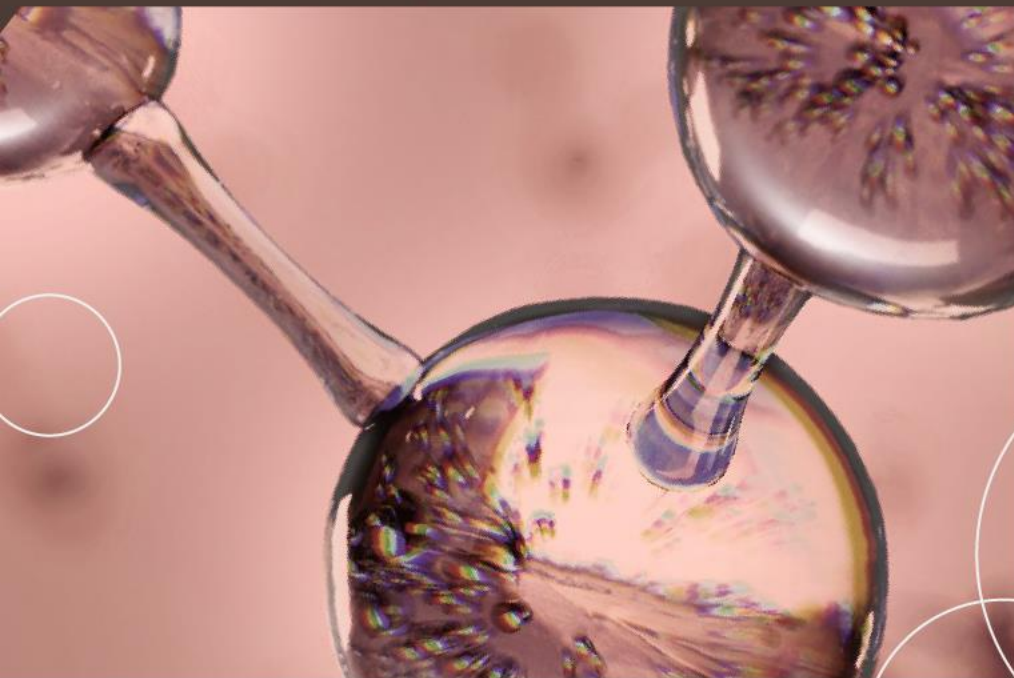


SYN-TC®

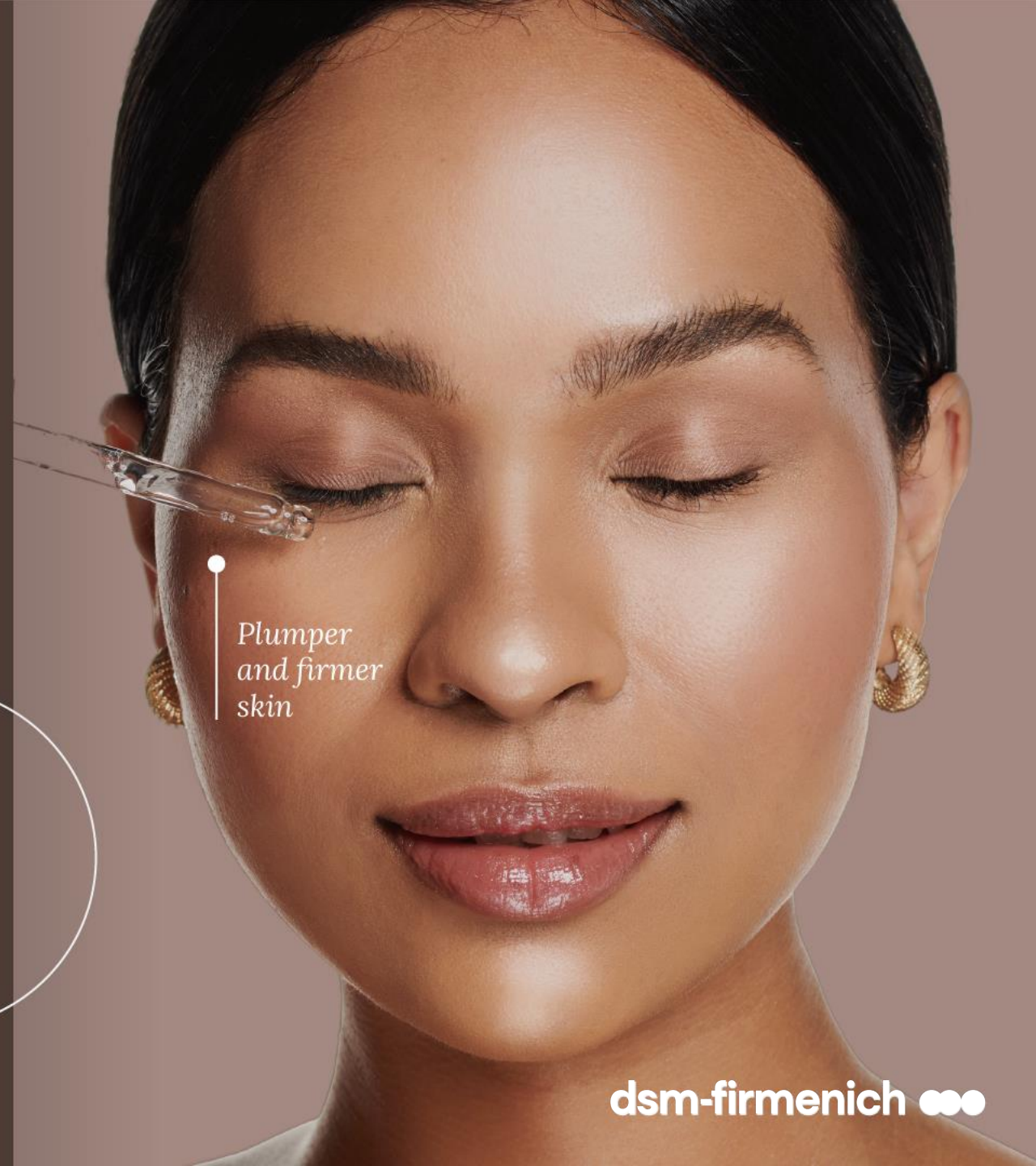
*A new dimension of skin
smoothing in just 28 days*

