ABSTRACT

Background. Teeth and mouth diseases which often occur is dental caries. Bacteria which act on dental caries process in the dental plaque is Streptococcus mutans. The contents of Curcuma xanthorrhiza are atsiri oil, xanthorrhizol, and flavonoid efficacious as antibacterial. 0.1 mg/ml xanthorrhizol similar with chlorhexidin on 2 mg/ml to Streptococcus mutans.

Purpose. The aim of this research is to find out how many minimum inhibitory concentration and minimum bactericidal concentration of Curcuma xanthorrhiza to Streptococcus mutans multiplication.

Method. 1 ml Curcuma xanthorrhiza 100%; 50%; 25%; 12.5%; 6.25%; 3.12%; 1.6%; 0.8%; 0.4%; mixed with 1 ml BHI and 0.1 ml inokulum bacteria, and positive control, they were incubated for 24 hours at 370 C. Then 0.1 ml bacteria at BHI media took and they’re multiplied at TYC agar media, also they were incubated for 48 hours at 370, and they’re calculated the number of bacteria at TYC agar media.

Result. There were Streptococcus colony at each concentration. Increasingly of Curcuma xanthorrhiza concentration, Streptococcus mutans colony decreased.

Conclusion. Curcuma xanthorrhiza had antibacterial activity againsts Streptococcus mutans.

Key words: Minimum Inhibitory Concentration, Minimum Bactericidal Concentration Curcuma xanthorrhiza, Streptococcus mutans.