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KTTKS pentapeptide and its derivatives - properties and application in cosmetics

Peptides are the active ingredients of many cosmetics for mature skin. One of the most important, found naturally in the skin is the fragment of type I procollagen, KTTKS pentapeptide (lysine-threonine-threonine-lysine-serine). For cosmetic purposes its pal-palmitoyne KTTKS derivative is used, which is more stable and better absorbed. Clinical tests have shown that pal-KTTKS stimulates the synthesis of collagen and other matrix components such as elastin and fibronectin, and stimulates the synthesis of collagen type IV, located in the zone of the dermal-epidermal adhesion. This substance is also defined in the production of dermal glycosaminoglycans (GAGs). As a result of these activities reduction of wrinkles, smoothing of the skin and improving the appearance of the face are clinically observed. A mixture of pal-KTTKS of nicotinic acid amide increases beneficial effects on the skin. The use of KTTKS and pal-KTTKS do not cause negative reactions, which is characteristic of other substances with similar properties.