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Studies on the Antimicrobial Activity of Cumin (*Cuminum Cyminum)* and Fenugreek (*Trigonella Foenum-Graecum*) Extracts Against Certain Food Borne Bacterial Pathogens

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Abstract: *In the present study, extracts of two spices namely cumin and fenugreek solvents were evaluated for their antibacterial and antifungal activity. The antibacterial activity was measured by agar well diffusion method and antifungal activity by poisoned food technique. All the extracts showed antibacterial activity against all the test bacterial isolates. Aqueous extracts of cumin did not exhibit antibacterial activity against B. subtilis. In aqueous extract, cumin and fenugreek showed good inhibitory activity against Staphylococcus aureus with zone of inhibition 20 to 25 mm and 22 to 24 mm respectively. In ethanol extract, cumin extract showed antibacterial activity against all test bacteria with zone of inhibition ranged between 10mm and 18mm, while fenugreek showed activity with zone of inhibition ranged between 10mm and 21mm. In methanol extract, the diameter of zone of inhibition ranged between 9mm and 23mm in cumin and 13mm and 22mm in fenugreek. In case of antifungal activity, only fenugreek ethanol extract showed activity only against Rhizopus stolonifer and Mucor sp. The percent mycelial growth inhibition ranged between 20 to 25%. Based on this finding, these extracts is an alternate to chemical preservatives and can be used as a natural antimicrobial preservative to increase the shelf-life of food.*

Keywords: Agar well diffusion, antibacterial and antifungal activity, cumin, fenugreek extracts

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