

PEPHA[®]-TIGHT CB

*The power of algae for
superior skin tightening*



April 2025

Biotech | Nature, enhanced by science

dsm-firmenich 

PEPHA®-TIGHT CB

ID Card

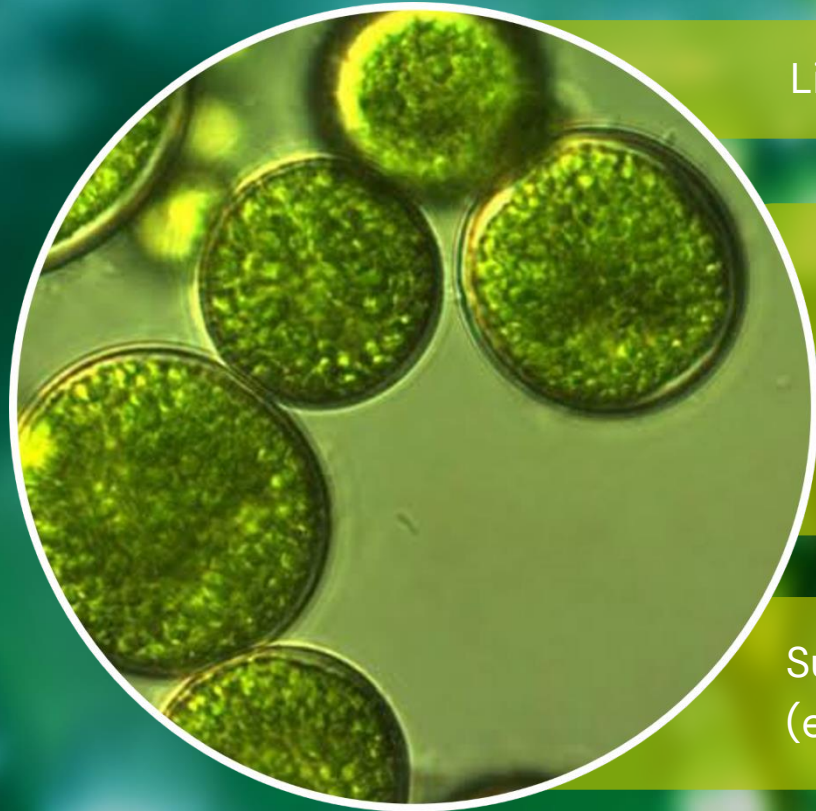
INCI NAME:	Nannochloropsis Oculata Extract, Pullulan, Pentylene Glycol, Citric Acid, Aqua		
TECHNOLOGY:	Sustainably farmed in photo-bioreactors, guaranteeing maximum quality (no risk of contamination, reproducibility of process, fully traceable) Derived from Nannochloropsis oculata microalgae and high performing polysaccharide Polysaccharides obtained from natural fermentation of tapioca starch 100% naturally-derived origin (ISO 16128)		
TECHNICAL:	Form: Transparent to turbid yellow to amber highly viscous liquid Use level: 1–5%	pH of use: 3.5 – 7.5 Preservative: Free	Solubility: Soluble in water
BENEFITS:	- Stimulates fibroblasts’ proliferation and Collagen I* - Protects the skin against oxidative stress and urban dust* - Short-term: Flawless skin after 1 application. Long-lasting lifting result up to 12hrs, already with 2 applications***. - Long-term: With regular usage wrinkles reduction by over -20%		
REGISTRATION CERTIFICATION	 Raw material verified by ECOCERT GREENLIFE, conform to the COSMOS Standard 		

¹ Based on dsm-firmenich clinical study where improvements in skin smoothness and texture homogeneity were detected already within 15min from 1st product application

