

〈シンポジウム〉

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スキンケア化粧品の使用方法と有効成分の皮膚透過性および皮膚中濃度

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Effect of Application Behavior of Cosmetic Products on the Skin Permeation and Concentration

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Abstract

Active ingredients in the formulations must distribute from the formulations to the epidermal tissues and maintain efficient concentrations in the tissues to achieve their effectiveness as cosmetics. In addition, the determination of skin concentration is very important for evaluating cosmetics formulations, as well as for developing new cosmetic products. However, the direct measurement of skin concentration has several problems. Generally, only one data point is obtained from one skin after active ingredient application. In addition, controlling the removal of the formulation from the skin surface is very difficult. Hard cleaning the skin surface decreases the membrane concentration, whereas inadequate cleaning may leave the drug formulation on the skin. Dose setting method guideline committee organized by the Japanese Cosmetic Science Society has reported that *in vitro* skin permeation experiment with an infinite dose could identify the formulation which exhibited the highest steady-state skin concentration of cosmetic active ingredients.

Skin concentration of active ingredients is affected by application behavior of cosmetic products, such as layered application and rubbing application. In the present paper, factors are introduced that affect skin concentration of active ingredients. I hope this presentation will contribute to the development as well as investigation of the safety and effectiveness of cosmetic products.

Key words: skin permeation, skin concentration, *in vitro* experiment, cosmetic active ingredients, safety evaluation.