

ABSTRACT

INHIBITION TEST OF *Escherichia coli* BACTERIA AND SENSORY RESPONSE OF HAND SANITIZER GEL FROM WARU LEAF EXTRACT (*Hibiscus tiliaceus L*) IN SOLUTION OF LEMON (*Citrus limon*) SKIN EXTRACT

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This study aims to determine the inhibitory power and sensory response of *hand sanitizers* from hibiscus leaf extract in a solution of lemon peel extract. This study was arranged in a non-factorial completely randomized block design (RAKL) with 6 treatments and 4 replications. The factors used were the concentration of waru leaf extract 0%, 5%, 10%, 15%, 20% and 25%. The data obtained were tested for similarity of variance using the Bartlett test and additional data were tested using the Tuckey test. The data were analyzed by means of variance and further analyzed with the Least Significant Difference (BNT) follow-up test at the 5% level. The results showed that the addition of the concentration of hibiscus leaf extract significantly affected the dispersion, pH, inhibition and hedonic sensory responses to texture, aroma and overall acceptance of *hand sanitizer* with lemon peel extract. Based on the results of the study, the addition of 25% hibiscus leaf extract (W5) was the best treatment that produced a *hand sanitizer* with a spreading power of 6.86 cm, a pH value of 7.03, an inhibitory power of 14.29 mm against *Escherichia coli* bacteria, a texture score. 3.66 which was favored by the panelists, the score of 4.15 which was favored by the panelists and the overall acceptance score of 3.70 which was favored by the panelists.

Keywords: *Hand sanitizer*, lemon peel extract, waru leaf extract

ABSTRAK

UJI DAYA HAMBAT BAKTERI *Escherichia coli* DAN RESPON SENSORI HAND SANITIZER GEL DARI EKSTRAK DAUN WARU (*Hibiscus tiliaceus L*) DALAM LARUTAN EKSTRAK KULIT BUAH LEMON (*Citrus limon*)

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Penelitian ini bertujuan untuk mengetahui daya hambat dan respon sensori *hand sanitizer* dari ekstrak daun waru dalam larutan ekstrak kulit buah lemon. Penelitian ini disusun dalam rancangan acak kelompok lengkap (RAKL) non faktorial dengan 6 perlakuan dan 4 kali ulangan. Faktor yang digunakan yaitu konsnetrasi ekstrak daun waru 0%, 5%, 10%, 15%, 20% dan 25%. Data yang diperoleh diuji kesamaan ragamnya menggunakan Uji Bartlett dan kemenambahan data diuji dengan Uji Tukey. Data dianalisis dengan sidik ragam dan dianalisis lebih lanjut dengan uji lanjut Beda Nyata Terkecil (BNT) pada taraf 5%. Hasil penelitian menunjukkan bahwa penambahan konsentrasi ekstrak daun waru berpengaruh nyata terhadap daya sebar, pH, daya hambat dan respon sensori hedonik terhadap tesktur, aroma dan penerimaan keseluruhan *hand sanitizer* ekstrak kulit buah lemon. Berdasarkan hasil penelitian, perlakuan penambahan ekstrak daun waru 25% (W5) merupakan perlakuan terbaik yang menghasilkan *hand sanitizer* dengan daya sebar sebesar 6,86 cm, nilai pH 7,03, daya hambat sebesar 14,29 mm terhadap bakteri *Escherichia coli*, skor tekstur 3,66 yang disukai panelis, skor aroma 4,15 yang disukai panelis dan skor penerimaan keseluruhan 3,70 yang disukai oleh panelis.

Kata kunci : *Hand sanitizer, ekstrak kulit buah lemon, ekstrak daun waru*