CB



June 2025

Peptides | Pharma-inspired skincare

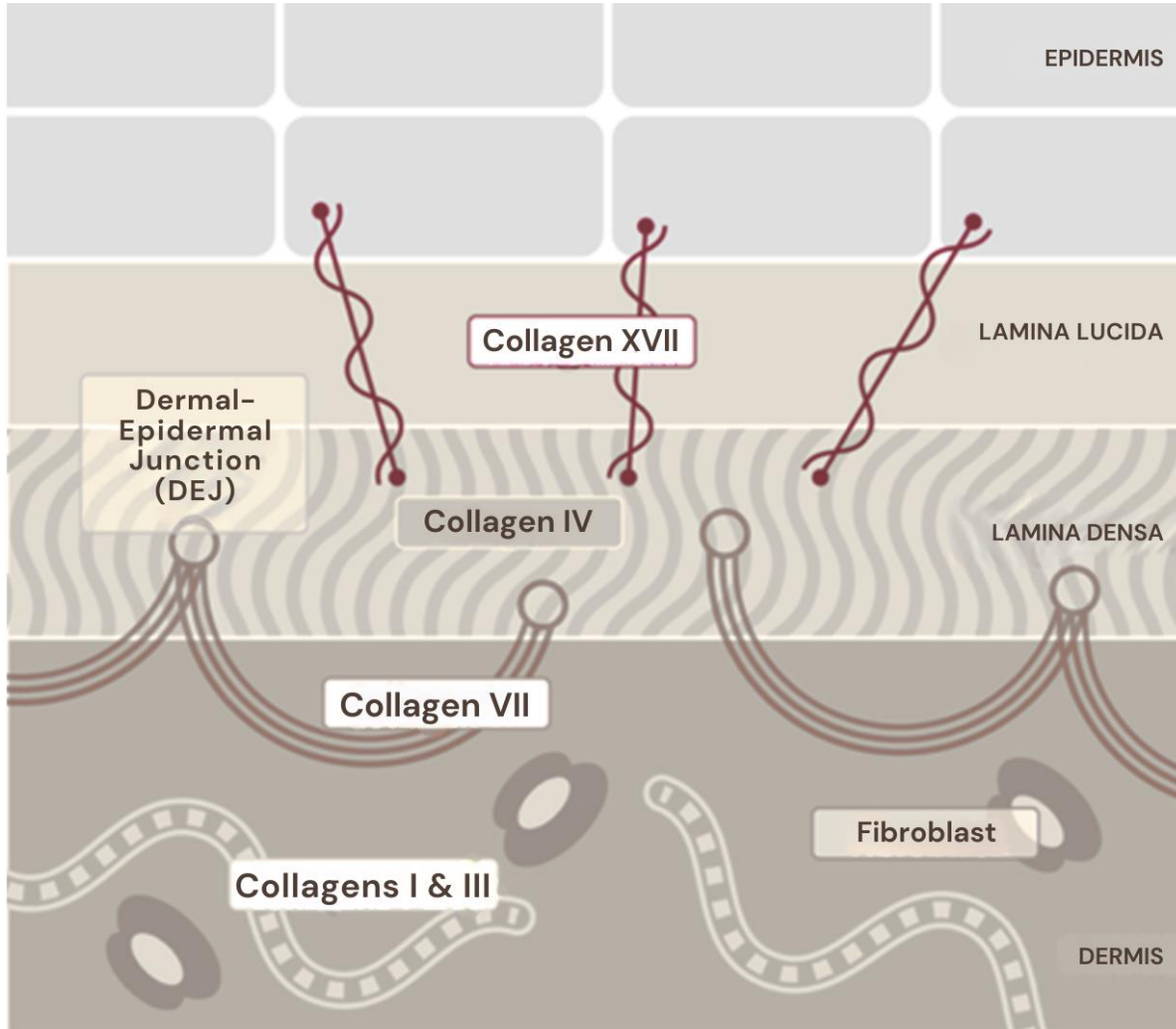


Plumper
and firmer
skin

dsm-firmenich 

Collagens

The most abundant proteins in skin



Collagens are mainly responsible for the skin's smoothness and strength, provide structure and firmness to the skin. Different collagens work hand in hand:

- **Collagen type I**
Main components of the dermis making up 75% of the dermis protein content. Collagen fibers support the skin's mechanical strength, volume and texture.
- **Collagen type III**
In association with Collagen I, high levels in young, smooth skin.
- **Collagen type IV**
Key molecule to ensure functionality of the Lamina densa. It forms a sheet to which the anchoring peptides are connected.
- **Collagen type VII**
Forms anchoring fibrils in the dermal epidermal junction. Connects the dermis to the DEJ.
- **Collagen type XVII**
Plays a major role in holding the layers of skin together as it anchors the epidermis to the DEJ.

SYN® TC CB

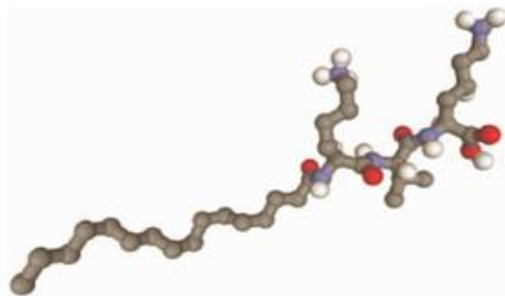
ID CARD

INCI NAME:	Tetradecyl Aminobutyroylvalylaminobutyric Urea Acetate, Palmitoyl Dipeptide-5 Diaminobutyroyl Hydroxythreonine, Palmitoyl Tripeptide-5, Aqua, Glycerin, Magnesium Chloride		
TECHNOLOGY:	• Combination of three highly active patented tri- and tetrapeptides, made by the latest cutting-edge SYN®-Peptide technology via Green Chemistry Science, designed to increase the amount of collagen type I, III, IV, VII and XVII • TFA-free¹ • 100% of natural origin (according to ISO 16128)		
TECHNICAL:	Form: Liquid pH of use: 3.0-7.0	Use level: 1-2.5% Preservative: Free	Solubility: Water miscible
BENEFITS:	• Significantly stimulates Collagens I, III, IV, VII and XVII all at once* • Skin is smoother with a softer touch and improved overall young- looking appearance** • Skin appears plumper** • Skin appears firmer** • Appearance of fine lines and wrinkles is visible reduced**		
REGISTRATION CERTIFICATION	   		

