

## Aktivitas antimikroba ekstrak meranti (*shorea spp*) terhadap methicillin resistant staphylococcus aureus (MRSA) = Antimicrobial activity of meranti (*shorea spp*) extract on methicillin resistant staphylococcus aureus (MRSA)

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### Abstrak

Infeksi bakteri Methicillin-Resistant Staphylococcus aureus (MRSA) merupakan masalah yang marak terjadi dalam pelayanan kesehatan Indonesia. Sejauh ini MRSA dapat diobati dengan antibiotik vankomisin, namun sangat perlu dilakukan pencarian antibiotik alternatif untuk mencegah adanya resistensi lagi. *Shorea spp.* adalah tumbuhan yang diketahui memiliki sifat antibakteri terhadap bakteri Gram positif dan Gram negatif, namun belum dilakukan penelitian mengenai efeknya terhadap bakteri MRSA. Penelitian ini bertujuan untuk mengetahui efek antibakteri ekstrak *Shorea spp.* terhadap MRSA. Uji dilakukan dengan metode makro dilusi tabung untuk mengetahui konsentrasi hambat minimum dan konsentrasi bunuh minimum ekstrak *Shorea spp.* dan vankomisin sebagai pembanding. Ekstrak *Shorea spp.* dipaparkan dengan suspensi bakteri MRSA pada sepuluh pengenceran makro dilusi dan diamati konsentrasi hambat minimumnya. Tabung yang dicurigai memiliki konsentrasi hambat minimum kemudian dikultur untuk mengetahui konsentrasi bunuh minimum. Hasil penelitian menunjukkan ditemukan kekeruhan dan pertumbuhan koloni bakteri pada setiap tabung mulai dari konsentrasi 1280 g/mL hingga 2,5 g/mL, sehingga tidak didapatkan adanya konsentrasi hambat minimum dan konsentrasi bunuh minimum ekstrak *Shorea spp.* terhadap MRSA pada konsentrasi 1280 g/mL hingga 2,5 g/mL.

.....Methicillin-Resistant Staphylococcus Aureus (MRSA) infection is a problem that is rife in Indonesian healthcare services. In recent years, MRSA can be treated by vancomycin, an antibiotic used to treat serious bacterial infections, but it is necessary to search alternative antibiotics to prevent further resistance. *Shorea spp.* is a plant that is known to have antibacterial properties against Gram positive and Gram negative bacteria, but there has not been any research referring to its effect on MRSA. This study aims to evaluate the antibacterial effect of *Shorea spp.* extract compared to vancomycin. Tests were conducted with macro dilution method to determine the minimum inhibitory concentration and minimum bactericidal concentration of *Shorea spp.* extract with vancomycin as comparison. *Shorea spp.* extract were exposed to MRSA suspension in ten times serial dilution and the minimum inhibitory concentration were observed. Tubes suspected of having minimum inhibitory concentration were cultured to determine the minimum bactericidal concentration. The results showed that turbidity and growth occurs at each dilution with concentration ranged from 1280 g/mL to 2,5 g/mL. This study suggests that minimum inhibitory concentration and minimum bactericidal concentration of *Shorea spp.* extract are not found in the concentration ranged from 1280 g/mL to 2,5 g/mL.