〈シンポジウム〉

『色彩から考える香粧品学～色がもつ不思議な力と効果』

顔画像を用いたテカリの評価法

大 槻 理 恵

Evaluation Method of Oily-Shine Using Facial Image

Rie OHTSUKI

Abstract

　　We describe the function of the base make-up cosmetics and a proposed method for evaluating the oily-shine appearance. Make-up face has a variable appearance that depends on the facial color and surface texture. On the other hand, the appearance of the make-up layer changes with the production of sebum as time passes. This results in a dull appearance, oily-shine, and enlarged pores. Among these changes, oily-shine is known to the strongest affect on appearance. Oily-shine means that the skin surface appears oily, shiny. Although, it is known that typical oily-shine areas are the nose, cheeks, and forehead, these areas vary among individuals. In order to evaluate the oily-shine, we developed a multi-band imaging system with six spectral channels. This camera system was constructed with an RGB camera with two additional color filters. Second, we proposed an algorithm for detecting the regions with oily-shine. Light reflection of oily-shine is regarded as the specular component of the dichromatic reflection. The oily-shine regions can be detected using the luminance L^* and its Laplacian value. In our experiment, we confirmed that the detected oily-shine areas are coincident with the subjective assessment. Moreover, we defined an equation for evaluating oily-shine by using the image parameters, and the predicted oily-shine score by professional assessments.

Key words:　oily-shine, make-up face, multi-band camera, image analysis.