

Aktivitas antimikroba isolat streptomyces sp. BCy yang ditumbuhkan pada production medium 4 = Antimicrobial activity isolate streptomyces sp. BCy that grown in production medium 4

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Abstrak

Isolat Actinomycetes BCy diisolasi dari lamun *Cymodocea rotundata* di Prapat Agung, Bali Barat dan telah diidentifikasi menggunakan gen 16S rRNA menunjukkan kemiripan 99,00 dengan *Streptomyces* sp. Isolat tersebut difermentasi dalam Production Medium 4 PM4, diinkubasi selama 1 dan 2 minggu. Medium difiltrasi dengan etil asetat lalu biomassa dikeringkan. Hasil biomassa kering minggu 1 dan 2 1,68 g, 2,79 g. Ekstrak kasar minggu 1 68,30 mg lebih tinggi dibandingkan minggu 2 62,35 mg. Metode uji antimikroba menggunakan Kirby-Bauer. Hasil uji menunjukkan ekstrak kasar senyawa antimikroba tidak mampu menghambat *Escherichia coli* NBRC 3301, namun mampu menghambat *Staphylococcus aureus* NBRC100910 pada konsentrasi 5 mg/mL dan apabila konsentrasi ditingkatkan menjadi 15 mg/mL maka mampu menghambat *Candida albicans* UICC Y-29 dan *Staphylococcus aureus* NBRC100910.

.....Isolate Actinomycetes BCy was isolated from seagrass *Cymodocea rotundata* in Prapat Agung, Bali Barat and was identified using 16S rRNA gene showing similarities 99,00 with *Streptomyces* sp. The isolates were fermented in Production Medium 4 PM4, incubated for 1 and 2 weeks. Medium was filtered with ethyl acetate then the biomass was dried. Total dried biomass during the 1st and 2nd weeks were 1,68 g and 2,79 g respectively. The crude extract of the 1st week 68,30 mg was higher than 2nd week 62,35 mg. Antimicrobial test was done using the Kirby Bauer method. The results show that crude extract can not inhibit *Escherichia coli* NBRC 3301, but inhibit *Staphylococcus aureus* NBRC100910 in 5 mg mL and if the concentration was added into 15 mg mL, it can inhibits *Candida albicans* UICC Y 29 and *Staphylococcus aureus* NBRC100910.