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サイエンスとエビデンスに基づく化粧品の研究と開発

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Science- and Evidence-Based Research and Development of Cosmetics

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Abstract

Usefulness and safety are the most important issues for developing cosmetics and the related quasi-drugs. In addition, they must be scientifically and evidentially evaluated for their valuable and rapid development. Their most important site of actions are cutaneous tissues. Thus, the skin concentration of cosmetic and quasi-drug ingredients must be paid attention, as like in plasma concentration of therapeutic drugs in TDM (therapeutic drug monitoring) and in R&D stages for developing generic drugs. The skin concentration of ingredients topically applied or exposed is closely related to their skin permeations. Thus, a relation between the percutaneous absorption and skin disposition must be important to be theoretically undertaken. In addition, the skin permeation of ingredients in the cosmetics and the quasi-drugs is proportionally related to their thermodynamic activity and greatly affected by use of chemical enhancers and/or physical means to increase the skin permeation such as iontophoresis and microneedles. Their applications must be checked during the development of cosmetics and quasi-drugs. In conclusion, the skin concentration of ingredients is a key for developing good cosmetics and quasi-drugs from scientific and evidential points of view.

Key words: science, evidence, cosmetic, research, development.