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Raw material name: Cacao Butter, Deodorised

INCI: Theobroma Cacao Seed Butter

CAS: 84649-99-0 / 8002-31-1

EC/EINECS: 283-480-6

Synonyms: Cacao Butter, Cocoa Butter, Theobroma Cacao Butter, Theobroma cacao L.

Chemical classification: Natural vegetable fats - fatty acid triglycerides.

Functional category: Emollient, skin-conditioning agent, and consistency- and structure-enhancing agent for cosmetic formulations.

Raw material description: Cacao Butter, Deodorised is a natural vegetable fat obtained by mechanical pressing of the seeds of the cacao tree (*Theobroma cacao* L.), followed by deodorisation to remove the characteristic cocoa aroma. The raw material has a solid consistency, a white to pale-yellow colour, a neutral odour and a melting range of 30 to 34 °C. It contains high levels of saturated and monounsaturated fatty acids, which provide its characteristic firmness, good oxidative stability and pronounced emollient properties. Owing to its lipid composition, cacao butter softens and smooths the skin, helps preserve its protective barrier and reduces transepidermal water loss. In cosmetic formulations, it improves consistency, increases textural richness and contributes to the formation of a pleasant protective lipid film. The deodorised grade is particularly suitable for formulations in which the characteristic cocoa aroma is not desired.

Physicochemical characteristics: Cacao Butter, Deodorised is a solid vegetable fat with a white to pale-yellow colour and a neutral odour, without the characteristic cocoa aroma. Its melting range is 30 to 34 °C, allowing it to melt gradually upon contact with the skin. According to the certificate of analysis, the iodine value is 37.0 g I₂/100 g, indicating a relatively low degree of fatty-acid unsaturation. The peroxide value is 1.0 meq O₂/kg, indicating a low level of primary oxidation products and a favourable initial oxidative condition of the raw material. The free fatty acid content is 1.390%, which is within the manufacturer's specification and represents an indicator of the degree of hydrolytic degradation of triglycerides.

Chemical composition - fatty acid profile: Cacao butter consists predominantly of triglycerides of palmitic, stearic and oleic acids, with a smaller proportion of linoleic acid. It is characterised by a high content of saturated and monounsaturated fatty acids, which determine its firmness, melting range, oxidative stability and emollient properties. Its composition is dominated by stearic acid (C18:0) at 36.1%, oleic acid (C18:1) at 33.2% and palmitic acid (C16:0) at 26.0%, while linoleic acid (C18:2) accounts for 2.0%. Stearic and palmitic acids, as saturated fatty acids, contribute to the solid consistency of cacao butter, its structural stability and its ability to form a protective lipid film on the

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skin surface. Oleic acid, as a monounsaturated fatty acid, contributes to emollient properties, improves spreadability and softens the skin, while linoleic acid, although present in a considerably lower concentration, is an essential fatty acid important for maintaining the function of the epidermal lipid barrier. The specific ratio of these fatty acids, primarily in triglyceride form, enables cacao butter to remain solid at room temperature and to melt gradually upon contact with the skin, creating a rich and pleasant emollient layer.

Bioactive compounds: In addition to triglycerides, natural cacao butter may contain small amounts of unsaponifiable matter and other accompanying compounds. Tocopherols are natural antioxidants that help protect the lipid fraction against oxidation. Phytosterols are plant sterols present in the unsaponifiable fraction and may contribute to the conditioning properties of the raw material. Squalene is a natural lipid that may be present in small amounts in the unsaponifiable fraction. Polyphenolic compounds may be present in trace amounts, although their content is significantly reduced during processing and deodorisation.

Benefits:

- **Emollient action:** Softens and smooths the skin, reduces roughness and improves softness and elasticity.
- **Moisture retention:** Forms a protective lipid film that limits transepidermal water loss and helps maintain hydration.
- **Care of dry and rough skin:** Particularly suitable for balms, restorative creams and products intended for the care of very dry skin areas.
- **Lip protection:** Improves the consistency and durability of lip balms and helps protect the lips against dryness.
- **Hair conditioning:** Softens the hair shaft, improves manageability and helps reduce dryness and breakage.
- **Improvement of formulation texture:** Increases the firmness and consistency of anhydrous products and provides emulsions with a fuller, richer structure.

Directions for use: Cacao Butter - Deodorised is used as an emollient and structural component in the manufacture of cosmetic creams, lotions, balms, body butters, lip-care products, massage products and hair-care products. The recommended concentration depends on the type of product and the desired consistency of the formulation. It is most commonly used at 1 to 10% in face and body creams and lotions, 5 to 30% in body butters, 5 to 25% in lip balms, 10 to 40% in protective and restorative balms, and 1 to 10% in hair masks and conditioners. In solid cosmetic products, it may be used at concentrations of 10 to 50%, depending on the desired firmness and the composition of the other lipid components. These concentrations represent indicative formulation ranges and not limits specified by the manufacturer.

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Cacao butter is added to the oil phase and gradually heated until completely melted, most commonly to a temperature of 40 to 50 °C, after which it is homogenised with the other lipid components. Controlled cooling is recommended to ensure a uniform crystalline structure and prevent the development of a grainy consistency. It is insoluble in water and, after melting, miscible with vegetable oils and other compatible lipid components.

Source raw material: Seeds of the cacao tree (*Theobroma cacao* L.), family Malvaceae.

Manufacturing method: Cacao butter is obtained by mechanical pressing of cocoa mass using an expeller-pressing process, followed by deodorisation to remove characteristic aromatic substances. No organic solvents are used and no preservatives are added during production.

Regulatory status: Natural origin: 100% according to ISO 16128.

GMO: The raw material is not obtained from genetically modified plant material.

Vegan status: Suitable for vegan formulations and contains no ingredients of animal origin.

Animal testing: In accordance with the applicable 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 in laboratories on living organisms (in vivo) or cell cultures (in vitro). This statement confirms compliance with the animal-testing ban and is provided solely for informational purposes regarding the further use of the raw material in cosmetic formulations.

Cosmetic use: Suitable for use in cosmetic products in accordance with Regulation (EC) No 1223/2009. This raw material grade is not declared as organically certified.

Storage conditions: Store in the original, tightly closed packaging in a cool, dry place, protected from direct sunlight and heat sources. Avoid frequent temperature changes because they may alter the crystalline structure of the butter.

Origin of the plant material: Africa, North America and South America.

Country of manufacture: Spain.