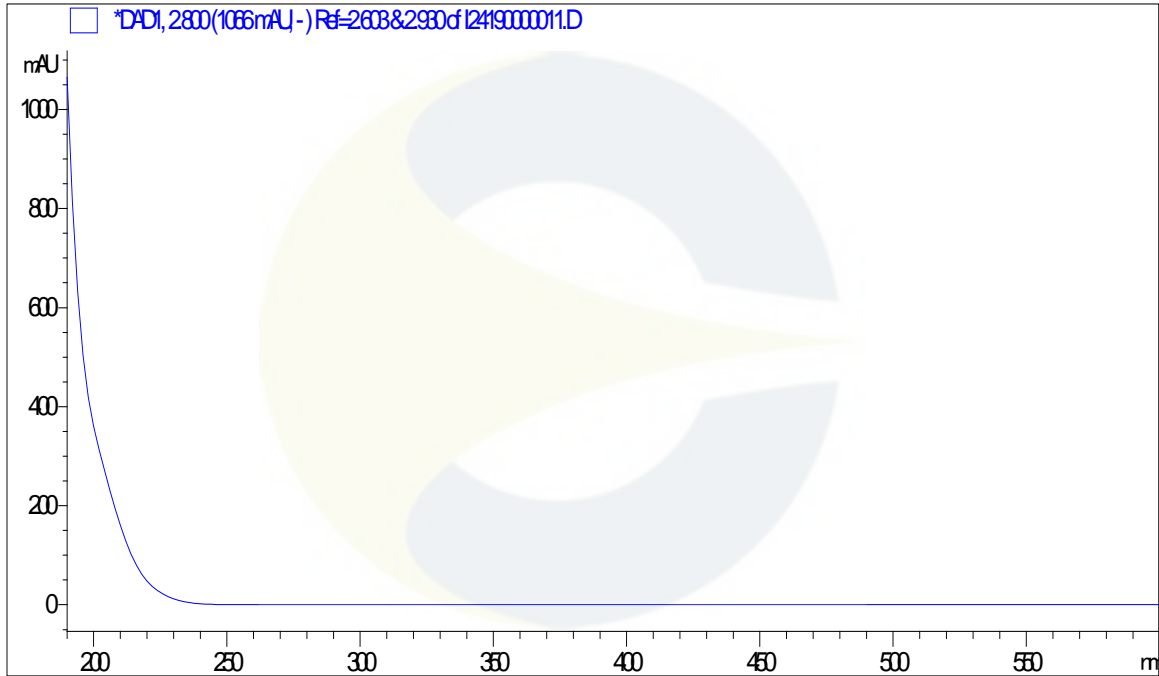
### HPLC CHROMATOGRAM OF L-(+)-LYSINE (CDXP-19-00566)



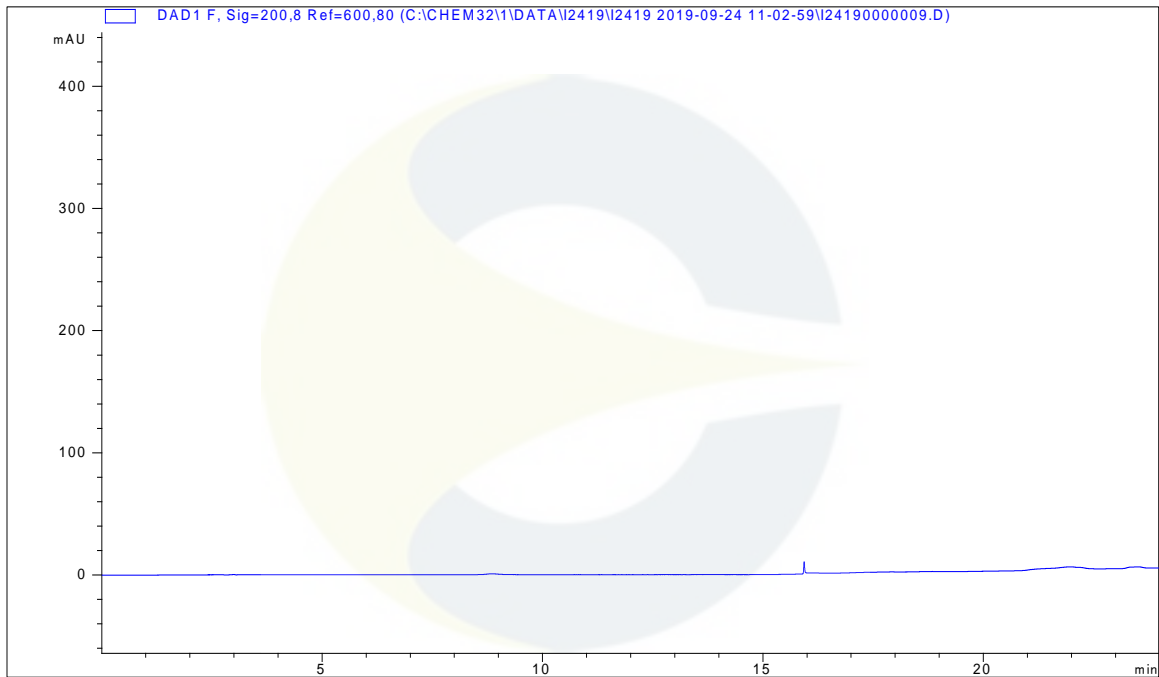
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**UV SPECTRUM AT RT = 2.8 MINUTES**

