INTRODUCTION

There is no doubt that now, a containing and quite possibly, a growing demand for the type of food product described under the general heading "processed cheese". The manufacturers are obviously aware of this trend and are taking energetic steps to meet this situation.

The recent lifting of the restrictions on the manufacture of processed cheese has led to the appearance in the shops of increasing supplies of a wide range of processed cheese products. Old favourites are now more freely available and many new varieties and packs have made their debut. It is clear that a large public demand exists for this type of product, which manufacturers are doing their utmost to satisfy.

In such circumstances it will be even more essential for the production methods to be of the highest efficiency.

The largest percentage of cheese used for the manufacture of processed cheese is Cheddar. Soft cheeses and mould ripened cheese are sometimes used as flavouring components during the manufacture of processed cheese. Also, proteases and lipases treated cheese or modified cheese flavour preparations are added to improve the flavour of processed cheese (Sood and Kosikowski, 1979). A typical blend for processed Cheddar cheese manufacture consists of 70 % cheese of age 1-4 months and 30 % of cheese of age 8-10 months. The younger cheese imparts to the processed product a smooth texture, firm

body, good sliceability and water holding capacity whilst the mature cheese provides flavour and good melting properties.

Cheddar cheese, which is considered a high price dairy commodity, is normaly imported to Egypt, and in view of reducing the value of imported cheese, efforts should be made to increase production of processed cheese at lower cost.

Introduction of retentates into process cheese making has been explored early. Kumar and Kosikowski (1977) briefly outlined a procedure for making process cheese supplemented with plain and enzyme-treated highly concentrated retentates.

The evaluation of these cheeses showed good quality and were judged more acceptable than commerical reference cheese. Suitable for natural cheese of up to 60 % enzyme-treated (protease and lipase) retentates solids produced an acceptable process cheese. Ernstrom et al (1980) substituted 80 % cheese-base for natural cheese in preparing process cheese. The mix behaved normally in the kettle and had good flavour, however booy of the product was brittle. They rereported about 19 % yield increase in cheese base prepared from UF concentrated whole milk.

Cheese-base is intended as raw product for the processed cheese industry and must, therefore, in chemical respect fulfill the same demands as are made for Cheddar cheese.

So, this study was planned to learn more of the performance capability of making process cheese using cheese-base

and to study the effect of replacing Cheddar cheese with cheese-base from retentate in the blend on the quality of the resultant processed cheese.

The investigation was carried out in three parts:

Part I : A survey was conducted to evaluate the quality of local and imported processed cheese.

Part II : Prelimenary study to produce processed cheese from different proportions of young and mature Cheddar cheese.

Part III: The use of cheese-base in the manufacture of processed cheese.

Section A: Production of cheese-base based on ultrafiltration.

Section B: Manufacture of processed cheese by using the cheese-base as a raw material to replace Cheddar cheese.