# Identifying which Natural Materials Can Be Used to Create an Environmentally Friendly Sanitary Pad

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The purpose of this experiment is to recreate the standard degradable sanitary pad with organic biodegradable ingredients to incorporate a more environmentally friendly alternative while upholding its absorbency through multiple sustainability tests. If multiple natural ingredients are used to recreate the standard degradable sanitary pad to create an economically friendly alternative, then the cotton-based pad will have the best longevity and sustainability because organic cotton is most likely to withhold longevity of the padding due to its long absorbency properties. Bamboo, banana, and cotton fibers were broken down using Magnesium Hydroxide (MgHO) to create a re-washed pulpy mixture, which was then shifted, molded, and condensed into thick padding that was tested using alkaline water to define its longevity and sustainability replicating the absorbency of a standard sanitary pad. Results prove that the cotton-based fiber pad lasted the longest at an average of 5.5 hours and absorbed the most alkaline water at an average of 11 mL. In conclusion, the alternate hypothesis was proven correct. This research can be used to advance the production of other materials using synthetic fibers.

**Awards Won:**