

ABSTRACT

Background: Most of the anaerobic bacteria is the cause of the periodontal tissues damage which has proteinase as the virulence factors which are able to increase the bacterial pathogens. Propolis as a herbal medicine is not only used as an antibacterial but also used as enzyme inhibitor.

Objective: This research aims to find out the influence of Propolis Ethanol Extract (*Apis Trigona*) on the proteolytic activity of anaerobic sulcus gingiva bacterial cultures.

Methods: The design of the research used was in vitro laboratory experimental. The method used was liquid dilution in the media of Tryptose Phospate Broth which was continued with a gelatin hydrolysis test. Propolis Ethanol Extract (*Apis Trigona*) which was tested to anaerobic sulcus gingiva bacterial cultures consisted of various concentrations: 0.8%; 0.4%; 0.2%; 0.1%; and 0.05% based on the weight/volume (w/v).

Results: All concentrations tested have weak relations ($r = -0.589$) on the proteolytic activities. However, they have strong relations ($r = -0.950$) with the total of influence of 90.3% on the bacteria population number.

Conclusion: Propolis Ethanol Extract (*Apis Trigona*) has weak relations on the proteolytic activity of anaerobic sulcus gingiva bacterial cultures.

Keywords: Propolis Ethanol Extract (*Apis Trigona*), Proteolytic Activity, Anaerobic Sulcus Gingiva Bacterial, Gelatin Hydrolysis Test