

TECHNICAL DATA SHEET

Product Name: Banana Fruit Extract

INCI Name: Glycerin, Aqua, Musa Sapientum (Banana) Fruit Extract, Benzyl Alcohol, Dehydroacetic Acid

CAS: 56-81-5, 7732-18-5, 89957-82-4, 100-51-6, 520-45-6

Chemical Classification: Mixture

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 local conditions of elevated pressure and temperature in the microenvironment around imploding bubbles. This process mechanically disrupts plant cell walls, releasing intracellular active compounds and significantly increasing the speed and efficiency of extraction. The process is carried out at a temperature of 25 °C in order to preserve the stability of thermolabile components such as flavonoids, vitamins, and essential oils. Compared to conventional maceration methods, ultrasonic extraction provides shorter processing time, higher yield, and improved utilization of plant raw materials. The resulting extract is preserved with a combination of benzyl alcohol (0.86%) and dehydroacetic acid (0.14%), a preservation 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 of the formulation.

Description: Banana extract is a natural ingredient rich in nutrients and active compounds. It is obtained from ripe banana fruits (*Musa spp.*) and is used for hydration, nourishment, and revitalization of the skin. It contains various types of polyphenols, including catechins, flavonoids (such as quercetin and kaempferol), and tannins. These polyphenols act as antioxidants and exhibit anti-inflammatory properties. The extract contains carotenoids such as beta-carotene and alpha-carotene, which are precursors of vitamin A, as well as β -cryptoxanthin, lycopene, and lutein. It also contains phenolic

Disclaimer: The details provided here are specific to the identified material and may not remain accurate if that material is combined with other substances or used in different processes. The information presented is, to the best of the company's knowledge, considered precise and trustworthy as of the date mentioned. However, the company does not make any explicit or implied assurance, guarantee, or claim regarding the information's precision, trustworthiness, or comprehensiveness, and will not be held accountable for any losses, damages, or costs, whether direct or indirect, that arise from its use. Users are encouraged to independently verify the appropriateness and thoroughness of this information for their specific purposes.

TECHNICAL DATA SHEET

acids, including caffeic acid and ferulic acid. Bananas are rich in essential vitamins, including vitamin C, vitamin B6, and vitamin B9 (folic acid). Natural sugars such as glucose and fructose help retain moisture and leave the skin smooth. Minerals such as potassium and magnesium support hydration and help soothe the skin. Banana extract helps reduce redness, often associated with irritation, dryness, or inflammatory skin conditions. Its moisturizing and soothing properties reduce skin flaking typical of dry or dehydrated skin. The extract contributes to skin smoothness and resilience, making it softer and less prone to cracking or the formation of fine lines. In hair care, banana extract strengthens hair fibers due to the presence of vitamins and minerals that help restore hair structure. This reduces breakage and makes hair more resistant to damage caused by combing or styling. It also hydrates the hair shaft, leaving hair smooth and shiny. It is most commonly used in creams, lotions, masks, shampoos, and conditioners. The extract is suitable for natural and vegan cosmetics. It is light yellow in color and odorless.

Benefits:

- Supports skin hydration, leaving the skin soft, smooth, and elastic
- Neutralizes free radicals and helps protect the skin from premature aging
- Nourishes the skin with vitamins, minerals, and amino acids, improving overall appearance
- Soothes irritated skin and reduces redness and inflammation
- Brightens the complexion and provides a radiant look
- Gently exfoliates the skin, removing dead cells and improving texture
- Helps regulate sebum secretion and exhibits antimicrobial activity, reducing the appearance of acne
- Improves hair shine and texture, providing nourishment to dry or damaged hair

Usage: Banana extract is used in various cosmetic products, with concentration adjusted according to the formulation type and desired effect. In moisturizing face and body creams and lotions, a concentration of 1% to 5% is recommended to ensure optimal hydration and skin regeneration. In products intended for sensitive or irritated skin, such as serums or balms, it is typically used at lower concentrations, around 1% to 3%, to minimize the risk of irritation while still achieving a soothing effect. In shampoos and hair conditioners, the extract is usually added at levels between 2% and 6% to provide hydration and nutrients to dry or damaged hair.

Disclaimer: The details provided here are specific to the identified material and may not remain accurate if that material is combined with other substances or used in different processes. The information presented is, to the best of the company's knowledge, considered precise and trustworthy as of the date mentioned. However, the company does not make any explicit or implied assurance, guarantee, or claim regarding the information's precision, trustworthiness, or comprehensiveness, and will not be held accountable for any losses, damages, or costs, whether direct or indirect, that arise from its use. Users are encouraged to independently verify the appropriateness and thoroughness of this information for their specific purposes.

TECHNICAL DATA SHEET

In face masks requiring more intensive care, the concentration may be increased up to 10%, provided compatibility with other active ingredients in the formulation is ensured. The extract is water-soluble and easily incorporated into the aqueous phase of formulations. It can be used in cold formulations without heating, preserving its delicate active components. For external use only.

Animal Testing: In accordance with current European regulations (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). The term 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 animal testing ban and is provided for informational purposes only regarding the further use of the raw material in cosmetic formulations.

GMO: Non-GMO

Vegan: Does not contain components of animal origin

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

Disclaimer: The details provided here are specific to the identified material and may not remain accurate if that material is combined with other substances or used in different processes. The information presented is, to the best of the company's knowledge, considered precise and trustworthy as of the date mentioned. However, the company does not make any explicit or implied assurance, guarantee, or claim regarding the information's precision, trustworthiness, or comprehensiveness, and will not be held accountable for any losses, damages, or costs, whether direct or indirect, that arise from its use. Users are encouraged to independently verify the appropriateness and thoroughness of this information for their specific purposes.