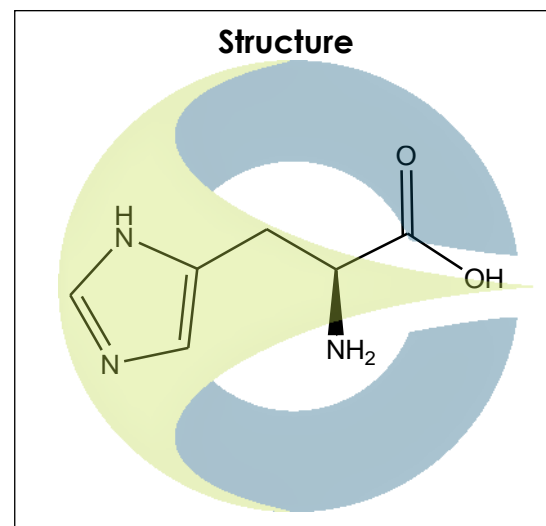


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PRODUCT NAME	L-Histidine
PART NUMBER	00008256
STANDARD TYPE	Primary (P)
LOT NUMBER	00008256-199
REPORT NUMBER	CDXA-RSS-3152-03
SAMPLE NUMBER	CDXA-08-2493
DATE OF SAMPLE	10/20/2008
DATE OF RE-EVALUATION	08/22/2013 (1 st); 08/13/2018 (2 nd); 07/07/2022 (3 rd)
DATE OF REPORT	08/01/2022



CHEMICAL NAMES	(S)-4-(2-Amino-2-carboxyethyl)imidazole; (S)- α -Amino-1H-imidazole-4-propanoic acid; Glyoxaline-5-alanine; Histidine
CHEMICAL FORMULA	C ₆ H ₉ N ₃ O ₂
MOLECULAR WEIGHT (MW)	155.15
CHEMICAL FAMILY	Amino acids
CAS NUMBER	[71-00-1]
EC#(EINECS)	200-745-3
RTECS	MS3070000

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	≥ 85%	99.9%
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	ND
Appearance	NA	NA	White powder

*Testing performed at an ISO 17025 accredited subcontracted laboratory.

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

STORAGE CONDITIONS

STORAGE Room Temperature in a dry place.

EXPIRATION DATE 07/2027 under the above conditions.

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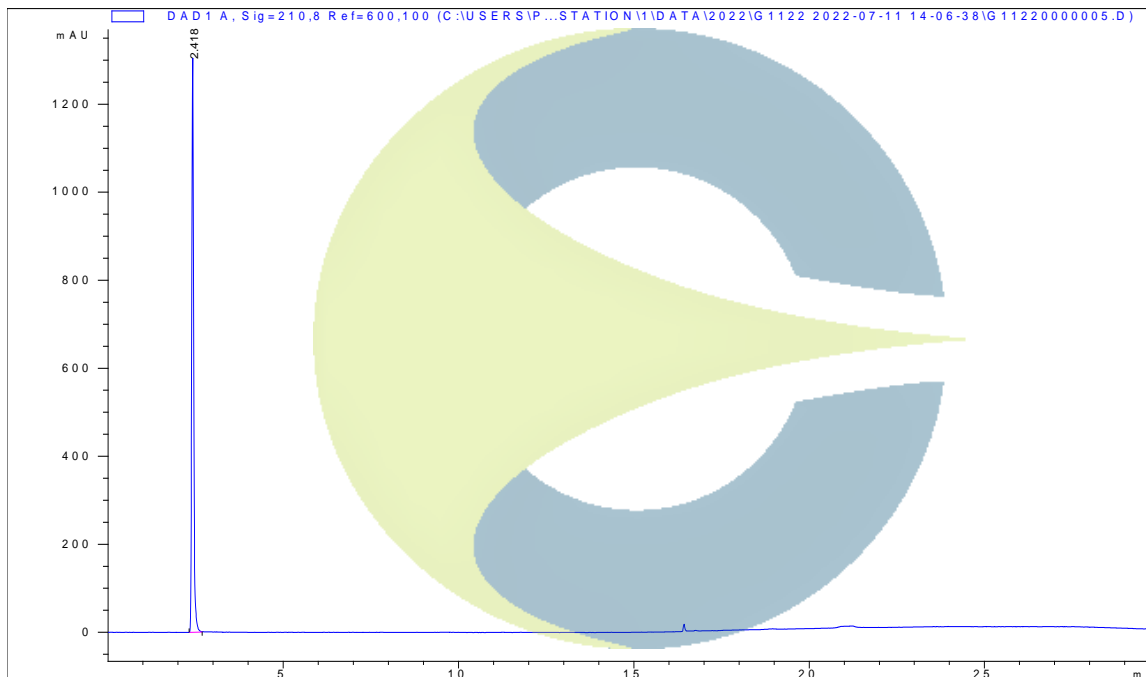
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ANALYTICAL CONDITIONS

