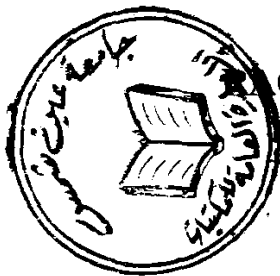


**STUDIES ON THE EFFECT OF SOME MIX
INGREDIENTS AND TECHNOLOGICAL
TREATMENTS ON THE PROPERTIES OF
FROZEN DAIRY PRODUCTS**

BY :



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GIA OMAR YOUSSEIF MOHAMED

B. Sc. (Agric.) 1991



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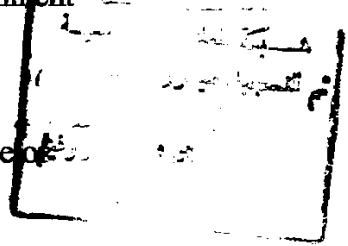
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1997



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By

RAGIA OMAR YOUSSEF MOHAMED

B. Sc. (Dairy Science and Technology), Fac. of Agric., Ain
Shams University, 1997 .

✶ This thesis for M. Sc. degree has been proved by :

Prof. Dr. A. B. Hagrass *A. B. Hagrass*
Professor of Dairy Science & Technology, Food Sci. Dept.,
Fac. of Agric., Ain Shams Univ.

Prof. Dr. S. G. Osman *S. G. Osman*
Professor of Dairy Science & Technology, Institute of Food
Research & Technology, Agricultural Research Centre .

Prof. Dr. S. M. Khalafalla *S. M. Khalafalla*
Professor of Dairy Science & Technology, Food Sci.
Dept., Fac. of Agric., Ain Shams Univ.

Date of examination : 24/9/ 1997

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RAGIA OMAR YOUSSEIF MOHAMED

B. Sc. (Agric.) . Ain Shams University, 1991 .

Under the supervision of :

Prof. Dr. S. M. Khalafalla

Professor of Dairy Science & Technology,
Food sci. Dept. , Fac. of Agric., Ain Shams Univ.

Dr. A. E. Fayed

Associate Professor of Dairy Science & Technology,
Food sci. Dept. , Fac. of Agric., Ain Shams Univ.

ABSTRACT

Ragia Omar yousef. studies on the effect of some mix ingredients and technological treatments on the properhis of frozen dairy products. Unpublished Master of Science, Ain Shams University, faculty Agriculture, food science Department (1997).

The influence of replacing skim milk powder (SMP) solids with each of ultrafiltered milk retentate (UFR) or dried whey protein concentrate (DWPC) on the physico-chemical, microbiological and organoleptical properties of ice cream mixes and their resultant frozen products was studied .

Vanilla ice cream mixes composing of 7 % fat, 12 % milk solids not fat (MSNF), 12 % sucrose, 5 % corn syrup and 0.25 % sodium carboxyl methyl cellulose (CMC) was made . The solids of UFR or DWPC were used to substitute 25, 50, or 75 % of SMP solids .

The results indicate that, both replacers whether UFR or DWPC did not change the dry matter or the fat content of the mix. UFR increased proportionally the protein as well as the acidity and the ash contents . While ash was reduced significantly by using DWPC . The specific gravity (sp. gr.) and the freezing point of the mix increased by DWPC more than that occured by UFR . Coversely, the increasing rate in the viscosity of the mix was higher by UFR than done by DWPC . The sp. gr. of the resultant ice cream was increased and consequently the overrun was reduced when DWPC was used but UFR reduced the sp. gr. and increased the overrun . UFR strengthened while DWPC weakened the melting resistance of the frozen products .

All treatments were organoleptically accepted and the ice cream of 50 % UFR was superior to the control followed by 25 % DWPC, 75 % UFR and 25 % UFR .

Ice cream could be successfully made using UF-dairy concentrates rich-in-protein as UFR or DWPC without any exception only provided that MSNF supplementation with the latter should not be > 50 %

Key words : Ice cream, ultrafiltered retentate, dried whey protein concentrate, skim milk powder, etc. . .

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