

EFFECT OF MICROWAVES ON CREAM

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ABSTRACT

In this study, cream (15%&30%) was subjected to microwaves for 90 and 180 Sec., Cream was then stored at refrigeration temperature up to 4 weeks, and analysed for acid value, thiobarbituric acid (T.B.A) and peroxide value (P.V.). Fatty acids were also determined by G.L.C., and microbial quality of cream was tested for total bacterial count, coliform, mold and yeast counts.

The results cleared that microwaves heating of cream increased P.V value, T.B.A. and saturated fatty acidis mainly palmatic acid.

On the other hand unsaturated fatty acids were decreased mainly oleic and linoleic acid. Microwaves heating also, improved the bacterial quality of cream by decreasing total bacterial count, while coliform, mold and yeasts completely disappeared.

INTRODUCTION

Microwave heating and cooking continue to gain popularity. Microwave cooking is based on the ability of microwave to interact with the components of food products and generate heat energy. Food molecules will vibrate and produce heat of friction within the molecules and corresponding heat radiation.

Heating with microwaves has been used in the processing of many foodstuffs such as pasteurization of buffaloes milk (EL-Shibiny *et al.* 1982). Eberhard *et al.* (1990) used microwaves for heating water, raw milk, pasteurized milk and cream (35% fat). They showed that there were differences in the temperature through layers.

The present work was planned to study the effect of microwaves heating on the stability of fat, bacteriological and keeping quality of cream contains 15% fat (as coffe cream) and 30% fat.