

Transformation of Low-cost Starch towards Bioplastic & their Characterization †

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Abstract: The diversity and ubiquity of plastic products substantially testify to the versatility of the special class of engineering materials known as polymers. However, the non-biodegradability of these petrochemical-based materials has been a source of environmental concerns and hence, the driving force in the search for 'green' alternatives for which starch remains the front liner. Starch is a natural biopolymer consisting predominantly of two polymer types of glucose, namely amylose and amylopectin. The advantages of starch for plastic products include its renewability, low cost, and biodegradability. So low-cost starch available like potato, corn, agar & their combination will be used to produce bio-plastic using a set of procedures in the lab. Further, its characterization will be done by carrying out tests like strength, heat resistance, solubility, and degradability.

Keywords: bioplastic; starch; environment friendly; bio-degradable; bio-polymer.

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Conflicts of Interest

The authors declare no conflict of interest.