

TECHNICAL DATA SHEET

Product Name: Hydrolyzed Soy and Rice Proteins

INCI: Water, Hydrolyzed Rice Protein, Hydrolyzed Soy Protein, 1,2-Dihydroxypentane, (+)-Arabinogalactan, 3-o-Ethyl Ascorbic Acid, Benzyl Alcohol, Potassium Sorbate, Sodium Benzoate

CAS: 7732-18-5, 94350-05-7, 68607-88-5, 5343-92-0, 9036-66-2, 86404-04-8, 100-51-6, 24634-61-5, 532-32-1

Chemical Classification: Proteins/derivatives

Functional Category: Conditioner for skin and hair care

Description: Hydrolyzed soy and rice protein is a natural plant-based ingredient used in cosmetic products for its moisturizing, nourishing, and regenerative properties. Through the process of hydrolysis, proteins from soy and rice are broken down into smaller molecules, making them more easily absorbed by the skin and hair. The amino acids and peptides obtained by this method serve as a basis for the regeneration of damaged tissues, helping repair microscopic damage caused by factors such as UV radiation, pollution, and chemical treatments. As a result, the skin becomes more resistant to harmful external influences, while hair becomes stronger and more vital. In hair care, hydrolyzed soy and rice protein fortifies hair structure and reduces breakage, giving hair a healthy and shiny appearance. In facial care, hydrolyzed soy and rice proteins help diminish wrinkles and improve skin tone. By boosting collagen synthesis, they contribute to better skin firmness and elasticity, which is vital in slowing the signs of aging. The anti-aging effect of this ingredient is further enhanced by its antioxidant action, which neutralizes free radicals and slows down cell damage. By restoring the skin's natural protective barrier, the skin becomes smooth, firm, and even-toned, with a healthy and radiant look. This active plant complex is brownish-yellow in color with a specific aroma. It is preserved with benzyl alcohol, potassium sorbate, and sodium benzoate. The complex is water-soluble.

Mechanism of Action: Hydrolyzed soy and rice proteins work effectively even at low concentrations, thanks to their low-molecular-weight peptides and amino acids that easily penetrate into the deeper layers of the skin. Upon reaching the dermis, they enhance metabolic processes within cells, boosting cell activity and regeneration. This

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process leads to skin renewal, contributing to improved tone, radiance, and freshness. Peptides from these proteins play a key role in stimulating collagen synthesis. Acting as signaling molecules, they activate fibroblasts—the cells responsible for producing collagen and elastin—thus strengthening the skin, increasing its elasticity, and reducing the appearance of wrinkles. In this way, soy and rice proteins have a preventive effect on the aging process while also providing regenerative benefits. Additionally, these proteins help protect the skin from damage caused by free radicals, thanks to their antioxidant properties. They reduce oxidative stress and defend the skin against negative external factors such as UV radiation and pollution. Regarding the reduction of dark circles under the eyes, soy and rice proteins improve microcirculation, reducing the buildup of pigments and fluids in the periocular area. They also strengthen capillaries, decreasing their permeability, which reduces the visibility of blood vessels. Furthermore, these proteins exhibit anti-inflammatory properties, lessening swelling and irritation. Clinical studies have shown that continuous use of products containing hydrolyzed soy and rice proteins can significantly reduce dark circles after eight weeks of treatment. All of these functions make these proteins highly effective ingredients for skin-care, improving skin structure, stimulating collagen production, and providing protection against oxidative stress. This results in a youthful, fresh, and healthy appearance, especially in the area around the eyes.

Benefits: Help the skin and hair retain moisture, preventing dryness and improving elasticity. Activate cell renewal and repair damage caused by UV radiation and external factors. Stimulate collagen and elastin synthesis, reducing the appearance of wrinkles and increasing skin firmness. Decrease oxidative stress and protect the skin from free radicals that accelerate aging. Promote better circulation in the skin, reducing puffiness and dark circles under the eyes. Strengthen hair fibers and reduce breakage, giving hair a healthier appearance. Improve skin tone, making it brighter, fresher, and more radiant. Method of Use: Hydrolyzed soy and rice protein finds wide application in various cosmetic formulations, with its concentration and mode of use adapted to the product type, functional goals, and desired sensorial effect. In hair cleansing and care formulations, hydrolyzed soy and rice protein is used at concentrations typically ranging from 0.5% to 5%, depending on the product type and the level of hair damage targeted. Lower concentrations are applied in everyday shampoos and conditioners, while higher values are used in intensive masks and treatments with regenerative functions. It is added during the cooling phase, when the system temperature drops below 40 °C, to preserve the stability and bioactivity of the peptides. In leave-in products—such as light

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sprays, serums, and fluids—the recommended concentration usually goes up to 2%, ensuring effectiveness without causing the hair to clump or feel weighed down. When combined with moisturizing and film-forming agents like panthenol, aloe vera, or hyaluronic acid, the hair's resilience and elasticity are further enhanced. In emulsion products for skin care, including creams, lotions, and body milks, its concentration ranges between 0.5% and 2%. Within this range, it optimally supports hydration, epidermal barrier restoration, and reduction of dryness without negatively affecting emulsion stability. In aqueous formulations, such as gels, toners, essences, and facial serums, it is used at lower concentrations—typically between 0.2% and 1%. In these levels, it provides a mild yet stable moisturizing effect and maintains formulation functionality without the risk of destabilizing the system, especially when combined with mild acids and plant extracts. In all these applications, it is recommended to incorporate the protein at pH values between 4.5 and 7.0, ensuring maximum functionality and compatibility with other components.

Method of Obtaining: Soy and rice peptides and amino acids are obtained by extracting proteins from specially purified, natural soy and rice.

Animal Testing: This substance has not been tested on animals

GMO: Not GMO

Vegan: Contains no animal-derived components

Transport and Storage: Hydrolyzed soy and rice protein can be transported at temperatures up to 25°C without significantly affecting its quality, as it remains stable for a short period under such conditions. However, to preserve its bioactivity and integrity over the long term, it is recommended to store it in a refrigerator at temperatures between 4°C and 8°C. Lower temperatures help prevent protein degradation, oxidation, or loss of efficacy, thereby extending its shelf life and preserving its functional properties in formulations. Cooling also reduces the risk of microbiological contamination or undesirable changes in the ingredient's texture and quality.

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