

***UTILIZATION OF EGG TRAY AND EGGSHELL AS AN ALTERNATIVE FUEL
FOR CHARCOAL BRIQUETTES WITH ADHESIVES OF CASSAVA PEELS***

(Manihot utilissima)

Mochammad Nuruddin, S.T., M.Si. *as Thesis Supervisor.*

Zenka Yanuariestha Hidayat

Study Program of Renewable Energy Engineering

Department of Engineering

ABSTRACT

Farming and livestock industrial activities produce a lot of biomass waste. Utilization of biomass waste is still ineffective because biomass still contains ash content and high moisture content. One of the materials that can be used as raw material for briquettes is waste from unused used egg trays and eggshells as a mixed ingredient that functions to increase the quality of briquettes. Generally, the adhesive used for briquettes is adhesive from tapioca, but tapioca is still a food ingredient. Cassava peel has the potential to be used as an adhesive for briquettes to replace tapioca. This research was conducted to determine the characteristics of briquettes produced from waste egg trays and eggshells, and the feasibility of cassava peels as an adhesive. Briquettes are made with a percentage of cassava skin adhesive, namely 25%, 30%, and 35%. The best composition of briquettes that complied with SNI Briquettes 01-6235-2000 was WCT1 with a percentage of 25% adhesive which resulted in a moisture content of 6.34% and an ash content of 6.16%.

Keywords: Briquette, Egg Tray, Eggshell, Cassava Peels