

ARBUTIN CREAM

ANTI SPOTS CREAM



Hyperpigmentation is the cause of an overproduction of melanin and can affect people with all types of skin in different degrees.

Among them, the use of extracts derived from natural plants has proven to be very effective.

Exposure to the sun is one of the most important causes of hyper-pigmentation, since UV radiation triggers the production of melanin.

There are several ways to treat hyperpigmentation. Inhibition of tyrosinase is one of the most common approaches to formulations for skin lightening.

ANTI-SPOTS GEL-CREAM It contains vitamin C, alpha-arbutin, nicotinamide and licorice extract, some of the best known and most effective natural ingredients to treat skin tone.

ANTI-SPOTS GEL-CREAM P87-19 illuminates the skin fully respecting its characteristics and natural health.

FUNCTIONAL INGREDIENTS DESCRIPTION:

100 % Pure Argan Oil



Ecocert Certificate, extracted from the Argan tree kernel fruit (*Argania Spinosa*) using only mechanical cold pressure, being therefore a pure active ingredient, ecological cosmetic, chemical-free and deodorized.

Argan oil is made up to 80% of essential fatty acids:

- ✓ 50% linoleic acid, 15% alpha-linolenic acid, 12% oleic acid: Biological precursors of intracellular hormones such as prostaglandins (key regulators of different cellular systems, including all membranous exchanges). They

stimulate intracellular oxygenation, improving the restoration of the hydro-lipidic film increasing the nutrient content of skin cells and ensuring the necessary skin moisture.

- ✓ 1% Arachidonic acid
- ✓ 3% Linolenic acid
- ✓ 5% Tocopherols (Vitamin E). The main representatives of this class of compounds found in Argan oil are alpha-tocopherol or vitamin E (5%), gamma-tocopherol (83%) and delta-tocopherol (12%) which are natural antioxidants and vitamin precursors.
- ✓ Ferulic acid: It is the compound found in greater proportion. It promotes blood circulation, thereby increasing the arrival of nutrients. Stimulates intracellular oxygenation, neutralizes free radicals and protects the connective tissues.
- ✓ Phytosterols: Delta-7-sterols are inhibitors of the 5-alpha-reductase enzyme, which converts testosterone into dihydrotestosterone (DHT), largely responsible for acne and hair loss.
- ✓ Squalene: Present in 25% of human lipids, by binding to the cell membrane, helps to eliminate toxins and neutralize free radicals.
- ✓ Lupeol: has anticancer properties and enhances proliferation of keratinocytes which produce keratin in hair, nails and skin.

All these elements give it high antioxidants, anti-inflammatory, re-structuring, regenerating and antiaging properties. Restores skin and protects it from oxidation caused by free radicals.

Mechanism of action:

Polyunsaturated fatty acids decrease with age causing the skin to become dry and to lose elasticity.

These two causes are the major trigger of wrinkles.

Argan oil is composed by 80% of fatty acids, of which 8 are essential fatty acids, which cannot be synthesized by our body itself, including omega-6 fatty acid.

Omega 6 fatty is a polyunsaturated fatty acid (linoleic acid) found in high proportions in argan oil. The skin uses it as a nutrient, reconstituting the hydrolipid layer, increasing hydration and reducing the appearance of wrinkles.



Essential fatty acids fight dryness and lack in elasticity by stimulating intracellular oxygenation, and improving the restoration of the hydrolipidic film by increasing the nutrient content of skin cells. The skin gains flexibility, hydration and firmness, becoming stronger and younger.

These beneficial effects are enhanced by its high vitamin E content, which thanks to its antioxidant activity, it protects cell membranes from oxidation and loss of its barrier function by neutralizing free radicals, thus slowing down the skin aging process.

Argan Oil is an anti-free radical, preventing skin aging.

All these components, gives Argan Oil high antioxidant, anti-inflammatory, restructuring, regenerating and anti-aging properties. It restores the skin and protects it from free radicals induced oxidation.

Essential fatty acids:

Essential fatty acids are polyunsaturated, "Polyunsaturated Fatty Acids", also known as PUFAs. They are absolutely necessary for our health, and cannot be synthesized by the body. PUFAs are involved in metabolic processes of great importance, such as control of blood pressure, lowering cholesterol, the regulation of inflammatory processes (are precursors of prostaglandins) and allergic reactions, or the constitution of the phospholipids of cell membranes, among others. As they're not synthesized by the body, they must be supplied from outside.

