

ABSTRACT

Background: Biofilm is a community of microorganisms, and also a precursor of the formation of plaque on the teeth. One example of a biofilm forming bacteria is *Lactobacillus acidophilus*, which plays an important role in the formation of caries, plaque, and often acts as an agent in the formation of secondary caries lesions. There has been a lot of antiseptic used as a mouthwash to eliminate the presence of pathogenic bacteria in the oral cavity, but the use of mouthwash in the long run may cause adverse effects on the normal flora of the oral cavity. To avoid this, the use of natural ingredients, such as turmeric (*Curcuma longa*) and *Aloe vera*, is encouraged. **Purpose:** To know the inhibition effect of tumeric (*Curcuma longa*) and *Aloe vera* extract on the formation of *Lactobacillus acidophilus* biofilm. **Method:** Inhibition of biofilm formation was observed using the value of Optical Density (OD) through the reading of the ELISA reader. **Results:** The result of OD reading in the turmeric extract experiment showed that 7,5% turmeric extract was the ideal concentration in inhibiting biofilm formation (94.2%). 5% aloe vera extract was the most effective concentration in inhibiting biofilm formation (75.1%). Both extracts could inhibit biofilm formation of *Lactobacillus acidophilus*. **Conclusion:** Based on the research that has been done, the results found that turmeric (*Curcuma longa*) extracts and *Aloe vera* extracts could inhibit biofilm formation of *Lactobacillus acidophilus*.

Keywords: *Lactobacillus acidophilus*, biofilm, *Curcuma longa*, *Aloe vera*, Optical Density