

## **RISK OF *Staphylococcus aureus* PREVALENCE IN BULK-SOLD DELI MEATS IN MEXICO CITY**

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*Staphylococcus aureus* is considered a pathogenic bacterium of importance in food safety, causing food poisoning due to the production of heat-stable staphylococcal toxin. Main foods contaminated by this microorganism are deli meats products sold in bulk so the objective of this study was to demonstrate the presence of *S. aureus* in deli meats sold in retail stores in Mexico City. The methodology used was established in NOM-210-SSA1-2015. One hundred samples of deli meats were analyzed (50 samples of ham, 50 samples of sausage). To confirm the identity of the *S. aureus* strains, the nuc gene, which encodes the TNAsa enzyme, was amplified by PCR, and the ability to produce enterotoxins was evaluated using the Visual Immunoassay of Staphylococcal Enterotoxins (VIA of SET). Additionally, the activity of TNAsa was evaluated by modifying factors such as temperature, pH, and sodium chloride concentration; the *S. aureus* ATCC 29213 strain was used as a positive control. In 50% of the samples analyzed (75 samples of ham, 25 samples of sausage) colonies characteristic of *S. aureus* were observed on Baird Parker agar. A total of 50 presumptive colonies of *S. aureus* were obtained, and all amplified the nuc gene. Regarding the quantification of TNAsa activity, it was not affected under the evaluated conditions of NaCl and pH, while the temperature at which the enzyme had the highest activity was 37°C. These results show the risk of consuming these products due to the likelihood that consumers may experience food poisoning with children, the elderly, and immunocompromised individuals being at higher risk. The risk of *S. aureus* contamination in retail-sliced ham primarily comes from point-of-sale handling, including the server's poor hygiene practices and inadequate sanitization of the slicing machine before preparing orders.