¹ Non-intentionally added TFA
* *in vitro* ** *in vivo*

SYN-TC® CB

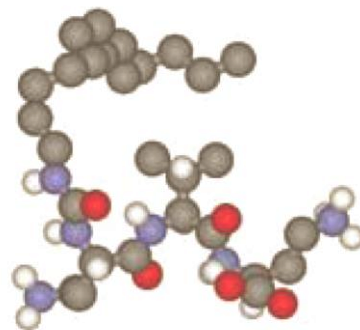
A tailor-made peptide combination provides best performance



Palm-Lys-Val-Lys-OH

INCI: Palmitoyl Tripeptide-5

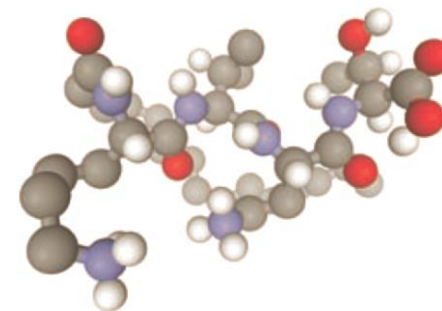
Activity: Significant effect on collagen III



TDAC-Dab-Val-Dab-OH

INCI: Tetradecyl
Aminobutyroylvalylaminobutyric
Urea Acetate

Activity: Significant effect on collagen I



Palm-Lys-Val-Dab-Thr-OH

INCI: Palmitoyl Dipeptide-5
Diaminobutyroyl Hydroxythreonine

Activity: Significant effect on DEJ anchoring collagens IV, VII, and XVII

SYN-TC® CB

Skin smoothing activity at a glance

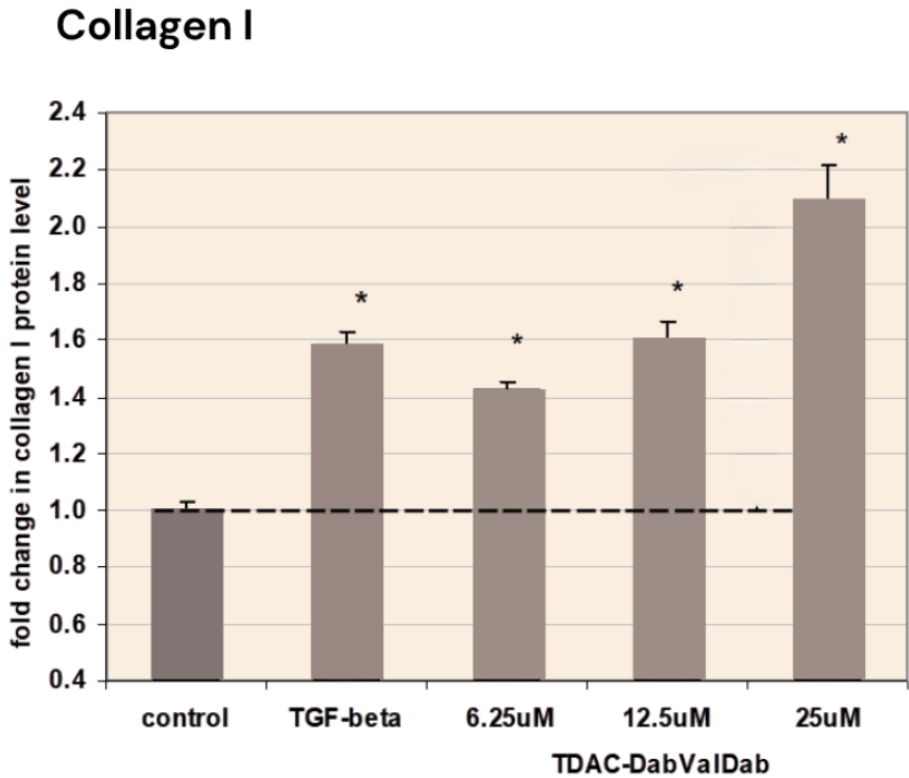
in vitro

	Palm-Lys-Val-Lys-OH	TDAC-Dab-Val-Dab-OH	Palm-Lys-Val-Dab-Thr-OH	Main skin benefit
Collagen I		+110%		More and stable collagen fibers in the skin, enhanced resiliency
Collagen III	+40%			Share of “youth” collagen increased, fine tunes homogeneity and flexibility of collagen fibers
Collagen IV			+190%	Improved stability of the DEJ
Collagen VII			+60%	Improved anchor functionality of the DEJ towards dermis
Collagen XVII			+120%	Improved anchor functionality of the DEJ towards epidermis
Total skin collagen	SYN-TC® CB	SYN-TC® CB	SYN-TC® CB	Quantity, quality and functionality improvement

