

Antibacterial Activity of Syzygium Cumini Seed Aqueous Extract

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Abstract: *The study explores the antibacterial activity of Syzygium cumini seed aqueous extract, a tropical evergreen plant with numerous therapeutic properties. The plant's seeds contain active compounds such as myricetine, β -sitosterol, myricyl alcohol, betulinic acid, friedeanol, epifriedeanol, eugenin, β -sitosterol-D-glucoside, Kamepferol-3-O-glucoside, quercetin, astragalin, and gallic acid. The edible part of fruits contains gallic acid, tannins, anthocyanins, and vitamin C. Syzygium cumini is widely used in traditional and folk medicine due to its therapeutic qualities. The leaves of the plant are used to treat various skin conditions and are also used as an anesthetic in many South American cultures. Research has been conducted to understand the characteristics, safety, and effectiveness of these plants against diseases. The study used methanol, petroleum ether, and ethanol extracts of powdered Syzygium cumini seeds to conduct antibacterial activities. Four different extracts were tested against two Gram positive pathogenic bacteria (Staphylococcus aureus and Bacillus subtilis) and two Gram negative pathogenic bacteria (Escherichia coli and Salmonella typhi). The cup plate method was employed in this investigation, and it was found that the methanolic extracts exhibited more antibacterial activity than the other three. In conclusion, the study highlights the strong antibacterial properties of Syzygium cumini seed and the potential of its extracts in treating various illnesses. The study provides valuable insights into the potential of plant extracts in treating various diseases and their potential applications in traditional medicine.*

Keywords: Syzygium cumini, Antibacterial activity, Disc diffusion method, Escherichia coli and Salmonella typhi