

Thermal analysis of interaction of epidermal lipids III

Lenka Dvořáková, diploma paper, June 2008

Abstract

The skin is the organ protecting the human body from unwanted influences from the environment. Physical chemical properties, structure and ordering of the epidermal lipids, mainly in the stratum corneum, play a key role in the barrier function of the skin. The major lipids are ceramides, cholesterol and free fatty acids in this layer. We are used the samples mimic such the most frequently referred composition of the epidermal lipids, contained pseudo-ceramid, oleic acid, cholesterol and cholesterol sulfate. Because the samples with oleic acids can at the higher temperatures influence the behavior of the particular constituents of the mixture, we are also performed the evaluation of the contained simpler samples which compound cholesterol and pseudo-ceramid. We are tried hydrated the mixtures at in vitro environment by various routes. And we are observed their characteristics and interactions by means of the differential scanning calorimetry. We are also deal with the evaluation of the particular raw materials and the double-barrelled mixtures. We are verified and in detail elaborated the operating sequences which are not completely unambiguously referred in the literature by means of these studies.