

EVALUATION OF CHICKEN MEAT FOR CONTAMINATION OF *Salmonella* AND *Escherichia coli* AMONG RETAIL MEAT OUTLETS IN ANURADHAPURA, SRI LANKA

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Poultry meat has been identified as one of the major sources of food-borne bacterial infections in humans. The incidence of these bacterial infections is higher in most developing countries due to a lack of regular surveillance of these bacterial pathogens. As chicken is the most commonly consumed animal protein source among Sri Lankan consumers, this study aimed to investigate the safety of chicken meat available in retail outlets in *Anuradhapura*, Sri Lanka. A total of 23 chilled and 11 frozen breast chicken samples (n=34) were purchased from retail outlets in *Anuradhapura* from July to September 2024. Total plate count (TPC), coliform count (CC), *Salmonella* and *E. coli* levels were determined using standard methods. Antimicrobial resistance profiles of *Salmonella* and *E. coli* isolates were also tested using the disk diffusion method. All samples exceeded the maximum permissible limits of TPC ($>5 \times 10^6$) and CC ($>1 \times 10^3$) (according to the Food Act No.26 1980) indicating very high levels of bacterial contamination. Only the chilled meat samples were contaminated with both *E. coli* (24%) and *Salmonella* (6%). Of the five antibiotics used in the study both *E. coli* and *Salmonella* isolates showed the highest resistance to amoxicillin, erythromycin, and trimethoprim. Further, 88% and 50% of the *E. coli* and *Salmonella* isolates showed multi-drug resistance respectively. This study indicates the potential public health risk associated with chicken meat sold at retail outlets in *Anuradhapura*, Sri Lanka.

Keywords: Amoxicillin, Antimicrobial resistance, Coliform count, Erythromycin, Total plate count