An Analysis of the Effect of Trihydric Alcohol, Propane 1,2,3-triol (Glycerol), on the Strength and Pliability of Bio-engineered Fabric

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Proving that it was possible to grow a biodegradable fabric that would not harm the environment in the production, or the disposal stage, was extraordinary. Improving the fabric and making stronger and additionally flexible is quite another feat. In order for this bioengineered fabric to become strong enough for consumer use, it became necessary to find an additive that would increase its strength and flexibility. It was thought that glycerol would be an appropriate additive to the recipe for growing the fabric, while still maintaining its environmentally friendly properties. Glycerol is easily dissolved in water and has a high boiling point. It also has preservative, as well as environmentally friendly properties that make it a good candidate for this fabric. Following are the steps that were used to produce the new fabric. * Brew Kombucha tea as normal, dividing the tea into two vessels. * In one vessel include 1/2 liter of glycerol. * Allow fabric to grow as normal. * When taking fabric out to dry, rub half of glycerol free fabric with glycerol. * Dye and cut fabric as needed. * Test fabric for strength and flexibility comparing to fabric from old recipe. This experiment proved that the addition of glycerol to bioengineered fabric mixture, made the fabric stronger, as well as flexible, while still maintaining environmental stability.

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