

## **Abstract**

Falafel is a popular and inexpensive food besides selling it as an interesting economic idea for earning money and boosting the business of the diner, but like other dishes that are available to them they are quickly prepared, it is likely to spread to all types of foodborne germs. Falafel is considered as a tasty food for the people of Sistan and Baluchestan. Little studies have been carried out on this tasty food in the field of microbial diseases in Sistan and Baluchistan as one of the vast provinces of Iran. The purpose of this study was to investigate the contamination of this food product with *Staphylococcus aureus* and *E. coli* in Sistan. A total of 65 Falafel samples were randomly collected from Sistan province over a period of 9 months. Biochemical and bacteriological methods were used to detect strains of *Escherichia coli* and *Staphylococcus aureus*. Using polymerase chain reaction test, the presence of sea gene of *Staphylococcus aureus* and *stx1* and *stx2* genes in *E. coli* were investigated. Of the 65 samples taken, 37 samples (56.9%) of *E. coli* and 29 (44.6%) were found to be infected with *Staphylococcus aureus*, of 37 isolates isolated from *E. coli* after PCR, 43.2% had *stx1* gene and 27% had *stx2* gene. Of the 29 isolates of *Staphylococcus aureus*, 20% were carriers of the sea gene. The results indicated a poor and undesirable health quality of the falafels introduced in Sistan. Therefore, more control and supervision is needed on the locations of Falafel and those working in these places, especially those that are mobile, active.

**Key Words:** *Escherichia coli*, Falafel, Sistan, *Staphylococcus aureus*, PCR



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contamination of Falafel by PCR in Sistan-Iran

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