

Native Collagen Eye Mask

Summary of Scientific Evidence

MedSkin
Solutions

Dr. Suwelack



Agenda

Summary of Scientific Evidence – Native Collagen Eye Mask

- ◊ Contents
- ◊ Introduction
- ◊ Active Ingredients
- ◊ Mode of Action
- ◊ Scientific Studies
- ◊ Ophthalmological Examination
- ◊ Patch Test
- ◊ Summary
- ◊ Contact Details



Native Collagen Eye Mask

At a Glance

Key Facts Active Biomaterial

- ✓Actives: Native Collagen (97% identical to human skin), Sodium Hyaluronate
- ✓pH: 4.2
- ✓Professional usage
- ✓Home use – Convenient and user friendly
- ✓Ultra gentle formula, highly bio-compatible
- ✓Free from preservatives, fragrances, silicones & colorants
- ✓100% highly pure native collagen
- ✓Freshly activated in the moment of use for maximum potential

Native Collagen Eye Mask Pure Twin Pack is a convenient and user-friendly eye mask for Home-Use.

The Mask is freshly activated in the moment of use for targeted regeneration and repair of the eye zone.

INCI Eye Mask

Collagen, Rayon*, Paraffin*, Hydrogenated Rosin, Hydrogenated Polyisobutene, PPG-15 Stearyl Ether, PEG-40 Sorbitan Peroleate, BHT

INCI Activation Liquid 13L

Aqua (Water), Butylene Glycol, Glycerin, 1,5-Pentanediol, Leuconostoc / Radish Root Ferment Filtrate**, Sodium Hyaluronate

* Rayon is used for lamination of mask, Paraffin is used for adherence of top layer to collagen layer, both not in contact with skin (back side of the mask).

** Leuconostoc / Radish Root Ferment Filtrate is a natural preservative, not on the black list of the EU regulation (KVO).



It's all about the skin



Introduction

The eye area is extremely thin, sensitive and less resistant compared to the rest of the face, is low in moisture and tension. Especially the skin on the upper lid and below the eyes tends to dryness, redness, eczema and itching. This skin condition causes discomfort.

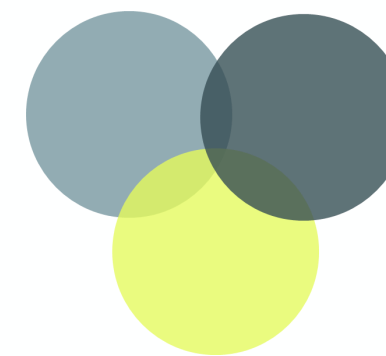
During the skin aging process, the water binding capacity and collagen synthesis of the skin decreases and wrinkles are formed. The skin loses firmness and its micro relief becomes more irregular. In order to regenerate the skin and to promote natural repair mechanisms, many conditions must be met. The regeneration process can be disturbed by factors such as age, poor blood circulation, skin dehydration, repeated trauma like sun burn or skin injury after aesthetic surgery.

Proper and well orchestrated skin renewal is important to restore the barrier function of the skin and to reduce the risk of aging.

Cosmetic treatments that provide the skin with lasting moisture, boosts collagen synthesis and create an acidic surface milieu can enhance the skin's protective function and strengthen its epidermal barrier. To achieve the best results in terms of regeneration, the active ingredients should be highly pure and skin-friendly, especially in the eye area, and should have a sufficiently high concentration of use.

Tobin, Introduction to Skin Aging. J Tissue Viability. 2017;26(1):37-46.





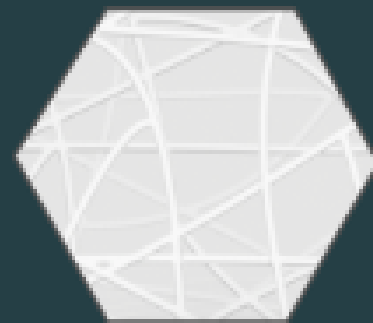
Ingredients explained in short

Ingredient	Function in cosmetic product	What that means
Collagen	Moisturizing	Preserves skin moisture
Rayon	Bulking	Lamination (Top layer), not in contact with skin (back side of the mask)
Paraffin	Viscosity Contolling	Adherence of top layer (rayon) to collagen layer, not in contact with skin (back side of the mask).
Hydrogenated Polyisobutene	Emollient	Makes the skin smooth and soft.
PPG-15 Stearyl Ether	Emollient	Makes the skin smooth and soft.
PEG-40 Sorbitan Peroleate	Surfactant	Reduces the interfacial tension of cosmetic products and contributes to an even distribution during application
BHT	Antioxidant	Inhibits unwanted reactions, which are triggered by oxygen
Aqua	Solvent	-
Butylene Glycol	Humecant	Adds moisture and conditions skin
Glycerin	Humectant	Preserves skin moisture
1,5-Pentanediol	Solvent	Moisturizing ingredient with good solubilizing properties
Leuconostoc/ Radisch Root Ferment Filtrate	Skin Conditioning	Moisturizes and conditions skin
Sodium Hyaluronate	Humectant	Preserves skin moisture

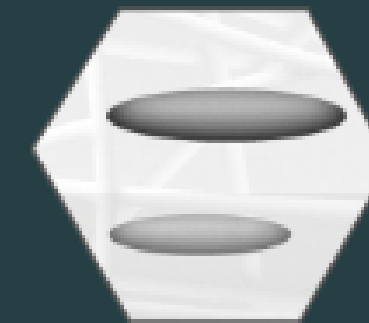
Hero Active Ingredients - Collagen



The properties and cosmetic efficacy of native collagen are linked to the maintenance of its triple helical structure.



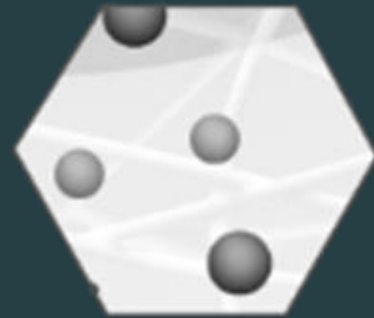
The insoluble, native collagen fibers [1] can absorb high amounts of liquid like a sponge and forms a barrier film on the skin. They serve as a delivery system for soluble collagen components and can gradually release moisture and active ingredients efficiently during the entire application. The high water-binding capacity and barrier film on the skin can reduce the transepidermal water loss. Both effects cause increased hydration of the stratum corneum, which lasts for hours. The use improves skin smoothness and gives the skin a pleasant feeling.



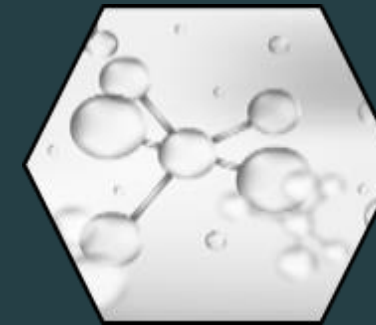
Native Soluble collagen molecules [1] remain on the skin surface (due to their size). They have an extremely high water-binding capacity, too. This characteristic helps to infuse the skin with moisture to strengthens the skin's moisture binding capacity, support the smoothing of fine lines and wrinkle and promote an even complexion

[1] Datenblätter zum Einsatz von Wirkstoffen in kosmetischen Mitteln, GDCh, Arbeitsgruppe Kosmetische Mittel, Proteine- Teil 1 Native Proteine tierischen Ursprungs

Hero Active Ingredients – Hyaluronic Acid



Soluble collagen peptides [1] are skin-identical and are recognized by the skin. They are released upon activation and can penetrate into the skin due to their much smaller molecular size. Collagen peptides such as matrikines have been shown to promote skin renewal by affecting signaling cascades for collagen synthesis, tissue remodeling and restoration.



Sodium Hyaluronate (water-soluble salt form of hyaluronic acid) [2, 3] is a polysaccharide, which occurs in different sizes (low molecular and high molecular) almost everywhere in the human body. 50% of the body's hyaluronic acid content is found in the skin. The amount of hyaluronic acid decreases with age. Hyaluronic acid is responsible for the moisture and elasticity of the skin, helping to promote a more revitalized and youthful complexion. It smoothes the appearance of wrinkles and improves the skin's texture

[1] Katayama et al. A pentapeptide from type I procollagen promotes extracellular matrix production", J. Biol. Chem., 1993, 268:9941-9944.

