

## Certificate of Analysis

Product Name: **L-Proline**  
 Raw Material: **Glucose**  
 Country of Origin: **China**  
 Batch Number: **Varies**  
 Manufacture Date: **Varies**  
 Retest Date: **Varies**

### Test Results Obtained by PureBulk

| ITEMS                        | SPECIFICATIONS                     | RESULTS   |
|------------------------------|------------------------------------|-----------|
| L-Proline (dry basis) (HPLC) | ≥98.5%                             | 99.27%    |
| Aerobic Plate Count          | ≤1000 cfu/g                        | <20 cfu/g |
| Coliforms                    | ≤100 cfu/g                         | <20 cfu/g |
| <i>E. Coli</i>               | Negative                           | Absent    |
| <i>Staph aureus</i>          | Negative                           | Absent    |
| Yeast & Mold                 | ≤100 cfu/g                         | <20 cfu/g |
| <i>Salmonella</i>            | Negative                           | Absent    |
| <i>Pseudo. aeruginosa</i>    | Negative                           | Absent    |
| Conclusion (PureBulk):       | This product conforms to standards |           |

The following information is an indirect translation of information provided from the Manufacturer's Certificate of Analysis, and should not be used solely as an instrument for strict quality control.

| ITEMS                                | SPECIFICATIONS                                                | RESULTS    |
|--------------------------------------|---------------------------------------------------------------|------------|
| Appearance                           | Whitish crystals or crystal powder, slight smell, taste sweet | Conforms   |
| Specific Rotation [α] <sub>D20</sub> | -84.5 ~ -86.0                                                 | -85.2      |
| Loss on Drying                       | ≤0.3%                                                         | 0.05%      |
| Residue on Ignition                  | ≤0.1%                                                         | 0.03%      |
| Transmittance                        | ≥98.0%                                                        | 99.5%      |
| Chloride (Cl)                        | ≤0.02%                                                        | <0.02%     |
| Sulfate (SO <sub>4</sub> )           | ≤0.02%                                                        | <0.02%     |
| Other Amino Acids                    | Negative                                                      | Negative   |
| pH                                   | 5.9-6.9                                                       | 6.28       |
| Ammonium Salt                        | ≤0.02%                                                        | <0.02%     |
| Iron Salt                            | ≤0.001%                                                       | <0.001%    |
| Heavy Metals                         | ≤10 mg/kg                                                     | <10 mg/kg  |
| Total Arsenic                        | ≤3 mg/kg                                                      | <3 mg/kg   |
| Arsenic Salt                         | ≤0.0001%                                                      | <0.0001%   |
| Cadmium (Cd)                         | ≤1 mg/kg                                                      | <1 mg/kg   |
| Mercury (Hg)                         | ≤0.1 mg/kg                                                    | <0.1 mg/kg |
| Conclusion (Manufacturer):           | This product conforms to enterprise standards                 |            |

**Additional information:** Allergen Free || Melamine Free || Gluten-Free || No Pesticides || BSE/TSE Free || GRAS - Yes || Vegetarian/Vegan

**Sterilization:** Non-EtO || Non-Irradiation

**GMO Statement:** Non-GMO

**Storage Conditions:** Keep in sealed container under 25°C.

Keep away from strong light, heat and moisture.

*Purebulk.Inc verifies that the information contained herein is true and correct to the best of our knowledge.*

*Verified By: Candace Gibson*

( This document was produced electronically and is valid without signature. )