UJI AKTIVITAS ANTIBAKTERI EKSTRAK ETANOL DAUN PANDAN WANGI (*Pandanus amaryllifolius* Roxb) TERHADAP PERTUMBUHAN BAKTERI *Streptococcus mutans* ATCC 25175

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INTISARI

Latar Belakang: Karies adalah penyakit gigi dan mulut yang paling banyak diderita oleh lapisan masyarakat di Indonesia yang menyebabkan infeksi jaringan lunak sekitar gigi, nyeri, dan bau mulut. Salah satu mikroorganisme yang dapat menyebabkan terjadinya karies gigi yaitu *Streptococcus mutans* ATCC 25175. Pengobatan menggunakan senyawa kimia pada karies gigi dalam jangka panjang dapat menyebabkan beberapa efek samping. Oleh sebab itu, diperlukan pencarian alternatif pengobatan dari bahan alam yang mempunyai aktivitas antibakteri antara lain daun pandan wangi.

Tujuan Penelitian: Mengetahui aktivitas antibakteri dan konsentrasi hambat minimum dari ekstrak etanol daun pandan wangi terhadap pertumbuhan bakteri *Streptococcus mutans* ATCC 25175.

Metode Penelitian: Ekstrak etanol daun pandan wangi didapatkan melalui proses maserasi menggunakan pelarut etanol 70%. Uji skrining fitokimia meliputi senyawa alkaloid, flavonoid, saponin, tanin, terpenoid, serta steroid dan dilakukan uji aktivitas antibakteri ekstrak etanol daun pandan wangi dengan variasi konsentrasi 5%, 10%, 15% dan 20%, dengan kontrol positif *chlorhexidin gluconate* 0,2% terhadap bakteri *Streptococcus mutans* ATCC 25175 menggunakan ketras cakram.

Hasil Penelitian: Hasil skrining fitokimia yang dilakukan ekstrak etanol daun pandan wangi mengandung senyawa flavonoid, terpenoid dan steroid. Hasil dari uji aktivitas antibakteri ekstrak etanol daun pandan wangi pada konsentrasi 5%, 10%, 15% dan 20% dengan rata-rata diameter zona hambat 9,6 mm, 10 mm, 10,4 mm dan 9,9 mm memiliki aktivitas antibakteri terhadap bakteri *S. mutans* dengan kategori kekuatan daya hambat sedang.

Kesimpulan: Ekstrak etanol daun pandan wangi memiliki aktivitas antibakteri terhadap bakteri *Streptococcus mutans* ATCC 25175 dengan konsentrasi hambat minimum 5%.

Kata Kunci: *Antibakteri, Daun Pandan Wangi, Karies Gigi, Streptococcus mutans*

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ANTIBACTERIAL ACTIVITY OF ETHANOL EXTRACT OF PANDANUS LEAVES (*Pandanus amaryllifolius* Roxb) ON THE GROWTH OF THE BACTERIA *Streptococcus mutans* ATCC 25175

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ABSTRACT

Background: Caries is a dental and oral disease that is most commonly suffered by levels of society in Indonesia which causes infection of the soft tissue around the teeth, pain and bad breath. One of the microorganisms that can cause dental caries is *Streptococcus mutans* ATCC 25175. Treatment using chemical compounds for dental caries in the long term can cause several side effects. Therefore, it is necessary to look for alternative treatments from natural ingredients that have antibacterial activity, including pandanus leaves.
Objectives: To describe the antibacterial activity and minimum inhibitory concentration of ethanol extract of pandanus leaves against the growth of *Streptococcus mutans* ATCC 25175 bacteria.
Methods: Ethanol extract of pandanus leaves is obtained through a maceration process using 70% ethanol solvent. The phytochemical screening test included alkaloids, flavonoids, saponins, tannins, terpenoids and steroids and the antibacterial activity test was carried out on the ethanol extract of pandanus leaves with varying concentrations of 5%, 10%, 15% and 20%, with a positive control of 0.2 *chlorhexidine gluconate*. % against the bacteria *Streptococcus mutans* ATCC 25175 using a hard disk.
Result: The results of phytochemical screening carried out by ethanol extract of pandanus leaves contain flavonoid, terpenoid and steroid compounds. The results of the antibacterial activity test of the ethanol extract of pandanus leaves at concentrations of 5%, 10%, 15% and 20% with an average inhibitory zone diameter of 9.6 mm, 10 mm, 10.4 mm and 9.9 mm had antibacterial activity against *Streptococcus mutans* bacteria with moderate inhibitory strength category.
Conclusion: The ethanol extract of pandanus leaves has antibacterial activity against the bacteria *Streptococcus mutans* ATCC 25175 with a minimum inhibitory concentration of 5%.

Keywords: *Antibacterial, Pandanus, Dental Caries, Streptococcus mutans*

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