

# MICROBIOLOGICAL CONTAMINATION OF FRESH CHICKEN MEATS AND OFFALS IN THE RETAIL MARKETS

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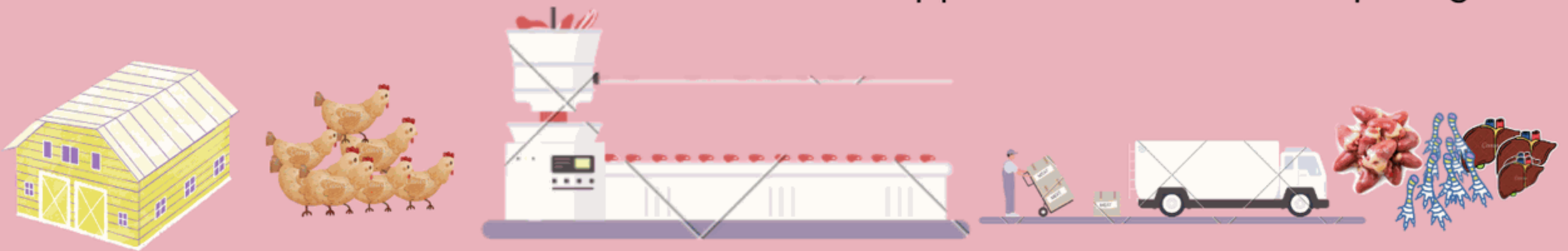
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## Introduction

Microbial contamination of chicken meats and offals can occur during poultry production and slaughter processes.

Enterobacteriaceae, *Escherichia coli* and *Salmonella* sp. can be used to monitor enteric contamination and *Pseudomonas* spp. as an indicator of spoilage.



## Objective

The aim of this study was to assess the bacterial contamination of chicken meat products and offals, from local supermarkets and butcheries.

## Methodology

A total of 72 samples: neck (n=12), liver (n=14), heart (n=16), gizzard (n=14) and feet (n=16), were analysed for *E. coli*, Enterobacteriaceae, *Salmonella* sp. and *Pseudomonas* spp., total mesophilic and psychrotrophic quantification, according to ISO methods.

## Results and Discussion

- *E. coli* was isolated in 63 (87.5%) samples and *Salmonella* spp. in 9 (12.5%). Local butcheries presented higher counts (2.60 cfu/g vs. 2.18 cfu/g;  $P < 0.001$ ) for *E. coli*. Neck is the product with highest average levels ( $3.69 \pm 0.77$  cfu/g) and gizzard ( $1.24 \pm 1.08$  cfu/g) showed the best results.
- Higher counts of Enterobacteriaceae, total mesophilic and psychrotrophic were observed in samples from local butcheries and, for *Pseudomonas* spp. in supermarkets.
- Significant differences were observed in relation to the type of product, with feet showing the highest average levels for *Pseudomonas* spp. ( $6.41 \pm 1.09$ ), mesophilic ( $6.93 \pm 0.77$ ) and psychrotrophic ( $6.41 \pm 1.09$ ), and liver showing the lowest counts for *Pseudomonas* spp. ( $4.69 \pm 0.72$ ) and psychrotrophic ( $5.59 \pm 0.86$ ) and also gizzard for mesophilic ( $5.55 \pm 0.66$ ).

## Conclusion

Monitoring the microbiological quality and exploring the sources of contamination are crucial to maintain high quality of lower price products and the safety of the consumers.

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