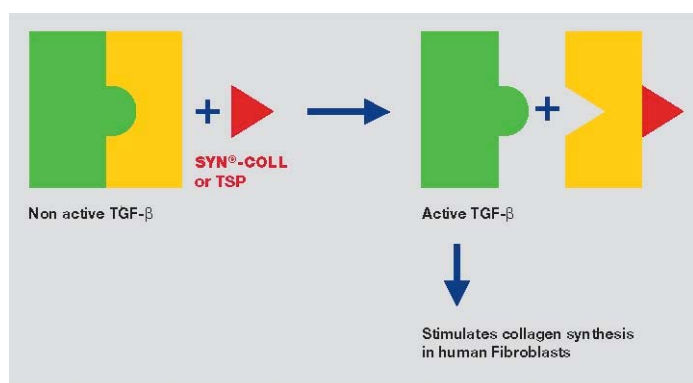


SYN[®]-COLL

SYN[®]-COLL is a patented innovative approach that is based on Pentapharm's many years of experience in synthesizing peptides for the pharmaceutical industry. SYN[®]-COLL is a small peptide with a unique sequence to mimic the human body's own mechanism to produce collagen via TGF- β . The product is offered unpreserved, as a ready to use water soluble solution.

Properties:

Collagen represents the main component of the ECM (Extra Cellular Matrix) of the dermal connective tissue. Thrombospondin I (TSP) is a multifunctional protein that activates the latent but biologically inactive form of TGF- β (Tissue Growth Factor). TGF- β is known as the key element in the synthesis of collagen and binds to a particular sequence in the TSP molecule. This sequence is known as ARG-PHE-LYS, being similar to this SYN[®]-COLL also has the capacity to bind and therefore activate TGF- β .



Source: J.E. Murphy-Ulrich, M. Poczatek, *Cytokine & Growth Factor Reviews*, 11, 2000, 59-69.

Function:

- SYN[®]-COLL stimulates Collagen synthesis
- SYN[®]-COLL actively removes any type of wrinkle
- SYN[®]-COLL has in addition skin firming and moisturizing properties
- SYN[®]-COLL has been clinically proven to be safe and effective.

Cosmetic application:

- SYN[®]-COLL is a deep penetrating, bio-active ingredient developed to remove any type of wrinkle and to repair existing stretch marks.
- As a breakthrough in wrinkle treatment SYN[®]-COLL can be used in any type of anti-aging product for every aspect of wrinkle reduction.

Suggested concentration:

1-3% SYN[®]-COLL

Formulation:

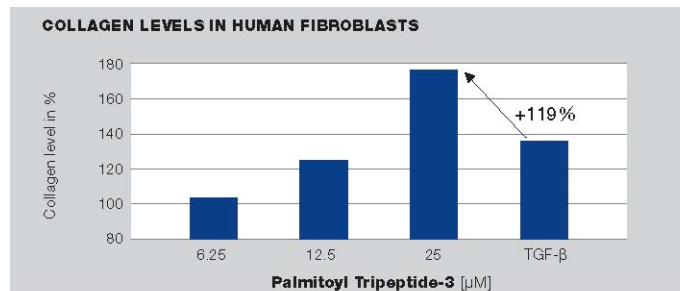
SYN[®]-COLL is a clear aqueous solution that can easily be incorporated into the aqueous phase of a formulation.

INCI name:

Palmitoyl Tripeptide-5, Glycerine

Efficacy tests:

In vitro testing in human fibroblasts, SYN[®]-COLL has shown excellent collagen building capacity compared to the positive standard TGF- β (0.4 nM).



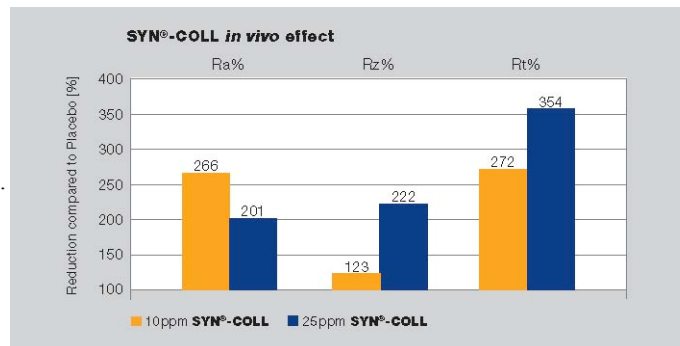
INCREASE OF COLLAGEN synthesis by 119% compared to the positive standard.

In vivo test:

To prove the anti-wrinkle effect of SYN[®]-COLL, a study on 60 healthy volunteers has been performed. Various concentrations of SYN[®]-COLL (1% and 2.5% respectively) have been applied twice daily for 84 days.



Effect on wrinkles is a 350% improvement compared to placebo



Ra: Average roughness Rz: Mean of 5 consequent regions Rt: Maximum difference

SYN[®]-COLL can be considered an effective alternative to collagen injections.