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KAJIAN UJI AKTIVITAS ANTIBAKTERI EKSTRAK TANAMAN PINANG (*Areca catechu L*) TERHADAP BAKTERI GRAM POSITIF DAN NEGATIF

(xvi+ 65 halaman + 17 gambar + 2 bagan + 11 tabel+ 7 lampiran)

ABSTRAK

Latar belakang: Pinang (*Areca catechu L*) merupakan bahan alam yang mengandung senyawa kimia alkaloid, flavonoid, saponin, dan tanin yang dipercaya memiliki aktivitas sebagai antibakteri. Tujuan umum penelitian ini adalah untuk menganalisis aktivitas antibakteri ekstrak pinang (*Areca catechu L*) terhadap bakteri gram positif dan gram negatif.

Metode: Jenis penelitian ini menggunakan kajian artikel yang menggunakan 6 artikel penelitian eksperimental tentang aktivitas antibakteri ekstrak pinang terhadap bakteri gram positif dan negatif. Data yg diperoleh berupa deskripsi aktivitas antibakteri ekstrak pinang terhadap bakteri gram positif dan gram negatif.

Hasil: Ekstrak akar pinang memiliki aktivitas antibakteri terhadap bakteri gram positif *Bacillus cereus*, *Staphylococcus aureus*, *Streptococcus pyogenes*, *Enterococcus faecalis* dan *Bacillus subtilis* dengan rentang nilai diameter zona hambat pada konsentrasi tertinggi 8-14 mm sedangkan bakteri gram negatif *Pseudomonas aerogenes*, *Klebsiella pneumonia* dan *Enterobacter aerogenes* dengan rentang 12-15 mm. Ekstrak daun pinang memiliki aktivitas antibakteri terhadap bakteri gram positif *Staphylococcus epidermidis*, *Enterococcus faecalis*, dan *Bacillus subtilis* dengan rentang nilai diameter zona hambat pada konsentrasi tertinggi 11-15 mm, sedangkan bakteri gram negatif *Klebsiella pneumonia* dan *Enterobacter aerogenes* dengan rentang 12-13 mm. Ekstrak biji pinang memiliki aktivitas antibakteri terhadap bakteri gram positif *Staphylococcus aureus*, *Staphylococcus epidermidis* dan *Streptococcus sp* dengan rentang nilai diameter zona hambat pada konsentrasi tertinggi 13-19 mm, sedangkan pada bakteri gram negatif *Branhamella catarrhalis*, *Salmonella typhi*, *Eschericia coli* mm dan *Enterobacter aerogenes* dengan rentang 11-24 mm. Aktivitas antibakteri bagian (akar, daun dan biji) ekstrak pinang dipengaruhi oleh adanya kandungan senyawa metabolit berupa alkaloid, flavanoid, terpenoid, sterol, saponin dan tanin.

Kesimpulan: Ekstrak pinang (*Areca catechu L*) memiliki aktivitas antibakteri terhadap bakteri gram positif dan gram negatif.

Kata kunci : ekstrak pinang, antibakteri, bakteri gram positif, bakteri gram negatif.

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**ASSESSMENT TEST ACTIVITIES ANTIBACTERIALS PLANTS
EXTRACT ARECA (*Areca catechu L*) AGAINST BACTERIA GRAM
POSITIVE AND GRAM NEGATIVE**

(xvi + 65 pages + 17 images + 2 Chart + 11 tables + 7 attachments)

ABSTRACT

Background: *Areca nut (Areca catechu L)* is a natural ingredient that contains chemical compounds alkaloids, flavonoids, saponins, and tannins which are believed to have antibacterial activity. The general objective of this study was to analyze the antibacterial activity of areca extract (*Areca catechu L*) against gram-positive and gram-negative bacteria.

Method: This type of research facilitates the study of articles using 6 experimental research articles on the antibacterial activity of betel nut extract against gram-positive and negative bacteria. The data obtained in the form of a description of the antibacterial activity of areca extract against gram-positive and gram-negative bacteria.

Results: *Areca* root extract has antibacterial activity against gram-positive bacteria *Bacillus cereus*, *Staphylococcus aureus*, *Streptococcus pyrogenes*, *Enterococcus faecalis* and *Bacillus subtilis* with a range of inhibition zone diameter values at the highest concentration of 8-14 mm while gram-negative bacteria *Pseudomonas aerogenes*, *Klebsiella pneumonia* and *Enterobacter aerogenes* with an inhibition zone value range of 12-15 mm. *Areca* leaf extract has antibacterial activity against gram-positive bacteria *Staphylococcus epidermidis*, *Enterococcus faecalis*, and *Bacillus subtilis* with a range of inhibition zone diameter values at the highest concentration of 11-15 mm, while gram-negative bacteria *Klebsiella pneumonia* and *Enterobacter aerogenes* range from 12-13 mm. Betel nut extract has antibacterial activity against gram-positive bacteria *Staphylococcus aureus*, *Staphylococcus epidermidis* and *Streptococcus sp* with a range of inhibition zone diameter values at the highest concentration of 13-19 mm, whereas in gram-negative bacteria *Branhamella catarrhalis*, *Salmonella typhi*, *Eschericia coli* mm and *Enterobacter aerogenes* with range 11-24 mm. The antibacterial activity of parts (roots, leaves and seeds) of betel nut extract is influenced by the presence of metabolite compounds in the form of alkaloids, flavonoids, terpenoids, sterols, saponins and tannins.

Conclusion: Extract *Areca catechu L* has antibacterial activity against gram-positive and gram-negative bacteria.

Keywords: *Areca catechu L*, antibacterial, gram-positive bacteria, gram-negative.