Microbiological safety of ready-to-eat foods from restaurants and hawker centres in Kota Kinabalu, Sabah

Abstract

A total of117 sample of ready-to -eat foods from hawker centres and restaurant in Kota Kinabalu were examined the aerobic plate count (APC), coliform, Escherichia coli and staphylococcus aureus as well as selected pathogens such as Lesteria monocytogenes, Salmonella spp and Escherichia coli 015:H7. Approximately 58% sample had APC levels above the miximum limit (>10^6 cfu/g) permitted by the food Act 1983 and food regulation 1985. The detection rate for coliform was highest in meat whereas egg samples were the lowest. E coli was in all groups of food samples with the highest count for vegetable samples. The highest mean for S.aureus was found in egg samples (4.6x10^4 cfu/g),followed by meats (1.3x10^4 cfu/g), vegetables (2.3x 10^4 cfu/g), chicken (2.0x 10^4 cfu/g) and fishes (1.3 x 10^4 cfu/g). samples taken from premises which hygiene training had been given to their food handles had a better microbiological quality as compared with those without training E coli 0157:H7 was only detected in 6% of the samples and was not detected in fish. However, all food samples were negative for Salmonella and L. monocytogenes. Based on these result, it was concluded that the microbiological quality of foods sold in Kota Kinabalu was unsatisfactory and the prevalence of certain pathogens such as E. coli and E. coli 0157:H7 significantly indicating a potential risk to consumers .