A New Concept of ECO-Friendly Material That Can Replace Plastic

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Nowadays, the world is producing twice as much plastic waste as two decades ago, with the bulk of it ending up in landfill, incinerated, or leaking into the environment. Only 9% were successfully recycled, according to a new OECD report. People's dependence on plastics has become more serious. Also, during COVID-19, the number of plastic packaging has led to overuse and waste. Its slow decomposition increases the problem of excessive plastic, which harms the environment. In the procedure, we used tapioca starch to make a natural form of packaging material and to form plates, cups, and spoons. Data were analyzed by one experiment: testing the tensile of tapioca solution material piece. What is Tapioca starch? And why did we choose this starch especially? Tapioca starch is a gluten-free flour that comes from the cassava plant. You can use it to thicken soups, or you can swap out wheat flour with tapioca for gluten-free baking, in addition, it has a lot of health benefits so it will be a good choice for our experience because we found that we can make this material with tapioca starch. We decided to improve this material into environmentally friendly packaging that can replace plastic packaging. This material can decompose in soil without any adverse effects on it, for the cost of it is appropriate for example: In 2022, the approximate price range for Brazil Tapioca is between US$ 0.73 and US$ 0.74 per pound (lb). or In 2022, the approximate price range for China Tapioca is between US$ 0.82 and US$ 0.64 per pound (lb).

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