

**UJI DAYA HAMBAT INFUSA RIMPANG JAHE MERAH (*Zingiber officinale var.rubrum*) TERHADAP PERTUMBUHAN BAKTERI *Streptococcus mutans* ATCC 25175**

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**INTISARI**

**Latar Belakang:** Jahe merah (*Zingiber officinale var.rubrum*) merupakan salah satu jahe yang paling umum digunakan karena kandungan senyawa metabolit yang terdapat pada jahe merah dipercaya dapat menyembuhkan berbagai penyakit dan memiliki efek sebagai antibakteri.

**Tujuan Penelitian:** Mengetahui aktivitas infusa dari rimpang jahe merah (*Zingiber officinale var.rubrum*) terhadap penghambatan pertumbuhan *Streptococcus mutans* yang dilihat dari diameter zona hambatnya.

**Metode Penelitian:** Rimpang jahe merah diekstraksi menggunakan metode infusa dan akuades sebagai pelarutnya dengan suhu 90°C selama 15 menit. Ekstrak cair yang diperoleh dilakukan skrining fitokimia dan dilanjutkan dengan uji aktivitas antibakteri dengan menggunakan kertas cakram dengan variasi konsentrasi yaitu 10%, 20%, 30%, 40%, dan 50%. *Chlorhexidine* 0,2% sebagai kontrol positif dan akuades sebagai kontrol negatif. Data dikumpulkan dan dianalisis dengan *One Way ANOVA* dan *Post Hoc*. Berdasarkan hasil uji statistik penelitian uji aktivitas antibakteri infusa rimpang jahe merah terhadap bakteri *Streptococcus mutans* ATCC 25175, dapat disimpulkan bahwa infusa rimpang jahe merah memiliki efek antibakteri dalam menghambat pertumbuhan bakteri *Streptococcus mutans*.

**Hasil Penelitian:** Hasil dari skrining fitokimia yang dilakukan infusa rimpang jahe merah mengandung senyawa alkaloid, saponin, tanin, flavonoid, dan terpenoid. Hasil dari uji aktivitas antibakteri terlihat zona bening terkecil pada konsentrasi 10% dengan rata-rata diameter 6,3 mm dan yang terbesar pada konsentrasi 50% dengan rata-rata diameter 8,3 mm.

**Kesimpulan:** Pada konsentrasi terkecil 10% sampai konsentrasi terbesar 50% infusa rimpang jahe merah (*Zingiber officinale var.rubrum*) memiliki aktivitas antibakteri terhadap bakteri *Streptococcus mutans*.

**Kata Kunci:** Antibakteri, Jahe Merah, *Streptococcus mutans*

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**INHIBITION TEST OF RED GINGER RHIZOME INFUSION (*Zingiber officinale* var. *rubrum*) ON *Streptococcus mutans* ATCC 25175**

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**ABSTRACT**

**Background:** Red ginger (*Zingiber officinale* var. *rubrum*) is one of the most commonly used types of ginger, as the metabolites contained in red ginger are believed to cure various diseases and have antibacterial effects.

**Objectives:** The objective of this study was to describe the activity of infusion from red ginger rhizome (*Zingiber officinale* var. *rubrum*) on the inhibition of *Streptococcus mutans* growth as seen from the diameter of the inhibition zone.

**Methods:** Red ginger rhizomes were extracted using the infusa method and distilled water as solvent at 90°C for 15 minutes. The obtained liquid extract was subjected to phytochemical screening and continued with antibacterial activity test using paper discs with concentration variations of 10%, 20%, 30%, 40% and 50%. *Chlorhexidine* 0.2% was used as positive control and aquadest was used as negative control. The data were collected and analyzed by *One Way ANOVA* and *Post Hoc*. Based on the statistical test results of the antibacterial activity test of red ginger rhizome infusa against *Streptococcus mutans* ATCC 25175 bacteria, it can be concluded that red ginger rhizome infusa has an antibacterial effect in inhibiting the growth of *Streptococcus mutans* bacteria.

**Results:** The results of phytochemical screening conducted on red ginger rhizome infusion contained alkaloid, saponin, tannin, flavonoid, and terpenoid compounds. The results of antibacterial activity test showed the smallest clear zone at 10% concentration with an average diameter of 6.3 mm and the largest at 50% concentration with an average diameter of 8.3 mm.

**Conclusion:** Red ginger rhizome infusa (*Zingiber officinale* var. *rubrum*) has antibacterial activity against *Streptococcus mutans* ATCC 25175 bacteria at the lowest concentration of 10% to the highest concentration of 50%.

**Keyword:** Antibacterial, Red ginger, *Streptococcus mutans*.

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