* in vitro ** ex vivo *** in vivo

The algae

Nannochloropsis Oculata



Lives in both MARINE and FRESHWATER LAKES

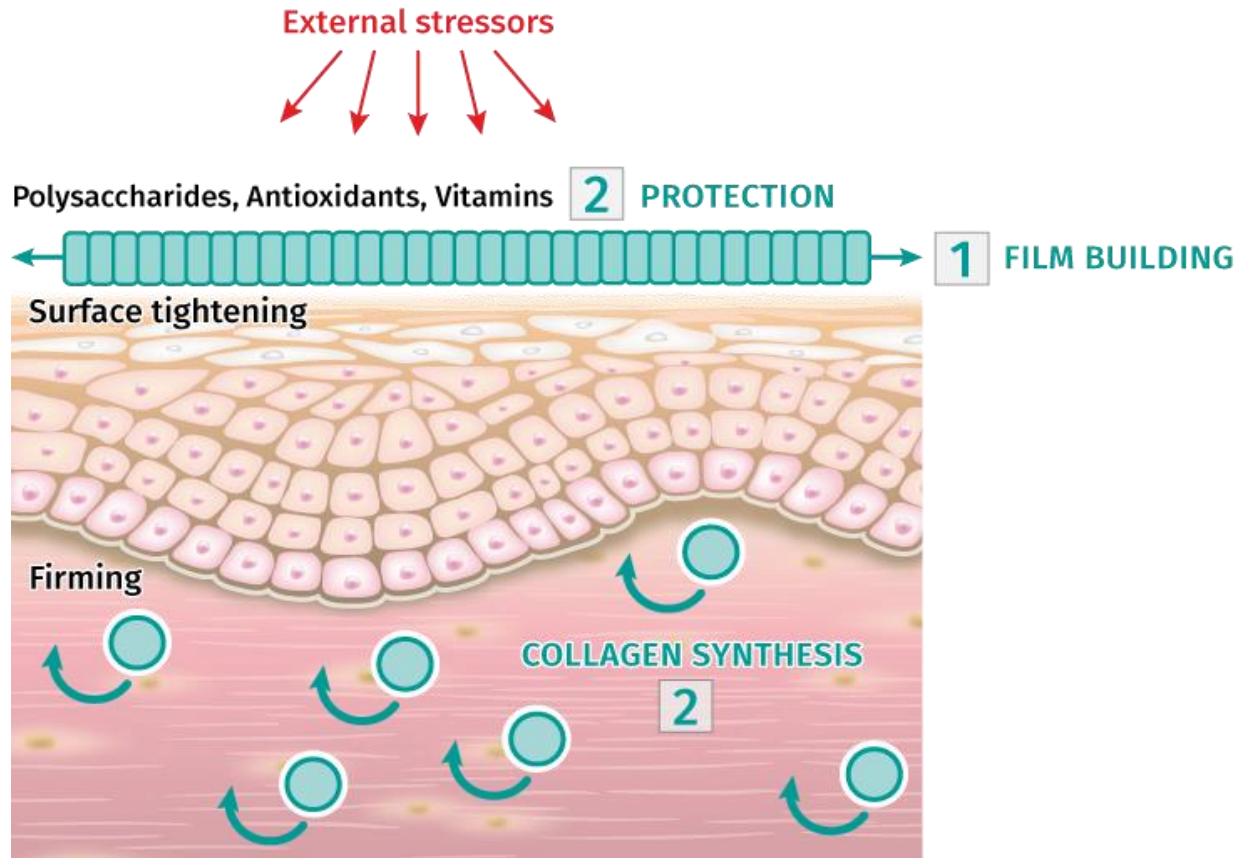
Used for several decades to PRODUCE NUTRACEUTICALS and FEED SUPPLEMENTS

A STRONG COCCOID CELL WALL that protects its bioactives

Supplies the skin with ESSENTIAL AMINO ACIDS, PRECIOUS VITAMINS (especially vitamins C and B12) and POWERFUL ANTIOXIDANTS

How does it work?

PEPHA[®]-TIGHT CB combines short- and long-term efficacy



1. Short-term, with 1 application:

PEPHA[®]-TIGHT CB forms a thin film on the skin, exerting an instant and long-lasting perceptible skin smoothing & lifting effect.

