TECHNICAL DATA SHEET

Product Name: L-(+)-Ergothioneine

Chemical Name: 2-Mercaptohistidine Trimethylbetaine

Synonyms: Ergothioneine,EGT, L-Ergothioneine, Thiol Histidine Betaine

CAS Number: 497-30-3

EINECS Number: 207-850-8

EC Number: 207-850-8

Molecular Formula: $C_9H_{15}N_3O_2S$

Molecular Weight: 229.30

● Product Description

L-(+)-Ergothioneine is a naturally occurring sulfur-containing amino acid derivative widely recognized for its strong antioxidant properties and cellular protective effects. It is naturally found in mushrooms, certain bacteria, and some plant sources.

Due to its excellent oxidative stress protection capability, Ergothioneine is widely used in dietary supplements, functional foods, cosmetics, anti-aging formulations, and nutraceutical products.

Jiangsu Khonor Chemicals Co., Limited supplies high quality L-(+)-Ergothioneine powder suitable for global health nutrition and cosmetic industries.

● Typical Specification

Parameter	Specification
Appearance	White to Off-White Crystalline Powder
Assay (HPLC)	≥ 98.0%
Identification	Positive
Loss on Drying	≤ 3.0%
Residue on Ignition	≤ 0.2%
Heavy Metals	≤ 10 ppm
Lead (Pb)	≤ 1 ppm
Arsenic (As)	≤ 1 ppm
Cadmium (Cd)	≤ 1 ppm

Mercury (Hg)	≤ 0.1 ppm
pH (1% Solution)	5.0 – 7.0

● Production Method

L-(+)-Ergothioneine is generally produced through advanced biological fermentation or synthetic manufacturing technologies followed by purification, crystallization, drying, and fine milling processes to achieve high purity standards.

● Functional Properties

- Strong antioxidant activity
- Cellular oxidative stress protection
- Supports mitochondrial health
- Free radical scavenging capability
- High stability in formulations
- Good water solubility

● Working Mechanism

Ergothioneine functions primarily as a powerful intracellular antioxidant. It can help neutralize reactive oxygen species (ROS) and reduce oxidative damage caused by environmental stress, aging, UV exposure, and metabolic activity. The body contains a specific transporter protein (OCTN1 transporter) that actively transports Ergothioneine into cells and tissues, especially in areas exposed to high oxidative stress such as:

- Brain
- Liver
- Skin
- Eyes
- Kidneys

This selective accumulation contributes to its protective biological functions.

● Applications

Dietary Supplements
Widely used in:

- Antioxidant capsules
- Anti-aging supplements
- Brain health products
- Immune support formulations

Functional Foods & Beverages
Suitable for:

- Functional drinks

- Nutritional powders
- Healthy aging nutrition products
- Wellness formulations

Cosmetic & Personal Care

Commonly used in:

- Anti-aging creams
- Skin protection serums
- Whitening products
- UV protection formulations

Pharmaceutical & Research Applications

Can be used in advanced research related to:

- Oxidative stress
- Cellular protection
- Healthy aging
- Neuroprotection

● Advantages of Ergothioneine

Feature	Benefit
Strong Antioxidant Activity	Helps reduce oxidative stress
Cellular Protection	Supports healthy cell function
High Stability	Suitable for multiple formulations
Specific Cellular Transport	Efficient tissue distribution
Broad Application Range	Nutraceutical and cosmetic use

● Packaging

- 1 kg Aluminum Foil Bag
- 5 kg Carton
- 25 kg Fiber Drum
- Customized Packaging Available

● Storage Conditions

Store in a cool, dry, and well-ventilated place away from heat, moisture, and direct sunlight. Keep container tightly sealed.

● Shelf Life

24 Months under recommended storage conditions.