

TECHNICAL DATA SHEET

Product Name: Laminaria japonica Seaweed Extract

INCI Name: Glycerin, Aqua, Laminaria Japonica Extract, Benzyl Alcohol, Dehydroacetic Acid

CAS: 56-81-5, 7732-18-5, 223751-72-2, 100-51-6, 520-45-6

Botanical Name: Laminaria Japonica Extract

Chemical Classification: Mixture

Functional Category: Skin and hair conditioning agent, humectant, emollient

Extraction Method: The extract is obtained through ultrasonic extraction using ultrasound frequencies of 20-25 kHz. At these frequencies, ultrasonic waves generate microscopic bubbles in the liquid containing the extract, leading to a phenomenon known as cavitation. Cavitation creates extreme conditions of high pressure and temperature in the microenvironment around the imploding bubbles. These conditions mechanically disrupt plant cell walls, releasing intracellular active compounds and significantly increasing the extraction rate and efficiency. The extraction is performed at 25°C to preserve the stability of thermolabile components. This method is more efficient than traditional extraction techniques, allowing for better raw material utilization and shorter extraction times. The extract is preserved with benzyl alcohol (0.86%) and dehydroacetic acid (0.14%), a preservative combination certified for use in natural cosmetics (ECOCERT/COSMOS). The extract is water-soluble. pH: 4-6.5.

Description: Laminaria japonica extract, also known as Japanese brown seaweed extract, is valued in cosmetics for its numerous benefits in skincare. Native to cold marine environments, this seaweed is rich in minerals such as iodine, magnesium, calcium, and zinc, which support skin regeneration and health. It also contains polysaccharides such as alginates and fucoidans, known for their strong moisturizing and anti-inflammatory properties. The extract intensely hydrates the skin, strengthens its protective barrier, and prevents moisture loss, making it especially suitable for dry and dehydrated skin by helping to maintain optimal hydration and improving elasticity. The presence of antioxidants protects the skin from free radicals and oxidative stress, thus reducing cellular damage and slowing the aging process. Its detoxifying properties aid in

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the removal of toxins and impurities, making it ideal for oily and problem-prone skin. Fucoidan soothes redness and irritation, particularly effective in treating acne-prone skin. Alginates form a protective layer on the skin surface, further reinforcing the natural barrier and shielding it from environmental aggressors. Due to its rich and diverse composition, Laminaria japonica extract blends well with other active ingredients and is commonly used in creams, serums, face masks, and body care products. The extract is yellow-brown in color and odorless. It is preserved with caprylhydroxamic acid and glyceryl caprylate.

Benefits:

- Deeply hydrates and improves the skin barrier, enhancing smoothness and elasticity
- Polyphenols protect against free radicals and premature aging
- Fucoidans and phytolans reduce redness, calm inflammation, and soothe irritation
- Vitamins and minerals help brighten the complexion and reduce dark spots
- Proteins stimulate collagen and elastin synthesis, improving skin firmness
- Minerals such as iodine detoxify the skin and remove excess sebum
- Nourishes both skin and hair, delays signs of aging, and reduces wrinkle appearance

Usage Instructions: Laminaria japonica extract is used in various cosmetic products due to its versatile properties and compatibility with all skin types. In facial care products such as serums and creams, a typical concentration ranges from 1% to 5% to achieve maximum moisturizing and antioxidant effects. In body care products such as lotions or masks, the concentration may be higher, up to 8%, to provide deeper hydration and regeneration. For products intended for oily or problematic skin, such as toners or gels, lower concentrations of 1-3% are usually sufficient. In wash-off masks or treatments, concentrations can go up to 10%, especially when intensive hydration and revitalization are desired. The extract is generally added to the water phase of the formulation or at the end of the process, depending on the raw material's stability and desired effect. It is ideal for cold-process formulations, as it retains all its bioactive properties. Careful blending with other active ingredients is recommended to maintain efficacy and achieve optimal results.

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Recommended concentrations vary by product type and intended effect:

1-5% for facial care (creams, serums)
Up to 8% for body care (lotions, body masks)
1-3% for oily/problematic skin (toners, gels)
Up to 10% in masks and rinse-off treatments

These concentrations are general guidelines and should be adapted to specific formulation needs. Appropriate stability and safety testing of the final product is always advised before market release.

Animal Testing: Not tested on animals

GMO: Non-GMO

Vegan: Does not contain animal-derived components

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