

TITLE: OCCURRENCE OF *SALMONELLA SP.*, *LISTERIA SP.* AND *E. COLI* IN MEAT PRODUCTS FROM RETAIL TRADE OF WEST PARANÁ, BRAZIL

AUTHORS: ANA YASMIM BORA, SANDI FERNANDA DOS SANTOS, EMANOELLI APARECIDA RODRIGUES DOS SANTOS, LEONARDO ERENO TADIELO, THIAGO HENRIQUE BELLÉ, CAROLINA DIAS RODRIGUES, VICTOR HUGO CORTEZ DIAS, JHENNIFER ARRUDA SCHIMIEDT, VINICIUS CUNHA BARCELLOS, LUCIANO DOS SANTOS BERSOT

INSTITUTION: UNIVERSIDADE FEDERAL DO PARANÁ, SETOR PALOTINA, PARANÁ, PR (RUA PIONEIRO, 2153, JARDIM DALLAS, CEP: 85950-000, PALOTINA – PR, BRAZIL)

ABSTRACT:

Research of pathogens in animal products is essential for food safety. The main actors involved in outbreaks of foodborne illness are bacteria, which enter the human body via the ingestion of water or contaminated products. The process of preparation of meat products involves several steps, being subject to contamination by microorganisms, among the main *Listeria sp.*, *Salmonella sp.*, and *Escherichia coli*. These pathogens are a challenge to public health due to morbidity, mortality and your difficulty in control. In this sense, the objective of this study was to determine the occurrence of *Salmonella sp.*, *Listeria sp.*, and *E. coli* in meat-chilled products in retail trade in West Paraná, Brazil. 41 sample collections in the period were october 2018 to may 2019. The samples were transported in trailers with recyclable ice to the laboratory of inspection and Quality control of food and water (LACOMA), the Federal University of Paraná (UFPR), and submitted to the research of *Salmonella sp.* according to methodology ISO 6579 with adaptations; *Listeria sp.*, according to ISO 11,290-1:2017 and *E. coli* in accordance with ISO 7251:2005 NPM method. The results revealed contamination of 4.9% (2 samples) for *Salmonella sp.*, 73.2% (30 samples) for *Listeria sp.*, being 12.2% (5 samples) of *L. monocytogenes* and 24.4% (10 samples) by *E. coli*. The presence of pathogenic microorganisms in meat products analyzed denotes concern because it represents a risk to public health. The process of handling and packaging at retail also promotes conditions for contamination and multiplication of these microorganisms. Also, the high contamination by *L. monocytogenes* can be due to faults in the process of cleaning, which allows bacterial adhesion and biofilm formation on surfaces, especially in equipment and utensils. Therefore, it reinforces the need for greater hygienic sanitary control in the production, handling, and supervision of meat products to provide safe foods and reduce the occurrence of foodborne diseases.

Keywords: Foodborne diseases; innocuity; retail