

**KUALITAS FISIK KULIT DOMBA SAMAK MIMOSA DENGAN TEKNIK  
ECOPRINT PADA SUHU BERBEDA TERHADAP KETAHANAN LUNTUR DAN  
MIKROSTRUKTUR KULIT**

**INTISARI**

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Penelitian ini bertujuan untuk mengetahui kualitas fisik kulit domba setelah proses penyamakan menggunakan mimosa dan mengetahui pengaruh perbedaan suhu teknik ecoprint kulit domba samak mimosa terhadap ketahanan luntur warna dan mikrostruktur kulit yang dianalisis menggunakan SEM. Metode penelitian menggunakan sampel kulit domba yang telah disamak terbaik dengan menggunakan mimosa. Penelitian samak kulit domba membandingkan sampel kulit domba yang diberi perlakuan A (mimosa 15%), perlakuan B (mimosa 20%), perlakuan C (mimosa 25%), perlakuan D (mimosa 30%) dan perlakuan E (gambir 15%). Penelitian ecoprint kulit samak domba membandingkan sampel ecoprint kulit samak yang diberi perlakuan 1 (suhu 60°C), dan perlakuan 2 (suhu 65°C). Evaluasi kualitas kulit samak dilakukan dengan mengukur beberapa parameter, seperti kekuatan tarik, kemuluran, kekuatan sobek, ketebalan, kelemasan dan suhu kerut. Kualitas ecoprint kulit samak domba dilakukan dengan mengukur ketahanan luntur warna terhadap gosokan, dan SEM (*Scanning Electron Microscopic*). Data yang diperoleh pada hasil kualitas fisik kulit samak dianalisis dengan menggunakan uji One Way Anova, jika hasilnya berbeda nyata maka dilanjutkan dengan uji Duncan's New Multiple Range Test (DMRT). Data yang diperoleh pada hasil ketahanan warna ecoprint dianalisis dengan menggunakan uji t-test. Data yang diperoleh pada hasil SEM dianalisis secara deskriptif. Hasil penelitian menunjukkan penyamakan kulit menggunakan mimosa yang dilakukan secara bertingkat berpengaruh nyata ( $p < 0,05$ ) pada parameter kekuatan tarik, kemuluran, kekuatan sobek, ketebalan, kelemasan, suhu kerut dan analisis warna. Kulit domba samak mimosa dengan konsentrasi 30% memiliki hasil kualitas fisik yang terbaik untuk ecoprint sesuai dengan SNI 4593-201. Teknik ecoprint dapat dilakukan secara efektif untuk kulit domba dengan suhu *thermofil* pada lingkungan tropis.

Kata kunci: ecoprint, mimosa, kulit domba, kualitas fisik kulit samak

PHYSICAL QUALITY OF OF MIMOSA TANNED SHEEP SKIN WITH  
ECOPRINTING TECHNIQUE AT DIFFERENT TEMPERATURES ON  
COLORFASTNESS AND MICROSTRUCTURE OF TANNED LEATHER

**ABSTRACT**

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This research aims to determine the quality of sheep leather after the tanning process using mimosa and to observe the different temperatures on colorfastness and microstructure of tanned leather. The research method involves using the best tanned sheep leather samples processed with mimosa. The tanning study compares sheep leather samples treated with Treatment A (15% mimosa), Treatment B (20% mimosa), Treatment C (25% mimosa), Treatment D (30% mimosa), and Treatment E (15% gambier). The ecoprint study on tanned sheep leather compares samples treated with Treatment 1 (60°C) and Treatment 2 (65°C). Leather quality evaluation is conducted by measuring several parameters, such as tensile strength, elongation, tear strength, thickness, softness, and shrinkage temperature. The quality of ecoprinted tanned sheep leather is assessed by measuring colorfastness to rubbing and observing via SEM (Scanning Electron Microscopy). The data obtained from the physical quality results of tanned leather were analyzed using a One-Way ANOVA test. If significant differences were found, they were followed by Duncan's New Multiple Range Test (DMRT). The data obtained from the color fastness results of the ecoprint were analyzed using a t-test. The data obtained from the SEM results were analyzed descriptively. The research results show that tanning with mimosa in increasing concentrations significantly ( $p < 0.05$ ) affects parameters such as tensile strength, elongation, tear strength, thickness, softness, shrinkage temperature and coloring analysis. Based on the research conducted, it can be concluded that sheep leather tanned with 30% mimosa concentration has best physical quality for eco-printing, in accordance with SNI 4593-2011. The ecoprint technique can be effectively applied to sheepskin using thermophilic temperatures in tropical environments.

Keywords: ecoprint, mimosa, sheep leather, physical quality of tanned leather