UJI AKTIVITAS ANTIBAKTERI AKAR, BATANG DAN DAUN BINAHONG *(Anredera cordifolia* (Ten).Steenis) TERHADAP BAKTERI *Escherichia coli* dan *Bacillus subtilis*

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ABSTRAK

Antibakteri adalah zat yang mampu mencegah atau membunuh bakteri penyebab infeksi, seperti *Bacillus subtilis* dan *Escherichia coli*, yang sering ditemukan di sistem pencernaan manusia. Salah satu tanaman alternatif dengan potensi antibakteri adalah binahong. Semua bagian tanaman binahong, termasuk akar, batang, bunga, dan daun, memiliki khasiat obat, namun daunnya paling sering digunakan. Daun binahong dapat mengobati berbagai penyakit seperti sembelit, diare, radang usus, sakit perut, dan demam. Penelitian ini bertujuan untuk menentukan konsentrasi hambat minimum (KHM) dan konsentrasi bunuh minimum (KBM) pada bakteri *Escherichia coli* dan *Bacillus subtilis*, serta mengevaluasi aktivitas mikroba dari ekstrak daun, batang, dan akar binahong. Selain itu, penelitian ini juga ingin mengidentifikasi senyawa kimia dalam binahong yang memiliki aktivitas antibakteri. Metode yang digunakan dalam penelitian ini adalah maserasi untuk ekstraksi, dan mikrodilusi serta difusi padat untuk uji aktivitas. Hasil uji antibakteri menunjukkan bahwa konsentrasi hambat minimum tercapai pada 250 ppm, 500 ppm, dan 1000 ppm, namun penelitian ini tidak menunjukkan adanya aktivitas antibakteri.

Kata kunci: antibakteri, binahong, escherichia coli, bacillus subtilis, infeksi.

ANTIBACTERIAL ACTIVITY TEST OF BINAHONG (Anredera cordifolia (Ten).Steenis) ROOTS, STEMS AND LEAVES AGAINTS Roots, Stems and Leaves Escherichia coli AND Bacillus subtilis bacteria

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ABSTRACT

An antibacterial is a substance capable of preventing or killing bacteria that cause infections, such as Bacillus subtilis and Escherichia coli, which are commonly found in the human digestive system. One alternative plant with antibacterial potential is binahong. All parts of the binahong plant, including the roots, stems, flowers, and leaves, have medicinal properties, but the leaves are most commonly used. Binahong leaves can treat various ailments such as constipation, diarrhea, intestinal inflammation, stomach pain, and fever. This research aims to determine the minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) for Escherichia coli and Bacillus subtilis, as well as to evaluate the antimicrobial activity of the extracts from the leaves, stems, and roots of binahong. Additionally, the study seeks to identify the chemical compounds in binahong that have antibacterial activity. The methods used in this research include maceration for extraction, and microdilution and solid diffusion for activity testing. The antibacterial test results showed that the minimum inhibitory concentrations were achieved at 250 ppm, 500 ppm, and 1000 ppm, but the study did not indicate any antibacterial activity.

Key words: antibacterial, binahong, escherichia coli, bacillus subtilis, infection