Musa paradisiaca Peelings an Ingredient that Strengthens the Biodegradable Plastic

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This project is important due to its nature of global impact since it presents an alternative do reduce contamination worldwide. The problem question in this study is, are the peelings of Musa paradisiaca an ingredient to add resistance to our homemade biodegradable plastic? The hypothesis under study is that the peelings of Musa paradisiaca give more resistance to homemade biodegradable plastic. In order to perform this study a plastic was made from a homemade biodegradable solution. Five samples of a homemade plastic using biodegradable solution were used as control and five samples of homemade biodegradable plastic using peelings from Musa paradisiaca were used as the experimental group. After both samples were prepared, various tests were performed such as water resistance, heat resistance and elasticity applying force. During the resistant to heat test both plastics observed became black in color, and got burned, but the plastic that didn't contain Musa paradisiaca was fragmented into pieces. In the water resistance test both samples became fragile but the plastic containing Musa paradisiaca was more resistant than the sample without it because this last one desintegrated. During the elasticity test, the plastic with Musa paradisiaca was observed to stretch 0.2 cm without tearing, which is a bit more that the plastic without Musa paradisiaca. After the tests it was determined that the biodegradable plastic which contained Musa paradisiaca peelings was more resistant in comparison with a plastic that didn't contain this peelings. Thus it was demonstrated that the hypothesis under this study was accepted.

Awards Won: