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Assessment of microbial load on fresh-cut pineapple in Koforidua (Ghana) market

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Fresh-cut fruits are fruits that have been peeled, trimmed, chopped and packaged for consumers while still maintaining its freshness. Fresh-cut fruits are increasingly becoming popular with consumers because of its convenience. A major challenge faced in Ghana is the inappropriate method of processing to maintain the quality of the fresh-cut fruits. This may increase the incidence of microbial contamination which will then reduce the shelf-life of fresh-cut fruits as well as causing foodborne illness to consumers. This study

was therefore conducted to assess the microbial loads on fresh-cut pineapple sold in Koforidua market in Ghana. Fresh-cut pineapples were obtained from three different vendors in Koforidua central market in Ghana. Pour plate method was used to analyze five microorganisms which include aerobic plate count, total coliform bacteria, *Escherichia coli*, *Salmonella*, yeast and molds on the fresh-cut pineapple samples. The microbial counts were transformed into log₁₀ colony forming units (CFU) and analyzed using SPSS. *Salmonella* plates showed no growth of bacteria colonies, but aerobic plate count, total coliform bacteria, *Escherichia coli*, yeast, and molds showed growth on the pour plates. The analyses indicated that the microbial count within vendors was not significantly different ($P>0.05$). The aerobic plate count showed a range

of 1.1×10^3 to 1.2×10^3 cfu, 1.0×10^3 cfu for *Escherichia coli*, yeast ranged from 1.2×10^3 to 4.7×10^3 cfu, molds ranged from 0 to 2.5×10^3 cfu for all the three vendors. All the values indicated for the microorganisms analyzed are above the acceptable limit of microorganisms in food. It is therefore concluded that fresh-cut fruits sold on Koforidua market are not qualified for consumption; however, vendors need to be trained on proper conditioning of the fruits prior to consumption.

Biography

Regina Ofori Asante is a Lecturer at the Department of Food and Postharvest, Faculty of Applied Science and Technology at Koforidua Technical University, Koforidua, Ghana. She earned B.Sc. Agricultural Science, Kwame Nkrumah University of Science and Technology. She did M.Sc. in Agricultural Science with specialization in Food Microbiology, Dalhousie University, Canada. Her research interest focus on the factors that affect the quality of agricultural products produced for human consumption from the time of harvesting, processing, and packaging of the products.

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