TITLE: DETECTION OF TOXIN GENES IN *Staphylococcus* spp. ISOLATED FROM FOOD HANDLERS

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ABSTRACT:

Pilot kitchen is a department where meals are prepared and later distributed to municipal schools, where the hygiene and sanitation conditions in this environment are essential for the protection and promotion of students' health. The incidence of foodborne diseases is shown to be increasing and bacterial contamination as well as the ingestion of staphylococcal enterotoxins are often involved in these cases. Besides that, food handlers colonized by *Staphylococcus* producers of superantigen and leukotoxins are subject to infections. This study aims to identify *Staphylococcus* species isolated from professionals from three pilot kitchens, as well as the molecular detection of genes of classic staphylococcal enterotoxins, TSST-1 and Leukocidin Panton Valentine. Initially two collections were carried out, Gram staining was used to phenotypic identification, catalase and coagulase and genotypic identification were performed by conventional PCR using the amplification of the *Sa442* gene, this method was also used to detect classical enterotoxin genes. *Staphylococcus aureus* were identified in 49 (90.7%) of 54 bacterial samples. Regarding the presence of genotype for enterotoxins production, 48 samples were positive, where the *sea* gene was present at a 92% frequency, *seb* 16%, *sec* 40% and *sed* 32%. A third pilot kitchen will be included in the study, as well as the detection of TSST-1 and Leukocidin Panton Valentine genes. The partial results of this study are worrisome, since they present high prevalence of *S. aureus* colonizing food handlers of pilot kitchens, moreover these isolates have the capacity of toxins production.

Keywords: intoxication, toxins, pilot kitchen, food handlers, foodborne diseases.

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