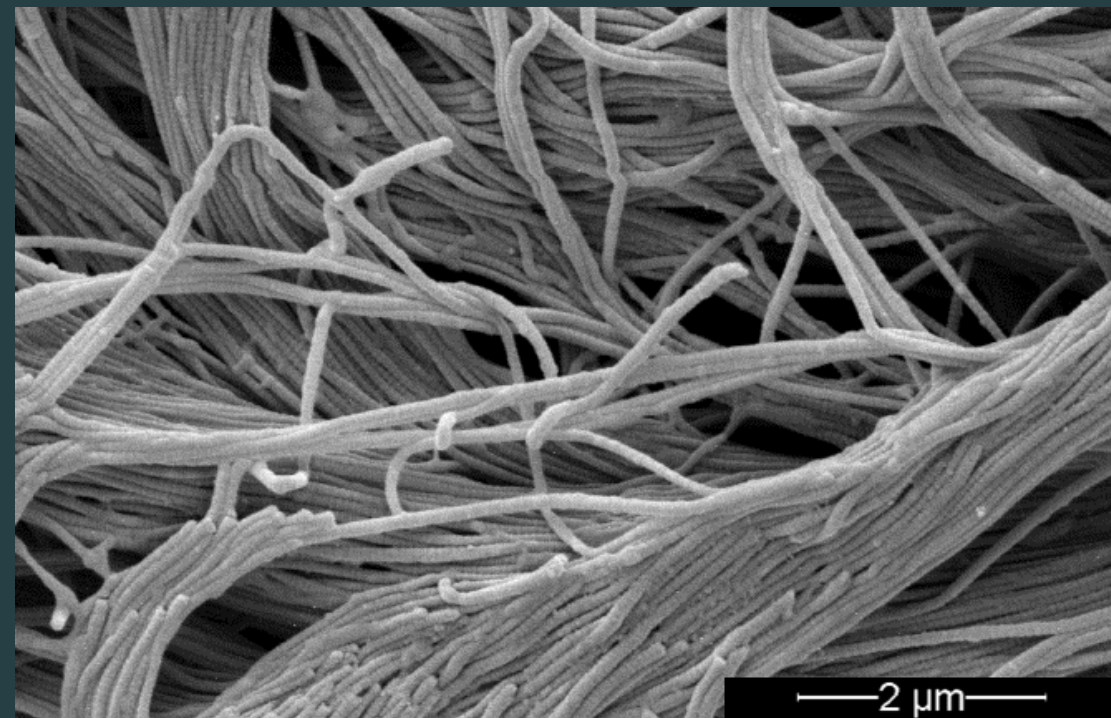
[2] Papakonstantinou et al., Dermato-Endocrinology, 2012, 4.

[3] Pavicic et al., Journal of Drugs in Dermatology 2011, 10 (9).

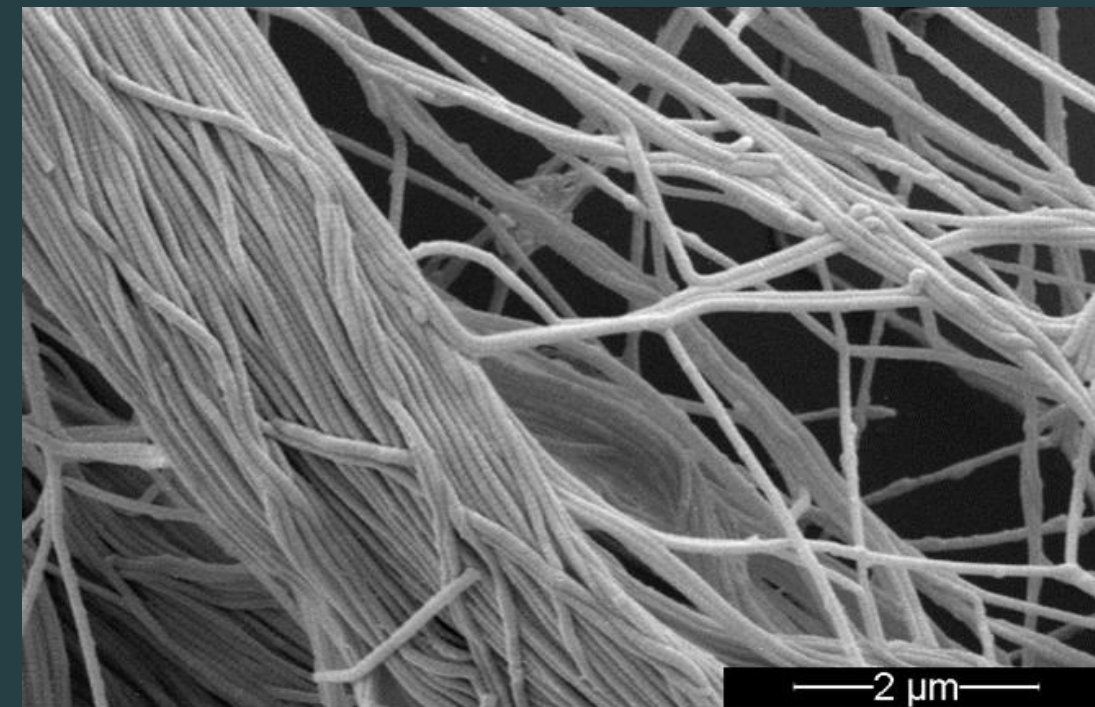
MedSkin's Native Collagen is 97% Identical to Human Skin

Empowered by the Advanced CryoSafe® Method

Human Dermis



MedSkin Solutions' Native Collagen



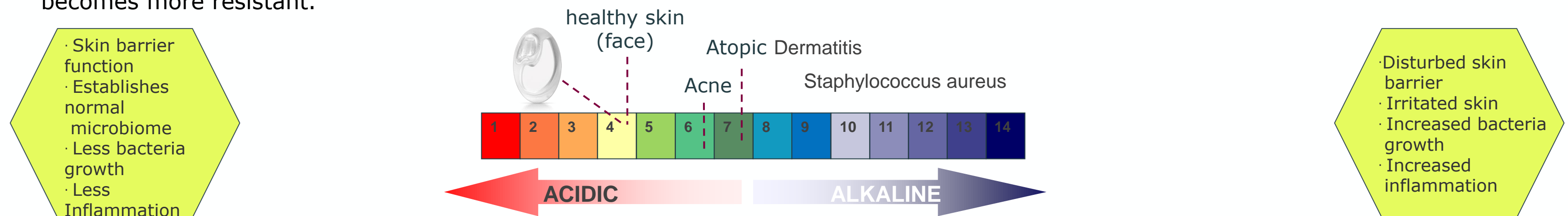
- Preservation and refinement of the natural properties and structures of biomaterials.
- Complete preservation of the activity and efficacy of bioactive ingredients.
- Skin is able to recognize biomaterial.
- Result: highly effective and safe products.

SEM analysis by Dr. Matthias Mörgelin, Lund, Sweden, 2013/2017; 10.000x zoom

Influence of skin pH

The skin is our largest organ. It has to resist the numerous environmental stresses and thus plays an extremely important role. A healthy acid mantle of the skin is important here, which protects the skin against harmful microorganisms and pollutants and thus prevents infections. The human healthy skin is therefore naturally slightly acidic. Its pH lies in the range of 4.1 to 5.8, depending on the person and body region. Many factors influence the pH value. For example, air dryness, intense heat or cosmetic products that are too alkaline can change it. But hormonal fluctuations or skin diseases also throw the skin's pH out of balance. Studies also suggest that the pH value increases with age. This would also explain why the skin is more susceptible to environmental influences over the years.

The pH value of the skin can recover quite quickly from small fluctuations, but if it is seriously out of balance, the problems become apparent. Even small changes can cause inflammation, making us more susceptible to infections and bacteria growth, which in turn can cause skin diseases such as rosacea, acne and eczema. An acidic pH value of cosmetic products can stabilize the physiological skin pH environment, promoting the natural regeneration process. This is beneficial for aged or previously damaged skin. The skin becomes more resistant.



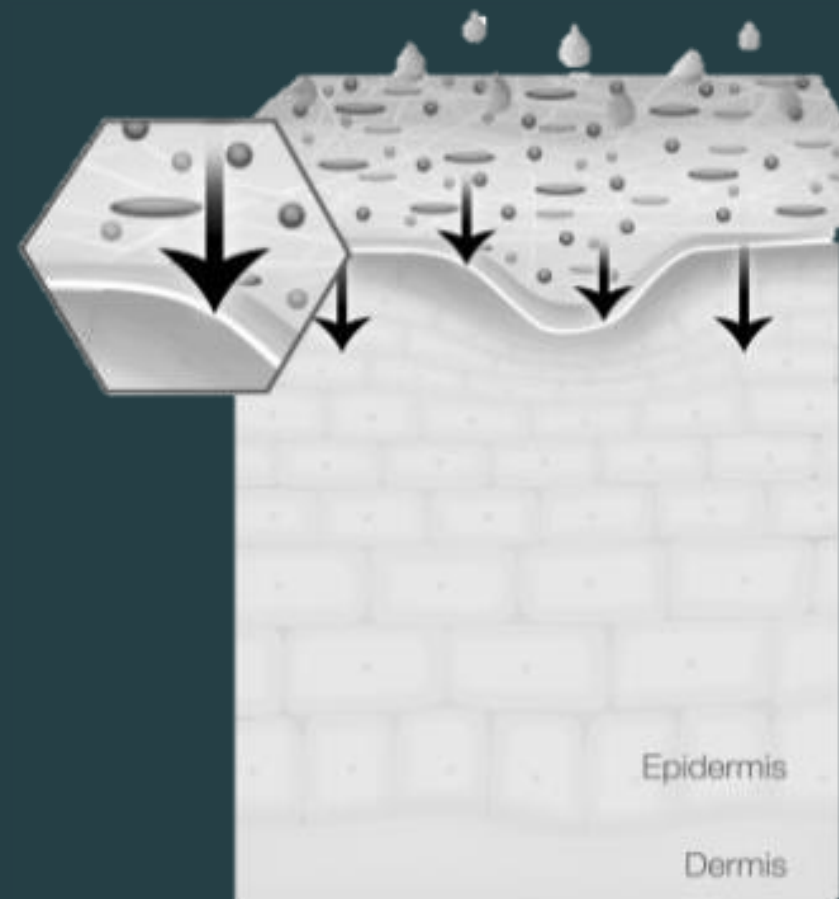
Proksch et al. Influence of Buffers of Different pH and Composition on the Murine Skin Barrier, Epidermal Proliferation, Differentiation, and Inflammation. Skin Pharmacol Physio. 2019; 32(6):328-336

