

ABSTRACT

**ANTIMICROBIAL SUSCEPTIBILITY TEST OF *Pluchea Indica* EXTRACT
AGAINST *Escherichia coli***

Escherichia coli is one of the pathogens that cause infectious diseases. *Escherichia coli* has been known to show resistance to several antibiotics. Use of herbal medicine *Pluchea indica* leaves extract helps in reducing the incidence of infection by *Escherichia coli*. This experiment aims to investigate the antimicrobial activity *Pluchea indica* leaves extract against *Escherichia coli*.

An experimental study using the post test only control group design carried out against *Escherichia coli* by tube dilution method and the agar dilution method. Treatment groups are groups of bacteria that were given *Pluchea indica* leaves extract with the concentration 300, 150, 75, 37,5, 18,75, and 9,375 mg/ml. The replication used in the research was four replications. MIC (Minimum Inhibitory Concentration) was observed visually by comparing turbidity of solution after incubation at 37^o C for 24 hours. Then these solutions were cultured on nutrient agar plates at 37^o C for 24 hours. MBC (Minimum Bactericidal Concentration) was observed visually by inspecting the presence of bacterial colonies growth.

MIC can not be observed because there is no change in turbidity pre and post treatment. Cultures on nutrient agar plates had no colonies growth in concentrations of 300 mg/ml. Thus, the Minimum Bactericidal Concentration (MBC) was 300 mg/ml.

Pluchea indica leaves extract contains flavonoids, phenolics, and tannins, wich have antimicrobial effects. In summary, *Pluchea indica* leaves extract has antimicrobial effect against *Escherichia coli* with MBC of 300 mg/ml.

Keywords: *Pluchea indica* leaves, antimicrobial activity, tube dilution method and the agar dilution method, *Escherichia coli*.