

PRODUCT, DESCRIPTION AND EVIDENCE

REFERENCE: FS11-10

PUBLISH DATE: 12/05/2026

## RETINOVA GEL MASQUE

An advanced rejuvenation treatment formulated to help reduce wrinkles, improve firmness, and enhance skin quality. This mask combines collagen-stimulating peptides with retinol to support skin renewal and reinforce the barrier.

### KEY BENEFITS

- Reduces wrinkle appearance by up to 31%
- Improves skin smoothness by up to 13%
- Supports collagen production
- Strengthens skin barrier
- Reduces crow's feet by up to 12.6%
- Skin appears up to 28% plumper
- Improves skin elasticity & firmness
- Decreases wrinkle depth by up to 19.9%

### TREATMENT ENHANCEMENT AND MAINTENANCE AT HOME (TEAMS)

A weekly at home treatment designed to support in-clinic treatments, e.g. Chemical peels, Ablative Lasers, Polynucleotides, Fillers, Exosomes and help boost the results of at home skincare.

### DIRECTIONS FOR USE

1. Use 1-2 times per week. Mix before use. Using clean fingers or a silicone brush/applicator to apply a thin, even layer to a clean, dry face. Ensure you avoid facial hair, eyebrows, and the immediate eye area.
2. Leave the mask to set for 8-10 minutes.
3. Once fully dry, gently peel away from the edges to reveal rejuvenated skin and rinse away any minor residue with warm water.

### WARNINGS

For external use only. Avoid contact with eyes. If this occurs wash affected area thoroughly with water. If irritation occurs, discontinue use. Store this product below 40°C and away from direct sunlight. An SPF 50+ must be worn and applied regularly whilst using this product. Contains Vitamin A. Consider your daily intake before use.

### INGREDIENTS

Aqua (Water), Alcohol Denat., Polyvinyl Alcohol, Isopentylidol, Glycerin, Propylene Glycol, Silica, Punica Granatum (Pomegranate) Extract, Camellia Sinensis Leaf (Green Tea) Extract, Lactobacillus Ferment (Probiotic) Lysate, Hyaluronic Acid, Phospholipids, Lactobacillus Ferment, Caffeine, Sodium Hyaluronate, Retinol (Vitamin A), Palmitoyl Tripeptide-38, Palmitoyl Tripeptide-1, Palmitoyl Tetrapeptide-7, Butylene Glycol, Mica, Carbomer, Parfum (Fragrance), Sodium Acetate, Sodium Lactate, Methyl Acetate, Hydroxypropyl Cyclodextrin, Polysorbate 20, Methanol, Phenoxyethanol, Ethylhexylglycerin, Sodium Dehydroacetate, Titanium Dioxide (CI 77891), Iron Oxides (CI 77491), Limonene.

### ACTIVE INGREDIENTS

|                                     |                                  |
|-------------------------------------|----------------------------------|
| Glycerin 3.15%                      | Caffeine 25mg                    |
| Silica 1%                           | Sodium Hyaluronate 15mg          |
| Punica Granatum Extract 0.5%        | Retinol 10mg                     |
| Camellia Sinensis Leaf Extract 0.5% | Palmitoyl Tripeptide-38 0.25mg   |
| Lactobacillus Ferment Lysate 0.5%   | Palmitoyl Tripeptide-1 0.15mg    |
| Hyaluronic Acid 0.25%               | Palmitoyl Tetrapeptide-7 0.075mg |
| Lactobacillus Ferment 0.1%          |                                  |

## PALMITOYL TRIPEPTIDE-38

### Ingredient Claims:

|                                              |                                                |
|----------------------------------------------|------------------------------------------------|
| Increases collagen 1 production by 111%      | Increases collagen 3 production by 104%        |
| Increases hyaluronic acid production by 174% | Increases production of collagen 4 by 42%      |
| Reduces appearance of wrinkles by up to 31%  | Reduces the appearance of crow's feet by 12.6% |
| Skin felt 13% smoother                       | Skin appeared 28% plumper                      |

Palmitoyl tripeptide-38 is a highly sought after ingredient for anti-ageing products. As the name suggests, palmitoyl tripeptide-38 is a peptide that stimulates the production of macromolecules within the skin such as collagen and hyaluronic acid.

Particularly beneficial for mature skin, studies using palmitoyl tripeptide-38 have been shown to reduce the appearance of wrinkles, especially when applied around the eyes. Palmitoyl tripeptide-38 has also been shown to have a lifting effect on the skin, for the appearance of plumper, firmer looking skin.

### Demonstrated cosmetic activity

In vitro (Tests performed with 5 ppm Pal-KMO<sub>2</sub>K equiv. to 250mg Palmitoyl Tripeptide-38)

| Increase in the synthesis of matrix molecules: |                                                      |
|------------------------------------------------|------------------------------------------------------|
| HSP47                                          | +123%; (p<0.01)                                      |
| Collagen I                                     | +111% on HDF; (p<0.01)<br>+37% on explants; (p<0.01) |
| Collagen III                                   | +104%; (p<0.01)                                      |
| Fibronectin                                    | +59%; (p<0.01)                                       |
| Hyaluronic Acid                                | +174%; (p<0.01)                                      |

| Boosting the effect of luminotherapy on UV-aged skins: |                |
|--------------------------------------------------------|----------------|
| Collagen                                               | +12%; (p<0.01) |

| Increase in the synthesis of molecules at the dermal-epidermal junction: |                |
|--------------------------------------------------------------------------|----------------|
| Collagen IV                                                              | +42%; (p<0.01) |
| Laminins                                                                 | +75%; (p<0.01) |

### In vivo

Clinical study to assess the smoothing and filling of forehead lines and crow's feet. Panel: 25 women who applied 250mg Palmitoyl Tripeptide-38 cream twice a day for 2 months

| Anti-wrinkle effect on the forehead determined by fringe projection (FOITS): |                  |
|------------------------------------------------------------------------------|------------------|
| Reduction in the volume of a main wrinkle                                    | -31%; (p<0.05)   |
| Reduction in visible cutaneous roughness (lifting effect)                    | -28%; (p<0.05)   |
| Reduction in the maximum depth of a main wrinkle                             | -16.3%; (p<0.05) |

| <b>Anti-wrinkle effect on crow's feet determined by fringe projection or imprinting:</b> |                  |
|------------------------------------------------------------------------------------------|------------------|
| Reduction in the surface occupied by deep wrinkles                                       | -28.5%; (p<0.05) |
| Reduction in the volume of a main wrinkle                                                | -21%; (p<0.05)   |
| Reduction in the mean depth                                                              | -15%; (p<0.05)   |
| Reduction in visible cutaneous roughness (lifting effect)                                | -12.6%; (p<0.05) |
| Opening of the wrinkle                                                                   | +8.4%; (p<0.05)  |

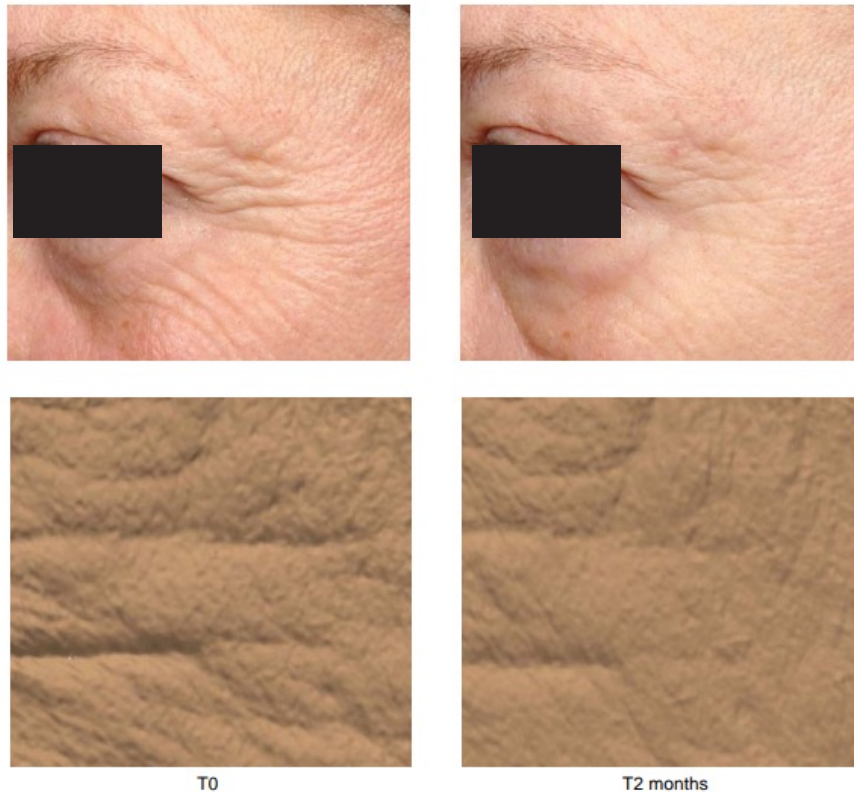
28.5% reduction in deep wrinkles

Variation in the topographic parameters of crow's feet after application of 250mg Palmitoyl Tripeptide-38 on 25 or 24\* volunteers)

| Surface occupied by deep wrinkles (%)        | 250mg Palmitoyl Tripeptide-38 |             | Placebo     |             |
|----------------------------------------------|-------------------------------|-------------|-------------|-------------|
| *                                            | T0                            | T 2 months  | T0          | T 2 months  |
| Mean                                         | 5.28 ± 2.68                   | 4.23 ± 2.00 | 4.48 ± 2.26 | 4.86 ± 2.91 |
| % variation vs T0<br>significance<br>Maximum | -20%;<br>p<0.01<br>-71%       |             | 8.5%;<br>ns |             |
| Difference in variations;<br>Significance    | -28.5%<br>p<0.05              |             |             |             |

12.6% reduction in crow's feet

| Complexity of the crow's feet;<br>lifting effect | 250mg Palmitoyl Tripeptide-38 |             | Placebo     |             |
|--------------------------------------------------|-------------------------------|-------------|-------------|-------------|
|                                                  | T0                            | T 2 months  | T0          | T 2 months  |
| Mean                                             | 3.85 ± 1.04                   | 3.54 ± 0.84 | 3.80 ± 1.00 | 3.97 ± 1.55 |
| % variation vs T0<br>significance<br>Maximum     | -8.1%;<br>p<0.05<br>-42%      |             | 4.5%;<br>ns |             |
| Difference in variations;<br>Significance        | -12.6%<br>p<0.05              |             |             |             |



During in vitro studies 250mg\* palmitoyl tripeptide-38 strongly stimulated:

- The synthesis of matrix molecules (Collagen I: +111%, collagen III: +104%, fibronectin: +59% and HSP 47: +123%).
- The synthesis of molecules of the dermal-epidermal junction (Collagen IV: +42% and laminins: +75%).
- The synthesis of hyaluronic acid (+174%), which through its highly branched structure and moisture-retaining capabilities provides volume, and is found at all levels of the epidermis, dermal-epidermal junction and dermis.

