

Certificate of Analysis

| Product Name: | L-Theanine | Batch Number: | Varies |
|--------------------|--|-------------------|--------|
| CAS No. | 3081-61-6 | Manufacture Date: | Varies |
| Molecular Formula: | C ₇ H ₁₄ N ₂ O ₃ | Expiry Date: | Varies |

| IDENTIFICATION | | SPECIFICATION | RESULT |
|----------------|----------------------|--|-----------------|
| Assay | | 98.0 - 102.0% | 98.98 - 99.3% |
| Physical | Appearance | White / Quasi-white crystals or crystalline powder | Complies |
| | Melting point | 202 - 215°C | 202.5 - 203.0°C |
| | Specific rotation | +7.5 to +8.5° | +8.0 to +8.06° |
| | Moisture | ≤ 2.0% | 0.27 - 0.51% |
| | Residue on ignition | ≤ 0.2% | 0.05 - 0.20% |
| | рН | 5.0 - 6.0 | 5.2 - 5.63 |
| | Loss on drying | ≤ 1% | 0.19 - 0.29% |
| Chemical | Heavy Metals (as Pb) | ≤ 10 ppm | Complies |
| | Cadmium (Cd) | ≤ 1 ppm | Complies |
| | Arsenic (As) | ≤ 1 ppm | Complies |
| | Chlorides (Cl) | ≤ 0.02% | Complies |
| | Sulfate | ≤ 0.02% | Complies |
| Microbial | Total Plate Count | ≤ 1000 cfu/g | Complies |
| | Yeast & Mold | ≤ 100 cfu/g | Complies |
| | E. Coli, Salmonella | Negative | Complies |

| Else | Storage condition | Sealed, kept in shady and dry place | |
|------|-------------------|-------------------------------------|--|
| | Shelf life | Three years | |

