

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2022-07-19 13:14:15  
 Date of Next Testing: 2026-07-18 13:14:15  
 Product Name: **L-Phenylalanine**  
 CAS Number: 63-91-2  
 Specifications & Purity: from non-animal source,EP,JP,USP ; for cell culture,98.5 to 101.0%  
 Lot #: G2214321  
 SKU #: **P110425**  
**Analysis:** **099874**  
 Storage Temperature: Protected from light,Desiccated

Parameter	Limit Values	Result
Bacterial endotoxins	0-25 (EU/g)	22.11 EU/g
(As)Arsenic	0-1 (ppm)	0.52 ppm
PH test	5.4-6	5.70
Chloride	0-0.02 (%)	0.00 %
Sulfate(SO42-)	0-0.02 (%)	0.01 %
Ammonia (NH4)	0-0.02 (%)	0.01 %
Other amino acids	0-0.5 (%)	0.33 %
Loss on drying	0-0.2 (%)	0.10 %
Heavy metal (as Pb)	0-10 (ppm)	5.23 ppm
Ignition Residue (as sulfate)	0-0.1 (%)	0.03 %
Iron(Fe)	0-10 (ppm)	5.60 ppm
Assay(Titration by HClO4)	98.5-101 (%)	100.13 %
specific Rotation[a]20/D(c=2 in H2O EP)	-35--33.5 (°)	-33.50°
specific Rotation[a]25/D(c=2 in H2O USP)	-34.7--32.7 (°)	-32.70°
Appearance (P110425)	White crystal powder	White crystal 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,0.5g to 10ml of 1m hyd	Clear colorless	Clear Colorless



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

John Su  
QA & QC Manager