

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-02-08 19:23:04  
 Date of Next Testing: 2027-02-07 19:23:04  
 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 #: B2303907  
 SKU #: **P110425**  
**Analysis:** **089508**  
 Storage Temperature: Protected from light,Desiccated

Parameter	Limit Values	Result
Bacterial endotoxins	0-25 (EU/g)	12.50 EU/g
(As)Arsenic	0-1 (ppm)	0.38 ppm
specific Rotation $[\alpha]_{20/D(c=2 \text{ in H}_2\text{O EP})$	-35--33.5 (°)	-34.57°
PH test	5.4-6	5.70
Chloride	0-0.02 (%)	0.01%
Sulfate(SO <sub>4</sub> <sup>2-</sup> )	0-0.02 (%)	0.01%
Ammonia (NH <sub>4</sub> )	0-0.02 (%)	0.01%
Other amino acids	0-0.5 (%)	0.29%
specific Rotation $[\alpha]_{25/D(c=2 \text{ in H}_2\text{O USP})$	-34.7--32.7 (°)	-34.15°
Loss on drying	0-0.2 (%)	0.01%
Heavy metal (as Pb)	0-10 (ppm)	3.50 ppm
Ignition Residue (as sulfate)	0-0.1 (%)	0.05%
Iron(Fe)	0-10 (ppm)	6.31 ppm
Assay(Titration by HClO <sub>4</sub> )	98.5-101 (%)	99.99%
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