ABSTRACT

There is a growing trend of consumer preference for the use of natural food preservatives either to prevent the growth of food-borne pathogens, or to delay the onset of food spoilage. In this investigation, an in-vitro screening method was used to determine the antibacterial efficacy of a 10% w/v suspension of the natural leaves of the herb culantro (Eryngium foetidum), against Staphylococcus aureus, Bacillus subtilis, Escherichia coli and Salmonella typhimurium.

The apparent sensitivity of the gram-positive bacteria and resistance of the gram-negative bacteria were distinct. Significant antibacterial activity was evident against S. aureus and B. subtilis but no apparent antibacterial activity was evident against E. coli and S. typhimurium. There was a 99.99% kill for both S. aureus and B. subtilis.

The results obtained from this investigation, suggest that culantro leaves can potentially be used as a natural food preservative by increasing the safety and extending the shelf life of food products.

Keywords: Sharon Homer; Natural food preservatives; Food-borne pathogens; Antibacterial efficacy; Culantro leaves; In-vitro screening method; % kill.