

Native Collagen Spray

Summary of Scientific Evidence

**MedSkin
Solutions**

Dr. Suwelack



Agenda

Summary of Scientific Evidence Native Collagen Spray

- Introduction – It's all about Skin
- Active Ingredients
- Mode of Action
- Scientific Studies
- Proven Anti Blue Light Damage Properties of Mannitol
- Controlled Dermatological Study
- Ophtalmological Examination
- Patch Test
- Summary
- Contact Details



Native Collagen Spray

At a Glance

High- performance concentrate for **intensive and sustainable regeneration**. It supports the natural regeneration and renewal process.

Native Collagen Spray has **a long-lasting moisturizing** effect and keeps the skin **supple**. The skin is **smoothed**, fine lines are softened and the skin **revitalized** and **regenerated**.

Key Facts

- ✓ 100% highly pure native, soluble collagen
- ✓ Active Ingredients: Soluble Collagen, NMF(-likes), Phyto Stem Cell Extract
- ✓ pH Value: 3.6-3.9
- ✓ Free from mineral oils, silicones & colorants
- ✓ Leave-on Product for home & professional Use

INCI: Aqua (Water) · Butylene Glycol · Glycerin · Leuconostoc / Radish Root Ferment Filtrate* · Soluble Collagen · Malus Domestica Fruit Cell Culture Extract · Panthenol · PCA · 1,5-Pentanediol · Saccharide Isomerate · Monosodium Citrate · Isomalt · Parfum (Fragrance)

* 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

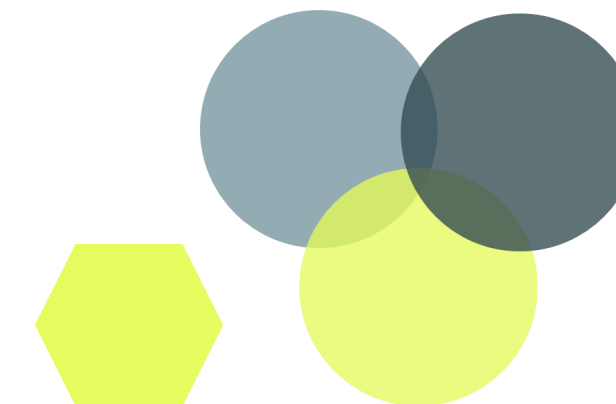
The ability of the skin to regenerate itself is of paramount importance to survival and health. This highly ordered regeneration process can be disturbed by factors such as age, poor circulation, skin dehydration, repeated trauma or systemic disease.

The skin is constantly exposed to environmental factors such as UV radiation and toxic chemicals. This contributes to dehydration of the skin, destroys skin barrier function and in worse case ends up in irritated and damaged skin. The skin looks dehydrated and rough!

Additionally, skin ages by progressive deterioration of physiological functions. As part of the biological skin aging process, the stem cells lose their vitality. Some few stem cells in the basal layer of the epidermis produce all the keratinocytes that differentiate to the stratum corneum and are renewed every four weeks. In older skin, the epidermal stem cells are less active and lower in number leading to wrinkles and an increased renewal time of the epidermis. The skin looks old, tired and dull!

Regenerating skin needs an extra dose of moisture and smoothing active ingredients in a well-dosed ratio. By providing lasting moisture and creating an acidic environment, protective skin functions are enhanced and the barrier strengthened. For targeted and effective renewal of the skin, the vitality of skin cells should be preserved. The natural regenerating processes are supported in this way.





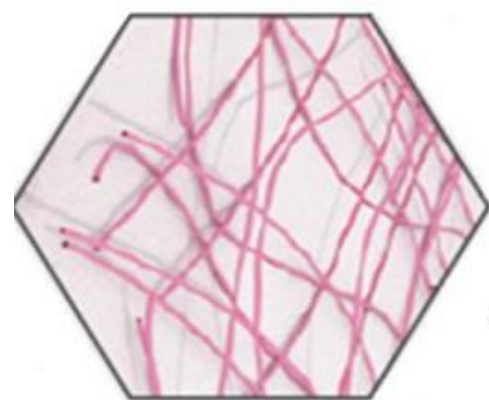
Ingredients explained in short

Ingredient
Butylene glycol
Glycerin
Leuconostoc/ Radisch Root Ferment Filtrate
Soluble Collagen
Monosodium Citrate
Panthenol
PCA (pyrrolidone carboxylic acid)
Saccharide Isomerate
Isomalt
1,5-Pentanediol
Malus Domestiva Fruit Cell Culture Extract

Function in cosmetic products
Skin conditioning
Humectant
Skin conditioning
Humectant
Buffer
Skin conditioning
Humectant
Humectant
Humectant
Solvent
Skin conditioning

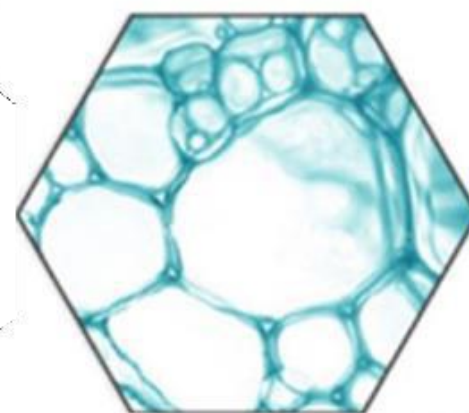
What that means
Adds moisture and conditions skin
Preserves skin moisture
Moisturizes and conditions skin
Preserves skin moisture
Helps adjust the acid/ base balance of cosmetics
Lubricant on the skin surface, which gives the skin a soft and smooth appearance
Preserves skin moisture
Preserves skin moisture
Preserves skin moisture
Moisturizing ingredient with good solubilizing properties.
Nourishes the skin while smoothing it

Hero Active Ingredients

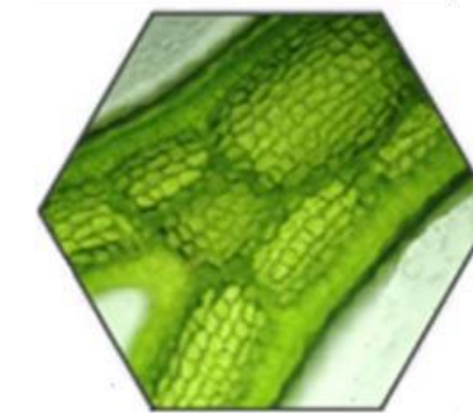


Soluble collagen molecules have an extremely high water-binding capacity and form a barrier film on the skin, which reduces the transepidermal water loss. Both effects lead to increased hydration of the stratum corneum, which lasts for hours. The use of native collagen improves skin smoothness and gives the skin a pleasant feeling. When used regularly, soluble collagen has a long-term effect..

→ Improved skin smoothness and hydration



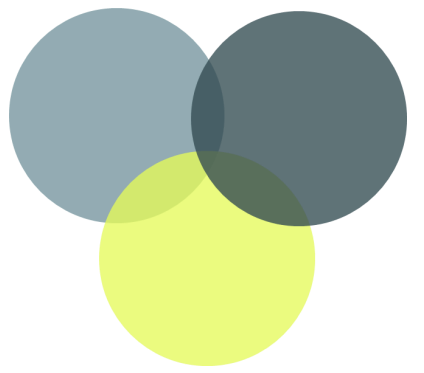
Natural Moisturizing Factor (NMF) components are of key importance in the maintenance of adequate skin hydration, because they are highly efficient humectants that attract and bind water in the skin. NMFs are composed of different components, mainly free amino acids or derivatives of these like **glycerin** and **PCA***, and carbohydrates. **Saccharide Isomerate**, a skin identical NMF-like complex, connects perfectly with the skin's surface layers and doesn't easily wash off, locking in moisture like a magnet. It ensures instant, deep hydration by generating a moisture reservoir, reduces flakiness and itchiness caused by dry skin. Skin becomes visibly smoother. It also strengthens the skin's natural defenses and preventing further dehydration.
→ Deep hydration and visibly smoother skin



Renewal of the skin is controlled by dermal stem cells. Their activity decreases with age resulting in a visible aging of the skin. Researchers discovered that plant stem cells contain epigenetic factors similar to those of adult human stem cells. **Phyto Stem Cell Extract** is isolated out of an old, rare apple (Uttwiler Spätlauber). Studies demonstrated that the extract improved the vitality of human stem cells, promoted stem cell growth and protected against UV damage.
→ Rejuvenation of the skin is achieved and wrinkles are smoothed out

