ABSTRAK

Judul : Uji Aktivitas Antibakteri Ekstrak Etanol 96% Daun Dan Biji Tanaman Petai Cina (*Leucaena leucocephala* (Lam.) de Wit) Terhadap *Bacillus subtilis* ATCC 6633 dan *Pseudomonas aeruginosa* ATCC 9027
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Petai cina merupakan tanaman yang sering digunakan sebagai obat tradisional di kalangan masyarakat. Tanaman ini telah dilaporkan memiliki aktivitas farmakologi sebagai antibakteri, antidiabetes, antiinflamasi, antikanker, anthelmintik, antioksidan, dan larvasida. Bagian daun dan biji petai cina sering digunakan sebagai pengobatan tradisional obat luka dan bengkak. Penelitian ini dilakukan dengan tujuan untuk mengetahui aktivitas antibakteri ekstrak etanol 96% daun dan biji petai cina terhadap bakteri *Bacillus subtilis* ATCC 6633 dan *Pseudomonas aeruginosa* ATCC 9027. Pada penelitian ini dilakukan ekstraksi dengan metode berbantu ultrasonik (UAE), uji aktivitas antibakteri metode difusi agar cara sumuran. Hasil skrining fitokimia menunjukkan bahwa ekstrak etanol 96% daun petai cina mengandung senyawa tanin dan steroid, sedangkan pada biji petai cina mengandung senyawa flavonoid, saponin, tanin dan triterpenoid. Ekstrak etanol 96% daun dan biji petai cina memiliki aktivitas antibakteri terhadap *Bacillus subtilis* ATCC 6633 dan *Pseudomonas aeruginosa* ATCC 9027 yang ditandai dengan terbentuknya zona bening di sekitar sumuran. Ekstrak etanol 96% daun petai cina mempunyai kekuatan daya antibakteri kategori kuat terhadap *Bacillus subtilis* ATCC 6633 dengan diameter zona hambat melebihi 11 mm dan kategori sedang terhadap *Pseudomonas aeruginosa* ATCC 9027 dengan diameter zona hambat antara 5 mm sampai 10 mm. Ekstrak etanol 96% biji petai cina mempunyai kekuatan daya antibakteri kategori sedang terhadap *Bacillus subtilis* ATCC 6633 dan *Pseudomonas aeruginosa* ATCC 9027 dengan diameter zona hambat antara 5 mm sampai 10 mm.

Kata kunci : Petai Cina, *Leucaena leucocephala* (Lam.) de Wit, UAE, Aktivitas antibakteri, *Bacillus subtilis*, *Pseudomonas aeruginosa*.

ABSTRACT

Title : Antibacterial Activity Test of 96% Ethanol Extract of Leaves and Seeds of Chinese Petai Plant (*Leucaena leucocephala* (Lam.) de Wit) Against *Bacillus subtilis* ATCC 6633 and *Pseudomonas aeruginosa* ATCC 9027
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Chinese petai is a plant that is often used as a traditional medicine in the community. This plant has been reported to have pharmacological activities as antibacterial, antidiabetic, anti-inflammatory, anticancer, anthelmintic, antioxidant, and larvicidal. The leaves and seeds of Chinese petai are often used as traditional medicine for wounds and swelling. This study was conducted with the aim of determining the antibacterial activity of 96% ethanol extract of Chinese petai leaves and seeds against *Bacillus subtilis* ATCC 6633 and *Pseudomonas aeruginosa* ATCC 9027 bacteria. In this study, extraction was carried out by ultrasonic-assisted method (UAE), antibacterial activity test using agar diffusion method using well. Phytochemical screening results show that 96% ethanol extract of Chinese petai leaves contains tannins and steroid compounds, while Chinese petai seeds contain flavonoids, saponins, tannins, and triterpenoids. The 96% ethanol extract of Chinese petai leaves and seeds have antibacterial activity against *Bacillus subtilis* ATCC 6633 and *Pseudomonas aeruginosa* ATCC 9027, which is characterized by the formation of clear zones around the well. The 96% ethanol extract of Chinese petai leaves have a strong category antibacterial power against *Bacillus subtilis* ATCC 6633 with an inhibition zone diameter exceeding 11 mm and medium category against *Pseudomonas aeruginosa* ATCC 9027 with an inhibition zone diameter between 5 mm to 10 mm. The 96% ethanol extract of Chinese petai seeds have medium-category antibacterial activity against *Bacillus subtilis* ATCC 6633 and *Pseudomonas aeruginosa* ATCC 9027 with inhibition zone diameters between 5 mm to 10 mm.

Keywords: Chinese Petai, *Leucaena leucocephala* (Lam.) de Wit, UAE, Antibacterial activity, *Bacillus subtilis*, *Pseudomonas aeruginosa*.