

**DEKOMPOSISI DAUN DAN RANTING MANGIUM DAN EKALIPTUS OLEH  
DELAPAN ISOLAT FUNGI PELAPUK  
(*Decomposition of Mangium and Eucalypt Leaves and Twigs by Eight  
Decaying Fungi Isolates*)**

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**ABSTRACT**

Decomposition of sterilized leaves and twigs of mangium (*Acacia mangium*) and eucalypt (*Eucalyptus* sp.) using eight isolates of decaying fungi i.e. HHBI-204 (*Schizophyllum commune*), HHBI-302, HHBI-341, HHBI-346 to 350 was studied in laboratory after incubated for thirty days. Degradation rate was evaluated based on change of organic carbon, nitrogen, nutrient content, and cation exchange capacity (CEC). Results indicated that those fungi affected the chemical content changes of the samples. Ratio C/N was around 24.3-33.4 for mangium and 19.5-27.6 for eucalypt. The lower C/N ratios on mangium were obtained from samples inoculated by fungi number HHBI-341, HHBI-346 and HHBI-350 i.e. 25,9; 25,0 and 24,3; and on eucalypt were obtained from samples inoculated by fungi number HHBI-302, HHBI-341, HHBI-346 and HHBI-350 i.e. 20.1; 19.8; 19.5 and 20.9, respectively. Nutrient contents on mangium were N 0.52%-0.86%; P 0.32%-0.38% and K 0.16%-0.21%; and on eucalypt were N 0.66%-0.94%; P 0.32%-0.38% and K 0.20%-0.30%. The CEC values of mangium and eucalypt were 23.48 me/100 g - 28.71 me/100 g and 25.73 me/100 g -29.11 me/100 g, respectively.

Key words: Logging wastes, decaying fungi, decomposition, mycelial growth

## ABSTRAK

Studi dekomposisi daun dan ranting mangium (*Acacia mangium*) dan ekaliptus (*Eucalyptus* sp.) yang disterilkan, menggunakan delapan isolat fungi pelapuk yaitu HHBI-204 (*Schizophyllum commune*), HHBI-302, HHBI-341, HHBI-346-350, dan diinkubasikan selama 30 hari secara laboratoris. Tingkat degradasi contoh uji dievaluasi berdasarkan perubahan kandungan karbon organik, nitrogen total, kadar unsur hara, dan kapasitas tukar kation (KTK). Hasilnya menunjukkan bahwa inokulasi fungi berpengaruh terhadap kandungan kimia contoh uji tersebut. Nisbah C/N berkisar antara 24,3-33,4 (untuk mangium) dan 19,5-27,6 (untuk ekaliptus). Nisbah C/N yang rendah dijumpai pada mangium yang diinokulasi HHBI-341, HHBI-346 dan HHBI-350 yaitu masing-masing 25,9; 25,0 dan 24,3; dan pada ekaliptus yang diinokulasi HHBI-302, HHBI-341, HHBI-346 dan HHBI-350 berturut-turut yaitu 20,1; 19,8; 19,5 dan 20,9. Pada mangium, kandungan unsur hara berkisar antara: N 0,52%-0,86%; P 0,32%-0,38% dan K 0,16%-0,21%. Pada ekaliptus, kandungan unsur berkisar antara: N 0,66%-0,94%; P 0,32%-0,38% dan kadar K 0,2%-0,30%. Nilai KTK contoh uji masing-masing adalah 23,48 me/100 g - 28,71 me/100 g (mangium) dan 25,73 me/100 g - 29,11 me/100 g (ekaliptus).

Kata kunci: *Limbah pembalakan, fungi pelapuk, dekomposisi, pertumbuhan miselium.*