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Abstracts

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Evaporation Of A Model Skin Lotion With Beta-Hydroxy Acids

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Two β-hydroxy acids, malic and salicylic acid were combined with a non-ionic surfactant, a commercial pentaoxyethylene sorbitan mono-oleate and water to form a simple model of a skin lotion and the phase diagrams were determined. One emulsion formulation with relative amounts of the three components similar to those in commercial lotions was used to observe microscopically the changes in the emulsion structure during evaporation. The microscope images were subsequently compared to the information from the phase diagram under equilibrium conditions. The results showed the behavior of the systems of the two acids to be distinctly different; as exemplified by that of a typical formulation with 3% by weight of acid and 5% of surfactant. The malic acid system consisted of vesicles, exclusively formed by the surfactant and water, in an aqueous molecular solution of the acid and the initial evaporation resulted in an increase of the acid concentration in the aqueous solution to reach 35.5%, before solid crystals of the acid solid solution appeared. The salicylic acid formulation, on the other hand, already at the beginning of the determination consisted of water, particles of the acid solid solution and surfactant vesicles. In both cases the remaining deposit after total evaporation was particles of a solid acid solution and liquid surfactant.

Advances In Sebaceous Gland Research: Potential New Approaches To Acne Management

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Sebaceous gland development and function is regulated by an expanding array of molecules including transcription factors, hormones, retinoids, growth factors, cytokines and nuclear hormone receptors. We have reviewed the literature to present the current understanding of sebaceous gland development and physiology, with particular emphasis on the control of the sebaceous gland and its implications for acne management. Interestingly, retinoids, cytokines and nuclear hormone receptors appear to be promising inhibitors of sebum synthesis, thus offering new approaches to acne management.

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Rheology Of Dead Sea Shampoo Containing The Antidandruff Climbazole

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In this study, the effect of the antidandruff climbazole on the rheology of hair shampoo containing Dead Sea (DS) salt was investigated. The presence of either DS salt or the climbazole led to increase in the shampoo viscosity. An optimum concentration was found where the viscosity of shampoo was maximum. In the absence of DS salt, the viscosity of hair shampoo increased with increasing the climbazole concentration to reach a maximum value at 1.0 wt%. Further addition of climbazole decreased the viscosity of shampoo. Adjusting the pH of the shampoo at 5.5 and 5.0 shifted the optimum climbazole concentration (corresponds to maximum viscosity) to 0.8 wt% and led to increase in the viscosity of shampoo. On the other hand, the addition of climbazole to the shampoo containing DS salt resulted in a decrease in shampoo viscosity. This decrease of shampoo viscosity became more pronounced with increasing the climbazole and/or DS salt concentrations. By controlling the pH of shampoo, an optimum formula of shampoo comprising both climbazole and DS salt and having maximum viscosity was obtained.