



## Lifting Cocktail

**Serum** is an innovative treatment with a **marked lifting or tightening effect**, with both an **immediate action and a medium-term action**,

**as shown in in-vivo efficacy studies.**



Our modern lifestyle demands a perfect image during long days over which fatigue is accumulated and this is reflected on our skin.

The cosmetic response to immediately eliminate these signs of fatigue and restore skin to all its glory can be found in the products with the so-called lifting effect. The "lifting" is an immediate tightening effect that visibly improves the appearance of skin as it reduces wrinkles, providing comfort and softness.

The active ingredients with a lifting action exert an immediate mechanical tension on the skin, resulting in a smoothing of the skin surface and showing a softer skin appearance.

This is achieved by **macromolecules** of various origins, which are **generally biopolymers**, which exert an immediate mechanical stress on the skin, which results in a smoothing of the skin surface, showing a more smooth appearance of the skin.

**These macromolecules form a surface film that smoothes the skin, erases wrinkles and lines of expression, and provides a more radiant and luminous appearance.**

**Lifting Cocktail Serum** contains DMAE and lactic acid, both actives with tensing and moisturizing properties that combat facial flaccidity achieving an **extremely potent**

**immediate lifting effect** to which is added the **re-energizing properties of marine glycogen**, which provides the necessary substances to **restore the energy of epidermal cells** and **stimulate cellular metabolism along with the deep hydration provided by hyaluronic acid**.

This biological cocktail makes **Lifting Cocktail Serum** a treatment that effectively combats facial flaccidity, visibly reaffirms the skin, deeply moisturizes, and re-energizes the skin cells.

## **BIOACTIVE COMPOUNDS in Lifting Cocktail Serum:**

### **1) DIMETHYLETHANOLAMINE, DEANOL (DMAE) + LACTIC ACID**

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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.

### **DMAE Mechanism of action**

#### **Skin aging:**

Intrinsic aging is related to the passage of time and individual genetic factors. Extrinsic aging depends on environmental factors such as solar radiation, cold, stress, pollution and tobacco consumption etc.

Morphologically the skin is dry, appears sagging, irregular pigmentation, wrinkles, and general atrophy.

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.

**In aging the production of acetylcholine decreases and, consequently, a decrease of the effect of this substance on the muscle takes place.** The only method to reverse this process is the application of DMAE which increases muscle contraction and firmness of the skin, raising the level of active acetylcholine in the body.

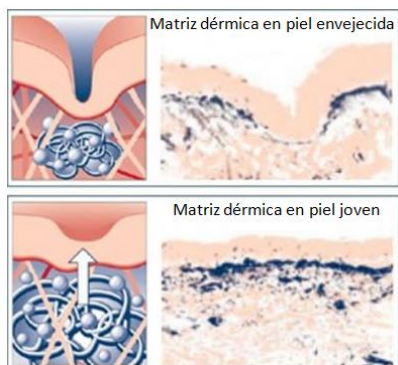
### **1. DMAE increases the synthesis/release of acetylcholine in such a way that it produces:**



✓ **Immediate lifting effect:** Acetylcholine is received through the nicotinic receptors of the epidermis, producing a contraction of the epidermis, through the contracture of the epidermal keratinocytes, in this way a visible lifting effect (tensor effect) is produced in few minutes (and have a limited duration between 8-12h).

- ✓ **Long-lasting firming action:** The increase in the levels of acetylcholine increases the number of stimuli received by the muscle so that it contracts, that is, it increases the muscular activity. By increasing the contractions, the muscle appears more toned and presents a greater mechanical resistance.

## 2. DMAE stimulates the synthesis of collagen in such a way that:



- ✓ **Regenerates the dermal matrix:** by stimulating neo-collagenogenesis, increasing the production of new collagen fibers and inhibiting and reversing protein cross-linking (cross-linking, entanglement and loss of elasticity of collagen fibers).

## 3. DMAE increases the synthesis of phosphatidylcholine such that:

- ✓ **Stabilizes cell membranes:** by stimulating the synthesis of phosphatidylcholine (the main component of cell membranes) it repairs the damage caused by free radicals in cell membranes.

## Results

### ▪ Facial

- ✓ **Immediate Lifting:** "Stretches" and tightens the skin (softening wrinkles).
- ✓ **Lasting firming effect:** Combats sagging by improving muscle tone and strength. Redefine the facial oval (tightening the face and neck skin) and improves body contouring.
- ✓ **Increases elasticity:** Increases skin elasticity. Smooths wrinkles.

### ▪ Eye contour

- ✓ Improves palpebral bags and softens wrinkles.
- ✓ Raises eyebrows and drooping eyelids.

