

ABSTRAK

Alpina Damayanti : Analisis Hasil Pewarnaan Batang Mangrove (*Rhizophora Mucronata*) Pada Kain Batik Cap di Sima Batik. Skripsi.Fakultas Teknik Universitas Negeri Medan.2025.

Penggunaan pewarnaan kimia masih mendominasi dalam proses pewarnaan pada batik, pewarnaan alami seperti batang mangrove memiliki potensi sebagai pewarnaan alami yang ramah lingkungan dan penggunaannya masih terbatas. Penelitian ini bertujuan untuk mengetahui perbedaan hasil warna pada kain batik cap berdasarkan lama perendaman dalam larutan pewarna alami dari batang mangrove.

Penelitian ini menggunakan pendekatan deskriptif kuantitatif, yang bertujuan untuk mengetahui pengaruh lama waktu perendaman pewarna alami batang mangrove (*Rhizophora Mucronata*) terhadap hasil pewarnaan batik cap. Penelitian dilakukan di Sima Batik dan menggunakan tiga kelompok perlakuan waktu perendaman yaitu 15 menit, 30 menit dan 45 menit. Sampel yang digunakan adalah kain batik cap yang masing-masing dua sampel setiap kelompok perlakuan. Penilaian hasil pewarnaan dilakukan oleh 5 pengamat dengan enam aspek: ukuran kain, kejelasan motif, hasil pewarnaan batang mangrove sebelum difiksasi, hasil pewarnaan batang mangrove setelah difiksasi, kerataan warna, kebersihan kain.

Data yang diperoleh dianalisis secara deskriptif kuantitatif menggunakan uji Kruskal-Wallis. Hasil analisis menunjukkan bahwa nilai rata-rata tertinggi diperoleh pada kelompok perendaman 45 menit (15,6), disusul kelompok 30 menit (17,4), dan 15 menit (19,4). Hasil uji Kruskal-Wallis menunjukkan bahwa terdapat perbedaan yang signifikan antara ketiga kelompok waktu perendaman terhadap kualitas hasil pewarnaan batik ($p = 0,01 > 0,05$). Dengan demikian, dapat disimpulkan bahwa lama waktu perendaman batang mangrove berpengaruh secara signifikan terhadap hasil warna pada batik cap.

Dengan demikian hasil penelitian pewarnaan alami dari batang mangrove terdapat perbedaan hasil warna terhadap lama perendaman kain batik cap, semakin lama perendaman warna yang dihasilkan semakin baik.

Kata kunci: batang mangrove, batik cap, pewarna alami, lama perendaman, kualitas warna.

ABSTRACT

Alpina Damayanti : Analysis of the Coloring Result of Mangrove Stems (*Rhizophora Mucronata*) on stamped Batik Fabric at Sima Batik. Undergraduated Thesis. Faculty of Engineering, Medan State University 2025

"The use of chemical dyes still dominates the dyeing process in batik, while natural dyes like mangrove bark have potential as environmentally friendly natural dyes but their use is still limited. This study aims to determine the differences in color results on stamped batik fabric based on the duration of immersion in natural dye solution made from mangrove stems.

This research employed an experimental design with a quantitative descriptive approach, aiming to analyze the effect of soaking duration using natural dyes from mangrove stems (*Rhizophora Mucronata*) on the dyeing results of stamped batik. The research was conducted at Sima Batik and used three treatment groups based on soaking durations: 15 minutes, 30 minutes, and 45 minutes. The samples used were stamped batik fabrics with the "Pengret-ret" motif, with two samples in each treatment group. The dyeing results were evaluated by five observers based on five aspects: fabric size, clarity of the "Pengret-ret" motif, dye color before fixation, dye color after fixation, and fabric cleanliness.

The data obtained were analyzed using descriptive quantitative methods with the Kruskal-Wallis test. The analysis showed that the highest average score was obtained in the 45-minute soaking group (19,4), followed by the 30-minute group (17,4), and the 15-minute group (15,6). The Kruskal-Wallis test results indicated a significant difference among the three soaking durations in terms of the quality of the batik dyeing results ($p = 0.001 < 0.05$). Therefore, it can be concluded that the soaking duration using natural dyes from mangrove stems has a significant effect on the final color quality of stamped batik.

Thus, the findings show that the natural dyeing process using mangrove stems results in varying color outcomes depending on the soaking duration; the longer the soaking time, the better the resulting color quality.

Keywords: mangrove stem, stamped batik, natural dye, soaking duration