INTISARI

Penyakit infeksi merupakan penyakit yang sering dijumpai dimana organisme seperti bakteri, virus, jamur yang mampu menyebabkan kerusakan dalam tubuh atau jaringan. Bakteri *Streptococcus mutan* spesies bakteri dominan di mulut penyebab utama karies gigi. Bakteri *Pseudomonas aeruginosa* bakteri patogen berbahaya menyebabkan penyakit infeksi di jaringan saluran pernapasan, mata, saluran kemih, dan kulit. Tujuan penelitian, mengetahui aktivitas antibakteri fraksi etil asetat kulit rambutan (*Nephellium lappaceum* L.) dalam menghambat pertumbuhan bakteri *Streptococcus mutan* dan *Pseudomonas aeruginosa*.

Fraksi etil asetat kulit buah rambutan dengan metode maserasi pelarut etanol 70% diekstraksi cair-cair pelarut kloroform dan etil asetat. Penetapan kadar tanin secara permanganometri. Uji aktivitas antibakteri metode difusi cakram 3 replikasi dengan kelompok kontrol positif *chlorhexidine* untuk bakteri *Streptococcus mutan* dan ciprofloxacin untuk bakteri *Pseudomonas aeruginosa*, kontrol negatif aquades steril, konsentrasi fraksi 10%, 30%, 40%, 60%, 80%, dan 90%. Diameter zona hambat diukur dan dianalisis menggunakan *Kruskal-wallis* dan *Mann-whitney*.

Hasil penelitian menunjukkan fraksi etil asetat kulit buah rambutan terdapat kadar tanin total sebesar 6,7611%. Zona hambat terhadap bakteri *Streptococcus mutan* pada K(+*chlorhexidine*), konsentrasi 10%, 30%, 40%, 60%, 80%, dan 90% secara berturut sebesar 15,4 mm; 11,83 mm; 14,46 mm; 10,66 mm; 15,23 mm; 19,26 mm; 17,86 mm, terhadap bakteri *Pseudomonas aeruginosa* sebesar 33,86 mm; 8,73 mm; 12,6 mm; 10,03 mm; 11,43 mm; 13,46 mm; 16,73 mm. Kontrol negatif aquadest steril tidak terdapat zona hambat bakteri.

Kesimpulan dari penelitian ini adalah fraksi etil asetat kulit rambutan terdapat senyawa tanin total sebesar 6,7611% dan memiliki aktivitas antibakteri terhadap bakteri *Streptococcus mutan*(Gram positif) dan bakteri *Pseudomonas aeruginosa*(Gram negatif).

Kata kunci : Kulit Buah Rambutan, (*Nephellium Lappaceum* L.), Fraksi Etil Asetat, Tanin, Antibakteri, *Streptococcus mutan*, *Pseudomonas aeruginosa*

ABSTRAC

Background : *Streptococcus mutans* are the most common cause of dental caries. *Pseudomonas aeruginosa* are pathogenic bacteria in the respiratory tissues, eyes, urinary tract, and skin. The objectives of the study was to determine the antibacterial activity of the ethyl acetate fraction from *rambutan* (*Nephellium lappaceum* L.) againts *Streptococcus mutans* and *Pseudomonas aeruginosa*.
Methods : *Rambutan* peel was extracted using maceration method with 70% ethanol solvent and subjected to fractionation with chloroform and ethyl acetate solvent to obtain liquid-liquid fraction at different concentration (10%, 30%, 40%, 60%, 80%, and 90%). The positive control of *Streptococcus mutans* and *Pseudomonas aeruginosa* treated with chlorehexidine and Ciprofloxacin respectively. The antibacterial activity of different concentration of ethyl acetate fraction from rambutan was tested against *Streptococcus mutans* and *Pseudomonas aeruginosa* using disk diffusion method. The inhibition zone was evaluated. The data were analyzed Kruskal-Wallis and Mann-Whitney.
Results : Mean inhibition zone of fraction against *Streptococcus mutant* at concentrations of K (+), 10%, 30%, 40%, 60%, 80%, and 90% were 15.4 mm; 11.83 mm; 14.46 mm; 10.66 mm; 15.23 mm; 19.26 mm; 17,86 mm respectively. Mean of inhibition zone of fraction against *Pseudomonas aeruginosa* at concentrations of K (+), 10%, 30%, 40%, 60%, 80%, and 90% were 33,86 mm; 8.73 mm; 12.6 mm; 10.03 mm; 11.43 mm; 13.46 mm; 16.73 mm respectively. K (-) is not inhibition zone against bacteria.
Conclusion : The ethyl acetate fraction from rambutan peel has an antibacterial activity against *Streptococcus mutans* and *Pseudomonas aeruginosa*. *Rambutan* peel contains 6.7611% tannins.

Keywords : Rambutan Peel, Ethyl Acetate Fraction, Tannins, Antibacterial, *Streptococcus mutans*, *Pseudomonas aeruginosa*