Mode of Action



Mode of Action

Activation & Release of Active Ingredients



Commencement of 3ple action effect

Activation Liquid 17SF:

- ◊ Release of collagen components of the mask by adding specially designed Activation Liquid 17SF.



Insoluble Collagen Fibers



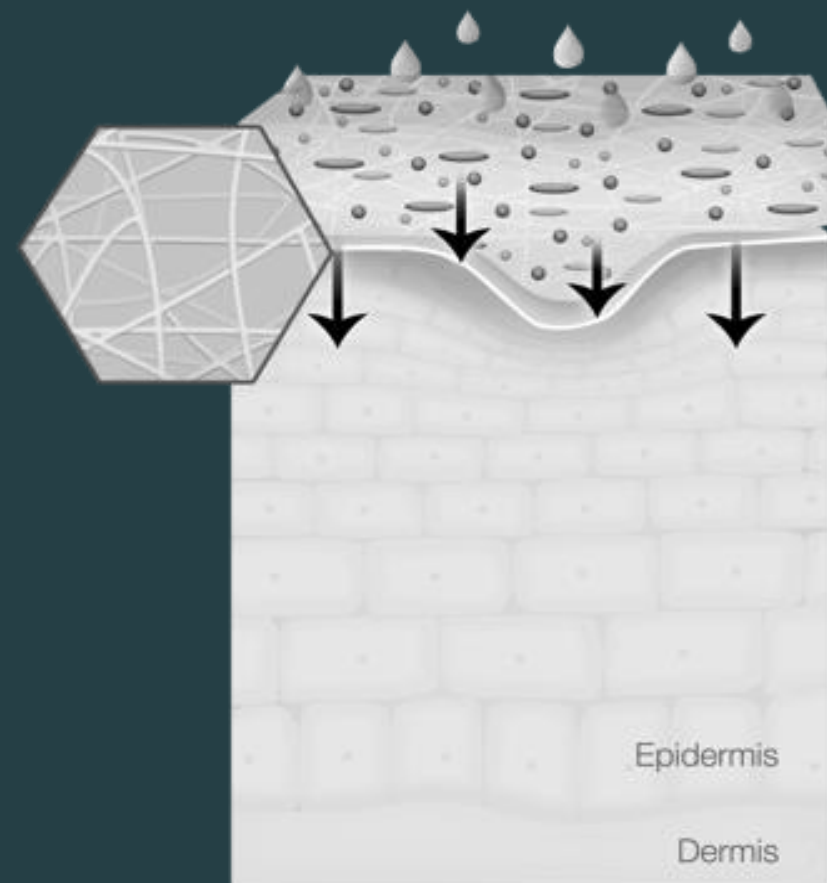
Soluble Collagen Molecules



Collagen Peptides

Mode of Action

Immediate Anti-Irritation



Insoluble collagen fibers on skin surface act like a second skin

Insoluble Collagen Fibers:

- Gradually release moisture / active ingredients.
- Moisture reservoir supports skin physiological processes.
- Nourishing agents penetrate easily into skin.

1st Benefits:

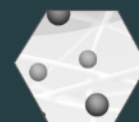
- Immediately soothes irritations.



Insoluble Collagen Fibers



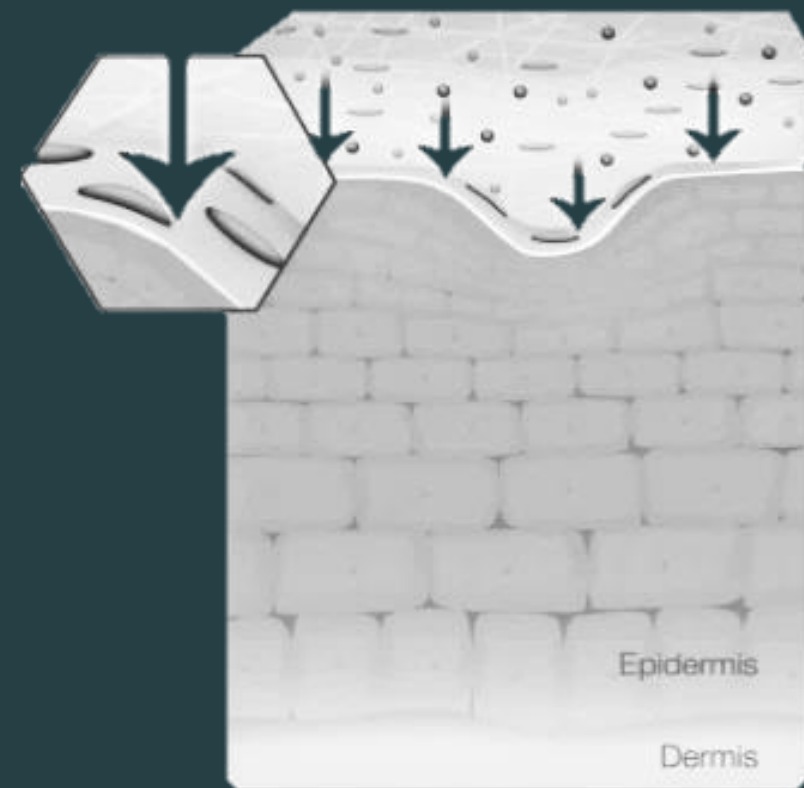
Soluble Collagen Molecules



Collagen Peptides

Mode of Action

Increase in Skin's long-term Moisture-Binding Capacity



Release of soluble collagen molecules

Soluble Collagen Molecules:

- Remain on skin surface and infuse surface with moisture.
- Physiological processes progress optimally, protective effect.

2nd Benefits:

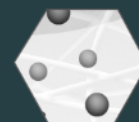
- Boosts hydration.
- Smooths lines and wrinkles.
- Promotes an even complexion.



Insoluble Collagen Fibers



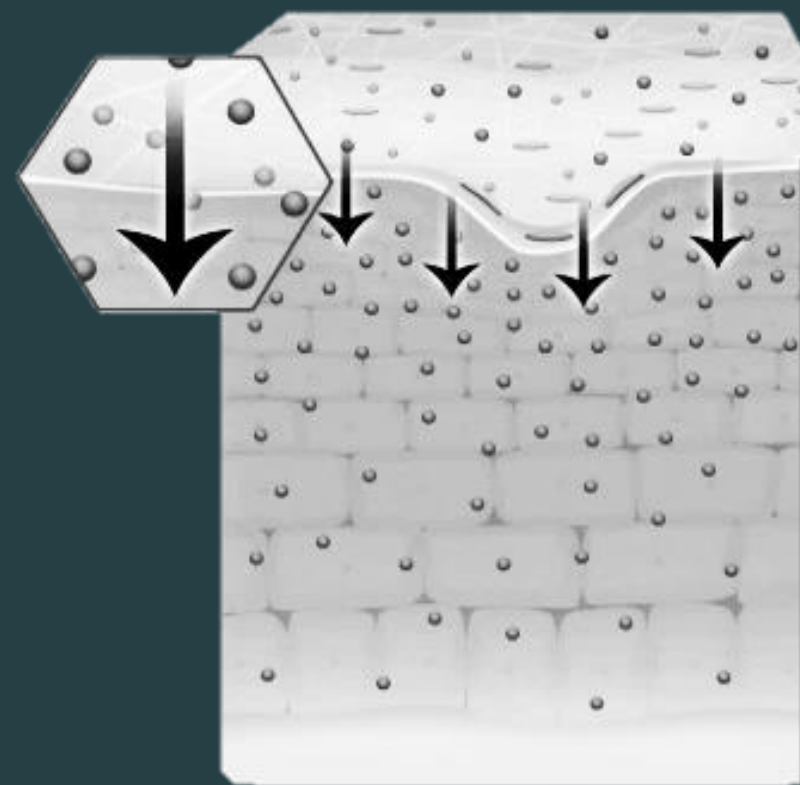
Soluble Collagen Molecules



Collagen Peptides

Mode of Action

Regeneration & Repair



Release of skin identical collagen peptides

Soluble Collagen Peptides:

- Are capable of penetration.
- Recognized in skin (97% skin identical, “cell-cell interaction”).
- Act as signal to trigger physiological processes (e.g. collagen synthesis)

3rd Benefits:

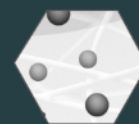
- Promotes skin regeneration & repair.