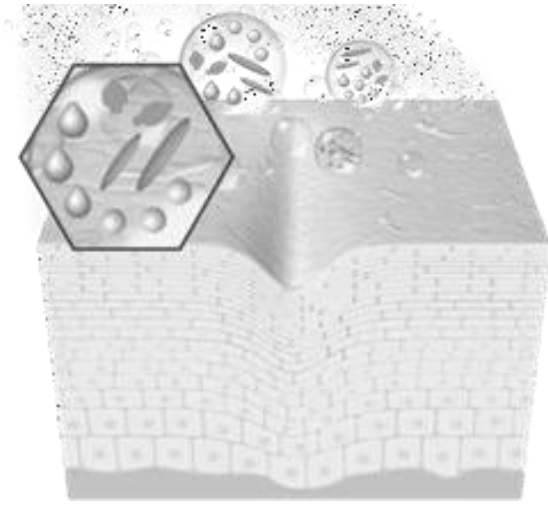
Mode of Action





Mode of Action

Application

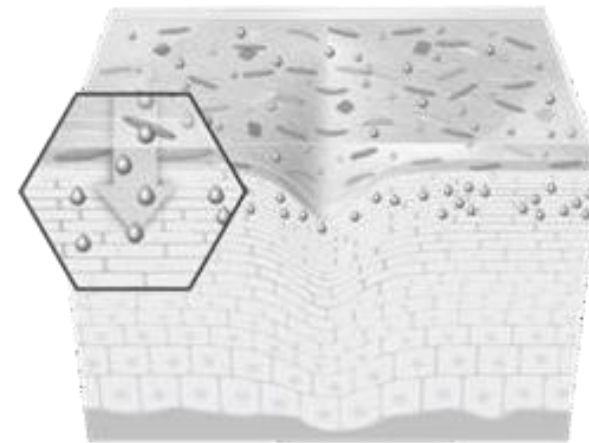


Spray concentrate of active ingredients is applied to the skin.

1st Benefits:

- The skin instantly feels refreshed, revitalized and smoothed.

Intense Hydration

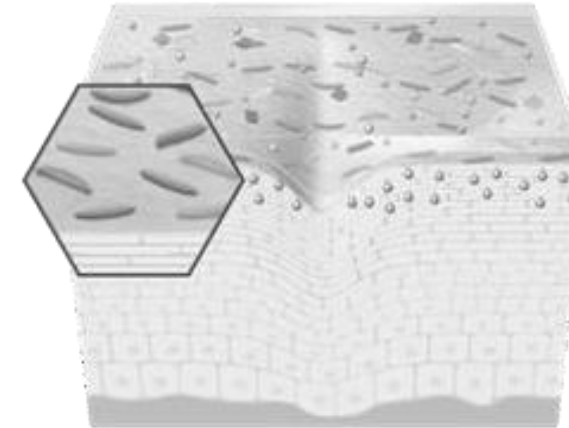


Natural Moisturizing Factors provide the skin with moisture.

2nd Benefits:

- Proven to plump and firm skin by retaining water in the Stratum Corneum.
- Keep skin surface intact, protective effect.

Long-Term Moisturization

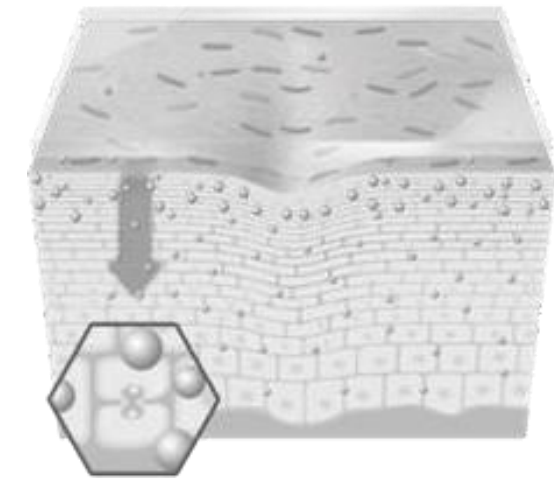


High number of Soluble Native Collagen Molecules remain on skin surface and infuse surface with moisture.

3rd Benefits:

- Boosted hydration, reduced TEWL.
- Smoothed lines and wrinkles.
- Harmonized skin tone, even complexion.

Improved Skin



Phyto Stem Cell Extract is released into deeper epidermal layers.

4th Benefits:

- Proven effective for protection and support of skin's stem cell renewal.
- Provides optimal conditions for skin cell vitality resulting in delayed aging.

Scientific Studies



Scientific Studies



Scientific Literature on Phyto Stem Cell Extract



Controlled Dermatological Study



Ophthalmological Examination



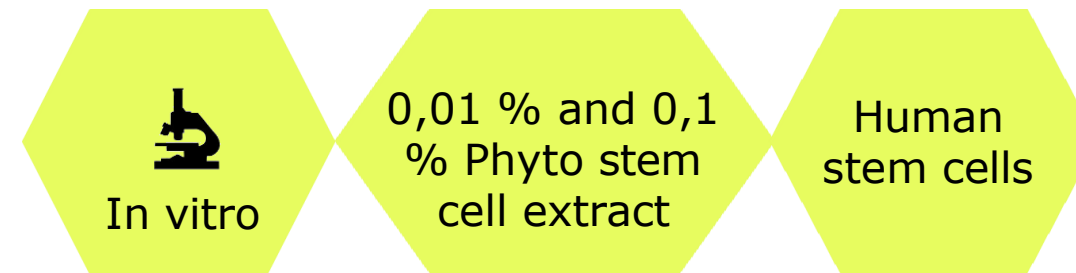
Patch Test





Proven Cell Renewal Activity of Phyto Stem Cell extract

A number of studies have been performed for the effects of **Phyto Stem Cell Extract** on human stem cells.

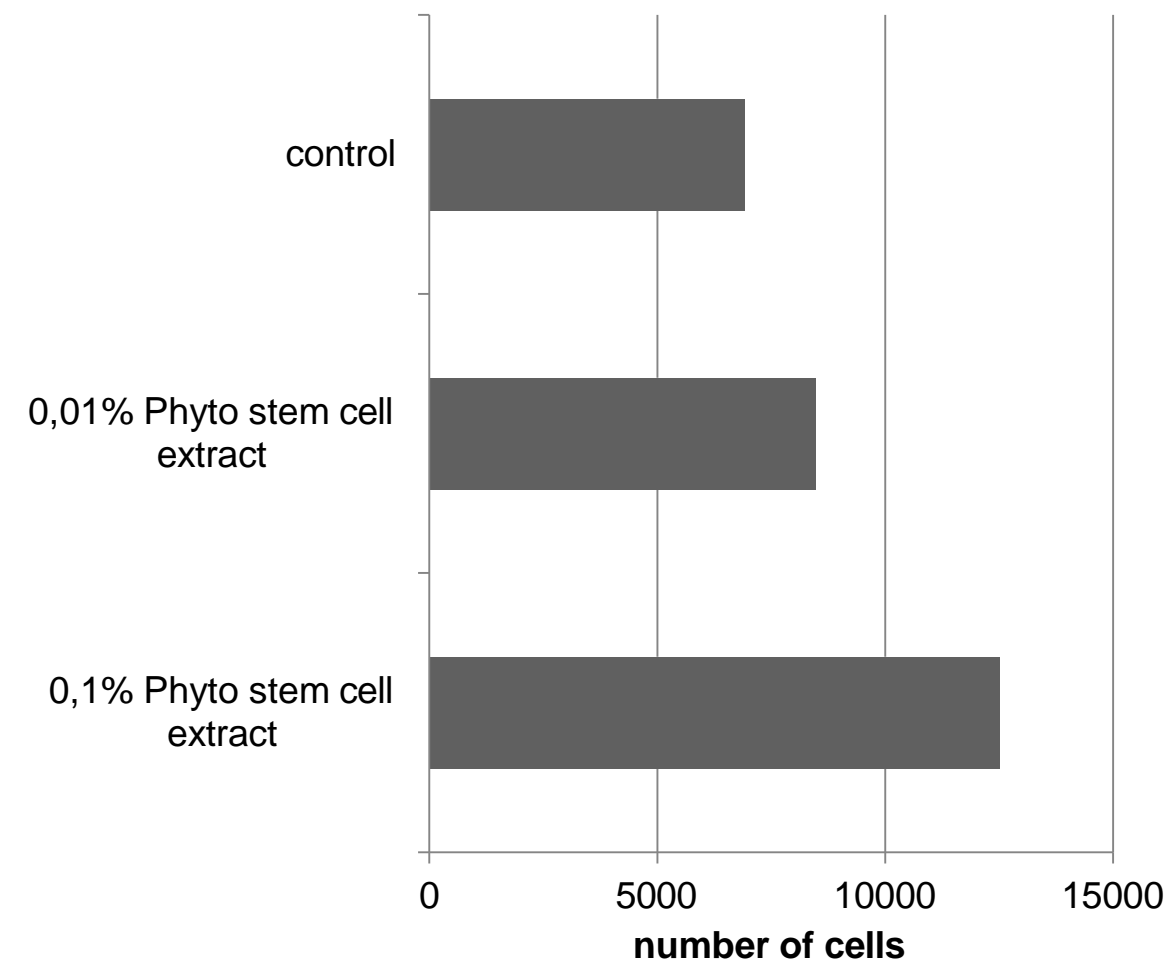


Results:

- Phyto stem cell extract induces concentration dependent cell renewal of human stem cells.