The stratum corneum, needs three types of lipids in order to achieve an effective barrier function:

Ceramides, Cholesterol and polyunsaturated fatty acids. When these lipids are regularly cohesive between keratinocytes, potentially harmful substances that touch the skin cannot penetrate the skin barrier. On the other hand, when there is a lack of PUFAs, the skin barrier becomes permeable.

Lack of PUFAs has as a direct result, a number of skin problems, such as:

- Dry, tight and uncomfortable skin
- Flaking
- The wounds take longer to heal
- Loss of hydration
- Erratic keratinization process

- Increase of the rate of mitosis (disruption of epidermal layers)
- Tendency to eczema and itching

Provide skin metabolism regulatory functions:

- ✓ Decreasing inflammation
- ✓ Keeping skin elasticity
- ✓ Stimulating healing and regeneration
- ✓ Regulating keratinization
- ✓ Decreasing the skin Evaporation Rate
- ✓ Keeping skin hydration

ANTI-FREE RADICAL ACTION: DNA PROTECTION

Free radicals are chemical agents endowed with a powerful oxidizing ability. They can have an exogenous (pollution, snuff, etc.) or endogenous origin (stress, cell respiration, etc.). Under normal conditions, the skin is able to maintain a balance between free radicals (both generated or penetrating from the outside), and our internal enzyme systems that neutralize them, but when an imbalance occurs, whatever their type and origin, the result is what is known as oxidative stress, the amount of free radicals produced exceeds the ability of cells to neutralize them, therefore, they begin to accumulate in the medium, attacking tissues and skin cells, causing accelerated aging. Free radicals attack specially cells membranes, causing their destruction. These membranes are the delicate support of our cells genetic map whose nucleus contains DNA. The integrity of this membranes protects DNA and life of our cells.

Delta-tocopherol, is the isomer of vitamin E with more antiradical activity. Precisely its vitamin E content allows it to be preserved better than other oils. Argan oil hydrates, oxygenates and regenerates intensely, protecting the skin from external aggressions, such as cold or sunlight. It is especially recommended for atopic, damaged, or sensitive skin as its anti-inflammatory properties soothes irritations and alleviates redness.

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VITAMIN C

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). All compounds which possess the biological activity of ascorbic acid are known as Vitamin C. We should note that the only active form of Vitamin C is L-Ascorbic Acid.

As Vitamin C is a water-soluble substance, it is rapidly eliminated from the organism. Our body tends to protect vital organs, so any vitamin deficiency is felt primarily in the skin (less vital organ), which explains the importance of its topical application.

Mechanisms of action of vitamin C

The anti-aging action of vitamin C is exerted through several ways:

Synthesis and repair of dermal collagen

Deficiency of ascorbic acid (AA) produces significant alterations in connective tissue, since Vitamin C is essential for collagen synthesis.

Vitamin C is essential for the transformation of proline in hydroxyproline and lysine in hydroxylysine (essential constituents of collagen). Consequently Vitamin C offers stability to the extracellular matrix.

The local increase of vitamin C means therefore significantly promote collagen production; therefore improved skin elasticity and greater resistance in wall capillaries are assessed.

2. Antioxidant activity

Vitamin C protects cells from free radicals. From all the scientific publications regarding Vitamin C, the most interesting are those related to the photoprotective effect of ascorbic acid when topically applied.

In mouse and pig it showed that when ascorbic acid is applied before UV radiation exposure, the negative consequences it causes in the skin (erythema, histological changes, "burned cells", wrinkles ...) decreased significantly .

A study published by the Journal of Investigative Dermatology in May 1996, describes how topical application of vitamin C, vitamin E and Selenium protects rats skin cells from damage caused by exposure to UVB rays.

In parallel, the British Journal of Dermatology some years before, evidenced this protective effect of vitamin C, when used topically, on pig skin damaged by ultraviolet radiation.

The Spanish Journal of Physiology published a study showing how direct application of vitamin C protects, and thus prevents the aging in human skin cells in culture subjected to a strong oxidation stimulus with hydrogen peroxide.

One might think that its photoprotective effect was physical, that is to say, topical vitamin C behaves as a sunscreen, and however, its absorption spectrum has nothing to do with the emission of UV radiation. Later it was found that UV radiation produced a significant decrease in the levels of ascorbic acid in the skin.

