

**PENGARUH TIPE BAHAN *FINISHING* TERHADAP
SIFAT FISIS KAYU SUNGKAI
(*Peronema canescens*)**

Ari Wandono¹⁾ Riana Anggraini²⁾

¹⁾Mahasiswa Jurusan Kehutanan Fakultas Pertanian Universitas Jambi

²⁾Dosen Jurusan Kehutanan Fakultas Pertanian Universitas Jambi

Email: ari123.aa54@gmail.com

ABSTRACT

*The increasing utilization of wood as a primary raw material for construction, furniture, and household needs highlights the importance of wood properties, including its workability. Sungkai wood (*Peronema canescens*) is a popular timber species for various applications such as building materials, furniture, and handicrafts, possessing durability class III and strength class II-III. The finishing process on wood aims to provide protection and decorative value, prevent dimensional changes, and mask imperfections in color, grain, and wood defects. This study analyzes the effect of different finishing material types on the physical properties of sungkai wood (*Peronema canescens*), with the expectation of providing information for selecting appropriate finishing materials.*

*This research was conducted for three months, from March to May 2025. Sample cutting was performed at a sawmill, while the analysis of wood's physical properties took place at the Laboratory of the Forestry Department, Faculty of Agriculture, Jambi University. The materials used included sungkai wood (*Peronema canescens*) and various finishing materials such as oil-based paint, water-based paint, and varnish. Tools included paint brushes, an oven, scales, measuring tape, and other equipment. The experimental design utilized a Completely Randomized Design (CRD) with one factor (finishing material type) and five replicates. Test samples were prepared defect-free according to ASTM D 358-98 standards, measuring 30cm x 15cm x 2 cm, and conditioned to a moisture content of 12-18%. Physical properties tested included moisture content, specific gravity, and density, with data analyzed using Analysis of Variance (ANOVA) followed by the DMRT test if significant effects were observed.*

The results indicate that the type of finishing material used did not significantly affect the moisture content, density, and specific gravity of sungkai wood. Nevertheless, after the finishing process, the moisture content of the wood tended to increase, with oil-based paint resulting in the highest average moisture content (20.28%). The application of finishing treatments such as varnish, oil-based paint, and water-based paint increased the density of sungkai wood, with varnish yielding the highest average density (0.77 g/cm³). The viscosity of the finishing material played a role in covering pores and increasing wood density. Based on these findings, varnish and oil-based paint are considered the best finishing materials due to their ability to coat the wood surface well and cover pores, which can extend the wood's lifespan for indoor use.

Keywords: Sungkai Wood, Physical Properties, Wood Finishing, Moisture Content, Density, Specific Gravity

ABSTRAK

Peningkatan pemanfaatan kayu sebagai bahan baku utama dalam konstruksi, mebel, dan kebutuhan rumah tangga menunjukkan pentingnya sifat-sifat kayu, termasuk kemudahan pengolahannya. Kayu sungkai (*Peronema canescens*) merupakan jenis kayu yang diminati untuk berbagai keperluan seperti bahan bangunan, mebel, dan kerajinan tangan, serta memiliki kelas awet III dan kuat II-III. Proses *finishing* pada kayu bertujuan untuk memberikan perlindungan dan nilai dekoratif, mencegah perubahan dimensi, serta menutupi kelemahan warna, serat, dan cacat kayu. Penelitian ini menganalisis pengaruh berbagai tipe bahan *finishing* terhadap sifat fisis kayu sungkai (*Peronema canescens*), dengan harapan dapat memberikan informasi dalam pemilihan bahan *finishing* yang sesuai.

Penelitian ini dilaksanakan selama tiga bulan, dari Maret hingga Mei 2025, dengan lokasi di Bangsal Kayu untuk pemotongan sampel dan Laboratorium Jurusan Kehutanan Fakultas Pertanian Universitas Jambi untuk analisis sifat fisis kayu. Bahan yang digunakan adalah kayu sungkai (*Peronema canescens*) dan berbagai bahan *finishing* seperti cat minyak, cat air, dan pernis. Alat yang digunakan meliputi kuas cat, oven, timbangan, dan meteran. Rancangan penelitian

menggunakan Rancangan Acak Lengkap (RAL) dengan satu faktor (tipe bahan *finishing*) dan lima ulangan. Contoh uji dibuat bebas cacat sesuai standar ASTM D 358-98, berukuran 30cm x 15cm x 2 cm, dan dikondisikan hingga kadar air 12-18%. Pengujian sifat fisis meliputi kadar air, berat jenis, dan kerapatan, dengan data dianalisis menggunakan Sidik Ragam (ANOVA) dan dilanjutkan dengan uji DMRT bila terdapat pengaruh nyata.

Hasil penelitian menunjukkan bahwa tipe bahan *finishing* yang digunakan tidak berpengaruh nyata terhadap kadar air, kerapatan, dan berat jenis kayu sungkai. Meskipun demikian, setelah proses *finishing*, kadar air pada kayu cenderung naik, dengan cat minyak menghasilkan kadar air tertinggi (rata-rata 20,28%). Pemberian perlakuan *finishing* seperti pernis, cat minyak, dan cat air meningkatkan kerapatan kayu sungkai, dengan pernis menghasilkan kerapatan tertinggi (rata-rata 0,77 g/cm³). Tingkat viskositas (kekentalan) bahan *finishing* berperan dalam menutupi pori-pori dan meningkatkan kerapatan. Berdasarkan temuan, bahan *finishing* terbaik adalah pernis dan cat minyak karena kemampuan melapisi permukaan kayu dan menutup pori-pori dengan baik, yang dapat meningkatkan masa pakai kayu untuk penggunaan dalam ruangan.

Kata Kunci: Kayu Sungkai, Sifat Fisis, *Finishing* Kayu, Kadar Air, Kerapatan, Berat Jenis