EFEK LAMA PERENDAMAN LEMPENG RESIN AKRILIK DALAM
EKSTRAK DAUN SALAM (SYZYGium POLYANTHUM) TERHADAP
PERTUMBUHAN CANDIDA ALBICANS

THE EFFECT OF IMMERSION TIME OF HEAT CURED ACRYLIC
RESIN IN BAY LEAF EXTRACT (SYZYGium POLYANTHUM) ON
GROWTH OF CANDIDA ALBICANS

ABSTRACT:

Background. The common material used as denture is heat cured acrylic. Acrylic based denture can be contaminated by Candida albicans that caused stomatitis while in contact with palatal mucosa. This is due to micro porosity of acrylic surface which is difficult to clean with only brushing. Most effective way to clean denture is by immersing it into the denture cleaner solution. Natural products can also be used as denture cleaner alternative which had antifungal activities such as bay leaf extract. This extract contains flavonoid, tannin, and essential oils which have antimicrobes activity especially against Candida albicans. Purpose. The aim of this study is to find out the soaking duration of acrylic resin plates in the bay leaf extract (Eugenia polyanthum) 25%, which is effective in inhibiting the growth of Candida albicans. Method. 35 sterile acrylic resin plates were immersed in saliva for pellicle formation and immersed in Candida albicans suspension. They were then incubated at 37°C for 24 hours. They were divided into 5 groups equally. Group 1 was immersed in sterile aquadest. Group 2 was immersed in bay leaf extract 25% for 10 minutes. Group 3 was immersed in bay leaf extract 25% for 15 minutes. Group 4 was immersed in bay leaf extract 25% for 20 minutes. Group 5 was immersed in bay leaf extract 25% for 25 minutes. After that, all samples are rinsed by PBS and vibrated in Saboroud’s Broth to collect the Candida. The Candida was planted on Saboroud’s Dextrose Agar plates and then incubated for 48 hours. Finally, the colony formed were counted manually in colony forming unit (cfu/ml). Results. Acrylic resin plates soaking in bay leaf extracts 25% for 10 minutes, 15 minutes, 20 minutes, and 25 minutes showed decreased number of Candida albicans colonies embedded in acrylic resin plates compared with the control group. Conclusion. The longer period of acrylic resin plates immersion in bay leaf extract 25% is more effective in inhibiting the growth of Candida albicans.

Key Words: Acrylic resin, Bay leaf extract, Candida albicans, Immersion time