

AESTHETIC AND COSMETIC DERMATOLOGY (LASERS SEPARATE CATEGORY)

ANALYSIS OF SKIN TONE AND REFLECTANCE OF KOREAN FEMALE FOR NEW COLOR CORRECTING TECHNIQUE

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Introduction: Skin tone is very important factor for beautiful appearance. In generally, Korean female wants to be whiter, less yellowness and flawless skin. These needs are key factors for developing makeup products. However, there are very a few basic studies for quantification of skin tone correcting of base makeup.

Objective: The aim of this study was to investigate skin tone and reflectance of Korean female, and find out the clue for developing color correcting principle for base makeup.

Materials and Methods: The skin tone of analysis and classification was performed by using previous study data (collected in 2011 ~ 2016, 20s: n= 28, 30s: n=267, 40s: n = 525). In order to measure skin reflectance value, 41 Kore females (33.8 ± 7.8 y.o.) were recruited and participated in additionally this study. Skin tone and reflectance were measured by spectrophotometer CM-2600D, and then Statistical analysis was performed using SPSS 23.0 with a significance level of $p < 0.05$. This study was approved by internal IRB.

Results: Korean female skin color in CIE-L*a*b* was lightness (L*) 62.99, redness (a*) 12.77, yellowness (b*) 16.30, respectively. They could be classified 5 groups and each group was named as dark, average, light, yellow, and red skin tone, respectively. 41 volunteers skin colors also were classified by 5 reference skin tone and reflectance of each group were significantly different at various wavelengths. The results showed that 500 - 600nm wavelength were related with skin lightness and reflectance ratio 400 - 490 nm with 610 - 700nm related skin was related with skin hue.

Conclusions: These results indicate that the color correction strategy should be changed according to the skin color, and skin color might be corrected by narrow range wavelength by cosmetic pigments or pearls.