

Efek antibakteri jus anggur (*Vitis vinifera*) varietas probolinggo biru terhadap *Streptococcus mutans* asal saliva, in vitro

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Abstrak

Latar Belakang : Bakteri patogen *Streptococcus mutans* merupakan salah satu faktor penyebab karies yang perlu diperhatikan. Jus Anggur (*Vitis vinifera*) varietas Probolinggo Biru mengandung senyawa fenol, diantaranya flavonoid, tannin, antosianin dan resveratrol. Senyawa fenol memiliki efek antibakteri terhadap *Streptococcus mutans* asal saliva.

Tujuan : Mengetahui besar efek antibakteri jus Anggur (*Vitis vinifera*) varietas Probolinggo Biru terhadap *Streptococcus mutans* asal saliva dengan menghitung besar zona hambatan, Konsentrasi Hambat Minimal (KHM) dan Konsentrasi Bunuh Minimal (KBM).

Metode : Senyawa fenol pada jus anggur diidentifikasi dengan uji fitokimia. Jus anggur dibuat dalam 8 tingkat konsentrasi, 20% hingga 90%. Penelitian ini menggunakan dua macam tes sensitivitas, metode difusi dan metode dilusi. Analisa statistik dilakukan dengan metode deskriptif.

Hasil : Zona hambatan meningkat dari 1.03 mm pada konsentrasi 20% hingga 7.03 mm pada konsentrasi 90%. Konsentrasi Hambat Minimal (KHM) sebesar 40% dan Konsentrasi Bunuh Minimal (KBM) sebesar 50%.

Kesimpulan : Berdasarkan hasil penelitian in vitro yang dilakukan, terbukti bahwa jus Anggur (*Vitis vinifera*) varietas Probolinggo Biru memiliki efek antibakteri yang potensial terhadap *Streptococcus mutans* asal saliva.

<hr>Background: The emergence of dental caries bacterial pathogen, *Streptococcus mutans*, is a significant threat to oral health. Grape (*Vitis vinifera*) juice variety Blue Probolinggo has active substance named phenolic compounds such as flavonoid, tannin, anthocyanin and resveratrol. Phenolic compounds have antibacterial effect against salivary *Streptococcus mutans*.

Objectives: The aim of this research is to determine the antibacterial effect of Grape (*Vitis vinifera*) juice variety Blue Probolinggo by measuring the inhibitory zone, Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC) on salivary *Streptococcus mutans*.

Methods: Phenolic compounds in grape juice were identified by phytochemical test. After divided to eight concentrations, from 20% until 90%, the grape juice was tested against salivary *Streptococcus mutans*. This research used two kinds of sensitivity test, diffusion and dilution method. Statistical analysis was done in descriptive method.

Result: Inhibitory zone was inclined from 1.03 mm in concentration 20% to 7.03 mm in concentration 90%. Minimum Inhibitory Concentration (MIC) was 40% and Minimum Bactericidal Concentration (MBC) was 50%.

Conclusion: This research shows that Grape (*Vitis vinifera*) juice variety Blue Probolinggo has potential antibacterial effect against salivary *Streptococcus mutans*, in vitro.