

**THE EFFECT OF YLANG-YLANG (*Cananga odorata*) ESSENTIAL OIL  
HAND SANITIZER ON REDUCING THE NUMBER OF MICROBES ON  
THE PALMS OF STREET FOOD IN MAGUWOHARJO**

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**ABSTRACT**

**Background:** *Personal hygiene among food handlers is essential to prevent foodborne diseases, especially among street food vendors who are more susceptible to microbial contamination. One preventive measure is the use of hand sanitizer as an alternative antiseptic. The essential oil of ylang-ylang flower (*Cananga odorata*) contains active compounds such as caryophyllene, which has antibacterial properties, making it a potential natural ingredient for hand sanitizer formulation.*

**Objective** *To determine the effect of ylang-ylang essential oil hand sanitizer at concentrations of 10%, 12.5%, and 15% on reducing the number of bacteria on the hands of street food vendors in Maguwoharjo.*

**Methods:** *Quasi experiment research with a pretest-posttest design in three treatment groups (10%, 12.5%, 15%) and one control. Samples were obtained through palm swabs and examined using Plate Count Agar (PCA). Data analysis was carried out by normality test, Paired Sample T-Test, One Way Anova, and LSD test.*

**Results:** *The use of ylang-ylang essential oil hand sanitizer reduced bacterial counts in proportion to the increase in concentration. The bacterial reduction at 10% concentration was 65.78%, at 12.5% was 68.45%, and at 15% was 72.01%. The control group showed only a 49.38% reduction. The 15% concentration was proven to be the most effective.*

**Conclusion:** *There was a significant reduction in the bacterial count on the palms after using ylang-ylang essential oil hand sanitizer.*

**Keywords:** *Hand Sanitizer, *Cananga odorata*, Bacterial Count, Food Handlers*

**PENGARUH *HAND SANITIZER* MINYAK ATSIRI BUNGA KENANGA  
(*Cananga odorata*) TERHADAP PENURUNAN ANGKA KUMAN  
TELAPAK TANGAN PEDAGANG DI *STREET FOOD* MAGUWO HARJO**

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**ABSTRAK**

**Latar Belakang :** *Personal hygiene* penjamah makanan penting untuk mencegah penyakit bawaan makanan, terutama pada pedagang kaki lima yang rentan kontaminasi mikroba. Salah satu upaya pencegahan adalah penggunaan *hand sanitizer* sebagai antiseptik alternatif. Minyak atsiri bunga kenanga (*Cananga odorata*) mengandung senyawa aktif seperti kariofilen yang bersifat antibakteri sehingga berpotensi digunakan sebagai bahan alami *hand sanitizer*.

**Tujuan :** Mengetahui pengaruh *hand sanitizer* minyak atsiri bunga kenanga konsentrasi 10%, 12,5%, dan 15% terhadap penurunan angka kuman telapak tangan pedagang *Street Food* Maguwoharjo.

**Metode :** Penelitian *quasi experiment* dengan rancangan *pretest-posttest* pada tiga kelompok perlakuan (10%, 12,5%, 15%) dan satu kontrol. Sampel diperoleh melalui usapan telapak tangan dan diperiksa menggunakan *Plate Count Agar* (PCA). Analisis data dilakukan dengan uji normalitas, *Paired Sample T-Test*, *One Way Anova*, dan uji LSD.

**Hasil :** Penggunaan *hand sanitizer* minyak atsiri bunga kenanga menurunkan angka kuman seiring peningkatan konsentrasi. Penurunan pada konsentrasi 10% sebesar 65,78%, konsentrasi 12,5% sebesar 68,45%, dan konsentrasi 15% sebesar 72,01%. Kelompok kontrol hanya menurun 49,38%. Konsentrasi 15% terbukti paling efektif.

**Kesimpulan :** Ada penurunan angka kuman telapak tangan setelah penggunaan *hand sanitizer* minyak atsiri bunga kenanga.

**Kata kunci :** *Hand Sanitizer*, *Cananga odorata*, Angka Kuman, Penjamah Makanan