

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2025-12-31 09:04:11
 Date of Next Testing: 2028-12-30 09:04:11
 Product Name: **L-Tryptophan**
 CAS Number: 73-22-3
 Specifications & Purity: UltraBio™, ≥99.5%(NT)
 Lot #: L2529360
 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 (%)	99.91 %
Melting point(Decomposition)	280-290 (°C)	283.60 °C
Loss on drying	0-0.1 (%)	0.10 %
Aluminum(Al)	0-5 (ppm)	0.00 ppm
Barium(Ba)	0-5 (ppm)	0.00 ppm
Calcium(Ca)	0-10 (ppm)	0.00 ppm
Cadmium(Cd)	0-5 (ppm)	0.00 ppm
Cobalt(Co)	0-5 (ppm)	0.00 ppm
Chromium(Cr)	0-5 (ppm)	0.00 ppm
Copper(Cu)	0-5 (ppm)	0.00 ppm
Iron(Fe)	0-5 (ppm)	0.00 ppm
Potassium(K)	0-50 (ppm)	2.00 ppm
Lithium(Li)	0-5 (ppm)	0.00 ppm
Magnesium(Mg)	0-5 (ppm)	0.00 ppm
Manganese(Mn)	0-5 (ppm)	0.00 ppm
Molybdenum(Mo)	0-5 (ppm)	0.00 ppm
Sodium(Na)	0-50 (ppm)	19.00 ppm
Nickel(Ni)	0-5 (ppm)	0.00 ppm
Strontium(Sr)	0-5 (ppm)	0.00 ppm
Zinc(Zn)	0-5 (ppm)	0.00 ppm
Arsenic(As)(MHS-AAS)	0-0.1 (ppm)	0.00000 ppm
Total sulfur as SO ₄ (ICP)	0-50 (ppm)	0.00 ppm
Chloride (Cl ⁻)	0-50 (ppm)	0.00 ppm
Cut-off(3.065 g in 30 ml in 0.5M HCl)	≤326 (nm)	326.00000 nm
Bismuth(Bi)	0-5 (ppm)	0.00 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)	0.00 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