



# BIO-CHEM CHEMICALS

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## CERTIFICATE OF ANALYSIS

|                         |  |
|-------------------------|--|
| <b>Product Name</b>     | <b>L-GLUTAMIC ACID 99% FOR BACTERIOLOGY &amp; TISSUE CULTURE</b> |
| <b>Cas No.</b>          | <b>56-86-0</b>   |
| <b>Code No.</b>         | <b>B-01284</b>   |
| <b>Batch No.</b>        | <b>BC01221389</b>  |
| <b>Mfg.Date</b>         | <b>JAN-2024</b>  |
| <b>Date of Analysis</b> | <b>08/01/2024</b>  |
| <b>Retest Date</b>      | <b>DEC-2024</b>  |

| <b>TEST</b>   | <b>SPECIFICATION</b> | <b>RESULT</b>  |
|---|----------------------|----------------|
| Appearance  | A white powder       | A white powder |
| Assay (acidimetric)   | Min 99%              | 99.32%         |
| Specific optical rotation<br>( $[\alpha]_{20}^D$ ; 100 g/L in 1 mol/L<br>HCl; on dried substance) | +30.5 to +32.5 0     | +31.5°         |
| Chloride (Cl)   | Max 0.02%            | 0.0001%        |
| Sulphate (SO <sub>4</sub> )   | Max 0.03%            | 0.007%         |
| Heavy metal (as Pb)   | Max 0.001%           | 0.0003%        |
| Iron (Fe)   | Max 0.001%           | 0.0008%        |
| Ammonium (NH <sub>4</sub> )   | Max 0.02%            | 0.001%         |
| Ninhydrin positive substance<br>(TLC)   | Max 0.5%             | 0.14%          |
| Sulphated ash (at 600°C)  | Max 0.1%             | 0.065%         |
| Loss on drying (at 105°C)   | Max 0.5%             | 0.15%          |

REMARK: This product complies as per the specifications of **BIO-CHEM CHEMICALS**.

**This is an electronically generated certificate and is valid without a signature.**

For Issues relating to quality you may send us a mail on [info@biofinechemicals.com](mailto:info@biofinechemicals.com) or call on  
**+91-7404210730** Website- [www.biofinechemicals.com](http://www.biofinechemicals.com)