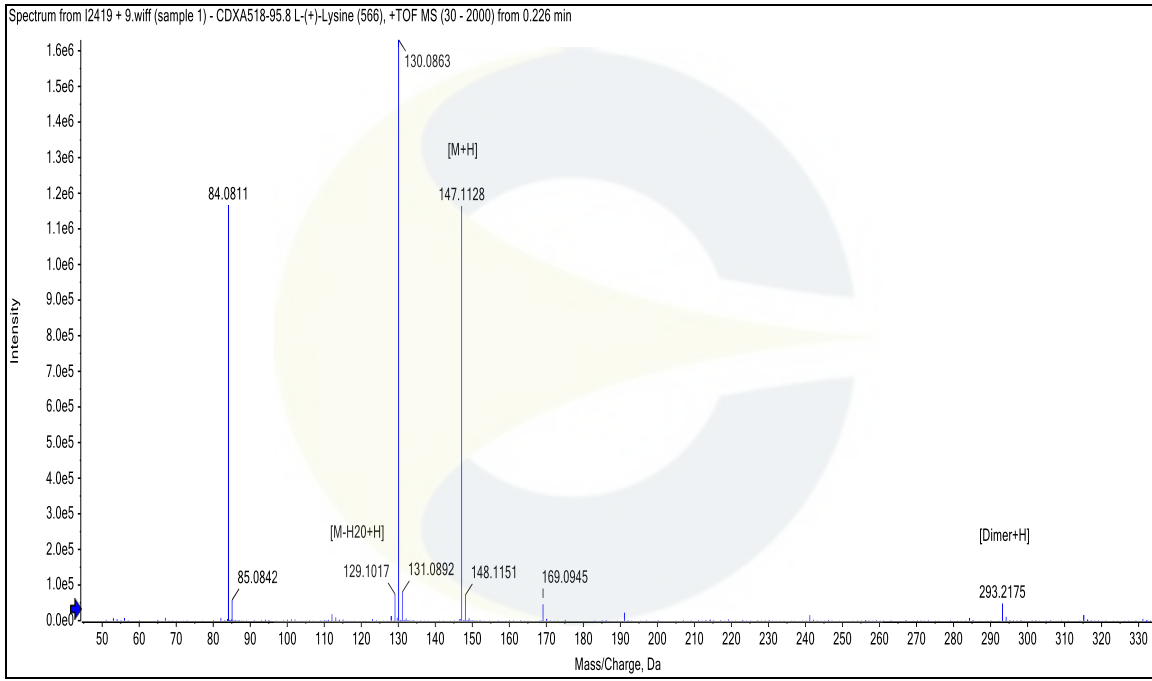


**HPLC CHROMATOGRAM OF DILUENT BLANK**

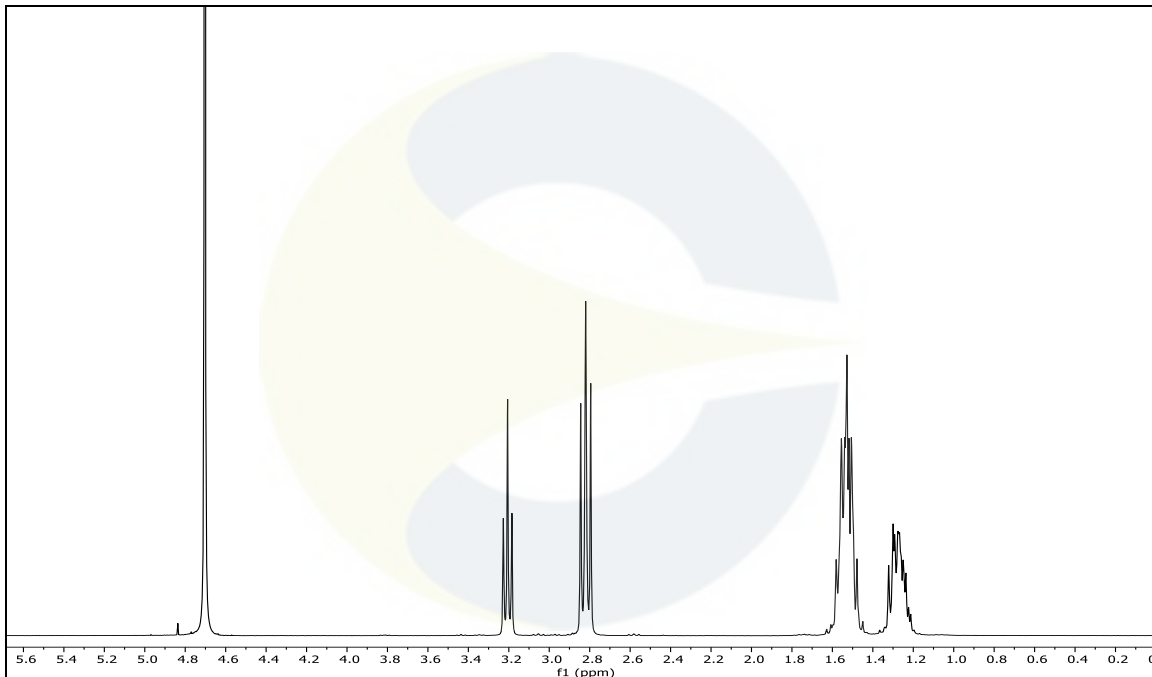


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**MASS SPECTRUM OF L-(+)-LYSINE (CDXP-19-00566)**

