

Sifat Kimia Kayu Sungkai (*Peronema canescens* Jack) pada Arah Aksial dan Radial dari Desa Warung Gunung, Provinsi Banten

Oleh :

Lucia Sekar Wangi Prabaningtyas¹⁾ dan Ganis Lukmandaru²⁾

INTISARI

Sungkai (*Peronema canescens* Jack) adalah salah satu jenis kayu mewah yang persebarannya banyak di Indonesia. Namun, pemanfaatan kayu sungkai belum maksimal khususnya pada bidang konstruksi dan mebel kayu. Untuk meningkatkan penggunaan kayunya dibutuhkan informasi mengenai sifat dasarnya seperti kimia kayu. Penelitian ini bertujuan untuk mengetahui pengaruh perbedaan arah aksial dan radial terhadap komponen kimia pada kayu sungkai.

Penelitian ini menggunakan sampel kayu sungkai umur 10 tahun (3 pohon) yang terbagi menjadi bagian pangkal, tengah, dan ujung pada arah aksial serta dekat hati dan dekat kulit pada arah radial. Sampel tersebut kemudian dibuat serbuk dengan ukuran 40-60 mesh untuk dilakukan pengujian sifat kimia kadar ekstraktif etanol-toluena, ekstraktif air panas, kadar holoselulosa, kadar α -selulosa, kadar lignin, kadar abu dan silika, serta nilai pH. Desain penelitian dilakukan dengan rancangan acak lengkap (*Completely Randomized Design*) dengan analisis *two-way ANOVA*

Kisaran nilai kimia dari kayu sungkai umur 10 tahun yang diperoleh adalah kadar holoselulosa, α -selulosa, lignin 67,18-71,97%; 39,26-41,63%; 28,73-33,59% secara berturutan. Ekstraktif etanol-toluena, ekstraktif air panas 3,71-5,29%; 2,27-2,82% secara berturutan. Kadar abu, kadar silika 1,51-1,60%; 46,63-84,09 ppm; dan nilai pH 6,05-7,22 secara berturutan. Perbedaan secara signifikan ditemukan pada interaksi kadar lignin dan nilai pH pada arah aksial dan radial. Pada arah aksial ditemukan perbedaan signifikan hanya pada kadar holoselulosa. Sedangkan pada arah radial ditemukan perbedaan signifikan pada kadar ekstraktif larut etanol-toluena.

Kata Kunci : *Sungkai, arah aksial, radial, kimia kayu, kayu konstruksi*

¹⁾Mahasiswa Departemen Teknologi Hasil Hutan, Fakultas Kehutanan UGM

²⁾Staf Pengajar Departemen Teknologi Hasil Hutan, Fakultas Kehutanan UGM

Chemical Characteristics of Sungkai (*Peronema canescens* Jack) Wood in Axial and Radial Direction from Warung Gunung Village, Banten District

By:

Lucia Sekar Wangi Prabaningtyas¹⁾ dan Ganis Lukmandaru²⁾

ABSTRACT

Sungkai (*Peronema canescens* Jack) is a kind of fancy wood that is widely distributed in Indonesia. However, the utilization of sungkai wood has not been maximized, especially in the field of construction and wood furniture. To increase the use of wood, information about its basic properties such as wood chemistry is necessary. This study aims to determine the effect in the axial and radial directions on the chemical components of sungkai wood.

This study used samples of 10-year-old sungkai wood with 3 replications which were divided into the base, middle, and tip in the axial direction; near the pith and near the bark in the radial direction. Then, the sample was turned into powder with a size of 40-60 mesh in order to be tested for chemical properties i.e ethanol-toluene extractive content, hot-water extractive content, holocellulose content, α -cellulose content, lignin content, ash and silica content, and pH value. The research were designed using a completely randomized design with two-way ANOVA for analysing.

The results showed that holocellulose content, α -cellulose content, lignin content were 67.18-71.97%; 39.26-41.63%; 28.73-33.59% respectively; ethanol-toluene extractive; hot-water extractive were 3.71-5.29%; 2.27-2.82% respectively. Ash content and silica content were 1.51-1.60%; 46.63-84.09 ppm; and pH values from 6.05 to 7.22 respectively. The significant difference in the axial and radial directions were found in the interaction of lignin content and pH values. In the axial direction, a significant difference was found in the holocellulose content only. Meanwhile, in the radial direction, a significant difference was found in the level of ethanol-toluen extractives.

Key words : *Sungkai, the axial direction, radial direction, chemical properties, wood construction*

¹⁾Student of Departement of Forest Product Technology, Faculty of Forestry, UGM

²⁾Lecturer of Departement of Forest Product Technology, Faculty of Forestry, UGM