

**ANALISIS KOMPONEN KIMIA EMPAT JENIS KAYU
ASAL SUMATERA UTARA**
(Chemical Component Analysis of Four Endemic Wood Species
From North Sumatra)

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ABSTRACT

This paper presents scientific information about chemical properties of four endemic wood species originated from North Sumatra. They consist of salagundi (*Rhodoleia championi* Hook.f.), raru (*Cotylelobium melanoxyton* Pierre), mobe (*Arthocarpus dadah* Miq.), and medang landit (*Persea rimosa*) species. The chemical analysis which were examined covered holocellulose, alfa cellulose, hemisellulose, lignin, pentosan, ash content, in silica content, moisture content, solubilities in cold water, hot water, alcohol benzen and solubility in NaOH 1% . As such, was carried out at Laboratory of Chemical Forest Product in the Center for Research and Development Forest Products Bogor. The materials were collected from Simalungun and Central Tapanuli North Sumatra Province which lasted from June until December 2005. The results revealed that holocelulose content range from 66.61%-75.99%, hemicellulose from 29.26%-34.26%, alphacellulose from 37.35%-42.22%, lignin from 22.26%-30.28%, pentosan from 15.40%-17.41%, ash content from 0.91%-2.67%, and in silica content from 0.29%-1.97%. Further, the solubilities in cold water, hot water, alcohol benzen and solubility in NaOH 1% from 3.19%-5.80%, 6.74%-9.08% and 1.76%-5.00% respectively. Based on results of chemical analisys, especially with respect holocellulose, lignin and pentosan content, most wood species are suitable as raw material for pulp and paper industry.

Key word: Endemic wood species, chemical component, North Sumatra

ABSTRAK

Tulisan ini menyajikan informasi ilmiah sifat kimia empat jenis kayu yaitu salagundi (*Rhouldolia teysmanii* Hook.f.), raru (*Cotylelobium melanoxyton* Pierre), mobe (*Arthocarpus dadah* Miq.), dan medang landit (*Persea rimosa*). Analisis kimia yang dilakukan meliputi penetapan kadar holoselulosa, alfa selulosa, hemiselulosa, kadar lignin, kadar pentosan, kadar abu, kadar silika, kadar air, kelarutan dalam air dingin, kelarutan dalam air panas, kelarutan dalam NaOH 1% dan kelarutan dalam alkohol benzene. Penelitian dilaksanakan pada bulan Juni sampai Desember 2005 di Laboratorium Kimia Hasil Hutan, Pusat Penelitian dan Pengembangan Hasil Hutan Bogor. Kayu diambil dari Kabupaten Simalungun dan Tapanuli Tengah Propinsi Sumatera Utara. Hasil penelitian menunjukkan bahwa kadar holoselulosa berkisar antara 66,61%-75,99%, hemiselulosa berkisar antara 29,26%-34,26%, alphaselulosa berkisar antara 37,35%-42,22%, lignin berkisar antara 22,26%-30,28%, pentosan berkisar antara 15,40%-17,41%, kadar abu kayu berkisar antara 0,91%-2,67% dan kadar silikat antara 0,29%-1,97%. Kemudian, kelarutan dalam air dingin, air panas dan alkohol benzene masing-masing berkisar antara 3,19%-5,80%, 6,74%-

9,08% dan 1,76%-5.00%. Berdasarkan hasil analisis komponen kimia kayu terutama dari kadar holoselulosa, lignin dan pentosan, keempat jenis kayu yang diteliti cukup baik digunakan sebagai bahan baku pulp dan kertas.

Kata kunci : Jenis kayu andalan, komponen kimia, Sumatera Utara