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بالرسالة صفحات
لم ترد بالأصل

Suez Canal University
Faculty of Veterinary Medicine
Department of Food Hygiene and Control

Studies on quality and Public health hazard of imported frozen liver

Thesis presented

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Under Supervision

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APPROVAL SHEET

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INTRODUCTION

1.INTRODUCTION

Liver is one the most important meat variety due to its high nutritional value; it's content of high quality protein, fat, carbohydrate, minerals and vitamins. The liver tissue spoil faster than meat which entails practical problems when trading ? Egypt imports large quantities of frozen beef liver yearly from the different countries. Many problems arise which are restricted by the Egyptians standards to 7 months shelf life only.

Various types of bacteria and mould through hide, skin, feet, intestinal contents, equipment, hands, clothing of workers, water and air in the slaughter hall could contaminate liver as meat. The environmental conditions inside the cool cabinet particular, temperature and relative humidity play also great role in contamination of liver with various bacteria **(Mansour, 1986)**. It is worth mentioning to note that gram positive and negative bacterium as well as mould could survive during the frozen storage of foods, and when the conditions become favorable begin to multiply.

Spoilage of liver during storage has been considered as one of the most important problems facing meat producers, distributors and consumers, either on the local or international level, due to shipment of liver is normally carried out under freezing conditions.

Microorganisms are not the only cause for liver spoilage; there are other physical and chemical ones. These leads to retrogressive changes in the appearance, color, odor as well as chemical constituents states that renders liver repulsive, unpalatable and unmarketable for human consumption.

The Microbial load and pH values of liver are very important for assessment of the liver quality and are considered by some authors as an index for liver spoilage.

The Number of bacteria in the liver tissue may be increased by contamination during the preparation and freezing operation and handling process during marketing. However, freezing kills small proportion of most microorganisms especially, gram-negative rods rather than gram positive cocci.

The assessment of extract release volume can be considered a good index for assessment of the period of freezing storage. Moreover liver can play an important role in hazarding the public health due to its load of pathogenic bacteria.

Therefore due to the aforementioned reasons and limited information regarding the microbiological and chemical profiles of frozen liver in North Sinai markets the present studies was planned out to determine the following:

Part 1:

1-Physical indices

2-Chemical indices:

A-Determination of pH

B-Determination of Extraction Release Volume

3-Bacteriological indices:

A-Total aerobic counts

B-Psychrotrophic counts

C-Enterobacteriaceae counts

D-Staphylococcus aureus counts.

E-Salmonella screening.

Part 11:

Sanitary status of liver seller hands, cutting knives and table surfaces through assessment of: Total bacterial, Psychotrophic, Enterobacteriaccae, Staphylococcus aureus counts and Salmonella screening.

Review of Literature