Insoluble Collagen Fibers

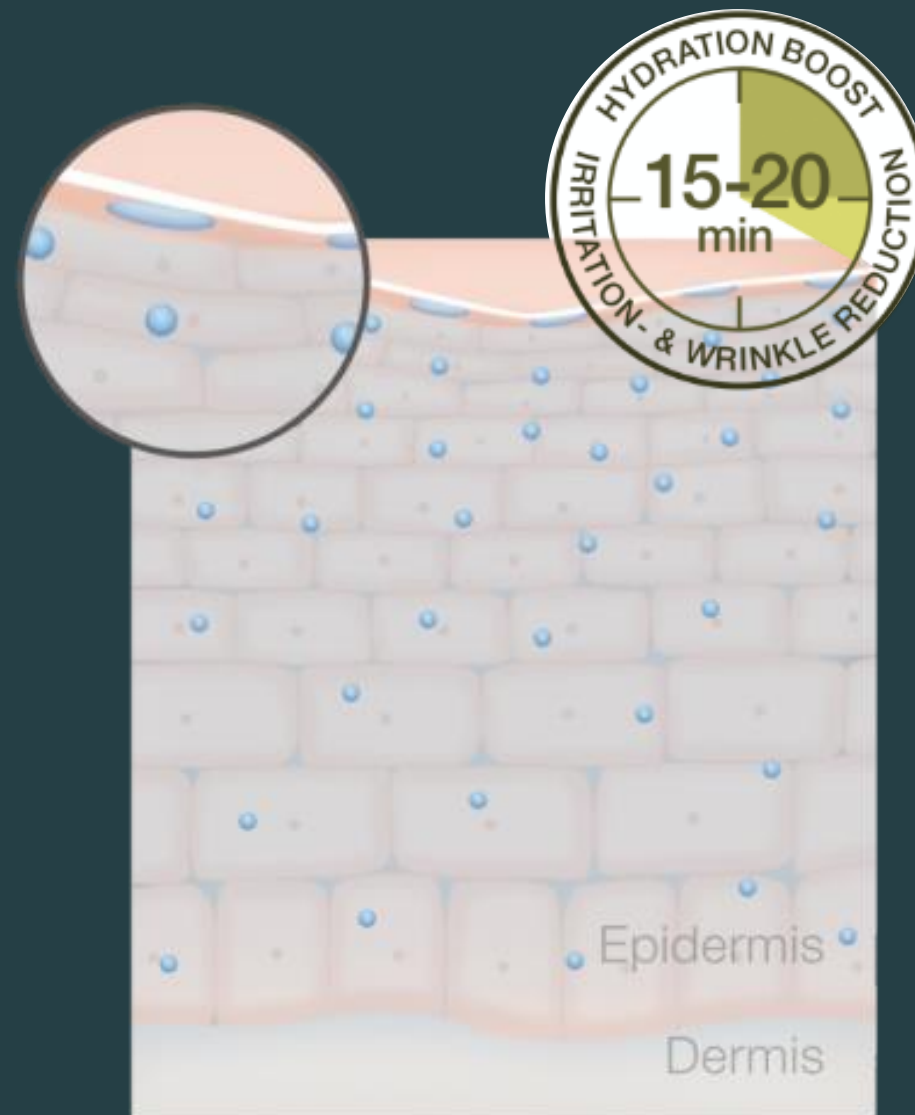


Soluble Collagen Molecules



Collagen Peptides

Results after Native Collagen Treatment



Regeneration & Repair

Smoothed lines and wrinkles

Healthy skin tone

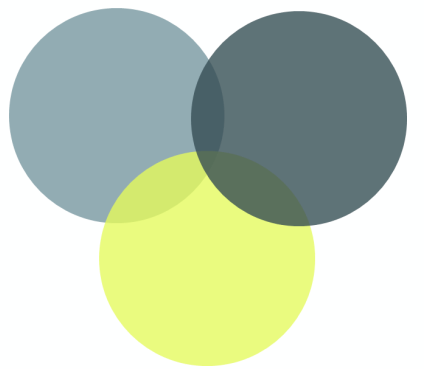
Soothed irritations and reduced redness

Increased moisture levels

Instantly balanced and recovered skin

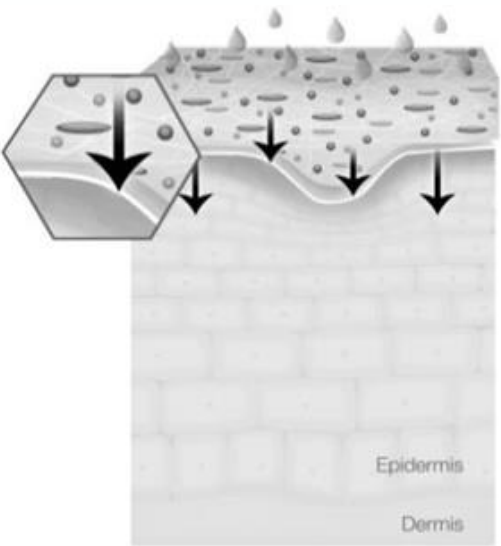
Balanced pH level and healthy microbiome





Mode of Action

Activation & Release of Active Ingredients

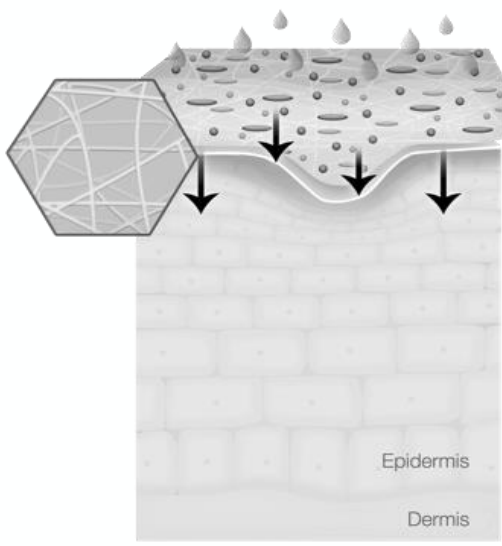


Commencement of 3rd action effect

Activation Liquid 13L:

- Release of collagen components of the mask by adding specially designed Activation Liquid 13L.

Immediate Anti-Irritation



Insoluble collagen fibers on skin surface act like a second skin

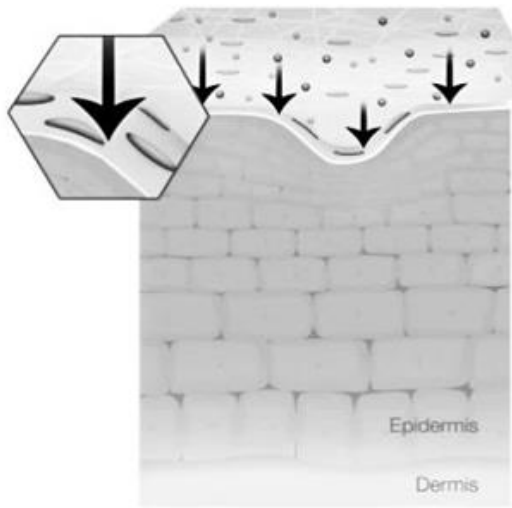
Insoluble Collagen Fibers:

- Gradually release moisture / active ingredients.
- Moisture reservoir supports skin physiological processes.
- Nourishing agents penetrate easily into skin.

1st Benefits:

- Immediately soothes irritations.

Increase in Skin's long-term Moisture-Binding Capacity



Release of soluble collagen molecules

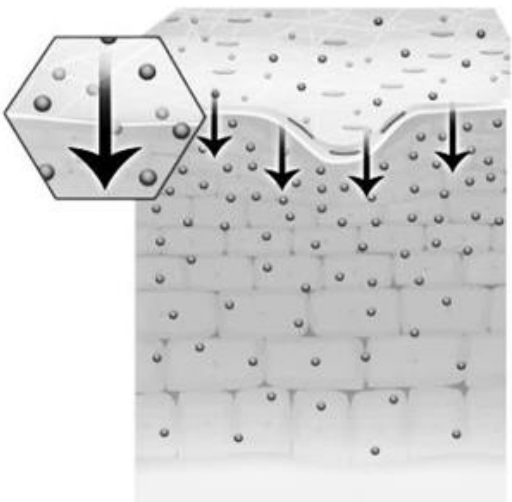
Soluble Collagen Molecules:

- Remain on skin surface and infuse surface with moisture.
- Physiological processes progress optimally, protective effect.