2. Long-term, with regular applications:

PEPHA[®]-TIGHT CB acts as a **protective shield** against oxidative stress, helps to **stimulate the formation of Collagen I**, an essential part of the skin's connective tissue, helping reducing wrinkles & improving skin elasticity.

dsm-firmenich solution: PEPHA®-TIGHT CB

The fast lane to superior skin tightening

In vitro PEPHA®-TIGHT CB:

- Stimulates Fibroblasts' proliferation by +350% and Collagen-I by +70%
- Protects the skin against oxidative stress and urban dust

In vivo PEPHA®-TIGHT CB:

- **Within minutes from 1st application:**
 - Visibly smoothens skin texture for an immediate¹ flawless effect
- **Up to 12hrs long-lasting effect:**
 - Skin looks and feels firmer, more lifted and more elastic already after 2 applications
- **Long-term result, after 2 months treatment:**
 - Reduces the wrinkles' surface by -26% and length by -21%
 - Improves skin elasticity by 15% and tonicity by 24%

¹Based on DSM clinical study where improvements in skin smoothness and texture homogeneity were detected already within 15min from 1st product application



Highly increases fibroblasts proliferation and Collagen-I synthesis

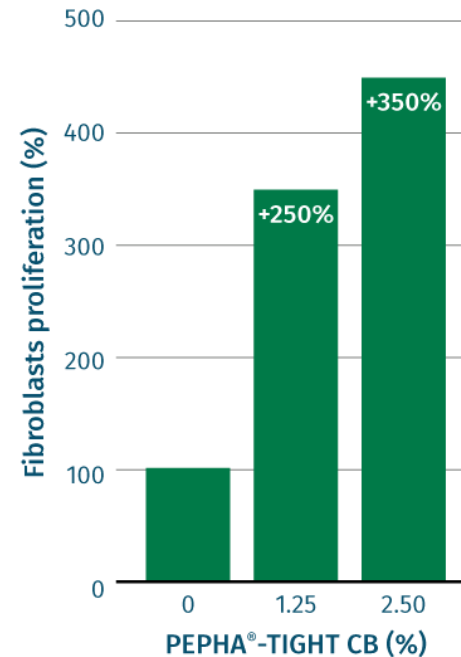
In vitro efficacy

Stimulation of fibroblasts proliferation by 350% and Collagen-I by 70%

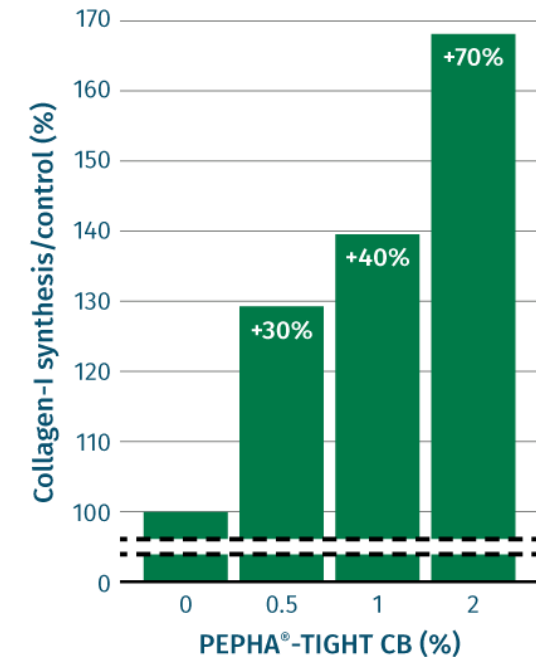
Aged skin is characterized by a decline of cell number and proliferative cells. Therefore, less ECM is produced, leading to a lack of structural components, such as collagen fibers. The skin gets thinner, less resilient and less firm.

Results:

- Increase in cell proliferation of human fibroblasts, and consequently support for collagen production increase.
- Stimulation of Collagen-I synthesis in human fibroblasts, improving the structure of the connective tissue



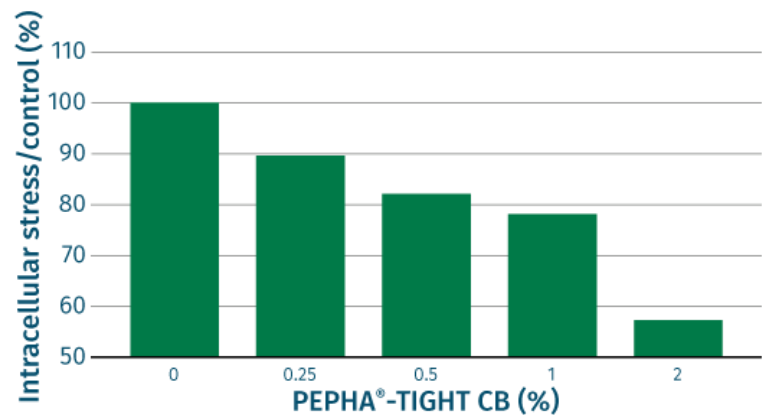
**p<0.01 against 0.
***p<0.001 against 0.



Protects the skin against stressors

In vitro efficacy

Protection against oxidative stress

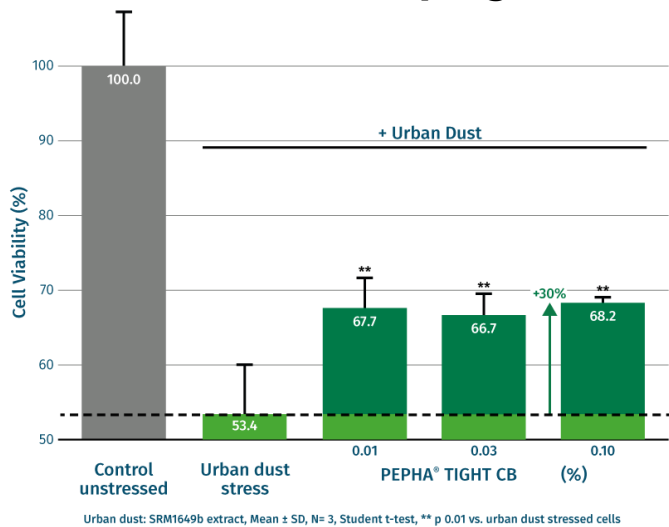


Reactive Oxygen Species (ROS) are known to accelerate the aging process. In addition, aged cells are less able to protect themselves against oxidative stress. This leads to an accelerated collagen breakdown and cross-linking of proteins. The skin gets thinner and less resilient. In vitro protection was measured by the ROS assay: Human fibroblasts were exposed to hydrogen peroxide (H₂O₂) to induce an intracellular oxidative stress. The release of ROS was quantified by fluorescence staining.

Results:

Dose dependent protection of human fibroblasts from oxidative stress, and consequently, protection of the collagen fiber network from damaging processes.

Protection of cell viability against urban dust



Used in the dsm-firmenich assay and research Standard Reference Material® (SRM) 1649b “urban dust” is an authentic surrogate for urban air pollution of the National Institute of Standards and Technology (Gaithersburg, MD, USA).

Results:

With PEPHA®-TIGHT CB, cell viability improves up to +30% vs stressed cells

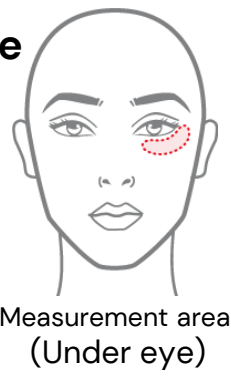
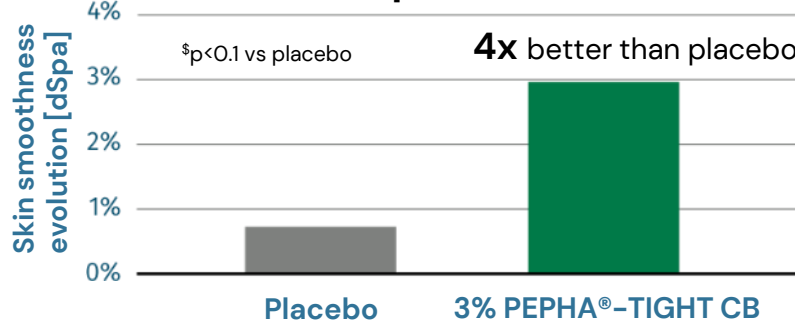
Flawless skin in minutes with PEPHA®-TIGHT CB

