

**ABSTRACT**  
**(LITERATURE REVIEW)**

**QUANTITATIVE ANALYSIS OF MERCURY CONTENT IN  
WHITENING CREAM BY ATOMIC ABSORPTION SPECTROSCOPY  
(AAS)**

**Yeti Septiyani**

The rise of skin lightening or whitening *lotions* on the market makes it easy for consumers to get them regardless of whether the whitening cream is safe or not. The use of creams that contain harmful substances needs to be considered. *Lotions* with mercury content will endanger the health of consumers, especially if used in the long term.

The purpose of this study was to determine the mercury levels in the whitening cream which was analysed using Atomic Absorption Spectrophotometry and to asses whether the analysed whitening cream was still within safe limits. The method in searching for sources uses the google scholar *Database* to retrieve article data from libray sources that are relevant to the research topic. To help limit the possibility of bias, manuscript searches were performed using the scanning, skimming, and mapping.

Based on the results of a *Literature Review* from 5 research journals, it can be concluded that there is mercury in the whitening cream that was tested at levels exceeding the spectrophotometry was carried out. It is feared that if the cream is used continuoslyit may become toxic to the body. The requirements for mercury contamination levels are based on BPOM Regulation No. 12 of 2019 concerning contamination in cosmetics and FDA regulations of not more than 1 mg/kg or 1 mg/L (1 bpj). The result of several tests from the five journals showed that the test samples contained mercury exceeding the threshold set by BPOM and FDA. Therefore, it is necessary to carry out a tjorough test of other circulating whitening brands and to educate the public about information abaout the accumulation of mercury in body. The test results from the five journals reviewed were all cream products containing mercury with the lowest mercury concentration of 0,00066 ppm and the highest concentration of 4.529,5 ppm and the product exceeded the required limit.

**Keyword:** Whitening cream, Mercury, Atomic Absorption Spectroscopy