

EVALUATION OF ANTIMICROBIAL RESISTANCE OF CEPAS DE ISOLATED GRAM-NEGATIVE BACTERIA ISOLATED IN COALHO CHEESE OF PARAÍBA.

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SUMMARY:

Antibiotics are chemical substances produced by the metabolism of certain species of bacteria and fungi capable of inhibiting the growth of fungi and bacteria which can cause death. The antibiotics are used in dairy herds for therapeutic purposes in large quantities and for a short period. These antimicrobial therapies are commonly used to control and prevent infections, becoming a problem of big importance because most veterinary medications, including antibiotics, are marketed without any type of official control, and these frequent practices, select resistant bacteria. This study aimed to analyze the susceptibilities of gram-negative bacteria isolated from antibiotics of several families. This research was performed in *Escherichia coli* identified by biochemical tests and *E. coli*, *Klebsiella pneumoniae* and *Shigella flexneri*, identified in the PCR test, using the disc diffusion method with the following antibiotics: ampicillin (AMP, 10 mg), gentamicin (GEN, 10 µg), amoxicillin / clavulanic acid (AMC, 30 µg), tetracycline (TET, 30 mg), ciprofloxacin (CIP, 5 mg), levofloxacin (LVX, 5 µg), amikacin (AMI, 30 mg), cefotaxime (CTX, 30 mg), imipenem (IPM, 10 µg), cephalothin (CFL, 30 mg), amoxicillin (AMO, 10 µg), nitrofurantoin (NIT, 300 µg). The diameter of the translucent areas that formed around the discs were measured and the bacteria were classified as resistant, intermediate and sensitive. We can conclude in this paper that the antibiotics that showed less efficacy on the strains of *E. Coli* identified from methods biochemical parameters were amoxicillin and cephalothin, on *E. coli* strains identified by PCR method was cefotaxime. On strains of *Klebsiella pneumoniae* and *Shigella flexneri*, also identified by PCR, were amoxicillin, ampicillin and cefotaxime. The antibiotics amoxicillin/clavulanic acid and imipenem were the most effective against all microorganisms.

KEY WORDS: Antibiotics; *Escherichia coli*; *Klebsiella pneumoniae*; *Shigella flexneri*