DAYA ANTIOKSIDAN EKSTRAK KAYU SIWAK (Salvadora persica) PADA SALIVA PENDERITA GINGIVITIS

ANTIOXIDANT EFFECTS OF MISWAK EXTRACT (Salvadora persica) IN SALIVA OF GINGIVITIS PATIENTS

ABSTRACT

Background: Periodontal disease has second highest prevalence after dental caries in Indonesia. Oxidative release to the formation of Reactive Oxygen Species (ROS) excessive is the key the inflammatory, including in periodontal disease. Overproduction of ROS (arising either from mitochondrial electron-transport chain or excessive stimulation) results in oxidative stress can be an important mediator of damage to cell structures, including lipids, membranes, proteins and DNA. Miswak has been used as an oral health device since centuries ago, and now it is proven scientifically to be good for the health of oral cavity. Unfortunately, an experiment to acknowledge the efficacy of antioxidant miswak against ROS which cause periodontal disease has never been conducted. Purpose: To acknowledge the efficacy of antioxidant miswak extract against ROS in saliva. Method: Salvadora persica powder is macerated into 96% of ethanol, extracted until it is free of the solvent, then diluted into five different concentrations, 0%, 6,25%, 12,5%, 25%, and 50%. Saliva of gingivitis are taken as samples, samples used in the in vitro research is a mixture of salivary gingivitis patients with miswak extract (Salvadora persica) and DPPH solution. The absorbance calculated by the formula percent activity to know rate of antioxidant activities. Result: There are significant differences among all of the test solution used in this experiment. Conclusion: Aqueous miswak extract is effective against the ROS of saliva which cause periodontal disease, starting on 12,5% concentration above and below of 25% concentration miswak extract with aquadest.

Keywords: Periodontal Disease, Miswak, Salvadora persica, Antioxidant Activities.