

ABSTRACT

Utilization of Potato (*Solanum tuberosum*) As Basic Materials Formation

Bioplasti

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Biodegradable plastics can be synthesized from potato starch and glycerol. To determine the optimal conditions the weight variation of starch (2,3,4,5,6 g), variations in glycerol (1, 1.5, 2, 2.5, 3 mL) and the variation of CPO (0.2, 0.4,0.6, 0.8, and 1 mL). It has been tested on the experimental results obtained on the weight of starch 5 g, 2 mL of glycerol concentration, resulting optimum tensile strength is 33.91 MPa to 61.93% elongation. While on biodegradable plastics in getting the condition where the addition of 1 mL CPO required tensile strength of 4.9 MPa and elongation 2.32%. The wide peaks around 3400-760 cm⁻¹ indicates the OH group, C = O and CH of cellulose pati.Photo SEM showed that test on glycerol is not hollow, while the CPO amount of amylose has not been broken and many cavities. It can be concluded biodegradation test results reduced the amount of plastic that is comparable to the old burial ground.

Keywords: Plastic, biodegradable, starch, potato.

