

**Analysis of Characteristics Teak Wood (*Tectona grandis L.*) Saw Waste  
Briquettes with Biduri Leaf Adhesive (*Calatropis gigantea*).**

*Supervised: Yuli Hananto, S.TP., M.Si.*

***Isfina Unaizatul Zahroya***

*Study Program Renewable Energy Engineering  
Engineering Department*

**ABSTRACT**

*The majority of energy sources in Indonesia are derived from fossil fuels, which are non-renewable. Fossil fuels can be reduced by utilizing biomass energy. This research aims to determine the best composition of teak sawdust waste briquettes using biduri leaf adhesive according to SNI briquette standards No. 01/6235/2000. The research was conducted through several stages: raw material preparation, carbonization process of teak sawdust waste, preparation of biduri leaf adhesive, mixing of materials, briquette molding, briquette drying, and briquette quality testing. Three compositions of raw material and adhesive were made: 65% : 35%, 60% : 40%, and 55% : 45%. The briquette variation that produced the best result was variation KDJB 1 with a composition of 65% teak sawdust waste and 35% biduri leaf adhesive, resulting in a moisture content of 3.960%, ash content of 6.353%, calorific value of 5011.6 cal/g, density of 1.113 g/cm<sup>3</sup>, bulk density of 0.321 g/cm<sup>3</sup>, and a combustion rate of 0.00428 g/s.*

**Key Word :** *briquettes, teak wood, biduri leaf adhesive.*