INTISARI

Daun cincau hijau (*Cyclea barbata Miers*) memiliki aktivitas antibakteri dengan kandungan senyawa metabolit sekunder yaitu flavonoid, alkaloid, saponin, tanin, dan steroid. Tujuan penelitian ini adalah untuk mengetahui pengaruh konsentrasi ekstrak daun cincau hijau terhadap persentase penghambatan pembentukan biofilm bakteri *Aggregatibacter actinomycetemcomitans*.

Larutan BHI sebanyak 130 µl dipindahkan ke dalam masing-masing sumuran dengan mikropipet. Kemudian masukkan suspensi bakteri *A. actinomycetemcomitans* (standar McFarland 1,5 x 10^8 CFU/ml) sebanyak 50 µl. Ditambahkan ekstrak daun cincau hijau, dimethyl sulfoxide, dan klorheksidin dengan volume masing-masing 20 µl. Konsentrasi ekstrak daun cincau hijau yang digunakan adalah 7,5%, 10%, 12,5%. Dimethyl sulfoxide 1% digunakan sebagai kontrol negatif dan klorheksidin 0,2% sebagai kontrol positif. Sumuran diinkubasi selama 48 jam pada suhu 37^{o}C, kemudian dilakukan pewarnaan *crystal violet* pada sumuran dan pembacaan dengan *microplate reader*. Data yang diperoleh dianalisis dengan uji *Brown-Forsythe, welch* dan *Games-Howell* dengan tingkat signifikansi 95%.

Hasil uji *Brown-Forsythe* dan *welch* menunjukkan nilai signifikan ($p<0,05$) yang berarti hipotesis diterima. Hasil uji *Games-Howell* menunjukkan terdapat perbedaan rerata signifikan di antara kelompok perlakuan kecuali kelompok konsentrasi 7,5% terhadap konsentrasi 10%. Kesimpulan penelitian adalah terdapat pengaruh signifikan konsentrasi ekstrak daun cincau hijau terhadap persentase penghambatan pembentukan biofilm bakteri *A. Actinomycetemcomitans*.

Kata Kunci : *Aggregatibacter actinomycetemcomitans*, biofilm, *dimethyl sulfoxide*, ekstrak daun cincau hijau, persentase penghambatan

ABSTRACT

Green grass jelly (*Cyclea barbata Miers*) has an antibacterial activity with secondary metabolite such as flavonoid, alkaloid, saponin, tanin, and steroid. The aim of this study is to know the effect of green grass jelly extract concentrations againts the percentage inhibition of biofilm formation of *Aggregatibacter actinomycetemcomitans*.

Transfering 130 µl of BHI solution to each of the wells using micropipette. Then, 50 µl of *A. actinomycetemcomitans* suspension (standardized McFarland 1,5 x 10^8 CFU/ml) was transfered to each of the wells. Green grass jelly extract, dimethyl sulfoxide, and chlorhexidine with a volume of 20 µl each were transfered to each of the wells. The concentrations of green grass jelly extract which used were 7,5%, 10%, and 12,5%. Dimethyl sulfoxide 1% solution were used as negative control and chlorhexidine 0,2% as positive control. The wells were incubated for 48 hours at 37ºC, then crystal violet staining were done on the wells and observed with microplate reader. The data were analyzed by *Brown-Forsythe, welch* and *Games-Howell* of significancy level 95%.

Brown-Forsythe dan *welch* test result showed significant value ($p<0,05$), this means hypothesis was accepted. *Games-Howell* test result showed that the mean difference between the groups were significant except 7,5% concentration group againts 10% concentration group. The conclusion of this study is there was an significant effect of green grass jelly extract concentrations againts the percentage inhibition of biofilm formation of *A. actinomycetemcomitans*

Key Words : *Aggregatibacter actinomycetemcomitans*, biofilm, dimethyl sulfoxide, green grass jelly extract, inhibition percentage