ABSTRACT

THE COMPARISON EFFECT OF EXTRACT TEMULAWAK (Curcuma xanthorrhiza Roxb) ON GROWTH INHIBITION OF Staphylococcus aureus AND Escherichia coli In Vitro

By:

Alexander Dicky K. N

The prevalence of infectious diseases in Indonesia is still relatively high and become a health problem in Indonesia. One of the cause is a bacterial infectious disease. Antibiotic therapy is used to fight bacteria. Ethanol extract of ginger (Curcuma xanthorrhiza Roxb) has many benefits, one of them as an antimicrobial. This is because the content of curcumin and essential oil in ginger can inhibit and kill bacterial growth. The aim of this study is to compare the effects of ethanol extract of ginger based on the inhibition of the growth of Staphylococcus aureus and Escherichia coli in vitro.

By using the method of Kirby bauer disk diffusion, ethanol extract of ginger with a concentration at 10%, 15%, 20%, 25%, 30%, 40%, 80%, 100%, negative control (sterile distilled water) and positive control (chloramphenicol) planted in Muller Hinton Agar / MHA which contains bacteria, incubated and measured inhibition zone is formed. Then performed a statistical test with t-test independent samples.

Based on the survey results revealed that there are differences in the diameter of inhibitory zone between Staphylococcus aureus and Escherichia coli at concentration 10%, 20%, 25%, 30%, 40%, and 80% with a value of p < 0.05. While at concentration 15% and 100% of the ginger, there is no difference between the inhibition zone diameter of Staphylococcus aureus and Escherichia coli with a value of p > 0.05.

Keyword: Escherichia coli, Staphylococcus aureus, the ginger (Curcuma xanthorrhiza Roxb)