

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2022-07-19 11:07:10
 Date of Next Testing: 2026-07-18 11:07:10
 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 #: G2214635
 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