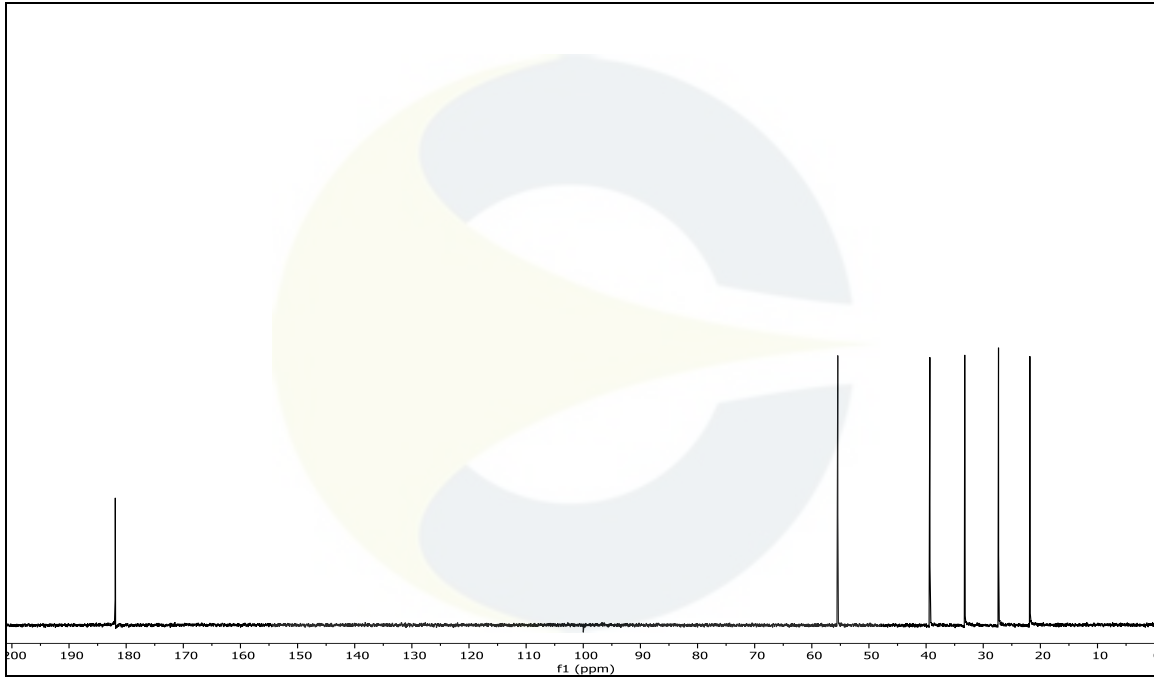


**<sup>1</sup>H-NMR SPECTRUM OF L-(+)-LYSINE (CDXP-19-00566) IN D<sub>2</sub>O**

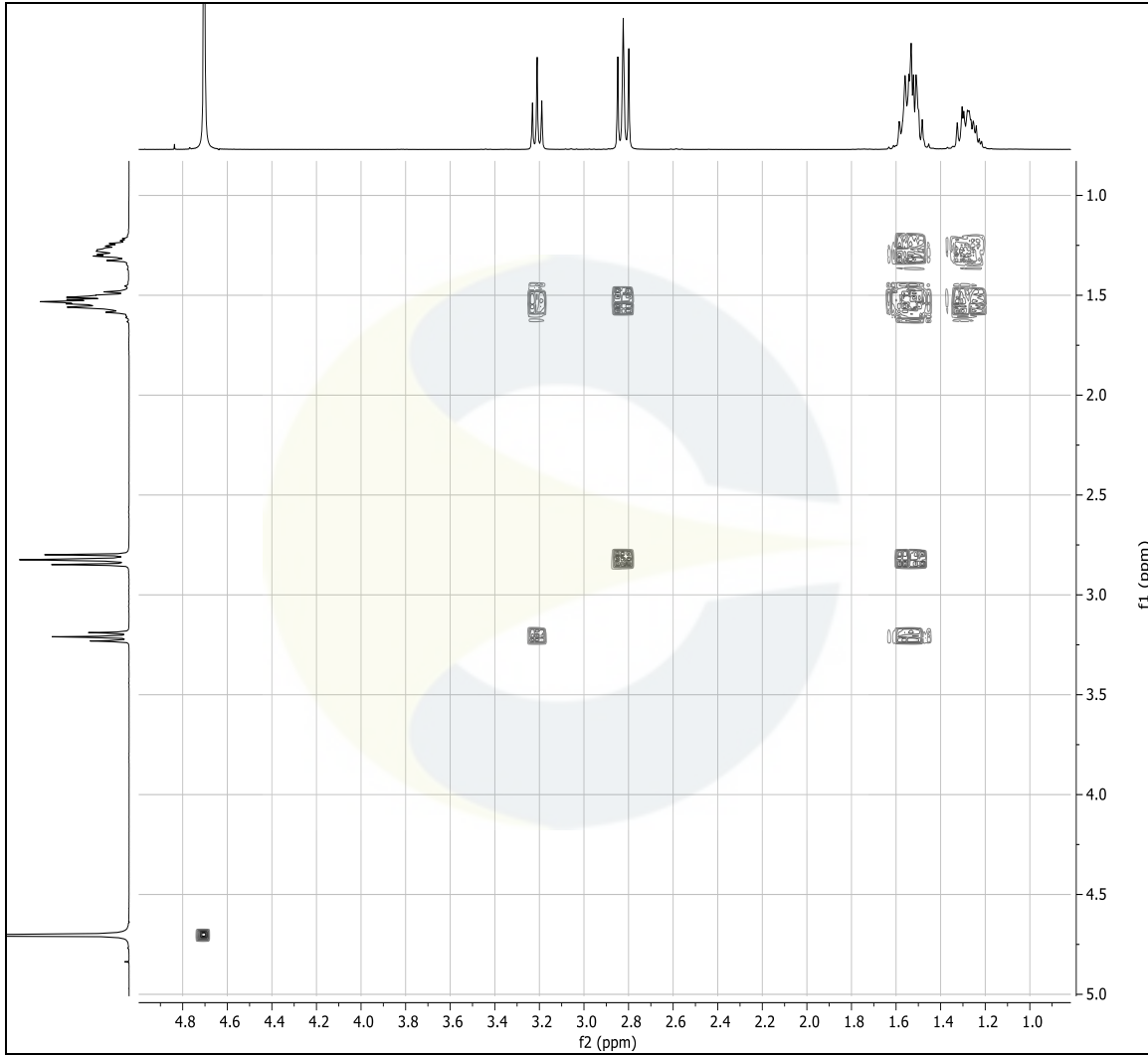


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**<sup>13</sup>C-NMR SPECTRUM L-(+)-LYSINE (CDXP-19-00566) IN D<sub>2</sub>O**



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**COSY-NMR SPECTRUM OF L-(+)-LYSINE (CDXP-19-00566) IN D<sub>2</sub>O**

**REVISION HISTORY**

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	10/17/2019	New report

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