

TECHNICAL DATA SHEET

Product Name: Rosehip Oil

INCI Name: Rosa Rubiginosa (Rose Hip) Seed Oil

CAS: 84603-93-0

Botanical Name: Rosa rubiginosa

Synonyms: Rosa rubiginosa L., Rosa eglanteria, Rosa mosqueta

Chemical Classification: Fats and Oils

Functional Category: Skin and Hair Conditioning Agent ~ Emollient

Extraction Method: Cold-pressed

Processing Type: RBD (Refined, Bleached, Deodorized)

Country of Origin: Italy

Description: Rosehip oil is a natural vegetable oil obtained from the seeds of wild rose (*Rosa rubiginosa*). It is characterized by a light, non-greasy texture and belongs to the category of dry oils, meaning it quickly absorbs into the skin without leaving a greasy residue. Thus, it is suitable for all skin types, including oily and combination skin. Refined rosehip oil has high stability due to antioxidants and reduced susceptibility to oxidation compared to the unrefined version. It has relatively low density, lighter than water, contributing to rapid absorption. The refractive index of the oil usually ranges between 1.470 and 1.480, characteristic of vegetable oils rich in essential fatty acids. The color of the oil depends on carotenoid content - refined oil appears clear, pale yellow to yellowish, while the unrefined version may have a more intense orange hue. It is completely insoluble in water, slightly soluble in ethanol and other alcohols, but readily soluble in nonpolar organic solvents such as hexane and ether. The scent of the oil may vary depending on raw material quality, extraction method, and refining processes. Refined oil has a milder aroma compared to the unrefined, which can exhibit a more pronounced natural plant scent. Due to its high content of essential fatty acids, rosehip oil is known for its moisturizing and regenerative properties, making it a popular ingredient in

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cosmetic formulations for skin and hair care.

Note: Rosa mosqueta and Rosa moschata are often confused. Rosa mosqueta is not a botanical name but a trade term used in South America for rosehip oil, typically obtained from Rosa rubiginosa. Conversely, Rosa moschata is a distinct botanical species, known as musk rose, primarily used for its fragrant flowers in perfumery rather than oil production.

Phytochemicals: The key active component in rosehip oil is trans-retinoic acid, a natural precursor of vitamin A (retinol), likely responsible for its healing properties. The oil contains oleic acid, a monounsaturated fatty acid, and linoleic acid (omega-6), an essential fatty acid comprising approximately 45-50% of total fatty acids. Alpha-linolenic acid (omega-3), another essential fatty acid, is present in smaller amounts, approximately 30-35% of total fatty acids. Palmitic acid, a saturated fatty acid, constitutes about 3-4%, contributing to oil stability and moisturizing properties. Stearic acid is found in minor amounts (around 1-2%). The oil is rich in carotenoids, including beta-carotene and lycopene, powerful antioxidants protecting the skin from oxidative stress and reducing harmful free radical effects. It also contains phenolic acids such as gallic and ellagic acid, certain flavonoids like quercetin and kaempferol, and carboxylic acids like cinnamic and malic acid. Phytosterols, plant components structurally similar to cholesterol, are also present, alongside vitamins A, C, and E.

Benefits:

- Hydrates skin and prevents moisture loss.
- Enhances regeneration, aiding in healing scars and stretch marks.
- Reduces wrinkles and fine lines due to antioxidant content.
- Soothes irritation, redness, and inflammation.
- Strengthens hair, reduces brittleness, and enhances shine.
- Moisturizes nails, preventing brittleness.
- Reduces pore size and regulates sebum production.
- Evens skin tone and reduces hyperpigmentation.

Usage Instructions: Rosehip oil is used at varying concentrations depending on the cosmetic product type and desired functional properties. In facial moisturizers and serums, it is typically added at 5-15%, supporting skin regeneration without compromis-

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ing texture. Body lotions and milks use slightly lower concentrations of 3-10%, enhancing skin elasticity without excessive greasiness. In products for dry and damaged skin, such as treatments for stretch marks and scars, concentrations can increase to 10-30% to maximize regenerative properties. Oil blends and massage formulations may contain it in concentrations from 20% to pure form, depending on the desired effect. Hair care products like masks and serums utilize it optimally between 2-5%, contributing elasticity and shine without excessive oiliness. Lip balms incorporate rosehip oil at 5-10%, providing additional hydration and protection for cracked lips. When adding to emulsion-based products, it is crucial to incorporate during the cooling phase to preserve essential fatty acids and nutritional value.

Animal Testing: Substance not tested on animals

GMO: Non-GMO

Vegan: Contains no animal-derived components

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