Effectiveness of Rice Straw and Coffee Skin Waste as Environmentally Friendly Biofoam

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Abstract

Food products currently in circulation are not multi-purpose containers and packaging. Food packaging and containers have the main goal of keeping food safe for consumption. Styrene pellets treated with benzene are a source of danger to styrofoam. If benzene enters the body, it can cause a number of serious diseases whose symptoms are not immediately visible. Other packaging materials that are more environmentally friendly are used as raw materials for making biofoam or biodegradable foam, namely agricultural products that are in abundant supply and the raw materials used contain starch and cellulose. Quasi-experimental research design with a quasi-experimental design. Data analysis of the One Way Anova Test and Bonffreroni Test showed the average percentage of water absorption capacity and tensile strength of biofoam at concentrations of 50%: 50%, 70%: 30%, and 30%: 70%. One Way Anova Test Results obtained ρ value of water absorption capacity 0.000 < 0.05. and the tensile strength obtained ρ value 0.004 <0.05 so that there are significant differences in various concentrations and the Bonfferoni Test Results showed that the most effective concentration for water absorption and tensile strength was at a concentration of 30%: 70%. It is hoped that further research needs to be carried out using other methods to produce biodegradable foam with better quality regarding the physical and mechanical properties of the biofoam produced.

Keywords

Biofoam, Rice Straw, Coffee Skin, Water Absorption, Tensile Strength