All this goes to show that the UV light, after exhausting all the vitamin C present in the skin, cause an increase in free radicals, making manifest the neutralizing action of vitamin C.

3. Anti-inflammatory action

Vitamin C inhibits NFkB, which is responsible for the activation of a number of pro-inflammatory cytokines. Therefore, Vitamin C has a potential anti-inflammatory activity and can be used in conditions like acne vulgaris and rosacea. It can promote wound healing and prevent post-inflammatory hyperpigmentation.

4. Vitamin C as a whitening agent

When choosing a whitening agent, it is important to differentiate between substances that are toxic to the melanocyte and substances that interrupt the key steps of melanogenesis. Vitamin C falls into the latter category of depigmenting agents. Vitamin C interacts with copper ions at the tyrosinase-active site and inhibits action of the enzyme tyrosinase, thereby decreasing the melanin formation.

GLYCOLIC ACID:

It is a type of Alpha Hydroxide Acid. It acts as an exfoliating agent extremely effective for its high acidity and its easy solubility. Accelerating the elimination of dead cells facilitating the natural cycle of skin renewal.

Glycolic acid significantly increases the density of tissues and decreases wrinkles. It also improves atrophic acne scars and eliminates stains.

Prevents the appearance of acne breakouts and allows other products that are applied on the skin penetrate much more effectively.

Cosmetodynamic properties

- ✓ **Gentle scrub:** Exfoliate dead skin cells and renew skin

- ✓ **Eliminates fine lines:** corners of the lips (barcode), frown lines, forehead lines, etc.

- ✓ **Depigmenting:** Removes sun spots on the skin, or spots that appear as a sign of age, scars, severe acne, etc.

- ✓ **Provides hydration and softness:** by regenerating tissues and lifting damaged skin from scars, glycolic acid leaves the skin very soft and erases the signs of dehydration

- ✓ **Rejuvenates:** when the tissues are regenerated, the skin visually remains luminous, uniform in color and looks young. Brightens the face matte and off.

- ✓ **Protects:** Helps skin form elastin and collagen.

ALPHA-ARBUTIN:

There are two forms of arbutin: alpha arbutin and beta arbutin. Research suggests that alpha arbutin is more stable and effective than its beta form. The main source of alpha arbutin is the bearberry bush. Arbutin is extracted from bearberry leaves because of their melanin-inhibiting properties. Alpha arbutin is a clean, water-soluble form of arbutin and is considered one of the most advanced natural ingredients in skincare, given its effectiveness in inhibiting pigmentation. It has also been shown to work well on all skin types and skin tones.

Medical research has proven that arbutin is very effective in treating pigmentations, age spots and it can also inhibit the negative effects of UV-radiation thanks to its sun protection properties. Arbutin evens out skin tone and is also effective in treating acne scars. Some studies have also shown that arbutin (alpha arbutin) can help treating skin redness, also known as erythema. Arbutin can also be combined with other skincare ingredients to maximize its efficacy, for example, with glycolic acid to exfoliate skin and facilitate its absorption of arbutin. When paired with Vitamin C, arbutin imparts even skin tone with improved radiance.

GLYCYRRHIZA GLABRA EXTRACT

The extract of Glycyrrhiza glabra is obtained from the roots of Glycyrrhiza glabra.



Commonly known as licorice extract, depigmenting and antioxidant properties are attributed to it thanks to its powerful antioxidants, saponins and triterpene flavonoids content.

Licorice has been reported to offer the following benefits for our skin:

- ✓ The extract has been shown to decrease melanin content when applied to the skin and so reduce skin pigmentation
- ✓ Licorice root extract acts as an anti-inflammatory to reduce itchy and inflamed skin offers anti-bacterial benefits for the skin being a strong antioxidant
- ✓ Licorice root oil extract helps to protect the skin from the sun and pollutant-induced attack by free radicals.

NIACINAMIDE:

It is a form of vitamin B3 widely used and appreciated in cosmetics for its multiple properties:

- ✓ Prevents the appearance of fine lines, acne and wrinkles.
- ✓ Strengthens the skin's natural defenses to maintain hydration.
- ✓ Reduces the generation of spots and reddened areas.
- ✓ Renews the cells of the most superficial part of the skin, which gives it a great luminosity.
- ✓ Avoid the processes that result in the yellow tone and the pallor of the skin.
- ✓ Reduces the visibility of pores.
- ✓ Reduces the loss of transepidermal water