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Title:

**Salmonella spp. And fecal esherichia coli investigation of
strawberry collected from sistan region using conventional
and most probable number methods**

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Abstract

Strawberries play an important role in health and nutrition as sources of essential vitamins and minerals, as well as sources rich in fiber. This can be proved by the recommendations of the World Health Organization (WHO) and Food and Drug Administration (FDA) to consume 1 to 5 units of vegetables and fruits in the daily diet, on the other hand, microbial diseases resulting from food consumption are always one of the They are the most important diseases in the world. Not only in developing countries, but also in developed countries with high health standards, these diseases, which are classified as intestinal diseases, are increasing. *Escherichia coli* is considered as a suitable fecal indicator, and the presence of this bacterium may be a sign of the presence of fecal pathogenic bacteria such as *Shigella* and *Salmonella*. Now, considering the importance of the mentioned bacteria in food poisoning and the characteristic of strawberry fruit, which in many cases is consumed without washing or briefly washing with water. The lack of investigation of bacterial contamination of this fruit is felt in the country, which has been addressed in this research. 81 strawberry samples were randomly collected from fruit supply places in Sistan. After entering the specifications, the date of collection - the place of collection, the samples have been transferred to the microbiology laboratory of the Faculty of Veterinary Medicine separately in a zip cap under cold chain conditions. The samples were homogenized in the laboratory and analyzed by the Maximum Probable Number (MPN) test method. Total Most Probable Number (MPN) of heat-resistant forms. Samples were analyzed for MPN by the 9-tube method, total heat-resistant forms were counted as an indicator of faecal contamination using a previously published technique. The results showed that 29 out of 81 samples (35.8%) contained 100 MPN per gram or more of heat-resistant coliform. Based on the above standard, more than a quarter of the researched strawberries were infected with heat-resistant coliforms (Table 1). Also, 4 samples out of 81 samples (4.9%) were infected with *Salmonella*.

The overall results in this study indicate that the contamination levels of heat-resistant bacteria and *Salmonella* in the examined strawberries are relatively low. However, there is still a need to adhere to standards and hygiene conditions in the production and supply of these products.

key words: *Escherichia coli* ,strawberry