TITLE: SENSITIVITY PROFILE TO PHARMACEUTICAL ANTIBIOTICS OF *STAPHYLOCOCCUS* SPP AND *ESCHERICHIA COLI* ISOLATED FROM QUEIJO MINAS FRESCAL

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ABSTRACT:

The Queijo Minas Frescal is a semi-fat product of high humidity to be consumed fresh obtained through the coagulation and/or other appropriate coagulating enzymes, complemented or not with action of specific lactic bacteria. The development of antimicrobials in recent decades has led to the emergence of several drugs with an increasingly broad spectrum of action and exposure to these substances has triggered bacterial resistance, restricting the therapeutic options of infectious processes. The predominance of increasingly resistant bacterial species is due to the indiscriminate and irresponsible use of antibiotics, human or veterinary. The objective of this work was to evaluate the sensitivity profile of *Staphylococcus* spp and *Escherichia coli* from food to antibiotics for pharmaceutical use. Of the 60 analyzed samples, *Staphylococcus* spp were isolated from 14 samples and *Escherichia coli* from 19 samples. Bacteria grown on Baird-Parker agar and Methylene Blue Eosin agar, respectively, were transferred to BHI broth and incubated at 36 °C for 48 hours. After the growth, the antimicrobial test was performed by Mueller-Hinton Agar with the following antibiotics for *Staphylococcus* spp: Penicillin G, Amicacin, Cephalexin, Erythromycin, Ampicillin and Rifampicin and for *Escherichia coli*: Amoxicillin, Polymyxin B, Nitrofurantoin, Ciprofloxacin, Gentamicin and Amicacin. The reading methodology was performed by measuring the inhibition halos formed around the disks, measured with pachymeter after 24h of incubation at 37 °C. Of the strains of *Staphylococcus* spp, 10,5% had resistance to Erythromycin, 16,8% to Ampicillin and 12% to Gentamicin. Of the strains of *Escherichia coli*, 6% had resistance to Amoxicillin, 5,3% to Polymyxin B and 18,5% to Gentamicin. *Staphylococcus* spp and *Escherichia coli* are considered to be highly food-borne bacteria and the resistance to the antimicrobials tested is of concern, posing a potential risk to public health, making it difficult to treat human and animal diseases.

Keywords: Bacterial Resistance; Queijo Minas Frescal; *Staphylococcus* spp., *Escherichia coli*