SkinCam measurement

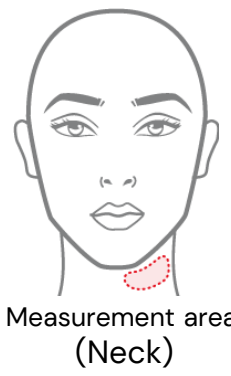
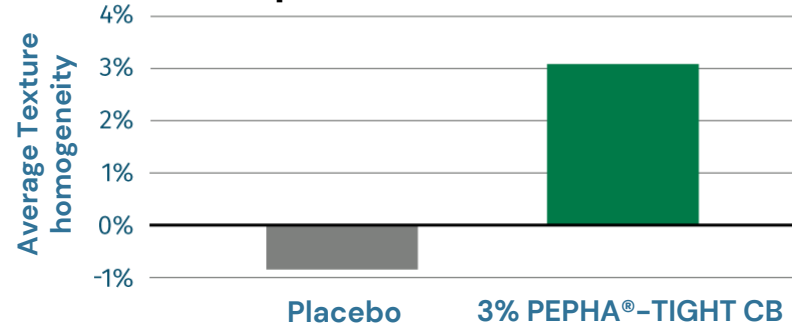
In vivo efficacy



Skin Smoothness Improvement below eye

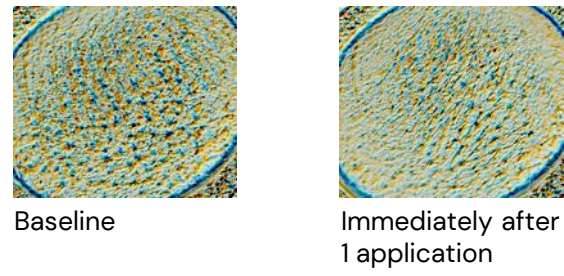


Skin Texture Improvement on Neck Area

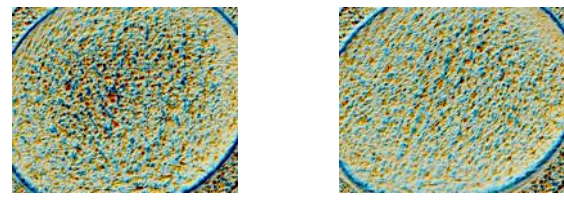


Immediately after 1 application

Volunteer 19

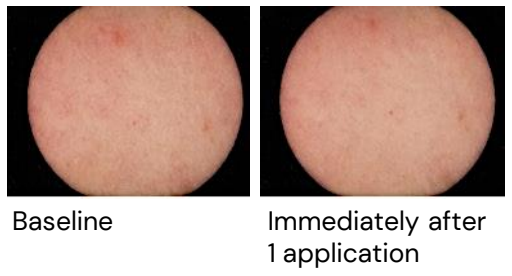


Volunteer 36

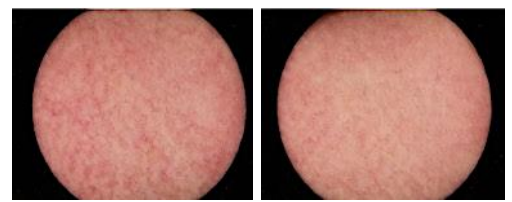


Immediately after 1 application

Volunteer 09



Volunteer 58



SkinCam takes an image of the skin surface and shows how the irregularities of the skin texture evolve.

After PEPHA®-TIGHT CB application, skin surface appears smoother and texture more homogeneous

