

Antimicrobial Activities of Garlic and Ginger Extracts on Some Clinical Isolates

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Abstract

The antibacterial activity of n-hexane and methanol extracts of ginger and garlic was determined in vitro against *Escherichia coli*, *Salmonella enterica*, *Klebsiella pneumoniae* and *Shigella dysenteriae* using agar well diffusion technique. The phytochemical screening revealed the presence of flavonoids, saponins, carbohydrates, alkaloids and triterpenes in the plant extracts. The n-hexane and methanol extracts of garlic were observed to be more potent against *S. dysenteriae* with maximum zone of inhibition of 27 mm at 40 mg/ml and 29 mm at 80 mg/ml. The n-hexane and methanol extracts of ginger were observed to be more potent against *E. coli* with maximum zone of inhibition of 16 mm at 40 mg/ml and 19 mm at 80 mg/ml. The MIC of the methanolic extract against the test organisms was determined to show values between 5 and 20 mg/ml. In comparison, the n-hexane extract had MIC values between 2.5 and 10 mg/ml. The methanol extract of ginger had MIC values between 10 and 40 mg/ml while the n-hexane had MIC values between 10 and 20 mg/ml. The MBC of methanol garlic extract was between 10 and 40 mg/ml. The n-hexane garlic extract had MBC values between 2.5 and 20 mg/ml. The methanol extract of ginger had MBC values between 10 and 40 mg/ml while the n-Hexane ginger extract had MBC values between 10 and 20 mg/ml. The result of this study showed that the extracts had activity against the test organisms and as such could be used for drug development.

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