

Título: ANTIBIOGRAM TESTS OF *Cucurbita moschata*

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Resumo:

Microbiological contaminants, mainly bacterial, are the main agents associated with the frames of foodborne diseases. Discovering new natural products with antimicrobial properties could represent an alternative for development of additive in food industry. To obtain crude extract (ExtB), pumpkin pulp was macerated, lyophilized, and submitted to methanol extraction. The ExtB fractionation resulted in the chromatographic fraction FA. The antibiogram tests were conducted by the agar Muller Hinton disk diffusion method. Antibiotic disks used were amoxicillin 10 µg, ampicillin 10 µg, cephalixin 30 µg, cephalothin 30 µg, cefoxitin 30 µg, clindamycin 2 µg, enrofloxacin 5 µg, erythromycin 15 µg, gentamycin 10 µg, oxacillin 1 µg, penicillin 10 µg, trimethoprim-sulfamethoxazole 25 µg, tetracycline 30 µg e vancomycin 30 µg. Statistical significance was determined by one way analysis of variance (ANOVA) followed by the Tukey test $P < 0,05$ indicates significant difference among group means. Antibiograms was tested five strains of *Staphylococcus* (*S. aureus* ATCC 25923, *S. aureus* ATCC 33591 (methicillin-resistant *S. aureus* - MRSA), *S. epidermidis* ATCC 12228, *S. aureus* Human Clinical Strain LSAh1 and *S. aureus* LSA 88). After bacterial strains were exposed to antibiotics it was observed that the results of processing (inoculum and sample) showed a significant increase of the zones of inhibition compared to controls (only inoculum) for all cases. The antibiograms of the strains *S. aureus* ATCC 25923, *S. epidermidis* ATCC 12228, *S. aureus* Human Clinical Strain and *S. aureus* LSA 88 bovine strain were sensitive to treatment with FA fraction, with increased sensitivity to drugs tested, as confirmed by the increasing of zone of inhibition ($P < 0,05$). Only for MRSA strain ATCC 33591, there was no significant increase in inhibition zone after exposure to cefoxitin, clindamycin, erythromycin and tetracycline, suggesting that treatments did not interfere on drug activity. The foodborne diseases are considered a major problem for global public health. *S. aureus* is the main species associated to food poisoning by presenting nutritional versatility and growing adaptation to different sources of food and environments, but other species, such as *S. epidermidis*, have also been incriminated in food poisoning outbreak. Overall, pumpkin may fit and attend the concept of a functional food, and should be included as a antimicrobial food.

Palavras-chaves: antibiogram tests, pumpkin, *Staphylococcus* spp

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