

PRODUCT, DESCRIPTION AND EVIDENCE

REFERENCE: FS7-48-3

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## PURFIY

Carefully crafted with a powerful blend of nature's best ingredients to remove makeup, pollution and dead skin cells for flawless looking skin. This micellar water is enriched with licorice root extract, it effectively brightens and evens out skin tone, revealing a luminous complexion. Panax ginseng extract revitalises and energises the skin, diminishing signs of fatigue and promoting a youthful glow. Green tea extract provides potent antioxidant protection, shielding your skin from daily environmental stressors. Packed with panthenol, to support deep hydration, leaving your skin smooth and hydrated throughout the day. The addition of hyaluronic acid enhances moisture retention, plumping and firming the skin for a radiant, dewy finish.

### KEY BENEFITS

- Helps the skin retain moisture, skin appears fuller and more hydrated
- Reduces oxidative stress in the skin to minimise the signs of ageing
- Improves the appearance of sun-damaged skin
- Skin feels smoother and more even
- Soothes irritated skin
- Improves skin tone and brighten complexion
- Helps to stimulate collagen production
- Provides intense moisturisation
- Reduces trans epidermal water loss
- Supports the skin barrier

### 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 at room temperature above 40°C.

### INGREDIENTS

Aqua, Glycerin, Cocamidopropyl Betaine, Panthenol, Aloe Barbadensis Leaf Extract, Glycyrrhiza Glabra Root Extract, Camellia Sinensis Leaf Extract, Panax Ginseng Root Extract, Coconut Acid, Leuconostoc/Radish Root Ferment Filtrate, Sodium Hyaluronate, Pantolactone, Sodium Chloride, Phenoxyethanol, Ethylhexylglycerin, Sodium Benzoate, Potassium Sorbate, Citric Acid, Parfum

### ACTIVE INGREDIENTS

Glycyrrhiza Glabra Root Extract 2000mg\*  
Camellia Sinensis Leaf Extract 2000mg\*  
Panax Ginseng Root Extract 2000mg\*  
Panthenol 0.75%  
Aloe Barbadensis Leaf Extract 0.65%  
Leuconostoc/Radish Root Ferment Filtrate 600mg\*  
Sodium Hyaluronate 100mg\*

## GLYCYRRHIZA GLABRA ROOT EXTRACT (LICORICE ROOT EXTRACT)

Ingredient Claims:

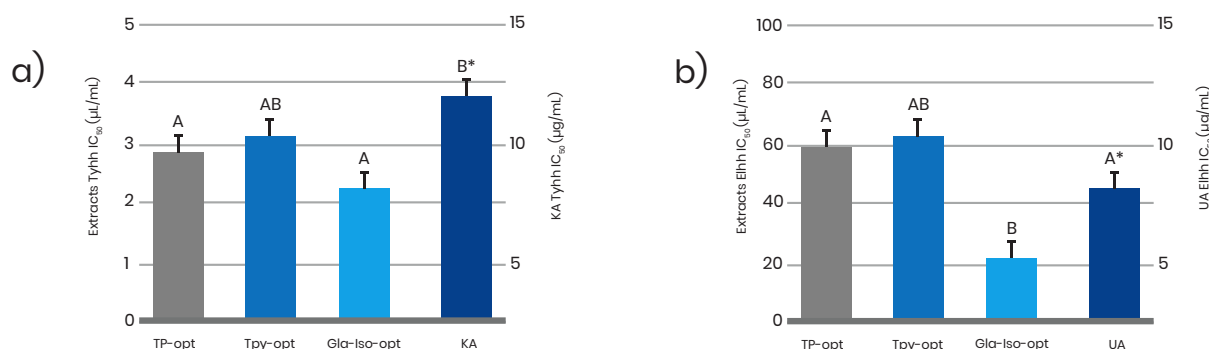
Reduces tyrosinase and elastase activity for brighter and firmer looking skin	Protects the skin from environmental stressors such as pollution and UV
Helps the skin retain moisture, skin appears fuller and more hydrated	Reduces the appearance of blemishes

Glycyrrhiza Glabra Root Extract, also known as licorice root extract, is a natural plant-based ingredient that has been used for centuries in traditional medicine and skincare. Here are some of the skin benefits of Glycyrrhiza Glabra Root Extract:

