

ABSTRACT

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Title of thesis: The effect of natural cosmetics on change the mechanical properties of the skin

This thesis in theoretical part deals with the structure of skin, its biochemistry and functions. Discusses the changes that the skin undergoes during development and aging. It describes the mechanical properties of the skin and the discipline that deals with these characteristics.

The practical part deals with the measurement of mechanical parameters of human skin after application of a natural cream. The trial involved a total of ten women were about the same age. Measurements were performed on a dynamic elastomers being developed at the Department of Biophysics and Physical Chemistry of the Faculty of Pharmacy at Charles University in Hradec Kralove. The investigated parameters were Hooke and Newton factor. Hooke's coefficient indicates the elasticity of the skin, Newton coefficient of its viscosity.

The results show that the test cream affected as skin elasticity, and its viscosity. In 90 % of the test persons there was a significant increase in the values of the Hooke and Newton coefficient and the resulting effect is long-lasting.

Key words: skin, mechanical properties, Hooke's coefficient, Newton's coefficient, viscoelastic material