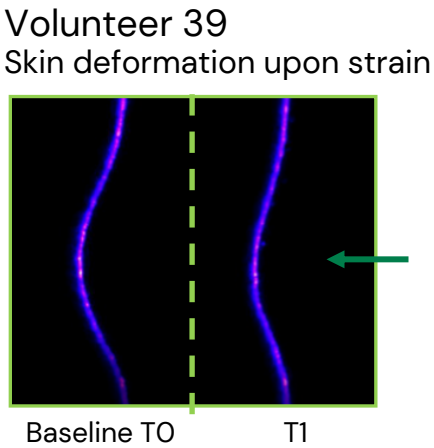
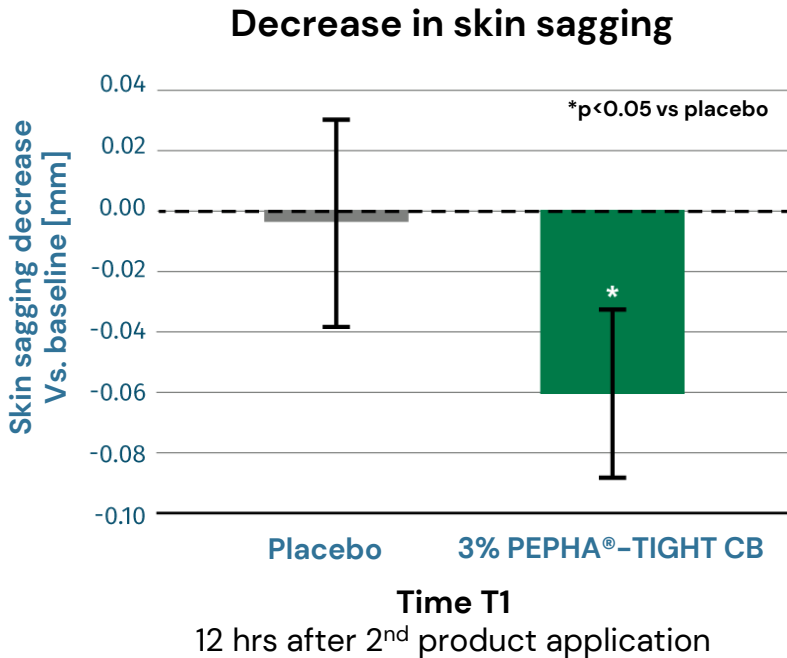
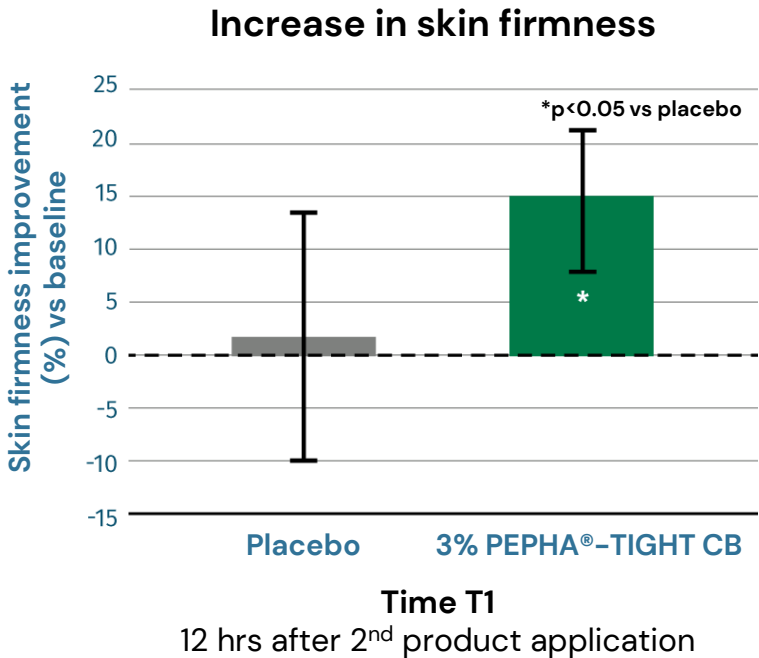
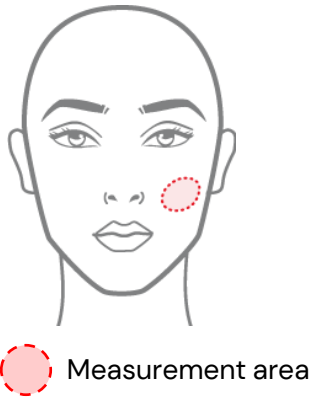
Significant long-lasting lifting effect with PEPHA®-TIGHT CB

SkinFlex measurement

In vivo efficacy



PEPHA-TIGHT CB is 13X better than placebo



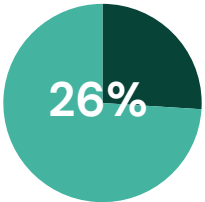
An airstream is blown perpendicularly to the cheek: it pushes the skin inwards forming a kind of “hole” in the cheek. The firmer & more lifted is the skin, the more it’s able to resist the airstream, as shown for Volunteer 39 in the pic

