ABSTRAK

Kayu merupakan bahan mentah penting dari hutan yang dapat diolah menjadi mebel dan konstruksi, memiliki sifat unik seperti higroskopisitas, kembang susut, corak, dan tekstur serat. Kemudahan pengolahan kayu bervariasi antar spesies, sehingga diperlukan metode sistematis untuk menentukan kesesuaiannya dalam penggunaan di mana kualitas permukaan hasil olahan sangat penting. Penelitian ini bertujuan untuk menganalisis sifat pengerjaan kayu medang labu (*Endospermum malaccensis* Mull.Arg.) dan kayu rengas (*Gluta renghas* L.) serta mengklasifikasikannya berdasarkan standar pengerjaan kayu. Informasi ini diharapkan dapat memberikan gambaran mengenai sifat pengerjaan kedua jenis kayu tersebut.

Penelitian ini dilaksanakan selama dua bulan yaitu pada bulan Mei hingga Juni 2025. Pemotongan contoh uji dilakukan di *sawmill*, sedangkan pengujian sifat pengerjaan kayu dilaksanakan di Laboratorium Teknologi Hasil Hutan, Program Studi Kehutanan, Fakultas Pertanian Universitas Jambi, serta pengujian kadar air di Laboratorium Dasar Universitas Jambi. Bahan yang digunakan adalah kayu medang labu dan kayu rengas dalam bentuk papan kering udara dengan kadar air ideal 12-20% dengan ukuran sampel 125 cm x 12,5 cm x 2 cm. Peralatan meliputi gergaji, mesin serut, mesin amplas, mesin bor, dan alat ukur lainnya. Parameter penelitian meliputi tingkat kerusakan dan jumlah cacat yang terjadi, diamati secara visual dengan bantuan kaca pembesar. Cacat yang diidentifikasi meliputi serat terangkat, serat berbulu, tanda serpih, serat tersepih, dan serat terlepas. Data dianalisis secara deskriptif berdasarkan persentase permukaan bebas cacat, yang kemudian diklasifikasikan kedalam lima kelas sifat permesinan berdasarkan ASTM-D 1666-64 yang dimodifikasi.

Berdasarkan hasil penelitian kayu medang labu pada proses pengerjaan penyerutan, pemotongan dan pengamplasan diklasifikasikan kedalam kelas I dengan kategori sangat baik, dan pengerjaan pengeboran diklasifikasikan kedalam kelas III dengan kategori cukup baik. Sedangkan pada proses pengerjaan penyerutan, pemotongan dan pengamplasan kayu rengas diklasifikasikan kedalam kelas I dengan kategori sangat baik, dan pengerjaan pengeboran diklasifikasikan kedalam kelas III dengan kategori cukup baik.

Kata Kunci: Sifat Pengerjaan Kayu, Medang Labu, Rengas, Kualitas Permesinan, Cacat Kayu.

ABSTRACT

Wood is an essential raw material from forests that can be processed into furniture and construction, possessing unique properties such as hygroscopicity, shrinkage, grain pattern, and fiber texture. The ease of wood processing varies among species, necessitating systematic methods to determine its suitability for applications where the quality of the processed surface is crucial. This research aims to analyze the machining properties of Medang Labu wood (Endospermum malaccensis Mull.Arg.) and Rengas wood (Gluta renghas L.), and to classify them according to woodworking standards. This information is expected to provide insights into the machining characteristics of these two wood species.

The research was conducted for two months, from May to June 2025. Sample cutting was performed at a sawmill, while woodworking property testing was carried out at the Wood Products Technology Laboratory, Forestry Study Program, Faculty of Agriculture, Jambi University, with moisture content testing at the Basic Laboratory of Jambi University. The materials used were Medang Labu and Rengas wood in air-dried planks with an ideal moisture content of 12-20%. Equipment included saws, planers, sanders, drills, and other measuring tools. Moisture content was measured, and master test samples measuring 125 x 12.5 x 2 cm were prepared. Research parameters included the level and number of defects, observed visually with the aid of a magnifying glass. Identified defects included raised grain, fuzzy grain, chip marks, chipped grain, and loosened grain. Data were analyzed descriptively based on the percentage of defect-free surface area, which was then classified into five machining property classes based on a modified ASTM-D 1666-64 standard.

The results of the study indicate that Medang Labu wood demonstrates excellent workability, being classified in Class I with a very good rating for planing, cutting, and sanding processes. However, its drilling performance falls under Class III with a fairly good category. Similarly, Rengas wood also exhibits excellent workability in planing, cutting, and sanding, classified in Class I with a very good rating, while its drilling performance is categorized in Class III with a fairly good category.

Keywords: Wood Machining Properties, Medang Labu, Rengas, Machining Quality, Wood Defects.