

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2025-12-31 09:00:10
 Date of Next Testing: 2028-12-30 09:00:10
 Product Name: **L-Tryptophan**
 CAS Number: 73-22-3
 Specifications & Purity: UltraBio™, ≥99.5%(NT)
 Lot #: L2529359
 SKU #: **L755707**
 Version: **2**
 Analysis #: **616588**
 Storage Temperature: Protected from light, Room temperature

Parameter	Limit Values	Result
Assay(Titration by HClO ₄)	99.5-100.5 (%)	99.91000 %
Melting point(Decomposition)	280-290 (°C)	283.60000 °C
Loss on drying	0-0.1 (%)	0.09600 %
Aluminum(Al)	0-5 (ppm)	0.00000 ppm
Barium(Ba)	0-5 (ppm)	0.00000 ppm
Calcium(Ca)	0-10 (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)	2.00000 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)	19.00000 ppm
Nickel(Ni)	0-5 (ppm)	0.00000 ppm
Strontium(Sr)	0-5 (ppm)	0.00000 ppm
Zinc(Zn)	0-5 (ppm)	0.00000 ppm
Arsenic(As)(MHS-AAS)	0-0.1 (ppm)	0.00000 ppm
Total sulfur as SO ₄ (ICP)	0-50 (ppm)	0.00000 ppm
Chloride (Cl ⁻)	0-50 (ppm)	0.00000 ppm
Cut-off(3.065 g in 30 ml in 0.5M HCl)	≤326 (nm)	326.00000 nm
Bismuth(Bi)	0-5 (ppm)	0.00000 ppm

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Parameter	Limit Values	Result
specific rotation $[\alpha]_{20/D(C=1 \text{ in water})}$	-32.5~-30.5 (°)	-31.59900 °
Lead(Pb)	0-5 (ppm)	0.00000 ppm
Sulphated ash	0-0.1 (%)	0.09900 %
Appearance(L755707)	Colorless to White Powder or Crystals	Colorless to White Powder or Crystals
Solution(3.065g in 30ml in 0.5M HCl)	Colorless to faintly yellow clear	Colorless to faintly yellow clear
Infrared spectrum	Conforms to Structure	Conforms to Structure



John Su
QA & QC Manager