

ABSTRACT

Putri, Dayu Nirwana. 2014. Activity Test of Anti-bacteria Methanol Extract of Kenikir Leaf (*Cosmos caudatus Kunth.*) through *Salmonella typhi* Bacteria. Biology Advisor: Dr. Retno Susilowati, M.Si. Religious Advisor: Umayatus Syarifah, MA.

Key Terms: Kenikir Leaf (*Cosmos caudatus Kunth.*), *Salmonella typhi*

Salmonella typhi is pathogen bacteria which capable of causing a mount of infection toward human being, those are typhoid fever (enteric fever), infection toward systematic vocal, septicemia, and various gastroenteritis clinically, involved fluid diarrhea up to dysentery. The growth of *Salmonella typhi* can be avoided by phenol compound, flavonoid, saponin, dan tannin. Plant which has phenol compound, flavonoid, saponin, dan tannin is kenikir leaf (*cosmos caudatus Kunth.*). The purpose of this study is to know the activity of anti-bacteria methanol extract of kenikir leaf (*Cosmos caudatus Kunth.*) toward *Salmonella typhi* bacteria.

The researcher applies laboratorial experiment with two steps. The first step is to know the active bacteria from extracting the methanol extract of kenikir leaf and the second step is to know the activity of the anti-bacteria. The next step of the study used Lengkal random approach (RAL) with 7 treatments and 3 repetitions with the extract concentration in an amount of 10mg/ml, 15 mg/ml, 20 mg/ml, 25 mg/ml, and 30 mg/ml. The positive control used cloramfenikol anti-biotic and the negative control used the mixing aquades and DMSO (*dimethyl sulfoxide*). The extract of kenikir leaf in this study used maserasi method. The results of this study involve phyto-chemistry and anti-bacteria activity. Its normality, then, is tested by using *Kolmogorov-Smirnov*, and its homogeneity, then, is also tested. Afterwards, it is analyzed by ANOVA *one way test*, if it has a great deal of necessity, the researcher did further testing in the degree of significance 5%.

The first result of the study shows that methanol extract of kenikir leaf has active compound, namely phenol, flavonoid, saponin, and tannin. While the next result of the study shows that, the extraction of Kenikir leaf is capable of avoiding *Salmonella typhi* bacteria in an amount of 9,5 mm in concentration 10 mg/ml. While in concentration 15 mg/ml shows the diameter of blocked zone in an amount of 13.3 mm, concentration 20 mg/ml shows diameter of blocked zone in an amount of 16,5 mm, concentration 25 mg/ml shows diameter of blocked zone in an amount of 20,3 mm, and concentration of 30 mm/ml. Diameter of blocked zone is continually raising in an amount of 24,2 mm. to conclude that the methanol extract of kenikir leaf has a potential as anti-bacteria toward the growth of *Salmonella typhi*.