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第48回教育セミナー(2023)・「皮膚を見る・観る・診る~最新の可視化技術レビュー~」

## 肌の色彩と質感をとらえる

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## Grasp Chromatic and Visio-Textural Features of the Skin

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## **Abstract**

Characterization of chromatic and visio-textural features of the skin is one of the critical approaches to grasp skin appearances. In particular, imaging/visualization of these features has already become the indispensable technique in current evaluation. The purpose of this article is to enlighten the insights of the imaging techniques. In this article, importance of the following two basic aspects that fix the course of the techniques is stressed: (1) "skin optics" and (2) "image recognition". In skin optics (1), light propagation of the surface and inside of the skin are firstly illustrated as the basic insights. This discussion leads to the key elements of the skin reflection properties such as directional property, spectral property and translucency. Based on this insight, some examples of evaluation methods on these three properties are briefly reviewed. In image recognition (2), to begin with, limitation of the approach of skin optics for grasping visual cues of the skin features are mentioned. This discussion leads to the specificity of the way of the methods on image analysis. Based on this insight, some examples of evaluation methods and results relating to "shitsukan", or skin visio-textural features, such as perceived shininess, translucency and firmness are briefly reviewed. The reviews on (1) and (2) logically clarifies the inevitability and necessity of the multi-faceted way of studies on skin appearance. Finally, in addition to the above-mentioned reviews, this article also touches the non-visual features derived from somatic and tactile sensations, which should be hardly ignorable and therefore should be grappled with more in cosmetology.

**Key words:** color, shitsukan, skin appearance, skin optics, image analysis.