

Lipactive Inca Inchi® - The richest oil in essential fatty acids with multifunctional applications for Cosmetics

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Abstract

During life, the skin is subjected to different perturbations (puberty, pregnancy, menopause, disease) and aggressions (UV, pollution, cold, detergent). These upheavals and external aggressions induce a decrease of membrane fluidity involving a disruption of the lipidic barrier (cutaneous dryness and roughness) and a loss of the epidermic elasticity (formation of irregularities, stretchmarks and furrows). All these events induce a cutaneous dehydration accompanied by the appearance of squamas and wrinkles on the skin surface. The supply of essential fatty acids and antioxidant molecules can restore the cutaneous permeability and the function of the skin barrier. They contribute to the control of the imperceptible water loss and they maintain the moisturizing of the skin.

Lipactive Inca Inchi® is a natural oil with an exceptional content in poly-unsaturated fatty acids (more than 90%) and tocopherols (1,5 to 2 g/kg). It is the only vegetable oil with both essential fatty acids in such a high amount - 49% of alpha-linolenic acid (omega-3) and 34% of linoleic acid (omega-6). Thanks to these two essential fatty acids and to omega-9 fatty acids (10%), involved in the stabilization of cell membranes by inserting between phospholipids, Lipactive Inca Inchi® allows the restoration of the cutaneous barrier organization and the epidermic elasticity. It regulates the cutaneous permeability and it contributes to the control of the imperceptible water loss and therefore to maintain skin hydration.

As precursors of “hormone like” chemical compounds as prostaglandins, these two essential fatty acids play a part in the regulation of the inflammatory process (E3 prostaglandin) and the treatment of dry and damaged skins as in eczema attacks (E1 prostaglandin).

In addition, Lipactive Inca Inchi® also has antioxidant properties thanks to its high content in tocopherols. By trapping free

radicals, tocopherols protect the various cellular structures against oxidative damages.

Lipactive Inca Inchi® is recommended for:

- Anti-ageing skin care
- Regenerative skin care
- Healing skin care
- Anti-stretchmark skin care
- Moisturizing skin care
- Dry skin with atopic tendency skin care
- After sun care
- Feet care
- Hand care
- Activator of blood microcirculation.

Three forms of Lipactive Inca Inchi® have been developed: 2 liquid forms (the Inca Inchi virgin oil and the odourless and colourless form of the Inca Inchi oil) and a solid form (micro-encapsulation). Lipactive Inca Inchi® is a new Active Lipidic Ingredient becoming a Basic Constituent of Emulsion.

Plukenetia volubilis, called Inca Inchi, is a plant native of the high-altitude rainforest of the Andean region of South America and especially of Peru. It produces a tetralobular fruit that contains seeds with a high oil content (54%) with a specific lipid composition (more than 90% of the lipids are omega-3 (47%), omega-6 (34%) and omega-9 (10%)). To produce the Inca Inchi oil in Peru, the OMEGA project has been developed. The aim of this project is to ensure respect for the environment and the farmer's quality of life, linked to the plant crop and the oil production quality. The OMEGA project falls into the criteria of Sustainable Development and Fair Trade.

Introduction

Inca Inchi (*Plukenetia volubilis* linneo) is a plant native of the high-altitude rainforest of the Andean region of South America