INSTRUMENT	AGILENT 1260 HPLC UV-VIS (DAD); FINNIGAN LCQ-DECA
COLUMN	Phenomenex Synergi Hydro-RP 250 x 4.6 mm, 4 µm particle size
MOBILE PHASE	A – 10 mM Potassium phosphate in Ultrapure water, pH 2.9; B – Acetonitrile; Isocratic 0% B for 10 minutes increasing to 30% B over 10 minutes and holding for 4 minutes. Decreasing to 0% B over 5 minutes
COLUMN TEMP.	22 °C
FLOW RATE	1.0 mL/minute
INJECTION VOL.	1.0 µL
INJECTION CONC.	2.4 mg/mL in Ultrapure water
DETECTION	210 ± 4 nm

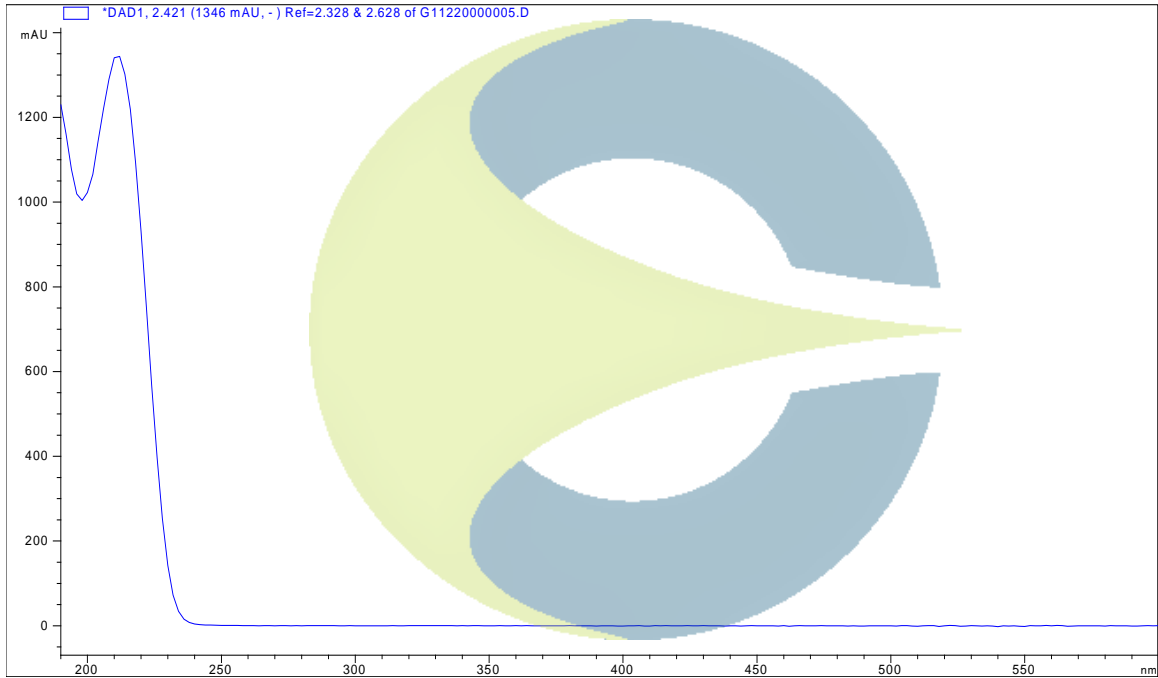
HPLC CHROMATOGRAM OF L-HISTIDINE (CDXA-08-2493)



