

EFFECT OF CITRONELLA (CYMBOPOGON NARDUS L.) STEM DECOCTION WATER AS A MOUTHWASH ON *pH* OF SALIVA

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ABSTRACT

Background : The prevalence of dental caries in Indonesia according to Riskesdas in 2018 was 57.6%. Many factors influence the occurrence of dental caries, one of which is salivary *pH*. The lower the *pH* of saliva, the higher the dental caries. Citronella stem decoction water as a mouthwash effectively inhibits the growth of *Streptococcus mutans*, which plays a role in the process of dental caries.

Objective : The effect of citronella stem decoction water as a mouthwash on salivary *pH* is known.

Methods : This research is a Quasy Experiment Design with a Pretest Posttest With Control Group design. This research was conducted in July 2023. The research sample was 60 respondents who were taken with Purposive Sampling technique. Plant identification at the Faculty of Biology Laboratory, Gadjah Mada University. Making citronella stem cooking water as much as 25 grams (\pm 8 sheets) cleaned and cut, then put into 500 ml of distilled water, boiled to a temperature of 100 ° C and until the cooking water is reduced to 250 ml, the cooking water is removed and allowed to cool. This study involved 20 respondents who gargled citronella stems, 20 gargled with mouthwash containing *chlorhexidine*, and 20 gargled with distilled water.

Results : The degree of acidity (*pH* saliva) before gargling citronella stem decoction water on acidic *pH* criteria was 100% and after gargling citronella stem decoction water on neutral *pH* criteria was 60%. The average value of salivary *pH* before gargling citronella stem decoction water was 5.1, while after gargling the average value was 7.05. Gargling citronella stem decoction water is significantly different at $p = 0.001$.

Conclusion : Citronella stem decoction water as a mouthwash can increase salivary *pH*

Keywords: Salivary *pH*, mouthwash, citronella stem

**PENGARUH AIR REBUSAN BATANG SERAI WANGI
(*CYMBOPOGON NARDUS L.*) SEBAGAI
OBAT KUMUR TERHADAP
pH SALIVA**

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ABSTRAK

Latar Belakang: Prevalensi karies gigi di Indonesia menurut Riskesdas tahun 2018 sebesar 57,6%. Banyak Faktor yang mempengaruhi terjadinya karies gigi, salah satunya adalah *pH* saliva. Semakin rendah *pH* saliva semakin tinggi karies gigi. Air rebusan batang serai wangi sebagai obat kumur efektif menghambat pertumbuhan *Streptococcus mutans* yang berperan dalam proses terjadinya karies gigi.

Tujuan : Diketuinya pengaruh air rebusan batang serai wangi sebagai obat kumur terhadap *pH* saliva.

Metode: Penelitian ini adalah Eksperimen Semu (*Quasy Experiment Design*) dengan rancangan *Pretst Posttest With Control Group*. Sampel penelitian sebanyak 60 responden yang diambil dengan teknik *Purposive Samping*. Identifikasi tanaman di Laboratorium Fakultas Biologi Universitas Gadjah Mada. Membuat air rebusan batang serai wangi sebanyak 25 gram (\pm 8 lembar) dibersihkan dan dipotong, kemudian dimasukkan kedalam 500 ml *aquades*, direbus mencapai suhu 100°C dan sampai air rebusan berkurang menjadi 250 ml, air rebusan diangkat dan didiamkan sampai dingin. Penelitian ini melibatkan 20 responden yang berkumur air rebusan batang serai wangi, 20 berkumur dengan obat kumur yang mengandung *chlorhexidine*, dan 20 berkumur dengan *aquades*.

Hasil : Derajat keasaman (*pH* saliva) sebelum berkumur air rebusan batang serai wangi pada kriteria *pH* asam sebanyak 100% dan sesudah berkumur air rebusan batang serai wangi pada kriteria *pH* netral 60%. Nilai rata-rata *pH* saliva sebelum berkumur air rebusan batang serai wangi 5,1, sedangkan sesudah berkumur nilai rata-rata 7,05. Berkumur air rebusan batang serai wangi sebelum dan sesudah berbeda secara signifikan sebesar $p = 0,001$.

Kesimpulan : Air rebusan batang serai wangi sebagai obat kumur dapat meningkatkan *pH* saliva

Kata Kunci : *pH* saliva, obat kumur, batang serai wangi