A clinical study was conducted on 25 female volunteers, who applied a 250mg Palmitoyl Tripeptide-38 cream twice a day. The assessments specifically monitored the smoothing and filling effect on forehead lines and crow's feet.

The anti-ageing effect of palmitoyl tripeptide-38 was proven using predominant techniques.

On the forehead, measurement by fringe projection, also known as FOITS, demonstrated a visible, mean reduction in main wrinkle volume of 31%. This was complemented by a 28% reduction in cutaneous roughness, which can be associated with a lifting effect. Finally, the maximum depth of this main wrinkle decreased by a mean of 16.3%.

For the crow's feet, the anti-wrinkle effect was measured through a decrease in the surface occupied by deep wrinkles (-28.5%), a decrease in the volume of a major wrinkle (-21%), and a reduction in the mean depth (-15%). There was also a lifting effect, since there was an approximate -13% reduction in cutaneous roughness. The wrinkle further opened by 8.4%, which reduced the shadow effect.

Links:

<https://openreviewhub.org/sites/default/files/cte/2685/sgrzybinnovativecosmeticrawmaterials.pdf>  
<https://www.mdpi.com/2079-9284/4/2/16/htm?crsi=6624969152>  
<https://europepmc.org/article/med/15648442>

**PALMITOYL TETRAPEPTIDE-1 & PALMITOYL TETRAPEPTIDE-7**

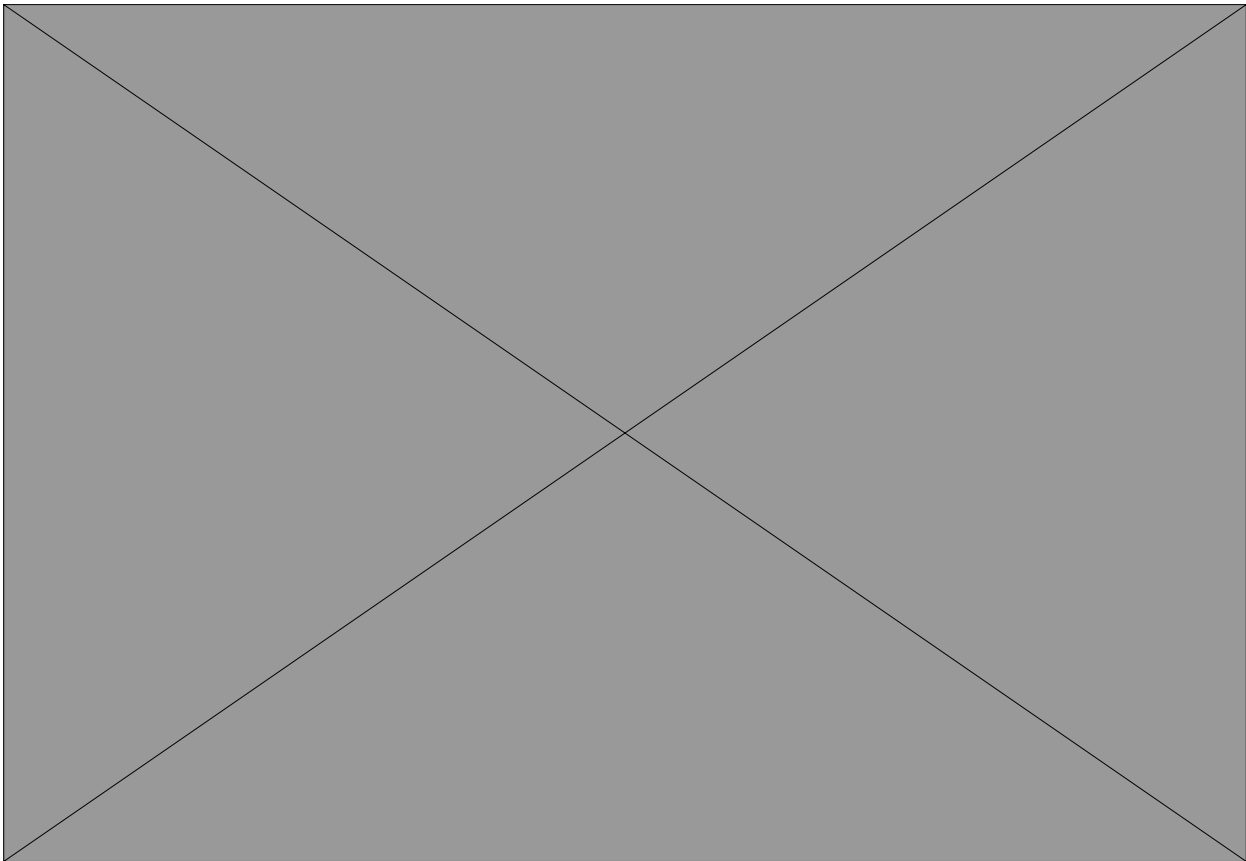
**Ingredient Claims:**

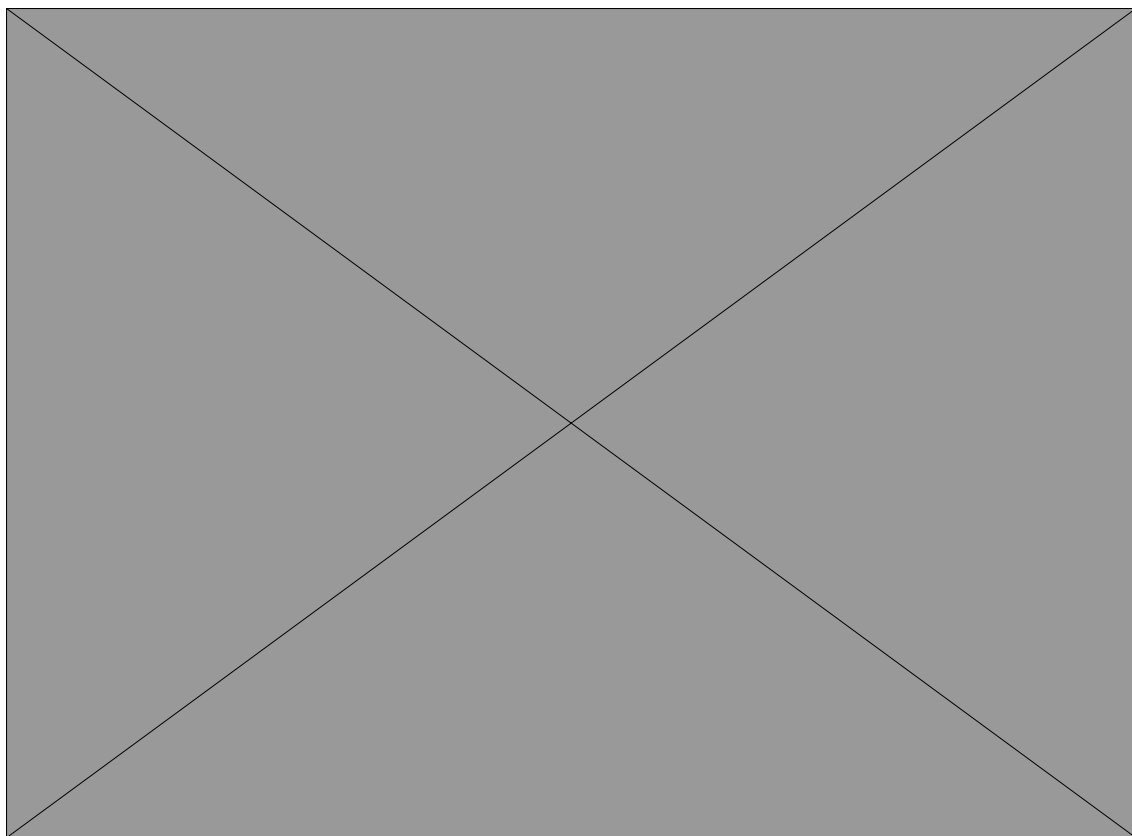
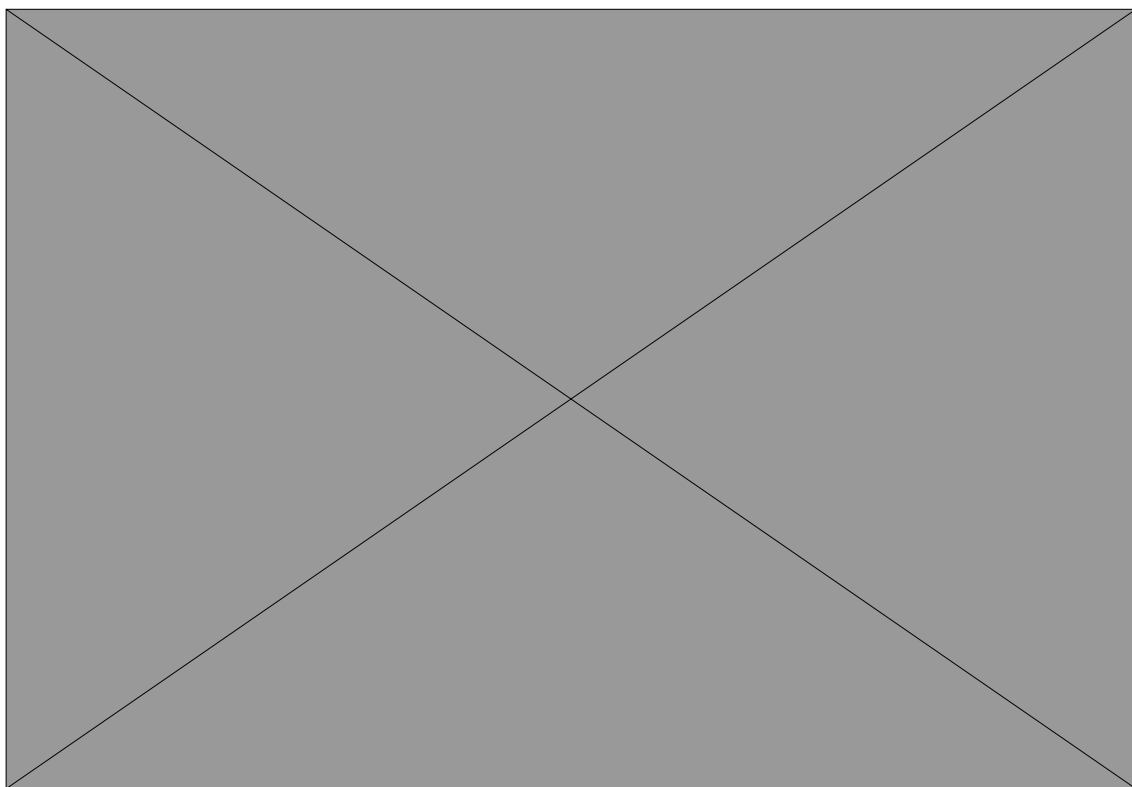
|                                          |                                                                      |
|------------------------------------------|----------------------------------------------------------------------|
| Decreased wrinkle depth by up to 19.9%   | Upregulates collagen synthesis for firmer, more elastic looking skin |
| Decreased wrinkle density by up to 32.9% | 16% improvement in skin complexion                                   |
| Skin appears up to 16% smoother          | 15.5% improvement in skin tone                                       |