- **Anti-inflammatory:** Glycyrrhiza Glabra Root Extract has anti-inflammatory properties that can help to soothe and calm irritated skin. This makes it a popular ingredient in skincare products designed for sensitive skin.
- **Brightening:** Glycyrrhiza Glabra Root Extract can help to brighten the skin by inhibiting the production of melanin, the pigment that gives skin its colour. This makes it a popular ingredient in skincare products designed to address dark spots and uneven skin tone.
- **Anti-aging:** Glycyrrhiza Glabra Root Extract contains antioxidants that can help to protect the skin from environmental stressors, such as UV radiation and pollution. This can help to reduce the appearance of fine lines and wrinkles and prevent premature ageing.
- **Moisturising:** Glycyrrhiza Glabra Root Extract is a natural humectant, which means it can attract and retain moisture in the skin. This can help to improve the overall hydration and plumpness of the skin.
- **Acne-fighting:** Glycyrrhiza Glabra Root Extract has been shown to have antibacterial properties that can help to reduce the growth of acne-causing bacteria on the skin.

A green ultrasound-assisted extraction (UAE) method using glycerol/water mixtures for extraction of licorice (*Glycyrrhiza Glabra*) bioactive constituents was developed in this study. The response surface method, according to the Box-Behnken design, was employed to optimize the extraction parameters: glycerol concentration (X1), temperature (X2), and the amount of herbal drug used in the production (X3). The responses were content of total phenols (TP), TP extraction efficiency (TPy) and the content of licorice characteristic constituents, glabridin (Gla) and isoliquiritigenin (Iso). Response surface analysis predicted the optimal extraction conditions for maximized amounts of TP, Tpy, Gla, and Iso. The extracts were prepared using the calculated conditions. The analysis of the selected constituents confirmed the validity of the model. Furthermore, biological activity of the extracts was tested. The results demonstrate that UAE using glycerol is a fast and efficient method for preparation of extracts with excellent radical scavenging, Fe<sup>2+</sup> chelating and antioxidant activity. Furthermore, the observed notable tyrosinase and elastase inhibitory activity of the extracts, as well as their anti-inflammatory activity, indicate the anti-aging properties of the investigated extracts. The fact that the extracts were prepared using the safe, cosmetically active solvent, glycerol, makes them suitable for direct use in specialised cosmeceutical formulations.

Produced from the roots and rhizomes of *Glycyrrhiza glabra*. It contains saponins, flavonoids, coumarins and triterpenoids. The polysaccharide fraction of licorice has shown remarkable immunomodulatory activity, especially by strengthening phagocytosis in the endothelial reticular system and stimulating interferon production. Glycyrrhizin has long demonstrated its strengthening action on hydrocortisone anti-inflammatory activity in rats. Other flavonoid components of licorice root, such as liquiritoside, have also shown in vitro anti-inflammatory activity.



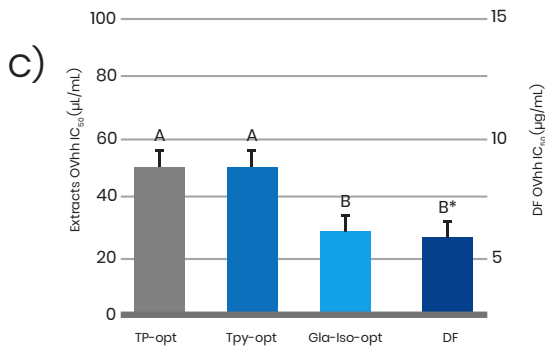


Figure 1. Tyrosinase (a) and elastase (b) inhibitory, and anti-inflammatory (c) activity of the extract and positive controls KA (Kojic Acid), UA (Ursolic Acid), and DF (Diclofenac). Different uppercase letters indicate statistical significance ( $p < 0.05$ ). Asterisk (\*) indicates that the IC<sub>50</sub> unit is placed on the right y-axis.

Licorice root contains numerous bioactive natural products, many of which are potent cosmeceutical ingredients. In this work, the UAE method for preparation of licorice root bioactive extracts was optimized. The extraction was performed using mixtures of water with glycerol, a biodegradable, safe, cosmetically active solvent. The prepared extracts displayed excellent radical scavenging, Fe<sup>2+</sup> chelating, and antioxidant activity. In addition, tyrosinase and elastase inhibitory activity of the extracts, as well as their anti-inflammatory activity, indicated excellent anti-aging properties. Such attractive array of skin-related biological activities makes glycerolic licorice extracts promising constituents of specialized cosmeceutical formulations.

Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6826613/>

### 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>

Link: <https://www.degruyter.com/view/journals/chem/open-issue/article-10.1515-chem-2015-0100/article-10.1515-chem-2015-0100.xml>

Link: <https://pubmed.ncbi.nlm.nih.gov/23742288/>

Link: <https://pubmed.ncbi.nlm.nih.gov/23742288/>

Link: <https://www.ajol.info/index.php/tjpr/article/view/67947>

Link: [Chu D.H. Overview of Biology, Development, and Structure of Skin. In Fitzpatrick's Dermatology in General Medicine, 7th ed; Wolff, K., Goldsmith, L.A., Katz, S.I., Gilchrest, B.A., Paller, A.S., Leffell, D.J., Eds.; McGraw-Hill: New York, NY, USA, pp. 57–73](#)

Link: [Hodge, Archibald, and Benjamin B. Warfield. Inspiration. Wipf and Stock Publishers, 2008.](#)

Link: <https://pubmed.ncbi.nlm.nih.gov/12719785/>

Link: <https://pubmed.ncbi.nlm.nih.gov/24009859/>

Link: <https://pubmed.ncbi.nlm.nih.gov/19397954/>

Link: <https://www.sciencedirect.com/science/article/pii/S0102695X17306725?via%3Dihub>

Link: <https://pubmed.ncbi.nlm.nih.gov/20846135/>

## PANAX GINSENG ROOT EXTRACT

#### Ingredient Claims:

Protects the skin from oxidative damage	A natural anti-inflammatory agent that soothes irritated skin and reduces redness
Improves skin tone and brighten complexion	Helps to stimulate collagen production

Ginseng, otherwise known as Panax Ginseng, was discovered in the mountains of Manchuria in China more than 5,000 years ago. By the 3rd century AD, the demand for Ginseng in China was so great that international trade was developed with Korea. Originally used as a food source, references regarding Ginseng's medicinal uses can be found in writings that date back to the Qin and Han dynasties<sup>1</sup> Panax Ginseng Root Extract has been used for its medicinal properties in traditional Chinese medicine for centuries.

When it comes to skin benefits, Panax Ginseng Root Extract exhibits several positive skin benefits such as:

- Anti-ageing: Ginsenosides, the active compounds found in Panax Ginseng, are known for their anti-aging properties. They help stimulate collagen production, which improves skin elasticity and reduces the appearance of fine lines and wrinkles.

- **Anti-inflammatory:** Panax Ginseng Root Extract contains natural anti-inflammatory agents that can soothe irritated skin and reduce redness.
- **Antioxidant:** Ginsenosides are also powerful antioxidants that help protect skin cells from damage caused by free radicals, environmental stressors, and UV radiation.
- **Moisturising:** Panax Ginseng Root Extract is rich in polysaccharides, which help lock in moisture and keep the skin hydrated. This can help improve the overall texture and appearance of the skin.
- **Brightening:** Panax Ginseng Root Extract is believed to have skin-brightening properties. It can help even out skin tone and reduce the appearance of dark spots and hyperpigmentation.

Links:

[Data on file](#)

<https://pubmed.ncbi.nlm.nih.gov/35509819/>

<https://pubmed.ncbi.nlm.nih.gov/34520601/>

<https://pubmed.ncbi.nlm.nih.gov/29983620/>

<https://pubmed.ncbi.nlm.nih.gov/29719469/>

## PANTHENOL (VITAMIN B5)

Ingredient Claims:

Provides intense moisturisation	Improves skin elasticity
Promotes wound healing	Improves skin texture and skin tone
Soothes red, irritated skin	Enhances skin barrier function

Also known as pro-vitamin B5, Panthenol effectively penetrates the skin and provides a number of benefits:

- **Moisturising:** Panthenol is a humectant, which means that it helps to attract and retain moisture in the skin. This can help to improve the skin's hydration levels by decreasing trans epidermal water loss and reduces dryness and flakiness.
- **Soothing:** Panthenol has anti-inflammatory properties that can help to calm and soothe irritated or sensitive skin. This makes it useful for people with conditions like eczema, rosacea, or acne.
- **Healing:** Panthenol can help to support the skin's natural healing process by promoting cell regeneration and tissue repair. This can help to reduce the appearance of scars and improve overall skin health.
- **Anti-ageing:** Panthenol can help to improve the appearance of fine lines and wrinkles by increasing the skin's elasticity and suppleness. It can also help to improve skin texture and tone.
- **Enhances skin barrier:** Panthenol can help to strengthen the skin's natural barrier function, reducing moisture loss and protecting the skin from external stressors.

