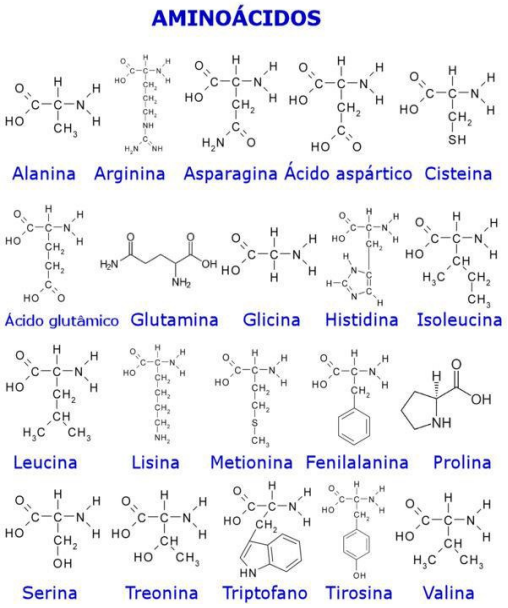
POLIVITAMIN SERUM

AMINO ACIDS

Amino acids are the structural units of proteins. They are found naturally in our body, giving structure to the skin, thanks to the formation of proteins, and participating in molecular processes that take place in it and that allow the skin to appear firm, elastic, luminous and hydrated.



Skin growth factors necessary for blood vessel repair are also made up of amino acids.
With the passage of time, the formation of amino acids and proteins decreases and therefore appearing the first signs of aging.

Collagen is made from proline, lysine, and glycine; elastin in turn adds alanine and valine to this group of amino acids.

Amino acids have an average molecular weight of 110 Daltons, allowing them to penetrate the skin. The supply of amino acids to the skin allows them to penetrate deeply and stimulate the formation of new proteins that help the skin to be firmer, brighter, more hydrated and elastic.

TRYPTOPHAN, GLUTAMINE, CYSTEINE, ALANINE, ARGININE, SERINE, LYSINE, VALINE, LEUKIN, HISTIDINE, METHIONINE, TREONIN, ISOLEUCINE, THYROSINE, ASPARCIL ACID, THYROSINE, ACID , ORNITHINE and TAURINE.

VITAMINS

They act as catalysts in chemical reactions in the body causing the release of energy, essential for the proper functioning of the body's cells.They are found in many foods such as fruits, vegetables and fish, and certain levels are necessary in the body for proper functioning.Vitamins are divided into two groups: hydro and fat soluble vitamins:

- WATER-SOLUBLE VITAMINS: those that dissolve in water. In this group there are vitamins C and those of group B (B1, B2, B3, B6 and B12).
- LIPOSOLUBLE VITAMINS: they are those that cannot be dissolved in water. They are vitamins A, E, D and K.

The serum contains the following vitamins (hydro and fat soluble), which have the following properties for the skin:

- CIANOCOBALAMINA: or B12, is a water soluble vitamin important for protein metabolism. This vitamin is present in foods of animal origin. This vitamin is in charge of forming red blood cells and for this reason it is considered an anti-aging vitamin. It stands out for regulating the pigmentation of the skin and illuminating it, unifying the tone.

- ASCORBIC ACID: The well-known vitamin C acts as a cofactor for the synthesis of collagen. It has a high regenerating capacity, due to its activity stimulating collagen synthesis.

The stimulating activity of collagen synthesis gives vitamin C a healing property of wounds caused by trauma, cuts, burns, or surgery. For this reason, its daily administration is important, since it is easier for your reserves to run out than for other vitamins.As vitamin C is a water-soluble substance, it is quickly eliminated from the body, and it tends to protect its most vital organs, so any vitamin deficiency is first noticeable in the skin (the least vital organ), which explains the importance of its topical application.

- **TOCOFEROL**: also called vitamin E, it is present in vegetable oils.

It is a conditioning, natural and antioxidant agent for the skin. It is a fat-soluble vitamin that has antioxidant, anti-aging, moisturizing and anti-inflammatory properties.

- **NIACINAMIDE**: it is vitamin B3. It is found in vegetables, milk, meat, fish, eggs, or yeast.

On the skin, it prevents the appearance of expression lines, acne and wrinkles. Maintains hydration and reduces the generation of stains. Renew the cells of the most superficial part of the skin, providing luminosity. Reduces visibility of pores.

