

Synthesis Electrolyte Membrane Of Cellulose Acetate From *Pandanus tectorius* Leaves

by Endang Widjajanti LFX, Marfuatun

ABSTRACT

This research aim to determine optimum condition of cellulose acetate (CA) synthesis obtained from *Pandanus tectorius* leaves, to know the effect of lithium salt composition and plasticizers to conductivity and characteristic of CA membrane. Research subject was CA membrane, while the object were membrane conductivity and its characters which were looked on FTIR spectra, and morphology. Membrane was made by casting polymer solution method. The result show that synthesis optimum condition were in 1 hours swelling time and 1 mL catalyst volume. The highest acetyl percentage gained was 38,3145% which means the product was cellulose diacetate. Higher amount of lithium salt composition resulted in higher conductivity in which the highest conductivity was $0,0295 \text{ S cm}^{-1}$ gained at 35%. Plasticizer tend to increase membrane conductivity, and the maximum value was got in 25%. The membrane characters were homogeny and the reactants interact by physical connectivity.

Kata Kunci: *electrolyte membrane, Pandanus tectorius, character, conductivity*