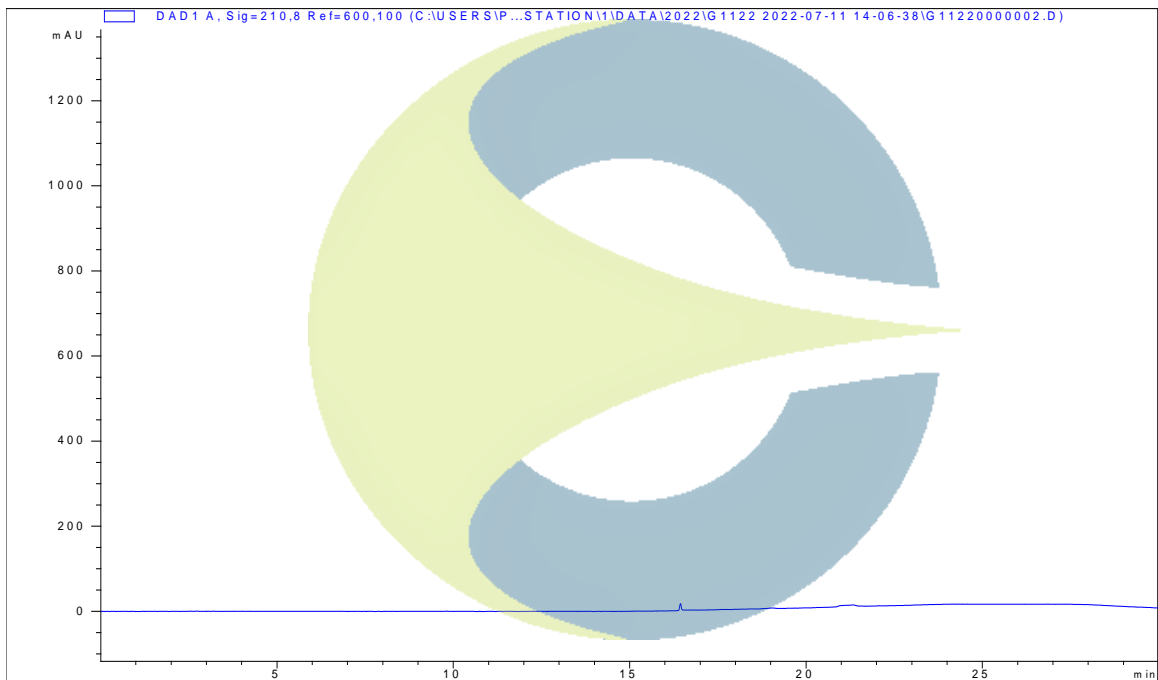
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UV SPECTRUM AT RT = 2.4 MINUTES