2nd Benefits:

- Boosts hydration.
- Smoothes lines and wrinkles.
- Promotes an even complexion.

Regeneration & Repair



Release of skin identical collagen peptides

Soluble Collagen Peptides:

- Are capable of penetration.
- Recognized in skin (97% skin identical, "cell-cell interaction").
- Act as signal to trigger physiological processes (e.g. collagen synthesis)

3rd Benefits:

- Promotes skin regeneration & repair.



Insoluble Collagen Fibers



Soluble Collagen molecules



Collagen Peptides

Scientific Studies



Scientific Studies



In vitro analysis: SEM for collagen nativeness



In vitro analysis of soluble protein components



In vivo in house evaluation: Skin pH



Dermatological Evaluation: Skin soothing effect



Dermatological Evaluation: Skin smoothing and hydration



Comparative Dermatological Evaluation: Skin smoothing and hydration



Ophthalmological Examination



Patch Test



Proven Nativeness of Native Collagen Eye Mask

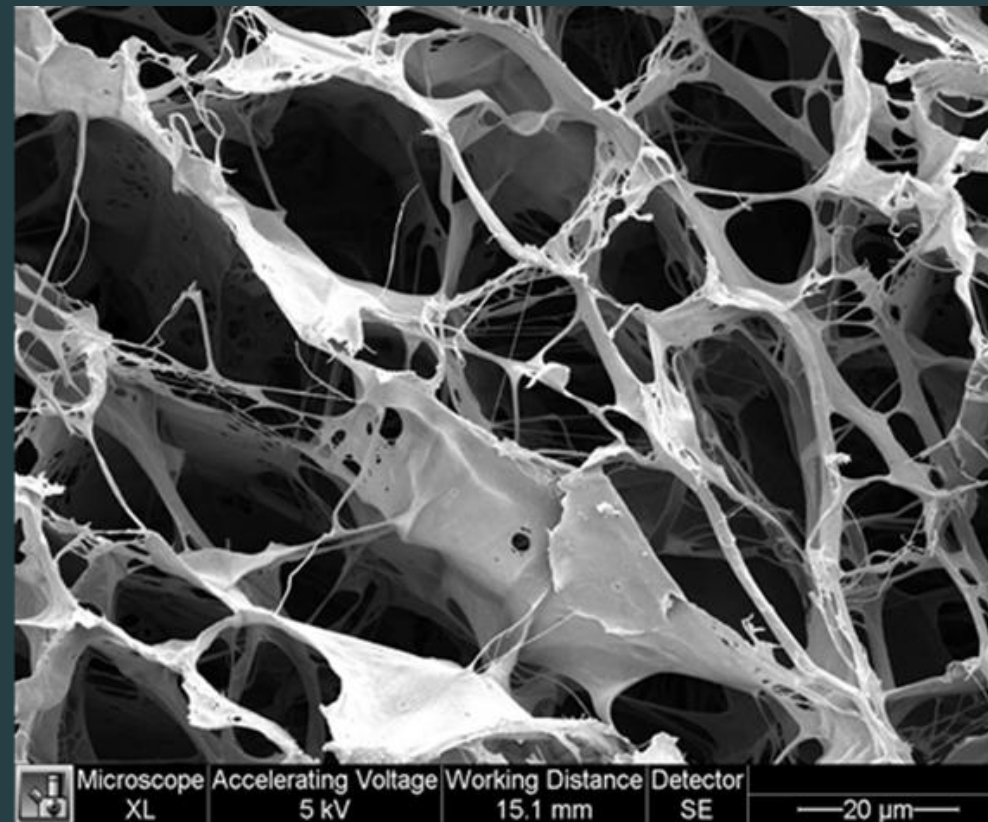
Skin-identical Ultrastructure of Collagen



Human dermis



Native Collagen Mask



Result:

SEM Analysis of Native Collagen Eye Mask shows a native structure of collagen highly similar to the human dermis

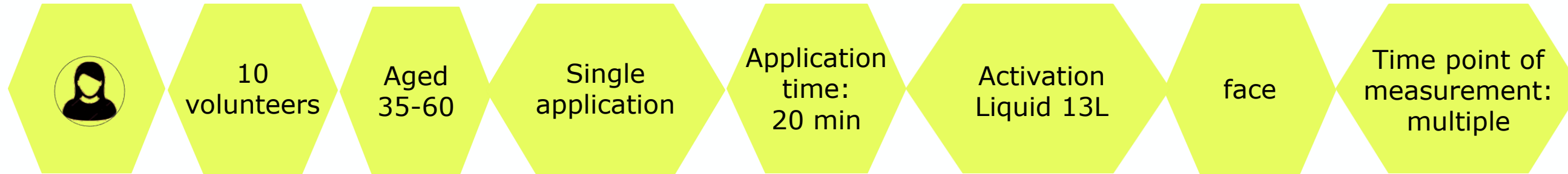
What that means:

The skin-identical collagen in Native Collagen Eye Mask acts as

- a delivery system and active ingredient in one
- with high cosmetic effect
- which is recognized by skin



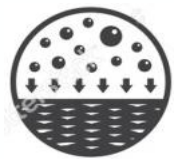
Controlled Dermatological Study



Study title: Clinical-dermatological application study in 20 volunteers (2 groups) with single application and activation with water or Activation Liquid¹

Study centre: Dermatest GmbH, Germany, 2013

Parameter: Determination of



skin moisture
Corneometer

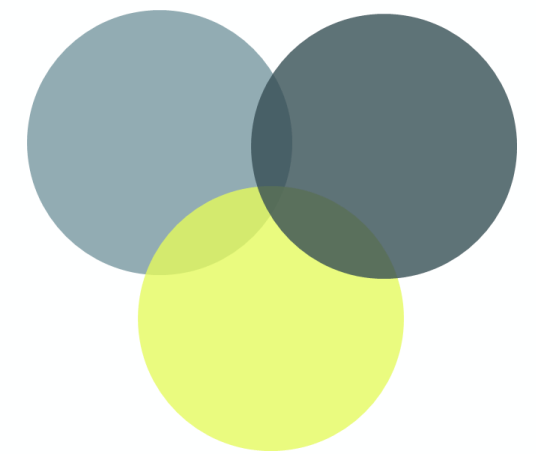


skin roughness
PRIMOS



Participant Opinion
Questionnaire

¹ Study was performed as split face study with 4 different Activation Liquids (known as Activator Study). Listed here are results relevant for this product



Intense skin moisture effect

Method:

- ◊ Corneometer (skin hydration)

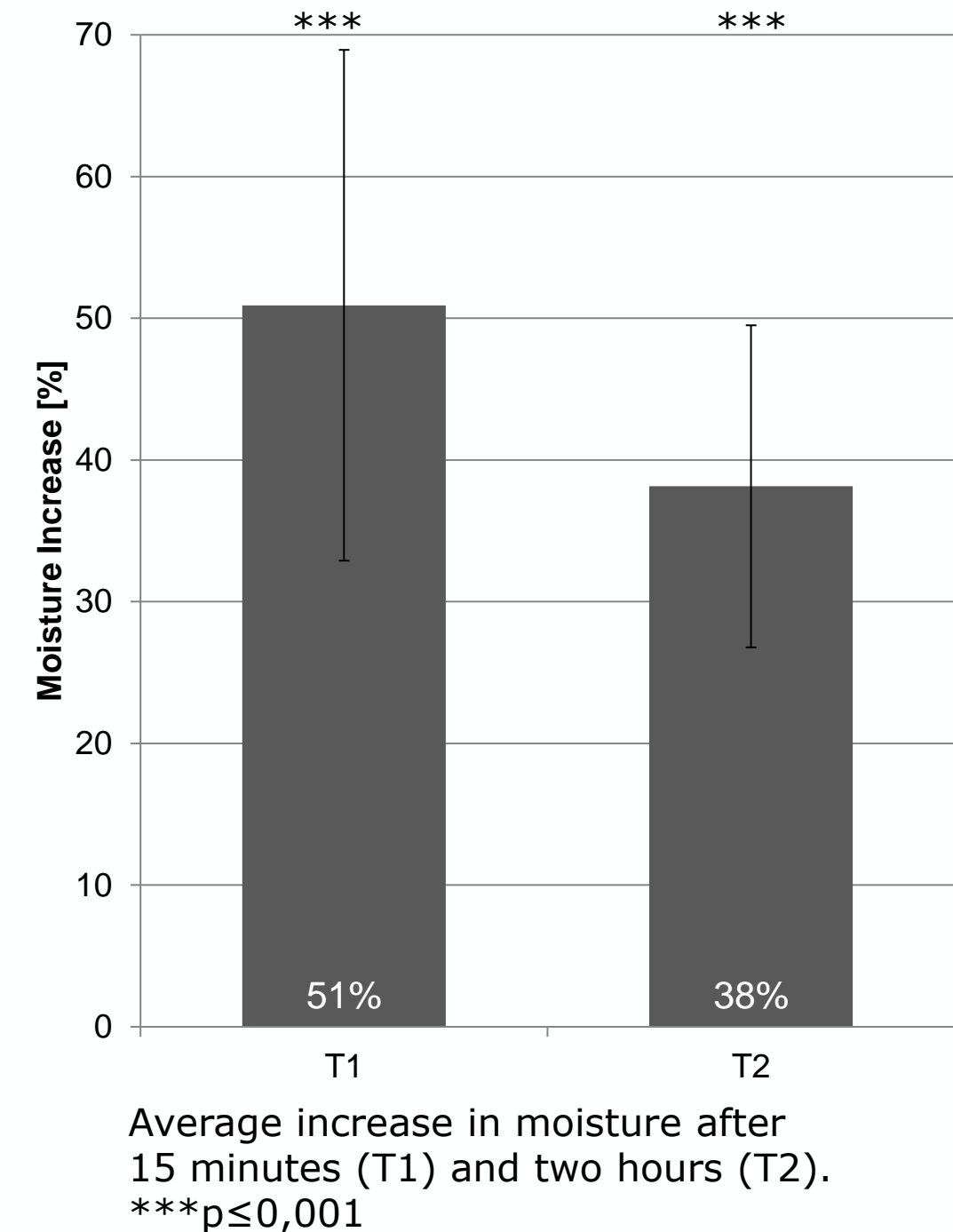
Results:

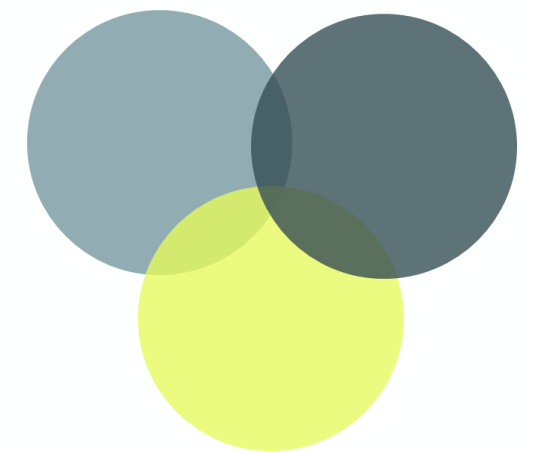
- ◊ Freshly activated with Activation Liquid:
 - ◊ After 15 min: Significant increase by 51 %
 - ◊ After 2 hours: significant increase by 38 %

What that means:



- ◊ Outstanding increase in skin hydration for skin moisture effect and healthy, revitalized and refreshed skin.
- ◊ Improved skin hydration together with a restoration of acidic healthy skin pH strengthens skin barrier.





Intense skin smoothing effect

Method:

- ◊ PRIMOS (skin roughness)

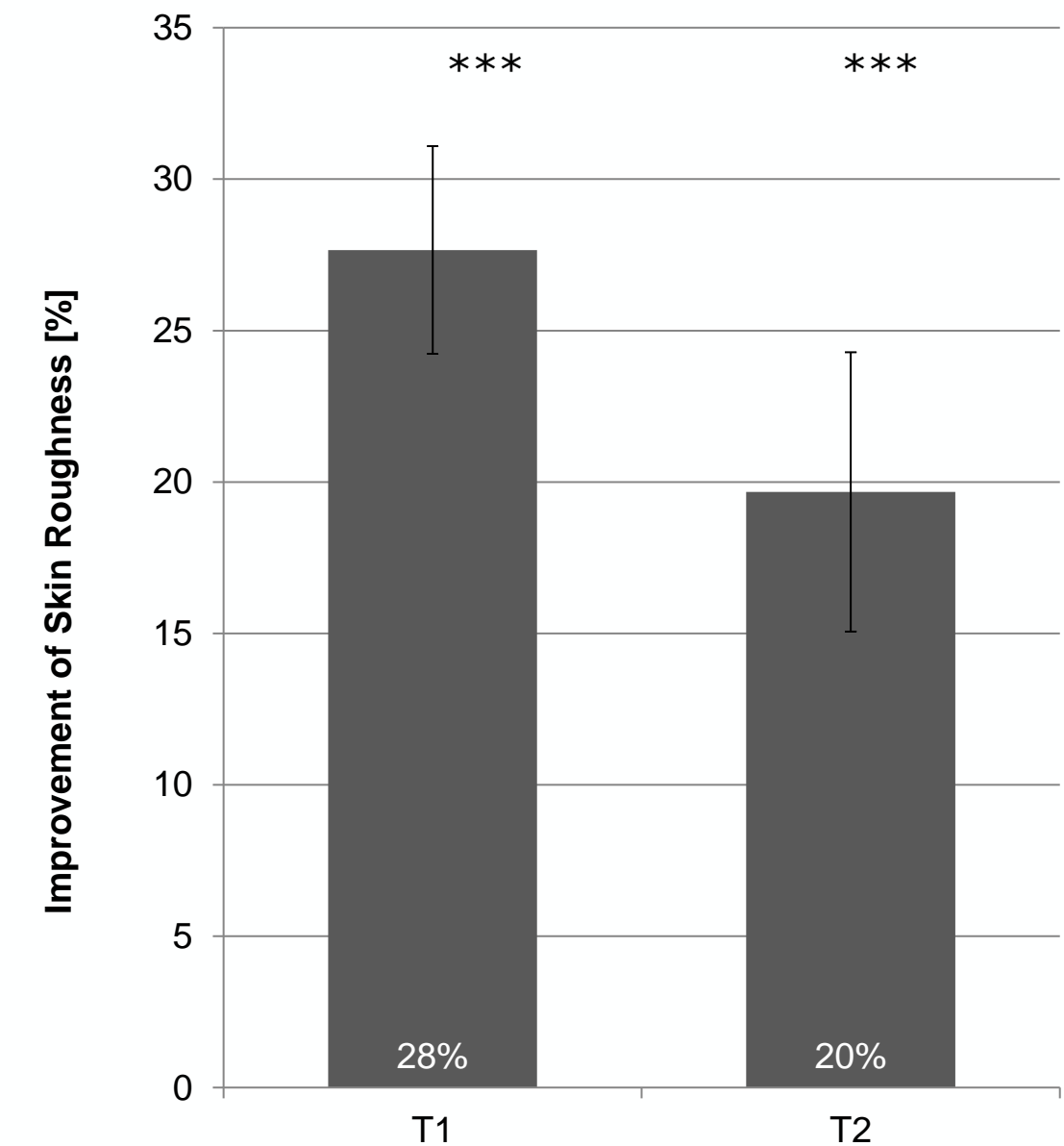
Results:

- ◊ Freshly activated with Activation Liquid:
 - ◊ After 15 min: Significant Improved by 28 %
 - ◊ After 2 hours: significant Improved by 20 %

What that means:



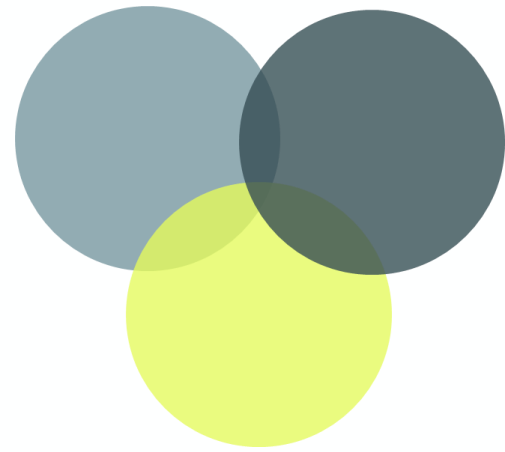
- ◊ Significant reduction of skin roughness for a skin smoothing effect. The skin appears younger!



Average reduction of skin roughness after 15 minutes (T1) and two hours (T2).

