ABSTRACT

Cahyani, Anggi. 2013. Effect of supernatant red grape (Vitis vinifera) juice isolated with 12.000rpm sentrifugation against Streptococcus mutans growth. Final Assignment, Medical Faculty of Brawijaya University. Supervisors : (1) Prof. Dr. dr. Sumarno DMM, SpMK(K) (2) drg. Dini Rachmawati Sp.KGA.

Streptococcus mutans (S.mutans) is a gram-positive bacteria in oral cavity which produced acid as the common cause of dental caries. In order to prevent the growth or kill Streptococcus mutans, antibacterial is required. Red grape (Vitis vinifera) is suspected to contain antibacterial. An experimental study using the post test only control group design is carried out to Streptococcus mutans with tube dilution method and streaking on the Brain Heart Infusion. A range of concentration from 40%, 50%, 60%, 70%, 80%, 90%, 98%. The control group are group of bacteria and red grape juice control. The analysis of Minimum Inhibitor Bactericidal (MIC) is show a difference absorbent value as the given concentration (Anova, p<0,05). The correlation test show is strong reciprocal association between concentration of red grape juice and absorbent value (r=-0,978; p< 0,05). The analysis of Minimum Bactericidal Concentration (MBC) is shows difference of the number of colonies as given concentration (Anova, p<0,05). The correlation reveals a very strong reciprocal association between concentration of red grape juice and the number of Streptococcus mutans colonies growth (r=-0,925; p< 0,05). The conclusion is supernatant of red grape juice has effect the growth as antibacterial agent on Streptococcus mutans in vitro, with MIC at concentration 60% and MBC at concentration 80%.

Keywords : Red grape juice, Streptococcus mutans, antibacterial.