

## TECHNICAL DATA SHEET

**Product name:** Walnut Leaf Infused Oil

**INCI name:** Walnut Leaf Infused Oil

**CAS:** 84012-43-1

**Synonyms:** Oleum Juglandis, Walnut Leaf Oil

**Chemical classification:** Mixture

**Functional category:** Skin care agent - occlusive, Skin conditioning agent - emollient, Antioxidant

**Extraction method:** Walnut leaf infused oil is obtained by macerating dry plant material (walnut leaves) in an appropriate vegetable oil using the so-called "Stove-Top" method. Medicinal substances slowly transfer from the walnut leaves into the vegetable oil, summing up the medicinal properties of the vegetable oil and the active components of the walnut leaves being macerated. Cold-pressed sunflower oil of the linoleic type, which contains a higher portion of essential linoleic acid and a smaller amount of oleic acid, is used as the "carrier oil". The oil is odorless, stable, and does not spoil quickly. It is preserved with vitamin E. The plant macerate is a 100% natural product.

**Effect on skin:** Walnut leaf infused oil contains omega 3, 6, and 9 unsaturated fatty acids, phosphorus, selenium, calcium, iron, and iodine. The oil is rich in vitamins E, B1, and B6. Ellagic acid is a powerful antioxidant. The oil has antibacterial, antiviral, and antiseptic effects, and also acts anti-inflammatory. The oil is recommended for inflammatory processes on the skin and mucous membranes. Antioxidants from walnut leaves protect the skin from UV rays. The oil prevents excessive drying of the skin, is useful against burns, and strengthens the hair. Massaging with walnut leaf oil will make the skin lighter, softer, and more delicate.

### Benefits:

- **Antioxidant properties:** Antioxidants present in the oil, such as flavonoids and phenolic acids, can neutralize free radicals. Free radicals are unstable molecules that can damage cells and initiate inflammatory processes. By neutralizing these molecules, the

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oil helps reduce oxidative stress and inflammation. Thanks to the presence of antioxidants, the oil can help reduce the appearance of fine lines and wrinkles.

- **Anti-inflammatory effects:** The oil has anti-inflammatory properties, making it useful for soothing irritated skin. Walnut leaf oil contains compounds that can inhibit the activity of enzymes such as cyclooxygenase (COX) and lipoxygenase (LOX). These enzymes are key in the production of prostaglandins and leukotrienes, which are important mediators of inflammation. By reducing their activity, walnut leaf infused oil can decrease the production of inflammatory mediators and thereby reduce inflammation. Phytochemicals in the oil can affect signaling pathways in cells that regulate the production of inflammatory cytokines, such as tumor necrosis factor-alpha (TNF- $\alpha$ ) and interleukins (IL-1, IL-6). By reducing the expression of these cytokines, the oil can contribute to the reduction of inflammatory responses, which can be particularly useful in conditions such as eczema, psoriasis, and other inflammatory skin issues.

- **Improvement of skin barrier function:** Inflammatory processes can impair the skin barrier function, making it more susceptible to irritations and infections. Components present in walnut oil can help in the restoration and preservation of the skin barrier function, thereby reducing inflammation and improving the overall condition of the skin.

- **Astringent action:** Tannins present in walnut oil have strong astringent properties. Astringents are substances that cause the tightening and shrinking of tissues, which can lead to a reduction in the size of pores on the skin. When applied to the skin, the oil can temporarily tighten the skin and pores, thereby improving the overall appearance of the skin and reducing the visibility of pores.

- **Regulation of sebum production:** Excessive production of sebum can lead to oily skin and the appearance of acne. Components in walnut oil can help regulate sebum production, thereby reducing the oiliness of the skin and preventing pore clogging. This regulation of sebum is key to maintaining a healthy skin balance.

Improvement of skin texture: Flavonoids and phenolic compounds in walnut oil help reduce redness and irritation of the skin. These effects, along with the astringent action, contribute to a smoother and more even skin texture.

- **Stimulation of cell renewal:** Some ingredients in walnut leaves can stimulate skin cell renewal processes, promote the removal of dead skin cells, and encourage the growth of new, healthy cells. This can revitalize the skin, improving its tone and texture.

- **Antimicrobial properties:** The oil has antimicrobial properties, which can help prevent the growth of certain bacteria and fungi on the skin. This makes it an excellent ingredient in products intended for acne-prone skin to prevent the development of

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acne-causing bacteria.

**Use in cosmetic products:** Today, walnut leaf infused oil is used in the manufacture of many cosmetic products, often as a base for creams, lotions, personal care products. It is also added to various natural balms for wound healing and against burns. The oil makes the skin soft and smooth, makes wrinkles less noticeable, and can alleviate freckles and other scars (for example, from acne). It is also used for massage.

**Animal testing:** The substance is not tested on animals

**GMO:** Not GMO

**Vegan:** Does not contain components of animal origin

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