

Pembuatan Biokomposit Menggunakan Jamur Pelapuk Putih *Auricularia auricula* dan *Lentinus squarrosulus* serta Bahan Lignoselulosik Serbuk Gergaji Kayu dan Tatal Kayu

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Abstract	<p>Abstract Biocomposite is a composite material that uses natural materials that contain lignocellulose. The manufacture of composite boards by utilizing agricultural waste will get added value, namely reducing the impact on the environment. Biocomposites that utilize the mycelium of white rot fungi, namely <i>Auricularia auricula</i> and <i>Lentinus squarrosulus</i> as binders and lignocellulosic materials such as sawdust and wood chips which contain the main components of cellulose, hemicellulose, and lignin which are good for fungal growth. The purpose of this study was to determine the effect of the type of white rot fungus with lignocellulosic material composition and to determine the optimal type of fungus and lignocellulosic material on the manufacture of biocomposites. This study used an experimental method with a completely randomized design with 10 treatments with 3 replications, the treatment was carried out on lignocellulosic materials in the form of sawdust and wood chips with a composition (25%, 50%, 75%, and 100%). The research variables consisted of independent variables in the form of white rot fungi and wood species, while the variable was the quality of the resulting biocomposite material. The parameters measured in this study were the main parameters, namely fungal mycelium growth, composite density, composite air content, composite thickness expansion, modulus of elasticity and modulus of fracture of the composite. The supporting parameters are composite biodegradability. The results showed that the types of fungi and lignocellulosic materials had an effect on the manufacture of composite boards. The best fungus used in the manufacture of biocomposites is <i>L. squarrosulus</i> and the best lignocellulosic material used is a mixture of the two lignocellulosic materials that is 25% sawdust + 75% wood chips. Keywords: biocomposite, lignocellulosic material, white rot fungus</p>
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