

TECHNICAL DATA SHEET

Product Name: Standardized Fenugreek Seed Powder (50% Saponins)

INCI Name: Trigonella Foenum-Graecum Extract

CAS: 84625-40-1

Botanical Name: Trigonella foenum-graecum

Product Quality: The standardized fenugreek seed powder with 50% saponins is a high-quality botanical raw material obtained through controlled extraction of Trigonella foenum-graecum seeds, with a laboratory-verified saponin concentration. It primarily contains steroidal saponins such as diosgenin, yamogenin, tigogenin, and gitogenin.

Description: Standardized fenugreek seed powder (50% saponins) is a valuable botanical ingredient known for its rich content of bioactive compounds with regenerative and stimulating properties. The standardization process ensures a stable and controlled saponin level, providing consistent efficacy in cosmetic formulations. Its main active components are steroidal saponins, predominantly diosgenin – a natural plant precursor for steroid hormone synthesis. Diosgenin demonstrates anti-inflammatory activity, improves microcirculation, and stimulates cellular metabolism, enhancing skin tone, elasticity, and vitality. Through synergistic interaction with other saponins, fenugreek extract promotes epidermal regeneration and strengthens the skin barrier, while also enhancing nutrient and active ingredient absorption. In scalp-care formulations, it revitalizes hair follicles, strengthens roots, reduces dandruff, and improves hair texture. Due to its natural origin and biocompatibility, this ingredient is suitable for products aimed at soothing, restoring, and revitalizing skin and hair. It does not clog pores and does not cause irritation, even in sensitive regions such as the area around the eyes.

Bioactive Compounds: The standardized fenugreek seed powder (50% saponins) is rich in a broad spectrum of phytochemicals that act synergistically to deliver both cosmetic and pharmacological benefits. The most significant group includes steroidal saponins diosgenin, yamogenin, tigogenin, and gitogenin which are natural plant steroids capable of supporting tissue regeneration, stimulating microcirculation, and reducing inflammation. Fenugreek seeds also contain alkaloids such as trigonelline, which supports cellular metabolism and has antioxidant effects, and choline, known for maintaining the structural integrity of cell membranes.

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.

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The flavonoid complex (isovitexin, orientin, apigenin) provides strong antioxidant protection, neutralizing free radicals and protecting the skin from oxidative stress. The polysaccharide and mucilage fractions, mainly galactomannans and arabinogalactans, form a protective film on the skin's surface, retain moisture, and enhance smoothness and elasticity. The lipid fraction contains linoleic and oleic acids, which nourish the epidermis and improve elasticity, while proteins and amino acids (especially leucine, isoleucine, and valine) promote regeneration. Together, these phytochemicals create a complex bioactive system that restores, protects, and revitalizes both skin and scalp, enhancing resilience and natural balance.

Benefits:

- Exhibits anti-inflammatory effects and reduces skin redness.
- Improves microcirculation and oxygen supply to tissues.
- Stimulates cell regeneration and epidermal renewal.
- Strengthens the skin barrier and enhances elasticity.
- Reduces dandruff and strengthens hair roots.
- Promotes skin tone, freshness, and vitality.
- Hydrates and helps retain moisture in the outer layers.
- Shows antimicrobial properties and prevents microbial growth.
- Protects the skin from oxidative stress and free radicals.
- Soothes irritated and sensitive skin, leaving it smooth and resilient.

Application: The standardized fenugreek seed powder (50% saponins) is used at low to moderate concentrations, depending on the formulation type and desired effect. In creams and emulsions: typically used at 1–3% for soothing, toning, and regenerative effects. In hair and scalp products (shampoos, masks, tonics): up to 5%, leveraging saponins for cleansing, strengthening, and revitalizing the follicles. The powder is usually added during the cold-processing phase, after pre-dispersion in water or glycerin for better solubility and homogenization. When combined with plant extracts, proteins, or hyaluronic acid, its efficacy increases making it ideal for restorative, hydrating, and revitalizing formulations that are gentle and non-comedogenic.

Animal Testing: In compliance with EU Regulation (EC) No. 1223/2009 on cosmetic products, this ingredient has not been tested on animals.

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Safety assessment is based on toxicological data, scientific literature, and validated alternative testing methods (in vitro and in silico). In silico testing refers to computer-based predictive modeling and simulations, rather than live-organism (in vivo) or cell-culture (in vitro) testing. This statement confirms adherence to the EU animal testing ban and serves for informational purposes regarding cosmetic use.

GMO Status: Non-GMO

Vegan: Contains no animal-derived components



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