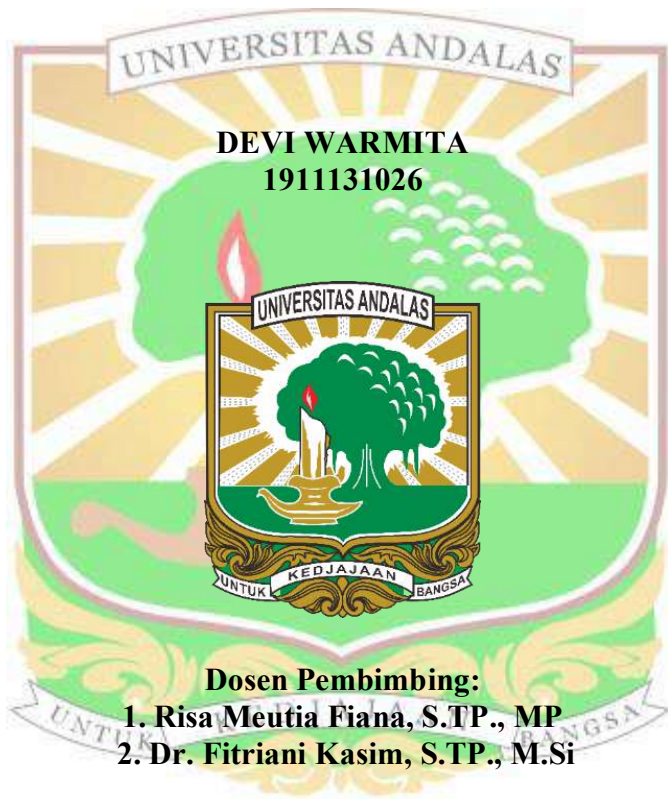


**KARAKTERISTIK BIOBRIKET DARI LIMBAH
BAGLOG JAMUR TIRAM DENGAN VARIASI
KONSENTRASI PEREKAT TEPUNG SAGU**



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Karakteristik Biobriket dari Limbah *Baglog* Jamur Tiram dengan Variasi Konsentrasi Perekat Tepung Sagu

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ABSTRAK

Biobriket adalah sumber energi yang berasal dari sumber daya alam terbarukan yang berpotensi digunakan untuk bahan bakar alternatif. Biobriket dapat dibuat dari limbah dari biomassa organik, seperti limbah kayu, limbah perkebunan, limbah pertanian, limbah hutan, limbah rumah tangga, dan komponen organik dari industri. Penelitian tentang biobriket dari biomassa limbah *baglog* jamur tiram telah dilakukan. Penelitian ini bertujuan untuk mengetahui pengaruh variasi konsentrasi perekat tepung sagu terhadap karakteristik biobriket dari limbah *baglog* jamur tiram. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan 5 perlakuan dan 3 ulangan. Data yang diperoleh dianalisis menggunakan ANOVA (*Analysis of Variance*), jika berbeda nyata dilanjutkan dengan uji DNMR (*Duncan's New Multiple Range Test*) pada taraf nyata 5%. Hasil penelitian menunjukkan, perlakuan E (80% arang limbah *baglog*:20% perekat tepung sagu) sebagai perlakuan terbaik yang memberikan nilai rata-rata hasil analisis kadar air sebesar 5,89%, kadar abu 24,40%, kadar zat menguap 45,93%, kadar karbon terikat 23,78%, nilai kalor 4229,53 kal/g, densitas 0,490 g/cm³, kuat tekan 6,02 kg/cm², dan laju pembakaran 0,333 g/detik. Dari hasil perlakuan terbaik didapatkan nilai tambah limbah *baglog* jamur tiram sebagai bahan baku biobriket berdasarkan metode Hayami yaitu Rp 5.978/kg dengan rasio nilai tambah sebesar 43,79%.

Kata kunci: biobriket; limbah *baglog*; nilai tambah; perekat tepung sagu

Characteristics of Biobriquettes from Oyster Mushroom Baglog Waste with Variations in Concentration of Sago Starch Adhesive

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ABSTRACT

Biobriquettes are an energy source derived from renewable natural resources that can potentially be used for alternative fuels. Biobriquettes can be made from waste from organic biomass, such as wood waste, plantation waste, agricultural waste, forest waste, household waste, and organic components from industry. Research on biobriquettes from oyster mushroom baglog waste biomass has been conducted. This study aims to determine the effect of variations in sago starch adhesive concentration on the characteristics of biobriquettes from oyster mushroom baglog waste. This study used a completely randomized design (CRD) with 5 treatments and 3 replications. The data obtained were analyzed using ANOVA (Analysis of Variance), if significantly different followed by DNMRT (Duncan's New Multiple Range Test) at significance level of 5%. The results showed that treatment E (80% baglog waste charcoal: 20% sago starch adhesive) was the best treatment that gave an average value of the analysis of moisture content of 5.89%, ash content 24.40%, volatile matter content 45.93%, fixed carbon content 23.78%, calorific value 4229.53 cal/g, density 0.490 g/cm³, compressive strength 6.02 kg/cm², and combustion rate of 0.333 g/sec. From the results of the best treatment, the added value of oyster mushroom baglog waste as raw material for biobriquettes based on the Hayami method is Rp 5.978/kg with an added value ratio of 43.79%.

Keywords: baglog waste; biobriquettes; sago starch adhesive; value-added