Biodegradable Plastic Made Up by Tacca Leontopetaloides Starch

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The plastics that we are using nowadays, especially disposable plastics, are mainly recycled from used plastic products. Some chemicals present in these used plastic products can contaminate food, and be absorbed into the human body, can cause cancer in the long run. Moreover, many types of plastic have a decomposition time of hundreds of years. Therefore, I researched the possibility of developing biodegradable packaging and making a film to preserve fruit. The project focuses on the research of the combination of tacca leontopetaloides starch and citrus hystrix extracts, green tea leaves, betel leaves added by gelatin, glycerol and water. The objective is to make up the protection films for fruit protection that are able to prevent and kill bacteria, and mold resistant; to make up plastic films with applications in manufacturing single-use products like bowls, plates, etc., which can be developed to make packaging bags that are biodegradable, environmentally-friendly, and harmless to humans. Through many experiments, the formula was found as 6 g of tacca leontopetaloides starch, 2 ml of glycerol, 1 g of gelatin / 5 g of tacca leontopetaloides fiber and 100 ml of water. The research successfully find out the flow chart for the production of plastic film from tacca leontopetal suspended, create a plastic preservation film and the resulted plastic can be used to make cups, bowls or plates…

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