What that means:

- support of skin's stem cell renewal.
- optimal conditions for skin cell vitality resulting in delayed aging.

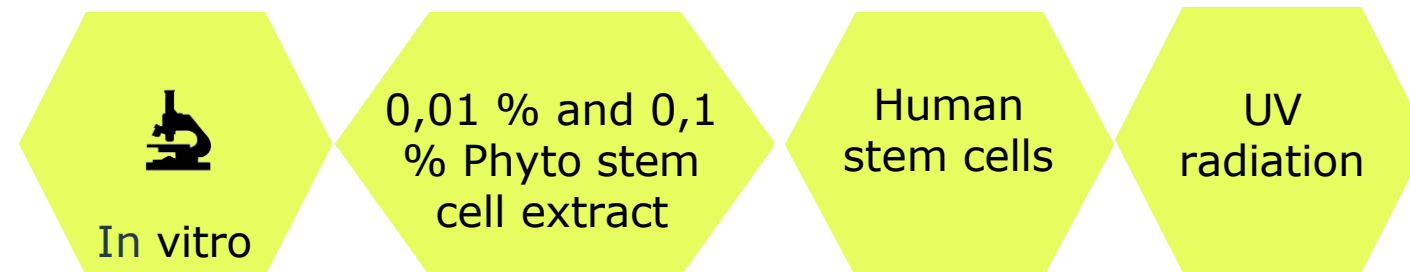


1: Morus et al. Plant stem cells as innovation in cosmetics. Acto Poloniae Pharmaceutica – Drug Research 2014; 71(5):701-707.



Proven Cell Renewal Activity of Phyto Stem Cell extract

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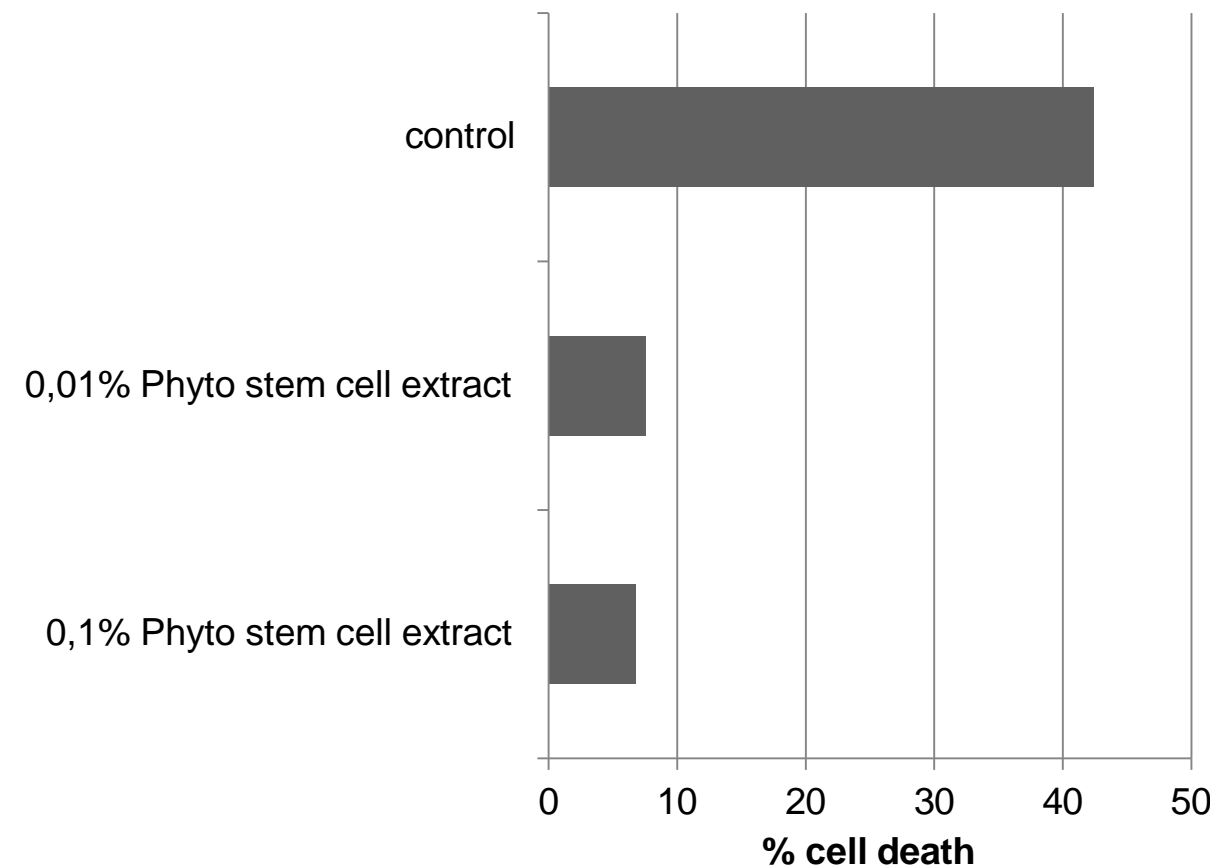


Results:

- Phyto stem cell extract protects stem cell from UV induced cell death.

What that means:

- Protection of skin's stem cell renewal
- Optimal conditions for skin cell vitality resulting in delayed aging.



1: Morus et al. Plant stem cells as innovation in cosmetics. Acto Poloniae Pharmaceutica – Drug Research 2014; 71(5):701-707.



Controlled Dermatological Study



Study title: Clinical-dermatological application study in 20 volunteers with application once a day for a period of four weeks

Study centre: Dermatest GmbH, Germany, 2013

Parameter: Determination of



skin moisture

Corneometer



skin roughness

PRIMOS



skin elasticity

Cutometer



Expert Evaluation

Visual Analog Scale

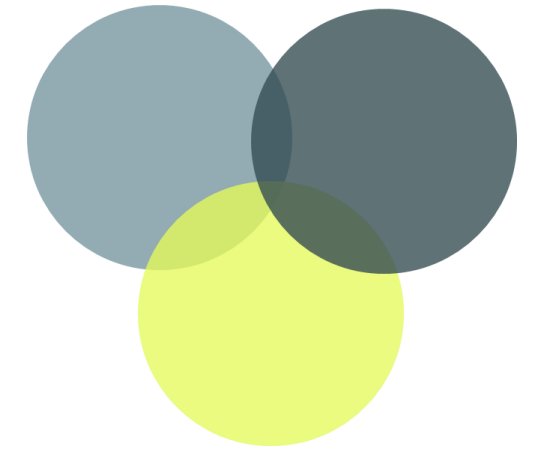


User Satisfaction

Questionnaire

Overall Tolerancy: All of the 20 study participants tolerated the product very well during the course of the four-week application test.

