

**“FORMULASI DAN UJI AKTIVITAS SEDIAAN GEL HAND SANITIZER
EKSTRAK ETANOL RIMPANG JAHE MERAH (*Zingiber Officinale* Var
Rubrum) TERHADAP PERTUMBUHAN BAKTERI *Staphylococcus aureus*
DAN *Escherichia coli*”**

ABSTRAK

Latar Belakang: Infeksi disebabkan oleh bakteri *Staphylococcus aureus* dan *Escherichia coli* masih menjadi masalah kesehatan yang memerlukan pencegahan efektif, salah satunya penggunaan *hand sanitizer* ekstrak etanol rimpang Jahe merah (*Zingiber Officinale* Var *Rubrum*) diketahui mengandung senyawa yaitu flavanoid, fenol, terpenoid yang berpotensi sebagai antibakteri.

Tujuan Penelitian: Penelitian ini bertujuan untuk mengetahui aktivitas antibakteri sediaan gel *hand sanitizer* ekstrak etanol rimpang Jahe merah (*Zingiber Officinale* Var *Rubrum*) terhadap pertumbuhan bakteri *Staphylococcus aureus* dan *Escherichia coli*.

Metode Penelitian: Penelitian ini dilakukan secara eksperimental laboratorium dengan metode formulasi sediaan gel *hand sanitizer* pada konsentrasi 0,5%, 1% dan 2% terhadap pertumbuhan bakteri *Staphylococcus aureus* dan *Escherichia coli*.

Hasil Penelitian: Penelitian ini diperoleh hasil bahwa uji aktivitas ekstrak etanol rimpang jahe merah (*Zingiber Officinale* Var *Rubrum*) dengan variasi konsentrasi konsentrasi 0,5%, 1% dan 2% terhadap pertumbuhan bakteri *Staphylococcus aureus* dan *Escherichia coli* yang diinkubasi selama 1x24 jam menunjukkan adanya zona hambat yang terbentuk. pada hasil pengukuran zona hambat konsentrasi 2% ekstrak etanol rimpang Jahe merah (*Zingiber Officinale* Var *Rubrum*) merupakan konsentrasi terbaik yang ditandai dengan terbentuknya diameter zona hambat yang besar. yaitu 9,88 mm dan 10,9 mm.

Kata Kunci: *Zingiber Officinale* Var *Rubrum*, *Hand Sanitizer*, *Staphylococcus aureus*, *Escherichia coli*.

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**"FORMULATION AND TESTING OF THE ACTIVITY OF A
PREPARATION OF HAND SANITIZER GEL ETHANOL EXTRACT OF
RED GINGER Rhizomes (*Zingiber Officinale* Var *Rubrum*) ON THE
GROWTH OF *Staphylococcus aureus* AND *Escherichia coli* BACTERIA"**

ABSTRACT

Background: Infections caused by *Staphylococcus aureus* and *Escherichia coli* bacteria are still a health problem that requires effective prevention, one of which is the use of hand sanitizer using ethanol extract of red ginger rhizomes (*Zingiber Officinale* Var *Rubrum*) which is known to contain compounds namely flavonoids, phenols and terpenoids which have antibacterial potential.

Research Objectives: This study aims to determine the antibacterial activity of hand sanitizer gel preparations from ethanol extract of red ginger rhizomes (*Zingiber Officinale* Var *Rubrum*) against the growth of *Staphylococcus aureus* and *Escherichia coli* bacteria.

Research Method: This research was carried out experimentally in a laboratory using the hand sanitizer gel formulation method at concentrations of 0.5%, 1% and 2% against the growth of *Staphylococcus aureus* and *Escherichia coli* bacteria.

Research Results: This research showed that the activity test of the ethanol extract of red ginger rhizome (*Zingiber Officinale* Var *Rubrum*) with varying concentrations of 0.5%, 1% and 2% on the growth of *Staphylococcus aureus* and *Escherichia coli* bacteria incubated for 1x24 hours showed that an inhibitory zone was formed. The best is characterized by the formation of a large diameter inhibition zone.

Keywords: *Zingiber Officinale* Var *Rubrum*, Hand Sanitizer, *Staphylococcus aureus*, *Escherichia coli*.