Utilization of Activated Charcoal for Waste Cooking Oil Adsorbent from Coccoa Seed Skin Into Brickets With The Addition of Cassava Peel and Shoe Flower Leaf Adhessive

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ABSTRACT

Indonesia is a tropical country that has abundant cocoa and cassava plants. Cocoa and cassava plants have many benefits. Currently, cocoa and cassava have been widely used but not yet optimal, especially in solid waste. Solid waste of cocoa bean shells and cassava peels can be converted into briquettes, which can be further utilized as environmentally friendly alternative fuels. A briquette is a block of material that can be used as fuel to start and maintain a fireThis study aims to determine the characteristics and the best composition of charcoal briquettes produced from activated charcoal from cocoa bean shells and cassava peels using hibiscus leaf adhesive. The research method used is the experimental method and the physical characteristics of briquettes with three variations in composition from the mass of activated charcoal raw material cocoa bean shells and cassava shells in a ratio of 1:2, 1:1, and 2:1 using hibiscus leaf adhesive with a constant composition of 20%. The method used is carbonization. The results showed that the best composition of briquettes made from cassava peel and activated charcoal of cocoa bean shell was at a ratio of 2:1. Result showed that moisture content was 7.4%, ash content was 6.65%, density was 0.87 g/ cm3, kamba density was 0.5 g/cm3, combustion rate was 0.036 gr/s, and the compressive strength was 2.24 kg/cm2. These characteristics indicate that activated charcoal from cocoa bean shells has the potential to produce briquettes that meet SNI.

***Key Words** : Briquettes, coccoa seed skin, cassava peel, shoe flower leaf*