

PENGARUH PEREBUSAN DAN ARAH RADIAL TERHADAP KADAR EKSTRAKTIF KAYU SENGON (*Paraserianthes falcataria* (L.) I.C.Nielsen)

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INTISARI

Sengon merupakan salah satu jenis kayu cepat tumbuh yang banyak dijumpai di Hutan Rakyat Pulau Jawa. Salah satu penggunaan kayunya adalah untuk kayu lapis yang dalam prosesnya dilakukan perebusan log untuk mengurangi cacat sehingga dapat meningkatkan kualitas finirnya. Informasi mengenai sifat dasar kandungan ekstraktif kayu menjadi penting karena untuk mengetahui pengaruh perebusan dan arah radial terhadap kadar ekstraktif kayu sengon.

Penelitian menggunakan sampel kayu sengon berumur 7 tahun dengan perlakuan perebusan pada suhu 80°C selama 10 jam dan faktor arah radial. Sampel tersebut dibuat serbuk dengan ukuran 40-60 mesh untuk dilakukan pengujian ekstraksi berturutan dengan pelarut (*n*-heksana, metanol, dan air panas). Pengukuran kadar fenolat total dilakukan pada ekstrak terlarut metanol dan kadar ekstraktif polisakarida pada ekstrak terlarut air panas. Desain penelitian menggunakan rancangan acak lengkap, apabila diketahui ada faktor yang menyebabkan pengaruh yang berbeda nyata, maka dilakukan analisis lebih lanjut dengan metode *Tukey HSD*.

Dari hasil pengujian analisis kadar ekstraktif kayu sengon umur 7 tahun, yaitu: kadar ekstraktif *n*-heksana, kadar ekstraktif metanol, kadar ekstraktif air panas, dan kadar ekstraktif total adalah 0,25-2,84%; 2,10-8,59%; 1,71-4,25%, dan 5,23-11,57% secara berurutan. Kadar fenolat total berkisar 16,01-227,05 GAE/g sampel dan kadar polisakarida total berkisar 43,96-155,16 GLuE/g sampel. Ditemukan interaksi nyata faktor arah radial dan perebusan terhadap kadar polisakarida total dan kadar ekstraktif air panas. Faktor perlakuan perebusan memberikan pengaruh yang nyata terhadap kadar ekstraktif metanol, fenolat, dan polisakarida. Kadar fenolat total dan polisakarida mengalami kenaikan setelah perebusan. Faktor arah radial memberikan perbedaan nyata terhadap kadar fenolat total yang diukur pada bagian dekat hati.

Kata kunci : *Sengon, perlakuan perebusan, arah radial, kadar ekstraktif*

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EFFECT OF BOILING TREATMENT AND RADIAL DIRECTION ON EXTRACTIVES CONTENT OF SENGON (*Paraserianthes falcataria* (L.) I.C.Nielsen) WOOD

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ABSTRACT

Sengon is one of the fast-growing wood species found in Java Island. It is utilized for plywood which log boiling is necessary to reduce the defects to improve the quality of the finirs. Information on the basic properties such as extractive content of wood is important to determine the effect of boiling and radial direction on sengon wood.

This study use 7-year-old sengon wood samples with 80°C boiling treatment for 10 hours and radial direction factor. Samples were powdered with size of 40-60 mesh for successive extraction with solvents from *n*-hexane, methanol, & hot water. Measurement of total phenolic content was conducted by using methanol soluble extract and extractive polysaccharide content by using hot water soluble extract. The research design was carried out using complete randomized design and the significant factors was further analyzed by Tukey HSD method.

The test results analysis of extractive content of 7-year-old sengon, namely: *n*-hexane extractive content, methanol extractive content, hot water extractive content, total extractive content are 0.25-2.84%; 2.10-8.59%; 1.71-4.25%, 5.23-11.57%, respectively. Total phenolic content ranged from 16,01-227,05 GAE/g sample and total polysaccharide content ranged from 43.96-155.16 GLuE/g sample. There was a significant interaction between a radial direction and boiling factors on total polysaccharide content and extractive content from hot water extract. The boiling factor gave a significant effect on extractive soluble in methanol, phenolics, and polysaccharide contents. Total phenolate and polysaccharide content levels increased after boiling treatment. The radial direction factor significantly affected the total phenolics content near the pith.

Keywords: *Sengon, boiling treatment, the radial direction, wood extractives*

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