

ABSTRAK

Penggunaan plastik menyebabkan pencemaran lingkungan karena sifatnya yang non biodegradabel. Penelitian plastik degradabel telah dilakukan dengan metode blending. Penelitian ini bertujuan untuk mengetahui karakteristik serta sifat fisik dan mekanik plastik biodegradable dari pati sukun dengan penambahan gliserol. Variasi gliserol yang digunakan yaitu 0; 30; dan 45%. Hasil penelitian menunjukkan bahwa interaksi pati dan gliserol berpengaruh pada sifat fisik meliputi densitas (0,1; 0,14; 0,17 g/cm³), higroskopisitas (1,6; 19,73; 37,4%), kelarutan dalam air (9,65; 37,4; 87,35%), WVTR (1,4; 1,52; 1,53 g/cm².jam) dan sifat mekanik meliputi kuat tarik (22,6118; 2,3130; 1,1718 MPa) dan elongasi (2,313; 14,4086; 9,3243%) serta biodegradasi pada bioplastik.

Kata kunci: Elongasi, Kuat tarik, Pati sukun, Plastik biodegradabel



ABSTRACT

The use of plastic causes environmental pollution because it is non-biodegradable. Research on degradable plastics has been carried out using the blending method. This studied aims to determine the characteristics and physical and mechanical properties of biodegradable plastic from breadfruit starch with the addition of glycerol. The variation of glycerol used was 0; 30; and 45%. The results showed that the interaction of starch and glycerol had an effect on physical properties including density (0.13; 0.14; 0.17 g/cm³), hygrosopicity (1.6; 19.73; 37,4%), solubility in water (9.65; 37.4; 87.35%), WVTR (1.4; 1.52; 1.53 g / cm².hours) and mechanical properties involve tensile strength (22.6118; 2.3130; 1.1718 MPa) and elongation (2.313; 14.4086; 9.3243%) and biodegradation in bioplastics.

Keywords: *Biodegradable plastics, Breadfruit starch, Elongation, Tensile strength*

