

MIC AND MBC OF FLAVONOID FROM MANGSOTEEN PERICARP EXTRACT AGAINST *Porphyromonas gingivalis*

ABSTRACT

Background. *Porphyromonas gingivalis* is one of the most common root canal's bacteria in necrotic tooth. Several irrigation material that usually used in endodontic treatment have a harmful side effect for long term using. It is necessary to develop an alternative irrigation material, one of the most potential substance is natural material. Flavonoid contained in mangosteen pericarp extract is known has an antibacterial potency. **Purpose.** The aim of this study is to determine Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration) of flavonoid from mangosteen pericarp extract against *Porphyromonas gingivalis*. **Method.** This research is laboratory experimental with post test only control group design. *Porphyromonas gingivalis* ATCC 33277 was diluted into several concentration using serial dilution method in Trypticase Soy Broth (TSB) medium and inserted in several reaction tube. Every reaction tube then incubated for 24 hours. After being incubated, each concentration was taken and dropped into Trypticase Soy Agar (TSA) medium in petridish using drop plate method. Then, every petridish was incubated for another 24 hours and colonies growth was counted manually in Colony Forming Unit (CFU). **Result.** Bacterial colonies growth at concentration 0,78% is 90% less than positive control group and there are no bacterial colonies growth at concentration 1,56%. **Conclusion.** Flavonoid from mangosteen pericarp extract has an antibacterial effect against *Porphyromonas gingivalis*. MIC of flavonoid against *Porphyromonas gingivalis* is 0,78% and MBC is 1,56%.

Keywords: Flavonoid, Mangosteen Pericarp extract, MIC, MBC, *Porphyromonas gingivalis*