Evaluation of microbial quality of ready-to-eat foods sold in Doha, Qatar

Shifa Zuhara and Ipek Goktepe
Qatar University, Qatar

Food safety is an integral part of environmental public health. According to Kunová et al. (2015), there has been many reports on ready-to-eat foods (RTEF) being the basis for foodborne outbreaks in recent years. In Qatar, 5.4% of the total communicable diseases reported from 2008 to 2011 were due to foodborne disease (SCH, 2013). There is very limited information regarding the microbial quality of food sold in mainly fast-food restaurants and cafeterias in Qatar. Therefore, this preliminary study was carried out to evaluate the microbial quality of ready-to-eat foods sold in selected food establishments in Qatar. Chicken and burger sandwiches and green salads were collected on a monthly basis from selected cafeterias and fast-food restaurants. The total aerobic, coliform, *Salmonella* spp., and Listeria spp. counts were determined using plate count agar (PCA), MacConkey Agar (MCA), Violet Red Bile Agar (VRBA), Listeria Selective Agar (LSA), respectively. The results indicated that the APC counts of the chicken and burger sandwiches were considered unsatisfactory since their counts were above the set international standards. For instance, the average total aerobic microorganism count for burger sandwich was $7.13 \log_{10} \text{CFU/g}$, which is much higher than the safety guideline set at $\geq 5 \log_{10} \text{CFU/g}$. Additionally, the total aerobic counts of green salads were determined to be $7.24 \log_{10} \text{CFU/g}$ which is higher than the set guideline of $6 \log_{10} \text{CFU/g}$. The total counts were $\geq 7 \log_{10} \text{CFU/g}$ for *Salmonella* spp., coliform, and Listeria spp, which are also considered to be unsatisfactory levels. These results demonstrate that it is necessary to improve awareness on food handling and sanitation practices applied in these restaurants to avoid any future foodborne outbreak.

Biography
Shifa Zuhara is a Senior Undergraduate Student of Environmental Sciences Program in the Department of Biological and Environmental Sciences, College of Arts and Sciences at Qatar University. She is currently working on her graduation project dealing with evaluating the microbial quality of ready-to-eat foods sold in Doha, Qatar.

ss1302976@qu.edu.qa