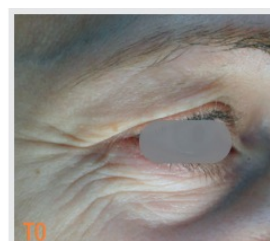
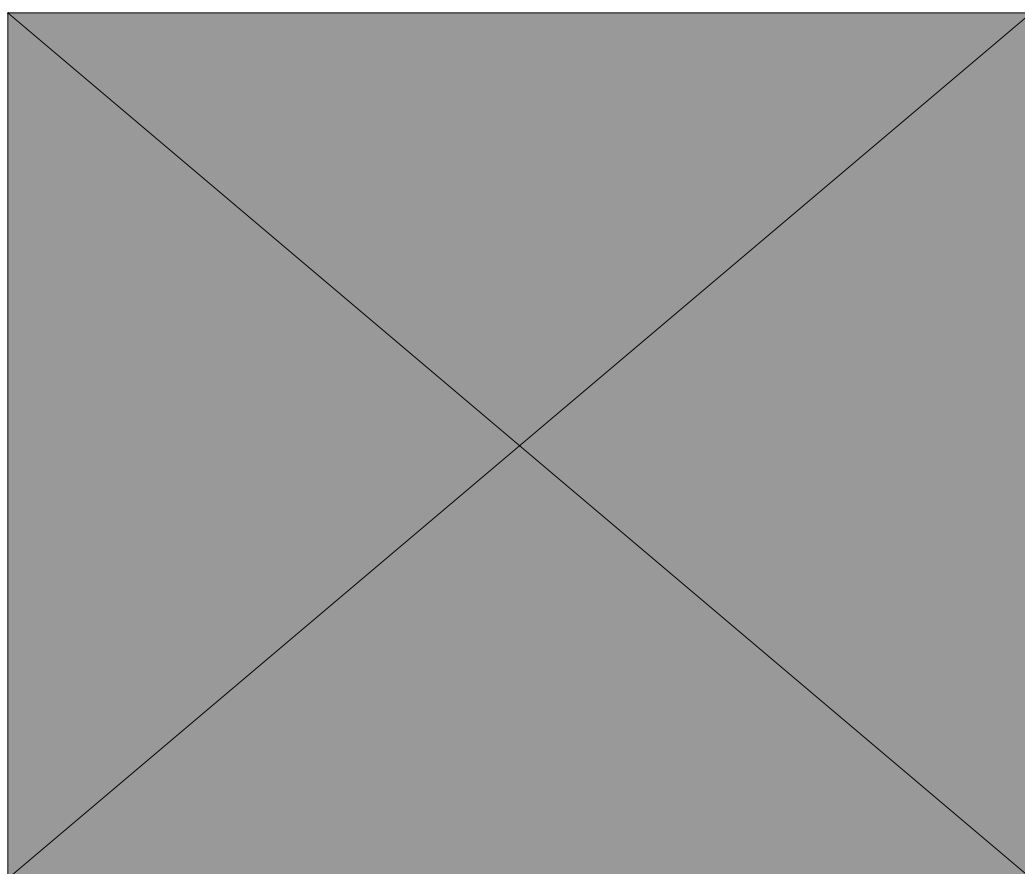
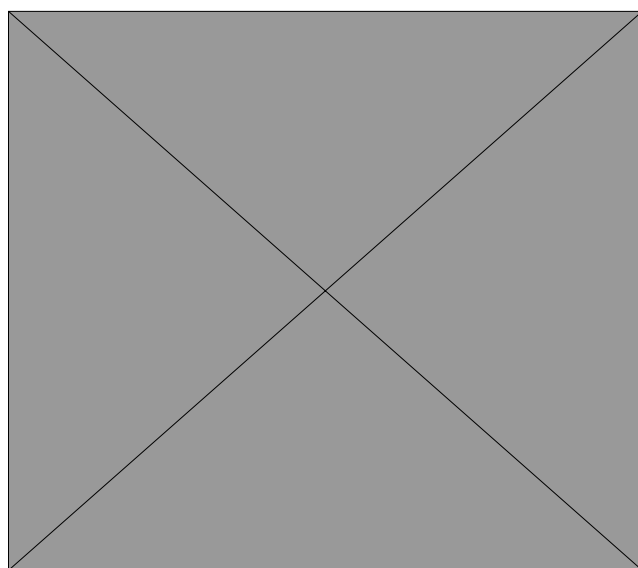
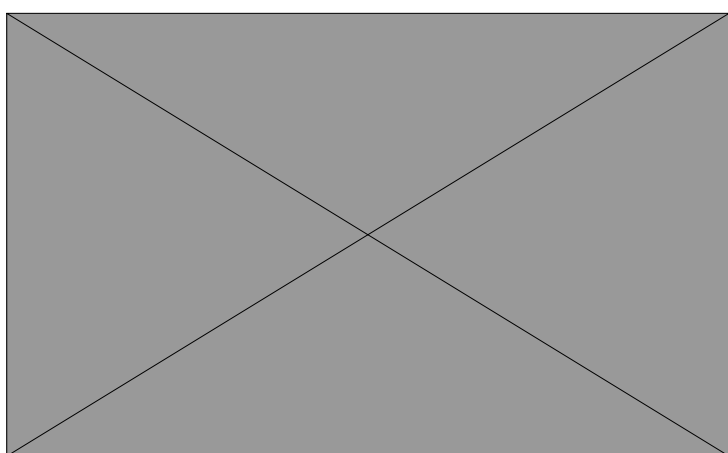
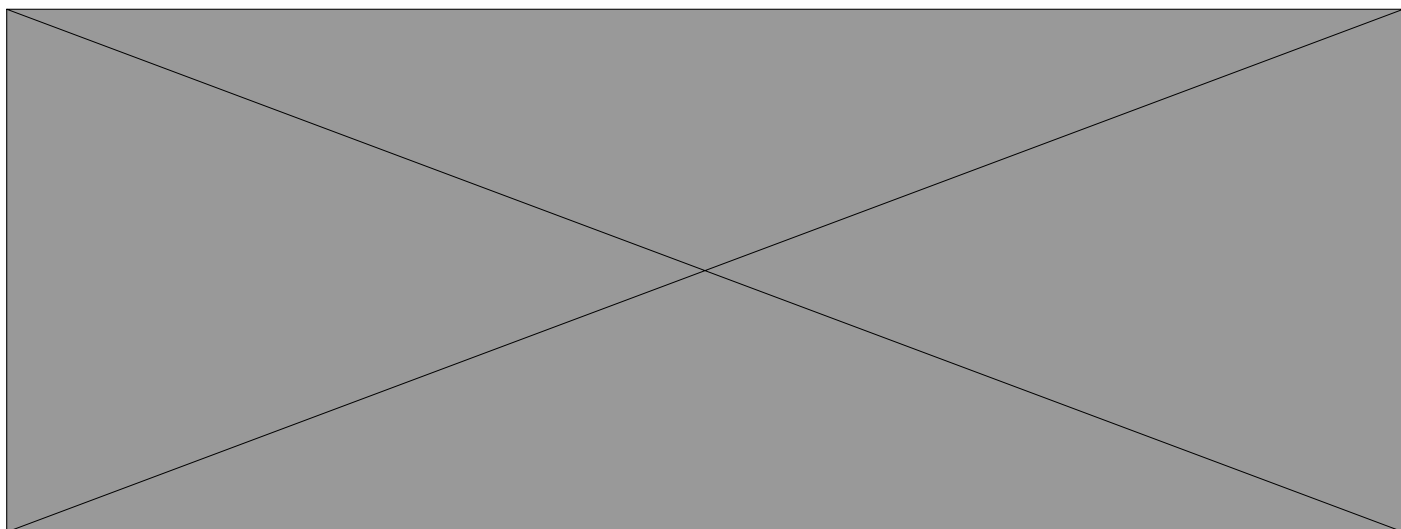
A blend of two peptides: Palmitoyl Tripeptide-1 and Palmitoyl Tetrapeptide-7. Peptides are short chains of amino acids that can have various benefits for the skin. Peptide can benefit the skin in several ways, such as:

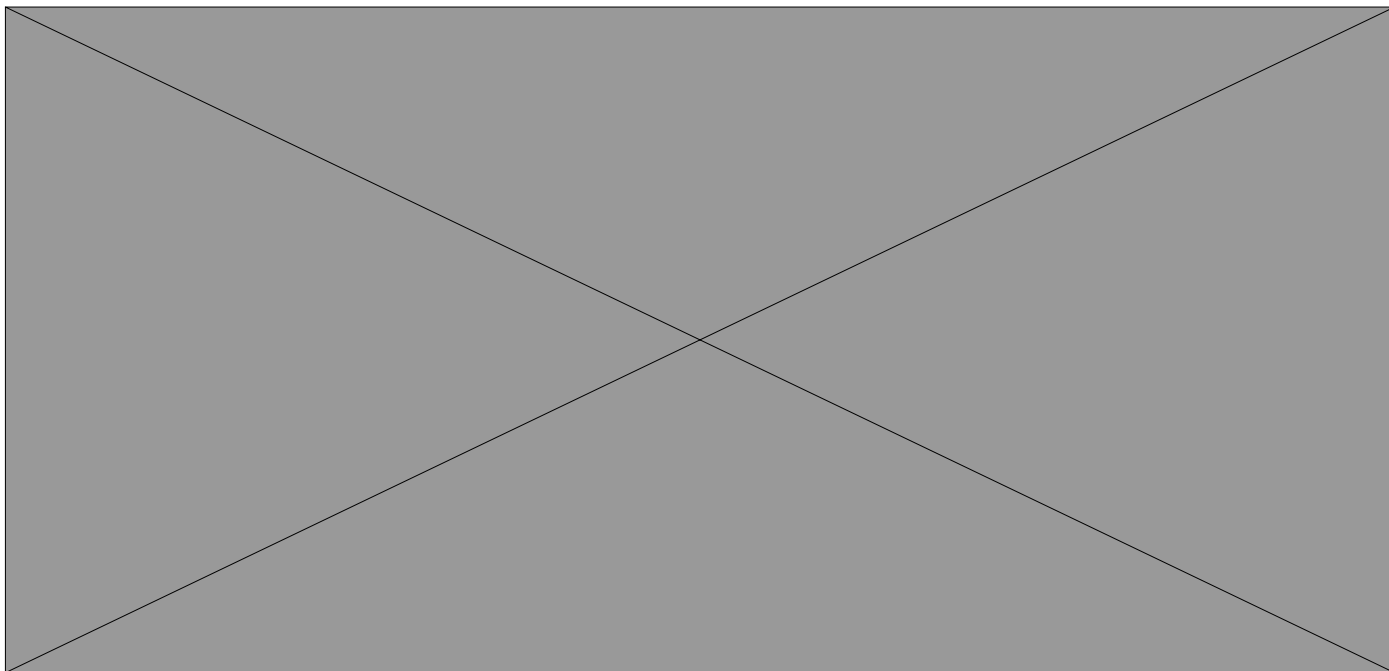
- Stimulate collagen production: Collagen is a protein that gives the skin its elasticity and firmness. Peptides can stimulate the production of collagen, which can help improve the appearance of fine lines and wrinkles and make the skin look more youthful.
- Improve skin texture: Peptides can also improve the texture of the skin by increasing its thickness and density. This can help reduce the appearance of fine lines, wrinkles, and other signs of ageing.
- Boost skin hydration: Peptides can help boost skin hydration levels by improving the skin's ability to retain moisture. This can help keep the skin soft, supple, and plump.
- Enhance skin elasticity: Peptides can also help enhance the skin's elasticity, which can help prevent sagging and improve the overall appearance of the skin.
- Reduce inflammation: Peptides can have anti-inflammatory properties, which can help reduce redness, irritation, and other signs of inflammation in the skin.

A blind, randomised clinical study with 28 volunteers twice daily applying cream including the active compound to half their face and one of their forearms and a placebo cream to the other half of the face and other forearm confirmed anti-wrinkle efficacy, reduction of wrinkle depth, volume and density, skin roughness and complexity, as well as a decrease of the area occupied by deep wrinkles, and an increase in skin tone.









After 2 months of daily application of Palmitoyl Tripeptides, the following points were observed:

- reduction in the mean depth of the main wrinkle (-19.9%) and in its volume (-23.3%).
- reduction in roughness (-16%) and complexity (-16.2%), a surface “lifting” parameter.
- decrease in the area occupied by deep wrinkles ( $>200\text{ }\mu\text{m}$ ) (-44%), giving rise to a decrease in density (-32.9%).
- increase in skin tone (+15.5%).

A blind, randomised clinical study with 28 volunteers twice daily applying cream including the active compound to half their face and one of their forearms and a placebo cream to the other half of the face and other forearm confirmed anti-wrinkle efficacy, reduction of wrinkle depth, volume and density, skin roughness and complexity, as well as a decrease of the area occupied by deep wrinkles, and an increase in skin tone.

Links:

<https://www.mdpi.com/2079-9284/4/2/16#B16-cosmetics-04-00016>

[Data on file](#)

## **PALMITOYL TRIPEPTIDE—1**

The various forms of peptides act upon collagen found in the body and particularly the skin. The most abundant form of collagen in the body is type collagen I, which is the collagen primarily responsible for repairing the skin. Collagen type III is found alongside collagen type I and works much in the same way, though it is not as tough as collagen I. Palmitoyl Tripeptide—1 mimics the relationship between the growth factors involved in the skin’s healing process and the production of collagen. Essentially, Palmitoyl Tripeptide-1 tricks the skin into producing more collagen to repair the skin, improve elasticity and minimise the appearance of fine lines and wrinkles. Palmitoyl Tripeptide—1 is a powerful skincare ingredient to combat aging, but like most skincare ingredients it works more effectively when used in combination with other anti-ageing peptide ingredients. When used as part of a good skin-care routine, Palmitoyl Tripeptide—1 can help skin repair damage by stimulating collagen production. The result is younger, smoother and stronger skin.

In a study with 15 women, a cream containing palmitoyl tripeptide-1 was applied twice daily for four weeks, leading to statistically significant reductions in wrinkle length, depth and skin roughness. Another study applied both vehicle and palmitoyl tripeptide-1 to the skin of 23 healthy female volunteers for four weeks.

Links:

<https://www.mdpi.com/2079-9284/4/2/16/html>

[https://farma.com.ro/articles/2021.3-4/RJPhP\\_2021\\_3-4\\_Art-01.pdf](https://farma.com.ro/articles/2021.3-4/RJPhP_2021_3-4_Art-01.pdf)

<https://pubmed.ncbi.nlm.nih.gov/18503476/>

## PALMITOYL TETRAPEPTIDE-7

Palmitoyl Tetrapeptide-7 (It was also formerly known and marketed as Palmitoyl Tetrapeptide-3. Palmitoyl Tetrapeptide-7 consists of a short chain of four amino acids (a.k.a. GQPR peptide or glycineglutamineproline-arginine) connected to palmitic acid. Palmitic Acid is a fatty acid added to improve the peptide's oil solubility and thus skin penetration. Palmitoyl Tetrapeptide-7 serves as an anti-inflammatory after exposure to UVB-irradiation. In vivo reflectance confocal microscopy studies indicated that a blend of Palmitoyl Oligopeptide and Palmitoyl Tetrapeptide-7 enhanced the extracellular matrix structure compared to placebo. Sixty healthy photoaged volunteers were tested over 12 months with a formulation containing Palmitoyl Tetrapeptide-7. A reduction of facial wrinkles was documented by this long-term use.

Palmitoyl Tetrapeptide-7 used in conjunction with Palmitoyl-Oligopeptide. They can boost the growth of the connective tissues and naturally increasing the production of collagen in the skin; when the production of collagen is increased, the skin can heal and rejuvenate itself.

It serves as an anti-inflammatory after exposure to UVB-irradiation. In vivo reflectance confocal microscopy studies indicated that a blend of palmitoyl oligopeptide and palmitoyl tetrapeptide-7 enhanced the extracellular matrix structure compared to placebo.

A reduction of facial wrinkles was documented by this long-term use. Better skin appearance was related to the deposition of fibrillin-rich microfibrils in the papillary dermis of treated skin.