### ▪ Lip contour

- ✓ **Smooths wrinkles (barcode)**
- ✓ **Increase in volume**

## 2) LACTIC ACID: Natural moisturizing factor

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**This product combines DMAE with Lactic Acid.**

Lactic acid is an alpha hydroxy acid used as a softener. It is a natural component of the hydrolipidic layer of the skin and, consequently, plays a physiological activity, belongs to the hydrophilic components that make up the protective mantle of the skin.

It is mainly used to improve the texture of the skin.

Lactic acid is also a natural moisturizing factor (NMFs) of the skin, which favors the water-binding ability of the stratum corneum.

In dermatology has been used since the time of Cleopatra, who legend, bathed in sour milk (lactic acid) to keep his skin soft and smooth.

It favors the skin regeneration and has keratolytic activity, exerting a gentle exfoliative effect that favors the regeneration of the horny layer.

### **3) PURIFIED MARINE COLLAGEN**

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It is a **very high concentration collagen, (5.00 to 7.00%)**, from marine origin high purity, with less than 1% of non-collagenous proteins.

**Collagen is a fibrous protein**, which is the main constituent of **connective tissue**. It is the most important protein in the human body, accounting for over 30% of total protein and 70% of skin proteins.

Native collagen in cosmetic preparations is not able to penetrate the skin. But thanks to the enzymes of the skin or via the sebaceous glands, it is possible to use fragments or to **assimilate the applied collagen**. Thus, the amino acids analogous to those normally found in the skin can be distributed and metabolized by fibroblasts.

**The dermis is composed mainly of collagen**, wh acts on the skin as a structural protein.

- ✓ it has a **tensor effect** thanks to its ability to form a **protective film**. It is able to **smooth the skin lines giving a feeling of smoothness**. It also increases the **protection** of the skin against **environmental damage**.
- ✓ **Helps restore collagen in the dermis**, providing the fibroblasts with amino acids that are able to metabolize.
- ✓ **Strengthens the hydrolipid barrier**, maintaining hydration and skin tone.
- ✓ **The film-forming effect**, helping dry and mature skin to defend itself against environmental agent's attacks, especially against UV exposure.
- ✓ Increases tone and restructures the elastic surface morphology of skin microrelief.
- ✓ Due to its hygroscopic function, it has an important capacity of hydration and reparative and protective effects.

#### 4) PURIFIED MARINE GLUCOGEN: Energizing, restorative, anti-stress

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**Glycogen provides the necessary substances to restore the energy of epidermal cells and stimulate cellular metabolism.**

It has a protective, regenerative and restorative function, it is a specific energizer with revitalizing, regenerating and strengthening effects.

Reinforces epidermal defense and its restorative capabilities.

Glycogen is a reserve polysaccharide, constituted from glucose molecules. It helps decrease the damage that occurs in the stressed skin, increasing oxygen consumption in epithelial cells. Glycogen is one of the main energy sources for cellular activity and metabolism. It is a source of energy reserve since it is stored for later use when necessary.

The energy obtained from glycogen is used for cell defense and restoration.

**Increases oxygen consumption in cells helps fight cell stress.**

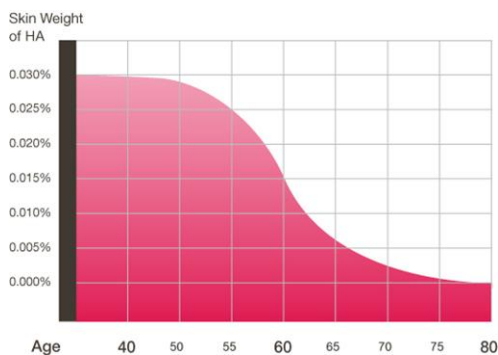


## 5) HYALURONIC ACID:



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 in GOLD 24K FLASH, 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.

## 6) ALOE VERA: Excellent moisturizer



Aloe juice is obtained from the pulp of its fleshy leaves by physical processes. It consists of a **complex mixture of more than 20 substances**, including mono and **polysaccharides**, **anthraquinones**, **enzymes**, **vitamins (A, B1, B2, B6 and B12)**, **salicylic acid**, **saponins**, **sterols**, and **minerals [4]**. It's

moisturizing, soothing, anti-inflammatory, anti-allergic and regenerative properties are well known.

**Fatty acids:** cholesterol, campesterol,  $\beta$ -sisosterol and lupeol. All have anti-inflammatory action. Lupeol also has antiseptic and analgesic properties.

It contains **phytohormones: auxins and gibberellins** that aid in wound healing and have anti-inflammatory action [5].

Aloe juice has been shown to **enhance the cellular structure of fibroblasts** and to **accelerate the process of collagen synthesis** [6].

It is an excellent moisturizer, so it captures atmospheric water by moisturizing in depth as it acts on the three layers of skin: epidermis, dermis, and hypodermis.

## 7) HAMAMELIS VIRGINIANA: Decongestant and antioxidant

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El extracto de hamamelis se obtiene a partir de las hojas de Hamamelis virginiana L. Hamamelis tiene propiedades medicinales sobradamente conocidas. Entre sus propiedades cosméticas se encuentran las siguientes:

- **Activity on blood circulation**

This activity is due to the flavonoids content of hamamelis extract.

