



大连汉德姆精细化学品有限公司

DALIAN HANDOM CHEMICALS CO.,LTD.

Certificate of Analysis

Product Name: L-Threonine

CAS No.: 72-19-5

Batch No.: HDC20230611

Batch Quantity: 800.00kg

Manufacturing Date: Jun 11th, 2023

Retest Date: Jun 10th, 2025

Test Items	Specifications	Test Results
Appearance	White crystal or crystalline powder	Conforms
Identification	Compare the infrared absorption spectrum of the sample with that of the standard atlas.	Conforms
Assay	98.5% ~ 101.5%	99.6%
Specific Optical Rotation	-26.7° ~ -29.1°	-28.5°
Chloride (Cl)	Not more than 0.05%	<0.05%
Sulfate (SO ₄)	Not more than 0.03%	<0.03%
Iron (Fe)	Not more than 30 ppm	<30 ppm
Heavy Metals (as Pb)	Not more than 15 ppm	<15 ppm
Related Substances	Any other impurity: Not more than 0.5%	Conforms
	Total impurities: Not more than 2.0%	Conforms
Loss on Drying	Not more than 0.20%	0.12%
Sulfated Ash	Not more than 0.40%	0.03%
pH Value	5.0 ~ 6.5	5.7

Conclusion: The testing results of this batch are complied with the USP Standard.

Storage Conditions: Preserved in tight, light-resistant containers; kept at room temperature away from heat and moisture.