

WIU CENTENNIAL HONORS COLLEGE
Thomas E. Helm Undergraduate Research Day 2023

Abstract

Poster

Major: Biology

Faculty Mentor(s): Tsai Shu-Hui

Absorbency of Sphagnum Moss and Corn Products

Olivia Luzadder

Laura Snyder

Jessica Storm

The use of natural materials is both beneficial to the consumer and the environment. When choosing natural materials for use in a feminine hygiene pad, absorbency and accessibility were contributing factors. Sphagnum moss is well known in gardening for its ability to hold large volumes of moisture, it can hold up to 25 times its own weight in water[3]. Not only does sphagnum moss have this extreme absorbent ability, this moss also has antibacterial properties. In times past, this ability to prevent bacteria and fungi from growing made dried sphagnum useful as a dressing for wounds suffered on the battlefield. It was put to this use in World War I[3]. Corn is a crop that is used in a variety of ways around the world, and also has easy accessibility to most individuals. Corn can actually be a soft and absorbent material when ground up. Additionally, products such as cornstarch can be a great binding agent that has an adhesive strength that is tough enough to keep things held together, while still offering a smooth feel [2]. Thus, dead (dried) sphagnum moss, cornmeal and cornstarch will be examined as possible materials to be used in feminine hygiene pads as a safer, sustainable, and environmentally kinder alternative to typical plastic products and other toxic non biodegradable ingredients being used in the majority of feminine hygiene products today.