

CERTIFICATE OF ANALYSIS

Product Name:	L-Leucine (Fermentation)	Quantity:	300kg
Batch Number:	21100601	Analysis Date:	6 th October, 2021
Production Date:	6 th October, 2021	Re-Test Date:	5 th October, 2023
Reference Standard:	USP24		
Item	Specification	Results	Test Method
Appearance	White crystals or crystalline powder	Conforms	Visual
Identification	Infrared Absorption	Conforms	USP<197K>
Assay	98.5~101.5%	99.1%	Titration
Loss on Drying	≤0.2%	0.12%	USP<731>
Residue on Ignition	≤0.4%	0.13%	USP<281>
Specific Rotation [α] _D ²⁵	+14.9°~+17.3°	+15.7°	USP<781S>
pH	5.5~7.0	5.8	USP<791>
Chloride (Cl)	≤0.05%	<0.05%	USP<221>
Sulfate (SO ₄)	≤0.03%	<0.03%	USP<221>
Iron (Fe)	≤0.003%	<0.003%	USP<241>
Heavy Metals (Pb)	≤0.0015%	<0.0015%	USP<231>
Organic volatile impurities	Meets the requirement	Conforms	USP<467>
Conclusion:	This Batch is conforming to the USP24 standard.		