

Evaluation of the Microbial Contamination of Enteral Feeding Solution

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Background & Objectives: The importance of safe food for hospitalized patients and the detrimental effect that contaminated food could have on their recovery has been emphasized. The object of the present study is to investigate the microbial contamination of enteral feeding solution, used for patients referred to one of the hospitals of the Shiraz University of Medical Sciences.

Methods: Ten samples of enteral feeding solution were collected from one of the hospitals in Shiraz and were transported in cold chain to the food microbiology laboratory for analysis. Then the appropriate dilution was prepared. Total microbial count, Coliforms count, *Escherichia coli* and *Staphylococcus aureus* count were done using PCA, VRBA, LST and Giolitti-Cantoni broth according to the National Standard of Iran. The final data was reported as log CFU/gr.

Results: The findings of the present study indicated that the mean of total count was 1.88 ± 0.73 CFU/gr. Besides, Coliforms-and *Escherichia coli* - counts were negative in all of the samples. Although 90% *Staphylococcus aureus* count were positive, only 10% were detected as coagulase positive *Staphylococcus aureus*; suggesting the inappropriate condition of enteral feeding solution preparation.

Conclusion: Considering the importance of the safety of enteral feeding solutions, administration of strict regulations is proposed.

Keywords: Microbial Contamination; Enteral Feeding Solution; Shiraz