*** $p \leq 0,001$

User Satisfaction



Method:

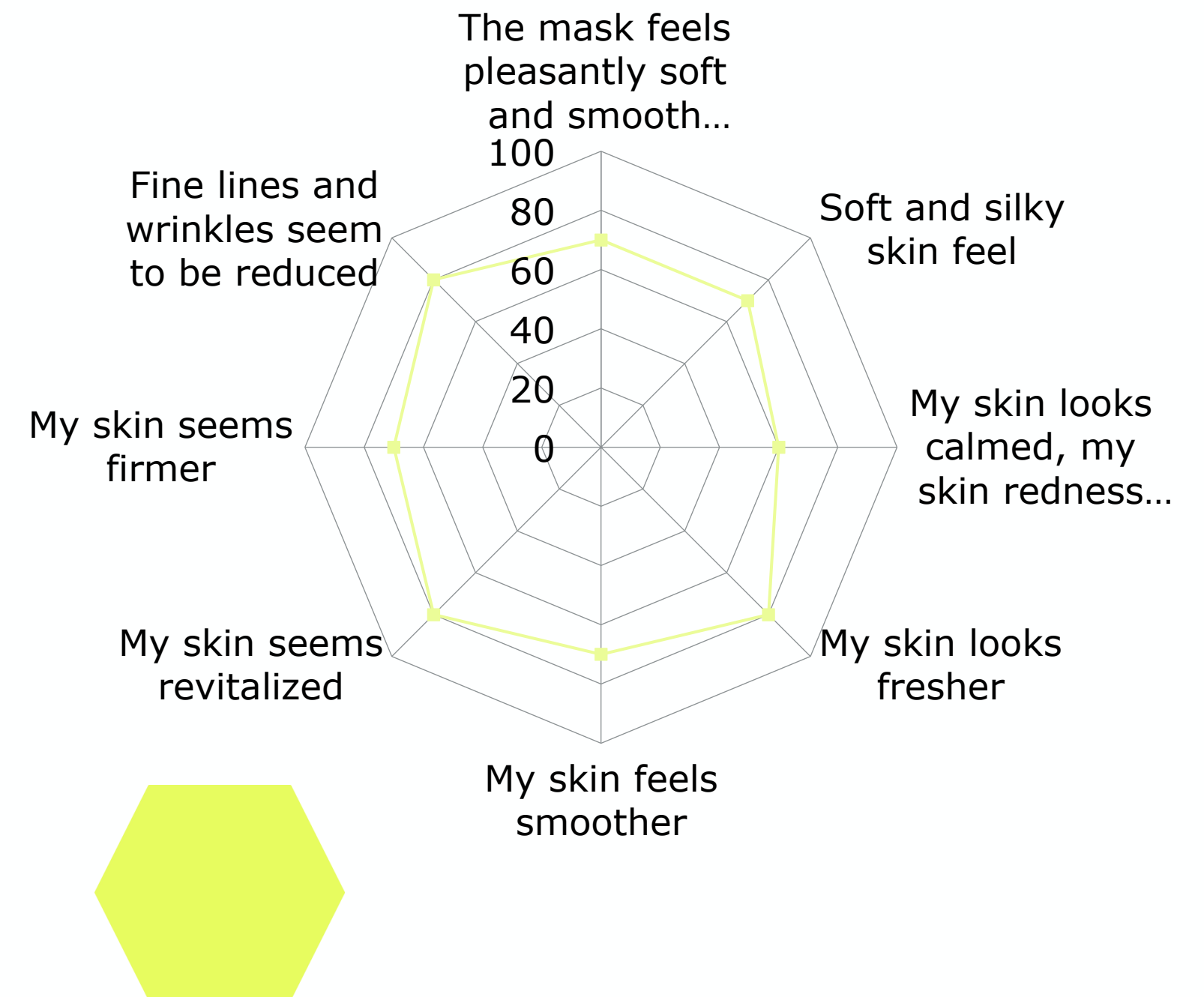
- Participant Questionnaire

Results:

- Native Collagen Eye Mask Pure has a positive effect on subjective skin feeling and appearance:
 - skin feels soft and silky (70 %), smoother (70 %).
 - Fine lines and wrinkle seems to be reduced (80%) and skin is firmer (70%)
 - Skin looks revitalized (80 %) and fresher (80%), calmed and redness is minimized (60%).

What that means:

- The skin is revitalized and regenerated for a fresh and silky skin feeling.





Controlled Dermatological Study



Study title: Clinical-dermatological application study in 5 volunteers with twice a week application for 4 weeks

Study centre: Dermatest GmbH, Germany, 2014

Parameter: Determination of



skin roughness
PRIMOS

Long lasting skin smoothing effect

Method:

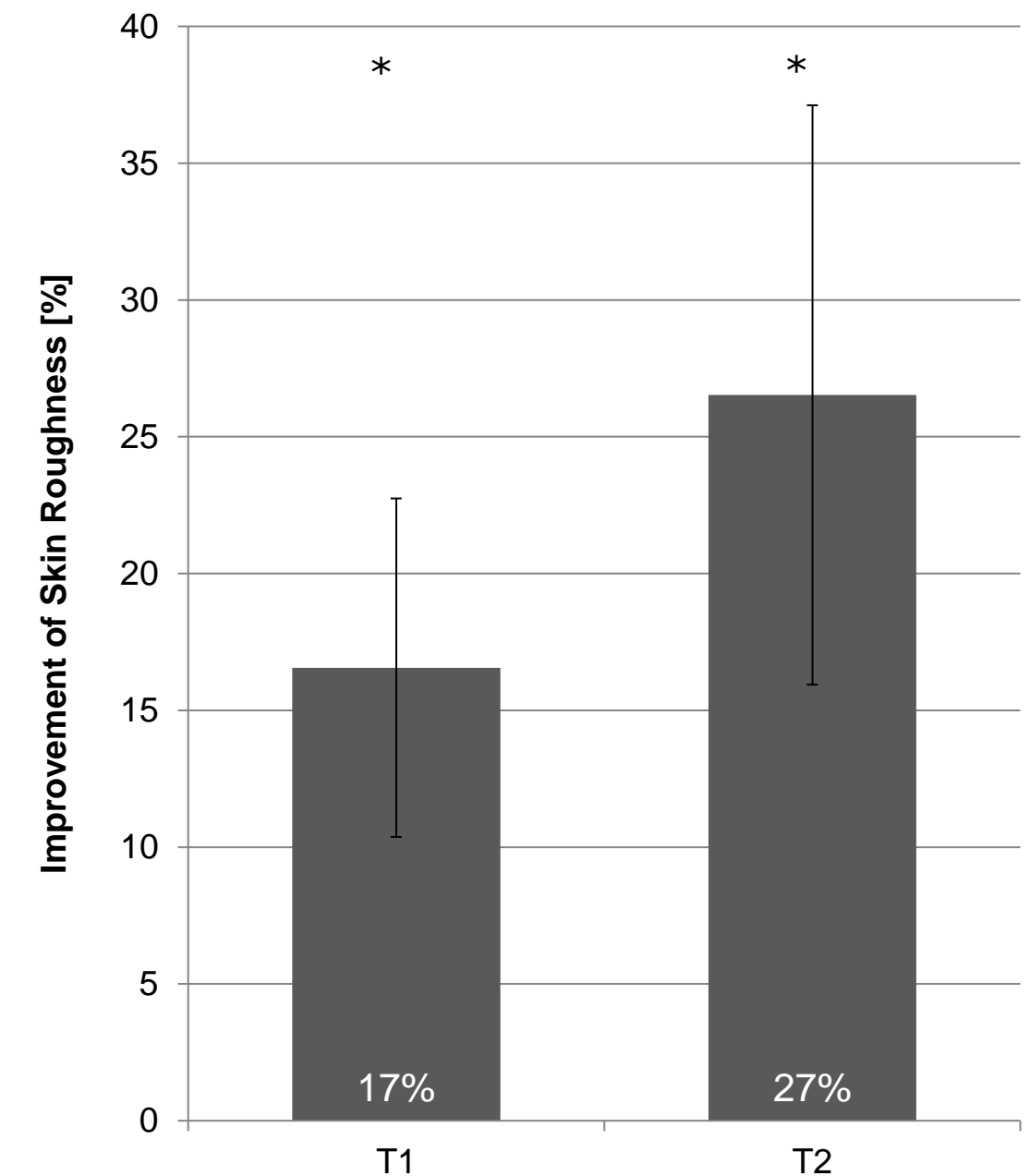
- ◊ PRIMOS (skin roughness)

Results:

- ◊ Freshly activated with Activation Liquid:
 - ◊ After 2 weeks: Significant Improved by 17 %
 - ◊ After 4 weeks: significant Improved by 27%

What that means:

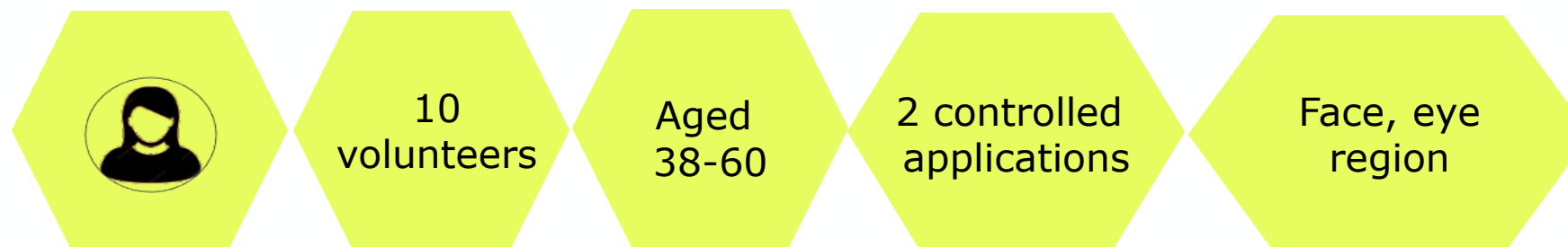
- ◊ Significant reduction of skin roughness for a long lasting skin smoothing effect. The skin appears younger!