Long lasting skin moisture effect



Method:

- Corneometer (skin hydration)

Results:

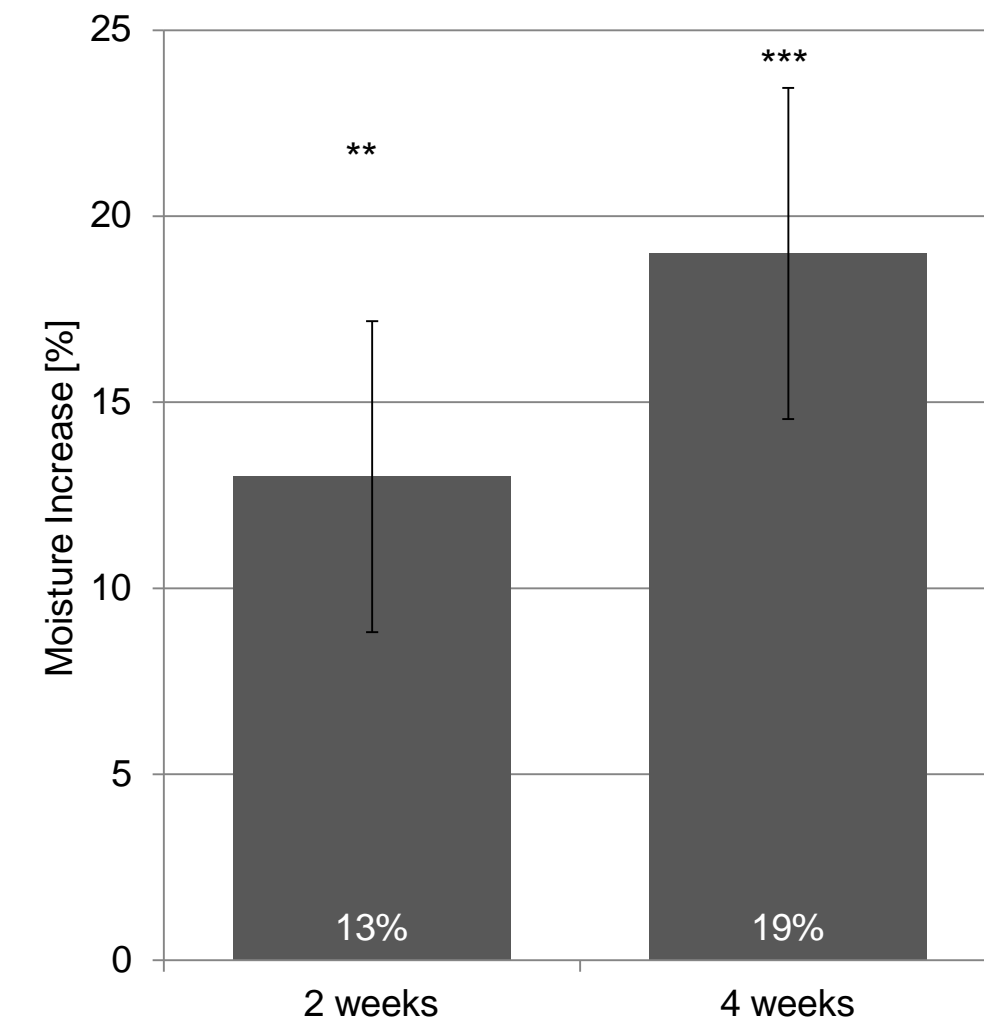
- Native Collagen Spray has a positive and significant effect on skin hydration.
- After 2 week an increase of 13 %, after 4 weeks a significant increase of 19 % was detectable.

What that means:

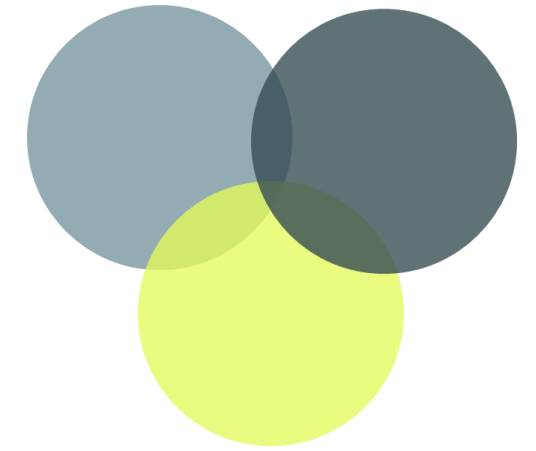


- Outstanding increase in skin moisture for a long lasting skin moisture effect and healthy, revitalized and refreshed skin.
- Improved skin hydration together with a restoration of acidic healthy skin pH strengthens skin barrier.

Intense Hydration



Long lasting skin smoothing effect



Method:

- PRIMOS (skin roughness)

Results:

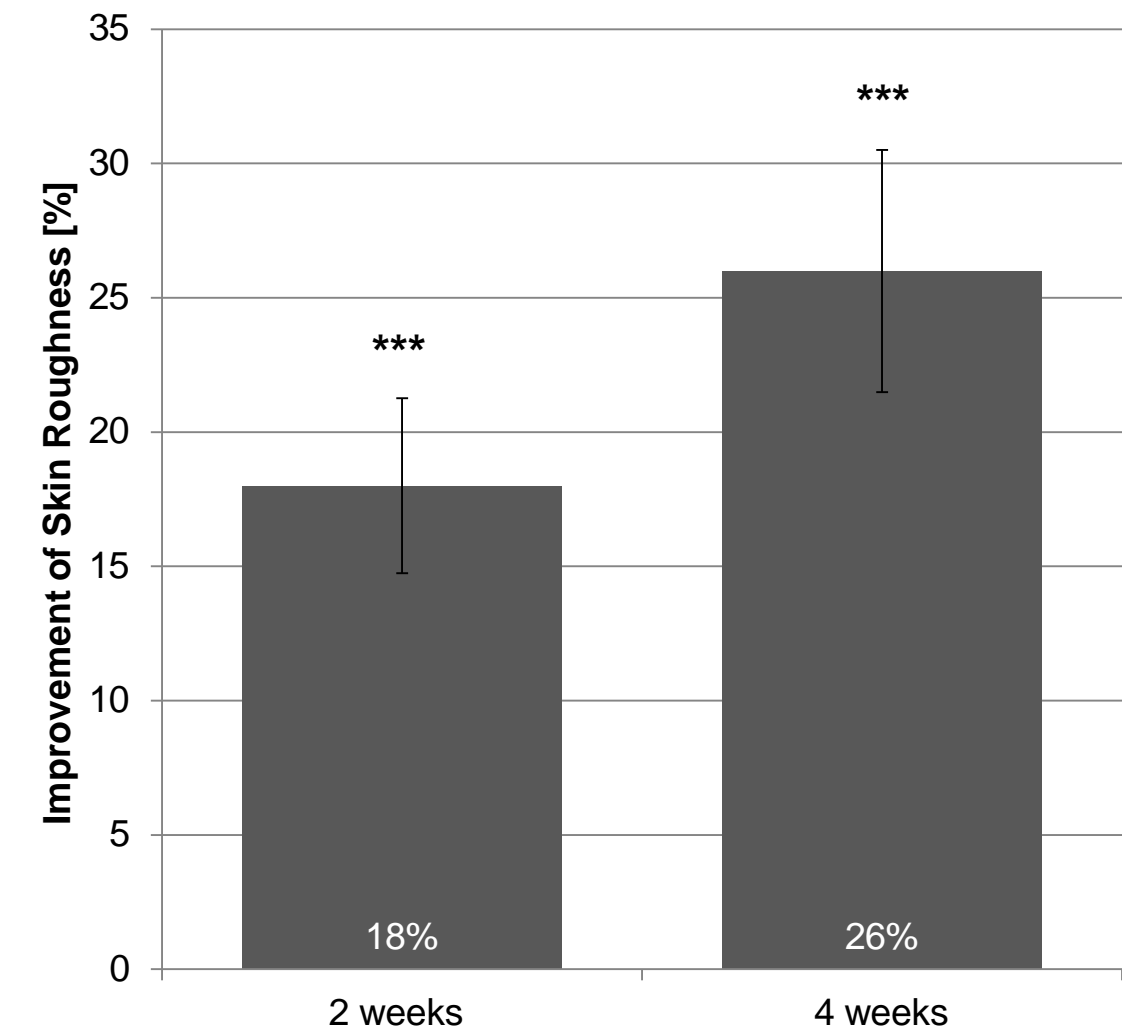
- Native Collagen Spray has a positive and significant effect on skin roughness.
- After 2 week was an improvement of 18 % detectable, after 4 weeks a significant improvement of 26 %.

