

Protectol – A New Ingredient with Photoprotector and Soothing Effects for Sensitive Skin

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Abstract

The skin ensures a main role in the body's defence against various aggressions such as penetration of chemical substances, microbial agents, mechanical and thermal factors and solar radiation.

Skin can protect itself but during the ageing process and because of repeated external aggressions, the skin barrier becomes deficient and skin is more reactive and vulnerable to external stimuli.

This greater reactivity leads to itching, nagging pains and feelings of heat with the possibility of drying or squamas and diffuse redness.

Furthermore, skin which is more subject to irritations stimulates its defence process by causing inflammatory reactions. Mediators of inflammation are produced. They induce a capillary permeability, free radical generation that induces lipidic and protein deteriorations.

So, reduction of inflammation is important for limiting sensitive skin reactivity as well as for decreasing the ageing process.

In order to develop a new active with anti-inflammatory effect, the classical prospecting method, **Ethnopharmacology**, has been combined with a new technique of research: **Bioinformatics**, an innovative approach in cosmetic research.

So, the active, called Protectol, is a natural ingredient containing compounds from triterpens family and iridoids.

Protectol efficiency has been proved by *in vitro* as well as *in vivo* tests.

Protectol is an inhibitor of enzymes involved in the inflammation process such as Phospholipase A2 (PLA₂), Cyclooxygenase (Cox) and Lipoxygenase (Lox).

It has been demonstrated that Protectol minimized the production of prostaglandins, leucotrienes as well as other cytokines (IL1 α). The immunoregulator effect of Protectol has also been proved.

Clinical tests have shown that Protectol prevents and reduces sun erythema intensity after UV irradiation. It also decreases drastically skin reactivity with reduction of stinging sensitivity.

Thanks to its soothing activity, Protectol is a natural active which has photoprotector effect and can reduce sensitive skin reactivity

Introduction

The skin ensures a main role in the body's defences in relation to numerous possibilities of aggressions coming from the surrounding world: penetration of chemical substances, microbial agents; mechanical impacts; thermal factors, solar radiation etc.

It constitutes an organ endowed with its own immunological properties which enables the protection of the individual from external aggressions.

However, skin can undergo modifications and become reactive and sensitive due to some internal and extrinsic factors:

- **Hormones**
- **Age:** children have a more sensitive skin than adults
- **Gender:** women have a more sensitive skin than men
- **Environment:** cold, heat, temperature variations, pollution, sun, repeated exposure to water, detergents, solvents.
- **Style of life:** emotions, stress, absorption of alcohol, some foods as spices.
- **The use of various products:** detergents, hygiene product not always adapted.

Then, the skin barrier function becomes deficient, its tolerance threshold lowers which makes skin more reactive and more vulnerable to external stimuli.

This greater reactivity provokes tingling, itching, nagging pain and heated feelings with the possibility of drying out, squamas and