

VARIASI AKSIAL dan RADIAL SIFAT FISIKA DAN DIMENSI SERAT KAYU KEDOYA (*Dysoxylum amorooides* Miq.) YANG TUMBUH DI HUTAN RAKYAT KECAMATAN SLEMAN KABUPATEN SLEMAN YOGYAKARTA

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INTISARI

Ketidakseimbangan antara pasokan dan kebutuhan kayu memerlukan alternatif upaya pemecahan masalahnya, antara lain dengan menggunakan jenis-jenis kayu kurang dikenal yang tumbuh di hutan rakyat. Salah satu jenis kayu yang berpotensi dari hutan rakyat adalah kedoya (*Dysoxylum amorooides* Miq.). Agar penggunaan kayu tepat dan optimal, perlu diketahui sifat fisika, dan dimensi seratnya.

Penelitian ini menggunakan rancangan acak lengkap dengan 5 ulangan dan 2 faktor yaitu kedudukan aksial (pangkal, tengah dan ujung) dan radial (dekat hati, tengah dan dekat kulit). Hasil analisis keragamannya jika berbeda nyata selanjutnya diuji lanjut dengan uji HSD (*Honestly Significant Difference*). Pembuatan contoh uji dan pengujian mengikuti *British Standard* nomor 373 tahun 1957.

Hasil penelitian ini menunjukkan bahwa kadar air segar dan kadar air kering udara sebesar 123,27% dan 17,34%. Berat jenis segar, kering udara dan kering tanur berturut-turut sebesar 0,46; 0,50; dan 0,53. Penyusutan longitudinal, tangensial dan radial dari segar ke kering udara berturut-turut sebesar 0,29%; 5,64% dan 4,45% serta penyusutan longitudinal, tangensial dan radial dari segar ke kering tanur sebesar 0,68%; 9,55%; dan 6,33%. Pengembangan longitudinal, tangensial dan radial dari kering tanur ke basah berturut-turut sebesar 0,61%; 9,67%; dan 5,2%. Panjang serat, diameter serat, diameter lumen, dan tebal dinding serat sebesar 1,2 mm, 16,48 μm , 11,15 μm , dan 2,66 μm . Faktor kedudukan aksial berpengaruh sangat nyata terhadap panjang serat. Faktor kedudukan radial berpengaruh sangat nyata terhadap kadar air segar, kadar air kering udara, berat jenis segar, berat jenis kering udara, berat jenis kering tanur, panjang serat, dan tebal dinding serat, dan berpengaruh nyata terhadap penyusutan tangensial, radial kondisi segar-kering udara, penyusutan longitudinal, radial segar-kering tanur, pengembangan longitudinal, radial dari kering tanur-basah, dan diameter lumen.

Kata kunci : kedoya, sifat fisika kayu, sifat dimensi serat kayu, letak aksial, letak radial

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**AXIAL AND RADIAL VARIATION OF THE PHYSICAL AND FIBER
DIMENSION PROPERTIES OF KEDOYA (*Dysoxylum amorooides* Miq.)
FROM COMMUNITY FOREST FROM KECAMATAN SLEMAN
KABUPATEN SLEMAN-YOGYAKARTA**

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ABSTRACT

The imbalance between supply and demand for wood need an alternatives problem-solving, among others by using other types of lesser known wood that grows in the community forests. One type of wood that have the potential of community forests is Kedoya (*Dysoxylum amorooides* Miq.). In order for proper and optimal use of wood, keep in mind properties of physics, and fiber dimensions.

This study used a Completely Randomized Design (CRD) with five replications and two factor, nemely the axial position (bottom, middle of height, and top of the tree) and radial position (nearby pith, middle, and near by bark). The result of variance analysis if significantly different then tested further by testing HSD (Honestly Significant Difference). Preparation of test samples and testing followed the British Standard number 373 in 1957.

The result of this study indicate that the green and air-dry Moisture Content (MC) are 123,27% and 17,34%. Specific gravity (SG) of green wood, air dry and oven-dry successively are 0,46; 0,50; dan 0,53. The average longitudinal, tangensial and radial shrinkage of the wood from green to air-dry condition successively are 0,29%; 5,64% and 4,45% and also from green to oven-dry condition successively are 0,68%; 9,55%; and 6,34%. The average longitudinal, tangential and radial swells of wood from oven-dry to wet condition successively equal to 0,61%; 9,67%; and 5,2%. Fiber lenght, fiber diameter, lumina diameter, and fiber wall thickness are 1,2 mm, 16,48 μm , 11,15 μm , and 2,66 μm . Factor of the axial position is very significant effect to fiber length. Factor pf the radial position is very significantly effect to green MC, air-dry MC, green SG, air-dry SG, oven dry SG, fiber lenght, fiber wall thickness, and significantly affect shrinkage tangensial, radial from green to air dry condition, longitudinal, radial shrinkage of the wood from green to kiln dry, longitudinal, radial swelling of the wood from kiln dry kiln to wet, and lumina diameter.

Keyword: kedoya, wood physical properties, wood fiber dimension properties, axial position, radial position

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