Karakteristik Fisik dan Mekanis *Biodegradable Foam* Berbasis Pati garut Dengan Penambahan Selulosa Kulit Durian (*Characterization of Physical and Mechanical Properties Biodegradable Foam from Arrowroot Starch with Variations of Addition Cellulose Durian Rind*)

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ABSTRACT

Biodegradable Foam (biofoam) is a type of bioplastic to be used as an alternative packaging to replace styrofoam that is safe and environmentally friendly. This study aims to determine the the effect of adding celullose durian rind on the characteristics of biofoam made from Arrowroot Starch and find best treatment from the formulation to be obtained. The stages of making Biodegradable Foam begin with making durian rind flour, durian rind cellulose extraction, and Biodegradable Foam using the baking process method with a printing temperature of 100°C, and a printing time of 4 hours. In the manufacture of biofoam , applied variations celullose content added was 0%, 1%, 2%, 3%, 4%, 5%. 6% and 7%. The results of biofoam were characterized based on density, water absorption, bursting strenght, thickness and biodegradation. Based on the research results, it is known that biofoam is close to commercial biofoam standards, namely biofoam with an variation 2% celullose content with a bursting strenght value of 1.38 N/mm2, density of 0,23g/cm^3,water absorption capacity of 22,241%, thikness value of 11,24 mm and decomposition power of 46,30% with an estimated decomposition time of 30 days.

***Keywords** : Biodegradable foam, Cellulose, Durian rind, Arrowroot starch*