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Aloe Vera Gel

Product Name: Aloe Vera Gel

INCI Name: Aloe Barbadensis Leaf Juice (and) Benzyl Alcohol, Dehydroacetic Acid, Citric Acid

CAS Number: 85507-69-3, 100-51-6, 520-45-6, 77-92-9

Synonyms: Aloe Vera Leaf Gel, Natural Aloe Vera Gel, Aloe Vera Hydrating Gel, Aloe Vera Skin Gel, Pure Aloe Vera Gel, Bio Aloe Vera Gel, Aloe Vera Gel MS – Provital, Aloe Vera Gel – BCE4007 – Biocosmethic, Aloe Vera Gel 1X AG002 – Rahn AG, Organic Aloe Vera Gel – BCE4516 – Biocosmethic, Aloe Vera Gel Concentrate 10:1 – AMB Wellness, Aloe Vera Gel 1:1 Natural – Tri-K Industries, Inc.

Chemical Classification: Botanical product

Functional Category: Skin conditioning agent, humectant, soothing and skin-regenerating agent

Description:

Aloe Vera Gel is a highly concentrated plant-derived cosmetic raw material obtained from the leaf juice of *Aloe barbadensis*. The 10x concentration indicates that the material has been technologically concentrated compared to standard aloe juice, allowing enhanced efficacy at lower formulation levels.

The gel is transparent, slightly viscous, and has a subtle botanical odor without causing sensory overload in finished products. It possesses a mildly acidic pH, making it compatible with most cosmetic systems and suitable for a wide variety of skin types.

In cosmetic formulations, it contributes to skin hydration, comfort, and soothing effects. The film formed on the skin is lightweight and non-sticky, making the ingredient highly suitable for serums, gels, emulsions, and daily care products.

Aloe Vera Gel (10x) is preserved with a benzyl alcohol and dehydroacetic acid system, while citric acid acts as a pH regulator. This preservation system ensures microbiological stability without compromising the natural character of the ingredient.

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The gel is aloin-free, which is important for cosmetic safety and skin compatibility. In finished formulations, this ingredient functions as both a humectant and a skin conditioning agent. It helps maintain moisture balance, supports the soothing of irritated skin, and provides a refreshing sensory effect.

It is frequently used in products intended for sensitive, dehydrated, and stressed skin, as well as in after-sun and after-shave formulations. Aloe Vera Gel (10x) represents a stable, effective, and formulation-friendly raw material that enables the development of lightweight, modern cosmetic products with clearly expressed soothing and conditioning properties.

Mechanism of Action:

Aloe Vera gel is rich in various phytochemicals that contribute to its cosmetic properties and beneficial effects on the skin.

Polysaccharides such as acemannan play a key role in hydration by acting as humectants and helping the skin retain moisture. Acemannan also contributes to soothing effects and supports the skin's natural protective functions, which is particularly important for sensitive and irritated skin.

Glycoproteins help reduce inflammation and irritation, while alprogen, a specific glycoprotein, is recognized for its antihistamine-like activity. It acts by inhibiting histamine release from mast cells, thereby helping reduce redness, itching, and skin discomfort.

Aloe Vera gel contains essential and non-essential amino acids that contribute to skin conditioning and maintenance of elasticity. Lysine participates in processes associated with collagen synthesis, while proline and serine support hydration and skin barrier maintenance.

Saponins naturally present in the gel possess mild antiseptic properties and contribute to a feeling of skin cleanliness. Sterols, including campesterol, lupeol, and sitosterol, are known for their anti-inflammatory effects and help reduce redness and swelling, while lupeol additionally contributes to skin soothing.

Vitamins present in Aloe Vera gel, including vitamins C, E, and A, function as antioxidants and help protect the skin from oxidative stress. Vitamin C participates in

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collagen-related processes, while vitamin E helps preserve hydration and maintain the protective skin barrier.

Enzymes naturally present in the gel, such as amylase, lipase, and cellulase, support physiological skin renewal and improve overall skin feel and texture without aggressive exfoliation.

Together, these bioactive components contribute to hydration, soothing, maintenance of skin balance, and support of natural regenerative processes, making Aloe Vera Gel a valuable ingredient in modern cosmetic formulations.

Benefits:

- Hydrates the skin and improves softness and elasticity.
- Reduces redness and irritation due to anti-inflammatory properties.
- Supports wound healing and may help reduce the appearance of scars.
- Provides antiseptic and antibacterial benefits that may support acne-prone skin care.
- Contains antioxidants that help protect the skin against premature aging.
- Soothes the skin and helps reduce itching and irritation.
- Hydrates hair, reduces dandruff, and improves shine.
- Refreshes and cools the skin after sun exposure or shaving.

Directions for Use:

In moisturizing creams and lotions, Aloe Vera Gel is typically used at concentrations between 5–20%. These concentrations provide optimal hydration and soothing activity, leaving the skin softer and more elastic.

In products intended for problematic skin, such as anti-acne creams, concentrations may reach up to 30% in order to maximize its antibacterial and anti-inflammatory benefits for reducing redness and swelling.

For products intended for damaged skin care, such as burn balms or wound creams, recommended concentrations range from 10–50%. Higher concentrations may enhance wound-healing support and help reduce scar formation due to the high polysaccharide content, particularly acemannan, which supports skin regeneration.

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In hair care products such as shampoos and conditioners, Aloe Vera Gel is commonly used at concentrations between 5–15%. These levels help hydrate the hair and scalp, reduce dandruff, and improve hair strength.

Aloe Vera Gel may also be incorporated into styling products such as gels and serums, where its natural moisturizing properties help maintain a healthy hair appearance.

In refreshing skin care products such as toners and facial sprays, lower concentrations of approximately 2–10% are generally recommended. These levels provide lightweight hydration and soothing effects without leaving a heavy sensation on the skin.

When formulating cosmetic products containing Aloe Vera Gel, it is important to ensure that stabilized and preserved material is used in order to maintain shelf life and efficacy. Testing different concentration levels is recommended to determine the optimal formulation for specific skin or hair care applications.

Due to the low pH of the concentrate, the ingredient may lower the pH of the finished product and potentially cause emulsion instability or separation. In such cases, lower usage levels are recommended, or the pH should be adjusted upward using TEA (triethanolamine) in order to stabilize the emulsion system.

Store refrigerated.

For external use only.

Source Raw Material:
Aloe barbadensis (Aloe Vera)

Production Method:
Prepared from pure concentrated Aloe Vera juice free from pesticides, BSE, and TSE contamination.

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Animal Testing:

In accordance with current European regulations (Regulation (EC) No. 1223/2009 on cosmetic products), this substance has not been tested on animals. The safety assessment of the raw material is based on available toxicological data, scientific literature, and validated alternative testing methods (*in vitro* and *in silico*).

The term *in silico* refers to testing and evaluation methods performed using computer-based models and simulations rather than on living organisms (*in vivo*) or cell cultures (*in vitro*).

This statement confirms compliance with the ban on animal testing and is provided solely for informational purposes regarding the use of the raw material in cosmetic formulations.

GMO: Non-GMO

Vegan: Does not contain ingredients of animal origin