ABSTRACT

Antibacterial Activity Of Ethanol Extract Of Solanum Torvum Fruits Against Escherichia Coli

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Introduction: People use medicinal plants as traditional medicines for many diseases. Solanum torvum is one of medicinal plants growing wild in Indonesia and its fruit is frequently used as traditional medicine due to its high nutrients. Escherichia coli is normal flora in intestine, but some types can cause human illness, including diarrhea. The present study was carried out to determine in vitro antibacterial activity of extract of Solanum torvum fruits against Escherichia coli.

Methods: This study was based on laboratory experimental. The samples were ethanol extract of Solanum torvum fruits from Randuagung vilage and Escherichia coli from Microbiology Laboratory Faculty of Medicine Airlangga University. The ethanol extraction was done at Pharmacology Laboratory Faculty of Medicine Airlangga University. MIC (Minimum Inhibitory Concentration) and MBC (Minimum Bactericidal Concentration) values were determined by dilution method. The concentrations used in MIC determination were 640 mg/ml, 320 mg/ml, 160 mg/ml, 80 mg/ml, 40 mg/ml, 20 mg/ml, 10 mg/ml, 5 mg/ml, 2,5 mg/ml and 1,25 mg/ml. The MBC value was determined by suspension streaking to nutrient agar plate. The result was analyzed by descriptive method.

Result: Growth of bacteria is decreasing at concentration 640 mg/ml, which is showed in MBC test. MIC of ethanol extract of Solanum torvum fruits against Escherichia coli could not be determined due to turbidity of the extract.

Conclusion: Ethanol extract of Solanum torvum fruits can inhibit bacterial growth but MIC and MBC could not be determined.

Keywords: antibacterial, dilution method, Escherichia coli, Solanum torvum