

## ABSTRACT

**EFFECT OF EXTRACT GREEN BETEL (*Piper betle linn*) LEAVES AGAINST *Escherichia coli***

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**Introduction :** Plants use as traditional medicine nowadays has many devotees because of Indonesia has many floras, it's minimum cost and many benefits that we obtained. The example is Green betle leaves (*Piper betle linn*) that relatively used as material to cure diseases. Green betle leaves (*Piper betle linn*) is well-known as a herbal medicine in Indonesia. It's extract contains some active substances.that able to inhibit the growth of many bacteria. *Esherichia coli* is one of normal flora that cause many infection especially in Indonesia.

**Methods :** This study was a laboratorium experimental. Green betle leaves extract and *Escherichia coli* were used on this study. Green betle leaves extract was from Balai Materia Medika Batu, *Escherichia coli* was from Microbiology Laboratory Faculty of Medicine Airlangga University. Minimum Inhibitory Concentration (MIC) values and Minimum Bactericidal Concentration (MBC) values were determined by dilution method. The concentration used in MIC determination for *Escherichia coli* is 100%; 50%; 25%; 12,5%; 6,25%; 3,125%; 1,5625%; 0,78125%; 0,390625% dan 0,1953125%. The MBC values were determined by suspension streaking from muller hinton broth on mac conkey agar plate. The result is analyzed with description method.

**Results :** The MIC value for *Escherichia coli* not be able to determined. It cause of turbidity or purify of differences between every tube is not clear. These MIC values determined by extract concentration inside the tube that turns from turbid into clear suspension. The MBC values for *Escherichia coli* are 0,78125% These MBC values determined by bacteria colonies absence in mac conkey agar plate after streaking. MIC and MBC values have been proved in the first until third replications..

**Conclusion:** Green betle leaves extract with ethanol 95% has antibacterial effect against *Escherichia coli*. The MBC for *Escherichia coli* was 0,78125%.

**Keywords:** *Escherichia coli* - Green betle leaves - Antibacterial - Dilution method