

A J Keever
Bioplastic to Dye For

The purpose of this project was to test whether or not adding food coloring to bioplastic would change the strength. I predicted that if I added food coloring to the bioplastic while it's being made then it would not change the strength because it would not change the monomers that create the long chain of polymers.

To test my hypothesis I first created two types of bioplastic using tapioca and corn starches. Each type of plastic had three samples with no food coloring, three with 2 drops of coloring and three with 12 drops of coloring. After each sample cured for 24 hours I began the testing process. For the experiment I wrapped one end of a string around the center of the sample and the other end around the hook of a digital fish scale. While a volunteer held both ends of the sample tightly, I slowly pulled up on the fish scale until the sample snapped. The pounds of pressure were recorded for each sample and used to find the averages of each test.

After studying the results I have concluded that my hypothesis was incorrect. The data collected shows that the more drops I added the stronger the plastic became.