

**KONSENTRASI EFEKTIF EKSTRAK DAUN SALAM (*Syzygium polyanthum* Wight) TERHADAP HAMBATAN BIOFILM *Enterococcus faecalis***

**EFFECTIVE CONCENTRATION OF BAY LEAF EXTRACT (*Syzygium polyanthum* Wight) TO INHIBIT *Enterococcus faecalis* BIOFILM**

**ABSTRACT**

**Background.** *Enterococcus faecalis* is the most dominant microorganisms found in endodontic secondary infection with prevalence ranging between 24% - 77%. Defense mechanism of *Enterococcus faecalis* bacteria is forming biofilm. A study showed that bacteria in mature biofilms can 10-1000 times more resistant to antimicrobials than bacteria in a planktonic form. One of the natural substances that can be used as antibiofilm to irrigation root canals is extract of fresh bay leaf (*Syzygium polyanthum* Wight). Chemical components in bay leaves include flavonoids, tannins, and essential oils, which have antibacterial capability and damage the membrane biofilm. **Purpose.** To determine the effective concentration of fresh bay leaf extract (*Syzygium polyanthum* Wight) that can inhibit biofilm *Enterococcus faecalis*. **Method.** This research is in-vitro laboratory experimental with post test only control group design using microtitter plate assay. Samples using *Enterococcus faecalis* ATCC 29212 cultured in TSB (Trypticase Soy Broth) + glucose. Bay leaf extract (*Syzygium polyanthum* Wight) concentration in this study was 13%, 12.25%, 11.50%, 10.75%, 10%, 9.25%, 8.50%, 7.75%, 7%, and 6.25%. **Results.** At the 13% concentration of *Syzygium polyanthum* Wight, showed 100% inhibition of biofilm, means that the 13% concentration of bay leaf extract (*Syzygium polyanthum* Wight) can totally inhibit biofilm formation of *Enterococcus faecalis*. **Conclusion.** The effective concentration of bay leaf extract (*Syzygium polyanthum* Wight) which inhibit *Enterococcus faecalis* biofilm is 13%.

**Keywords:** *Syzygium polyanthum* Wight extract, biofilm, *Enterococcus faecalis*, effective concentration.