### Sources

<https://pubmed.ncbi.nlm.nih.gov/25817264/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4950680/>

<https://pubmed.ncbi.nlm.nih.gov/19438432/>

## HYALURONIC ACID (ULTRA LOW MOLECULAR WEIGHT HYALURONIC ACID)

### Ingredient Claims:

|                                                                     |                                                           |
|---------------------------------------------------------------------|-----------------------------------------------------------|
| 50% faster absorption compared to regular hyaluronic acid           | Stimulates fibroblast proliferation up to 32% in 24 hours |
| Stimulates elastin synthesis up to 32.6% in fibroblasts in 24 hours | Decreases elastase activity by 25% in 24 hours            |
| Decreases collagenase activity by 25%                               | Improves skin elasticity by 10%                           |

Hyaluronic Acid or HA, also known as hyaluronan or hyaluronate, is a carbohydrate, more specifically a mucopolysaccharide occurring naturally throughout the human body. It can be several thousands of sugars (carbohydrates) long. When not bound to other molecules, it binds to water giving it a stiff viscous quality. This viscous Gel is one of the most heavily researched substances in medicine today with thousands of clinical trials. Its function in the body is, amongst other things, to bind water and to lubricate movable parts of the body, such as joints and muscles. Its consistency and tissue-friendliness allows it to be beneficial in skin-care products as an excellent moisturiser. Because HA is one of the most hydrophilic molecules in nature with numerous benefits for the human body it can be described as "nature's moisturiser".

It is a humectant meaning it can draw water from its surroundings and blood vessels and has an extreme hydrating effect on the skin. Although Hyaluronic Acid (HA) can be found naturally in most every cell in the body, it is found in the greatest concentrations in the skin tissue. Almost 50% of the body's HA is found here. It is found in both the deep underlying dermal areas as well as the visible epidermal top layers. Young skin is smooth and elastic and contains large amounts of HA that helps keep the skin stay young and healthy. The HA provides continuous moisture to the skin by binding up to 1000 times its weight in water.

With age, the ability of the skin to produce HA decreases. Hyaluronic acid's moisture-binding characteristic is exceptionally important when it comes to skin ageing. When young, skin can hold onto water and retain a balanced amount of moisture, but it loses this ability with ageing. The result is a visible loss of firmness, pliability, and a diminished appearance of plumpness and suppleness - HA has powerful anti-ageing properties.

In addition to hyaluronic acid, sodium hyaluronate is a salt that's derived from hyaluronic acid. Sodium hyaluronate is helpful in the same way that hyaluronic acid for skin is, but with one extra advantage— skin absorbs it more easily than it does hyaluronic acid. Hyaluronic is a humectant and draws water to the skin adding increased hydration. It works over time by rehydrating skin to make it look and feel healthier and more supple.

In one study measurement of skin roughness showed a significantly finer skin structure after two weeks of treatment with hyaluronic acid, and skin elasticity showed a significant improvement after 2 and 8 weeks of treatment. Hyaluronic acid clearly demonstrated a significant benefit in decreasing the depth of wrinkles (up to 40%), and skin hydration (up to 96%) and skin firmness and elasticity were significantly enhanced (up to 55%) at the end of eight weeks.

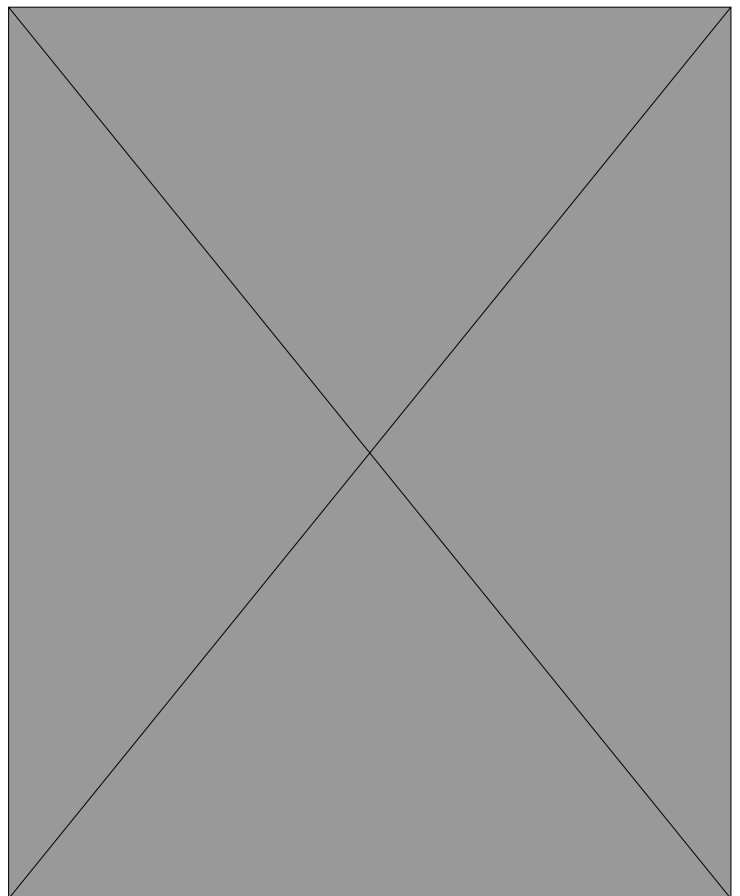
Due to its strong water-binding potential, hyaluronic acid (HA) is a well-known active ingredient for cosmetic applications. HA is proposed to help the skin to retain and maintain elasticity, turgor and moisture. Topical application of HA formulations used in this study led to significant improvement in skin hydration and elasticity. Application of low-molecular-weight (LMW) HA was associated with significant reduction of wrinkle depth, which may be due to better penetration abilities of LMW HA.

Low molecular weight HA has also been shown to have an anti-inflammatory and antioxidant effect.

## Hyaluronic Acid - Efficacy profile

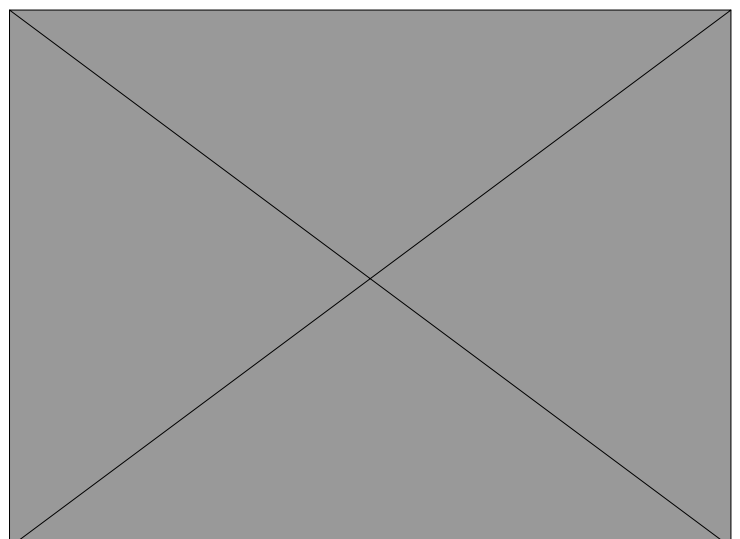
### Permeation Test

- Compared to any regular hyaluronan (from 60 to 2000 kDa), this formulation quickly permeates up to more than twice after 24 hours.
- Both epidermis content and permeated hyaluronan have been quickly and highly improved.
- Improvement is quick and maintained over time (already more active in just 1 hour, up to 50% vs Medium Molecular weight)
- Even very -low molecular weight shows lower performances in same conditions.



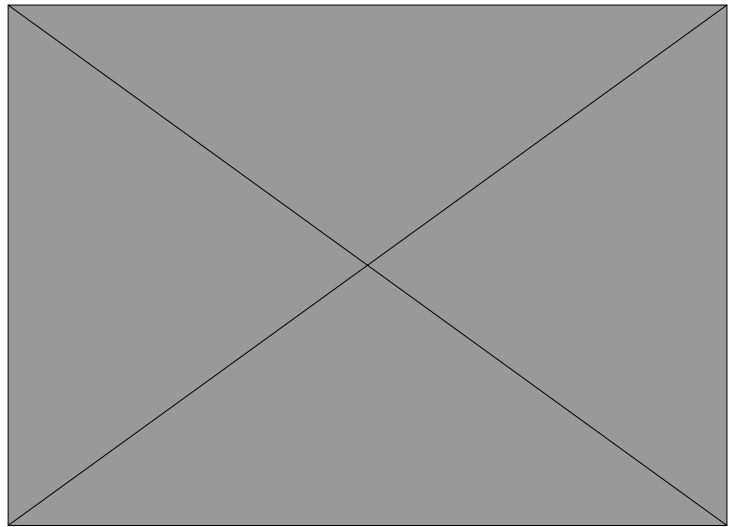
### Synthesis of total elastin Trophic-elasticising properties

- Fibroblasts produce and release elastin a key component for dermis.
- Compared to control, this formulation stimulates elastin synthesis up to 35% in a quick (24 hours) and dose-depending progression.