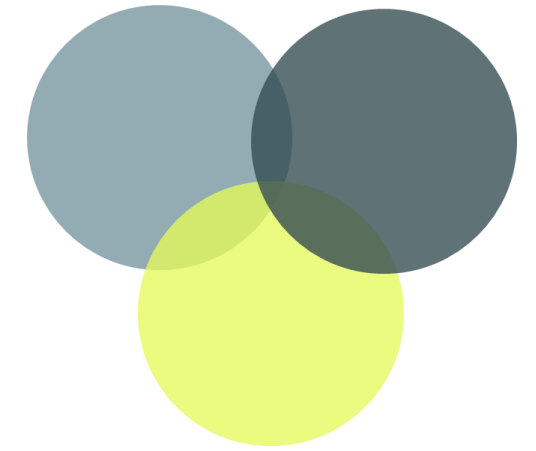
What that means:



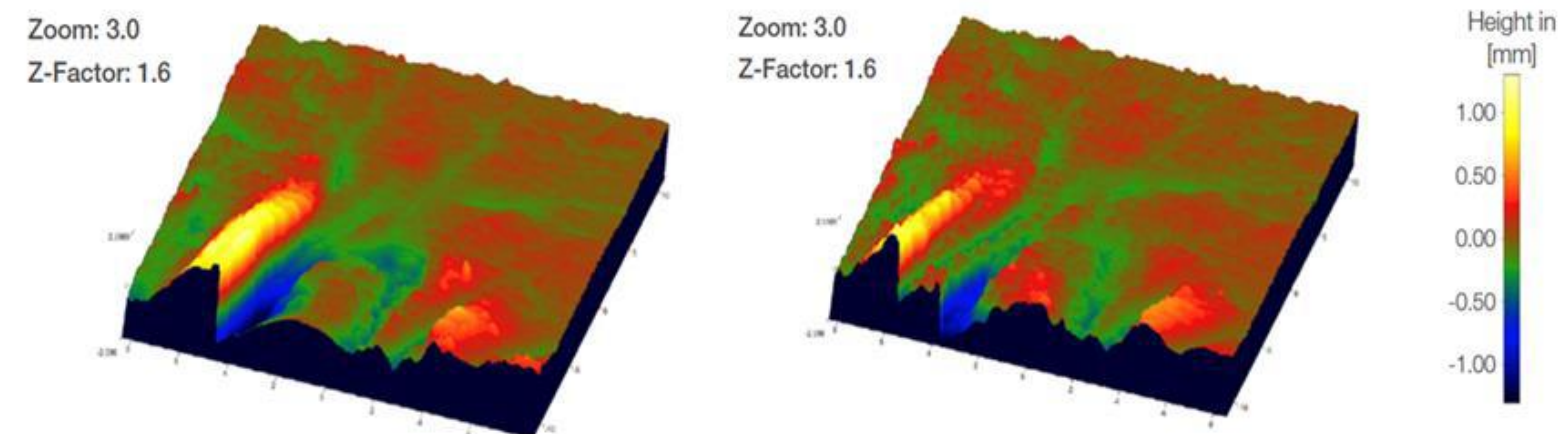
- Significant reduction of skin roughness for a long lasting skin smoothing effect. The skin appears younger!

Intense skin smoothing





Long lasting skin smoothing effect



Exemplary Picture (before: left; after 4 weeks: right) of skin relief

Method:

- ◊ PRIMOS (wrinkles depth)

Results:

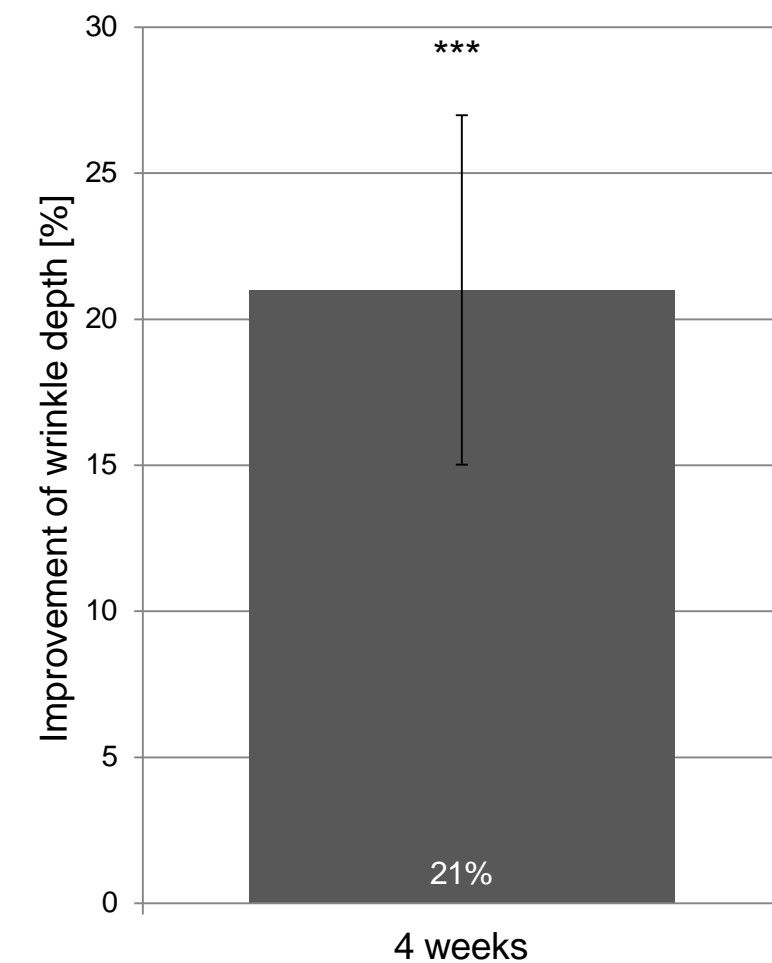
- ◊ Native Collagen Spray has a positive and significant effect on wrinkle depth.
- ◊ After 4 week was a significant improvement of 21 % detectable.
- ◊ Exemplary pictures of Skin reliefs demonstrate reduction of wrinkle depth.

What that means:

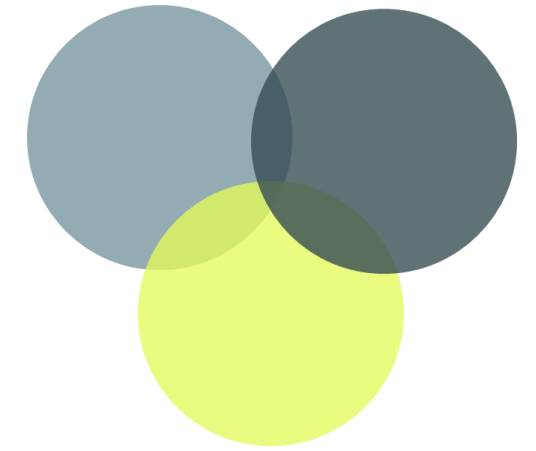


- ◊ Significant reduction of wrinkle depth for a long lasting skin smoothing effect.
The skin appears younger!

Intense skin smoothing



Long lasting skin firming effect



Method:

- Cutometer (skin elasticity)

Results:

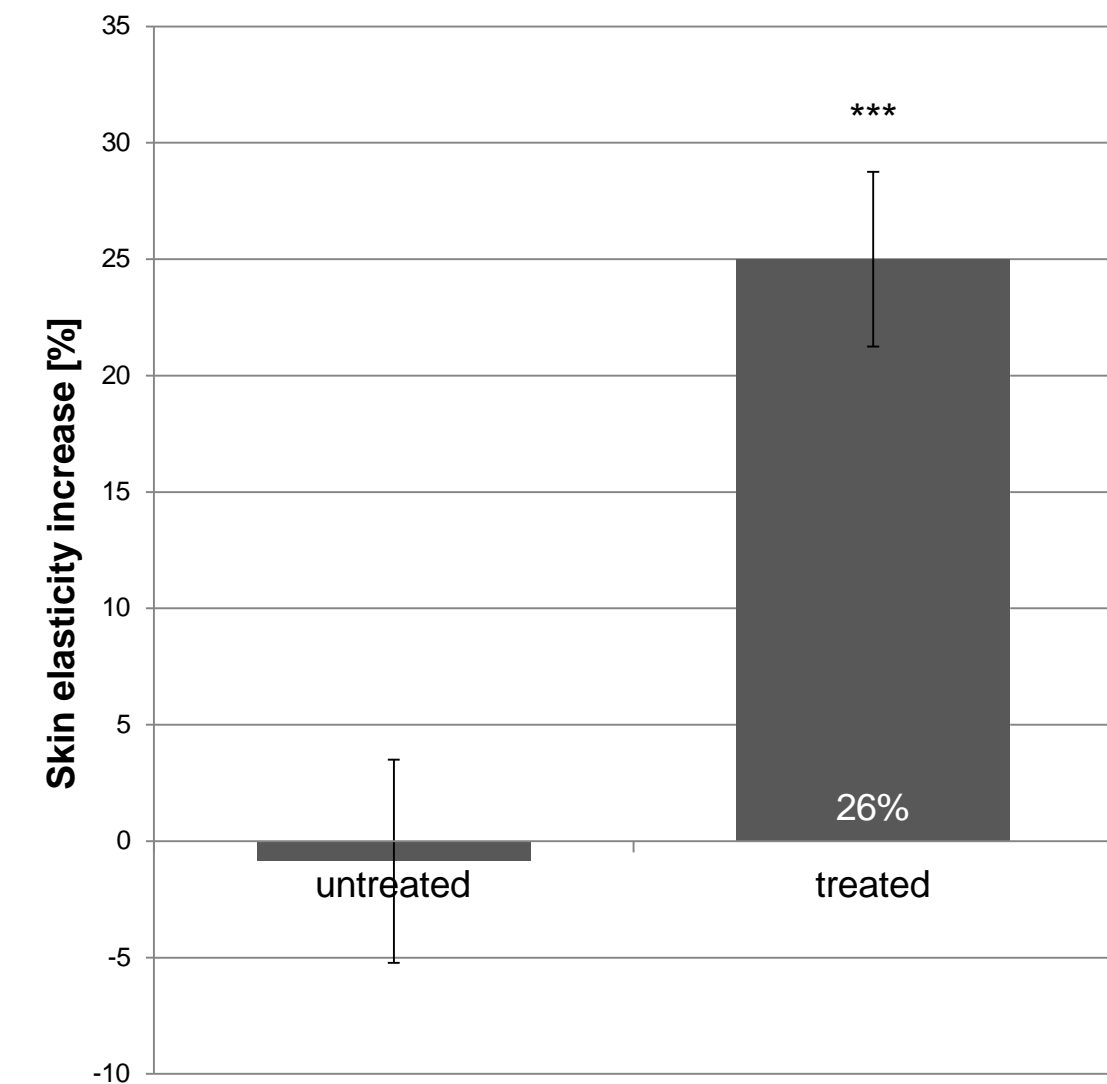
- Native Collagen Spray has a positive and significant effect on skin elasticity.
- After 4 week an improvement of 25 % in the treated area was measured.

