

TECHNICAL DATA SHEET

Product Name: Baobab Seed Extract

INCI Name: Glycerin, Aqua, Adansonia Digitata Seed Extract, Benzyl Alcohol, Dehydroacetic Acid

CAS: 56-81-5, 7732-18-5, 91745-12-9, 100-51-6, 520-45-6

Latin Name: Adansonia digitata (lat. Adansonia)

Synonyms: Adansonia grandidieri Baill., Adansonia gregorii F. Muell., Adansonia madagascariensis, Adansonia perrieri Capuron, Adansonia rubrostipa

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

Extraction Method: The extract is obtained by ultrasonic extraction using ultrasound frequencies between 20 and 25 kHz. At these frequencies, ultrasonic waves generate microscopic bubbles in the liquid containing the plant material, leading to a phenomenon known as cavitation. Cavitation creates extreme localized conditions of elevated pressure and temperature in the microenvironment around collapsing bubbles. This phenomenon mechanically disrupts plant cell walls, releasing intracellular active components and significantly increasing extraction speed and efficiency. The process is carried out at a temperature of 25 °C to preserve the stability of thermolabile compounds such as flavonoids, vitamins, and essential oils. Compared to conventional maceration methods, ultrasonic extraction enables shorter processing time, higher yield, and improved utilization of plant raw material. The obtained extract is preserved with a combination of benzyl alcohol (0.86%) and dehydroacetic acid (0.14%), a preservative system approved for use in natural cosmetics and certified by ECOCERT and COSMOS. The extract is water-soluble, allowing easy incorporation into various water-based cosmetic formulations. The pH value of the finished extract ranges from 4.0 to 6.5, making it suitable for most dermal applications without the need for additional pH adjustment.

Description: The aqueous-glycerin extract of baobab seeds is a mild and effective botanical ingredient intended for skin hydration, soothing, and regeneration. Derived from Adansonia digitata, this extract is dissolved in a glycerin-water mixture, enabling preservation of bioactive components such as polysaccharides, vitamins, and amino acids. Due to naturally present humectants, it provides intensive hydration, improves

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skin elasticity and tone, while not clogging pores and being suitable for sensitive regions, including the area around the eyes. It is stabilized with mild preservatives (benzyl alcohol and dehydroacetic acid), ensuring good tolerance even for reactive skin. It is ideal for serum, toner, gel, and emulsion formulations, particularly within natural and dermocosmetic product lines. It contributes to moisturizing, anti-age, and protective effects without an occlusive skin feel. The extract has a dark color, no pronounced odor, is water-soluble, and has a pH of 4.0–6.5.

Bioactive Compounds: Baobab extract is exceptionally rich in antioxidants, particularly vitamin C, flavonoids, and polyphenols. These active compounds help neutralize free radicals, protecting skin cells from oxidative stress and slowing premature aging. In addition to vitamin C, the extract contains B-complex vitamins B1 (thiamine), B2 (riboflavin), and B6 which participate in cellular metabolic processes and contribute to healthy-looking skin. The phytochemical profile includes numerous flavonol glycosides such as quercetin, rutin, hesperidin, kaempferol, apigenin, luteolin, and acacetin-7-O-glycoside, which collectively exert anti-inflammatory, soothing, and protective effects. Tannins and proanthocyanidins further contribute antioxidant, antibacterial, antiviral, and antifungal activity, while saponins exhibit potential immunomodulatory properties. The extract also contains phytosterols beta-sitosterol, stigmasterol, and campesterol known for their regenerative and anti-inflammatory effects on the skin. The presence of minerals such as potassium, calcium, magnesium, and iron supports enzymatic activity and helps maintain skin integrity.

Benefits:

- Helps retain moisture in the skin due to natural sugars and amino acids.
- Protects the skin from oxidative stress and external aggressors.
- Vitamin C stimulates collagen synthesis and improves skin firmness.
- Flavonoids provide anti-inflammatory effects and reduce irritation.
- Supports skin regeneration and faster healing of minor damage.
- Essential fatty acids strengthen the skin barrier.
- Slows the appearance of wrinkles and improves skin tone and texture.
- Vitamin C helps reduce hyperpigmentation and brighten the skin.
- Leaves no greasy residue and integrates easily into various formulations.

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Usage: The aqueous-glycerin extract of baobab seeds is used as a functional ingredient in the water phase of formulations, with a recommended concentration range of 1% to 10%, depending on product type and desired effect. In hydrating toners and facial mists, lower concentrations of approximately 1–3% are usually sufficient for refreshing and soothing effects. In serums, gels, and emulsions intended for regeneration and anti-age performance, higher concentrations between 5% and 10% are recommended to achieve the full antioxidant and nourishing potential of the extract. Due to its good water solubility, the extract can be added directly during the cold-processing phase without heating, preserving thermolabile compounds such as flavonoids and vitamins. It is stable over a broad pH range (typically 4.5–7.5), making it suitable for most dermo-cosmetic formulations, including products for sensitive skin, care of sensitive regions such as the eye area, body lotions, and facial treatment serums. During formulation, careful balancing with other active ingredients is recommended to avoid incompatibility, particularly in the presence of highly acidic components that may destabilize the extract. Synergistic use with other botanical extracts, hyaluronic acid, or niacinamide is desirable.

Animal Testing: In accordance with current European legislation (Regulation (EC) No. 1223/2009 on cosmetic products), the 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). In silico refers to testing and assessment methods performed using computer 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 for informational purposes only regarding further use of the raw material in cosmetic formulations.

GMO: Not GMO

Vegan: Does not contain ingredients of animal origin

Storage and Shelf Life: The product is stable when stored in a cool, dry place. Shelf life: 2 years.

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