



Certificate of Analysis

L-Leucine USP

Catalog Number: LC1002
Lot Number: 1116501
CAS Number: 61-90-5
Synonym(s): (S)-2-Amino-4-methylpentanoic acid
Molecular Formula: C₆H₁₃NO₂
Molecular Weight: 131.17
Storage: 15°C – 30°C
Date of Manufacture: March 25, 2013
Retest Date: January 20, 2017

Test	Specification	Result
Appearance	White crystals	White crystals
Assay (Dry Basis, HClO ₄ Titration)	98.5% to 101.0%	99.8%
Identification (IR)	To match standard	Conforms
H-NMR	To match standard	Conforms
Chromatographic Purity (other amino acids)	≤ 2.0%	< 0.1%
Moisture (LOD)	≤ 0.2%	0.13%
pH (1% Solution, H ₂ O)	5.5 to 7.0	6.0
Residue on Ignition	≤ 0.10%	0.03%
Specific Rotation (40 mg/mL, 6N HCl @ 20°C)	+14.5° to +16.5°	15.55°
Specific Rotation (40 mg/mL, 6N HCl @ 25°C)	+14.9° to +17.3°	15.75°
Appearance of Solution	Clear, colorless solution	Conforms
Heavy Metals (as Pb)	≤ 10 ppm	8 ppm
Ammonium (NH ₄)	≤ 0.01%	0.01%
Chloride (Cl)	≤ 0.02%	0.02%
Iron (Fe)	≤ 10 ppm	8 ppm
Sulfate (SO ₄)	≤ 0.03%	0.02%
Bioburden	≤ 50 CFU/g	< 50CFU/g
Endotoxin (1% solution)	≤ 20 EU/g	< 20EU/g

Approved by:

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