

Daya antimikroba infusum jambu air Semarang (*Syzygium samarangense*) terhadap pertumbuhan *Streptococcus mutans*, in vitro

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Abstrak

Latar Belakang : Jambu air Semarang (*Syzygium samarangense*) atau jambu cinalo telah terbukti dapat menghambat pertumbuhan bakteri patogen, karena mengandung senyawa Tannin dan Oleanolic acid.

Tujuan: Penelitian ini untuk membuktikan daya antimikroba infusum Jambu air Semarang terhadap *Streptococcus mutans*.

Metode: Infusum Jambu air Semarang dibuat dengan proses pemanasan 100o C selama 15 menit terhadap 50 gram jambu air semarang dalam 500 ml air, kemudian disaring untuk mendapatkan 500 ml larutan (konsentrasi 10%), dipanaskan lagi sehingga larutan tersisa 50 ml (konsentrasi 100%), untuk penelitian ini dibuat infusum 80%, 60%, 40%, 30%, 20%, dan 15% sesuai prosedur yang benar. Efek antimikroba masing-masing konsentrasi infusum diperiksa dengan metode difusi serial dilusi sehingga diperoleh nilai KHM dan KBM serta metode difusi sehingga diperoleh nilai zona hambatan terhadap 6 koloni *S.mutans*.

Hasil: Terhadap ke-6 koloni *S.mutans* diperoleh hasil sebagai berikut: KHM : 80%/ml dan KBM tidak diketahui serta rata-rata zona hambatan 1,533 mm.

Kesimpulan: Secara in vitro, Infusum Jambu air Semarang dengan konsentrasi 80% berkhasiat menghambat pertumbuhan bakteri *S.mutans*(efek bakteriostatik).

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Background : Wax apple (*Syzygium samarangense*) has been known to prevent the growth of pathogen bacteria since ancient times because it contains phenol (tannin) and oleanolic acid which has been proved to prevent the growth of bacteria.

Objectives: This research is for determine the antimicrobial activity of Wax apple's infusum on *Streptococcus mutans*.

Methods: Wax apple's infusum was made by the process of steeping seedless 50 gram Wax apple in 500 ml water, to see its medicinal properties after getting 100% concentration of solution. After that we made 80%, 60%, 40%, 30%, 20%, and 15% infusum. The antimicrobial activity of wax apple's infusum was examined by dilution method to get the minimum inhibition concentration (MIC) and minimum bactericidal concentration (MBC), and diffusion method to get the inhibition zone to 6 colony of *S.mutans*. Data obtained from this research in a descriptive method.

Results: Effect of Wax apple's infusum on *Streptococcus mutans* are : *Streptococcus mutans* type 1

inhibition zone 1,5 mm; MIC 80% /ml ,MBC unknown; Streptococcus mutans type 2 inhibition zone 1,5 mm; MIC 80% /ml ,MBC unknown; Streptococcus mutans type 3 inhibition zone 1,4 mm; MIC 80% /ml ,MBC unknown; Streptococcus mutans type 4 inhibition zone 1,6 mm; MIC 80% /ml ,MBC unknown; Streptococcus mutans type 5 inhibition zone 1,7 mm; MIC 80% /ml ,MBC unknown; Streptococcus mutans type 6 inhibition zone 1,5 mm; MIC 80% /ml ,MBC unknown;

Conclusion: We conclude that Wax apple's Infusum has anti microbial activity against Mutans Streptococci, in vitro. Hence it may have potential anticariesproperty.