What that means:

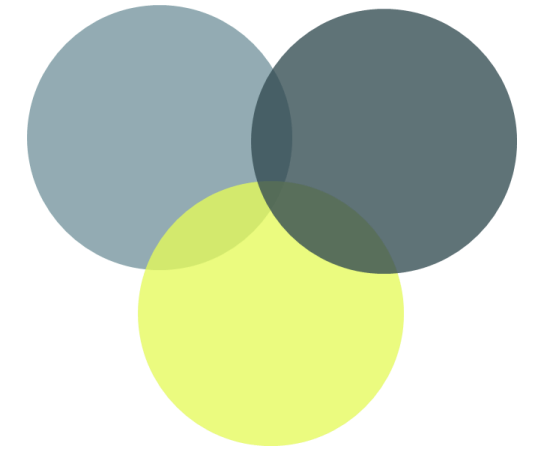


- Significant improvement of skin elasticity for a long lasting skin firming effect. The skin appears younger!

Intense skin firming



Improvement of skin appearance



Improved skin appearance

Method:

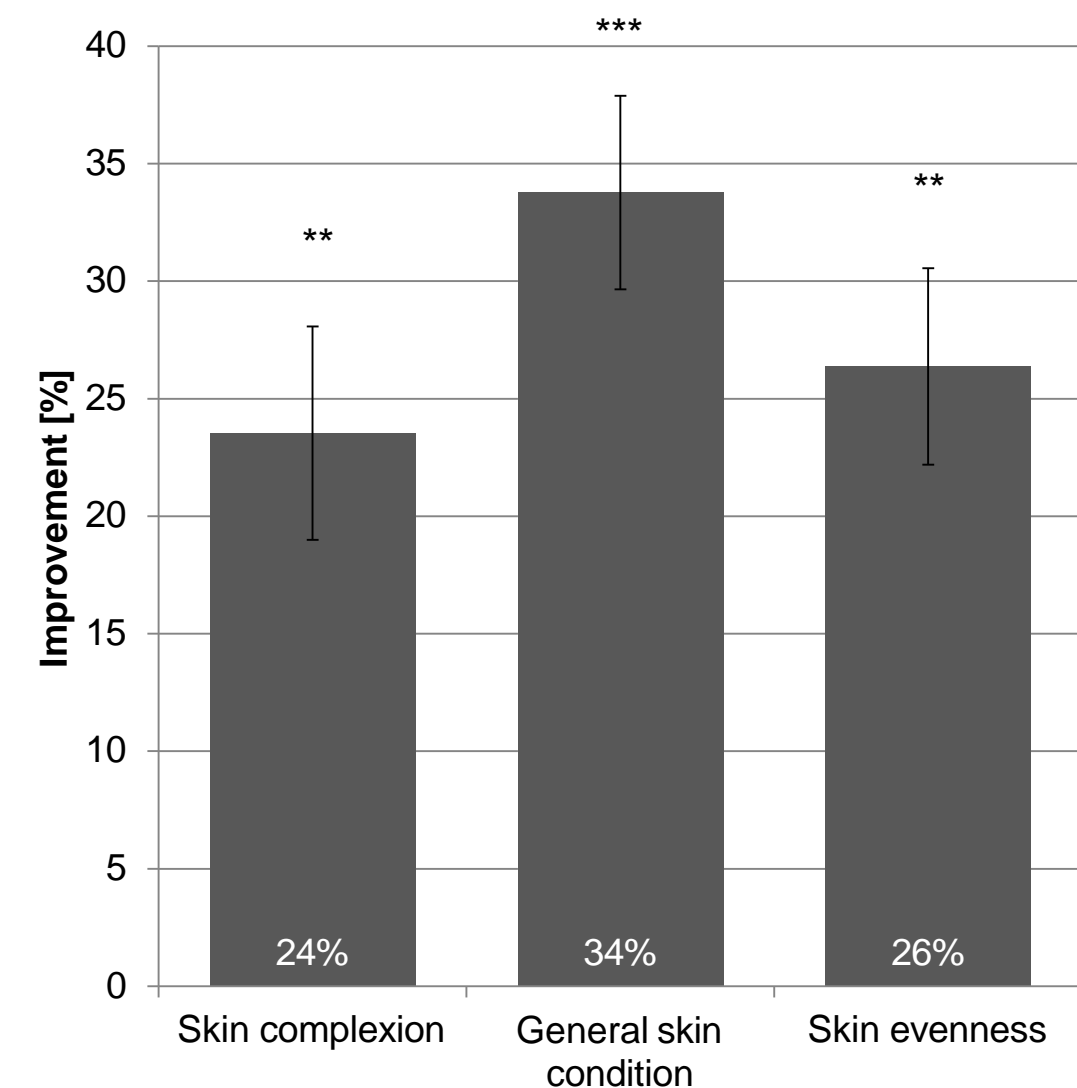
- Expert Rating Scale (Visual analog scale (VAS); parameter: skin complexion, general skin condition, skin evenness)

Results:

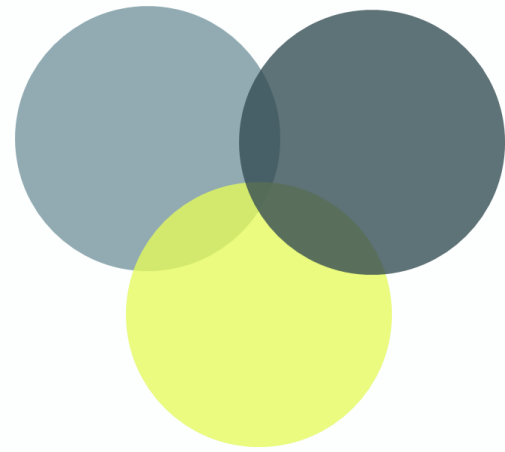
- Native Collagen Spray has a positive and significant effect on skin appearance parameter.
- After 4 week an improvement of 24 % for skin complexion, 36 % of skin evenness and 34 % of the general skin condition was observed.

What that means:

- The skin looks refreshed, revitalized and smoothed. Your skin has a harmonized skin tone and even complexion.



