

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2026-05-19 16:25:20  
 Date of Next Testing: 2029-05-18 16:25:20  
 Product Name: **L-Threonine**  
 CAS Number: 72-19-5  
 Specifications & Purity: UltraBio™, Ultra pure, ≥99.5%(NT)  
 Lot #: E2613355  
 SKU #: **L433393**  
 Version: **1**  
 Analysis #: **697971**  
 Storage Temperature: Room temperature

Parameter	Limit Values	Result
foreign amino acids	0-0.5 (%)	0.02500 %
Loss on drying	0-0.1 (%)	0.07000 %
Residue on Ignition	0-0.1 (%)	0.02000 %
Chloride (Cl-)	0-50 (ppm)	1.32500 ppm
Assay(Titration by HClO4)	99.5-100.5 (%)	99.80000 %
Specific Rotation [α] <sub>20</sub> /D(c=5 in H <sub>2</sub> O)	-29~-28 (°)	-28.10000 °
Melting point	255-265 (°C)	264.82000 °C
Purity(HPLC)	99.5-100 (%)	99.51000 %
Aluminum(Al)	0-5 (ppm)	0.00000 ppm
Barium(Ba)	0-5 (ppm)	0.00000 ppm
Bismuth(Bi)	0-5 (ppm)	0.00000 ppm
Calcium(Ca)	0-50 (ppm)	0.00000 ppm
Cadmium(Cd)	0-5 (ppm)	0.00000 ppm
Cobalt(Co)	0-5 (ppm)	0.00000 ppm
Chromium(Cr)	0-5 (ppm)	0.00000 ppm
Copper(Cu)	0-5 (ppm)	0.00000 ppm
Iron(Fe)	0-5 (ppm)	0.00000 ppm
Potassium(K)	0-50 (ppm)	0.20000 ppm
Lithium(Li)	0-5 (ppm)	0.00000 ppm
Magnesium(Mg)	0-5 (ppm)	0.00000 ppm
Manganese(Mn)	0-5 (ppm)	0.00000 ppm
Molybdenum(Mo)	0-5 (ppm)	0.00000 ppm
Sodium(Na)	0-50 (ppm)	0.20000 ppm
Nickel(Ni)	0-5 (ppm)	0.00000 ppm
Lead(Pb)	0-5 (ppm)	0.00000 ppm

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Parameter	Limit Values	Result
Strontium(Sr)	0-5 (ppm)	0.00000 ppm
Zinc(Zn)	0-5 (ppm)	0.00000 ppm
Arsenic(As)	0-0.1 (ppm)	0.00000 ppm
Total sulfur as SO4 (ICP)	0-100 (ppm)	0.00000 ppm
Ammonia (NH4)	0-500 (ppm)	200.00000 ppm
Appearance(L433393)	White to Off White Powder or Crystals	White to Off White Powder or Crystals
Infrared spectrum	Conforms to Structure	Conforms to Structure
Solubility(250mg in 5ml Water),Colorless Clear	Pass	Pass



John Su  
QA & QC Manager