



University of Zabol
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Faculty of Veterinary Medicine
Department of Health and Food quality control
The Thesis Submitted for the degree of M.Sc
(in the field of food Hygiene and quality control Science)

The Thesis Submitted for the Degree of Master of Science
(In the field of Horticultural science)

Title

Study on Borak Entrobacteriaceal contamination in Zabol
region and determination of antibiotal resistance

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Abstract

Local or traditional foods are very important in every region. These foods are directly related to the festivals and seasons. Burak is a typical Sistani food that is made of triangular thick bread. Burak filled by a local and growth itself plant called Suzi that grows in the fields in winter and spring. Because of its high popularity among locals, this is widely used as a meal and snack. For this reason, this study was conducted to investigate the contamination of *Salmonella* and *Escherichia coli* as well as their antibiotic resistance in Burak in Zabol city. In this study, 100 Burak samples were collected from 10 supply units throughout the city. The samples were transferred to the laboratory Veterinary Medicine, Zabol University under sterile conditions beside the ice and microbial tests were performed with samples. Of the total 100 Burak samples studied, 50% were contaminated with *Salmonella* and 25% were contaminated with *E.coli*. Friedman statistical tests showed that the sensitivity of *Salmonella* and *E. coli* isolates to different antibiotics was significantly different ($P < 0.001$). The results showed that the extracted *Salmonella* were more susceptible to Ceftriaxone and Gentamicin and were also resistant to Tetracycline and Ampicillin. The results showed that the extracted *E. coli* were more susceptible to Gentamicin, Ampinem, Sulfamethoxazole and were also resistant to Tetracycline. The results show that personal hygiene and delivery of this product was not performed properly. It is recommended that personal hygiene training are performed at all stages of preparation. In addition to monitoring, the relevant authorities should provide an appropriate location to supply this product.

Keywords: *Escherichia coli*, *Salmonella*, Burak, Antibiotic resistance, Zabol