Several tests demonstrated that hamamelis flavonoids have phlebotonic, vasoprotective and capillarotropic effects, and that they reduce blood capillaries permeability. These effects are reinforced by the hamamelis leucoanthocyanidins.

- **Antimicrobial activity:** Due to its content in tannins and proanthocyanidins, it possesses bacteriostatic and antiviral properties (Alonso, J., 2004).
- **Antioxidant activity:** Its content in tannins, especially hydrolyzable tannins, and flavonoids inhibit lipid peroxidation.



## 8) CALENDULA EXTRACT: Re-epithelizing and healing

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Calendula is one of the best-considered plants for treating sensitive skin.

It is one of the most recognized plants in medicinal treatments. It is composed of flavonoids and triterpenes whose properties are beneficial to treat the different conditions of the skin.

It is ideal for the dry and scaly skin as it moisturizes, rejuvenates the skin, improving its elasticity.

Los extractos de las flores de *C.officinalis* muestran un amplio espectro de acciones farmacológicas, de ahí la gran importancia de los extractos de caléndula en la cosmetología moderna [1].

- **Reepithelizing and wound healing activity**

This is one of the most extensively used actions of calendula. It is due to the presence of polysaccharides (mucilage), flavonoids (especially quercetrin-3-O-glycoside), triterpenes and carotenes. These substances act on the metabolism of glycoproteins and on the collagen fibers. Creams containing calendula floral extract 5% in combination with allantoin, promoted remarkable epithelization with especial intensity on the metabolism of glycoproteins and collagen fibers during tissue regeneration.

More recent research suggested that the water extracts of calendula flowers, applied on skin wounds, play a role as micro-vascularization inducing agents, thus contributing to speed up healing [1].

According to ESCOP, calendula (flower) is recommended for the local treatment of skin inflammation, and as a co-adjuvant in wound-healing [2].

The calendula extract polysaccharides have concentration-dependant adhesive effects (absorption effects) on the epithelial tissue of the oropharyngeal mucosa. This action contributes to its therapeutic effects to treat oropharyngeal mucosae inflammation ([www.fitoterapia.net](http://www.fitoterapia.net)).

For these reasons, the Calendula extract is highly recommendable to formulate cosmetic products with tissue regeneration action.

- **Moisturizing activity**

This activity of calendula is due to its saponin and mucilage content. These active principles have moisturizing properties (water retention and water release to the medium).

Due to its moisturizing activity, Calendula is ideal for formulating cosmetic products for the dry, irritated or delicate skin.

### **Anti-inflammatory activity**

The topical use of calendula preparations is rather extensive in cosmetics as well as in dermatology because of its **anti-inflammatory activity**. The clinical efficacy of this plant has been long demonstrated. In vivo studies using rats evidenced the anti-inflammatory activity (on inflammation induced by carrageenan and prostaglandin E1) and the inhibitory action on leukocyte infiltration.

Thus, Calendula is highly recommended to formulate cosmetic products for sensitive and/or irritated skin.

## **9) ASIAN CENTELLA EXTRACT: Dermoprotector**

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Asian centella (*Hydrocotyle asiatica*), contains an essential oil, triterpene saponins (asiaticosides, brahmosides), alkaloids (hidrocotilina), tannins, phytosterols, vitamin K and mineral salts (magnesium, calcium and sodium).

Highlights include its astringent, antiseptic, anti-inflammatory and dermoprotective virtues.

The triterpene derivatives stimulate the formation of fibroblasts, cells indispensable for repairing damaged tissues. In addition, they regulate the incorporation of collagen to the skin.

## Collagen synthesis stimulating activity

The active ingredients of the selected triterpenes of *Centella asiatica* have shown to have modulating properties on the development and metabolism of connective tissue.

*Centella asiatica* has been documented to aid wound healing in several scientific studies. One of the primary mechanisms of action of this plant appears to be the stimulation of type-1 collagen production.

Triterpenes of *Centella asiatica* may help to improve wound repair with a better reepithelialisation and a normalisation of perivascular connective tissue allowing an improvement of the venous wall tone and elasticity.

## References

[1] Kasuga, 2010

[2] Alonso J., 2004

[3] [www.fitoterapia.net](http://www.fitoterapia.net)

[4] **Potential of herbs in skin protection from ultraviolet radiation.**

Radava R. Korać and Kapil M. Khambholja. Pharmacogn Rev. 2011 Jul-Dec; 5(10):164–173.

[5] Aloe Vera: a short review. Amar Surjushe, Resham Vasani, and D G Saple

[6] **Dietary Aloe Vera Supplementation Improves Facial Wrinkles and Elasticity and It Increases the Type I Procollagen Gene Expression in Human Skin in vivo.**

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