

ABSTRACT

The increasing use and demand for fossil fuels is a serious problem in people's lives. Industrial development and increasing population are the main causes of the scarcity of fossil fuels. Alternative fuels are the solution to deal with scarcity of fossil fuels, one of the renewable alternative fuels is coffee grounds briquettes. The coffee grounds used are blend coffee types with a composition of 40% robusta and 60% arabica originating from EXCELSO cafe. The making of coffee grounds using variations of coffee grounds without a synthesis temperature and coffee grounds with a synthesis temperature of 100⁰C, 150⁰C, 200⁰C and 250⁰C. Then compacted into a briquette sample with a mass of 5 grams using hydraulic pressure. Aiming to find out the calorific value and the burning time of coffee grounds, the tools used are bomb calorimeters and gasification stoves. Based on the result of this study, it can be seen that briquettes using coffee grounds as raw material obtained the best treatment at a synthesis temperature of 250⁰C resulting in a heating value of 6603 cal/g in the bomb calorimeter test. Meanwhile, of the five types of raw material conditions for coffee grounds briquettes in the gasification stove test, the best results were obtained at the treatment at synthesis temperature of 250⁰C resulting in a heating value of 2683 cal/g.

Keywords: *Briquettes, Coffee Grounds, Temperature, Heat.*