

بسم الله الرحمن الرحيم



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شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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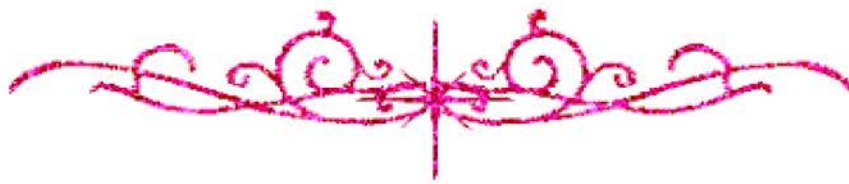


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MICROBIAL STATUS OF SOME FISH PRODUCTS

THESIS PRESENTED

BY

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INTRODUCTION

1. Introduction

Fish is considered as a very important source of high quality animal protien especially in Egypt where the animal protien are insufficient to meet the pupulation requirements , and also for its richness in calcium , phosphates and vitamines .

Salting is a method of preservation based on the penetration of table salt into the tissue .The process is governed by various physical and chemical factors such as diffusion, osmosis and series of complicated chemical and biochemical processes . The uneviscerated fresh water fish *Hydrocynous forskallii* (Moloha) and *Mugil cephalus* (Fessekh) were usually salted by different ways and stored at room temperature for at least one month before consumption.

Sodium chloride is the most widly chemical preservative used in Egypt. It's well known that the sodium chloride has osmotic effect on bacteria involved in spoilage of fish and the concentration of salt and it's rate of penetration influence bacterial action. This method of storage may be also influenced by the degree of moisture . However the using of salt as mean of preservation do not prevent contamination of fishes with food poisoning bacteria .

The U . K . Department of Sicentifica and Industrial research reported that a large increase in the bacterial population occured when fish were brined .

Regarding the bacterial count of brine an immediately ten fold increase in the count occured 2 minutes after the first immersion followed by a

slight decrease during immersion and a definite marked decrease after the removal of the fish. Immersion of the next lot of fish resulted once more in a large increase in bacterial count thus concluding that fish itself was a source of contamination of the brine and so the sodium chloride also must be exposed to thermal treatment before use.

In spite of proper salting a lot of salted fish was spoiled and at the same time it constitutes a public health hazard (Youssef, 1986 and Morshedy *et. al.*, 1982). The microbial status of fish reflects the microbiological condition of the water from which fish originated. A major contributing factor is the holding - temperature from the time of catching until consumed. Many authors have reported the survival of bacteria in the flesh of fish after cooking. Pickling or smoking. This is of special importance in foreign countries where the time temperature factor is not controlled and salting is a common method of preservation.

Since salted fish is subjected to many risks of contamination from different sources between fishing, processing and marketing till reach of consumers, therefore this investigation was carried out on two commercially important species of salted fish Moloha and Fessekh the investigation included the following items.

I Chemical examination

1 - Moisture %

2 - Sodium chloride %

II Bacteriological examination.

1 - Total halophilic count.

2 - Staphylococcus count with special reference to
Staphylococcus aureus

3 - Vibrio parahaemolyticus count .