

## ABSTRACT

THE IMMERSION EFFECT OF LIME(*Citrus aurantifolia*) EXTRACT ON GROWTH OF *Candida albicans* AT ACRYLIC RESIN

**Background.** Acrylic resin is a material that is often used in dentistry. The use of acrylic resin denture has the advantage also has the disadvantage that there is a micro- cavity attachment for debris that can occur plaque accumulation. *Candida albicans* is one of the normal flora in the oral cavity. *Candida albicans* as the main fungal species found in the denture wearing. The roughness of surface the more the accumulation of *Candida albicans*. In recent years, the increase of interest for knowing the properties of lemon that can affect the growth of *Candida albicans*. **Purpose.** To determine the minimal inhibitory concentration (MIC) of lemon fruit extract on the growth of *Candida albicans* on acrylic resin. **Method.** This research used a sample size of 1x1x1 mm acrylic resin, then the sample had been inserted into the tube containing the suspension *Candida albicans*. Then the sample was soaked in lemon fruit extract with a concentration of 20%, 25%, 30%, 35%, 40% and 2% ketoconazole. Each sample washed 2x with PBS solution and then inserted into Saboroud's broth 10 ml and vibrated for 30 seconds. Then planted in Saboroud's dextrose 37°C for 48 hours. after that, the colonies were counted. **Result.** The statistic results that counted by Independent t-test known significant difference ( $p < 0.05$ ). On the positive control was not obtained the growth of *Candida albicans*, whereas the lemon extract with a concentration of 20%, 25%, 30%, 35%, 40% found that the growth of *Candida albicans* 42.2000 CFU / ml, 33.2000 CFU / ml, 20.4000 CFU / ml, 14.0000 CFU / ml, 5.8000 CFU / ml. **Conclusion.** Based on the results of research, concluded that heat cured acrylic plate that soaked in 40% concentration of lemon extract effectively inhibit the growth of *Candida albicans* colonies due to the minimum growth of *Candida albicans*.

**Keywords :** *Citrus aurantifolia*, *Candida albicans*, acrylic resin, colony count.