Assessment of microbiological quality of ready to eat meat sandwiches in new valley governorate

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Abstract:

In this study, one hundred and twenty samples of meat sandwiches including 30 samples each of Beef shawerma, Beefburger, Hawawshi and Liver (kibda) were randomly collected from the vending shops and different restaurants in New Valley governorate to evaluate their bacteriological quality. The results revealed that the mean values of APC, Coliforms and Staph. aureus, yeast and mould counts (log CFU/g) were 6.37±0.06, 2.15±0.14, 3.55±0.15 and 4.02±0.35 for Beef shawerma, 6.30±0.08, 2.08±0.14, 4.68±0.18 and 4.04±0.5 for Beef burger, 6.30±0.06, 1.9±0.11, 3.38±0.17 and 3.94±0.71 for Hawawshi, 6.56±0.05, 2.25±0.13, 3.51±0.14 and 3.60±0.08 for Liver (kibda) sandwiches, respectively. Staph. aureus was isolated with an incidence of 33.3%, 30%, 26.6% and 33.3% from the examined samples of Beef shawerma, Beefburger, Hawawshi and Liver (kibda), respectively. Also, the incidences of isolation of Salmonella spp. from the same examined samples were 3.3%, 3.3% and 6.6%, respectively but Salmonella couldn’t be isolated from Hawawshi sandwiches. Furthermore, the incidences of isolation of E. coli from the same samples were 3.3%, 16.6 % and 3.3%, respectively but E. coli couldn’t be detected in Beef shawerma sandwiches. Moreover, the incidence of Listeria spp. in the same samples was 16.6 %, 6.6 % and 20%, respectively. But Listeria spp. couldn’t be found in Beef shawerma sandwiches. The obtained results indicated that consumption of RTE sandwiches may cause a public health hazard to the consumer. Thus, measures to control the quality of the raw material, environmental and hygienic conditions during preparation and serving should be taken.

Keywords:

RTE meat sandwiches, microbiological quality, Staph. aureus, Salmonella spp., E. coli, Listeria spp

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