

ABSTRACT

The fossil energy utilization in Indonesia is increasing. Sources of fossil energy if used continuously will be exhausted, therefore we must seek alternative energy. One of them is organic waste that can be used as a briquette fuel. The base material for making briquette comes from organic waste that is easy to find and cheaper price. This research makes briquettes with organic waste with an additive of coconut shell additives and rice husk, the process of charcoal activation by adding the chemical NaOH to be used as activated charcoal. Methods of research conducted with the mixing of organic waste and additives using hydraulic pressure on the sample briquette with test variations ratio of mass comparison as much as 5 is 1.5:1.5, 1.75:1.25, 2:1, 2.25:0.75, 2.5:0.5. This test is done to find out the heat value. This test is done using a single tool, which is a Calorimeter Bomb. From the results of the test the highest heat value of the rice husk additive with a variation of the ratio of 2:1 with a heat value 4328 cal/GR, while the highest Calor value on coconut shell Charcoal Additives 1.5:1.5 5047 cal/Gr. From the results of coconut shell testing influence on the composition of more and more coconut shell then the value of the heat is higher, the temperature has no effect in testing the value of the heat, and the amount of organic waste mass is very influential to increase the value of the heat. From the test result rice husk influence against the temperature of the high heat value at 600 °c by comparison ratio SO 2.5 gr + SK 0.5 gr with the value of heat is 3945 cal/Gr. If the temperature is raised to more than 600 °c then the value of the heat will be small, and if the temperature is lowered then the heat value is higher than the temperature in the raise. Temperature has no effect when testing the heat value.

Keywords: briquette, coconut shell, rice husk, organic waste, activated charcoal.

