

## **Abstract**

In this study, we investigated the rate of contamination of traditional ice creams with *Escherichia coli* and *Bacillus cereus* in Zabol County. A total of 102 samples including, 51 ice creams and 51 ice creams with carrot juice collected from 17 commercial ice cream shops. In each ice cream shop, an ice cream sample and an ice cream with carrot juice were collected three times. The samples were transmitted with container in vicinity of ice to the quality control laboratory of Veterinary Faculty. The samples were diluted and cultured into the lactose broth medium. Then the *E. coli* were determined by culture into the EMB medium and green colored colonies were transferred to SIM, TSI, MR-VP and Simon-citrate mediums as confirmatory tests. For detection of *B. Cereus* 1cc of lactose broth medium was transferred to the MYP containing polymycin and yolk supplements. Then pink-colored colonies formed in lactose broth, were tested by dye and catalase assay. Finally, the susceptibility of isolated bacteria to the antibiotics of Azithromycin (AZM), Ampicillin (AM), Cotrimoxazole (SXT), Nalidic Acid (NA), Amoxiclav (AMC), Gentamicin (GM), Penicillin (P), Vancomycin (V), Cefaxime (CFM) and Cephalothin (CF) were measured. Friedman statistical test was used to compare the susceptibility of isolated bacteria to different antibiotics. SPSS software was used to analyze the data. The results showed that, contamination with *E-coli* and *B. Cereus* is 36.3% and 34.1% respectively in all traditional ice creams in Zabol County. According to antibiogram test, *E-coli* isoletes had highest susceptibility to GM and AZM and had the highest resistance to AM, V, P and AMC. All *B. cereus* isoletes were susceptible to AZM and GM and all of them were resistant to AM, P and AMC. Also 93.8% of *B. cereus* were resistant to CFM. The cause of Ice contamination in Zabol is the use of non-pasteurized milk for producing of ice cream and the lack of compliance with the individual hygiene of the workers in the preparation of ice cream, as well as the non-compliance with the principles of health in the provision of frozen fruit juices.

**Keywords:** Traditional ice cream, *Bacillus cereus*, *Escherichia coli*, Zabol.



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**Prevalence of *Bacillus cereus* and *Escherichia coli*  
Contamination of the Traditional Ice Creams  
Produced in the City of Zabol and Comparison of the  
Frequency of Resistance to Common Antibiotics**

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