

ABSTRACT

ANTIBACTERIAL ACTIVITY OF ORANGE JESSAMINE LEAF (*Murraya paniculata* L. Jack) ETHANOL EXTRACT ON *IN-VITRO* GROWTH OF GRAM NEGATIVE BACTERIA (*Escherichia coli*) AND GRAM POSITIVE (*Staphylococcus aureus*).

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Infectious diseases is one of the most important health problems. Gram-positive bacteria *Staphylococcus aureus* and gram-negative bacteria *Escherichia coli* are the most common cause of infectious diseases. Orange Jessamine (*Murraya paniculata* (L.) Jack) has been known as one of plant are useful to treat various diseases, as an antibacterial. This antibacterial activity is related to chemical substance leaf containing in the extract, such as flavanoid, alkaloid, saponin, tannin, etheric oil and phenols.

This study aims to determine the antibacterial ability of ethanol extract of orange jessamine leaves on the growth of *E. coli* and *S. aureus* from the diameter of inhibition zone formed. Extraction of orange jessamine leaves was done by maceration using ethanol 76 %. Testing for antibacterial activity was using the Kirby Bauer diffusion method.

The result of this experiment measured show that the concentration of ethanol extract orange jessamine leaves 30 %, 40 % and 50 % are strong antibacterial and concentration of 20 % is classified as medium antibacterial on *E. coli* and *S. aureus*. Gram-positive bacteria *S. aureus* is more sensitive to the orange jessamine ethanol leaf extract compared to gram-negative bacteria *Escherichia coli*.

Keywords: antibacterial activity, *Escherichia coli*, orange jessamine leaves, *Staphylococcus aureus*,