

MULTILEVEL DISPERSE SYSTEMS IN COSMETICS

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Creation of modern highly effective cosmetics is based not only on inclusion in it of new highly effective biologically active substances. A perspective direction is use in cosmetic

formulation special delivery systems providing fast transport of active components in skin and increasing efficiency of cosmetics. A new direction in creation of transepidermal delivery systems of biologically active substances are multilevel disperse systems (multiple emulsions). Distinctive characteristic of such systems is structural and functional similarity with living cell. On the one hand in these systems particles of a disperse phase are structured as cellular compartmentalization by particles at least one additional internal disperse phase. On the other hand when such structured particles contact with skin, releasing of biologically active substances from internal disperse phases in surrounding is drop and simulates an intercellular exchange of substances or signaling. Such drop action of biologically active substances is more physiologic and preferable to epidermal cells in comparison with homogeneous action taking place in the majority of cosmetics.

In this study we research multiple emulsions type W1/O/W2 with use as an oil phase silicone liquids. Ability silicones to dissolve significant amounts of oxygen and carbonic gas results in greater similarity of particles of disperse phase W1/O to living cells. Are shown ability of multiple emulsions to provide highly effective transepidermal transport as hydrophilic and hydrophobic biologically active substances, an ability of overlapping in such emulsions the substances incompatible on physical and chemical properties in solutions. The possibility of creation on the basis of multiple emulsions liposomal systems with increased stability in hydrophobic compositions is shown too.