Average reduction of skin roughness after 2 weeks (T1) and four weeks (T2). * $p \leq 0,05$



Ophthalmological Examination



Study title: Ophthalmological examination

Study centre: Derma Consult GmbH, 2011

Protocol: Product applied once daily

Examination of the eyes, eyeground, and eye area by an ophthalmologist

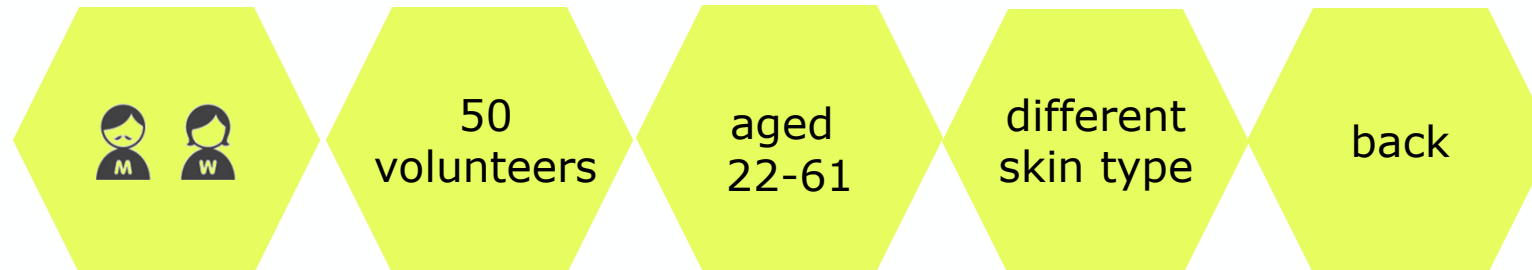
Result:



All subjects showed a healthy eye before, during and after the application study. No pathological changes of the eye and eye mucosa were found in any form. The product was very well tolerated, and did not lead to ophthalmological relevant skin changes in any subject.



Patch Test



Study title: Examination of the Product MatriCol Pure exclusiv with Actionation Liquid 13 L by Human Patch Test

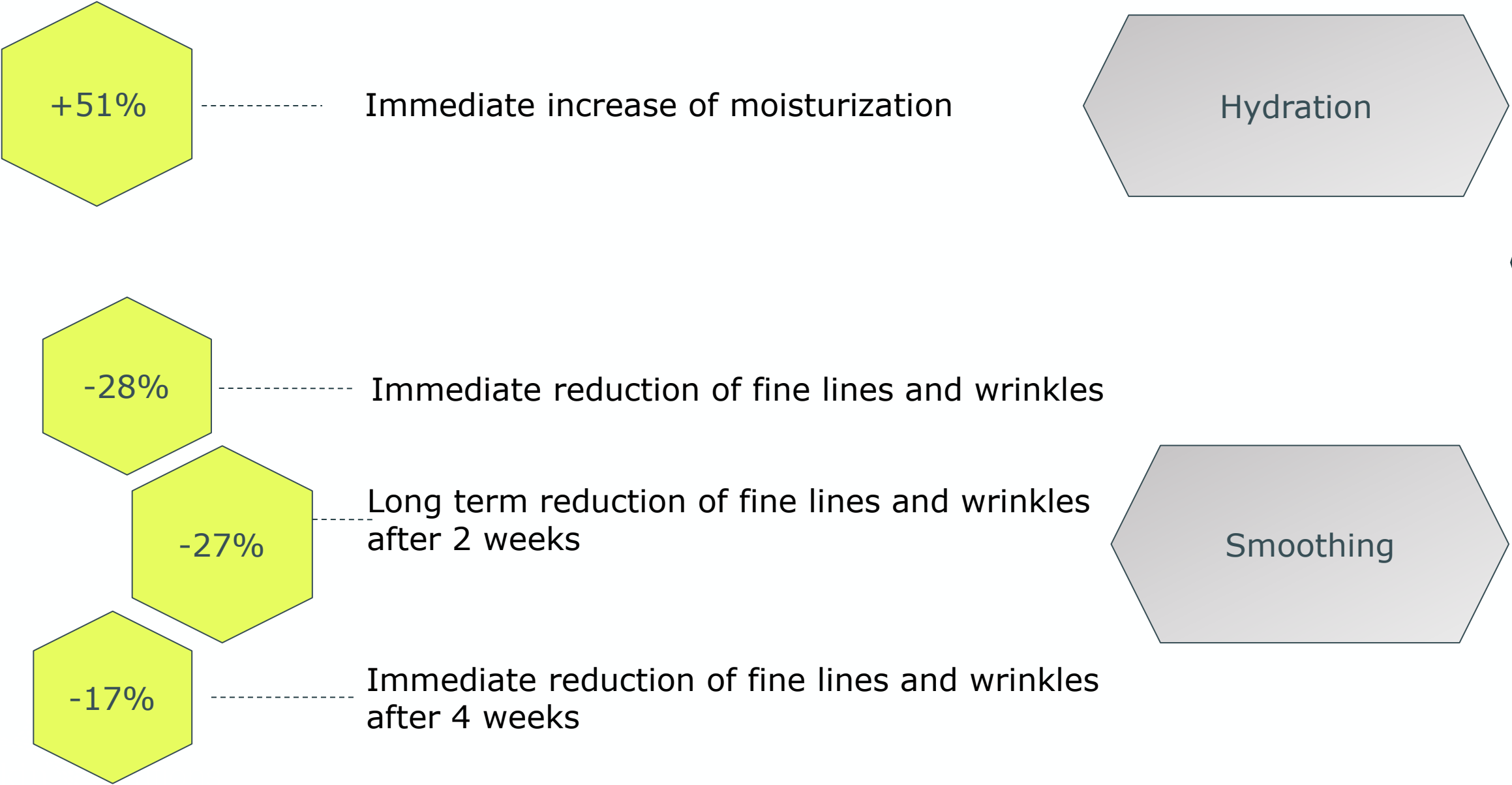
Study centre: Derma Consult, Germany, 2010

Protocol: Application of the product for 48 under occlusion. Positive control was Sodium dodecyl sulphate (SDS, 1%), negative control was water
Evaluation of the test areas 48 (30 min after patch removal) and 72 hours.

Result: None of the subject showed any reaction to the test product. It can be concluded that the use of the product will not cause any unwanted skin reactions due to an irritating effect.

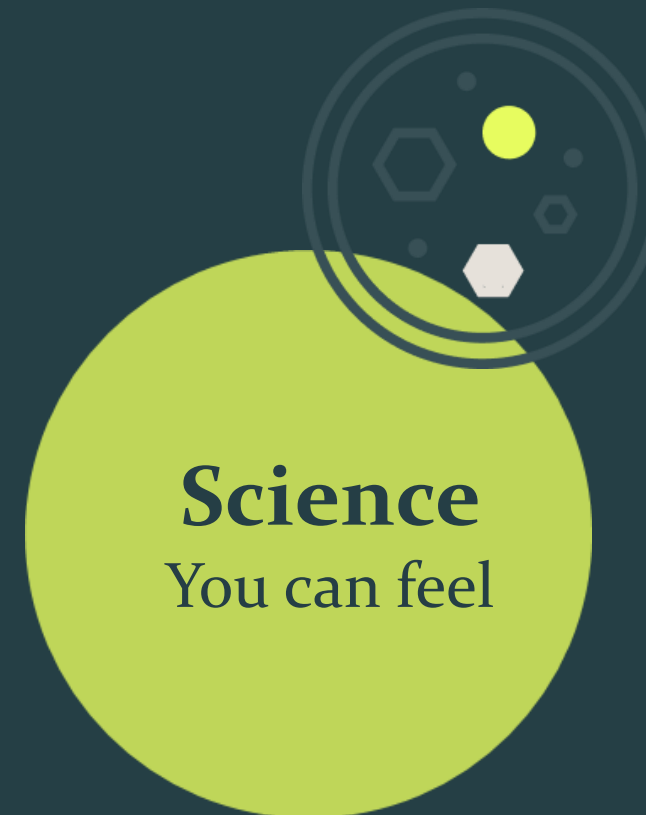


Summary



Thank you for your attention

Our proprietary Advanced CryoSafe™ Method preserves and refines the natural properties of biomaterials. Our science-based Specialty Care solutions demonstrate excellence through superior efficacy and optimal skin compatibility.



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