



TECHNICAL DATA SHEET

Product Name: L-Theanine

Chemical Name: L-Theanine

CAS No.: 3081-61-6

Molecular Formula: C₇H₁₄N₂O₃

Molecular Weight: 174.20 g/mol

Appearance: White crystalline powder

Grade: Food / Nutritional Supplement Grade, subject to supplier confirmation

1. Product Description

L-Theanine is a naturally occurring non-protein amino acid originally identified in tea leaves. It is structurally related to glutamine and is widely studied for its role in relaxation, cognitive performance, and nutritional applications.

L-Theanine is used as a functional ingredient in dietary supplements, functional foods, beverages, and other formulations, subject to applicable regulatory requirements.

2. Technical Specifications

Appearance		White to pale yellow crystalline powder
Identification		Pass test
Content	%	98.5-101.0
pH		5.0-6.0
Transmittance	≥%	98
Loss on drying (4h@150°C)	≤%	0.2
Residue on ignition	≤%	0.1
Chloride	≤%	0.02
Other amino acids	≤%	0.5
Total Plate Count	≤cfu/g	1000
Total Yeast & Mold	≤cfu/g	100
Staphylococcus aureus		Negative
Salmonella		Negative
Escherichia Coli		Negative

Note: The above values are a preliminary reference specification and must be confirmed against the manufacturer's current approved specification and batch COA before commercial use.

3. Physical and Chemical Properties

- Appearance: White crystalline powder
- Solubility: Soluble in water; actual solubility depends on test conditions
- Odor: Typically odorless or nearly odorless

4. Applications

L-Theanine may be used in the following applications, subject to local regulations and product suitability:

- Dietary supplements
- Functional foods and beverages
- Relaxation and stress-management formulations
- Cognitive wellness product development
- Nutritional ingredient blends
- Research and development

Any health-related claims must be supported by appropriate evidence and comply with the regulations of the target market.

5. Packaging

Standard packaging: To be confirmed according to the manufacturer's available options.

Packaging may include sealed inner liners with suitable outer packaging to protect the product during storage and transportation.

Customized packaging and labeling may be available upon request.

6. Storage Conditions

Store in a tightly sealed container in a cool, dry, and well-ventilated place. Protect from moisture, direct sunlight, and contamination.

Keep the container closed when not in use.

7. Shelf Life

To be confirmed by the manufacturer based on stability data and recommended packaging and storage conditions.

8. Handling and Safety

Handle in accordance with good industrial hygiene practices. Avoid unnecessary dust generation and contact with the eyes.

Use appropriate personal protective equipment as indicated in the applicable Safety Data Sheet (SDS).

Refer to the SDS for detailed safety, handling, and transportation information.

9. Transportation

Transportation classification and shipping requirements should be determined according to the applicable SDS and relevant transportation regulations.

10. Quality Assurance

Each batch should be tested against the manufacturer's approved product specifications. A Certificate of Analysis (COA) may be provided to document the analytical results of the supplied batch, subject to supplier arrangements.

Additional quality documentation, including TDS, SDS, and applicable certificates, can be discussed upon request.