Title: Sanitary quality of minimally processed vegetables sold in the city of Pelotas - RS

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Abstract:

Consumption of minimally processed foods has gained ground in the consumer market in recent decades. They represent convenience and an option of a healthier diet. Microbiological quality of minimally processed foods is related to the presence of spoiled microorganisms that will influence the sensory and microbiological quality and the useful life of these products. Together, the presence of pathogens must also be controlled in order to prevent the occurrence of disease carried out by food. The aim of this study was to evaluate the sanitary quality of minimally processed vegetables, sold in the city of Pelotas-RS. It was analyzed sixteen samples of raw, grated, minimally processed, ready for consumption vegetables, available in the local market of the city of Pelotas. When simulating a purchase situation, beet, carrot, red and green cabbage samples were acquired, from two different lots, L1 and L2. Each of the lots had their samples analyzed on the day of acquisition (zero time - ZT) and on the expiration date specified in the product label (expiration time - ET). It was held a quantification of thermotolerant coliforms, *Escherichia coli* and coagulase-positive *Staphylococcus* (CPS). It was also verified the presence of *Salmonella* spp. Among the 16 analyzed samples of L1 and L2, 25% of ZT and 43.75% of ET were not adequate for consumption by the standards of the National Health Surveillance Agency. The green cabbage sample of L1/ZT showed high thermotolerant coliform levels (7,5 x 10^5 CFU/g) and three isolates of *Escherichia coli*. All analyzed ET samples of L1 and L2, which were not appropriate for consumption, had CPS scores above the limit of federal legislation. All 16 samples analyzed did not have the presence of *Salmonella* spp. The results of this study showed that samples of the analyzed minimally processed vegetables were not appropriate according to the prevailing sanitary limit, characterized as inappropriate products for consumption. The high levels of coliform and CSP remit to inefficient hygienic-sanitary conditions during the processing steps. The handling of the food can contribute to the final product contamination. It emphasizes the need to implement Good Manufacturing Practices for production and commercialization of healthy food.

Keywords: microbiological evaluation; sanitary quality; vegetables