Links:

<https://pubmed.ncbi.nlm.nih.gov/21982351/>

<https://pubmed.ncbi.nlm.nih.gov/27545858/>

<https://www.scinapse.io/papers/3564442>

<https://www.tandfonline.com/doi/full/10.1080/09546634.2016.1214235>

[Data on file.](#)

## ALOE BARBADENSIS LEAF JUICE (ALOE VERA)

Ingredient Claims:

Soothes irritated skin	Moisturises and hydrates dry skin
Reduces trans epidermal water loss	Encourages skin healing and improves skin's overall condition
Improve skin elasticity	

The botanical name of Aloe Vera is Aloe Barbadensis miller. It belongs to Asphodelaceae (Liliaceae) family, and is a shrubby or arborescent, perennial, xerophytic, succulent, pea-green colour plant. The Aloe vera plant has been known and used for centuries for its health, beauty, medicinal and skin care properties. The name Aloe vera derives from the Arabic word "Alloeh" meaning "shining bitter substance," while "vera" in Latin means "true". 2000 years ago, the Greek scientists regarded Aloe vera as the universal panacea. The Egyptians called Aloe "the plant of immortality.

It grows mainly in the dry regions of Africa, Asia, Europe and America. Aloe Barbadensis is a useful additive for cosmetics as it has many different properties to counteract the effects of ageing and to protect the skin. Aloe barbadensis, or Aloe Vera, is a succulent plant which offers many benefits and is suited for all skin types, especially dry, damaged, broken, sensitive and irritated skin. It offers anti-inflammatory, antimicrobial, antioxidant, humectant and soothing and anti-itch properties for skin. Aloe Vera contains Vitamin B complex, folic acid, Vitamin C and carotene, which is a precursor of Vitamin A.

Aloe soothes the skin, prevents trans epidermal water loss (TEWL). It cools and hydrates the skin, moisturises and promotes healing from breakouts. Aloe vera contains 75 potentially active constituents: vitamins, enzymes, minerals, sugars, lignin, saponins, salicylic acids and amino acids.

Links:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2763764/>

[https://www.researchgate.net/publication/334123567\\_Review\\_on\\_Aloe\\_Vera](https://www.researchgate.net/publication/334123567_Review_on_Aloe_Vera)

## LEUCONOSTOC RADISH ROOT FERMENT FILTRATE (FERMENTED RADISH ROOT EXTRACT)

Ingredient Claims:

Boosts moisture content in the skin	Helps to prevent the growth of harmful bacteria which cause blemishes
Soothes irritated skin	Gently exfoliates the skin for a more radiant complexion

