

ANALISYS OF LEAD (Pb) CONTENT IN UNBRANDED POWDERED COFFEE CIRCULATING IN THE GADANG TRADITIONAL MARKET (MALANG CITY, EAST JAVA PROVINCE) USING THE AAS (ATOMIC ABSORPTION SPECTROPHOMETRY) METHOD

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ABSTRACT

Background: Coffee is a beverage widely consumed by the public due to its distinctive taste and aroma, making it popular among consumers. According to Statistics Indonesia (BPS) of Malang Regency in 2024, the consumption rate of ground coffee is 15.91 kilograms per capita per year. Along with the increasing popularity of ground coffee consumption, food safety aspects need to be considered, particularly the potential contamination by heavy metals such as lead (Pb), which may pose health risks. Lead (Pb) exposure has negative effects on human health because it can affect various vital organs. The nervous system is the organ most vulnerable to the toxic effects of lead (Pb), both in adults and pregnant women. Indonesian National Standard (SNI) 8964:2021 has established a maximum permissible limit of 2.0 mg/kg for lead (Pb) contamination in ground coffee. **Objective:** This study aimed to determine the lead (Pb) levels in unbranded ground coffee sold at Gadang Traditional Market, Malang City, East Java Province. **Research Method:** The analysis was carried out quantitatively using the Atomic Absorption Spectrophotometry (AAS) method. **Results:** The average lead (Pb) concentrations in unbranded ground coffee samples A, B, C, D, and E were 1,317 mg/kg, 1,092 mg/kg, 0,700 mg/kg, 0,701 mg/kg, and 0,9571 mg/kg, respectively. **Conclusion:** Based on the results of this study, the lead (Pb) levels in samples A, B, C, D, and E complied with the maximum limit established by SNI 8964:2021, which is 2,0 mg/kg.

Keywords: Ground Coffee, Lead (Pb), Atomic Absorption Spectrophotometry