

## INTISARI

Daun pandan (*Pandanus amaryllifolius Roxb*) telah banyak dikenal mengandung senyawa antibakteri. Penelitian sebelumnya ekstrak etanol daun pandan wangi menunjukkan anti bakteri spektrum luas terhadap gram positif dan negatif, sementara formulasi gel *hand sanitizer* terungkap bahwa 2,5% dari ekstrak etanolnya memiliki efek antibakteri *Staphylococcus aureus* dan *Eschericia coli*. Penelitian ini bertujuan untuk mengevaluasi aktivitas antibakteri dari formulasi *hand sanitizer* kombinasi alkohol, triklosan dan ekstrak daun pandan wangi terhadap *Eschericia coli*.

Penelitian ini menggunakan metode maserasi dengan etanol 96% untuk mengekstraksi senyawa daun pandan wangi. Formulasi gel *hand sanitizer* menggunakan ekstrak daun pandan wangi sebagai senyawa aktif dengan konsentrasi 0,5%, 0,75%, 1% dan 1,25%, dikombinasikan dengan alkohol dan triklosan untuk meningkatkan efek antibakteri daun pandan wangi. Formulasi *hand sanitizer* dievaluasi secara fisik menggunakan uji organoleptis, pH, homogenitas, daya sebar, daya rekat dan viskositas. Efek antibakteri *hand sanitizer* dievaluasi menggunakan metode sumuran dengan diameter zona hambat sebagai parameter uji.

Hasil menunjukkan gel *hand sanitizer* kombinasi ekstrak etanol daun pandan wangi (*Pandanus amaryllifolius Roxb*) dengan alkohol & triklosan memiliki karakteristik yang bagus secara organoleptis, pH 5,5- 6,0, daya sebar 4,52 cm, daya lekat 0,51 detik dan sifat alirnya *non Newtonian*. Hasil uji antibakteri pada *Eschericia coli* dengan zona hambat keempat konsentrasi gel berturut 19,11±0,19 mm, 20,33±1,20 mm, 21,44 ±1,54 mm dan 22,22±0,77 mm. Pada konsentrasi 1,25% memiliki diameter zona hambat yang paling besar yaitu 22,22 mm.

**Kata Kunci** : *hand sanitizer*, ekstrak etanol *Pandanus amaryllifolius Roxb*, alkohol & triklosan

## ABSTRACT

Pandan leaf (*Pandanus amaryllifolius Roxb*) has been widely known contains antibacterial compounds. Previous study on ethanolic extract of pandan leaf shows broad spectrum of antibacterial effect against both gram positive and negative, while Formulation as hand sanitizer were revealed that 2.5% of its ethanolic extract has antibacterial effect on *Staphylococcus aureus* and *Eschericia coli*. This study aims to evaluate antibacterial activity of *hand sanitizer* formulation on combination of alcohol, triclosan and ethanolic extract of pandan leaf against *Eschericia coli*.

This study using maceration method with ethanol 96% to extract pandan leaf compounds. Formulation of hand sanitizer using ethanolic extract of pandan leaf as active compound with concentration 0,5%, 0,75%, 1% and 1,25%, while combined with alcohol and triclosan to further enhance antibacterial effect of pandan leaf. Formulation of hand sanitizer were physically evaluated by organoleptic, pH, homogeneity, adhesion, dispersion and viskosity test. Antibacterial effect of *hand sanitizer* were evaluated using diffusion with diameter zone of inhibition as test parameter.

The results showed that the combination of ethanol extract of pandanus leaves (*Pandanus amaryllifolius Roxb*) *handsanitizer* with alcohol and triclosan had good organoleptic characteristics, pH 5.5-6.0, spread capacity 4.52 cm, adhesion power 0.51 secons and the flow properties are *non Newtonian*. Antibacterial test results on *Eschericia coli* with the fourth diameter zone of inhibitory respectively 19,11±0,19 mm, 20,33±1,20 mm, 21,44 ±1,54 mm and 22,22±0,77 mm. Concentration 2.5% has the diameter zone of inhibitory is the greatest of 22.22 mm

**Keyword ;** *Hand sanitizer*, ethanol extract of *Pandanus amaryllifolius Roxb*, alcohol & triclosan