HPLC CHROMATOGRAM OF DILUENT BLANK

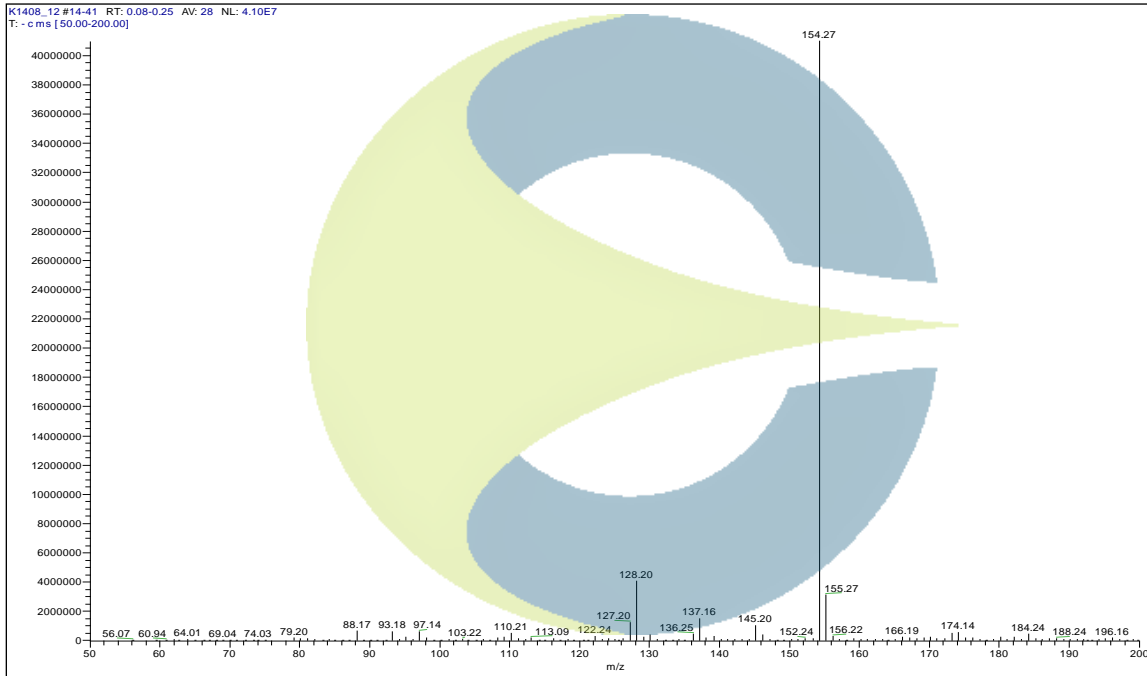


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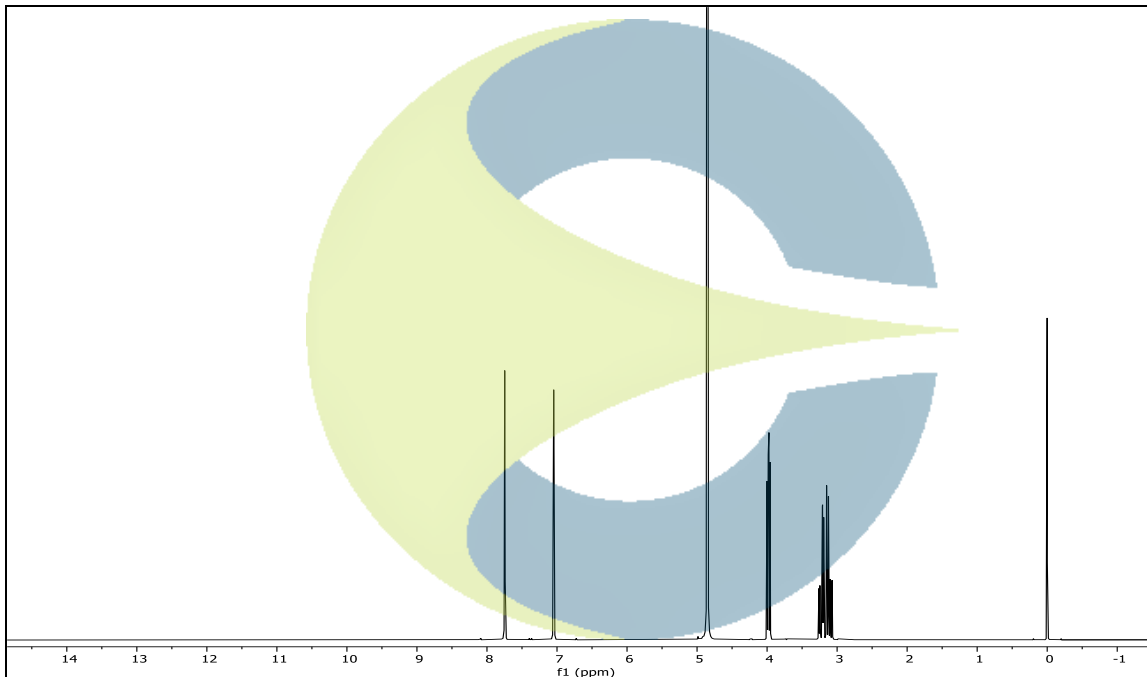
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Email: customerservice@lifetechindia.com Website: www.lifetechindia.com

