

## Serotyping of *Salmonella* in Unpasteurized Cream Samples and Their Antibiotic Resistance Pattern

**Ghanadan, M. (BSc)**

MSc Student of Microbiology,  
Islamic Azad University, Arak  
Science and Research Branch, Arak,  
Iran

**Akbari, N. (PhD)**

Assistant Professor of Microbiology,  
Department of Microbiology,  
Islamic Azad University, Tehran  
Science and Research Branch,  
Tehran, Iran

**Soltan Dallal, MM. (PhD)**

Professor of Microbiology, Food  
Microbiology Research Center/  
Division of Food Microbiology,  
Tehran University of Medical  
Sciences, Tehran, Iran

**Corresponding Author:** Soltan  
Dallal, MM.

**Email:** soltanirad34@yahoo.co

**Received:** 3 Jun 2013

**Revised:** 3 Aug 2013

**Accepted:** 5 Aug 2013

### Abstract

**Background and Objective:** Cream, a rich dairy product, with a neutral PH and low preservation time is a suitable medium for microbial growth. *Salmonella* is one of the most important pathogens in causing food poisoning and human gastroenteritis. This study aimed at investigating the quality of traditional cream for the bacterial contamination.

**Material and Methods:** In this cross-sectional study, 196 non-pasteurized cream samples were collected from 5 regions of Hamedan, Iran. After dilution in phosphate buffer and serial dilution preparation, *Salmonella* was transferred to Rappaport-Vassiliadis (RV) enrichment medium according to CDC guidelines. After 24 h incubation at 37 ° C, a loop was inoculated in MacConkey and Hektoen Enteric (HE) Agar. The suspected colony phenotype was examined and their identification confirmed by API-20 E.

**Results:** The samples (29%) were contaminated with at least one kind of bacteria, *Salmonella Spp* (4.59%) and *Yersinia Spp* (2.55%). The other bacteria like *Escherichia*, *Enterobacter*, *Klebsiella*, and *Citrobacter* were also isolated. Nine samples were contaminated with two kinds of bacteria.

**Conclusion:** The presence of bacteria such as *Salmonella* and *Yersinia* in unpasteurized cream indicates that more quality control needs to be applied to the traditional crème produced in the city by health control office of food products.

**Keywords:** Cream, *Salmonella SPP*, *Coliform*, *Yersinia Enterocolitica*, Hamedan