

## **ABSTRACT**

*Garbage is the main problem that occurs in the surrounding environment, and the most dominant is organic waste. To reduce this organic waste, of course, further handling is needed, or make this organic waste into something useful, one of which is to use organic waste into fuel. The research that will be done is utilizing organic waste in the form of vegetable waste as the raw material of briquette making which in the process there is a variation in the composition of additives, and variations in the initial drying temperature. This research used additives in the form of newspaper as an additive and tapioca flour as an adhesive material. Variations in the composition of additives will be done which is 10%, 20%, 30%, and 40% of the mass of vegetable waste briquettes. Previously, the drying process of raw materials (vegetable waste) with variations in drying temperature composition is 100°C, 125°C, and 150°C. This study used calorimeter bomb tool and WBT (Water Boiling Test) method using gasification stove for organic waste briquette testing process and best calorific value result with calorimeter bomb testing of 3757 calorimeter at initial drying 100°C additive addition 40%, while the best calorific value with WBT method testing is 516.88 cal/gr at initial drying 150°C additive addition 10%.*

**Keywords:** *organic waste, biomass briquettes, additives, bomb calorimeters, gasification stoves.*