

**SIFAT FISIS DAN MEKANIS EMPAT JENIS KAYU ANDALAN
ASAL SUMATERA UTARA
(Physical and Mechanical Properties of Four Endemic Wood Species
from North Sumatra)**

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Abstract

This paper presents scientific information about physical and mechanical properties of four endemic wood species originated from North Sumatra. They consist of salagundi (*Rhouldolia teysmanii*), raru (*Cotylelobium melanoxyton*), mobe (*Arthocarpus dadah*) and medang landit (*Persea rimosa*) species. The properties which were examined covered wood density, moisture content, linear shrinkage (in longitudinal, radial, and tangential directions), volumetric shrinkage, modulus of rupture (MOR), modulus of elasticity (MOE), compression strength and tensile strength. As such, the experiment was carried out at Laboratory of Forest Product Processing and Utilization in the Research and Development Institute for Forestry (North Sumatra). The samples of wood materials were collected from Simalungun and Central Tapanuli, which lasted from June until December 2005. The results revealed that there were significant variations in the wood properties among those four endemic species, including the specific gravity, as follows: 0.44-0.54 (for medang landit), 0.55-0.69 (mobe), 0.80-0.86 (salagundi) and 1.02-1.09 (raru). The specific gravity of wood was linearly and positively correlated with particular mechanical properties, e.g. MOR and MOE.

Key word: Endemic wood species, physical, mechanical, and North Sumatra

Abstrak

Tulisan ini menyajikan informasi ilmiah sifat fisis dan mekanis empat jenis kayu yaitu salagundi (*Rhouldolia teysmanii*), raru (*Cotylelobium melanoxyton*), mobe (*Arthocarpus dadah*), dan medang landit (*Persea rimosa*). Sifat-sifat kayu yang diukur adalah berat jenis, kadar air, penyusutan linear (arah longitudinal, radial, tangensial), penyusutan volume, modulus patah (MOR), modulus elastisitas (MOE), keteguhan tekan dan keteguhan tarik sejajar serat. Penelitian dilaksanakan pada bulan Juni sampai Desember 2005 di Laboratorium Pengolahan dan Pemanfaatan Hasil Hutan, Balai Litbang Kehutanan Sumatera. Kayu diambil dari Kabupaten Simalungun dan Tapanuli Tengah. Hasil penelitian menunjukkan bahwa berat jenis kayu berturut-turut : 0.44-0.54 (medanglandit), 0.55-0.69 (mobe), 0.80-0.86 (salagundi) dan 1.02-1.09 (raru). Nilai berat jenis berbanding lurus dan berkorelasi positif dengan sifat lainnya terutama sifat mekanis seperti MOR dan MOE

.Kata kunci : Jenis kayu andalan, fisis, mekanis, dan Sumatera Utara.