

ABSTRACT

Non-organic waste is a serious problem because it cannot be biodegraded by nature. The non-organic waste used to make briquettes comes from baby diapers, sanitary napkins, and toilet paper because they are commonly found but rarely used. The waste is also dry, so it can be used as fuel by making briquettes. Briquettes are an alternative fuel. Lignocellulose materials were used from rice straw, corn cobs, and coconut husks because they are rich in energy so that they can be a mixture of briquettes. A total of 15 types of briquettes were made. 25 grams of briquettes were burned using updraft and downdraft gasifier stoves to obtain trigger time, flame duration, and ash mass. A bomb calorimeter was used to obtain the calorific value of each briquette. The highest calorific value of 5203 cal/g came from the TT briquette variation. The results of this study show that the briquette variations that meet the SNI standard by burning briquettes using an updraft gasifier stove are PW, TT, TT-JP, TT-TJ, and TJ briquettes. However, for burning with a downdraft gasifier stove, only TT briquettes.

Keywords : *briquettes, waste, baby diapers, sanitary napkins, toilet paper, rice straw, corn cob, coconut husk, gasifier stove, bomb calorimeter*