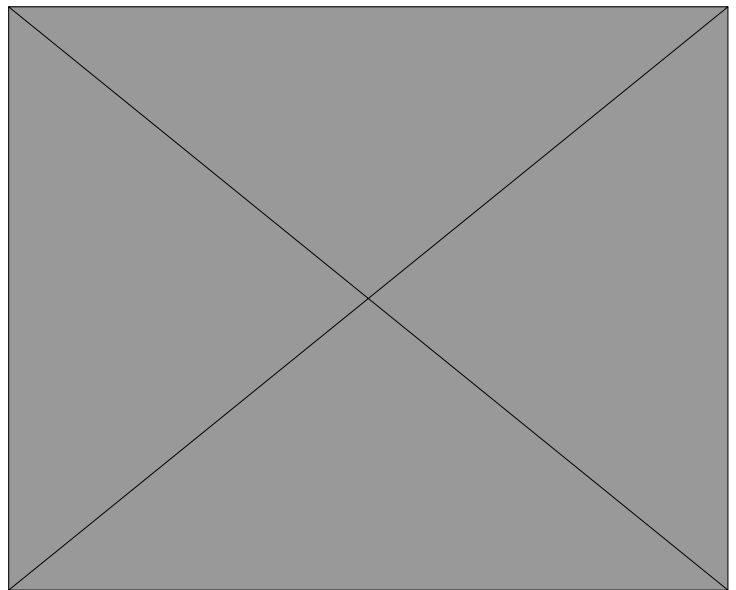
#### Modulation of elastase activity

- Elastin in the dermis is metabolised by the elastase.
- Compared to control, this formulation modulates elastase activity down to 25% in a quick and progressive action (already active in 2 hours).



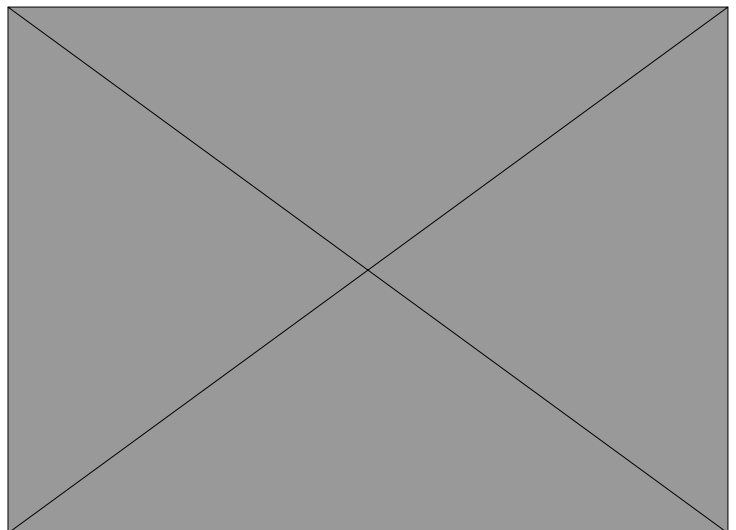
#### Modulation of collagenase activity

- Collagen in the dermis is metabolised by collagenase.
- Compared to control, this formulation modulates elastase activity down to 32% in a quick and progressive action (already active in 2 hours).



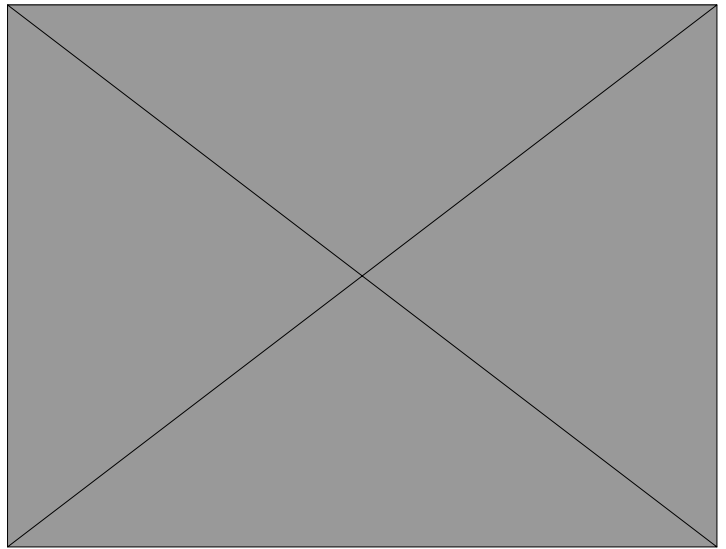
#### Moisturisation corneometry

- Monitored results are significantly improved vs placebo cream.
- At 0.25%, the formulation statistically induces a constant improvement of moisturisation vs medium weight hyaluronate (+10.9% after 30mins)



## Skin Elasticity

- Placebo cream does not show any improvement.
- At 0.25% this formulation quickly confirms a more elastic trend (+10% after 60 days) of the skin.



In-vitro efficacy dossier: elasticity improvement

Compared to control, this formulation:

- Stimulates elastin synthesis up to 35% in a quick (24hrs) and dose-dependent progression.
- Decreases elastase activity down to 25% in a quick and progressive action (already active in 2hrs).
- Decreases collagenase activity down to 32% in a quick and progressive action (already active in 2 hrs).

Links:

Data on file

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3583886/>

<https://pubmed.ncbi.nlm.nih.gov/26964566/>

<https://jcadonline.com/efficacy-of-a-new-topical-nano-hyaluronic-acid-in-humans/>

<https://pubmed.ncbi.nlm.nih.gov/22052267/>

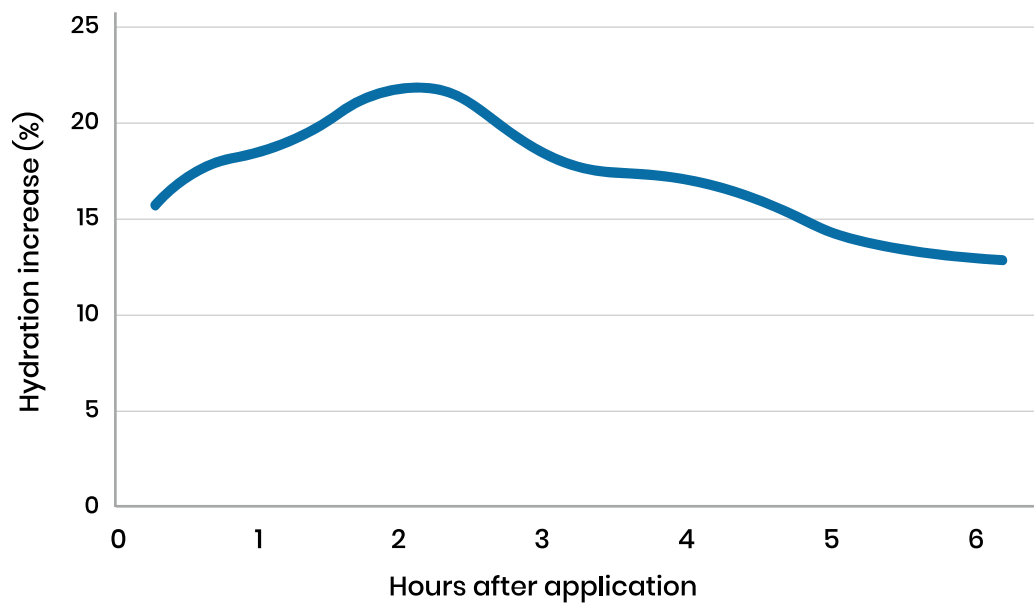
<https://pubmed.ncbi.nlm.nih.gov/21787831/>

SODIUM HYALURONATE

Ingredient Claims:

|                                 |                                             |
|---------------------------------|---------------------------------------------|
| Boosts skin hydration           | Supports the skin barrier                   |
| Promotes wound healing          | Protects the skin from environmental damage |
| Skin feels smoother and tighter | Supports collagen and elastin formation     |

Results: Up to 25% increase of skin hydration  
2 hours after application



In vitro

High-molecular-weight (up to 2000 kDa) Sodium Hyaluronate improves skin hydration and elasticity when compared to placebo.\*

Study

0.025% Sodium Hyaluronate (1.4 MDa) in an emulsion vs placebo  
8 Volunteers  
Parameter: skin hydration (Corneometer CM 820 PC)

Sodium Hyaluronate is the salt form of Hyaluronic Acid, a water-binding ingredient that has the ability to fill the spaces between the connective fibres known as collagen and elastin. Hyaluronic Acid hydrates and separates the skin, allowing it to retain water and create a plumping effect. Sodium Hyaluronate has been used for moisturisation and wound healing since its discovery in the 1930s. It is comprised of small molecules that penetrate the skin easily and can hold up to 1000 their own weight in water. Because the skin naturally loses its water composition as it ages (going from 10% - 20% water to less than 10%).

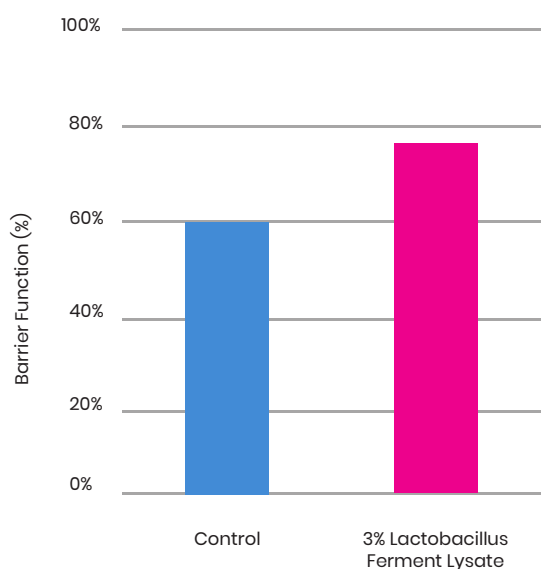
Hyaluronic Acid and Sodium Hyaluronate can replace some of the water lost in the dermis, and potentially fight wrinkles and other signs of ageing. Because of its relatively high molecular weight it is not absorbed following application to the skin. Instead, it forms a thin, light, permeable, invisible, viscoelastic surface film. This fixes the moisture on the surface of the skin. The Hyaluronic Acid (HA) film supports the skin's natural protective mechanism. Since it is an excellent water reservoir leading to a perceptible and visible improvement in skin condition.

