ABSTRACT

Background: Dental caries is an infectious progressive disease that caused by biofilm bacteria in the oral cavity. One of bacteria that cause caries is Lactobacillus sp which increased after the caries process was start, and cause caries more severe. Cacao beans are one of the herbs that can be used as a treatment because it has a variety of therapeutic effects such as antioxidant and antibacterial. Purpose. The aim of this study was to observe the inhibition flavonoid extract of cocoa beans towards bacteria Lactobacillus sp using optimum inhibitory concentration and minimum bactericidal concentration. Methods: This research was a laboratory experimental study. Dental plaque taken from the teeth of children aged 8-11 years, who were not in antibiotic medication and no systemic disease. It was cultured and isolate to get Lactobacillus sp. Cocoa beans was dried, crushed, soaked in 70% ethanol and stirred with kinetic maceration machine then diluted to obtain various concentrations. Optimum inhibitory concentration and minimum bactericidal concentration cocoa beans extract towards Lactobacillus sp were known by counting the growth of bacterial colonies on Natrium Agar media using of colony forming unit (CFU). Results: Flavonoid extract of cocoa beans had optimum inhibitory concentration against Lactobacillus sp at 3.125% concentration and minimum bactericidal concentration at 6.25% concentration. Conclusion: Minimum bactericidal concentration and optimum inhibitory concentration of flavonoid extract of cocoa beans towards Lactobacillus sp are each at 6.25% and 3.125% concentration.

Keywords: Caries, flavonoids, cocoa beans extract, Lactobacillus sp