

# FERMOPURE® FOR HAIR SUPPLEMENTS: BEAUTY STARTS FROM WITHIN

While one in five global consumers are worried about thinning hair, food players see opportunities and invest in beauty concepts.\* L-cystine is an essential component of keratin, the main protein in hair, skin and nails. The amino acid supports their strength via disulfide bridges and is therefore a very good solution for the beauty positioning of your products.

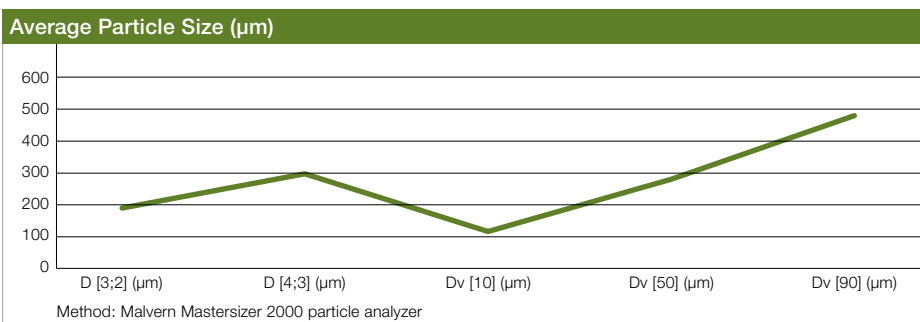
WACKER is the first company in the world to produce plant-based, natural L-cystine in a sustainable fermentation process. This patented technique was awarded an environmental prize in 2008. WACKER's natural L-cystine is manufactured with state-of-the-art equipment, resulting in the highest quality.

### Technical Data

FERMOPURE® Natural L-Cystine Food (contains > 98.5% L-cystine) is a white or almost white, crystalline powder. It is packed in units of 25 kg. It has a shelf life of at least 36 months when stored in unbroken original packaging in dry storage areas.

#### Typical Density and Particle Size

<b>Density:</b>	1.66 g/cm <sup>3</sup>
<b>Bulk density:</b>	approx. 1.66 g/ml
<b>Water solubility:</b>	0.122 g/l at 20 °C (68 °F)



### Production with Outstanding Quality

Our L-cystine is produced in León, Spain, in compliance with the outstanding quality demands of FSSC 22000, a GFSI-recognized standard for food safety management systems, and ISO 9001:2015. WACKER's fermentation site in León (capacity of 8 x 100 m<sup>3</sup> fermenters) has certificates for both standards to guarantee a superior safety level for our products. Furthermore, having a site based in Europe ensures a reliable supply chain.

#### Product Highlights

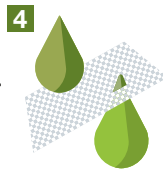
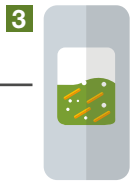
- Natural
- Vegan
- No human or animal sources
- Utmost purity and safety
- Kosher and halal-certified
- Sustainable raw materials



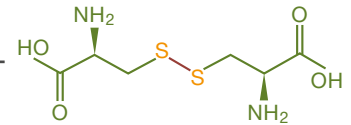
\* Source: Euromonitor

FERMOPURE® is a registered trademark of Wacker Chemie AG.

WACKER Fermentation for Utmost Purity, Safety and Efficiency



**L-Cystine**



**1. Plant-Based, Sustainable Raw Materials**

As a substrate for our fermentation process, we use glucose that is derived entirely from plant starch.

**2. Microorganism**

We use a harmless *E. coli* safety strain to synthesize L-cysteine. Its metabolism has been optimized for maximum efficiency.

**3. Fermentation**

The microorganisms produce L-cysteine from glucose and inorganic trace elements in a continuous stream. In the broth, the product directly forms the dimer L-cystine.

**4. Purification**

The fermentation broth is purified to yield natural L-cystine.

WACKER is a member of the "Together for Sustainability" initiative and is rated by EcoVadis.



TOGETHER FOR SUSTAINABILITY

More information on FERMOPURE® Natural L-Cystine Food:



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