Title: SURFACES MICROBIOLOGICAL ANALISIS OF SINKS AND CHOPPING BLOCKS IN RESIDENTIAL KITCHENS LOCATED AT THE CITY OF MACEIÓ, ALAGOAS

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Abstract:

The concern with alimentary security has been growing in recent years. A much discussed point is the contamination of food by pathogenic micro-organisms and their toxins. An important factor that contributes for the increase on the number of food-transmitted diseases is the cross-contamination. This form of contamination refers to the transmission of pathogenic micro-organisms from contaminated foods to others through utensils or surfaces. The disinfection of utensils, as well as the cleansing of kitchen equipment and surfaces that have direct contact with food during its production is an important point in order to prevent the propagation of pathogenic micro-organisms. Therefore, the purpose of this research was to assess the bacterial contamination through aerobic mesophilic bacteria and *Escherichia coli* in sinks and chopping boards' surfaces at fifteen residential kitchens located at the city of Maceió, Alagoas. In order to collect the samples, a sterile swab was rubbed on the assessed surface. Subsequently, this swab was introduced into test tubes with brain-heart infusion broth. Aliquots of this material were inoculated on the surface of the plate count agar medium, which was subsequently incubated at 37ºC for 24h. After the incubation period, the count of aerobic mesophilic bacteria was realized and the results were expressed in Colony Formative Unities for cm² of surface. For the *E. coli* research, 100µL of the sample collected on the Eosin Methylene Blue agar's surface. This material was incubated at 37ºC for 24h. The colonies that presented typical *E. coli* characteristics were subjected to the biochemical identification tests: It was verified that 53,3% of the samples obtained from sink surfaces and 33,3% of the samples obtained from chopping blocks were considered inadequate regarding the count of aerobic mesophilic bacteria. On the *E. coli* research, it was verified that among the thirty samples assessed, 13% of these presented contamination. Based on these results, the hygienic-sanitary of these places is precarious, with the presence of micro-organisms that might cause damage to the health of those who consume the food made. Therefore, adequate measures of decontamination of the utensil and surface must be intensified with the intention of avoiding food contamination and thus prevent the occurrence of diseases due to the absence of good production practices.

Keywords: food safety, residential kitchens, microbiological quality.