KARAKTERISTIK PEWARNA ALAMI DARI DAUN JATI (*Tectona grandis*) DAN KETAPANG (*Terminalia catappa*) SERTA PENGARUH *POST-MORDANT* ALAMI TERHADAP PEWARNAAN KAIN

Daniel Joy Sitorus[1], Rini Pujiarti[2]

INTISARI

Minat terhadap pewarna alami meningkat kembali karena sifatnya yang ramah lingkungan. Pewarna alami dapat dibuat dari daun jati (*Tectona grandis*) dan daun ketapang (*Terminalia catappa*). Kedua daun tersebut mengandung tanin yaitu pigmen dapat memberikan warna kuning hingga coklat. Daya ikat zat pewarna alami terhadap serat kain relatif lemah sehingga dibutuhkan mordan untuk mempertahankan zat warna pada serat. Bahan fiksasi bisa didapatkan dari alam, di antaranya jeruk nipis (*Citrus aurantifolia*), jeruk purut (*Citrus hystrix*) dan garam (NaCl). Pewarnaan kain dapat dilakukan menggunakan pewarna alami dari daun jati dan ketapang, dengan *post-mordant* dari jeruk nipis, jeruk purut, dan garam. Hasil pewarnaan menggunakan pewarna alami dan *post-mordant* tersebut belum diketahui. Penelitian ini bertujuan untuk mengetahui karakteristik bahan pewarna, indeks warna kain, dan ketahanan luntur warna.

Pewarna alami dibuat dari daun yang telah dikeringkan. Daun kering dicacah kemudian diekstraksi dengan metode perebusan dengan akuades. Larutan pewarna diuji karakteristiknya meliputi: intensitas warna, derajat keasaman/pH, dan uji tanin. Kain diwarnai dengan metode pencelupan dingin sebanyak 5 kali 5 jam. Setelah diwarnai kain difiksasi menggunakan mordan alami. Kain yang telah diwarnai kemudian diuji indeks warna dan ketahanan luntur warnanya, meliputi: ketahanan luntur warna kain terhadap gosokan kering, ketahanan luntur warna kain terhadap penyetrikaan, dan ketahanan luntur warna kain terhadap keringat asam.

Hasil penelitian menunjukkan bahwa perbedaan bahan pewarna mempengaruhi intensitas warna dan derajat keasaman larutan pewarna. Kedua jenis larutan pewarna mengandung tanin. Dihasilkan empat kelompok warna kain, yaitu *Burro, Foxtrot, Sheepskin, dan Arrowwood*. Nilai penodaan warna pada uji ketahanan luntur warna kain terhadap gosokan kering kain memiliki rata-rata sebesar 3-4 dan 4-5. Faktor mordan dan bahan pewarna tidak mempengaruhi nilai penodaan pada uji ketahanan luntur warna kain terhadap gosokan kering. Pada uji ketahanan luntur warna kain terhadap penyetrikaan nilai penodaan dan perubahan warna memiliki nilai yang sama yaitu 4-5. Dengan demikian faktor mordan dan bahan pewarna tidak mempengaruhi ketahanan luntur kain terhadap penyetrikaan. Pada uji ketahanan luntur warna kain terhadap keringat asam, nilai penodaan dan perubahan warna memiliki rata-rata sebesar 3-4 dan 4-5.

Kata kunci: pewarna alami, mordan alami, indeks warna, ketahanan luntur

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[1] Mahasiswa Departemen Teknologi Hasil Hutan, Fakultas Kehutanan UGM
[2] Staf Pengajar Departemen Teknologi Hasil Hutan, Fakultas Kehutanan UGM

CHARACTERISTIC OF NATURAL DYES FROM FROM TEAK (*Tectona grandis*) AND INDIAN ALMOND (*Terminalia catappa*) LEAVES AND EFFECT OF NATURAL POST-MORDANT ON FABRIC DYEING

Daniel Joy Sitorus[1], Rini Pujiarti[2]

ABSTRACT

Interest in natural dyes is increasing because they are environmentally friendly. Natural dyes can be made from teak leaves (*Tectona grandis*) and indian almond (*Terminalia catappa*) leaves because they contain color pigments such as tannins which can give a yellow to brown color. The affinity of natural dyes to fabric fibers is relatively weak, therefore fixator/mordant is needed to maintain the dyes on the fibers. Fixation materials can be obtained from nature, including lime (*Citrus aurantifolia*), kaffir lime (*Citrus hystrix*) and salt (NaCl). Fabric can be dyed using natural dyes from teak and indian almond leaves and natural post-mordant lime, kaffir lime and salt. Result of fabric dyeing using the mentioned natural dyes and post-mordant is not known yet. This study aims to determine the effect of natural mordant on the color of cloth dyed with natural dyes from teak leaves and indian almond leaves.

The dye solution is made from dried leaves. The dried leaves were chopped and then extracted by boiling with water. The characteristics of the dye solution were tested including: color intensity, degree of acidity/pH, and tannin test. Fabrics were dyed by cold dyeing method 5 times 5 hours. The fabric fixed using natural post-mordant. The dyed fabrics were then tested for color index and color fastness, including: color fastness to rubbing, color fastness to ironing, and color fastness to perspiration.

The results showed that the differences in dye ingredients affected the color intensity and degree of acidity of the dye solution. Both types of dye solutions contain tannins. Four groups of fabric colors are resulted, namely Burro, Foxtrot, Sheepskin, and Arrowwood. The value of color staining in the color fastness test of the fabric to dry rubbing of the cloth has an average of 3-4 and 4-5. Mordant factors and dyes did not affect the staining value in the color fastness to rubbing. In the color fastness test to ironing, the staining and color change values generates same value, namely 4-5. Thus, the mordant and dye factors do not affect the fastness of the fabric to ironing. In the test of the color fastness to perspiration, the of staining and color change values have averages of 3-4 and 4-5.

Keywords: natural dyes, natural mordant, color index, fastness

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[1] Student of Forest Product Department, Faculty of Forestry UGM
[2] Lecturer of Forest Product Department, Faculty of Forestry UGM