

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2025-05-28 14:41:56

Date of Next Testing: 2029-05-27 14:41:56

Product Name: **L-Proline**

CAS Number: 147-85-3

Specifications & Purity: Animal Free, USP, Ph.Eur., for cell culture, ≥99%

Lot #: E2521640

SKU #: **P120032**

Version: **1**

Analysis #: **518705**

Storage Temperature: Protected from light, Room temperature

| Parameter                                                                               | Limit Values          | Result                |
|-----------------------------------------------------------------------------------------|-----------------------|-----------------------|
| Ammonia (NH <sub>4</sub> )                                                              | 0-0.02 (%)            | 0.00100 %             |
| PH(10% in water)                                                                        | 5.9-6.9               | 5.98000               |
| Ignition Residue(Ash)                                                                   | 0-0.1 (%)             | 0.00000 %             |
| Chloride (Cl <sup>-</sup> )                                                             | 0-0.02 (%)            | 0.00000 %             |
| Heavy metal (as Pb)                                                                     | 0-10 (ppm)            | 0.00000 ppm           |
| Specific Rotation [α] <sub>20</sub> /D(c=4 in H <sub>2</sub> O)(calcd.on anh.substance) | -86--84 (°)           | -84.10000 °           |
| Endotoxin Assay                                                                         | 0-1 (EU/mg)           | 0.00000 EU/mg         |
| Sulfate(SO <sub>4</sub> <sup>2-</sup> )                                                 | 0-0.02 (%)            | 0.00000 %             |
| Specific Rotation [α] <sub>25</sub> /D (USP: 25 °C in c=4 in H <sub>2</sub> O)          | -86.3--84.3 (°)       | -85.30000 °           |
| Iron(Fe)                                                                                | 0-10 (ppm)            | 5.00000 ppm           |
| Loss on drying                                                                          | 0-0.3 (%)             | 0.02000 %             |
| Purity(as dry basis)                                                                    | 98.5-101.5 (%)        | 99.63200 %            |
| Appearance (P120032)                                                                    | white powder          | White powder          |
| Cell Culture Test                                                                       | pass                  | Pass                  |
| Infrared spectrum                                                                       | Conforms to Structure | Conforms to Structure |
| Ninhydrin-Positive Substances                                                           | Conforms              | Conforms              |
| Origin                                                                                  | non-animal source     | non-animal source     |
| Solubility in H <sub>2</sub> O , clear colorless , 1 g / 10 ml in water                 | pass                  | Pass                  |



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

John Su  
QA & QC Manager