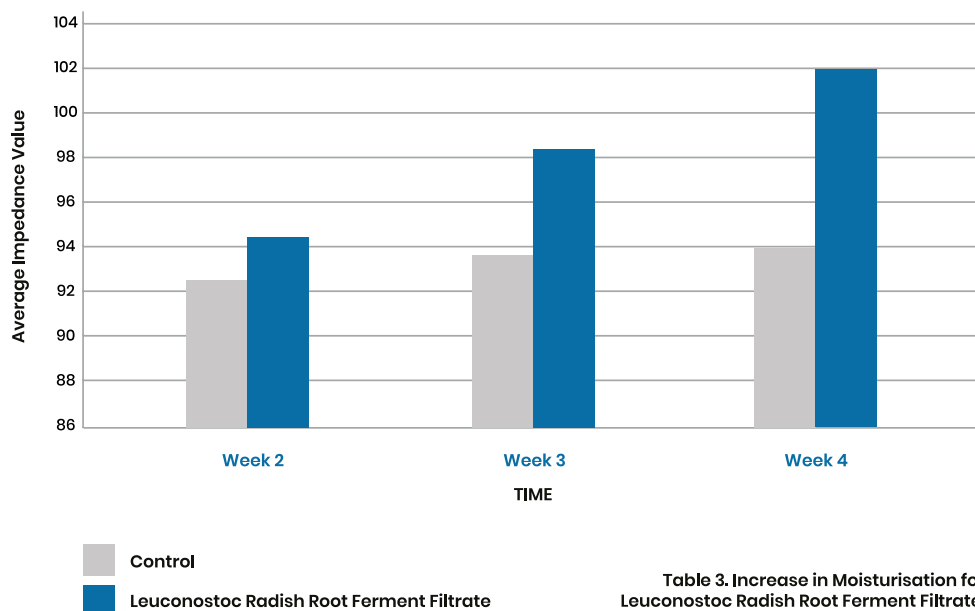
Leuconostoc radish root ferment filtrate is a natural antimicrobial ingredient that is derived from fermented radish roots. It has become a popular ingredient in skincare products due to its ability to act as a preservative and provide several benefits for the skin. Here are some of the skin benefits of Leuconostoc radish root ferment filtrate:

- **Natural preservative:** Leuconostoc radish root ferment filtrate has antimicrobial properties that make it an effective natural preservative in skincare products. This can help to extend the shelf life of the product without the use of harsh synthetic preservatives.
- **Moisturising:** Leuconostoc radish root ferment filtrate is a humectant, which means it has the ability to attract and retain moisture in the skin. This can help to improve the overall hydration and plumpness of the skin.
- **Gentle exfoliation:** Leuconostoc radish root ferment filtrate contains natural enzymes that can help to gently exfoliate the skin, removing dead skin cells and promoting a smoother, more radiant complexion.

- Antimicrobial: Leuconostoc radish root ferment filtrate has antimicrobial properties that can help to prevent the growth of harmful bacteria on the skin, which can contribute to acne and other skin irritations.
- Soothing: Leuconostoc radish root ferment filtrate has been shown to have soothing properties, which can help to calm and reduce inflammation in the skin.

Moisturisation using 1% in cream compared to base cream without active.

**Moisturisation Results**



Links:

[Data on file](#)

<https://pubmed.ncbi.nlm.nih.gov/25779084/>

<https://pubs.acs.org/doi/full/10.1021/jf5063588>

**Table 3. Increase in Moisturisation for Leuconostoc Radish Root Ferment Filtrate**

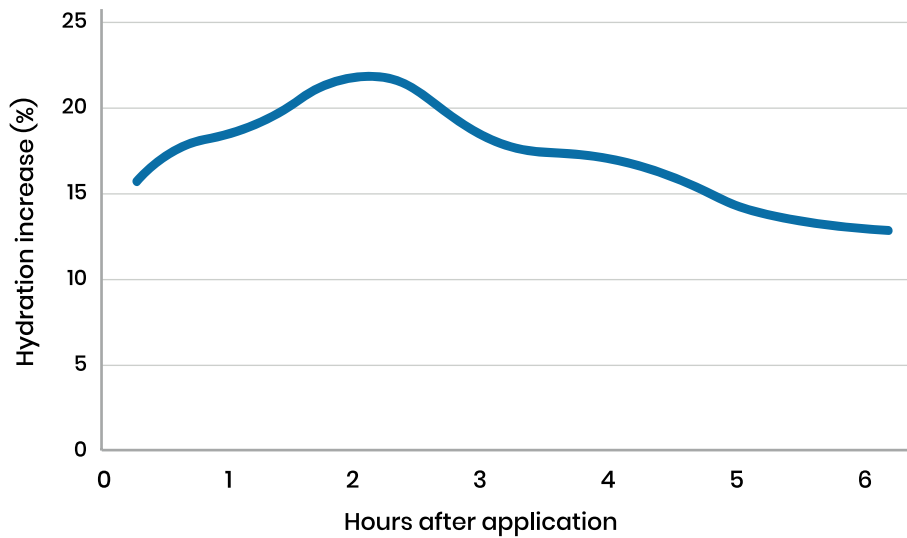
## SODIUM HYALURONATE

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

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%).

## 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)

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.

Links:

[Data on file](#)

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

\*Mg/kg