

Preparation of BioPlastics by Using Carrageenan and Banana Peels [†]

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Abstract: Non-degradable plastic is one of the major environmental problems. Due to the non-degradability of plastic, they act as one of the major pollutants in the world. As a solution for this, we can use biodegradable and edible plastic. Here we have made bioplastic with the help of banana peels and red seaweed Carrageenan. NaOH, HCl, glycerin, sodium metabisulphite are used with banana peels. KOH, chlorine, sodium thiosulphate, ascorbic acid, starch, and glycerin are used with red seaweed, Carrageenan. Glycerin acts as the primary plasticizer by increasing the tensile strength. These plastics can be used to produce edible lunch sheets, spoons, plates, etc. Moreover, aloe vera, turmeric, natural colors, and different flavors are added. Aloe vera preserves the moisture of food; turmeric acts as an antimicrobial agent, different colors and flavors increase the appetite. Using thin bioplastic, we can make small water balls consumed with water. This method of making bioplastic can act as a promising solution for plastic pollution.

Keywords: bioplastic; Carrageenan; biodegradable; tensile strength; edible.

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Conflicts of Interest

The funders had no role in the design of the study; in the collection, analyses on the interpretation of data, in the confining of the manuscript, or in the decision of publishing the result.