Microbial Analysis of Fresh Miki Noodles Sold in Selected Stalls in Zamboanga City Public Market

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ABSTRACT

Fresh “miki” noodles are considered one of the components of Filipino families’ favorite dishes. However, food borne diseases associated with consuming fresh noodles pose a serious public health problem. This study specifically sought to microbiologically examine miki samples for presence and the number of colony counts of Salmonella sp. and Staphylococcus aureus, two common microorganisms associated with food poisoning. The samples were collected from three different stalls at different peak hours, upon the delivery of the fresh miki noodles early in the morning and in the afternoon in Zamboanga City. The 3M Petrifilms were used for the colony counting for Salmonella sp. and S. aureus. Presumptive positive for Salmonella sp. and S. aureus were further subjected to biochemical confirmation to which confirmation disks were inserted between the plate’s top film and bottom film test. Results showed that all the samples were safe from Salmonella sp. but are contaminated by S. aureus. The number of colonies has exceeded the recommended counting limit of Petrifilm Staph count plate which is 150 to 300 S. aureus colonies per 1mL of homogenate. Moreover, stall number 3 has the highest number of colony counts for S. aureus which may be accounted to the observed improper food handling. Higher colony count was observed in the afternoon than in the morning, an indication of longer duration of exposure of the fresh noodles to contaminants. These data could provide science-based decision making in the city’s policy framework on regular monitoring and proper food handling.

Keywords: food handling, Salmonella sp., Staphylococcus aureus, 3M Petrifilms, Zamboanga City