

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing:	2024-10-25 17:38:50
Date of Next Testing:	2027-10-25 17:38:50
Product Name:	<b>L-Leucine</b>
CAS Number:	61-90-5
Specifications & Purity:	UltraBio™, Ultra pure, BioReagent, ≥99.5%(NT)
Lot #:	J2423106
SKU #	<b>L433129</b>
Version	<b>2</b>
<b>Analysis #:</b>	<b>427106</b>
Storage Temperature:	Protected from light

Parameter	Limit Values	Result
Purity(Titration by HClO <sub>4</sub> )	99.5-101 (%)	100.60 %
Residue on Ignition	0-0.1 (%)	0.00500 %
drying Loss(20 °C)	0-0.1 (%)	0.02000 %
Aluminum(Al)	0-5 (ppm)	0.00 ppm
Arsenic(As)	0-0.1 (ppm)	0.00300 ppm
Barium(Ba)	0-5 (ppm)	0.00 ppm
Bismuth(Bi)	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)	0.23 ppm
Potassium(K)	0-50 (ppm)	0.00 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
NH <sub>4</sub> <sup>+</sup>	0-100 (ppm)	85.00000 ppm
Sodium(Na)	0-100 (ppm)	0.00 ppm
Nickel(Ni)	0-5 (ppm)	4.00 ppm
Lead(Pb)	0-5 (ppm)	3.00 ppm
Strontium(Sr)	0-5 (ppm)	4.52 ppm
Zinc(Zn)	0-5 (ppm)	2.25 ppm
Chloride (Cl-)	0-200 (ppm)	100.00 ppm

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Parameter	Limit Values	Result
Sulfate(SO42-)	0-100 (ppm)	100.00 ppm
UV Absorbance 260nm(0.1 M in 1 M HCl)	0-0.05	0.00360
UV Absorbance 280nm(0.1 M in 1 M HCl)	0-0.05	0.00450
Specific Rotation [α] <sub>20</sub> /D(c=4 in 6N HCl)	14.5-17.3 (°)	15.60°
Appearance(L433129)	White to Off-White Powder or Crystalline powder or Shiny flakes	White to Off-White Powder or crystalline powder or shiny flakes
NMR Spectrum 1H	Conforms to Structure	Conforms to Structure

John Su  
QA & QC Manager