

TECHNICAL DATA SHEET

Product Name: Saccharomyces Ferment Filtrate

INCI Name: Saccharomyces Ferment Filtrate, Hydroxyacetophenone, 1,2-Hexanediol

CAS: n/a, 99-93-4, 6920-22-5

Chemical Classification: Mixture

Functional Category: Antioxidant, Skin-Conditioning Agent (other), Preservative (secondary function via the Hydroxyacetophenone and 1,2-Hexanediol system), Solvent, Chelating/Sequestering Agent.

Description: Saccharomyces/Rice Ferment Filtrate is obtained through the fermentation of rice using specific strains of yeast. During fermentation, the yeast decomposes and transforms rice nutrients into a complex of bioactive substances beneficial for the skin, including amino acids, polypeptides, organic acids, and vitamins. These small-molecule compounds are rapidly absorbed, which makes the filtrate widely used in cosmetics. On the skin, this ferment provides multiple benefits: due to low-molecular sugars and amino acids, it acts as a powerful humectant that binds and retains moisture, improves hydration, and ensures a long-lasting feeling of freshness. The presence of bioactive antioxidants such as ferulic acid helps neutralize free radicals, reduce oxidative stress, and slow down skin aging. Certain fermentation metabolites also inhibit tyrosinase activity, thereby reducing melanin synthesis, evening out the complexion, and diminishing hyperpigmentation, leaving the skin brighter and more radiant. At the same time, the ferment strengthens the epidermal barrier, soothes sensitive or irritated skin, supports regeneration, and increases resistance to external stressors. This ingredient is widely used in toners, serums, lotions, and creams, where it enhances hydration, regeneration, and brightening. It is particularly valued in facial masks that restore nutrients and improve overall skin condition. In products intended for sensitive or irritated skin, as well as for sensitive regions such as the area around the eyes, it is added to relieve dryness, reduce dullness, and smooth fine lines.

Bioactive Compounds: During rice fermentation by yeast, the nutrients in rice are converted into a range of bioactive substances that the skin easily recognizes and absorbs. The filtrate is rich in amino acids especially alanine, glycine, serine, proline, and lysine which help the skin retain moisture and maintain elasticity. Peptides and polypeptides

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further stimulate collagen and elastin synthesis, improving firmness and regeneration. Organic acids lactic, malic, citric, and pyruvic gently remove dead cells, promote renewal of the surface layer, and help maintain natural pH balance. The filtrate contains B-complex vitamins (B1, B2, B3 – niacinamide, B5, and B6) that strengthen the barrier function and support healthy cellular metabolism, while vitamin E and its derivatives act as strong antioxidants that protect skin lipids from damage. Minerals such as zinc, magnesium, potassium, and selenium contribute to enzymatic processes and enhance the skin's natural defenses, while ferulic acid, a polyphenol, effectively neutralizes free radicals, protects against UV damage, and delays the appearance of aging signs. The ferment also contains sugars and polysaccharides, particularly beta-glucans, which restore the skin's protective barrier, reduce irritation, and increase resilience to external factors. Phytosterols stabilize the lipid layer and have soothing and anti-inflammatory properties, while enzymes such as superoxide dismutase, catalase, and glutathione peroxidase support detoxification processes and further protect against oxidative stress. Owing to this unique composition, Saccharomyces/Rice Ferment Filtrate improves hydration and elasticity, evens out the complexion, and restores skin radiance. It is widely used in serums, creams, toners, and facial masks, as well as in products designed for sensitive skin and the area around the eyes.

Note: Instead of rice, other plant materials may be used as the fermentation substrate with Saccharomyces or other yeasts. In practice, barley, wheat, soy, corn, oats, or even fruits such as grapes and apples are commonly used. Each raw material produces a different nutrient profile in the ferment, since the yeast decomposes and transforms specific sugars, proteins, and polyphenols from the base substrate. For instance, soy ferment is rich in isoflavones with pronounced phytoestrogenic and antioxidant effects, while barley and wheat ferments contain higher levels of beta-glucans and B-vitamins. The substrate is therefore selected according to the desired cosmetic effect rice is most often used for its balanced content of amino acids, peptides, and ferulic acid, but other grains or plant materials can yield ferments with distinct functional properties.

Benefits:

- Binds and retains skin moisture for long-lasting hydration.
- Protects the skin from free radicals and slows aging.
- Reduces melanin formation and evens skin tone.

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- Restores the skin barrier, soothes irritation, and increases resilience.

Use Instructions: Saccharomyces/Rice Ferment Filtrate is typically incorporated during the final stage of formulation, at moderate temperatures, to preserve its bioactive components. It is generally used at 2–10% concentration lower levels in basic moisturizers, toners, and lotions, and higher levels in serums and masks for intensive care. In formulations for sensitive skin or regions such as the area around the eyes, the lower end of the range is preferred to achieve a gentle yet effective hydrating, brightening, and soothing action.

Natural or Synthetic Origin: Saccharomyces/Rice Ferment Filtrate is considered a natural ingredient, produced biotechnologically through rice fermentation using *Saccharomyces cerevisiae*. During fermentation, microorganisms naturally decompose and transform rice nutrients into bioactive compounds, which are then separated by filtration without any chemical synthesis.

Animal Testing: In accordance with EU Regulation (EC) No. 1223/2009 on cosmetic products, this substance has not been tested on animals. Safety evaluation is based on available toxicological data, scientific literature, and validated alternative testing methods (in vitro and in silico). In silico refers to computer-based modeling and simulation methods rather than testing on living organisms (in vivo) or cell cultures (in vitro). This statement confirms compliance with the EU animal-testing ban and serves as an informational note for cosmetic formulation use.

GMO: Not GMO

Vegan: Contains no animal-derived components. Bifida Ferment Filtrate is also considered a vegan ingredient, as it is produced biotechnologically through the fermentation of *Bifidobacterium* species under controlled laboratory conditions, using plant- or synthetic-based nutrient media free of animal ingredients.

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