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Occurrence of *Aeromonas spp*. in ready-to-eat foods and detection of the enterotoxin genes

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Aeromonas spp. are considered emerging pathogens and can cause, among other diseases, gastroenteritis in humans. Besides water, the major source of contamination, different types of food can be the vehicles of foodborne disease. In gastroenteritis, pathogenesis is associated with colonization and enterotoxins production. The present work aimed to evaluate the occurrence of Aeromonas spp. in ready-to-eat foods (temaki, minimally processed fresh fruits and cheese) collected from retail markets in Campinas city, SP, Brazil, and detect the genes encoding enterotoxin. The American Public Health Association´s methodology, with minor modifications, was performed for Aeromonas spp. isolation and the multiplex Polymerase Chain Reaction (PCR) of genes gyrB and rpoB was carried for identification of the main pathogenic species (A. hydrophila, A. caviae and A. veronii). PCR was also performed to detect the genes alt and ast, codifying cytotonic enterotoxin (Alt and Ast), and act, codifying cytotoxic enterotoxin (Act). Aeromonas sp. was isolated from 66.67% (20/30) of temakis, 3.23% (1/31) of minimally processed fruits and none (0/30) of cheese samples. Among the isolates, the prevalence was A. caviae (26.38%), followed by A. hydrophyla (20.83%), and A. veronii (6.94%), but 45.83% were classified only as Aeromonas sp. The prevalence of virulence genes among isolates was 41.67% for act, 38.89% for alt, and and 18.06% for ast. A. hydrophila was the specie more potentially enterotoxigenic. The results demonstrate the presence of Aeromonas spp. potentially causing gastroenteritis in temakis and minimally processed fruits, thus these foods should be consumed with caution by immunocompromised and elderly.

Biography:

Dirce Yorika Kabuki has completed her Doctor`s degree from School of Food Engineering, University of Campinas-UNICAMP. She is Assistant Professor of Department of Food Science, School of Food Engineering, UNICAMP. She has published more than 20 papers in reputed journals.

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