## LACTOBACILLUS FERMENT LYSATE (PROBIOTIC LYSATE)

### Ingredient Claims:

|                                   |                                               |
|-----------------------------------|-----------------------------------------------|
| Supports the skin's microbiome    | 17% improvement in skin barrier function      |
| Calms and soothes irritated skin  | Improves skin radiancy                        |
| Improves skin texture             | Reduces appearance of fine lines and wrinkles |
| Supports renewal of the epidermis |                                               |

Lactobacillus ferment lysate keeps the microbiome in balance while increasing skin tone and elasticity, minimising wrinkles, providing deep hydration and increasing cell turnover. It also helps to reduce redness and irritation.



Treatment with Lactobacillus Ferment Lysate clearly leads to a better barrier function.

Lactococcus Ferment Lysate, based on a lysate of *Lactococcus lactis*, to stimulate the skin's self-renewal effectively. This probiotic lactic acid-producing bacterium is grown under specific conditions, after which the obtained cells are lysed, a process involving the killing and destruction of the bacterial cells.

Probiotic bacteria are well-established in the food industry, and their benefits for the human body are described in many scientific, peer-reviewed papers. In the gut they beneficially influence the composition and metabolic activity of the endogenous bacteria, and some probiotic strains are even able to inhibit the growth of pathogenic bacteria. Probiotic bacteria are also reported to be able to modulate the immune system, essentially improving immunocompetence and, therefore, our body's ability to adapt to negative influences. Interestingly, it is not the whole living probiotic bacterial cell which is needed for the latter activity, it is the constituents and metabolites of these bacteria which are essential. A product obtained from a lysate of *Lactococcus lactis*, as Lactococcus Ferment Lysate, which essentially contains the cell debris of this bacterium – such as cell fragments, like DNA, metabolites, cytoplasmic compounds, and cell wall materials – should show and, in the studies performed, has shown that it is able to improve both the skin renewal processes and the processes involved in the skin's adaptation to negative influences.

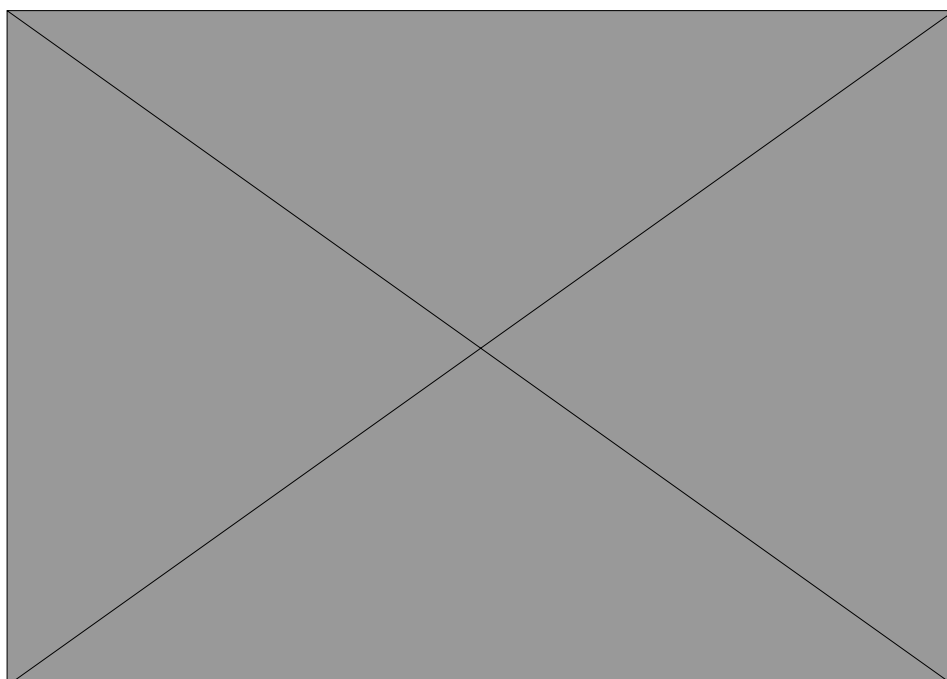
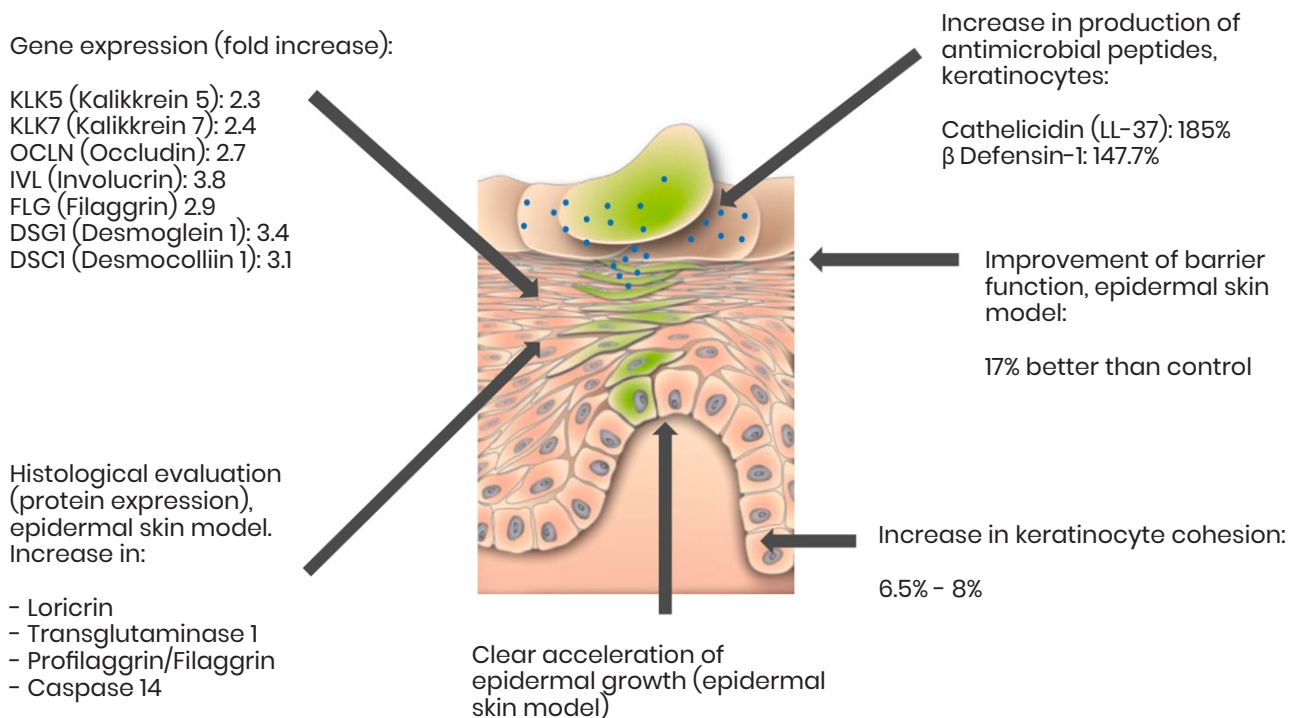
Lactobacillus Ferment Lysate helps to support the skin's microbiome, which is the collection of microorganisms that live on the surface of the skin. A healthy microbiome can help to protect the skin from harmful bacteria and maintain a healthy skin barrier.

Lactobacillus Ferment Lysate has anti-inflammatory properties that can help to calm and soothe the skin. This makes it useful for people with sensitive or reactive skin.

Lactobacillus Ferment Lysate can help to improve the skin's barrier function, which is important for maintaining healthy and hydrated skin. It helps to strengthen the skin's natural defence system, reducing moisture loss and keeping the skin hydrated and supple.

In addition, Lactobacillus Ferment Lysate has been shown to help improve skin radiance and overall skin health. It helps to improve skin texture, reduce the appearance of fine lines and wrinkles, and improve the overall brightness and clarity of the skin.

Lactococcus Ferment Lysate was shown to be able to accelerate the growth of the epidermal skin models, indicating that it is able to support the renewal processes in the epidermis. Additionally, it was shown that, by elevating the production of transglutaminase 1, (pro)filaggrin, and caspase-14, Lactococcus Ferment Lysate has a significant influence on the quality of the skin renewal process, as these molecules are essential for the quality of the skin. This observation was further supported by the assessment of the quality of the barrier function by topically applying SDS on the epidermal skin models, where the models which were treated with Lactococcus Ferment Lysate clearly showed a better barrier function.



Links:

[Data on file](#)

<https://koreascience.kr/article/JAKO202010548326943.page>

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## CAFFEINE

Ingredient Claims:

|                                    |                                                           |
|------------------------------------|-----------------------------------------------------------|
| Reduces appearance of dark circles | Reduces appearance of bags under the eyes                 |
| Reduces puffiness around the eyes  | Diminished appearance of expression lines around the eyes |

Collagen degradation occurs earliest around the eyes where skin is thinnest, making it imperative for products to treat the damage that causes bags under the eyes. By including caffeine, the product has the ability to reduce puffiness and diminish the appearance of the bags that emerge under the eyes. Caffeine's vasoconstrictive properties help reduce puffiness due to the ability to make blood vessels smaller. Additionally, its diuretic properties help deflate puffiness, increase circulation and minimize dark circles that form under the eyes. Furthermore, caffeine also provides antioxidant benefits that aid in the reduction of photo-aging.

Now there's a non-surgical solution for treating the delicate eye area: An invigorating cream complex that can erase the signs of ageing.

To test the efficacy a three week in-vivo study was conducted. Ten subjects (Male & Female) between the ages of 24 and 45 were asked to apply the product on the right periorbital area of their faces twice a day for 3 weeks. Pictures were taken at the start of the study and after the third week. As shown in figures 1 and 2, this product is capable of significantly reducing the appearance of bags under the eyes as well as dark circles after a 3-week period. As indicated with red ovals on both figures, wrinkles as well as expression lines were also significantly diminished by continued use of the product.