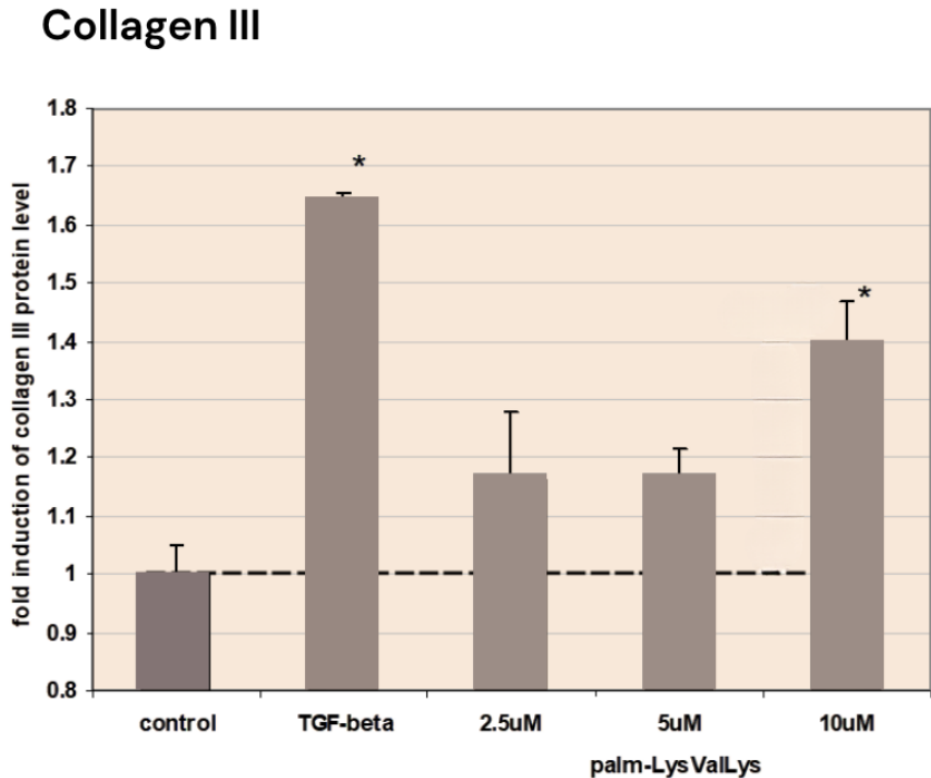
in vitro efficacy

Significant up-regulation of dermal Collagen I and III in human skin fibroblasts

in vitro



TDAC-Dab-Val-Dab-OH
stimulates Collagen 1 Synthesis in a dose dependent manner up to 110%.



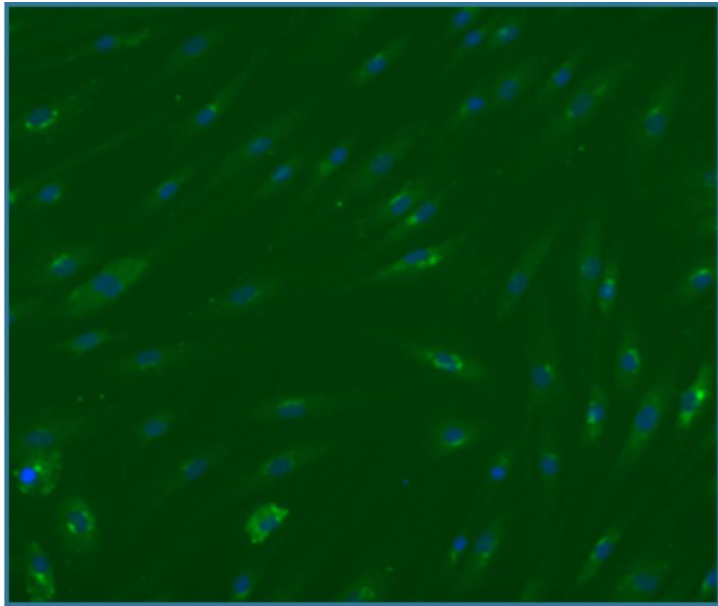
Palm-Lys-Val-Lys-OH
stimulates Collagen III Synthesis in a dose dependent manner up to 40%.

in vitro efficacy

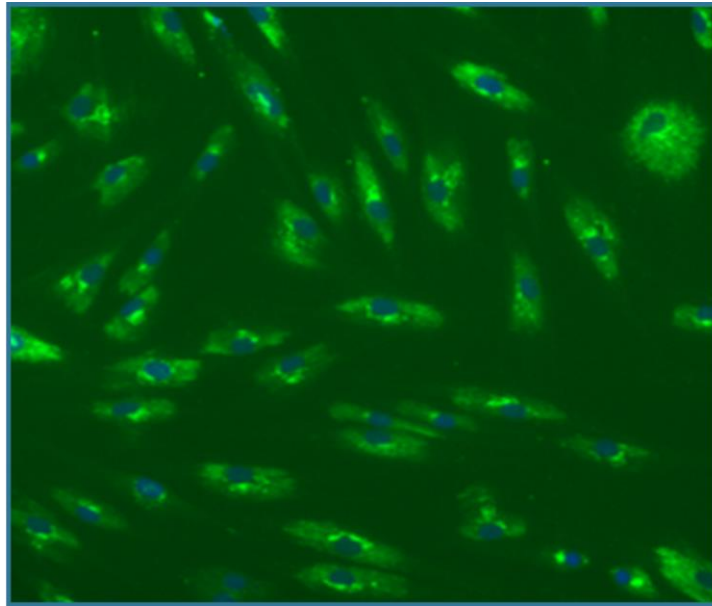
Positive effect on collagen III production in human fibroblasts

in vitro

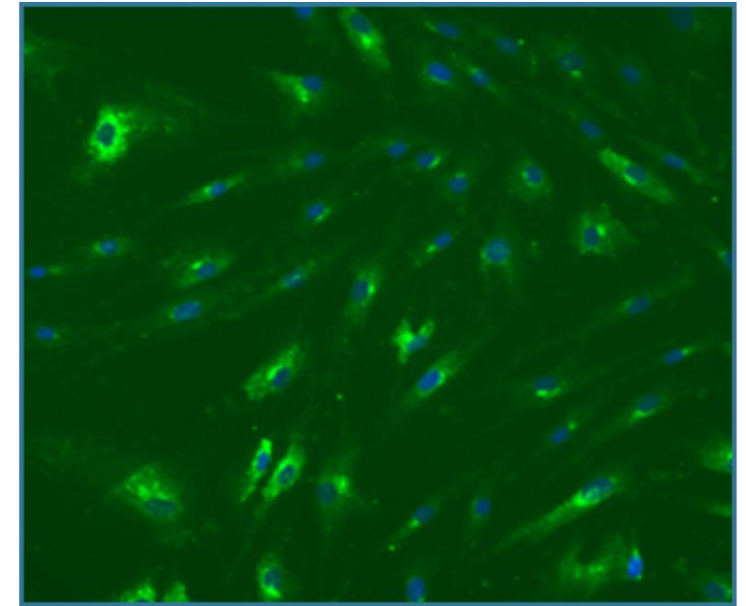
- Collagen III is particularly found in quickly-growing tissue, mature skin has higher levels of Collagen I
- Particularly young skin is characterized by high levels of Collagen III, accounting for smooth skin



