

INHIBITORY EFFECT OF EXTRACT ETHANOLIC PROPOLIS (*Apis Trigona*) AGAINST HYDROLYTIC CAPACITY OF *Enterococcus faecalis* (in vitro)

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ABSTRACT

Background : *Enterococcus faecalis* is a root canal bacteria that is commonly encountered with endodontic failure. It takes a role as the inflammatory inducer due to its extracellular proteins representing their hydrolytic capacity. To prevent the possibility for the occurrence of endodontic failure, some additional preventive procedures such as irrigation and antibiotics application could be administered. In addition to these two approaches, propolis could be an interesting biological substance as an alternative remedy due to its biological and therapeutic properties. Propolis has a potential ability to inhibit inflammatory induction. **Purpose :** This study is to determine the effect of extract ethanolic propolis (*Apis Trigona*) solution by various extract concentrations in the gelatine hydrolysis activity of *Enterococcus faecalis*. **Methods :** This research was conducted as a laboratory experimental study in vitro. Various concentrations which were used for this research are: 0,05%; 0,1%; 0,2%; 0,4%; and 0,8% by weight/volume (w/v). Brain Heart Infusion broth was used as a growing and culturing media, while the bacterial turbidity was measured using Spectrophotometer UV-mini. Gelatin hydrolysis measurement procedure was then performed for confirming gelatine hydrolytic activity. **Result :** All ethanolic propolis treated-samples showed hydrolysis inhibitory effect of *Enterococcus faecalis*. Furthermore, the most effective concentration in inhibiting the hydrolytic activity of *Enterococcus faecalis* was 0,4%. **Conclusion :** Extract ethanolic propolis of *Apis Trigona* could inhibits hydrolytic capacity of *Enterococcus faecalis*.

Keywords : Extract ethanolic propolis, *Apis Trigona*, hydrolytic capacity, *Enterococcus faecalis*