

## TECHNICAL DATA SHEET

**Product Name:** Shiitake Mushroom Powder

**INCI Name:** Lentinus Edodes Extract

**CAS:** 37339-90-5

**Synonyms:** Chinese black mushroom, Lentinus edodes, Oriental black mushroom, golden oak mushroom, Shiitake Mushroom.

**Product Quality:** The product is standardized to Beta Glucan content. Beta Glucan content is 30%.

**Origin of Raw Material:** China

**Description:** Shiitake mushroom (*Lentinula edodes*) is a type of edible mushroom native to East Asia. It is characterized by a distinctive brown umbrella-shaped cap, which can reach up to 10 cm in diameter. It grows on decaying hardwood trees, most commonly oak, where it forms complex mycelial structures. Today, it is cultivated on specialized farms where wood or substrates are used to simulate its natural environment, allowing for controlled growth and harvest. Known for its dense and meaty texture, it is valued for its rich and flavorful aroma profile. Besides culinary values, it is known for its potential health benefits. It contains various bioactive components including polysaccharides, terpenoids, sterols, and lipids, which are distinguished by their immunomodulatory, antioxidant, and anticancer effects. Traditionally used in East Asian medicine to enhance health and vitality, as well as for the potential treatment and prevention of various diseases. Shiitake mushroom powder is obtained by drying and grinding shiitake mushrooms. The powder is brown in color and easily soluble in water.

### Benefits:

- **Antioxidant Properties:** Shiitake mushrooms are rich in antioxidants, such as selenium, vitamin A, and C, which help protect the skin from damage caused by free radicals. Selenium is a key component of the enzyme glutathione peroxidase (GPx), which plays a vital role in protecting cells from oxidative stress. GPx helps in the reduction of peroxides (including hydrogen peroxide), thereby neutralizing potentially harmful free radicals that can damage cellular structures, including DNA, proteins, and

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lipids. Selenium, as part of GPx, not only directly removes free radicals but also helps in the regeneration of other antioxidants, such as vitamin C and E, thereby enhancing the body's overall antioxidant defense. Selenium may help reduce inflammatory processes in the body. Inflammation is often associated with increased levels of oxidative stress, and selenium, by inhibiting oxidative stress, can contribute to reducing inflammation. Thanks to the antioxidant action of Vitamin A and C, shiitake mushroom extract can reduce signs of aging, such as wrinkles and fine lines, and contribute to a healthier and younger-looking skin.

- **Skin Brightening and Tone Evening:** Kojic or kojic acid found in shiitake mushrooms is known for its ability to lighten the skin, reduce pigmentation, and even skin tone, therefore it is used to reduce the appearance of dark spots, scars, and hyperpigmentation.

- **Anti-inflammatory Effects:** The anti-inflammatory action of shiitake mushroom powder stems from its rich content of bioactive components, such as polysaccharides (lentinan), terpenoids, and phenolic compounds. These components can modulate the immune system and reduce the production of inflammatory mediators. Polysaccharides from shiitake mushrooms can stimulate the production of anti-inflammatory cytokines, while simultaneously inhibiting the production of proinflammatory cytokines, thereby reducing inflammation. This effect is particularly beneficial in cosmetic and dermatological products, as it can help reduce redness, irritation, and other signs of inflammation on the skin, providing a soothing and regenerative action and is used in products intended for acne, rosacea, and sensitive skin conditions.

- **Hydrating Properties:** Natural polysaccharides in shiitake mushrooms, such as beta-glucans, have significant hydrating properties. They help attract moisture to the skin, maintaining its elasticity and softness, preventing skin dryness.

**Skin Barrier Support:** Nutrients in shiitake mushroom powder can help strengthen the skin's barrier function, protecting it from external stressors such as pollutants and UV radiation.

- **Skin Regeneration Promotion:** Shiitake mushrooms are a source of ergothioneine, an amino acid that helps in skin regeneration. Ergothioneine helps protect DNA, proteins, and lipids in skin cells from oxidative damage, thereby contributing to the preservation of cellular integrity and function. Additionally, ergothioneine has the ability to improve the vitality of skin cells, promoting their regeneration and renewal. This can contribute to reducing the visibility of wrinkles, improving skin elasticity and texture, as well as speeding up the healing process. Ergothioneine can also increase the production of collagen, a key protein that gives

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skin structure and firmness, thereby further promoting a youthful skin appearance and its regeneration.

**Use:** Used for making water-glycerin extracts, glycerites, tinctures, and other cosmetic semi-products. Recommended concentrations range from 5-10%.

**Storage/Shelf Life:** Stable when stored in a dry and cool place. Shelf life 2 years.

**Animal Testing:** The substance has not been tested on animals

**GMO:** Non-GMO

**Vegan:** Does not contain components of animal origin

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