

Abstract

The use of bioactive substances such as peptides, antioxidants and substances that induce collagenogenesis, has led to the creation of a new generation of cosmetic products – dermatocosmetics, which aim to the treatment of aging and photoaging, as well as to medical devices, such as healing products, sunscreen products with enhanced antioxidant properties to cope with the effect of ultraviolet radiation on the biological macromolecules identified in the skin. The increasing trend of using such bioactive substances makes it necessary to develop and validate methods of quantification along with methods to control their actions and applications in Biomedical Sciences.

At the same time, the development of technology has contributed to the creation of new aesthetic devices, less invasive, whose function is based on electricity and / or radiation. The prevailing trend is to produce as small and user-friendly systems as possible, capable of providing advanced aesthetic applications for treating aging and photoaging. Significant advantages of these modern dermatoaesthetic applications are the minimization of the recovery time that allows the patient to return immediately to his / her daily activities and work, the lack of pain and the reduction of adverse reactions. Contemporary methods of dermatocosmetic and aesthetic applications are advantageous over other obsolete treatments with regard to collagenogenesis and increased elasticity, activating the natural healing process of the body.

The proposed thesis, will research using biophysical methods, the effect on the skin of bioactive substances incorporated in topically administered products when applied on their own or / and in combination with other aesthetic methods with or without the use of machine devices.