EFEKTIVITAS DAYA HAMBAT
EKSTRAK DAUN *Ricinus communis* L. TERHADAP
PERTUMBUHAN KOLONI *Streptococcus mutans*

SKRIPSI

Oleh:

**BRINNA LISTIANI**

020810048

FAKULTAS KEDOKTERAN GIGI
UNIVERSITAS AIRLANGGA BHMN
SURABAYA
2012
ABSTRACT

Background. Dental Caries is a common infectious disease. There have been many studies utilizing natural ingredients that aims to produce drugs in an effort to support dental health services programs, particularly to prevent and overcome disease dental caries caused by Streptococcus mutans. Streptococcus mutans is the prevalent decay microorganism. Antibacterial ingredients those commonly used are containing phenol, chlorhexidine, fluorine, and hexetidine in the form of mouthwash and toothpaste. But the long term use of synthetic materials can cause adverse effects. Ricinus communis L. is one of herbs which is used as a traditional antibacterial agent since long time ago because of its active substance content that is Flavonoid. The use of traditional herbs that are used as drugs rarely cause adverse side effects than drugs made from synthetic materials. Purpose. The aim of the present study was to investigate the inhibition effectiveness concentration from ethanol extracts of Ricinus communis L. against clinically isolated Streptococcus mutans. Method. Flavonoids extract was purified from ethanol extract of Ricinus communis L. leaves which was obtained from Ballitro, Cimanggu, Bogor, Jawa Barat. Extract flavonoids was diluted in aquased to 100%, 50%, 25%, 12.5%, 6.25%, 3.125%, 1.5625%, 0.78125%, 0.390%, 0.195%. S.mutans were grown in medium BHIB and incubated with flavonoids for 24 hours at 37° C. Antibacterial activity was reflected by the diameter of the inhibition zone around the paperdisc. The data were analyzed by using ANOVA followed by LSD test with significance level of 5%. Result. The result of this study showed that all flavonoid significantly (p<0.05) inhibited the growth of S.mutans. 6.125% extract was the most effective concentration to inhibit the growth of S.mutans. Conclusion. The ethanol extracts of Ricinus communis L. demonstrated the inhibition effectiveness against the growth of Streptococcus mutans at certain concentration. The most effective concentration that can inhibit the growth of S.mutans is 6.125%.

Keywords: Ricinus communis L., Streptococcus mutans, Zone of Inhibition, Antibacterial Activity