

Microbiological assessment and acceptability of minced meat from hypermarkets: pathogenic and spoilage microorganisms

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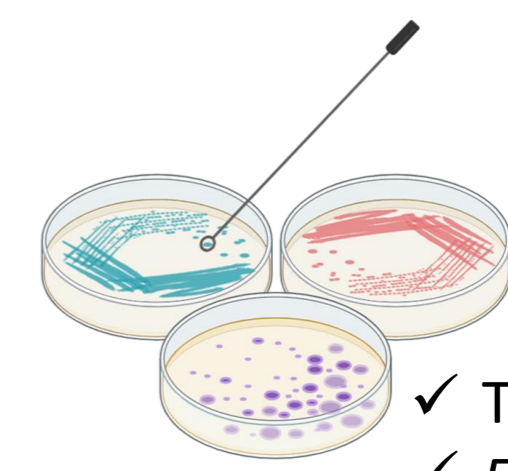
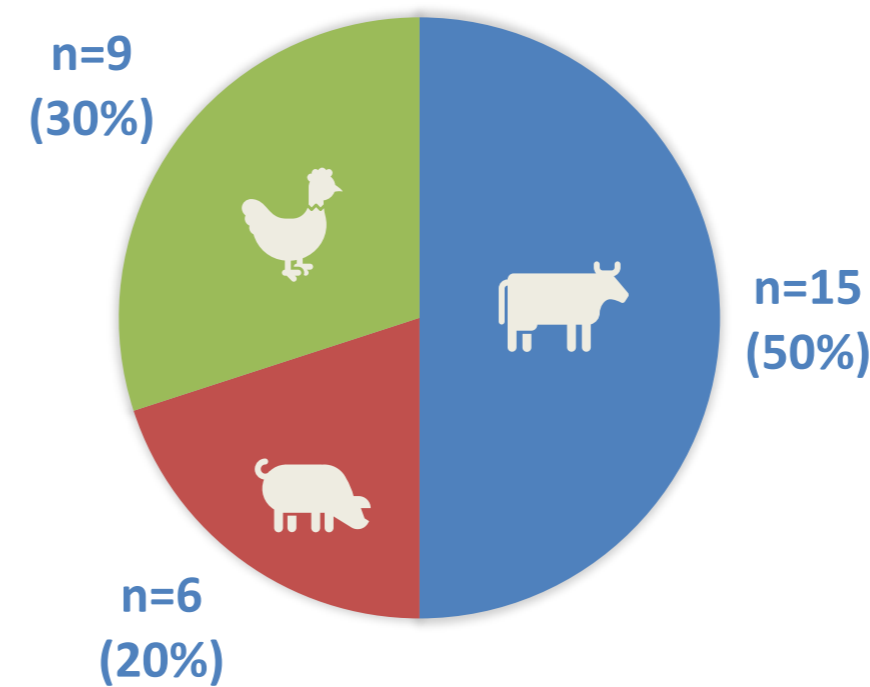
INTRODUCTION & AIM

Minced meat contains spoilage microorganisms, responsible for reducing its shelf-life and causing economic and environmental impacts. It can also harbour pathogens that pose risks to public health, leading to foodborne illnesses and product recalls. The aim of this study was to evaluate the deteriorative and pathogenic microbiota of minced meat obtained in hypermarkets, as well as its acceptability.



