

INTISARI

Kandungan kimia senyawa flavonoid dan tanin pada ekstrak etanol seledri memiliki aktivitas antibakteri. Gel *hand sanitizer* ekstrak etanol seledri 20% mempunyai aktivitas antibakteri tetapi menghasilkan warna gel coklat kehitaman. Penelitian ini merupakan bentuk penelitian lanjutan dari peneliti sebelumnya bertujuan untuk mengevaluasi dan mengetahui besar zona hambat gel *hand sanitizer* kombinasi ekstrak etanol seledri (*Apium graveolens L.*) dengan alkohol & triklosan terhadap bakteri *Escherichia coli*.

Penelitian ini merupakan penelitian eksperimental laboratorium. Simplisia serbuk seledri di ekstraksi menggunakan metode maserasi dengan pelarut etanol 96%. Gel *hand sanitizer* dibuat menjadi 3 formula dengan perbandingan kombinasi ekstrak seledri, alkohol dan triklosan 1%;40%;1%, 2%;40%;0,5% dan 4%;40%;0,25%. Penelitian ini mengevaluasi 3 formula gel *hand sanitizer* kombinasi ekstrak etanol seledri (*Apium graveolens L.*) dengan alkohol & triklosan meliputi uji organoleptik, homogenitas, pH, uji daya sebar, uji daya lekat, dan viskositas. Efektivitas antibakteri gel *hand sanitizer* dilakukan terhadap bakteri *Escherichia coli* menggunakan metode difusi sumuran. Analisis data evaluasi gel *hand sanitizer* dengan membandingkan formula sesuai nilai rujukan standar kualitas gel dan hasil uji antibakteri dianalisis secara statistik dengan one way ANOVA unuk mengetahui apakah adanya perbedaan zona hambat antar formula gel.

Hasil uji evaluasi gel *hand sanitizer* kombinasi ekstrak seledri alkohol & triklosan menunjukkan bahwa ketiga formula secara organoleptik homogen dan menghasilkan gel dengan bau khas seledri berwarna hijau bening-hijau pekat, serta F1;F2;F3 berturut-turut didapatkan hasil pH 5,8;5,4;5,7, daya sebar $4,66 \pm 0,26$; $4,74 \pm 0,07$; $4,64 \pm 0,28$ cm, daya lekat 1,3;1,58;1,14 detik, viskositas $5,5 \pm 0,18$; $2,7 \pm 0,08$; $3,1 \pm 0,19$ Pa.s. Hasil uji antibakteri dengan zona hambat ketiga formula gel berturut 17,2 \pm 1,3 ;15,8 \pm 1,1 ;13,3 \pm 1,0 mm. Hasil data dianalisis secara statistik menunjukkan tidak terdapat perbedaan bermakna antar ketiga formula ($p > 0,05$).

Kata kunci : *Gel hand sanitizer, ekstrak etanol seledri, alkohol & triklosan*

ABSTRACT

The chemical content of flavonoids and tannins in ethanol extract from celery has antibacterial activity. Hand sanitizer gel with 20% ethanol celery extract has antibacterial activity but has a blackish brown color appearance. This research is continuation from previous researchers aimed to evaluate and determine the inhibition zone of the gel hand sanitizer combination of ethanol extract of celery (*Apium graveolens L.*) with alcohol & triclosan against *Eschericia coli* bacteria.

This research is a laboratory experimental study. Powder of celery simplicia is extracted using maceration method with 96% ethanol. Hand sanitizer gel is made into 3 formulas with a comparison of the combination of celery extract, alcohol and triclosan 1%;40%;1%, 2%;40%;0,5% and 4%;40%;0,25%. This study evaluate 3 hand sanitizer gel formulas with a combination of ethanol in celery extract (apium graveolens L.) with alcohol and triclosan including organoleptic test, pH homogeneity, dispersion test, adhesion test, and viscosity test. The effectiveness of the hand sanitizer antibacterial gel was carried out using the well diffusion method. Evaluation of analysis data is done by comparing formulas according to the reference values of gel quality standards and antibacterial test results were statistically analyzed with one way ANOVA to determine whether there were differences in inhibition zones between gel formulas.

The evaluation results of the hand sanitizer gel combination of celery alcohol & triclosan extract showed that the three formulas were organoleptically homogeneous and produced a clear green color with distinctive celery smell, and F1; F2; F3 with a pH value of 5.8; 5.4; 5.7, spread power 4.66 ± 0.26 ; 4.74 ± 0.07 ; 4.64 ± 0.28 cm; adhesion power 1.3; 1.58; 1.14 seconds; viscosity 5.5 ± 0.18 ; 2.7 ± 0.08 ; 3.1 ± 0.19 Pa.s. Antibacterial test results with the third inhibition zone gel formula successively 17.2 ± 1.3 , 15.8 ± 1.1 , 13.3 ± 1.0 mm. The results of the data were analyzed statistically showing no significant differences between the three formulas ($p > 0.05$).

Keywords: hands sanitizer gel, etanol celery extract, alcohol and triclosan