UJI AKTIVITAS ANTIBAKTERI EKSTRAK BERTINGKAT JAMUR TIRAM PUTIH (*Pleurotus ostreatus*) TERHADAP BAKTERI *Propionibacterium acnes*

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ABSTRAK

Jerawat merupakan masalah kulit yang biasanya disebabkan oleh bakteri *Propionibacterium acnes*. Jamur tiram (*Pleurotus ostreatus*) memiliki manfaat sebagai antibakteri, karena memiliki kandungan senyawa alkaloid, saponin, steroid, dan flavonoid. Aktivitas antibakteri jamur tiram terhadap bakteri *P. acnes* masih belum banyak diteliti kebenarannya. Tujuan dari penelitian ini untuk mengetahui perbedaan kandungan fitokimia, aktivitas antibakteri, serta nilai kesetaraan terhadap klindamisin antara ekstrak n-heksan, etil asetat, dan etanol 96% jamur tiram (*P. ostreatus*) terhadap *P. acnes.* Penelitian dilakukan dengan pembuatan simplisia, ekstraksi dengan metode maserasi bertingkat, dan uji aktivitas antibakteri terhadap *P. acnes* dengan metode difusi sumuran. Hasil yang diperoleh yaitu senyawa alkaloid ditemukan dalam ekstrak n-heksan, ekstrak etil asetat, dan ekstrak etanol 96%, senyawa steroid ditemukan dalam ekstrak n-heksan dan etil asetat, sedangkan senyawa flavonoid hanya ditemukan pada ekstrak etil asetat jamur tiram. Rata-rata diameter zona hambat terhadap *P. acnes* dari konsentrasi 5% b/v, 10% b/v, 20% b/v ekstrak n-heksan, ekstrak etil asetat, dan ekstrak etanol 96%, berturut-turut adalah 10,0 mm, 11,6 mm, 13,3 mm; 11,3 mm, 14,6 mm, 16,3 mm; dan 10,3 mm, 12,0 mm, 14,3 mm. Satu µg/ml ekstrak n-heksan, ekstrak etil asetat, dan ekstrak etanol 96% jamur tiram masing-masing setara dengan 0,00038 µg/ml, 0,00050 µg/ml, dan 0,00040 µg/ml klindamisin. Kesimpulan dari penelitian yaitu terdapat perbedaan kandungan fitokimia ekstrak n-heksan, etil asetat, dan etanol 96% jamur tiram. Ekstrak etil asetat menunjukkan aktivitas antibakteri terbaik terhadap *P. acnes*, meskipun tergolong lemah.

Kata kunci: Jamur Tiram, *Pleurotus ostreatus*, antibakteri, *Propionibacterium acnes*, ekstraksi bertingkat

ANTIBACTERIAL ACTIVITY TEST OF WHITE OYSTER MUSHROOM (*Pleurotus ostreatus*) EXTRACT AGAINST THE BACTERIA *Propionibacterium acnes*

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ABSTRACT

Acne is a skin problem that is usually caused by *Propionibacterium acnes*. Oyster mushrooms (*Pleurotus ostreatus*) have antibacterial activity because they contain compounds, alkaloids, saponins, steroids and flavonoids. The antibacterial activity of oyster mushrooms against *P. acnes* bacteria has not yet been widely studied. The aim of this research was to determine the differences in phytochemical content, antibacterial activity, and the equivalence value of clindamycin between n-hexane, ethyl acetate, and 96% ethanol extracts of oyster mushrooms (*P. ostreatus*) against *P. acnes*. The research was carried out by making simplicia, extraction using the multilevel maceration method, and testing antibacterial activity against *P. acnes* using the well diffusion method. Alkaloid compounds were found in n-hexane extract, ethyl acetate extract, and 96% ethanol extract, steroid compounds were found in n-hexane and ethyl acetate extracts, while flavonoid compounds were only found in ethyl acetate extract of oyster mushroom. The average diameter of the inhibition zone against *P. acnes* from concentrations of 5% w/v, 10% w/v, 20% w/v n-hexane extract, ethyl acetate extract, and 96% ethanol extract, respectively, is 10,0 mm, 11,6 mm, 13,3 mm; 11,3 mm, 14,6 mm, 16,3 mm; and 10,3 mm, 12,0 mm, 14,3 mm. One µg/ml of n-hexane extract, ethyl acetate extract, and 96% ethanol extract of oyster mushrooms is equivalent to 0,00038 µg/ml, 0,00050 µg/ml, and 0,00040 µg/ml clindamycin, respectively. The conclusion there are differences in the phytochemical content of n-hexane, ethyl acetate, and 96% ethanol extracts of oyster mushroom. Ethyl acetate extract showed the best antibacterial activity against *P. acnes*, although it was relatively weak.

Keyword: Oyster Mushroom, *Pleurotus ostreatus*, antibacterial, *Propionibacterium acnes*, graded extract