

EFEKTIVITAS KONSENTRASI INFUSA LIDAH BUAYA (ALOE VERA LINN) SEBAGAI DESINFEKTAN TERHADAP PERTUMBUHAN CANDIDA ALBICANS PADA LEMPENG AKRILIK HEAT CURED

(Analitik eksperimental laboratoris)

EFFECTIVENESS OF THE CONCENTRATION ALOE VERA INFUSION AS A DESINFECTANT TO ACRYLIC SLAB ON CANDIDA ALBICANS

(Analytical laboratory experimental)

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ALOE VERA INFUSION; CANDIDA ALBICANS

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ABSTRACT

Background: Acrylic based denture are contaminated by *Candida albicans* that caused stomatitis while contact with palatal mucosa. Denture need to be cleaned by immersed it into chemical liquid. In this case, the chemical liquid is Aloe vera infusion. This infusion contains anthraquinone, acemannan, tannin, and saponin which have antimicrobes activity especially against *Candida Albicans*.

Purpose: To find out the ability of aloe vera infusion in inhibiting the growth of *Candida albicans*'s colony on acrylic based denture.

Materials and Method: 32 acrylic plates that are used are heat cured acrylics (QC-20). During "dough stage" the acrylic is embedded into the mold and the acrylic is then cured according to the manufacture's instruction. When the acrylic resin plates are done, it was being sterilized. These acrylic were immersed in saliva for pellicle formation and immersed in *Candida Albicans* suspension. They were incubated at 37°C for 24 hours. They were divided into 4 groups equally. Group 1 was immersed in sterile aquadest. Group 2 was immersed in 80% aloe vera infusion. Group 3 was immersed in 90% aloe vera infusion. Group 4 was immersed in 100% aloe vera infusion. All groups being immersed for 30 minutes each. Saboroud's broth was used after the immersion so that the *Candida Albicans* came off. Then, Saboroud's Dextrose Agar was used for growing *Candida Albicans*. The colonies were counted using colonizing forming unit (CFU)

Result: The mean and standard deviation obtained for each group were : 1. ~/ ~, 2: 5625,0000 / 1995,53072, 3: 2857,0000 / 1552,64751, 4: 0 / 0. There is significant decrease of *Candida Albicans* colonies growth between infusions with different concentration, since $P(0.000) < \alpha 0.05$.

Conclusion: Aloe vera infusion does decrease the number of *Candida Albicans* colonies growth. As high as the concentration, so that the ability of the infusion to kill the *Candida Albicans* getting stonger.

Keywords : Aloe vera infusion, *Candida albicans*, denture stomatitis