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RETHINK II: Kombucha Shoes for Scarlett and Rhett

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Keywords: sustainability, textile innovation, non-apparel 3-D design

Shoes Measurements (length x width x depth): 10.6"x3.7"x2.8" for Scarlett; 11.8"x4.5x2.8" for Rhett

Inspired by the concept "sustainability" and Suzanne Lee's celluloid clothing, the part of her project called BioCouture (Llanos, 2012), we further challenged ourselves to rethink what constitutes sustainable consumer products in a world of increasingly stressed natural resources. We explored the innovative way to develop renewable biocomposite materials, leather-like nonwoven fabrics, which can be used for daily apparel and footwear products for the betterment of people and the planet. The cellulose fiber mats formed by bacteria and yeast in a fermenting green tea can be produced without any synthetic process or chemical materials. Our kombucha shoes can be an alternate future where we move to a cradle-to-cradle system, instead of relying on materials derived from unsustainable sources (McDonough & Braungart, 2002). It is crucial for our challenge to transmit textile innovation that promotes our sustainable lifestyle.

The outcome of our innovative design efforts is presented by creating aesthetically pleasing, biodegradable shoes for Scarlett and Rhett, leading characters from *Gone with the Wind*, one of the most famous American fiction bestsellers published in the 1930s. A variety of 1930s' stylish shoes were explored focusing on decorative perforations and diverse tone of shoes. Through the journey of our material development and design exploration, the RETHINK II piece provides a promising future of this biodegradable material as an alternate suitable for women's and men's casual leather shoes.

Once design sketches were finalized, the shoes were created using Oxford and Loafer style patterns under the consideration of simple pattern development using zero waste approach. In addition, the cellulose fiber mats were naturally dyed for different colors by considering the first impression of Scarlett and Rhett in the movie. Scarlett's shoes inspired by elegant and ardent images was made of the dark red cellulose fiber mat dyed with leftover red onion skins, while Rhett' shoes inspired by luxurious and sensual images was made of the dark brown cellulose fiber mat dyed with the leftover coffee grounds.

The cellulose fiber mats, outer shell of the shoes, were grown by designers using the following combination of ingredients in a 11.5"x16.75" plastic container at a room temperature of 80-85°F: 3760ml water, 9 organic green tea bags, 540g cane sugar, 632ml vinegar, and 100g commercial organic SCOBY (Symbiotic Colony of Bacteria and Yeast). Two sheets of the material were used to make this RETHINK II design for Scarlett and Rhett. Other materials used to complete this design were rubber, pig skin for lining and insole, cowhide for insole cover, ethylene vinyl acetate for midsole, and cotton shoelaces.

References

- Llanos, M. (2012). Suzanne Lee and her celluloid clothing. *Trendland*. Retrieved June 20, 2012, from <http://trendland.com/suzanne-lee-and-her-celluloid-clothing/>.
- McDonough, W. & Braungart, M. (2002). *Cradle to cradle: Remarking the way we make things*. New York: North Point Press.

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Image A. Front view



Image C. Construction detail



Image B. Different angle

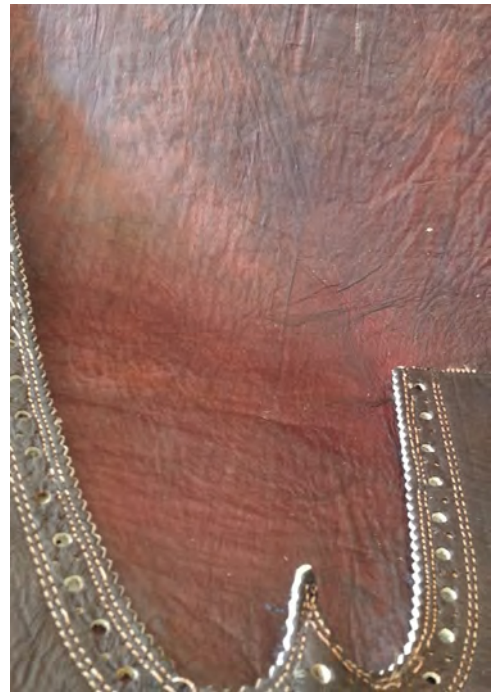


Image D. Material detail