Year Two--Time of the Month: Bad for the Environment?

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Commercially used sanitary napkins are dangerous for women and detrimental to the environment because it is contains harmful chemicals such as furan and dioxin. These chemical toxins are unsafe for women and their reproductive systems. Due to its slow degradation the superabsorbent polymers in the pad's core could take almost 500 years to degrade. The objective of this study is to develop a prototype of a plant-based, organic sanitary napkin to be a competitor against commercially-used sanitary napkins, acting as a safer option for women and the environment. My design only contains hydroentangled fabric and ground chia seeds. In order to get the validity of the design and see if the design is marketable I went through four phases; Phase One: testing the function of the pad, Phase Two: digitally designing the pad using paint 3-D, Phase Three: creating the pad using a Sono-bond machine and sewing machine, and Phase Four: conducting market research. Based on the incline wicking test Chia seeds, were proven highly absorbent, based on the Kirby-Bauer Test they were also shown to be yeast resistant. Chia seeds also aid in the degradation proven using the decomposition simulation. The sanitary pad design was improved from the first-year project design by using new materials such as[SS1] hydroentangled fabric and the Sono-bond machine, this allowed a more sophisticated and appealing look to compliment a more environmentally plant based product. The prototype was an overall success as it was absorbent, antimicrobial, and biodegradable.

Awards Won: