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Identification and susceptibility of the genus staphylococcus isolated from vegetables and legumes of economic interest

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ABSTRACT

Introduction: Microorganisms of Staphylococcus genus are Gram-positive cocci catalase-positive bacteria of clinical interest due to their pathogenicity in humans and animals. Staphylococcus aureus is part of the normal microbiota and can be responsible for suppurations of wounds, abscesses also it may transmit a toxin-fection caused by the intake of toxins elaborated by the infectious agent present in foods. Objectives: Isolation and identification of Staphylococcus in products of economic interest cultivated in Pernambuco. Material and Methods: 25 g of the samples (cassava, carrot, coriander and cabbage) were added in 225 mL of 0.1% peptone saline, serial dilutions until 10-3 were made. The dilutions of 10-2 and 10-3 were seeded in Baird Parker medium and the colonies characteristic of the genus Staphylococcus were identified by the catalase, Gram, coagulase, Carbohydrate (Glucose, Trehalose, Ramnose, Mannose, Maltose, Lactose, Xylose, Sucrose and Inositol) and disc test with Polymyxin and Novobiocin. In addition, the Antibiogram of the isolated colonies was performed using the antibiotics Erythromycin, Vancomycin, Clindamycin, Sulfamethoxazole, Oxacillin, Chloramphenicol, Gentamicin and Ciprofloxacin. Results and Discussion: Eight colonies were isolated: cassava (1), coriander (1), carrot (1) and cabbage (5) and submitted to identification tests. Staphylococcus pasteuri, S. saprophyticus, S. warneri (3), S. hominis subsp. hominis and two classified as coagulase negative Staphylococcus. In the antibiogram 50% of the isolates presented resistance to erythromycin, 12.5% to oxacillin and gentamicin. Conclusion: The majority of the isolates can be found in food and only one causes infections in the urinary tract. No positive coagulase Staphylococcus (Staphylococcus aureus) was found and the samples analyzed were within the standards established by RDC No. 12 of 02/01/2002. A negative coagulase lineage isolated from carrot showed resistance to oxacillin and erythromycin in the antibiogram.

Keywords: Product of economic interest; Resistance; Staphylococcus

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