

CELLULOSE EXTRACTION FROM PINEAPPLE LEAVES TO PRODUCE DIELECTRIC MATERIALS



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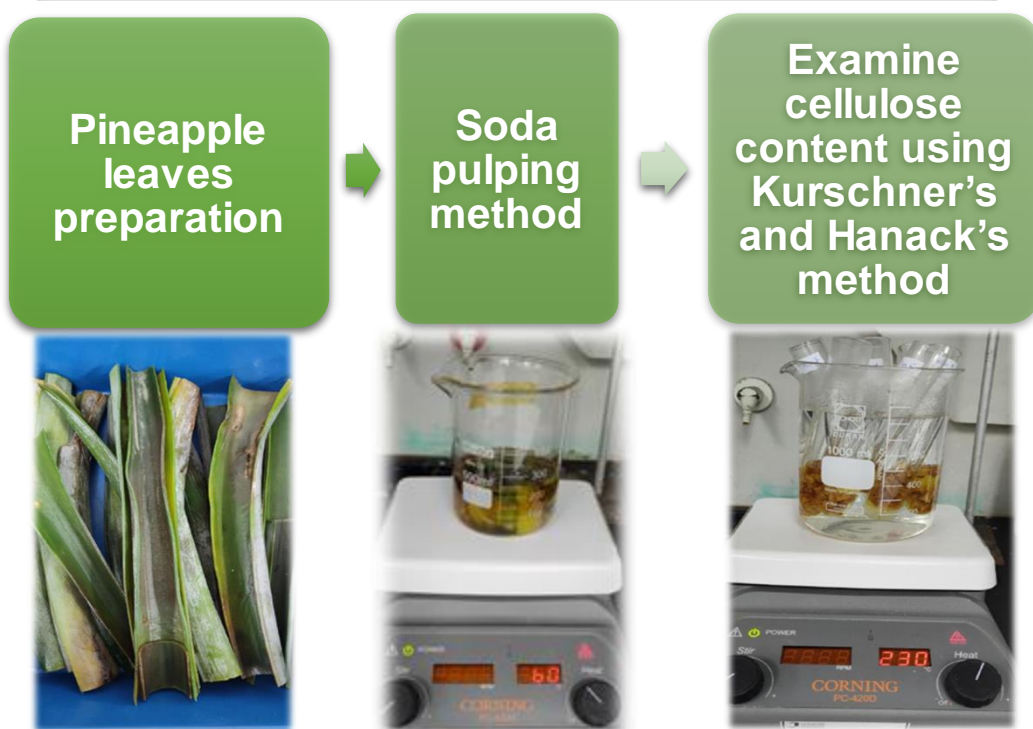
Introduction

Cellulose is extracted using soda pulping method and it is known as the simplest method. The chemical used for soda pulping in this study is sodium hydroxide (NaOH). After that, the cellulose content was analyzed using Kurschner's and Hanack's method. Then, experiment and analysis was done to determine the best condition for soda pulping process based on four factors which are ratio of solid to solution, soda concentration, temperature and pulping time. From this study, the best condition for soda pulping is at temperature 60°C, 75 minutes pulping time, 5 wt. % of soda concentration and ratio of solid to solution is 1:5 which resulted in 34.5% of cellulose content.

Novelty

Novelty of this research is the application of soda pulping for preparation of environmental friendly dielectric material.

Cellulose Extraction Process



Result

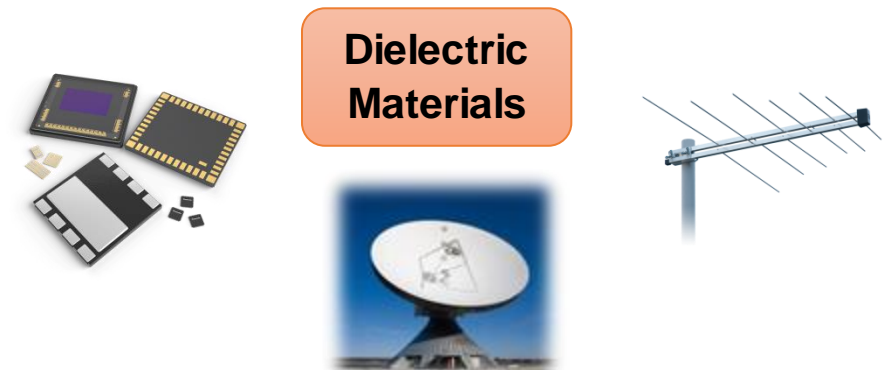


Pulping Time (min)	15	75
Average Weight (g)	0.7760	0.6555
Cellulose Content (%)	22.4	34.5

Marketability

Soda Pulping	Mechanical Pulping
Sodium hydroxide as raw material	No raw material
Hotplate for heating	Require many equipments (refiners, grinder)
Total Cost: RM120	Total Cost: 6075

Usefulness



Benefits

