

PROBLEM OF ILLEGAL COSMETICS CONTAINING MERCURY IN INDONESIA

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BACKGROUND: Skin lightening products have an increasing demand in Indonesia despite its illegal and safety issue, including hazardous mercury-containing skin lightening creams. Misperception of beauty may result in a desire to have lighter skin instantly regardless of the ingredients of products. As a populous country, Indonesia becomes a promising country for this industry. Due to increasing demand from middle-class society and cosmetic trend change among men, this industry grows greatly in Indonesia. This study aims to investigate hair mercury concentration to the duration and estimated weight of skin lightening products applied.

METHOD: As much as 297 participants were given a questionnaire regarding their skin cream application. Hair and skin products were analyzed by particle-induced x-ray emission (PIXE).

RESULTS & DISCUSSION: The mean hair mercury concentration of users was 20.3 ± 5.4 ppm, 10 times higher than non-users (2.12 ± 2.05 ppm). Of 27 samples of skin lightening creams, eight samples did not contain mercury while others contain mercury with the mean mercury concentration of 272.26 ppm (0-7834 ppm). Hair mercury concentration exhibited a statistically significant correlation with the duration of skin lightening cream application as well as the estimated weight of the cream applied.

CONCLUSION: This study exhibited the presence of hazardous skin lightening creams containing mercury as well as accumulation of mercury in the human body that has a significant correlation with the duration of exposure and weight of cream applied.

KEYWORDS: Illegal Cosmetics, Mercury, Human Problems

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