# ABSTRAK

## FORMULASI SEDIAAN TOPIKAL ANTISEPTIK *SPRAY GEL HAND SANITIZER* EKSTRAK ETANOL DAUN KEMANGI (*Ocimum basilicum)*

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**Latar Belakang:** Bakteri *Staphylococcus aureus* pada tangan dapat menjadi salah satu penyebab terjadinya infeksi. *Hand sanitizer* berbahan alami dapat digunakan sebagai alternatif untuk menjaga kebersihan tangan. Daun kemangi (*Ocimum basilicum*) diketahui mengandung flavonoid, tanin, dan saponin yang berpotensi sebagai antibakteri. Aktivitas antibakteri dipengaruhi oleh konsentrasi ekstrak yang digunakan. Tujuan penelitian ini untuk mengetahui variasi konsentrasi ekstrak terhadap sifat fisik, stabilitas, dan aktivitas antibakteri sediaan *spray gel* ekstrak etanol daun kemangi.

**Metodologi:** Penelitian eksperimental ini meliputi pembuatan ekstrak etanol daun kemangi, formulasi sediaan *spray gel*, evaluasi sifat fisik dan stabilitas, serta uji aktivitas antibakteri. *Spray gel* diformulasikan dengan variasi kadar ekstrak 0,25%, 0,5%, 0,75%, dan 1%. Pengamatan organoleptis, homogenitas, kondisi semprotan, stabilitas fisik dianalisis secara deskriptif. Pengamatan viskositas, pH, daya sebar lekat, dianalisis dengan *oneway* ANOVA, dan diameter zona hambat dianalisis dengan *Kruskal-wallis*.

**Hasil Penelitian:** Hasil penelitian menunjukkan bahwa peningkatan konsentrasi ekstrak etanol daun kemangi berpengaruh signifikan terhadap penurunan nilai pH dan viskositas *spray gel*. Sediaan *spray gel* dengan konsentrasi ekstrak 0,5% – 1% memiliki aktivitas antibakteri terhadap *Staphylococcus aureus.*

**Kesimpulan:** Formula terpilih sediaan *spray gel* yaitu Formula II dengan konsentrasi ekstrak etanol daun kemangi sebesar 0,50% menunjukkan aktivitas antibakteri terhadap *Staphylococcus aureus* dengan diameter hambat 7,67 mm.

**Kata Kunci:** *Spray gel*, ekstrak etanol daun kemangi, karbopol 940, *Staphylococcus aureus*.

## ABSTRACT

### TOPICAL ANTISEPTIC FORMULATION OF SPRAY GEL HAND SANITIZER FROM ETHANOL EXTRACT OF BASIL LEAVES (*Ocimum basilicum)*

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**Background:** Staphylococcus aureus bacteria on the hands can be one of the causes of infection. Hand sanitizer made from nature can be used as an alternative to maintain hand's hygiene. Basil leaves (*Ocimum basilicum*) are known to contain flavonoids, tannins and saponins which have potential as antibacterial properties. Antibacterial activity is influenced by the concentration of the used extract. This research was aimed to determine the variation in the concentration of the extract on the physical characteristic and antibacterial activity of the basil spray gel's ethanol extract.

**Methodology:** This experimental methods were included extraction, the formulation of *spray gel* from ethanolic extract of basil leaves, evaluation of physicial characteristic, stability, and antibacterial activity test. The *spray gel* was formulated with varying extract levels of 0,25%, 0,5%, 0,75%, and 1%. Organoleptic, homogeneity, spray conditions and stability test were analyzed descriptively. Viscosity, pH, adhesion dispersion were analyzed by *oneway* ANOVA and antibacterial test were analyzed by *Kruskal-Wallis.*

**Results:** The results was showed that the increase in the concentration of the ethanol extract of basil leaves had an effect on the decrease in the pH value and viscosity of the spray gel. Spray gel preparations with an extract concentration of 0.5% - 1% have antibacterial activity against Staphylococcus aureus.

**Conclusion:** Formula II as the selected formula of spray gel, with a concentration of 0,50% ethanol extract of basil leaves was showed antibacterial activity against *Staphylococcus aureus* with an inhibition diameter 7,67 mm.



**Keywords:** *Spray gel,* ethanolic extract of basil leaves, carbopol 940, *Staphylococcus aureus.*