

## Research Highlights

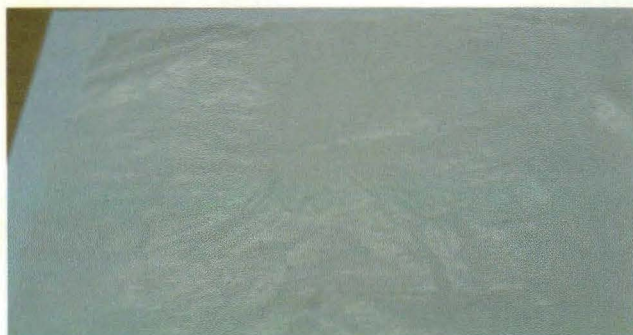


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# THE POTENTIAL OF NATURAL WASTE FOR PRODUCTION OF ENVIRONMENTAL FRIENDLY BIODEGRADABLE FILMS

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A Biodegradable Film



Environmental pollution



Pollution at Sea

**AWARDS: ITEX 09 GOLD MEDAL SPECIAL AWARDS (BEST INVENTION IN ENVIRONMENT INNOVATION-HENRY GOH AWARD)**

Plastic in the environment is regarded to be hazard, since the material is inert. Nondegradable plastics accumulate at the rate of 25 million tonnes per year. According to an estimate more than 100 million tonnes of plastic is produced every year all over the world. In an effort to protect the environment, biodegradable film has been develop from natural waste for packaging application.

The films were characterized through Fourier transform infrared (FTIR), thermo gravimetric analysis (TGA), differential scanning calorimetry (DSC) and atomic force microscopy (AFM). Thus, the concept of biodegradability enjoys both user-friendly and eco-friendly attributes, and raw materials are essentially derived from either replenishable agricultural feedstock and therefore it capitalizes on natural resource conservation with an underpinning on environmentally friendly and safe atmosphere.