

〈シンポジウム〉
(皮膚計測工学)

香粧品科学領域における難題への挑戦 ——皮膚の代謝活性評価へのアプローチ——

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Challenge to Difficult Problems in Cosmetic Science —Approach to the Evaluation of Cutaneous Metabolic Activity—

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Abstract

Stratum corneum plays essential roles to express the healthy and beautiful skin appearance as well as to maintain the skin homeostasis *via* its barrier function. Because stratum corneum is the final product of terminal differentiation of epidermal keratinocytes, analysis of their proliferation and differentiation is important for evaluation of the efficacy of cosmetics. Here, we showed that the corneocytes stripped from the skin surface by adhesive tape could reflect the proliferation and differentiation of epidermal keratinocytes. This stripping method is non-invasive, simple, and widely applicable. We have clarified the variation of the corneocytes due to anatomical regions or skin types and the seasonal change of corneocytes by this stripping method. Besides the generally employed skin engineering techniques, this method has been applied to evaluation of moisturizers. As results, the moisturizers with high efficacy showed not only mere improvement of the hydration of corneocytes, but also normalization of the proliferation and differentiation of keratinocytes. In future, various approaches including biochemical, morphological, and new skin engineering techniques are necessary to elucidate the etiologic mechanism of minor skin troubles and to develop proper treatments for them.

Key words: corneocyte, proliferation, differentiation, non-invasive, stripping.