Figure 1:



Figure 2:



Link: [Data on file.](#)

## CAMELLIA SINENSIS LEAF EXTRACT (GREEN TEA EXTRACT)

### Ingredient Claims:

|                                                                      |                                                           |
|----------------------------------------------------------------------|-----------------------------------------------------------|
| Reduces oxidative stress in the skin to minimise the signs of ageing | Protects the skin against damaging pollutants             |
| Improves the appearance of sun-damaged skin                          | Skin feels smoother and more even                         |
| Inhibits the activity of collagen and elastin degrading enzymes      | Improves skin microcirculation for healthier-looking skin |
| Soothes irritated skin                                               |                                                           |

Research has established that topical application of green tea leaves or extracts have many benefits for skin, including anti-ageing properties. The polyphenols in green tea possess potent antioxidant and skin-soothing properties, and show significant promise for improving the appearance of sun-damaged skin. Epigallocatechin gallate (EGCG) is one of the active constituents of green tea believed to be responsible for its many health and appearance benefits, both orally and topically. The primary benefit of green tea is an antioxidant boosting skin against environmental pollutants. Research also shows that the catechins in Green Tea Extract act as a sunblock and as a way to reduce signs of ageing in sun-damaged skin.

Green tea is an anti-inflammatory agent, so it will soothe skin and help prevent redness.

### Antioxidant:

- Tea Catechins, regarded as the most important antioxidant substance in the human diet, contribute a lot to the beneficial effects to the skin. Oxidative stress is the most important factor in the aging of the skin. Natural oxidants like this are helpful in the prevention of this process. Polyphenols in this extract can have moisturizing and protective effects. Skin roughness is significantly reduced with its use.

### Photoprotective Activity:

- Ultraviolet radiations ranging from 280-400 nm are very detrimental to the skin. This extract can absorb ultraviolet radiation in harmful range and may also have scavenging properties for radicles produced by UV radiations.

### Anti-ageing:

- Multiple enzymes including collagenases, hyaluronidase, metalloproteinases, lipoxygenases can have a destructive effect on skin cement lipid. So, Camellia Sinensis by inhibiting these enzymes delays the aging of the skin by preserving hyaluronic acid, elastin, collagen important for the skin. Alkaloids, phenols, and catechins are effective in preventing the formation of cellulite thus further aiding anti-ageing objective.

### Anti-Inflammatory:

- By inhibiting platelet aggregation, cyclooxygenase (COX-1), and thromboxane synthase (TXAS) production in platelet, it produces anti-inflammatory effect even stronger than commonly used non-steroidal anti-inflammatory drug aspirin. It improves skin microcirculation and protects intracellular cement lipids.

### Sebum Production/Acne:

Oily skin, a result of excessive sebum production, accompanied by the problem of acne can be solved by the topical application of its extract. It helps reduce sebum production and have anti-greasy effect too.

### Conclusion:

Camellia Sinensis and its extracts can improve skin regeneration by its anti-oxidant, anti-inflammatory, and toning properties. It is strongly soothing, protects against harmful environmental influencers, eliminates excess sebum, and improves skin hydration.

Link: <https://www.spandidos-publications.com/ijo/18/6/1307>  
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 Link: <https://pubmed.ncbi.nlm.nih.gov/20846135/>

## RETINOL (VITAMIN A)

### Ingredient Claims:

|                                                                                                        |                                                   |
|--------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Stimulates collagen production                                                                         | Accelerates skin cell renewal                     |
| Reduces appearance of age spots                                                                        | Evens skin tone                                   |
| Limits collagen degradation                                                                            | Improves skin texture                             |
| Stimulates the creation of new blood vessels in the skin, leading to nourished, healthier looking skin | Reduces the appearance of fine lines and wrinkles |

Retinol is a precursor of retinoic acid and is an effective anti-ageing treatment widely used in cosmetic medicine and is classed as part of the group of topical Vitamin A based drugs called retinoids. Retinoids are widely studied and have been shown to reduce fine lines and wrinkles by increasing the production of collagen. They also stimulate the production of new blood vessels in the skin, which improves skin colour. Additional benefits include fading age spots and softening rough patches of skin. Topical application of retinol significantly affects both cellular and molecular properties of the epidermis and dermis. Tretinoin, was the first retinoid. It was used as an acne treatment in the 1970s, but researchers later discovered that it also fades actinic keratosis spots, evens pigmentation, and speeds the turnover of superficial skin cells.

Vitamin A and its derivatives are among the most effective substances slowing the ageing process. Retinoids regulate the cell apoptosis, differentiation and proliferation. Anti-wrinkle properties of retinoids promote keratinocyte proliferation, strengthen the protective function of the epidermis, restrain trans epidermal water loss, protect collagen against degradation and inhibit metalloproteinases activity.

### Links:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2699641/>  
<https://www.ncbi.nlm.nih.gov/pubmed/26578346>  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6791161>  
<https://pubmed.ncbi.nlm.nih.gov/17515510/>  
<https://pubmed.ncbi.nlm.nih.gov/7097042/>

## PUNICA GRANATUM EXTRACT (POMEGRANATE EXTRACT)

Ingredient Claims:

|                                         |                                            |
|-----------------------------------------|--------------------------------------------|
| Skin lifting and tightening effect      | Helps to prevent the formation of wrinkles |
| Protects the skin from oxidative damage |                                            |

Pomegranate is a juicy, bright red fruit that is considered a superfruit because of its unique antioxidant benefits as well as its high nutritional value. A distinct pomegranate extract which is extracted along with its high molecular weight carbohydrates. When applied on the skin, this ingredient provides immediate tightening and lifting benefits that help reduce the appearance of sagging and wrinkles.

Sources

<https://pubmed.ncbi.nlm.nih.gov/35128669/>

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<https://pubmed.ncbi.nlm.nih.gov/34416060/>

## GLYCERIN

Ingredient Claims:

|                                    |                                |
|------------------------------------|--------------------------------|
| Excellent moisturising properties  | Enhances skin elasticity       |
| Calms and soothes irritated skin   | Promotes skin barrier function |
| Reduces trans epidermal water loss | Soothes hot or sunburned skin  |

Glycerin is a humectant which is present in all-natural lipids. Derived from natural substances by hydrolysis of fats and by fermentation of sugars. This palm-free vegetable Glycerin is widely used in cosmetic products and provides the following benefits:

- **Moisturising:** Glycerin has excellent moisturising properties. It attracts and retains moisture from the environment, helping to hydrate the skin and prevent dryness. It forms a protective layer on the skin, reducing water loss and maintaining its natural moisture balance.
- **Skin barrier repair:** Glycerin can support the skin's barrier function by strengthening the outermost layer of the skin, known as the stratum corneum. This can help improve the skin's ability to retain moisture and protect it from external irritants.
- **Soothing and calming:** Glycerin has soothing properties that can help alleviate skin irritation, itching, and inflammation. It can be beneficial for conditions such as eczema, psoriasis, or dry, sensitive skin.
- **Anti-ageing effects:** Glycerin has the ability to improve the appearance of fine lines and wrinkles. By maintaining skin hydration, it can enhance the skin's elasticity and firmness, giving it a smoother and more youthful appearance.
- **Compatibility with various skin types:** Glycerin is generally well-tolerated by different skin types, including sensitive and acne-prone skin. It is non-comedogenic, meaning it won't clog pores or contribute to breakouts.
- **Enhances product effectiveness:** Glycerin is often used as a key ingredient in skincare formulations because it helps other ingredients penetrate the skin more effectively. It can enhance the delivery of active ingredients, allowing them to work more efficiently.
- **Cooling effect:** Glycerin has a cooling effect on the skin, making it useful in products such as facial mists or soothing gels. It can provide relief for hot or sunburned skin.

Links:

[International Journal of Cosmetic Science, August 2016, ePublication](#)

[British Journal of Dermatology, July 2008, pages 23-34](#)

[Journal of Cosmetic Dermatology, June 2007, pages 75-82](#)

[Proceeding of the National Academy of Sciences, June 2003, pages 7,360-7,365](#)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8395744/>

## SILICA

### Ingredient Claims:

|                                                             |                                     |
|-------------------------------------------------------------|-------------------------------------|
| Skin feels smoother and softer                              | Helps control excess oil production |
| Helps protect skin against environmental aggressors         | Soothes irritated skin              |
| Instantly reduces the appearance of fine lines and wrinkles | Improves overall complexion         |

Silica, also known as silicon dioxide, is a naturally occurring mineral commonly used in skincare products for its potential skin benefits. These include:

- **Absorbent Properties:** Silica has absorbent qualities, which can help control excess oil on the skin's surface. It aids in mattifying the skin and reducing shine, making it beneficial for individuals with oily or combination skin.
- **Mattifying Effect:** Silica can create a soft-focus effect on the skin, blurring the appearance of fine lines, pores, and imperfections. This can result in a smoother and more even complexion.
- **Skin Protection:** Silica has been found to have some protective effects on the skin. It forms a barrier that helps shield the skin from environmental pollutants, such as pollutants and toxins, that can contribute to skin damage and premature aging.
- **Absorption of Excess Moisture:** Silica can absorb excess moisture on the skin, helping to keep it dry and preventing the growth of bacteria and fungi.
- **Skin Soothing:** Silica has soothing properties that can help calm irritated or inflamed skin. It can be beneficial for conditions like acne, eczema, or rashes, providing relief and reducing redness.

### Link:

<https://pubs.acs.org/doi/abs/10.1021/nn301622h>

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