IDENTIFICATION OF HYDROQUINONE IN BPOM REGISTERED AND UNREGISTERED NIGHT CREAMS SOLD IN ONLINE SHOPS ON JAVA ISLAND USING THE TLC METHOD

Rahma*, Asworo
Program Studi D3 Analisis Farmasi dan Makanan Poltekkes Kemenkes Malang
*Email: miladhia2002@gmail.com

ABSTRACT

In the digital era, sales of cosmetic products through online shops are increasing. The increase in sales of facial creams also occurred in Java Island due to its very wide distribution and easier access. The distribution of cosmetic products online that does not go through strict supervision raises concerns about the safety of the active ingredients used, one of which is hydroquinone. This study aims to identify the hydroquinone content in night creams registered and unregistered by the Food and Drug Supervisory Agency (BPOM) in online shops in Java Island. This research method uses Thin Layer Chromatography (TLC). The stationary phase used is Silica Gel Plate GF 254 and the mobile phase used is n-hexane with acetone (3:2). The night cream samples studied were 6 samples. Qualitative hydroquinone identification tests were carried out by physical observation, observing the Retention Factor (Rf) value, visual spot color, and fluorescence color under 254 nm UV light. Visual spot observation was carried out by spraying the TLC plate using silver nitrate solution as a detection reagent. The results showed that 3 samples that were not registered with BPOM were indicated to contain hydroquinone (positive) based on Rf values that were close to the hydroquinone standard and 3 BPOM-registered samples did not contain hydroquinone compounds (negative). The Rf values of the 3 positive samples were sequentially 0.562; 0.554; 0.608. These findings indicate the potential health risks due to the use of cosmetic products containing hazardous active ingredients such as hydroquinone.

***Keywords**: Hydroquinone, Night Cream, TLC*