Morphological and biochemical identification of microorganisms can be cultured lactic spoilage meat products packed under vacuum

Shabeb AL Saedi

M.shapep.yahoo.com

Date of Submission:June 18, 2016

Department of Food Science and Technology

Isfahan University of Technologe, Isfahan 84156-83111, Iran

Degree: M.Sc Language: Farsi

supervisor's Name and Email address: Dr. Sabihe, **soleiman@cc.iut.ac.ir**

Abstract

The consumption of meat and its products in some countries reached more than 200 kg per year. In Iran, some statistical studies show that the amount of red meat produced since the early 60s to the end of 80s, three times, have been increased.Microbial spoilage of goods each year causes the destruction of large quantities of these products. The aim of this study is to isolate the lactic acid bacteria arable spoilage in meat products packaged under vacuum in the city of Isfahan, then the identification of lactic acid bacteria were isolated using morphological and biochemical methods. The last part of this study is to determine physicochemical changes of the area and some meat products in modified atmosphere packaging is done in terms of survival. The results showed that the logarithmic range of bacteria in the samples at room temperature during 10 daysin the range of 3 to 5 and the samples stored at a temperature of 7 degrees after 30 days in the logarithmic range of 4 to 6 have been kept. As shown in the results of this study, the packaging under nitrogen gas is more efficiently in decreasing of growth of the bacterial. The results of biochemical test of the consumption of sugar showed that, *L.casei subsp. Casei, L.mesenteroides, L.caseisubsp.pseudo-plantarum, L.caseisubsp.tolerans, L.plantarum, L.dextranicum,L.homohiochii and L.sake* were Of bacteria in the samples and the probability of p< 0/05 *L.sake* among indicator bacteria sample. The results of increasing the shear strength parameters of refrigerated meat at room temperature, the shear strength parameters of meat and poultry samples are in the range of 0/4 to 4/5. Due to the increasing amount of speculation can be attributed in part to reduce the amount of moisture. Enumeration of microorganisms on the tenth day under nitrogen gas at room temperature and under vacuum the samples in thirty days at refrigerator temperature, had a similar situation. In general this work can be concluded that the samples packaged under nitrogen gas and at 7 ° C had better condition during the retention period.

Keywords: Corruption, Meat products, Packaging controlled, Lactic acid bacteria.