

**EFEKTIFITAS PERENDAMAN LEMPENG AKRILIK
DALAM EKSTRAK TEMULAWAK (*CURCUMA
XANTHORRHIZA Roxb.*) TERHADAP PERTUMBUHAN
KOLONI *CANDIDA ALBICANS*
(Penelitian Eksperimental Laboratoris)**

SKRIPSI



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**Efektifitas Perendaman Lempeng Akrilik dalam Ekstrak Temulawak
(*Curcuma xanthorrhiza* Roxb.) terhadap Pertumbuhan Koloni *Candida
albicans***

(Penelitian Eksperimental Laboratoris)

**The Effectivity of Acrylic Plate Immersion in Temulawak (*Curcuma
xanthorrhiza* Roxb.) Extract on the Growth of *Candida albicans* Colony
(A Laboratory Experiment)**

Abstract

Introduction: Temulawak (*Curcuma xanthorrhiza roxb.*) is a plant from Indonesia which has been used as a herbal medicine for generations. Temulawak extract contains a certain sesquiterpene compound called Xanthorrhizol, which has been proved to be effective in inhibiting the growth of *Candida albicans*. This experiment is focused on the effectiveness of temulawak extract against *Candida albicans* colony on the acrylic-based removable denture. **Purpose:** to propose an alternative agent for denture cleansing. **Materials and Methods:** The samples were 30 pieces of (10x10x1)mm heat-cured acrylic plates. They are divided into 5 groups, one immersed in sterile aquadest as a control, and the other 4 groups are immersed in temulawak extract with concentration of 12%, 10%, 8%, and 6% respectively. First, the samples were soaked in sterile saliva and incubated for 24 hours for pellicle formation. Then, the samples were immersed in aquadest and the extract groups with the concentrations mentioned above. After that, all samples are rinsed by PBS and vibrated to collect the *Candida*. The *Candida* was planted on agar plates and then incubated for 48 hours. Finally, the colony formed were counted manually in colony forming unit (cfu/ml). **Results:** The results show that there is a significant difference between those 5 group, whereas the higher the extract's concentration is, the less colony is found. The 6% concentration is found effective in inhibiting the growth of *Candida albicans*. **Conclusion:** Temulawak extract is found effective in inhibiting the growth of *Candida albicans* on acrylic-based removable dentures, with the effective concentration of 6%.

Keywords: Temulawak extract, Acrylic Plate, *Candida albicans*.