

Coconut Shell Charcoal Briquettes Making With Cassava Skin Waste Adhesive

Dr. Bayu Rudiyanto, ST, M. Si.

Intan Rida Agustina

*Study Program of Renewable Energy Engineering
Majoring of Engineering*

ABSTRACT

The need for energy is increasing along with the increasing number of people who use fuel derived from plant and animal fossils. The Indonesian state will make efforts to find alternatives to fossil fuels that are dwindling with the availability of biodiversity sources in the open. One of the alternative energy sources to replace fossil fuels in Indonesia is biomass. Biomass is one of the organic compounds that have similarities with fossil energy derived from living things. The development of biomass as an alternative fuel, one of which is used as briquettes. The purpose of this study is to make and analyze the characteristics of coconut shell briquettes using cassava skin adhesive material by the pyrolysis method. Briquettes are made with a percentage of coconut shell raw materials of 75%, 70%, 65% and cassava leather adhesive materials of 25%, 30%, 35%. The authoring process by the pyrolysis method uses a temperature of 150-200°C for 6-7 hours. The results of the study with the best composition can be seen in the composition of BKS 1 with a ratio of coconut shell raw materials of 75% with cassava skin adhesive material of 25%, namely water content of 5.51%, ash content of 1.50%, calorific value of 6266 cal/gr, density of 1,05 gr/cm³, and combustion rate of 0.071 gr/s.

Keywords: *briquettes, coconut shells, cassava skins*