



Zuraida Ahmad

SAGO

(Metroxylon Rottb)

And Its Applications

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Sago **(*Metroxylan Rottb*)** **and Its Applications**

Editor
Zuraida Ahmad



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Chapter 10

Preliminary Study on Superabsorbent Polymer Hydrogel from Sago Starch

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Preview. In eliminating many problems associated with environment, the superabsorbent polymer hydrogel (SAPH) consisted of natural based materials were produced. This hydrogel is prepared from sago starch via graft co-polymerization of polyacrylonitrile (PAN) onto sago starch (SS) in aqueous solution. The PAN grafted copolymer was obtained via redox initiator system of ammonium persulphate (APS) and in the presence of N,N'-methylenebisacrylamide (N-MBA) cross-linking agent. This new approach showed a promising production of SAPH produced from local available resource, namely sago, which contribute to greener environment and reduced global warming. This chapter focuses on characterization of SAPH including XRD analysis, FTIR analysis and SEM analysis.

Introduction

Superabsorbent hydrogels are hydrophilic polymers that can absorb and retain aqueous fluids in large quantities, with the absorbed water are hard to remove even under pressure [1,2]. Thus, superabsorbent gels have been defined as polymeric materials that exhibit the ability of swelling in water and retaining a significant fraction (>20%)