

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2024-06-27 09:58:22
 Date of Next Testing: 2028-06-26 09:58:22
 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 #: F2425356
 SKU #: **P110425**
 Version: **2**
 Analysis #: **365213**
 Storage Temperature: Protected from light,Desiccated

Parameter	Limit Values	Result
Bacterial endotoxins	0-25 (EU/g)	4.68 EU/g
(As)Arsenic	0-1 (ppm)	0.30 ppm
PH test	5.4-6	5.60
Chloride	0-0.02 (%)	0.00 %
Sulfate(SO42-)	0-0.02 (%)	0.00 %
Ammonia (NH4)	0-0.02 (%)	0.00 %
Other amino acids	0-0.5 (%)	0.06 %
specific Rotation $[\alpha]_{25/D(c=2 \text{ in H}_2\text{O USP})$	-34.7--32.7 (°)	-32.98 °
Loss on drying	0-0.2 (%)	0.00 %
Heavy metal (as Pb)	0-10 (ppm)	1.97 ppm
Ignition Residue (as sulfate)	0-0.1 (%)	0.04 %
Iron(Fe)	0-10 (ppm)	1.94 ppm
Assay(Titration by HClO4)	98.5-101 (%)	100.59 %
specific Rotation $[\alpha]_{20/D(c=2 \text{ in H}_2\text{O EP})$	-35--33.5 (°)	-33.51 °
Appearance (P110425)	White crystal powder	White crystal powder
Ninhydrin-positive substances (other amino acids)	Conforms	Conforms
Origin	non-animal source	non-animal source
Residual solvents	complies	complies
Cell Culture Test	pass	Pass
Infrared spectrum	Conforms to Structure	Conforms to Structure
Solubility in hot Water, almost transparency,Clear colorless	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