

Prevalence of Foodborne Pathogens in Grilled Chicken from Street Vendors and Retail Outlets in Reynosa, Tamaulipas, Mexico

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Abstract:

We analyzed a total of 70 grilled chicken samples bought randomly from street vendors and retail outlets in the city of Reynosa, Mexico, to determine the prevalence of *Escherichia coli* (Shiga toxin producing and enterotoxin producing), *Salmonella* spp., *Staphylococcus aureus*, *Listeria* spp., and *Campylobacter* spp. using microbiological methods and PCR detection of bacterial sequences. Of the 70 samples, 27 (38.5%) were from retail outlets and 43 (61.4%) from street vendors. All specimens were negative by both microbiological and molecular methods for *Listeria monocytogenes*, Shiga toxin 2 of Shiga toxin-producing *E. coli*, It of enterotoxin-producing *E. coli*, and st enterotoxin, and all were negative for *Salmonella* spp. and *Campylobacter jejuni* by PCR. Of the samples studied, 49 (70%) had undetectable levels of the foodborne pathogens studied with the methods used. In the remaining 21 (30%) specimens, at least one pathogen was isolated or detected, with *E. coli* being the pathogen most frequently isolated and with two samples bearing the *hlyA* gene. We found no statistical difference in bacterial prevalence between retail and street vendor samples. The presence of pathogens in grilled chicken is an important public health risk because of the great demand for and daily consumption of this product in this region.