

ABSTRACT

Garlic has the ability as an anti-bacterial because of the chemical component, Allicin, contained in it. Moreover, allicin is a substance that can function as an antibacterial and has a large zone of inhibition against *Streptococcus Mutants*. The purpose of this study was to determine the effectiveness of the inhibition of garlic extract (*Allium sativum* L) against *Streptococcus Mutans* in vitro. In addition, to determine the optimal concentration and the function of Lanang Garlic (*Allium sativum* L) in inhibiting the growth of *Streptococcus Mutants*. The research design in this study utilizes a laboratory experimental method with a *post-test control group design*. Then, the method used in data analysis is numerical variable comparative hypothesis testing using the one-way Anova technique, Kruskal-Wallis, and Mann-Whitney test. The results showed that as the concentration of Lanang Garlic's extract (*Allium sativum* L) was increased, the average diameter of the growth inhibition zone of *Streptococcus mutans* that was formed increased. Then, the comparison test showed that there was no difference between the 100% extract treatment and the 80% extract treatment in inhibiting the growth of *Streptococcus Mutant* bacteria. The conclusion of the study was that the concentration of Lanang Garlic (*Allium Sativum* L) extract of 40% was determined as the Minimum Kill Concentration in inhibiting the growth of *Streptococcus Mutans*, thus, the extract of Lanang Garlic (*Allium Sativum* L) was stated to have inhibitory power against *Streptococcus Mutans* in children's oral candidiasis.

keywords: Lanang Garlic, *Streptococcus Mutans*, Allicin

The logo of UNMAS DENPASAR, featuring a stylized figure in traditional Balinese attire seated on a lotus flower, with the text "UNMAS DENPASAR" below it.

ABSTRAK

Bawang putih lanang memiliki kemampuan sebagai anti bakteri karena komponen zat kimia Allicin yang terkandung di dalamnya. Semenatara, zat allicin adalah zat yang dapat berfungsi sebagai antibakteri dan memikliki zona hambat yang besar terhadap *Streptococcus Mutans*. Tujuan dari penelitian ini adalah mengetahui efektivitas daya hambat ekstrak bawang putih lanang (*Allium sativum L*) terhadap *Streptococcus Mutans* secara in vitro. Selain untuk mengetahui konsentrasi optimal dan peran bawang putih lanang (*Allium sativum L*) dalam menghambat pertumbuhan *Streptococcus Mutans*. Rancangan penelitian ini menggunakan metode eksperimental laboratorium dengan *post test control group design*. Metode dalam analisis data adalah uji hipotesis komparatif variable numerik dengan menggunakan teknik one way Anova, *Kruskall-Wallis*, dan uji *Mann-Whitney*. Peneliti menunjukkan bahwa dengan meningkatnya konsentrasi ekstrak bawang putih lanang (*Allium Sativum L*) yang digunakan, rata-rata diameter zona hambat pertumbuhan *Streptococcus mutans* yang terbentuk mengalami peningkatan. Uji perbandingan menunjukkan tidak terdapat perbedaan perlakuan ekstrak 100% dan perlakuan ekstrak 80% dalam menghambat pertumbuhan bakteri *Streptococcus Mutan*. Kesimpulan dari penelitian diperoleh bahwa konsentrasi ekstrak Bawang Putih Lanang (*Allium Sativum L*) sebesar 40% konsentrasi Bunuh Minimum dalam menghambat pertumbuhan *Streptococcus Mutans* sehingga ekstrak Bawang Putih Lanang (*Allium Sativum L*) dinyatakan memiliki daya hambat terhadap *Streptococcus Mutans* pada kandidasis oral.

Kata kunci: Bawang Putih Lanang, *Streptococcus Mutans*, *Allicin*

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