DAYA HAMBAT EKSTRAK KAYU MANIS (Cinnamomum zeylanicum) TERHADAP PERTUMBUHAN CANDIDA ALBICANS RONGGA MULUT

(INHIBITION EFFECT OF CINNAMON (Cinnamomum zeylanicum) EXTRACT TOWARDS ORAL CANDIDA ALBICANS)

ABSTRACT

Background. Cinnamon or Cinnamomum zeylanicum, which is beneficial for health, one of its benefits is capability to inhibit the growth of Candida albicans because it has active substances such as cinnamaldehyde and eugenol. Purpose. The aim of this research was to know the inhibition effect of cinnamon extract towards Candida albicans by identifying the minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) of cinnamon extract. Methods. This research was done with the help of a volunteer, maxilla removable denture wearer, wearing the denture for at least 12 months and does not have any systemic disease. The lesion was swabbed from mucosa that contacts with the fitting surface of the denture and also from the denture basis that contacts with mucosa. The swabbed material was incubated in sabourauds dextrose agar to let Candida albicans to grow. Cinnamon extract was diluted into 10 different concentrations; 100%, 50%, 25%, 12.5%, 6.25%, 3.125%, 1.56%, 0.78, 0.39% and 0.195%. After 24 hours, the inhibition zone will be measured. Result. The result of this research showed that the minimum inhibitory concentration of cinnamon extract in inhibit the growth of Candida albicans is 0.39%. Meanwhile the minimum bactericidal concentration of cinnamon extract is 0.78%. Conclusion. Cinnamon extract can inhibit the growth of oral Candida albicans at 0.39% concentration for MIC and 0.78% concentration for MBC.

Keywords: Cinnamomum zeylanicum, cinnamon, Candida albicans