

***CWB (COB WASTE BIOBRIQUETTE): BIOMASS-BASED
BIOBRIQUETTE INNOVATION WITH THE ADDITION
OF MASK WASTE AS QUALITY ENHANCER AND
LEUCAENA LEUCOCEPHALA AS ADHESIVE***

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ABSTRACT

Indonesia is trying to overcome energy security by switching to renewable energy, one of which is biobriquettes. This research uses corn cob charcoal, coconut shell charcoal, mask waste, and lamtoro leaves to make biomass-based briquettes. There are three variations in the composition of the briquettes used. BB1 has a composition of 27.5% corn cob charcoal and coconut shell charcoal respectively, and 40% lamtoro leaves. BB2 has a composition of corn cob charcoal and coconut shell charcoal of 25% each, and lamtoro leaves of 45%. BB3 has a composition of corn cob charcoal and coconut shell charcoal of 22.5% each, and lamtoro leaves of 50%. The three variations both added 5% mask waste. The parameters tested were moisture content (KA), ash content (A), volatile matter (VM), fixed carbon (FC), heating value (Q), and density (ρ). The best result was obtained by BB1 with KA 1.11%, A 2.95%, VM 9.75%, FC 86.19%, Q 9000 cal/gr, and density 1.2 gr/cm³. These results are in accordance with SNI. This research also conducted techno-economic analysis calculations. The result is that this product is very feasible to be used as a business. The selling price of the product is Rp5000/kg which is much cheaper than the price of kerosene and LPG on the market. The turnover obtained in a year is also more than Rp200,000,000.

Keywords: *Biobriquettes, corn cob charcoal, coconut shell charcoal, leucaena leucocephala, mask waste*