THE EFFECT OF FERMENTATION ON ARABICA COFFE (*Coffea arabica* L.) USING PAPAYA SKIN (*Carica papaya*) SKIN ON ORGANOLEPTIC QUALITY, pH AND CAFFEINE CONTENT

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ABSTRACT

Arabica coffee (*Coffea arabica* L.) is a type of coffee that has a distinctive taste and is widely consumed. However, the high caffeine content can cause side effects for some individuals. This study aims to analyze the effect of fermentation using papaya skin (*Carica papaya*) on organoleptic quality, pH and caffeine content in Arabica coffee. The method used is Arabica coffee fermentation with variations in papaya skin concentration of 0%, 20%, 30%, 40%, and 50%. Analysis was carried out on changes in taste, aroma, color, pH, and caffeine content. The results of the study showed that fermentation with papaya skin affected the quality of Arabica coffee. Organoleptic tests showed that fermentation treatment affected the aroma, taste, and color of coffee with the highest score at a concentration of 50% papaya skin. The higher the concentration of papaya skin, the higher the pH value of Arabica coffee, with a range of 4.91-6.7. In addition, fermentation with papaya skin significantly reduced caffeine levels from 19.5 mg/g in the A1 to 2.72 mg/g in the 50% (A5) papaya skin treatment. The caffeine levels obtained still meet the SNI 01-3542-2004 standard, which stipulates that caffeine levels in ground coffee are no more than 2%.

Based on these results, fermentation with papaya skin can be an alternative method to reduce caffeine levels in Arabica coffee while improving its sensory quality.

Keywords*: Arabica coffee, fermentation, papaya skin, caffeine, pH, organoleptic.*