

Certificate of Analysis

Date of Testing: 2022-03-23 03:04:24
 Date of Next Testing: 2026-03-22 03:03:17
 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 #: E2224085
 SKU #: **T118579**
 Analysis: **084515**

Parameter	Limit Values	Result
Ammonia (NH ₄)	0-0.02 (%)	0.01 %
Chloride	0-0.02 (%)	0.00 %
PH test(1% in water)	3-3.5	3.30
(As)Arsenic	0-1 (ppm)	0.00 ppm
Ignition Residue	0-0.1 (%)	0.00 %
Iron(Fe)	0-20 (ppm)	6.80 ppm
Heavy metals	0-10 (ppm)	0.00 ppm
Sulfate(SO ₄ ²⁻)	0-0.02 (%)	0.01 %
Endotoxin Assay	0-1 (EU/mg)	0.34 EU/mg
Specific Rotation [α] ₂₀ /D(0.1g /10mL 1M HCl)EP and JP	-32.5--30.5 (°)	-31.50°
Specific Rotation [α] ₂₀ /D(c=1 H ₂ O)	-29.4 ~ -32.8 (°)	-29.75°
Loss on drying	0-0.1 (%)	0.10 %
Assay(dry basis)	99-100.5 (%)	100.49 %
Appearance (T118579)	white to yellow crystals,powder,crystalline powder	white to yellow crystals,powder,crystalline powder
Cell Culture Test	pass	Pass
Infrared spectrum	Conforms to Structure	Conforms to Structure
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



ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

A handwritten signature in black ink that reads "John Su".

John Su
QA & QC Manager