TITLE: ANTIMICROBIAL SUSCEPTIBILITY PROFILE OF ENTEROCOCCUS FAECIUM STRAINS ISOLATED FROM TYPE “COALHO” CHEESE

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Although lactic acid bacteria contribute to the development of sensory characteristics and to biopreservation in cheeses, the presence of Enterococcus in foods has aroused concern. Due to their high resistance to antibiotics and the production of virulence factors, these microorganisms became considered as emerging pathogens. The objective of this study was to evaluate the antimicrobial susceptibility profile of *Enterococcus faecium* isolated from type “coalho” cheese. Sixteen *E. faecium* strains thrusts in the UFRPE Meat and Milk Inspection Laboratory were used, previously isolated from type “coalho” cheese samples purchased at hypermarkets in the city of Recife-PE. They were tested by the disk diffusion method Nitrofurantoin (300µg), Erythromycin (15µg), Tetracycline (30µg), Ciprofloxacin (5µg), ampicillin (10µg), penicillin G (10U), norfloxacin (10µg), vancomycin (30µg), Levofloxacin (5µg), Linezolid (30µg) e Teicoplanin (30µg). Colonies were suspended in 5 ml of sterile saline and diluted to 0.5 on the McFarland scale and the solution was seeded with swab on Mueller-Hinton agar plates. After drying, the discs were placed under the agar and incubated at 37°C/24h. The reading and interpretation of the results were performed using breakpoints for *E. faecium*. From the halos diameter reading, zones of inhibition were measured and strains classified as sensitive, intermediate or resistant. It was observed resistance of 50% of strains to Nitrofurantoin (8/16), 31.25% to Erythromycin (5/16) and 6.25% to Tetracycline (1/16); intermediate resistance of 18.35% to Nitrofurantoin (3/16) and 43.75% to Erythromycin (7/16); and sensitivity of 31.25% to Nitrofurantoin (5/16), 25% to Erythromycin (4/16) and 93.75% to Tetracycline (15/16). In addition, all strains were sensitive to Ciprofloxacin, Ampicillin, Penicillin, Norfloxacin, Vancomycin, Levofloxacin, Linezolide and Teicoplamine. The occurrence of antimicrobial resistant strains of *E. faecium* may compromise treatment options for bacterial diseases, and these are alerted to public health authorities, since antibiotics are the last therapeutic choice in the treatment of hospital infections caused by Enterococcus. Monitoring of susceptibility to Vancomycin becomes important in the control of strains of resistant Enterococcus (VRE), which represent one of the greatest public health problems in the world.

Keywords: lactic acid bacteria, foodborne diseases, bacterial resistance, pathogenic microorganisms, public healt.