Immediate effect of the product



Method:

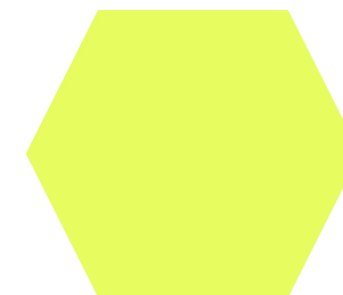
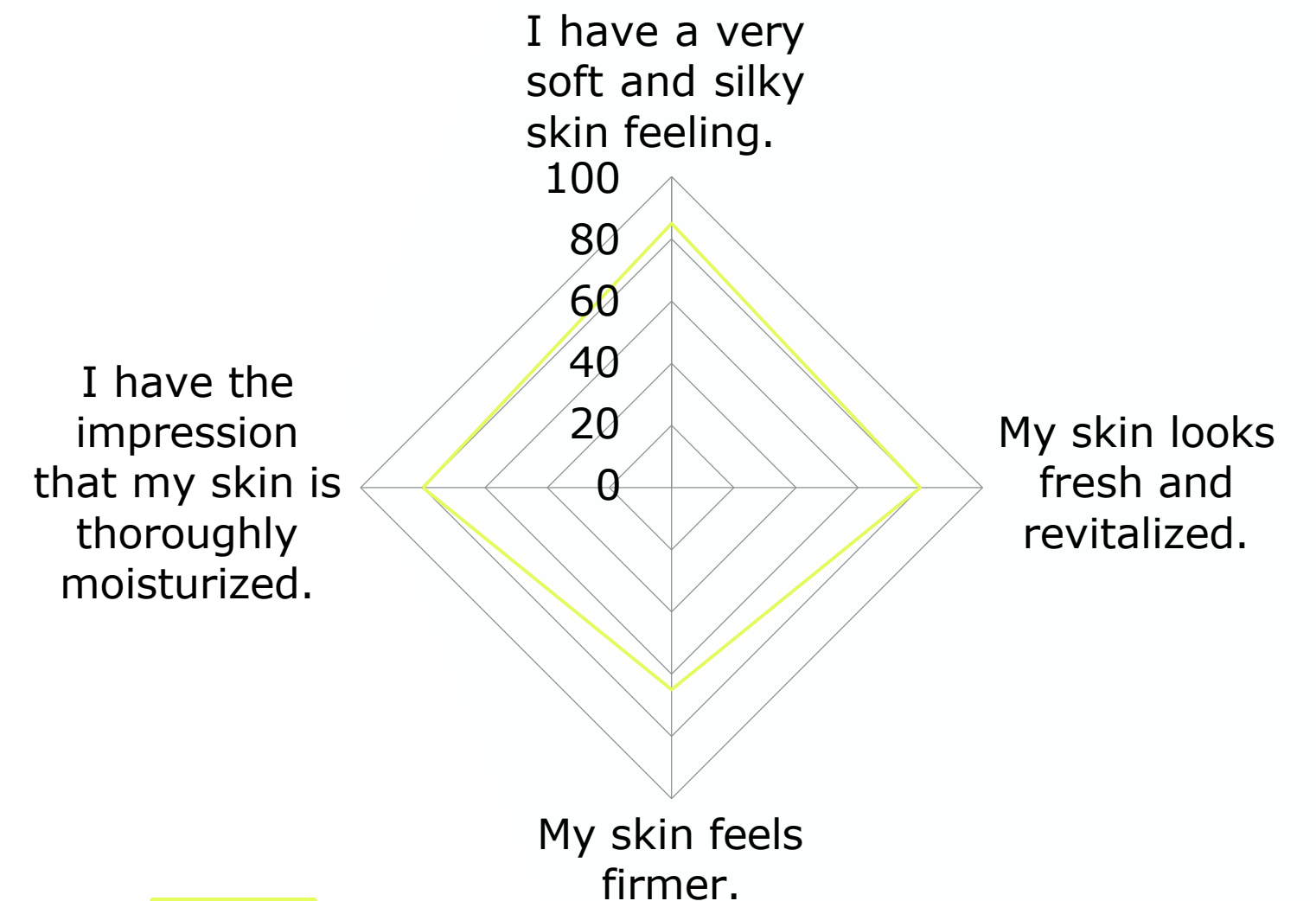
- Participant Questionnaire after single use

Results:

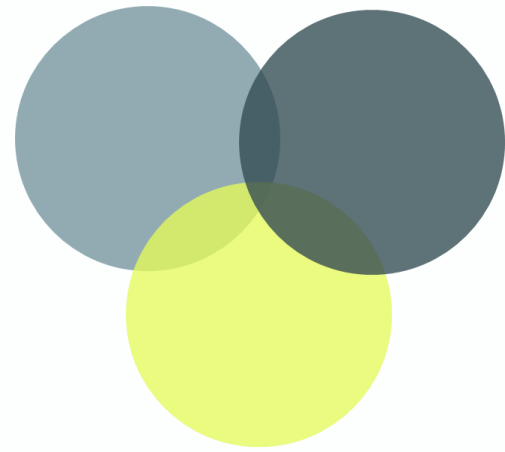
- Native Collagen Spray has a positive on subjective skin feeling and appearance.
- After single use of the product skin feels moisturized (80 %), firmer (65 %), soft and silky (85 %). The skin looks fresh and revitalized (80 %).

What that means:

- The skin instantly feels refreshed, revitalized and smoothed.



Long lasting effect of the product



Method:

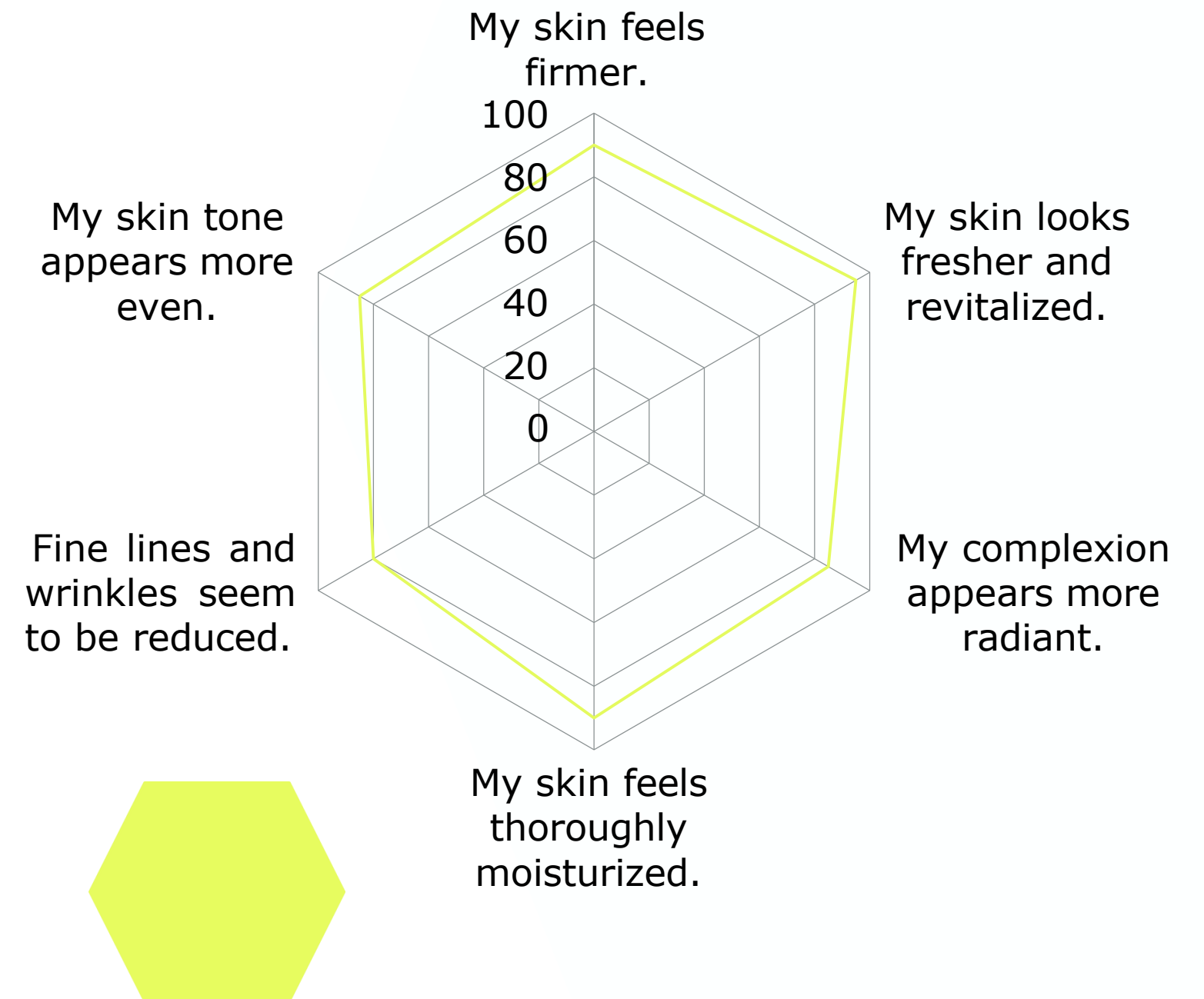
- Participant Questionnaire after 4 weeks of twice daily use

Results:

- Native Collagen Spray has a positive on subjective skin feeling and appearance.
- After 4 weeks of twice daily use of the product skin feels moisturized (90 %) and firmer (90 %).
- The skin looks fresh and revitalized (95 %), the complexion is more radiant (85 %), the skin tone appears more even (85 %) and fine lines and wrinkles are reduced (80 %)

What that means:

- The skin looks refreshed, revitalized and smoothed.





