

TECHNICAL DATA SHEET

Product Name: Burdock Root Infused Oil

INCI Name: Arctium Lappa Root Extract, Helianthus Annuus Seed Oil, Prunus Amygdalus Dulcis Oil, Tocopherol

CAS Numbers: 84012-13-5, 8001-21-6, 8007-69-0, 59-02-9

Synonyms: Oleum Bardanae, Infused Burdock Root Oil, Burdock Root Oil, Burdock Infused Oil, Arctium Lappa Root Oil

Chemical Classification: Mixture

Functional Category: Skin Conditioning Agent ~ Occlusive, Skin Conditioning Agent ~ Emollient, Antioxidant, Hair Conditioning Agent

Description: Burdock root infused oil is obtained by macerating dried burdock root (Arctium lappa) in a selected plant oil using the stove-top method. During this process, the bioactive compounds from the plant material gradually transfer into the carrier oil, enhancing its therapeutic properties. The chosen carrier oils are cold-pressed linoleic-type sunflower oil, rich in essential linoleic acid with a smaller proportion of oleic acid, and sweet almond oil. Due to the presence of inulin, a natural prebiotic, this oil helps maintain a healthy skin and scalp microbiota. Prebiotics serve as nutrients for beneficial bacteria (e.g., Lactobacillus and Bifidobacterium), which positively influence the skin's microbiome. At the same time, the phenolic acids and polyphenols present in burdock root act as antioxidants, protecting the skin from oxidative stress and premature aging. Its soothing effect makes it particularly beneficial for dry and irritated skin, while for oily skin, it helps regulate sebum production, promoting balanced sebaceous gland function. When applied to the hair and scalp, this oil strengthens the hair shaft from the root, stimulates hair growth, and reduces dandruff. It improves scalp circulation, enhancing nutrient delivery to hair follicles. Its mild and nourishing nature makes it suitable for various skin and hair types, particularly for those prone to dryness and irritation.

Bioactive Compounds: Burdock root infused oil is rich in bioactive compounds that contribute to its regenerative, soothing, and protective effects on skin and hair. Among the key components is inulin, a polysaccharide that acts as a natural prebiotic. Inulin

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supports the balance of the skin and scalp microbiota, enhancing the skin barrier function, reducing irritation, and maintaining a hydrated, healthy appearance. Phenolic acids and polyphenols, known for their antioxidant and anti-inflammatory properties, significantly enhance the effectiveness of burdock root oil. The most abundant include chlorogenic, caffeic, and chicoric acids, which help neutralize free radicals, reduce oxidative stress, and protect skin cells from premature aging. These compounds are particularly beneficial for skin exposed to external aggressors such as UV radiation and pollution. Additionally, polyphenols, including quercetin, luteolin, and arctigenin, contribute to reducing inflammation and strengthening the skin's resilience against irritants. Their anti-inflammatory effects are useful for problematic skin prone to redness, irritation, and inflammatory conditions. Arctigenin, present in burdock root, also exhibits potential immunomodulatory properties, which may help alleviate symptoms of certain skin conditions such as eczema and psoriasis. Mucilage and other moisturizing substances from burdock root contribute to its soothing effects, aiding in the regeneration of dry, chapped, and irritated skin. Thanks to these compounds, the oil is suitable for formulations designed for sensitive and problematic skin, providing a sense of comfort and gentle protection. The essential fatty acids from the carrier oils, in synergy with burdock root's bioactive components, help strengthen hair follicles and improve scalp microcirculation. This action promotes healthier hair growth and reduces dandruff while nourishing the scalp, making it more resistant to external irritants. Burdock root also contains lignans, such as arctigenin and matairesinol, which further enhance its antioxidant and regenerative properties. Phytosterols present in the root support skin structure, reduce transepidermal water loss, and improve elasticity, while tannins provide mild astringent effects, helping to balance sebum production and tighten pores in oily skin.

Benefits:

- Helps maintain optimal skin hydration and prevents dryness.
- Improves skin texture, making it smoother and softer.
- Soothes irritations, reducing redness and discomfort caused by inflammation or allergies.
- Regulates sebum production, balancing skin oiliness, particularly in oily skin types.
- Stimulates hair growth by strengthening the roots and promoting healthier hair development.
- Reduces dandruff, cleansing the scalp and preventing the formation of dry,

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flaky buildup.

- Strengthens hair, improving its resilience and reducing hair loss and breakage.

Usage: Burdock root infused oil is primarily applied directly to the skin and hair but can also be incorporated into various cosmetic formulations. For skincare formulations: It can be used as a primary moisturizing ingredient in creams, serums, and lotions at concentrations typically ranging from 1% to 5%. For soothing and irritation relief, a 2-3% concentration is recommended, while for stronger anti-inflammatory and redness-reducing effects, it can be increased up to 5%. For hair and scalp care: It is commonly used in treatments designed to stimulate hair growth and reduce dandruff. It can be applied directly to the scalp, left overnight or for a few hours before washing, with concentrations in hair care formulations typically ranging from 1% to 5%. It can also be used in shampoos, conditioners, and hair masks at concentrations of 2-3%. For specific skin concerns such as dryness or eczema, higher concentrations may be used, but it is advisable to start with a lower amount to monitor skin response. Burdock root infused oil is compatible with various other oils and active ingredients, making it a versatile addition to formulations with botanical extracts and essential oils.

Animal Testing: Not tested on animals.

GMO Status: Non-GMO.

Vegan Status: Does not contain animal-derived components.