INCI Denomination: Sodium hyaluronate (and) silanetriol (and) water

Epidermal extra-cellular matrix & cell renewal

Low molecular weight hyaluronic acid synergized by the silanol technology

Our structure-activity studies resulted in the design of a silanol, derived from low-molecular weight hyaluronic acid, with a boosting effect on the properties of hyaluronic acid towards the epidermal extra-cellular matrix.

hyaluronic acid (250 - 600 kDa) associated to silanol for a higher epidermal renewal (retinoic-like effect)

Low-molecular weight hyaluronic acid often triggers the immune cells recruitment

EPIDERMOSIL eliminates all negative side-effects related to inflammation

APPLICATIONS:
- anti-aging
- epidermal renewal
- moisturization
- improvement of barrier function

Conference given at 25th IFSCC Congress in Barcelona in October 2008:
Design of a novel anti-aging active ingredient targeting the epidermal extracellular matrix
EPIDERMOSIL

Analytical characteristics
- Limpid to opalescent liquid
- Colorless to pale yellow, soluble in water
- pH: around 6
- Hyaluronic acid content: around 0.35%
- Silicium content: around 0.9 g/kg

Preservatives*
- Phenoxyethanol / sorbic acid
* the preservative system may be adapted on request

Using dose
- About 5%

Tolerance
- The tests show that the product is not toxic nor irritant

EPIDERMAL RENEWAL

Three types of studies evidence the boosting effect, of EPIDERMOSIL, on epidermal renewal:

- monitoring, on reconstructed epidermis, of the cell renewal and differentiation using immunofluorescence.
- monitoring of the cell renewal by histological analysis of mechanically injured reconstructed epidermis.
- monitoring of the cell renewal and differentiation on human explant using immunofluorescence.

The Ki67 antigen, present in proliferative cells, is a marker of cell renewal. Its labeling, by immunofluorescence (yellow), shows that the number of proliferative cells is higher in the epidermis treated by low-molecular weight hyaluronic acid (HA), and even higher in the epidermis treated by EPIDERMOSIL.

Reconstructed epidermis
- control
- treated by HA
- treated by EPIDERMOSIL

The monitoring of pro-inflammatory cytokines released in the culture medium of the reconstructed epidermis revealed the complete absence of inflammatory response.