

A Study on Sustainable Material Washed Kraft Paper in Compression Hat Design

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Abstract

This paper introduces an innovative collection of “wrinkled hats” crafted from freely compressible, sustainably sourced washed kraft paper. Merging creased structural design with eco-friendly materials, the hats prioritize portability and functionality while advancing sustainable design innovation. Rooted in interdisciplinary research exploring washed kraft paper’s applications in design, the project evaluates two core objectives: first, the role of sustainability in shaping contemporary design practices, and second, strategies to enhance wearability and consumer appeal through material transparency and user-centered design. The inspiration derives from Muji’s compressed portable T-shirt, Uniqlo’s “Coca-Can” compression T-shirt, and insights from brands like UASHMAMA and CULCREAT, as well as individual organic works by artist Paul Jackson. The research combines practice-led experimentation with material analysis to validate the viability of sustainable materials as alternatives to leather in fashion design. The results demonstrate the practicality, surprising material properties of washed kraft paper in wearable applications, highlighting its feasibility, user-friendly form, and aesthetic potential. The project emphasizes the need for designers to balance ecological responsibility with functional, engaging products, advocating a shift toward materials that foster user awareness of sustainability. By bridging design innovation with everyday usability, this work invites dialogue on redefining design and sustainability through eco-conscious. The collection of wrinkled hats demonstrates the significance of sustainability in everyday life and explores the practical application of washed kraft paper in wearable design.

Keywords: alternatives; compression shape; eco-friendly material; fashion design;

sustainability