METHOD

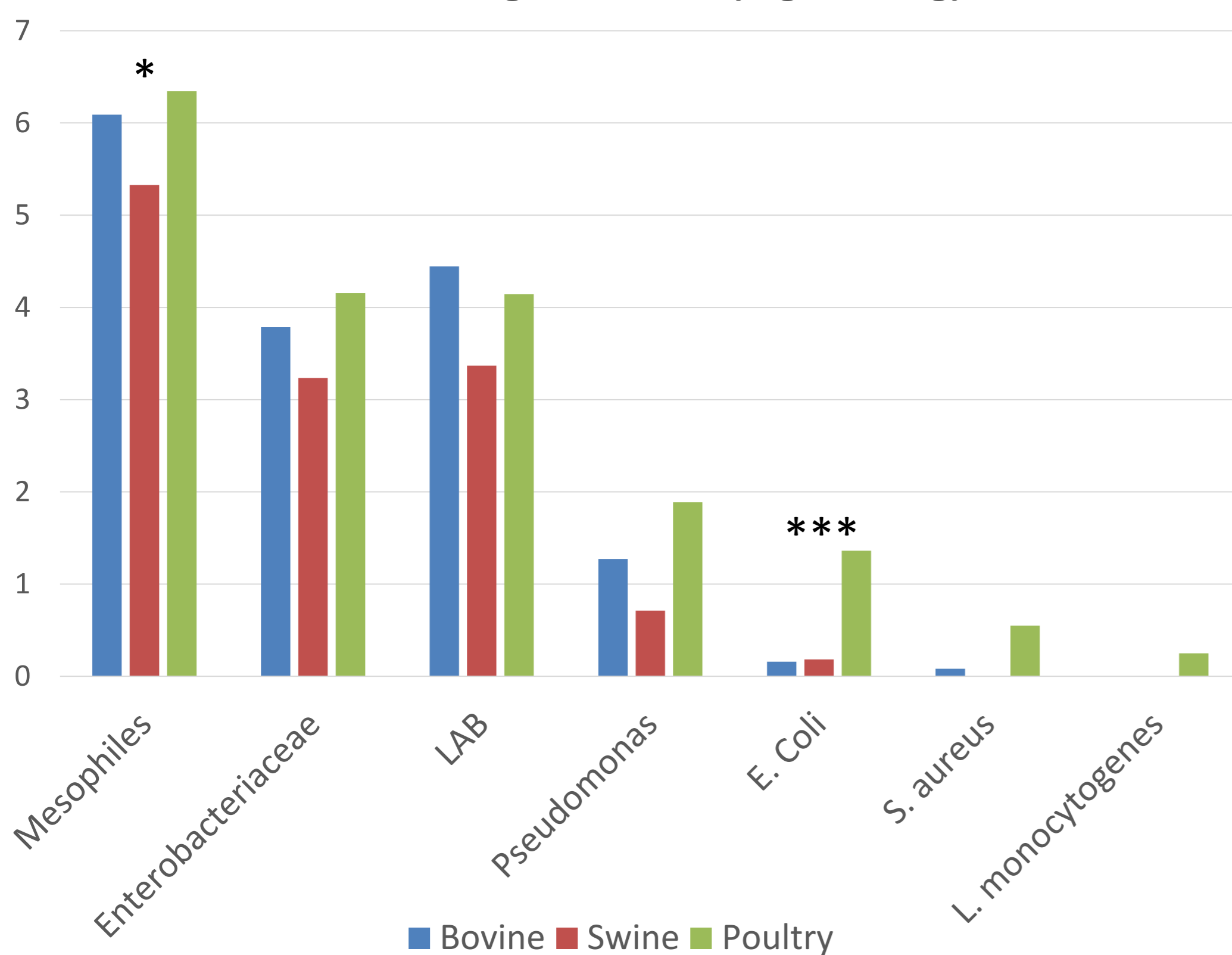
30 samples of minced meat



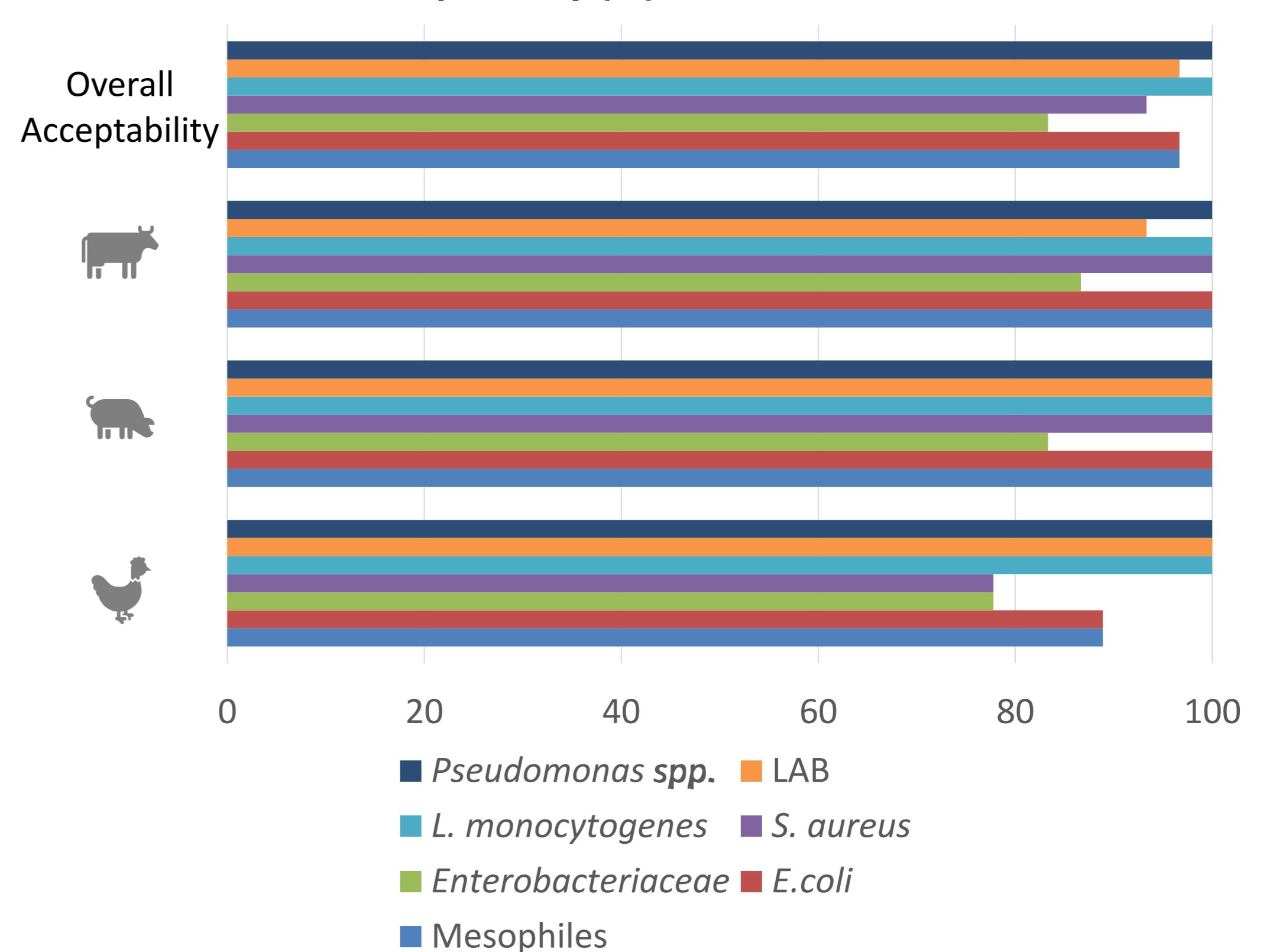
- ✓ Total mesophiles
- ✓ *Enterobacteriaceae*
- ✓ Lactic Acid Bacteria (LAB)
- ✓ *Pseudomonas* spp.
- ✓ *E. coli*
- ✓ *S. aureus*
- ✓ *L. monocytogenes*

RESULTS & DISCUSSION

Microbiological counts (log₁₀ cfu/g)



Acceptability (%)



- ⚙ Significant differences in microbial counts were found only for total *mesophiles* and *E. coli*, with poultry showing higher levels than beef and pork ($p < 0.05$)
- ⚙ Although poultry meat had the overall highest microbial counts, followed by beef and pork minced meat; which is associated with its lower acceptability, this difference was not statistically significant ($p > 0.05$)
- ⚙ *Enterobacteriaceae* was the microorganism with the lowest acceptability, contributing to a reduction in the general product acceptability (83.3%) compared to higher rates for other microorganisms

CONCLUSION

These findings emphasize the role of minced meat in the transmission of pathogenic and deteriorative microorganisms, highlighting the importance of proper handling and thorough cooking to prevent foodborne diseases.

ACKNOWLEDGEMENTS

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