

SYN[®]-Peptides

SYN-TC[®]



Experience a new dimension of skin smoothing in only 28 days



DSM

BRIGHT SCIENCE. BRIGHTER LIVING.

Total Collagen Care

Looking young and beautiful is widely accepted to be a source of professional success and personal happiness. Collagens play a major role in the skin, ensuring proper functionality and thus perfectly smooth, young-looking skin. During the process of ageing our body's natural production of collagen in the skin decreases, and as its functionality is reduced typical signs of ageing become visible.

Whilst traditional anti-ageing approaches mostly focus on dermal collagen type I, SYN-TC® follows a more holistic approach that focuses on total collagen care. A particular focus is set on collagen type III – the so-called youth collagen – that is known for its skin smoothing properties, especially in young skin. Additional focus is set on the collagens of the dermal-epidermal junction (DEJ), especially on collagen IV, VII and XVII, the so-called anchoring collagens that are essential for skin functionality and support skin firmness.

Key facts

UNIQUE PRODUCT FEATURES

- Patented synthetic Tri- and Tetrapeptide technology
- SYN-TC® significantly increases *in vitro* the amount of collagens to facilitate their unique contribution to beautiful smooth skin
- Combines best performance in a tailor made peptide complex

BENEFITS

- Skin is smoother with a softer touch and improved overall young looking appearance
- Skin appears plumper
- Skin appears firmer
- Skin elasticity is improved
- Appearance of fine lines and wrinkles is visible reduced

COSMETIC APPLICATION

- Skin smoothing products
- High performing facial anti-ageing formulas
- Anti-wrinkle and anti-photo ageing solutions
- Plumping beauty products

SUGGESTED CONCENTRATION

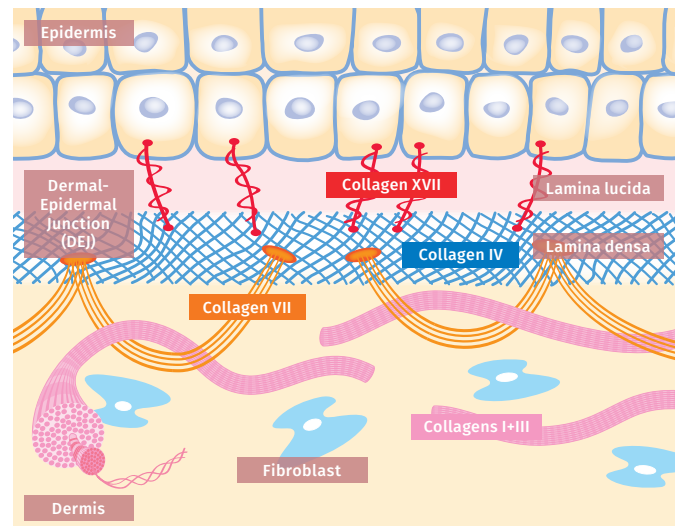
2.5% SYN-TC®

INCI NAME

Tetradecyl Aminobutyrylvalylaminobutyric Urea Trifluoroacetate, Palmitoyl Tripeptide-5, Palmitoyl Dipeptide-5 Diaminobutyryl Hydroxythreonine

Mechanisms

Collagens are the most abundant proteins in the skin, making up 75% of the skin proteins. Collagens are mainly responsible for the skin's strength and smoothness as they provide structure and firmness. However, over time collagen levels decrease and their proper function is reduced. SYN-TC® is a synthetic peptide-based complex tailor-made for optimal activity. *In vitro*, SYN-TC® peptides increase the formation of undamaged, stable and homogeneous collagens to facilitate their unique contribution to beautiful smooth skin.



The picture above shows the tight interaction between the dermal collagens I and III and the DEJ collagens IV, VII, and XVII. Each of these collagens varies in structure and functionality. DSM's key finding was that in order to ensure highest collagen level and functionality *in vitro* different tailor-made peptide sequences have to be combined. SYN-TC® is a combination of those peptide sequences that work *in vitro* on dermal collagens I and III as well as on the DEJ collagens IV, VII, and XVII – all in one product.

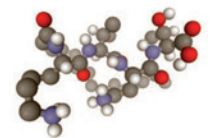
CHEMICAL STRUCTURE

Palm-Lys-Val-Lys-OH

INCI: Palmitoyl Tripeptide-5

MW: 840 g/Mol

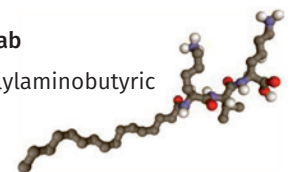
Activity: Significant effect on collagen III



