INHIBITION OF “CABAI JAWA” (Piper retrofractum Vahl) EKSTRACT TO Streptococcus sanguis GROWTH

Abstract

Background. Indonesia has a rich biodiversity which can be used as medicinal herbs. They have long been used in traditional medicine, such as Piper retrofractum Vahl. It contains essential oil that can be used as an antibacterial agent. Streptococcus sanguis is the first colonial form bacteria that causes dental plaque, the cause of dental caries and calculus. Inhibition of antibacterial is the ability to inhibit bacteria growth. Essential oil has bacterial inhibition to damage the bacteria cell membrane and enzymes. Purpose. To find out the inhibition of Piper retrofractum Vahl extract on the growth of Streptococcus sanguis. Method. The method used in this study was antimicrobial test of dilution with concentration of 100%, 90%, 80%, 70%, 60% and 50%. Piper retrofractum Vahl extract mixed with Brain Heart Infusion Broth (BHIB) to obtain each concentration then Streptococcus sanguis added and incubated for 24 hours. Observations made by visual observation and planting on Tryptone Yeast Cystine (TYC) agar. Results. Minimum Inhibitory Concentration (MIC) of Piper Retrofractum Vahl extract against Streptococcus sanguis, based on observations of the growth of bacteria on media BHIB and TYC agar, was 70%. Conclusion. Piper retrofractum Vahl extract inhibit the growth of Streptococcus sanguis in which is 70%.

Key words: Piper retrofractum Vahl, essential oil, Streptococcus sanguis, MIC