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Title

Study on contaminathon of traditional and commercial hamburgers with enterobacteriaceae in zabol region and determination of antibiotical resistance

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Abstract

Today, due to the problems caused by industrialized and advanced societies and the lack of time to prepare food, people are bringing in Fast foods such as hamburgers, and since it has a significant amount of meat, it is a good environment for the growth of pathogenic microorganisms. The aim of this study was to evaluate the Enterobacteriaceae contamination in traditional and industrial hamburgers distributed in Zabol city and their antibiotic resistance. Samples were collected randomly from fast food restaurants. The contamination of the samples was evaluated for Enterobacteriaceae family (Salmonella and Escherichia). As well as the resistance of different strains of Salmonella and Escherichia to ten antibiotics were evaluated and compared. In this study, of the total ۱۰۰ samples of handmade (traditional) and industrial hamburgers, ٥٤ (٥٤٪) were contaminated with Salmonella and ٢٤ (٢٤٪) were contaminated with *Escherichia coli*. Among handmade hamburgers, Salmonella contamination rate was ٣٤,٥٪ and *E.coli* contamination rate was ٥١,٧٪. Among industrial hamburgers, Salmonella contamination rate was ٦٠٪ and E. coli contamination rate was ١٢,٧٪. The results showed that the Salmonella isolates were more susceptible to and Gentamicin and Sulfamethoxazole and were also resistant to Ampicillin and Ciprofloxacin. The results showed that the E. coli isolates were more susceptible to Gentamicin, Sulfamethoxazole and Amikacin and were also resistant to Tetracycline and Amoxiclav.

Keyword: Hamburgers, Enterobacteriaceae, Antibiotic resistance, Zabol