

**POLITEKNIK KESEHATAN KEMENKES TANJUNG KARANG
JURUSAN KESEHATAN LINGKUNGAN**

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Pengembangan potensi ekstrak daun kemangi (*ocimum basilicum*) dan kulit jeruk nipis (*citrus aurantifolia swingle*) sebagai alternatif bahan baku antiseptik tahun 2021

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ABSTRAK

Antiseptik adalah zat yang dapat mengurangi pertumbuhan dan perkembangan mikroorganisme patogen seperti virus, bakteri, parasit, dan jamur. Daun kemangi dan kulit jeruk nipis merupakan tanaman fungsional yang banyak dibudidayakan di Indonesia. Penelitian menunjukkan hasil Daun kemangi dan kulit jeruk nipis memiliki kandungan saponin, flavonoid, polifenol, serta tanin yang bersifat antiseptik. daun kemangi dan kulit jeruk nipis diekstraksi dengan metode maserasi dan destilasi uap. Konsentrasi yang dipakai penelitian ini sebanyak 3 level konsentrasi pada ekstrak daun kemangi dan kulit jeruk nipis yaitu 0,25%,0,5%,1% dan konsentrasi kombinasi sebagai kombinasi daun kemangi dan kulit jeruk nipis yaitu 0,25%/0,25%, 0,25%/0,5%, 0,25%/1%, 0,5%,0,25%, 0,5%,0,5%, 0,5%,1%, 1%/0,25%, 1%/0,5%, 1%/1% serta kontrol dari penelitian ini yaitu sebesar 0%/0%.

Berdasarkan hasil pengaruh kombinasi ekstrak kemangi dan kulit jeruk nipis mendapatkan hasil jumlah koloni perlakuan kombinasi pada konsentrasi 1%/0,5% sebesar 24/CFU sedangkan pada kontrol mendapatkan hasil dari konsentrasi 0%/0% yang hanya ditanam bakteri *E.coli* mendapatkan jumlah koloni sebesar 45/CFU. Dapat disimpulkan bahwa kombinasi ekstrak kemangi dan kulit jeruk nipis memiliki pengaruh terhadap penurunan jumlah koloni *E.coli* pada perlakuan kombinasi ekstrak kemangi dan kulit jeruk nipis. Berdasarkan hasil penelitian uji *Two way anova* kombinasi ekstrak kemangi dan kulit jeruk nipis mendapatkan hasil uji hipotesis kombinasi yaitu $p\text{-value} = 0,000$ ($p\text{-value} < \alpha 0,05$) yang berarti terdapat pengaruh yang nyata terhadap hasil pengaruh kombinasi ekstrak kemangi dan kulit jeruk nipis terhadap jumlah koloni *E.coli* sebesar 70,1% .

Kata Kunci: Antiseptik, ekstrak kemangi dan kulit jeruk nipis, jumlah koloni

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Development of potency of basil leaf extract (*Ocimum basilicum*) and lime peel (*Citrus aurantifolia swingle*) as alternative antiseptic raw materials year 2021

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ABSTRACT

Antiseptics are substances that can reduce the growth and development of pathogenic microorganisms such as viruses, bacteria, parasites, and fungi. Basil leaves and lime peel are functional plants that are widely cultivated in Indonesia. Research shows the results Basil leaves and lime peel contain saponins, flavonoids, polyphenols, and tannins which are antiseptic. Basil leaves and lime peel were extracted by maceration and steam distillation methods. The concentration used in this study was 3 levels of concentration in the extract of basil leaves and lime peel, namely 0.25%, 0.5%, 1% and the combination concentration as a combination of basil leaves and lime peel was 0.25%/0.25 %, 0.25%/0.5%, 0.25%/1%, 0.5%, 0.25%, 0.5%, 0.5%, 0.5%,1%, 1% /0,25%, 1%/0,5%, 1%/1% and the control of this study is 0%/0%

Based on the results of the effect of the combination of basil extract and lime peel extract, the number of colonies in the combination treatment at a concentration of 1%/0.5% was 24/CFU, while the control obtained results from a concentration of 0%/0%, which only E.coli was planted with. colony of 45/CFU. It can be concluded that the combination of basil extract and lime peel has an effect on decreasing the number of E.coli colonies in the combination treatment of basil extract and lime peel. Based on the results of the Two way ANOVA test, the combination of basil extract and lime peel obtained the combination hypothesis test, namely p-value = 0.000 (p-value < 0.05), which means that there is a significant effect on the results of the combination of basil extract and orange peel. lime to the number of E.coli colonies by 70.1%.

Keywords: Antiseptic, basil and lime peel extract, number of colonies