

ABSTRACT

ANTIBACTERIAL ACTIVITY TEST OF *Cyperus rotundus* L. RHIZOME EXTRACT USING DISTILLATION METHOD AGAINST *Bacillus subtilis*

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Gastrointestinal disease is a disease that is often suffered. *Bacillus subtilis* are bacteria that can cause infections in the digestive tract, one of the options in dealing with infectious diseases using synthetic chemicals. The use of antibiotics is often uncontrolled and can lead to resistance to bacteria. Therefore, alternative treatment with traditional medicine is needed that can kill bacteria. The *Cyperus rotundus* L. rhizome is one type of plant that can be used as traditional medicine, which is known to contain active compounds such as alkaloids, phenols, glycosides, tannins, and flavonoids. The aim of this study was to determine the antibacterial activity of *Cyperus rotundus* L. rhizome extract against *Bacillus subtilis*. The extraction method used in this research is distillation. The *Cyperus rotundus* L. rhizome extract was tested against the bacterium *Bacillus subtilis* using the paper disc method. From the results of the study, the diameter of the inhibition zone was found at concentrations of 15%, 30%, and 45% with an average of 2.91 mm; 3.68mm; and 3.72 mm. The negative control containing *aquadest* did not show a clear zone. The results of this study indicated that of *Cyperus rotundus* L. rhizome extract had antibacterial activity against *Bacillus subtilis* at all concentrations with a weak category. The greater the concentration of the extract, the greater the inhibition of bacteria caused.

Keywords : *Cyperus rotundus* L. rhizome, *Bacillus subtilis*, Distillation, Extract