Ophthalmological Examination



Study title: Ophthalmological test

Study centre: Derma Consult GmbH, Germany, 2013

Protocol: No use of topical and any form of decorative preparations on the test areas (7 days before til end of test).

Product applied twice daily for 2 weeks;

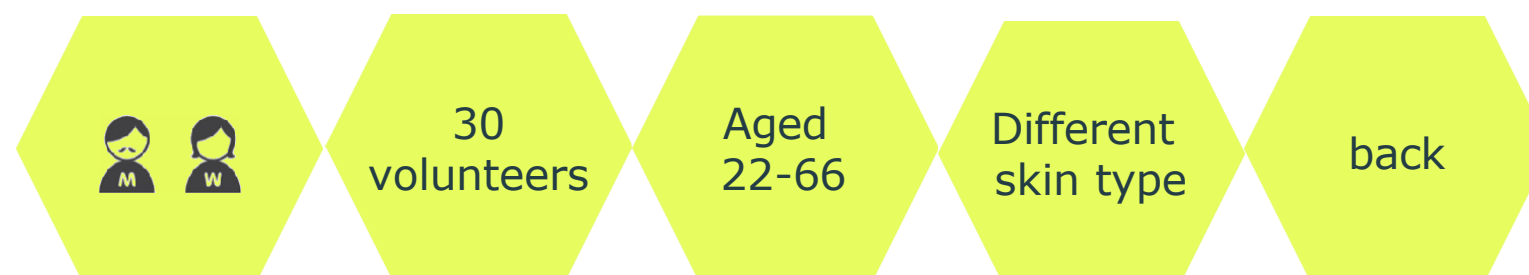
Examination of the eye and eye area by an ophthalmologist

Result:



No subject reported either subjective or objective eye irritation (neither tearing, reddening nor scaling). Examination of the eye ground showed no irritant contact conjunctivitis with chemosis to be present at any of the subjects. Additionally, none of the subjects reported any form of irritations or discomfort.

Patch Test



Study title: Test for primary skin irritation and hypersensitivity of human subjects after single application

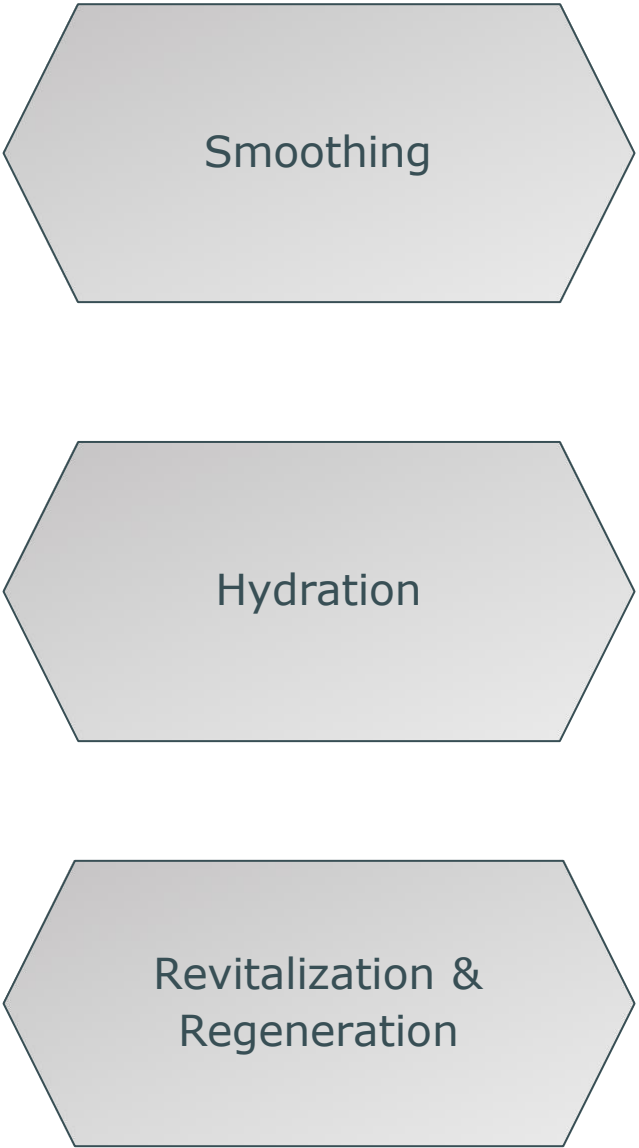
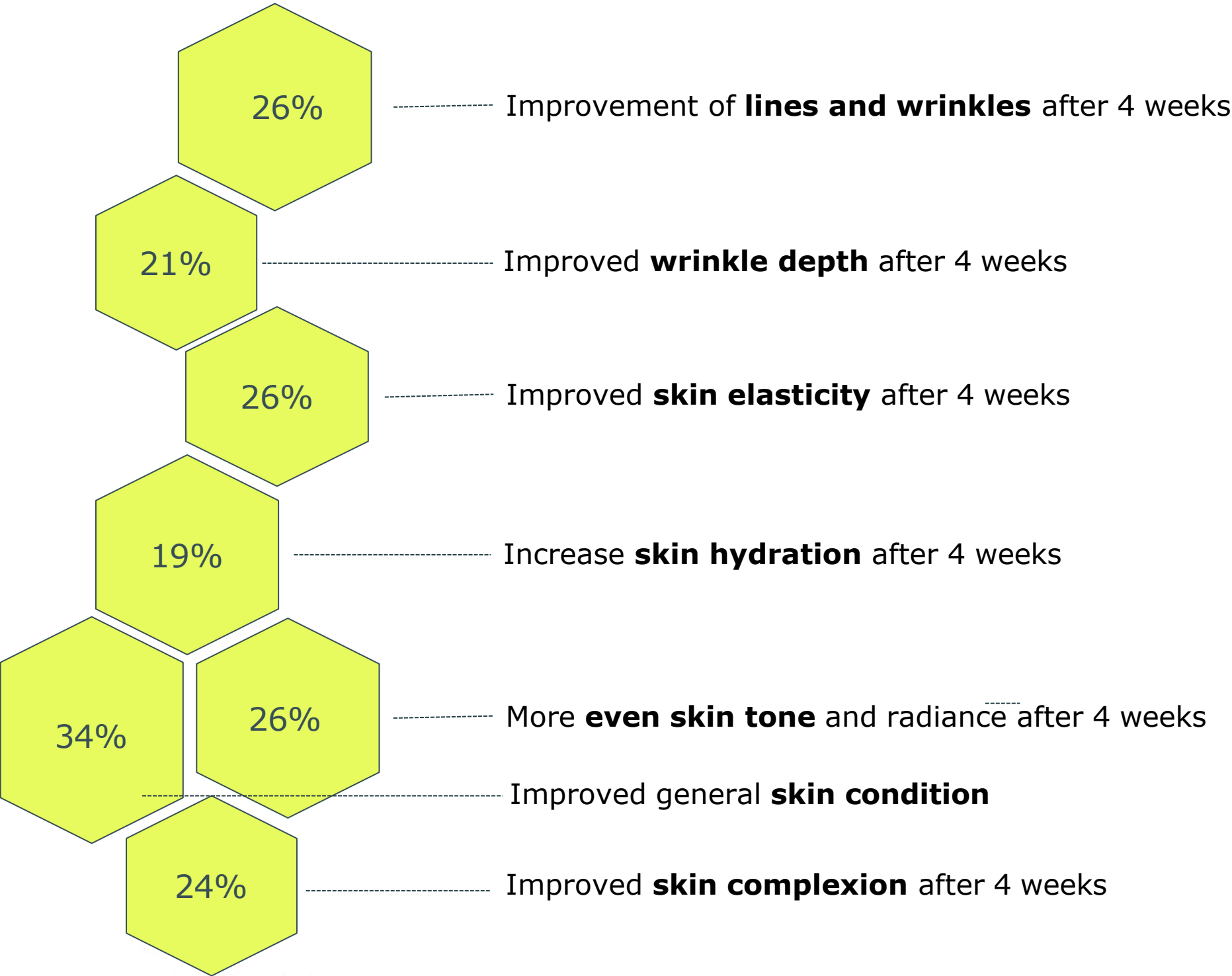
Study centre: Dermatest GmbH, Germany, 2014

Protocol: Application of the product for 24, 48 and 72 hours under occlusion
Evaluation of the test areas 30 min after completion of the occlusion

Result: None of the individuals reacted to the test product according to the internationally recognised guidelines of ICDRG (International Contact Dermatitis Research Group). 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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