

Microbiological study of ready-to-eat foods of vegetable origin

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Vegetable based foods have been incriminated as a major source of food borne diseases world over. The objective of this study too was to determine the microbiological quality of the vegetable based ready-to-eat products. There is a high possibility of spreading common food borne pathogens such as *Salmonella* spp and *Staphylococcus aureus* and *Escherichia coli* through ready-to-eat foods. Recent history of food borne outbreaks illustrates occurrence of food borne illness due to common food borne pathogens by consumption of ready-to-eat foods with vegetable origin. A total of 21 ready-to-eat foods of vegetable origin were analyzed in this study. Indicators of faecal origin; (*Escherichia coli*) and food borne pathogens; (*Salmonella* spp and *Staphylococcus aureus*) were the criteria tested for the evaluation of microbiological quality of vegetable based ready-to-eat foods. Examination of the foods revealed that the majority (16 out of 21; 76.2%) were of satisfactory or acceptable microbiological quality according to Public Health Laboratory Service microbiological guidelines, while 5 (23.8%) samples were of unsatisfactory microbiological quality. Unsatisfactory quality was due to *Escherichia coli* levels higher than 10^2 CFU/g and *Staphylococcus aureus* levels in between 10^2 - $<10^3$ CFU/g. *Salmonella* spp were not detected in any of the samples tested. Ready-to-eat foods can be contaminated with food borne pathogens during the production process. The presence of food borne pathogens in ready-to-eat foods can result in a range of human health problems as well as economic losses. Ensuring good quality raw materials, adequate lethality treatment, effective sanitation of both the equipment and processing environment and implementation of good hygiene practices are crucial in preventing contaminations of ready-to-eat foods.

Key words: Microbiological quality, Ready-to-eat foods, Vegetable origin, Food borne pathogens

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