بسم الله الرحمن الرحيم

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تم عمل المسح الضوئي لهذة الرسالة بواسطة / سامية زكى يوسف

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى مسئولية عن محتوى هذه الرسالة.

ملاحظات:

- بالرسالة صفحات لم ترد بالأصل
- بعض الصفحات الأصلية تالفة
- بالرسالة صفحات قد تكون مكررة
- بالرسالة صفحات قد يكون بها خطأ ترقيم

STUDIES ON THE MANUFACTURE OF HALLOUMI CHEESE FROM BUFFALOES MILK

BY

REDA ABDEL-LATIF MOSTAFA SABEK

B.Sc., Agric. Sci. (Dairy Science and Technology), Cairo Univ., 1969

M.Sc., Agric. Sci. (Dairy Science and Technology), Zagazig Univ., 1979

A thesis submitted for partial fulfillment

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in

Agricultural Science
(Dairy Science and Technology)

Food Science Department
Faculty of Agriculture
Ain Shams University

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Approval Sheet

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ABSTRAT

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Halloumi cheese was made traditionally from normal sheep's, cow's milk and compared with cheese from standardized buffaloe's milk with 6%, 4.5%, 3% and 1.5% fat to obtain the best fat content which gives the highest quality with lower losses. Also, Halloumi cheese was made from standardized buffaloe's milk with 4.5% fat and adjusting the pH value to 6.8, 6.7, 6.6, 6.5 and 6.4 and cooking the curd at 70°C, 75°C, 80°C, 85°C and 90°C to determine the required time for curd floating. Cheese characteristics and quality was assessed. The effect of homogenization and concentration by ultrafiltration on the properties and microstructure of Halloumi cheese was also studied. Results indicated that Halloumi cheese could be successfully made from buffalo milk with 4.5% fat and pH of 6.5 and cooking the curd to 90°C. These condition gave the highest quality and yield. Homogenization and ultrafiltration (4X) of buffalo milk enhanced the structure of the resultant Halloumi cheese by increasing the adsorption of casein micelles at fat – water interface, reducing the number of free micelles in water phase and reducing the density of gel structure. However, cow's milk 3% fat and buffaloe's milk 4.5% fat were concentrated 4 folds by ultrafiltration, then, the effect of homogenization on the microstructure and Halloumi cheese quality was studied.

Key words: Halloumi cheese, Sheep, Cow, Buffalo, Ultrafiltration, Homogenization, Microstructure.

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