

Listeria monocytogenes isolated from fresh pork meat commercialised in La Plata, Buenos Aires, Argentina

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INTRODUCTION

Listeria monocytogenes is one of the most important bacterial foodborne pathogens. The ability to survive under diverse environmental conditions and biofilm formation are critical to guaranteeing food safety. Currently, no data is available on the detection of this microorganism in fresh pork meat in the region.

The aim of this study was to determine the presence of *L. monocytogenes* in fresh pork meat from retail markets in La Plata, Buenos Aires, Argentina.

MATERIALS & METHODS

From August to November 2024, a total of 138 pork meat samples were collected from 46 randomly selected local meat retailers in the city of La Plata. In each store, three individual samples were pooled to create a single composite sample.

All samples were processed according to ISO 11290-1 and those confirmed were subcultured and preserved at -20 °C.



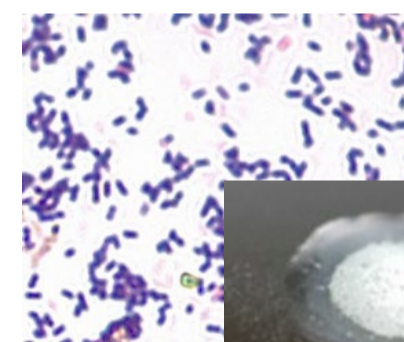
25 g of pork meat cultured in 225 ml of Half Fraser broth.



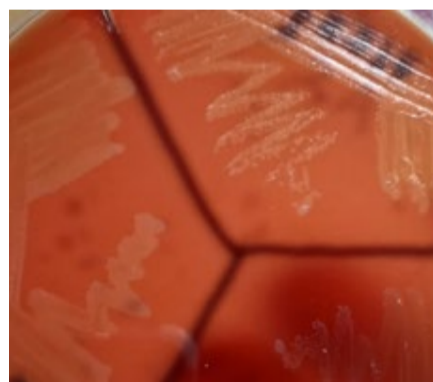
Fraser broth supplemented with ferric ammonium citrate showing negative and positive aesculin hydrolysis reaction, respectively.



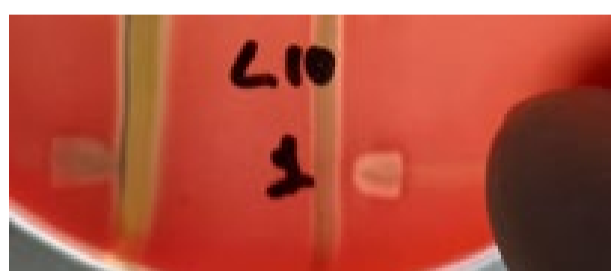
Suspected *L. monocytogenes* colonies in CHROMagar™ Listeria.



Gram stain showing Gram-positive slim, short rods. Positive Catalase reaction.



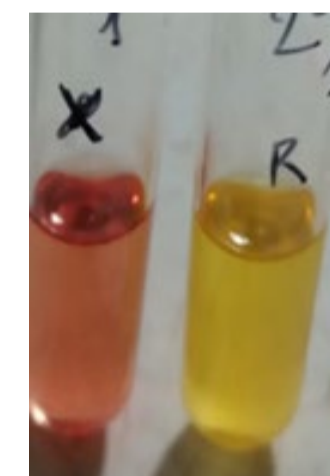
Haemolysis test showing narrow, clear, light zones of β -haemolysis.



CAMP test against *Staphylococcus aureus*.

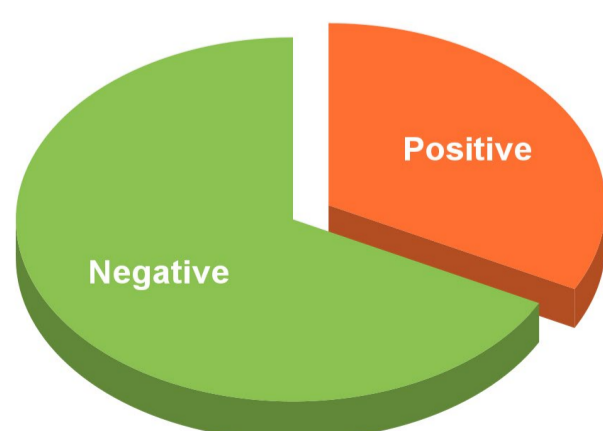


Umbrella-like growth pattern in TSYEA at 25 °C.



Carbohydrate utilization (xylose and rhamnose).

RESULTS



Of the 46 retailers sampled, 32.61 % resulted positive for *Listeria monocytogenes*.

DISCUSSION & CONCLUSION

This is the first report of *Listeria monocytogenes* in fresh pork meat in the region, showing similar values to those previously reported in beef butcher shops.

The isolation of this microorganism, its survival characteristics, and the context of meat retailers selling ready-to-eat food products might indicate cross-contamination. These findings emphasize the need for implementing good manufacturing practices to ensure food safety.