**Microbial and Chemical Properties of Mahyaveh,** **a traditional Iranian fish sauce, and optimization of production conditions to decrease microbial load Review**

Maryam Adeli1

Faculty of Biological Science and Biotechnology

maryamadeli673@gmail.com

**‌ Statement of Problem:** *Mahyaveh* is a traditional fermented Iranian fish sauce. The taste, smell, preservation time and healthiness of *Mahyaveh* are affected by its microbiota. According to these populations, this fermented sauce can be one of the foodborne diseases source; to overcome this problem and have healthier *Mahyaveh*, some research was done and stated.

**Research Purpose:** Here some articles are presented; the aims of these studies were measuring the microbiota and some chemical conditions of *Mahyaveh*, detecting and counting pathogens to compare with standards, and also figuring out the best condition of production to produce safe and healthier *Mahyaveh* with low microbiota, and prevent possible foodborne diseases.

**Research Method:** Factors such as the type of the fish, the concentration of the salt, and the fermentation time affect the microbiota; 15 treatments were designed in a project to find out the optimum condition of production of *Mahyaveh* to decreasethe microbiota.*Mesophilic acidophilic bacteria, Coagulase Positive Staphylococci,* mould, yeast, and *Lactic acid bacteria* were counted, the PH of the samples was measured and compared with Food and Agriculture Organization (FAO) standards.

**Results and Conclusion:** The optimum condition was obtained at the time of 103.63 days of fermentation with *Sardine* fish and at a salt concentration of 29.38%. The maximum number of *Mesophilic acidophilic bacteria, Coagulase Positive Staphylococci*, *Mould* and *yeast*, and *Lactic acid bacteria* were reported, 7.99, 5.64, 3.40, 7.50 log CFU/gr respectively. The average PH was measured around 6. The number of *Coagulase Positive Staphylococci* in 58.33% of samples was more than permitted limit.

**Keywords:** *Mahyaveh*, Microbiota, Fish sauce, Iran, Foodborne disease