A Survey on Selected Quality Parameters of Buffalo Milk Samples Collected from Consumer Markets of Three Different Central Governorates in Egypt

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Abstract

One hundred and twenty samples of raw buffalo milk were collected at consumer markets in central Cairo, Giza and Qualubya, Egypt. All samples were analysed chemically using Lactoscan, and microbiologically using the pour plate technique. Also, levels of aflatoxin (AF) M1 were assessed by using a commercial ELISA kit. The mean values were - 0.476±0.07 °C, 5.89±0.79 %, 4.13±0.53 %, 4.25±0.53 %, 0.69±0.14 %, and 14.59±1.39 % for freezing point, fat, protein, lactose, ash and total solids respectively. Bacteriological enumeration of total mesophilic aerobic bacteria, coliform, spore forming bacteria and psychrotrophic bacteria were 5.37±0.78, 3.77±0.90, 2.78±0.36 and 2.84±0.39 Log CFU/ml respectively. The median concentration of AF M1 in all samples was 44.31 ng/L. Our results indicate that there is an essential need for improving the hygienic conditions in the production of raw milk.

Key Words: Milk quality, safety, aflatoxin M1, codex, HACCP, ISO 22000