Microbiological Infection of Hamburgers Consumed in Arak City, Iran

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Abstract

Background and Objective: The presence of microorganisms in food is a paramount importance to public health. This study was carried out to measure the rate of microbial contamination of the hamburgers consumed in Arak.

Material and Methods: The samples of frozen hamburgers (n = 100) were collected from the selling centers in Arak. The city was divided into five areas and 20 samples were collecte from each area. The experiments of counting staphylococcus aureus with Iranian National No 6806-6, the total counting of bacteria No. 5272 and the counting mould and yeast with No 997 were carried out.

Results: The samples polluted by staphylococcus aureus were 26.6%, 61.3% of the samples were higher than the required standard and 65% of the samples were higher than the required standard in Iran. The rate of staphylococcus aureus in the samples was $6 \times 10^3$ CFU/gr on average and the total counting of the bacteria was $5 \times 10^6$ CFU/gr on average, and the average rate of being polluted by fungi was $2 \times 10^4$ CFU/gr (820-36300) showing the high microbial contamination in this product. No significant difference was found at the level of different brands.

Conclusion: The results showed that 26.6% of the samples were contaminated with S. aureus, 61.3% with total microbial and 65% with fungal infection.

Keywords: Meat Products, Staphylococcus, Fungi, Food Safety