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Graduate Management
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Title:

Study of Falafel Entrobacteriaceal contamination
in Zabol province and antibiotal resistance

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Abstract

The microbial contamination of industrial and traditional falafels to Enterobacteriaceae and their antibiotic resistance were investigated in this study. 100 samples of industrial and traditional falafel from Zabol city were prepared in 7 rounds. In order to prevent secondary contamination, they were transferred to the Food Quality Control Laboratory, Faculty of Veterinary Medicine, Zabol University under sterile conditions and next to the ice. The samples were transferred to 225 ml of Lactose Broth at 25 g weights. Then, they were cultured on EMB medium, SS agar, Bismuth Sulfite Agar, and Brilliant Green Agar to search for *Escherichia coli* and *Salmonella* respectively. Also, for confirmatory tests of *Escherichia coli*, colonies with metallic green polish were transferred to MR-VP, TSI, SIM and Simmons Citrate media. In addition, black colonies grown in SS agar, brilliant green agar, bismuth and sulfite agar were cultured on TSI and LIA media. Finally, the susceptibility of the obtained bacteria was measured to ampicillin (AM) and amikacin (AN), Imipenem (IMP), ciprofloxacin (CP), amoxiclav (AMC), gentamicin (GM), nalidixic acid (NA), ceftriaxone (CRO), tetracycline (TE), and sulfamethoxazole (SXT). Friedman test was used to compare the susceptibility of the obtained bacteria to different antibiotics and SPSS statistical software was used for statistical analysis of the data. Significance level was considered $P < 0.05$. Out of 100 samples of falafel studied in this study, 66 cases (66% with a 95% confidence interval from 56% to 75%) were infected with *Salmonella* and 10 cases (10% with a 95% confidence interval from 5% to 16%) were infected with *Escherichia coli*. In this study, it was found that *Salmonella* is more sensitive to the novelization of amikacin and sulfamethoxazole, and more so to ampicillin, and more resistant to *Escherichia coli* to ciprofloxacin separation, and more sensitive to amipenem, amoxiclav, gentamicin and Amy Cassin is related.

Keywords: Falafel, Enterobacteriaceae, Antibiotics, Zabol.