

## **PEMANFAATAN KULIT PISANG RAJA (*Musasapientum*) DAN GLISEROL DARI MINYAK JELANTAH SEBAGAI PLASTIZER PADA PEMBUATAN PLASTIK *BIODEGRADABLE***

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**Abstrak** –Utilization the bark of banana as the manufacture of plastic materials is one way to reduce plastic waste. Starch content from the bark of banana skin can be made to biodegradable plastic. Intention of this research is to make the biodegradable plastic from waste the peel plantains and also make the biodegradable plastic that enviromental friendliness. In order to repair the characteristic film, it needs additive. The additive is glycerin as plasticizer. This research was conducted with several stages, namely the extraction of starch the peel platains the manufacture of biodegradable plastic tensile strength test, swelling mean value (its resistance toward water), the thickness of the plastic and also biodegradation tests with soil and EM4 (Effective Microorganism). Variations in the treatment of two factors, namely the amount of Glycerin and temperature stirring. The amount of plasticizer used is 50 ml, 100 ml, 150 ml and 200 ml, 250 ml, temperature stirring used 80 °C and 100 °C. variation of the treatments used The results showed that The highest value of tensile strength is found at sample with addition 50 ml of Glycerin that is 0.0107 MPa temperature stirring 80 °C, the average thickness of 0.2 mm, swelling mean value (its resistance toward water) is owned by the biodegradable plastic with the addition 50 ml of glycerine that is 8.19% at temperature stirring 80 °C. The most rapidly degrade sample is the sample with the addition 250 ml of Glycerin.

**Key words:** *Biodegradable, Peel Plantains, Swelling, Tensile Strenght, Glycerin*