

**TITLE:** Antimicrobial resistance profile of *Staphylococcus aureus* isolated in goat milk

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**ABSTRACT:**

The present work aimed to study the antimicrobial resistance profile of *Staphylococcus aureus* isolated from goat milk. Two hundred and twelve samples of goat milk were used for the microbiological analyses. In ten (4.7%) of these samples, strains of *Staphylococcus aureus* were isolated. The susceptibility of the strains of *S. aureus* was assayed by the disc diffusion method. The antibiotics tested were: Ampicillin-10µg (AMP), Chloramphenicol-30µg (CHL), Tetracycline-30µg (TET), Gentamicin-10µg (GEN), Trimethoprim-Sulfamethoxazole-25µg (SXT), Erythromycin-30µg (ERY), Cefoxitin-30µg (CFO), Ciprofloxacin-05µg (CIP), Penicillin-10µ (PEN), Clindamycin-02µg (CLI), Azithromycin-15µg (AZM), Rifampicin-05µg (RIF) and Linezolid 30µg (LZD). The antibiotic disks were applied on the surface of the inoculated agar plates using aseptic technique. Thereafter, the diameters of the zone of inhibition were measured to the nearest millimetre and the strains were characterised as susceptible (S), resistant (R) or intermediary (I). All samples were susceptible to CHL. The higher number of resistant strains was found to be to PEN (60.0%), followed by AMP (50.0 %), by LZD (30.0 %), CLI (30.0 %), RIF (30.0 %) and CFO (20.0 %). For the other antibiotics, only one sample was resistant. The antimicrobial susceptibility tested in this study indicates a variation of bacterial resistance to different antibiotics. In addition, the strain sensitivity to CHL can be justified by its prohibited use in food-producing animals. On the other hand, some studies indicate a higher bacterial resistance by the indiscriminate and extended use of antibiotics by the producers without a prescription from a professional. The resistance of some strains to the antibiotics tested becomes a concern, because of the difficulty in treating the animal, but also because of a loss of product quality and by virtue of the possibility of contamination in human consumption, which can occur, including, during periods of treatment, when the milk should not be used.

**Keywords:** goats dairy; antimicrobial sensitivity, mastitis.

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