

DPHP (Dipalmitoyl Hydroxyproline)

A powerful anti-aging active targeting a wide range of skin aging signs for a youthful looking skin

INCI: DIPALMITOYL HYDROXYPROLINE

- Stimulates the collagen synthesis for a firmer, smoother skin
- Repairs skin by improving skin elasticity reducing the number and depths of wrinkles
- Effective moisturizer
- Anti-Erythema

DPHP is a lipoamino acid obtained by the acylation of palmitic acid on hydroxy-4-proline. It is an amino acid which is essential to the skin and which is known for its moisturizing properties.

CTFA Designation: dipalmitoyl hydroxyproline

Hydroxyproline is a key player in skin collagen synthesis. Dipalmitoyl hydroxylproline, a liposoluble derivative of hydroxyproline, is to penetrates into the dermis and promotes collagen synthesis.

DPHP is an efficacious anti-wrinkle and firming active.

- The respect the acid level of the skin and help preserve it.
- They restore the skin's hydrolipic film and promote in this way the skin's self protect against outside attacks.
- They act as anchors between the corneocytes and intracellular lipids in the cohesion of the corneal layered preserve surface desquamation.
- They contribute to the moisturizing of the stratum corner because of the liberation of the carboxyl in the aminoacids.

DPHP is an active ingredient with many specific properties which means it can be used in many products, both pharmaceutical and cosmetic.

Applications:

- anti-wrinkle creams
- moisturizing lotions
- facial cleanser
- sun protection products
- vanishing creams
- massage creams



SKIN TONER

In Vivo Study

A panel of 10 volunteers applied the product to be tested every morning and evening for three weeks.

After the treatment the elasticity of the dermis was assessed using a fermometer which records three criteria, total extensibility, hysteresis and softness.

Results

The results obtained show that **DPHP** in quantities of 2% in an O/W emulsion clearly improves the extensibility, the elasticity and the softness of the skin. When this product is combined with liposomes its efficiency is reinforced. MARTINI, M.C. and al. conclude in the study (1) that **DPHP** can therefore claim to have properties which improve the softness of the skin.

ANTI-ELASTASIC

In Vitro Study

The method is based on the diffusion of elastase in agar gel in the presence of insoluble elastin stained with orcein and dispersed in gel. After incubating for 48 hours in the incubator at 37°C, the surface of the areas which are clean after enzyme digestion, is measured.

DPHP is introduced into the gel in a quantity of 0,5% at 40°C in the presence of buffer solution (pH=8,5)

Results

According to this method, the percentage of the inhibition of the elastase in relation to the elastin is determined.

DPHP has the property of being able to inhibit the activity of elastase with regard to elastin. AE DPHP presents ageing effects such as skin loose of elasticity and tonicity. This action is due neither to a change in pH, nor to any surfactant power (2).

Physical and Chemical Data:

TEST	SPECIFICATION
Appearance	white to to light yellow powder
Odor	characteristic
Acid Value	110.0 - 140 mg KOH/g
Sulphated ash	0.5 % max

Storage:

Cool, in tightly sealed glass or polyethylene containers