Negative control



Positive control TGF b



10 uM Palm-LysValLys

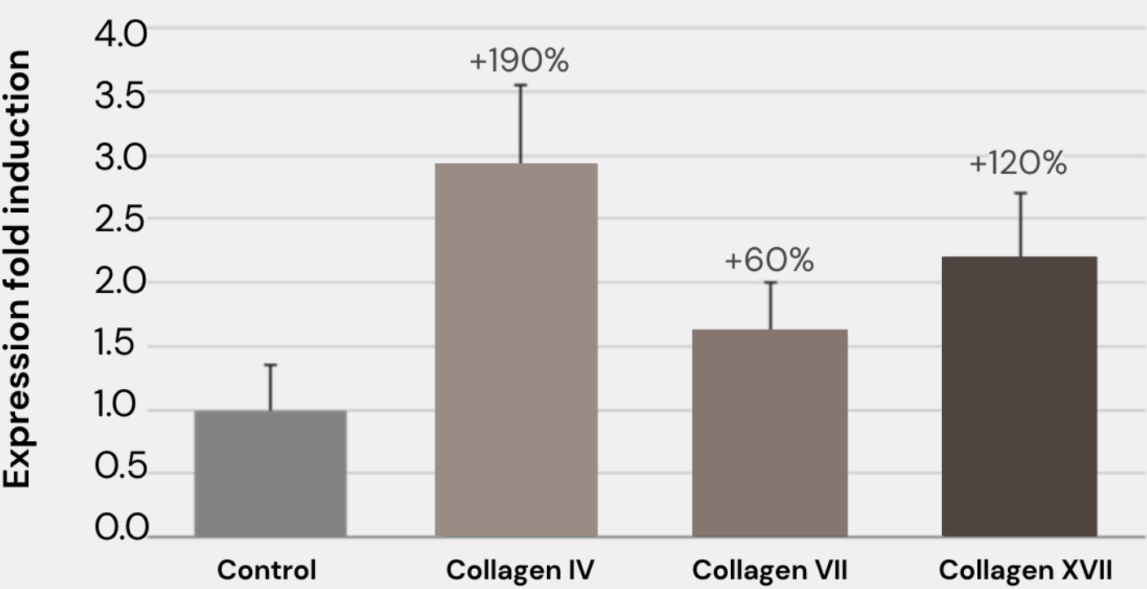
in vitro efficacy

Positive effect on collagen III production in human fibroblasts

The peptide Palm-Lys-Val-Dab-Thr-OH was added at 50uM to a human Keratinocytes cell culture (HaCaT cells) and the expression level for three different collagen genes was measured after 16 hours of incubation time.

in vitro

DEJ collagens



in vitro efficacy

Parameter	1 month	2 months	Consumer benefit
Smoothness increase	+ 9.1%	+ 12.2%	- Improves skin touch and softness - Smoother skin
Firmness increase	+ 7.6%	+ 10.8%	Improves the look of skin
Wrinkle depth reduction	– 5.6%	– 10.3%	Reduces the appearance of lines and wrinkles
Wrinkle volume reduction	– 6.9%	– 11.9%	Reduces the appearance of lines and wrinkles

Comparison against initial conditions (average values)

SYN-TC® CB

in vivo study set-up

Design:

- Methodology – Double blind, 30 volunteers
- Female volunteers, age 30 – 50y (average 42y), with visible facial skin wrinkles
- Application twice daily and test area on face and on forearms
- Formulation with/without 2.5% SYN-TC® CB

Parameters:

- Measurement of the skin firmness on the forearm using Cutometer®
- Measurement of skin smoothness using PRIMOS technology on the forearm
- Measurement of wrinkle parameters in crow's feet area by 3D PRIMOS topography recording technology
- Illustration of the visual effect by high resolution photography

