

TITLE: EVALUATION OF MICROBIOLOGICAL QUALITY AND SENSITIVITY TO ANTIMICROBIALS OF *E. coli* STRAINS ISOLATED FROM MARISCOS CULTIVATED AND MARKETED IN THE STATE OF BAHIA, BRAZIL.

AUTHORS: GODOI, J. L.; LEAL NETO, A. F.; PASSOS, R. S. F. T.; ROSÁRIO, A. I. L. S.; SILVA, L. D. Q.; OLIVEIRA, D. L. S.; COSTA, N. P.; FERNANDES, L. M. B.; CAVALHEIRO, C. P.; SILVA, M. C. A.

INSTITUTION: UNIVERSIDADE FEDERAL DA BAHIA, SALVADOR, BA (AVENIDA ADHEMAR DE BARROS, ONDINA, CEP 40170-115, SALVADOR – BA, BRAZIL)

ABSTRACT:

The concern about food safety is a strategy for the permanence of products on the market and consumer demand, mainly due to the growing number of contaminated products, industrialized or not. The State of Bahia has the largest coastal strip among the Brazilian states, which facilitates the population's access to seafood and allied to the gastronomic and cultural aspects of the region, increase the consumption of shellfishes, including bivalve molluscs and crustaceans. Bivalve molluscs are aquatic organisms whose characteristic is the feeding through the filtration of the water of the environment in which they inhabit, being able to carry through their tissues pathogenic microorganisms, as strains of enterobacteria. The objective of the present work was to evaluate the microbiological quality of shellfishes produced and marketed in the State of Bahia, Brazil, as well as to evaluate the resistance profile of strains of *Escherichia coli* isolated through the antimicrobial susceptibility test. The samples were stored and transported in isothermal boxes with recyclable ice and analyzed in the Laboratory of Inspection and Technology of Meat and Derivatives - LABCARNE, School of Veterinary Medicine and Animal Science, Federal University of Bahia. From the total of 184 samples analyzed for the presence of thermotolerant coliforms, it was verified that 75 samples (40.8%) presented above the standards limits recommended by the Brazilian legislation and 27% (49 samples) presented counts in the maximum limits allowed. Concerning the *E. coli* research, these were isolated in 80 samples (43.5%). The results indicate that 50% of the antimicrobial agents tested showed some ability to inhibit the growth of *Escherichia coli*. However, the most worrying fact was that approximately 79% of the strains presented multiresistance. The efficacy of aztreonam, cefepime, ciprofloxacin, chloramphenicol and tetracycline was observed. In contrast, ampicillin, ceftazidime, gentamicin and imipenem showed a little efficacy against the isolated strains. The high levels of coliforms and the presence of *E.coli* indicate the poor hygienic-sanitary quality of shellfishes produced and marketed in the State of Bahia, Brazil, reflecting through their consumption a high probability of infection by resistant bacteria, which can be considered a serious risk to the health of brazilians and tourists.

Keywords: enterobacteria, bivalve molluscs, antimicrobial resistance, public health

Supported by: Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) / Bahia Pesca S. A./ Universidade Federal da Bahia