MASS SPECTRUM OF L-HISTIDINE (CDXA-08-2493)

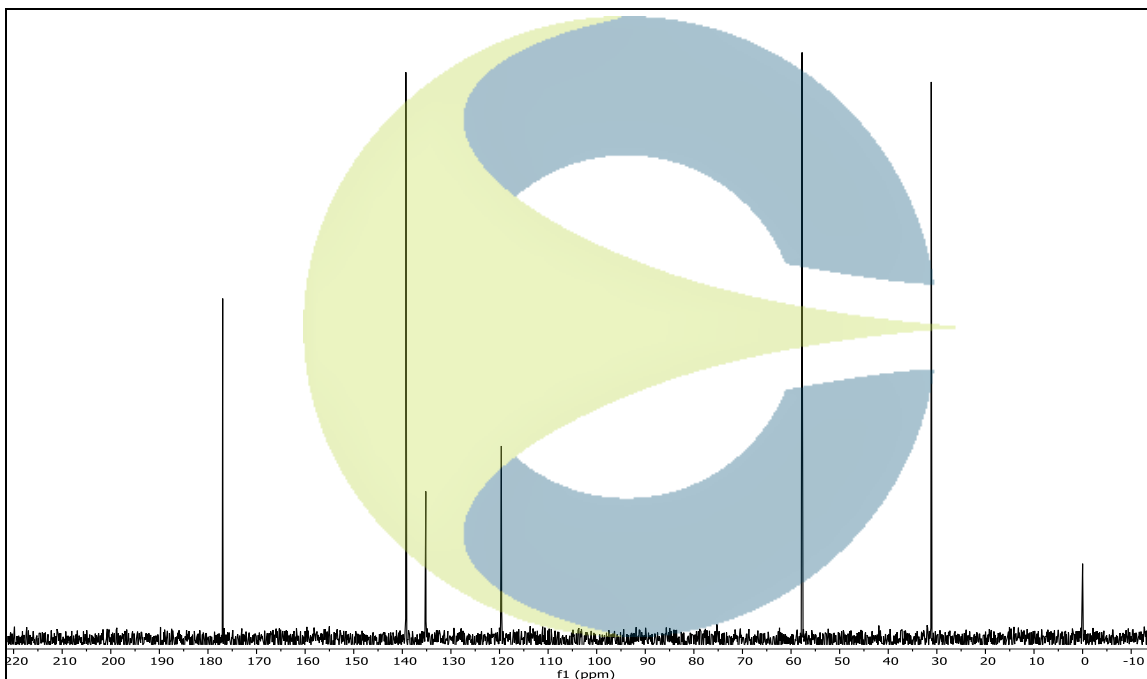


¹H-NMR SPECTRUM OF L-HISTIDINE (CDXA-08-2493) IN D₂O+TMSP



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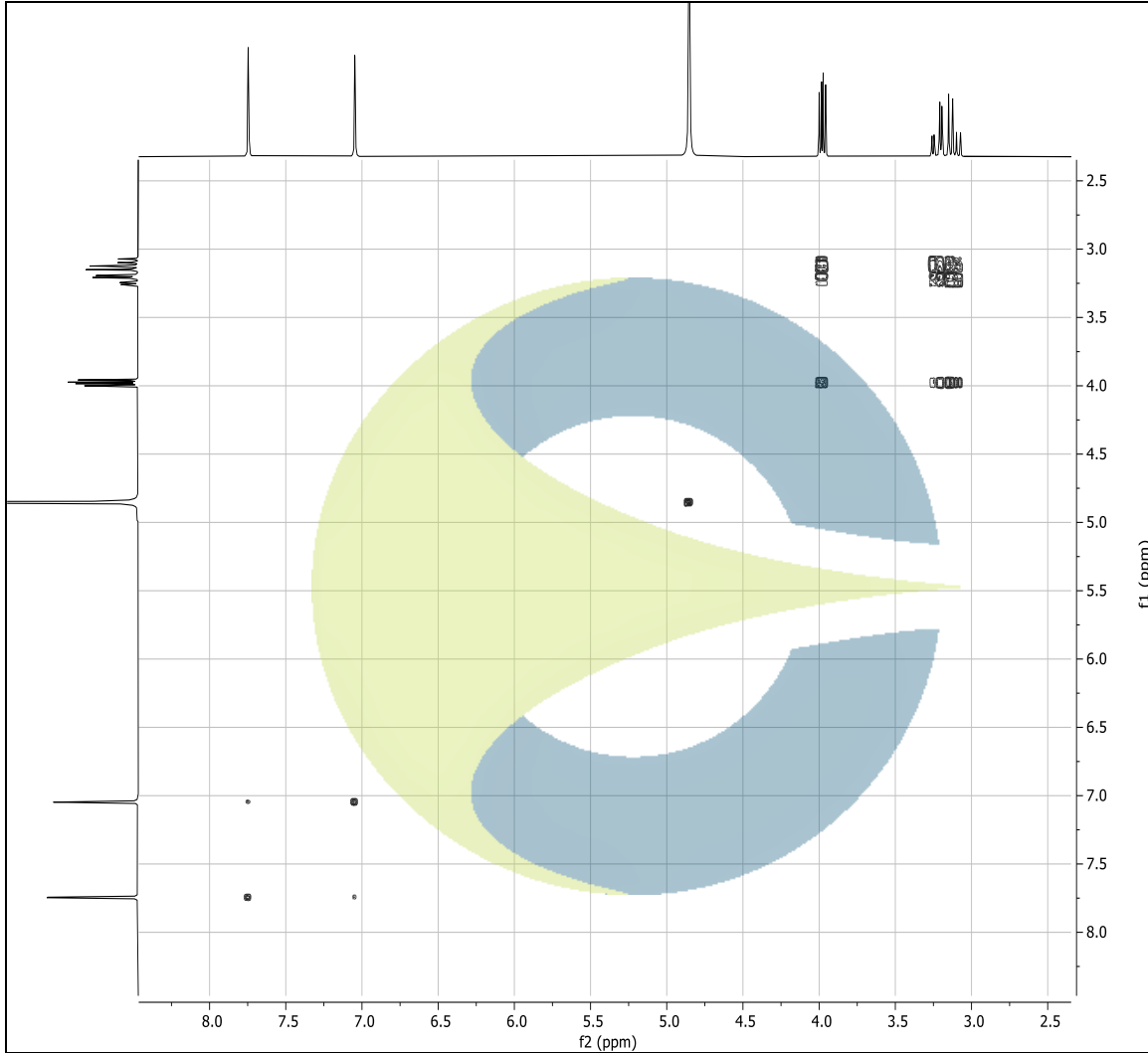
¹³C-NMR SPECTRUM OF L-HISTIDINE (CDXA-08-2493) IN D₂O+TMSP



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COSY-NMR SPECTRUM OF L-HISTIDINE (CDXA-08-2493) IN D₂O+TMSP

REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	12/02/2008	New report
01	09/13/2013	Material passed re-evaluation. Updated expiration date.
02	09/06/2018	Passed second re-evaluation by HPLC, KF. Updated expiration date, chemical structure, analytical method, conditions, chromatograms and results. Removed melting point.
03	08/01/2022	Passed third re-evaluation by HPLC, KF and NMR. Updated expiration date, analytical conditions, chromatograms and results

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