ANALYSIS OF LEAD (Pb) METAL CONTENT IN LIPSTICK SOLD IN E-COMMERCE IN EAST JAVA REGION USING THE GRAPHITE FURNACE - Atomic Absorption Spectroscopy (GF-AAS) METHOD

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

ABSTRACT

Background: *Cosmetics are preparations used on the outside of the human body (epidermis, hair, nails, lips, external genital organs), teeth and oral mucous membranes with the aim of cleaning, perfumed, protecting the body, and maintaining the body in good condition. One of the most widely used cosmetics is lipstick. Lipstick is a lip color packaged in the form of a stick or rod that aims to provide color to the lips so that the face looks healthy and attractive. Heavy metal contamination that is still found in lipstick is lead (Pb). Lead (Pb) heavy metal can be identified quantitatively using an atomic absorption spectrophotometer instrument.* ***Research Objectives:*** *The aim is to determine the levels of lead (Pb) in lipstick sold in e-commerce in the East Java region at a price below Rp. 15,000 using the SSA method, and to compare the Pb levels of lipstick obtained with the limits of Pb heavy metal contamination based on BPOM regulations (<20 mg/kg).* ***Research Method:*** *Pb metal research was conducted using the Graphite Furnace - Atomic Absorption Spectroscopy (GF-AAS) instrument, and dry destruction was carried out according to the procedures stated in the 2011 BPOM RI regarding cosmetic analysis methods.* ***Research results:*** *The results of the research conducted showed that from 5 samples, Pb metal levels were found to exceed the cosmetic safety requirements according to BPOM (> 20 mg / kg). The Pb metal levels in each sample tested were 27 - 94 mg / kg.* ***Conclusion:*** *From the results of the study, it can be concluded that lipstick sold on e-commerce at prices below Rp. 15,000 in the East Java region is not safe to use.*

Keywords: *lipstick, lead heavy metal, atomic absorption spectrophotometry (AAS)*