- FOLIC ACID: or vitamin B9, involved in the biosynthesis of nucleic acids (structural unit of DNA). Participates in the synthesis of red blood cells and antibodies, increasing resistance against external microorganisms.

Folic acid, by contributing to cell division, is very important in the development and regeneration of cells.

- BIOTIN: it is known as the "vitamin of the skin, hair and nails", it provides hydration to irritated skin and stops hair loss. It favors the smooth and hydrated appearance to the skin, and repairs dehydrated, dry or irritated skin.

- **TROXERUTINE**: also known as vitamin B4, it is a bioflavonoid. Soothes the skin.

- **PANTHENOL**: Responsible for hydrating the skin and penetrating to the deepest layers of it, retaining moisture. Very good for sensitive skin.

- **THYAMINE** (vitamin B1), RIBOFLAVINE (B2) and PYRIDOXINE (B6): These three vitamins of group B help to delay the aging of the skin. Control excess fat, have antibacterial and anti-inflammatory effect, so they are very beneficial for acne-prone skin.

- **INOSITOL**: Also called phytic acid. It is a group B vitamin and is water soluble. It is found in wheat germ, oats, beef liver, nuts, and legumes. It diminishes the formation of wrinkles.

MINERALS

Zinc and magnesium are trace elements that are essential for cell renewal and skin stimulation. Calcium is vital in the cellular metabolism of the skin, and stimulates the production of collagen and intercellular lipids. It prevents the enzymes responsible for the degradation of elastic fibers that cause the appearance of wrinkles and facial flaccidity from forming.

PEPTIDES are molecules that arise from the union of two or more amino acids through peptide linkages. When there are more than 50, they are considered proteins.They have many different functions in the body, antibiotics, hormones or functioning as neurotransmitters.From a certain age, the skin stops working as actively and its regenerative activity begins to decrease. Collagen and elastin deteriorate and fibroblasts lose their activity losing firmness, expression lines appear, deep wrinkles, ...

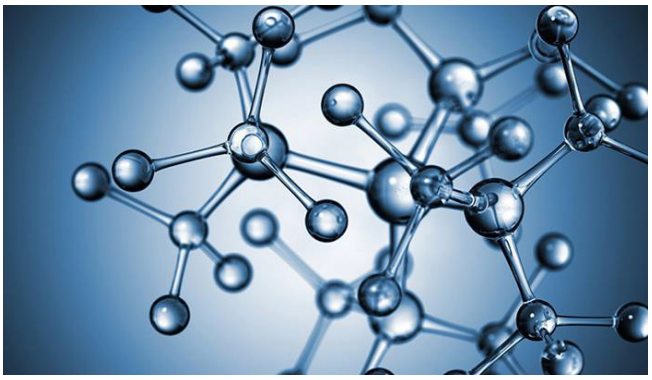
Adding peptides to the skin helps the skin produce the substances it needs to stay firm and look good again.Another advantage they have is that they are smaller than proteins, so they penetrate the skin more easily and settle better in the dermis, helping to repair it and smooth aging. They are essential for preventing aging.

COENZYMES Coenzyme Q10 is one of the most important antioxidants in the skin. It is naturally contained in almost every cell in the body including the skin.

Coenzyme Q10 is essential to generate energy (ATP). It is a defense against oxidative attack. Studies by Quinn et al. demonstrated that this lipid antioxidant is integrated into the regeneration cycle. Once vitamin E is oxidized to its tocopheryl radical it can be reduced by Ubiquinol to regenerate Tocopherol.

The topical application of the combination of Coenzyme Q10 and Vitamin E helps to balance the level of endogenous antioxidants.

HYALURONIC ACID



Effective anti-wrinkle, which strengthens the skin and hydrates it intensely. Hyaluronic Acid is a polysaccharide of the glycosaminoglycan type with β bonds, which has a structural function, like chondroitin sulfates. Viscous in texture, it is a component that naturally forms part of the skin, and is essential to fight aging and wrinkles for its high moisturizing power. In the dermis, hyaluronic acid is the main component of the extracellular matrix (ECM). Fibroblasts are responsible for the production of collagen and elastin in the skin. The ECM is the space between the skin cells. This makes the skin soft, smooth and elastic. Young skin (soft and elastic) contains a large amount of HA.