

〈シンポジウム〉
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香粧品科学領域における難題への挑戦 ——くすみ解明に向けた形態的、光学的アプローチ——

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Challenge to Difficult Problems in Cosmetic Science —Morphological and Optical Approach for Understanding Kusumi—

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Abstract

The Cosmetic Industry Association has defined Kusumi, the yellowing and darkening of the skin with aging, as a visible skin condition caused by multiple factor act individually or in combination. In order to elucidate the causes of this condition, the use of optical and morphological measuring techniques to identify the numerous causes of Kusumi is being investigated. When the various causes of Kusumi are examined, two basic assumptions come to light. First, Kusumi is a gradual changes with aging and second, it is a momentary condition caused by a temporary decrease in blood flow that results in reduced L^* values and alteration of a^* and b^* values of skin color. The following has been confirmed about the former: 1) Reduced skin L^* values and the yellowing, together with a loss in skin color evenness with aging, intensify Kusumi. 2) Skin surface configuration becomes rougher and is accompanied by unevenness morphological changes with aging. This lack of evenness accentuates the appearance of Kusumi. Kusumi is not only the absolute value of skin color or surface configuration but is a condition created by unevenness changes in skin color and surface configuration. Taking this into account when performing measurements, should throw further light on the subject.

Key words: unevenness, melanin content, voronoi division, coefficient of variation, aging.