

Certificate of Analysis

Date of Testing:	2024-08-02 11:16:26
Date of Next Testing:	2028-08-01 11:16:26
Product Name:	L-Tryptophan
CAS Number:	73-22-3
Specifications & Purity:	from non-animal source, meets EP, JP, USP testing specifications, for cell culture, 99.0-101.0%
Lot #:	G2431489
SKU #	T118579
Version	0
Analysis #:	366371

Parameter	Limit Values	Result
Ammonia (NH ₄)	0-0.02 (%)	0.00 %
Chloride	0-0.02 (%)	0.00 %
PH test(1% in water)	3-3.5	3.10
(As)Arsenic	0-1 (ppm)	0.00 ppm
Ignition Residue	0-0.1 (%)	0.00 %
Iron(Fe)	0-20 (ppm)	1.98 ppm
Heavy metals	0-10 (ppm)	0.00 ppm
Sulfate(SO ₄ ²⁻)	0-0.02 (%)	0.00 %
Endotoxin Assay	0-1 (EU/mg)	0.23 EU/mg
Specific Rotation [α] ₂₀ /D(0.1g/10mL 1M HCl)EP and JP	-32.5--30.5 (°)	-30.60°
Loss on drying	0-0.1 (%)	0.06 %
Assay(dry basis)	99-100.5 (%)	100.16 %
Specific Rotation [α] ₂₀ /D(c=1 H ₂ O)	-32.8--29.4 (°)	-29.43°
Appearance (T118579)	white to yellow crystals,powder,crystalline powder	white to yellow crystals,powder,crystalline powder
Cell Culture Test	pass	Pass
Ninhydrin-positive substances (other amino acids)	Conforms	Conforms
Origin	non-animal source	non-animal source
Residual solvents	complies	complies
Solubility,Clear , 0.5 g to 20 mL of 2M HCl	pass	Pass
Infrared spectrum	Conforms to Structure	Conforms to Structure



ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

A handwritten signature in black ink that reads "John Su". The signature is written in a cursive, flowing style.

John Su
QA & QC Manager