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**Title:** Isolation and Identification of E.coli O157:H7 from Hamburger samples Using Conventional culture and Multiplex PCR

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**Abstract:** Introduction: Meat products have been implicated in outbreaks of E.Coli O157:H7 in most of the world. This bacteria is associated with diseases such as haemorrhagic colitis, haemolytic uraemic syndrome and thrombotic thrombocytopenic purpura. In this present study we have used Multiplex PCR to identification E.coli O157:H7 via presence of flicH7 rfbO157 and uidA gene in Non Sorbitol Fermenting Escherichia coli genome.

Material and Method: In total, 100 fresh Hamburger samples were obtained from different facories across Khuzestan province from March 2010 to September 2010. All samples were collected aseptically, put into sterile containers, transferred to the laboratory For isolation E.coli O157:H7. 25 g of each sample put into 225 ml of TSB supplemented with 20 mg/l novobiocin, homogenized and were incubated at 37 °C for 16–18 h. The enriched culture were plated onto tellurite cefixime-sorbitol MacConkey agar (TC-SMAC) and incubated at 37 °C for 24 h. after that, Non Sorbitol Fermentating colonies were selected from TC-SMAC plates, followed by biochemical tests. presumptive colonies on CT-SMAC that had confirmed as E. coli were emploied as templates for Multiplex PCR method.

Results: Out of 100 Hamburgers samples, 5 samples (5%) gave positive results for Non-Sorbitol fermenting colonies (NSF). Out of thease, two samples (40%) were confirmed as E.Coli by biochemical tests.

Conclusions: Since H7 flagella antigen is not expressed in some strains and show false negative results, we can show precence of the gene responsible for H7 flagella Antigen. Since Escherichia coli Non-Sorbitol Fermenting are food-born pathogen, inspection of meat products for this bacteria is recommended.

**Key Word:** Hamburger, E. coli O157:H7, Multiplex PCR

**Presentation:** Poster