



**DEVELOPMENT OF CALAMANSI PEEL-BASED BIO-LEATHER FOR
ECO-FRIENDLY FASHION ACCESSORIES**

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ABSTRACT

The increasing demand for sustainable materials in the fashion industry has led to the exploration of eco-friendly alternatives to traditional leather. This study aimed to develop and evaluate calamansi peel-based bio-leather for its potential application in eco-friendly fashion accessories. Calamansi peels were processed and combined with natural binders to create bio-leather formulations, which were tested for strength, flexibility, durability, and drying time. The results showed that the bio-leather formulation with calamansi peels exhibited excellent durability and flexibility, making it suitable for practical applications. Set B emerged as the most balanced formulation, offering optimal strength and drying time. The study concluded that calamansi peel-based bio-leather is a viable and eco-friendly alternative to traditional leather, with potential applications in sustainable fashion and interior design. Further research is recommended to optimize the formulation and scale up production.

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