Tetradecylaminocarbonyl-Dab-Val-Dab

INCI: Tetradecyl Aminobutyrylvalylaminobutyric Urea Trifluoroacetate

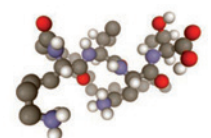
MW: 785 g/mol



Palm-Lys-Val-Dab-Thr-OH

INCI: Palmitoyl Dipeptide-5 Diaminobutyryl Hydroxythreonine

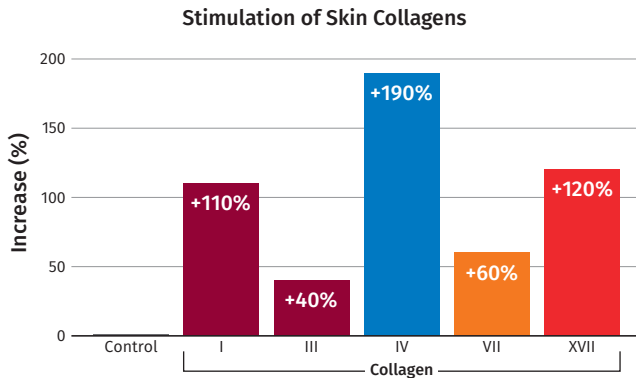
MW: 913 g/mol



Efficacy

In vitro

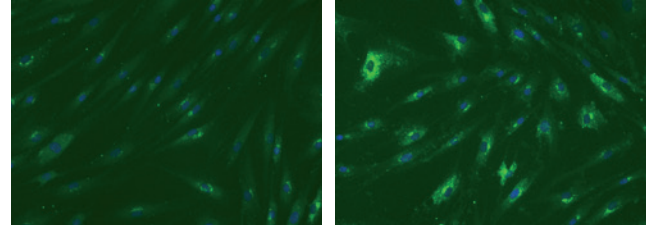
Collagen synthesis



Results: SYN-TC® leads to a significant up-regulation of dermal collagens and DEJ collagens.

Collagen III stimulation

Young skin is characterized by high levels of Type III collagen, accounting for its softness and suppleness.



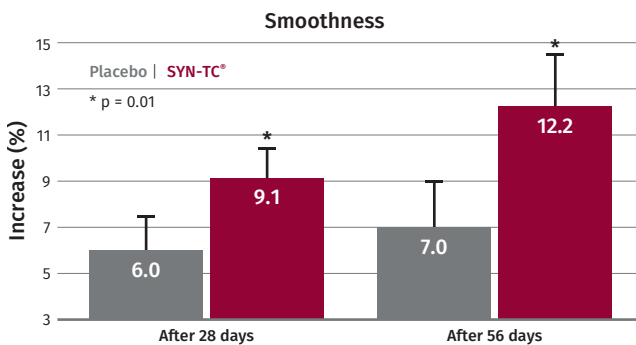
Negative control SYN-TC® (10 μmol PALM KVK)

Results: SYN-TC® increases production of collagen III, the youth collagen, in human fibroblasts.

In vivo

Skin smoothness

Formulation with/without 2.5% SYN-TC®. Application twice daily to 30 volunteers, age 30–50y (average 42y) using PRIMOS technology on the forearm.



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

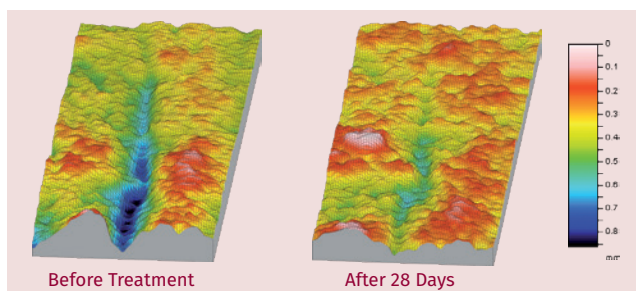
Skin firmness

Formulation with/without 2.5% SYN-TC®. Application twice daily to 30 volunteers, age 30–50y (average 42y) on forearm, using Cutometer®.



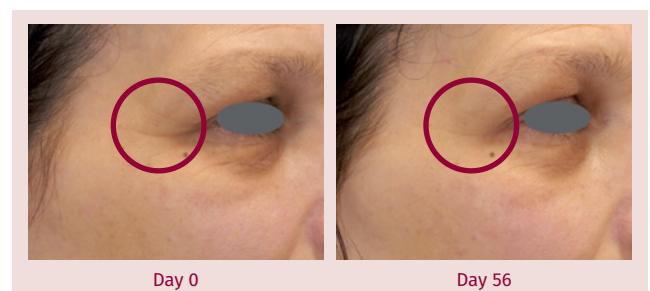
Results: SYN-TC® shows after already one month a skin firming effect (+7.6%) that is further enhanced after two months (+10.8%).

3D computer-based analysis of crow's foot area



Results: The skin surface becomes smoother with an overall reduced appearance of wrinkles (depth, area, volume) in only 28 days.

Macro photographs of crow's foot area



Results: Wrinkle appearance in the crow feet area is reduced, the skin looks younger.

For more information, please visit www.dsm.com/personal-care

Europe

DSM Nutritional Products Europe Ltd
Personal Care
Wurmisweg 576, CH-4303 Kaiseraugst
Switzerland
Phone: +41 (61) 815 8888
Email: info.pc-emea@dsm.com

North America

DSM Nutritional Products, LLC
45 Waterview Boulevard, Parsippany, NJ 07054
United States of America
Phone: +1 800 526 0189
Fax: +1 973 257 8580
Email: info.pc-na@dsm.com

Asia Pacific

DSM Singapore Industrial Pte Ltd.
trading as DSM Nutritional Products Asia Pacific
30 Pasir Panjang Road
Mapletree Business City #13-31
Singapore 117440
Phone: +65 6632 6617
Fax: +65 6632 6600
Email: info.pc-apac@dsm.com

Latin America

DSM Produtos Nutricionais Brasil S.A.
Av. Juscelino Kubitschek, 1909, Torre Sul, 5o andar
03178-200 Brasil
Phone: + 55 11 3760 6409
Fax: + 55 11 3760 6492
Email: info.pc-latam@dsm.com

China

No. 476, Libing Road, Zhangjiang
Pudong, Shanghai 201203
China
Phone: +86 21 6171 8240
Fax: +86 21 61716266
Email: info.pc-china@dsm.com



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