Long-term well-aging result with regular usage of PEPHA®-TIGHT CB

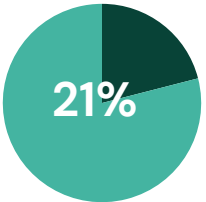
Profilometer and Cutometer measurement

In vivo efficacy

Wrinkle reduction (profilometry):

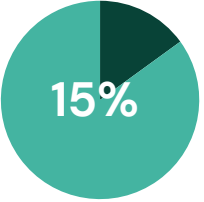


reduction of wrinkle surface

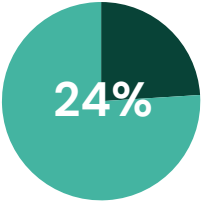


reduction of wrinkle length

Skin firming (cutometry):

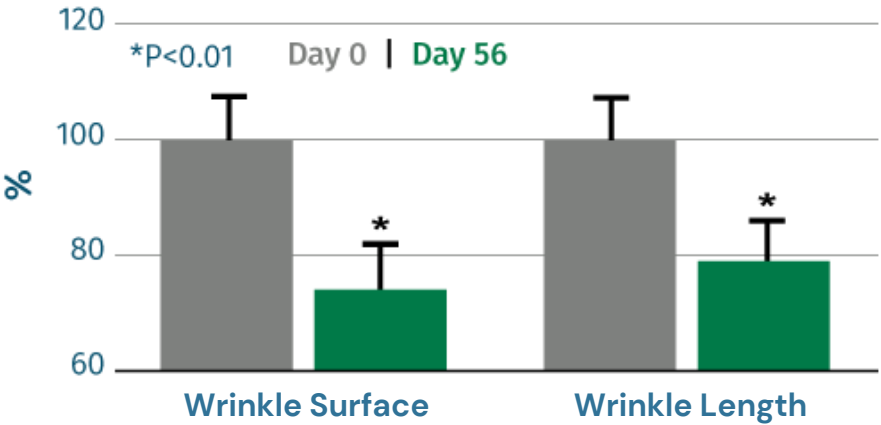


improvement of elasticity

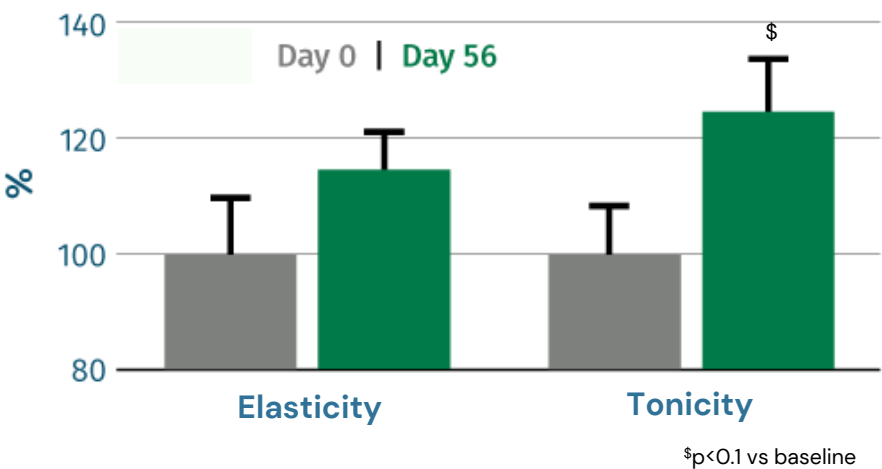


improvement of tonicity

Visible wrinkle reduction after 2 months



Long-term skin firming results after 2 months!



Cream with 3% PEPHA®-TIGHT CB applied on the face twice daily over 2 months. 13 female volunteers 30-55y.o., mean 40yrs.

PEPHA®-TIGHT CB

Supported marketing claims

Flawless skin within minutes¹

With just 1 application, skin surface appears smoother and texture more homogeneous

Long-lasting lifting effect, up to 12hrs from last application

Skin gains elasticity in critical facial areas

After multiple applications, long-term well-aging effect with wrinkles reduction by over -20%

¹Based on dsm-firmenich clinical study where improvements in skin smoothness and texture homogeneity were detected already within 15min from 1st product application



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