QUALITATIVE ANALYSIS OF HYDROQUINONE IN HANDBODY LOTIONS SOLD AT PASAR LARANGAN SIDOARJO REGENCY USING THIN LAYER CHROMATOGRAPHY METHOD

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ABSTRACT

Hydroquinone is a phenolic compound that works by inhibiting the tyrosinase enzyme involved in the skin pigmentation process. This compound is commonly used in skin whitening products; however, its use has been prohibited due to its potential to cause serious side effects such as irritation, abnormal pigmentation, and even skin cancer when long term use. The prohibition is regulated under the Indonesian National Agency of Drug and Food Control (BPOM) Regulation No. 17 of 2022, which states that hydroquinone is prohibited in cosmetic preparations. Nevertheless, cases of cosmetic products containing hydroquinone are still being found. This study aims to identify the presence of hydroquinone in handbody lotion products sold at Pasar Larangan, Sidoarjo Regency. The location was selected because Pasar Larangan is a traditional market, which is considered to have high potential for the circulation of illegal cosmetic products that may contain hazardous or prohibited substances, including hydroquinone. The method used is Thin Layer Chromatography (TLC) with a mobile phase on n-hexane:aceton (3:2). The study was conducted by comparing the Retention factor (Rf) values of the samples with the standard Rf value of hydroquinone. The results showed that out of four tested samples, two of them samples C and D showed spots with Rf values of 0,44 and 0,40, respectively, which are suspected to contain hydroquinone.

Keywords: Hydroquinone, handbody lotion, Thin Layer Chromatography (TLC)