PERBANDINGAN PARAMETER STANDAR DAN AKTIVITAS ANTIBAKTERI MADU MANUKA DAN MADU RAHMI DENGAN METODE DIFUSI AGAR

ABSTRAK

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Kualitas madu dapat dilihat berdasarkan perbedaan parameter standar dan aktivitas antibakteri. Dalam penelitian ini kualitas madu yang dibandingkan adalah kualitas Madu Manuka dan Madu Rahmi menggunakan dua parameter di atas. Adapun parameter standar yang diuji dalam penelitian ini meliputi uji organoleptis, uji keasaman, uji kadar air dan indeks bias. Sementara untuk uji aktivitas antibakteri terhadap bakteri Gram positif (*Staphylococcus aureus*, *Bacillus subtilis*) dan bakteri Gram negatif (*Pseudomonas aeruginosa*, *Escherichia coli*) dengan menentukan Konsentrasi Hambat Minimum (KHM) menggunakan metode difusi agar dan pengujian potensi antibakteri dengan menggunakan pembanding kloramfenikol dan tetrasiklin HCl. Hasil yang diperoleh Madu Manuka dan Madu Rahmi memenuhi persyaratan organoleptis, sedangkan untuk keasaman, indeks bias dan kadar air tidak memenuhi persyaratan yang ditentukan SNI dan US Standar. Hasil uji KHM Madu Manuka dan Madu Rahmi memiliki aktivitas antibakteri terhadap bakteri Gram positif dan bakteri Gram negatif. Hasil uji potensi Madu Manuka terhadap bakteri *Staphylococcus aureus* setara dengan 9958,598 ppm kloramfenikol, sedangkan hasil uji potensi Madu Manuka setara dengan 36,2 ppm tetrasiklin HCl. Hasil uji potensi Madu Manuka dan Madu Rahmi terhadap bakteri *Bacillus subtilis* setara dengan 7449,624 ppm dan 15162,164 ppm kloramfenikol, sedangkan hasil uji potensi Madu Manuka dan Madu Rahmi setara dengan 341 ppm dan 430,4 ppm tetrasiklin HCl. Dan hasil uji potensi Madu Rahmi terhadap bakteri *Escherichia coli* setara dengan 14837,3 ppm kloramfenikol, sedangkan hasil uji potensi Madu Rahmi setara dengan 1977,3 ppm tetrasiklin HCl.

Kata Kunci: Antibakteri, Madu Manuka, Madu Rahmi, Kloramfenikol, Tetrasiklin HCl

COMPARISON OF STANDARD PARAMETERS AND ANTIBACTERIAL ACTIVITY OF MANUKA HONEY AND RAHMI HONEY WITH AGAR DIFFUSION METHOD

ABSTRACT

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The honey's quality can be seen based on the difference of standard parameters and antibacterial activity. In this research the quality that compared were the Manuka honey and Rahmi honey used those two parameter. The standard parameters that examined in this research were include organoleptis test, acidity test, the water content and refractive index test. Meanwhile, for the antibacterial activity test, there were examination of antibacterial activity to Gram positive bacterial (*Staphylococcus aureus, Bacillus subtilis*) and Gram negative bacterial (*Pseudomonas aeruginosa, Escherichia coli*) determined by the Minimum Inhibitory Concentration (MIC) used agar diffusion method and antibacterial potency testing used chloramphenicol and tetracyclin HCl as comparator. The result showed that Manuka Honey and Rahmi Honey meet organoleptic requirements, while for acidity, refractive index and water content does not meet the SNI and US Standards. The antibacterial activity result showed that Manuka Honey and Rahmi Honey has antibacterial activity to Gram positive and Gram negative bacterial. The result of antibacterial potency test for Manuka Honey with *Staphylococcus aureus* equivalent to 9958,598 ppm chloramphenicol, and the result of antibacterial potency test for Manuka Honey equivalent to 36,2 ppm tetracyclin HCl. The result of antibacterial potency test for Manuka Honey and Rahmi Honey with *Basillus subtilis* equivalents to 7449,624 ppm and 15162,164 ppm chloramphenicol, while the result of antibacterial potency test for Manuka Honey and Rahmi Honey equivalents to 341 ppm and 430,4 ppm tetracyclin HCl. And the result of antibacterial potency test for Rahmi Honey with *Escherichia coli* equivalent to 14837,3 ppm chloramphenicol, and the result of antibacterial potency test for Rahmi Honey equivalent to 1977,3 ppm tetracyclin HCl.

Key Word: Antibacterial, Manuka Honey, Rahmi Honey, Chloramphenicol, Tetracyclin HCl