

## Crude Extracts of Medicinal Plants Can Inhibit Some Bacteria of Clinical Importance in Minced Meat

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**Abstract :** The antimicrobial activities and preservative potentials of crude extracts of *Alstonia boonei* stem bark and *Euphorbia hirta* leaves were studied. Soxhlet extraction and cold ethanol extraction methods were used for the extraction of the dried and ground plant samples. Well in agar diffusion method was used for the antimicrobial screening at different concentrations of 25mg/ml, 50mg/ml, 100mg/ml and 200mg/ml on *E.coli* and *B.subtilis*. The preservative effects of the extracts at 0.1%, 0.2% and 0.3% singly and in combination were determined in minced meat using *E. coli* and *B. subtilis* as test isolates. Phytochemical analysis was also conducted on the extracts using standard analytical methods. *E.hirta* cold and *A.boonei* cold extracts gave the highest zone of growth inhibition on *E. coli* and *B.subtilis* with 20mm zone diameter at 200mg/ml concentration. Phytochemical analysis revealed the presence of alkaloids, flavonoids, tannins, saponins and cardiac glycosides. *A.boonei* at 0.1, 0.2 and 0.3% produced a log cycle reduction on the growth of *E.coli*. Mixture of *A. boonei* and *E. hirta* extracts (1:1) at 0.1% and 0.2% also produced a log cycle reduction on the growth of *E.coli* and *B. subtilis*, however the *A. boonei* extracts had more significant effect on the isolates. The observed antimicrobial activities are attributed to the phytochemicals identified in the extracts. The results reveal the potentials of plant extracts as natural antimicrobial preservatives in minced meat. Thus the crude extracts can act as inhibitors of bacteria in a food system. Upon further purification better results may be obtained.

**Keywords :** antimicrobial preservative, crude extracts, minced meat, test isolates

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