in vivo efficacy

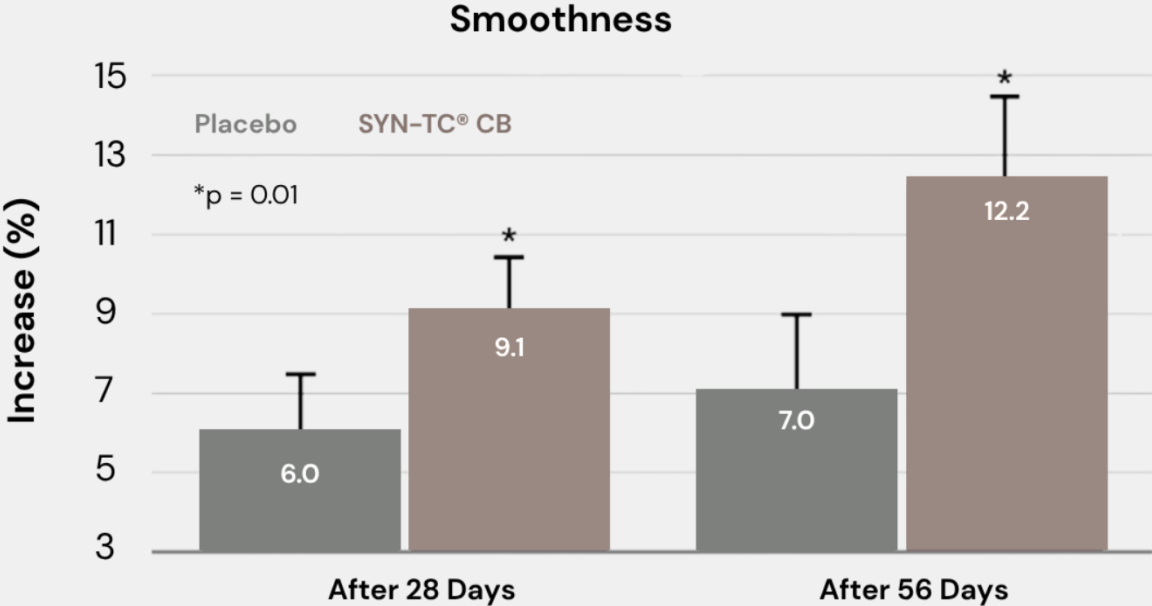
in vivo

Significant improvement of skin smoothness

SYN-TC® CB shows after already one month a significant improvement of skin smoothness (+9.1%), the effect is further pronounced after two months (+12.2%).

Comparison against initial conditions
(average values)

in vivo



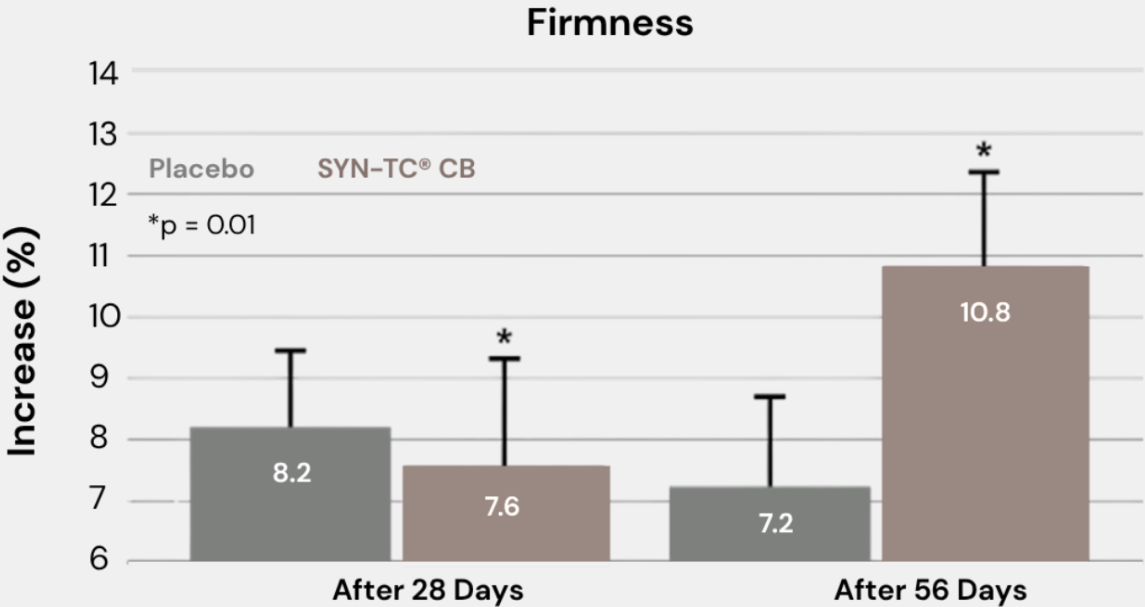
in vivo efficacy

Skin gets significantly firmer using SYN-TC[®] CB

SYN-TC[®] CB shows after already one month a skin firming effect (+7.6%) that is further enhanced after two months (+10.8%).

Comparison against initial conditions (average values)

