

## CLINICAL DATA – COLLAGEN ENHANCEMENT COMPLEX

Collagen enhancement complex (Tripeptide-10 Citrulline, Tripeptide-1, Pseudoalteromonas Ferment Extract, Hydrolyzed Wheat Protein, Hydrolyzed Soy Protein) helps maintain our collagen quantity and quality. *In vivo* and *in vitro* data shows a significant anti-wrinkle effect. Collagen enhancement complex is a combination of active peptides that can fight the processes that affect the quantity and quality of collagen as we age. This ingredient has proven to significantly reduce the depth of wrinkles around the eyes, thanks to the overall improvement in both the quantity and quality of skin collagen.

Collagen enhancement complex acts at three different stages in the life of collagen: synthesis, formation and degradation.

### A) Collagen synthesis boosting

During ageing, the synthesis of collagen gradually declines. The active ingredients in Collagen enhancement complex boost the synthesis of collagen types I, III and IV, helping to compensate for our decreased production as we age.

### B) Collagen organisation

The process of fibrillogenesis results in the formation of collagen bundles that are responsible for the strength and resiliency of the skin. Collagen enhancement complex controls collagen fibril dimensions by uniformising their diameter and spacing them regularly. This provides a better cohesion and stabilisation of the collagen fibres, and gives suppleness to the skin.

### C) Collagen protection

After a certain age the degradation of collagen speeds up, due to an increase in MMP (matrix metalloproteinases) levels. Collagenases, a specific type of MMP, cleave fibrillar collagen into smaller fragments, which are then susceptible to further proteolysis. Collagen enhancement complex inhibits the production of human MMP-2 and MMP-3, therefore avoiding excessive collagen damage in aged skin. Its anti-collagenase activity protects collagen from degradation.

In addition to enzymatic degradation, another process that damages collagen is glycation. Glycation is a reaction between proteins and sugars in our skin. Sugars act as a kind of glue that sticks proteins together. When glycation affects collagen fibres, they lose their flexibility and elasticity. Collagen enhancement complex has also proved to inhibit glycation, avoiding the formation of AGEs (Advanced Glycation Endproducts), protecting skin from the loss of elasticity.