STRUKTUR ANATOMI, SIFAT FISIK DAN MEKANIK
KAYU PALADO (Aglaia sp.)

Anatomical Structure, Physical and Mechanical Properties of Aglaia sp.

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Abstract

This research was carried out to identify wood anatomical structure, physical and mechanical properties of Aglaia sp took from natural production forest in Kalukku district of Mamuju, West Sulawesi. The result showed that Aglaia sp. has white to light yellow colour of sapwood and light brown to grayish brown colour of heardwood; straight grain; rather fine texture;the vessels is few (3 per sq.mm), oval and solitar; simple perforation; rays extremely short, fine and few (hight 327mm, width 25.52mm and frequencies 5 per sq.mm), parenchyma is diffuse or scanty paratracheal. The fiber length 1132 mm and diameter25.61 mm , lumina diameter 17.39 mm and wall thickness 1.64mm. Air dry moisture content 15.85 %; air dry specific gravity 0.48 and oven dry specifig gravity (density) 0.53; shrinkage from green to air dry condition 2.71 % (Radial) and 4.67 % (Tangensial); ultimate bending strength 612.72 kg/cm2 and compression parallel to grain 402.28 kg/cm2.

Key word : Wood, properties, anatomical, physical, mechanical, Aglaia sp

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Abstrak

Penelitian ini dilaksanakan untuk mengidentifikasi struktur anatomi, sifat fisik dan sifat mekanik kayu palado (Aglaia sp.) yang diambil dari hutan produksi alam di Kalukku kabupaten Mamuju, Propinsi Sulawesi Selatan. Hasil penelitian menunjukkan bahwa palado memiliki kayu gubal berwarna putih sampai krem dan teras berwarna coklat muda sampai coklat kelabu; serat lurus, tekstur agak halus, pori sedikit (3 per.mm²) berbentuk lonjong dan tersebar tata baur; perforasi tipe sederhan; jari-jari luar biasa pendek, sempit dan jarang (tinggi 327 mm; lebar 25,52 mm dan frekuensi 5 per mm², parenkim tersebar atau baur. Panjang serat 1132 mm dan diameter serat 25,61 mm; diameter lumen 17,39 mm; dan tebal dinding 1,64 mm. Kadar air kering udara 15,85 %; berat jenis kering udara 0,48 dan berat jenis kering tanur (kerapatan) 0,53; penyusutan kering udara ke kering tanur 2,71 % (Radial) dan 4,67 % (Tangensial); keteguhan lentur pada batas patah 612,72 kg/Cm2 dan keteguhan tekan sejajar serat 402,28 kg/Cm2 .

Kata kunci : Kayu, sifat, anatomi, fisik, mekanik, Palado.