in vivo

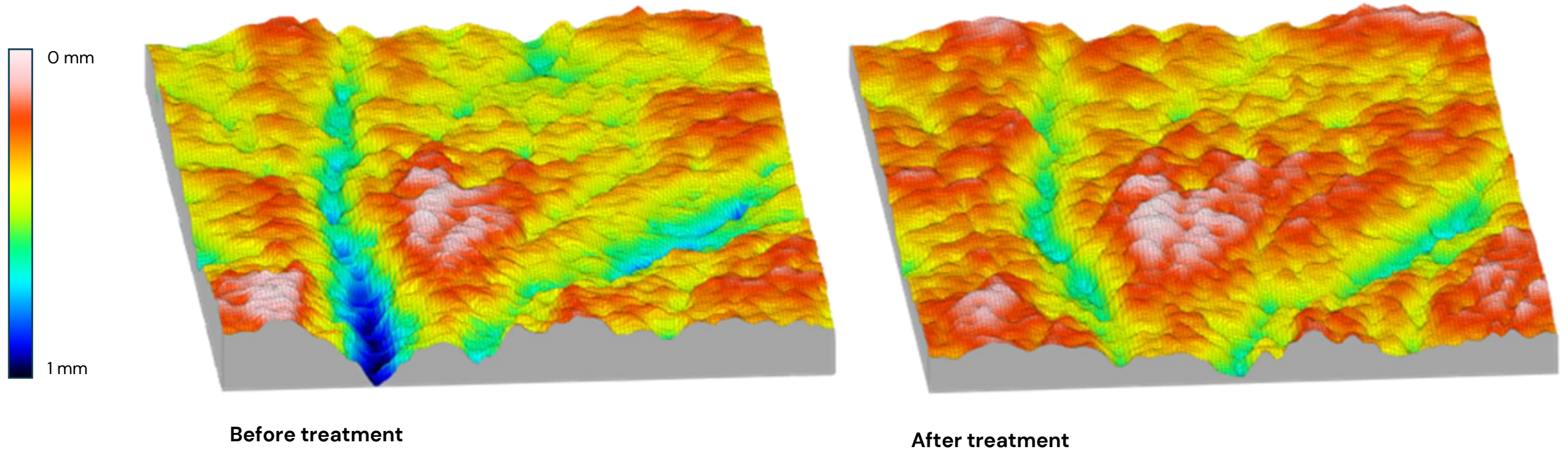


in vivo efficacy

Visible skin smoothing in only 28 days

1/2

in vivo



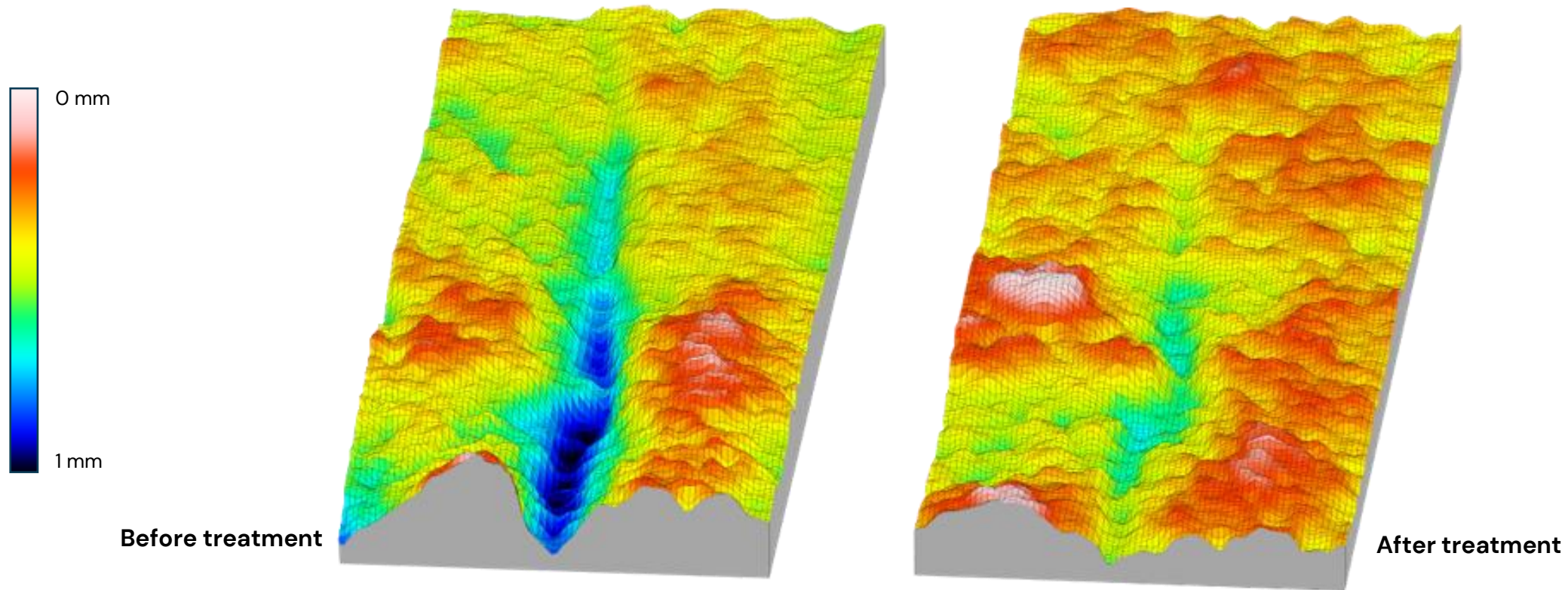
3D computer based Primos analysis of Crow' foot area, Volunteer no. 11

The skin surface becomes smoother with an overall reduced appearance of wrinkles (depth, area, volume)

Visible skin smoothing in only 28 days

2/2

in vivo



3D computer based Primos analysis of Crow' foot area, Volunteer no. 24

The skin surface becomes smoother with an overall reduced appearance of wrinkles (depth, area, volume)

Graph: Dermaconsult 2012

Reduced appearance of deep wrinkles and iron out smaller wrinkles

in vivo

Photographic documentation, Volunteer no. 6

Wrinkle appearance in the crow feet is reduced, the skin looks younger



Day 0



Day 28

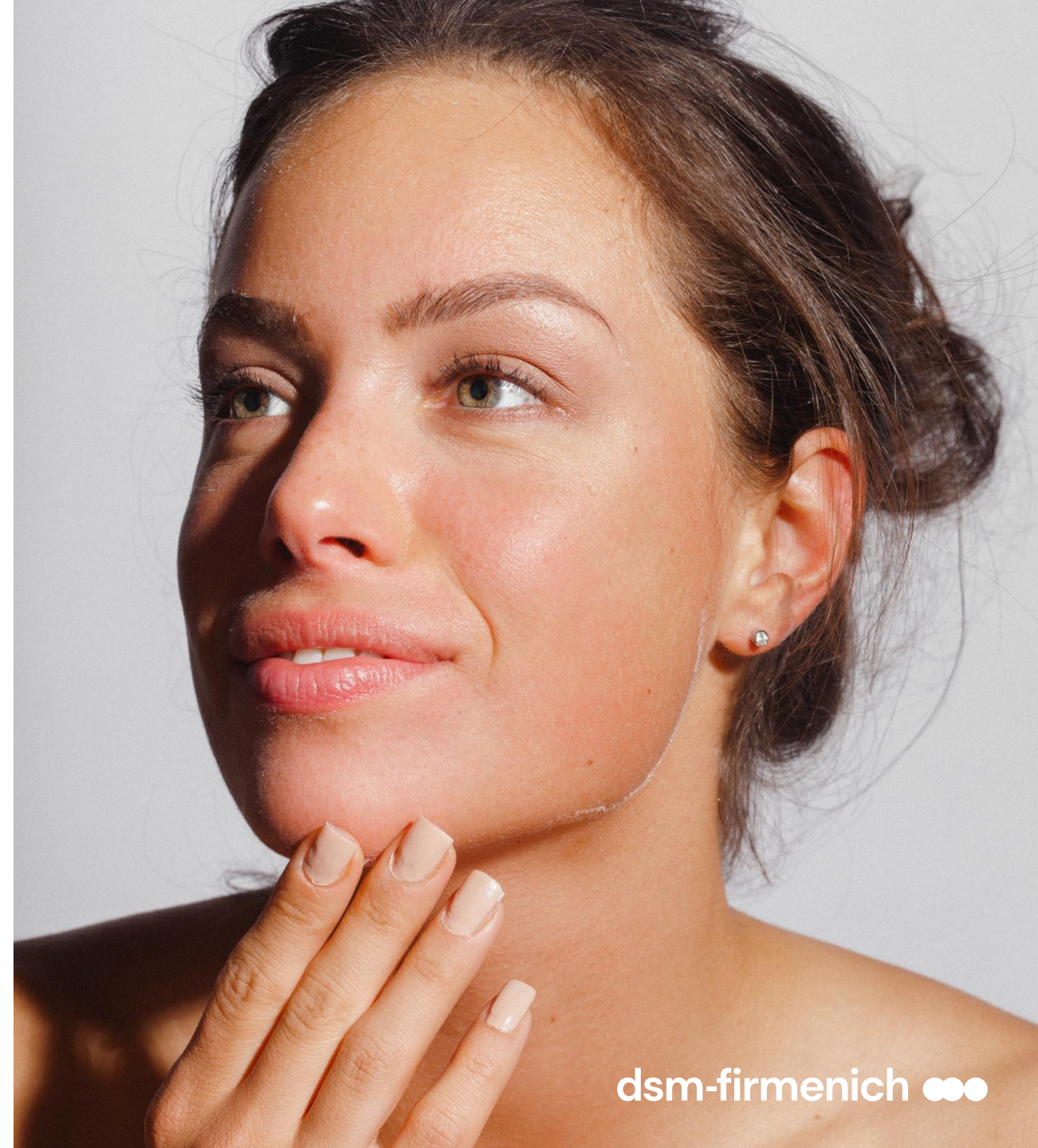


Day 56

SYN-TC® CB

Experience the benefit of total collagen care in only 28 days

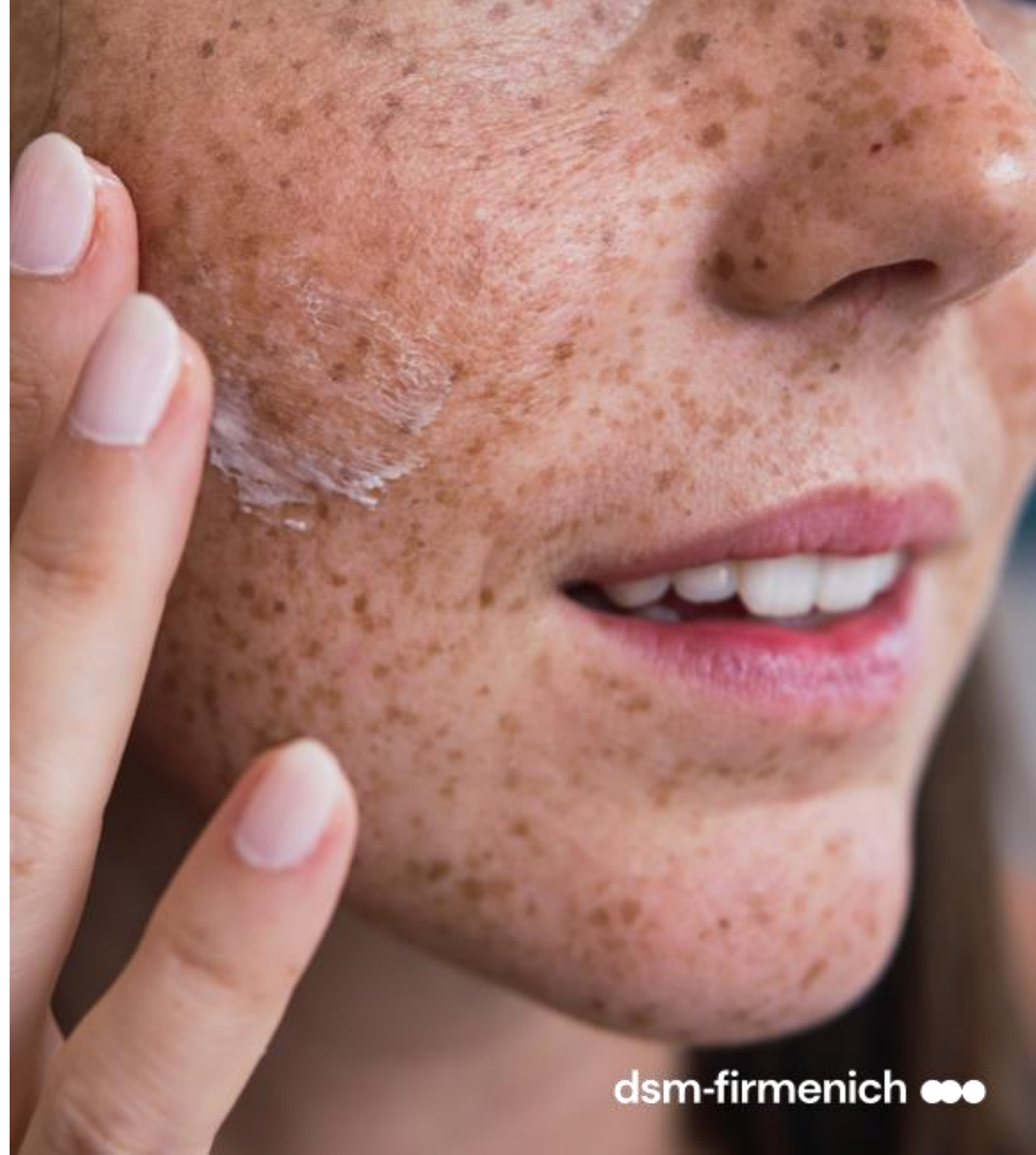
- Skin is smoother with a softer touch
- Younger looking appearance
- Skin appears plumper
- Skin appears firmer
- Appearance of fine lines and wrinkles is visibly reduced



SYN-TC® CB

Formulation guidelines

- Offered as a glycerine-based aqueous solution
- No preservative
- Optimal pH range in formulations from 3 to 7
- Stable at elevated temperature (80°C) for up to 2 hours
- Recommended concentration: 2.5%
- Guide formulations are available upon request



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