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OCCURRENCE OF INDICATOR MICROORGANISMS AND RECOVERY OF SALMONELLAE IN SOME MEAT PRODUCTS

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INTRODUCTION

As a result of inadequate quantities of meat in Egypt and excessive demand of the increased population, frozen boneless beef is extensively imported from different countries to be sold, as such, or after being processed.

Technological developments in meat processing and handling have given consumers a much greater choice over the food they can buy. So, meat hygiene comprises, nearly every aspect of processing from the health of the living animal to the distribution of the final product, it prevents harmful ingredients to be used in manufacturing meat products and the sale of contaminated or unwholesome meat.

Food of good microbiological quality is not subject to unnecessary premature spoilage with concomitant financial losses whilst the absence of pathogenic microorganisms is necessary to ensure customer safety. The types and numbers of microorganisms present in food play a very significant role in determining both keeping quality of food and its consumer safety (Sue, 1992).

So, processed meat products may at time constitute a public health hazards either due to presence of spoilage microorganisms responsible for objectionable changes or pathogenic one leading to foodborne disease by infection and intoxication.

Indicator organisms have been used for various purposes. The main objective of sign bacteria as indicators of unsanitary practices to

reveal condition of treatment which imploy a potential hazard or indicate exposure of the product in sanitary condition or large numbers of microorganisms is often regarded as presumptive evidence that the food may also contain infectious or toxic contaminants. On the other hand, indicator organisms may be employed to reflect the microbiological quality of foods relative to product shelf-life or their safety from foodborne pathogens.

Therefore, this study was done in order to give an information about the occurrence of indicator microorganisms and recovery of salmonellae in some meat products, so the following points were designed:

Part I: Estimation of indicator organisms:

- 1- Total aerobic bacterial count.
- 2- Total anaerobic bacterial count.
- 3- Total enterobacteriaceae count.
- 4- Coliforms count (MPN).
- 5- Isolation of faecal coliform.
- 6- Isolation of salmonellae.
- 7- Staphylococcus aureus count.

Part II: Effect of chilling and freezing on Salmonellae microorganism.

Part III: Effect of heat treatments on Salmonellae microorganisms.

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