## **ACTIVE INGREDIENTS:**



## ASCORBIC ACID – VITAMIN C

**C**ontains Vitamin C, active ingredient with antioxidant and restorative properties of the dermal matrix, protecting the skin from photo-aging, lightening and whitening pigmentation spots and revitalizing the skin.

**Vitamin C,** or L-ascorbic acid, acts as a cofactor for collagen synthesis. It has a high regenerating ability, by its collagen synthesis stimulating activity.

Vitamin C is essential for the proline hydroxylation,

therefore in the development and maintenance of collagen integrity. In addition, vitamin C inhibits the synthesis of Extracellular Matrix Metalloproteinase enzymes of, enzymes which stimulates collagen degradation in the dermis.

Vitamin C's collagen stimulating properties provides it with wound healing properties, caused by trauma, cuts, burns, or surgery. It is also suitable for the formation of new tissues.

Vitamin C belongs to the group of water soluble vitamins, and like most of them, it is not stored in the body for a long period of time, but in small quantities which are eliminated



through urine. For this reason, Vitamin C daily administration is important in order to provide sufficient antioxidant protection.

Its chemical structure is similar to that of glucose (in many mammals and plants, this vitamin is synthesized from glucose and galactose).



### HYALURONIC ACID

Hyaluronic acid (HA) is a polysaccharide from the type  $\beta$ - links glycosaminoglycans, having a structural function, such as chondroitin sulfates. It has the capacity to absorb more than 1000 times its volume in water.



That is why it is used in epidermis moisturizing the as it reconstructs the fibers that hold skin tissues, giving a better shape. With a very high viscoelasticity, it is a natural component part of the skin and is essential to fight aging and wrinkles due to its high moisturizing power.

In the dermis, hyaluronic acid is the main component of the extracellular matrix (ECM). Fibroblasts are a cell type responsible for the production of collagen and elastin in the skin. ECM extracellular matrix is the space between the skin cells. This makes the skin soft, smooth and elastic.

Young skin (soft and elastic) contains high amounts of HA (Hyaluronic acid).

Hyaluronic acid contained is of biotechnological origin, has a molecular weight of 50-110 kDa:



Retains moisture and elasticity in the tissues (moisture retention in the extracellular matrix (ECM))

✓ Protects against environmental stress

 ✓ Helps to reduce the appearance of wrinkles and expression lines.

#### **GROWTH FACTOR 3**



# DIMETHYLETHANOLAMINE, DEANOL (DMAE) + LACTIC ACID

It is indicated for the treatment of flaccid and/or aged skins. Contains Dimethylamino Ethanol (DMAE) and Lactic Acid, actives with tensing and moisturizing properties that combat facial and body flaccidity achieving an immediate lifting effect. It attenuates wrinkles by firming and improving skin elasticity.

Dimethylaminoethanol, dimethylethanolamine, deanol or DMAE, is a liquid and transparent organic compound. It is a natural nutrient that is part of our own organism (the human brain secretes it in small amounts) and is also present in



large quantities in nature (especially in fish such as salmon, anchovy or sardines). Dimethylaminoethanol is a biochemical precursor of acetylcholine, a neurotransmitter involved in multiple bodily activities.

There is an epidermal thinning with a decrease in the number of melanocytes. In the dermis, there is a decrease in fibroblasts, mast cells, and venules. This decrease in the vascular network causes atrophy of the glands and hair follicles with a lower proliferative capacity of the fibroblasts and decrease in the number of elastic fibers.

Clinically photoaging is translated into wrinkles, telangiectasia, atrophy and areas of depigmentation and keratosis.

In the processes of intrinsic and extrinsic aging are present free radicals that alter the cell membranes reducing their permeability and altering the collagen fibers.

DMAE acts on the membranes by stabilizing them and decreasing the concentration of free radicals. DMAE, dimethylethanolamine for its part, is used in anti-aging treatments and in improving skin tension. It makes the skin more resistant to stress, and offers protection against free radicals, without actually being considered an antioxidant.