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**STUDIES ON THE MANUFACTURE OF
HALLOUMI CHEESE FROM
BUFFALOES MILK**

BY

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

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**Agricultural Science
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Ain Shams University.**

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Approval Sheet

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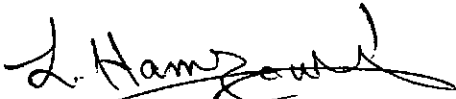
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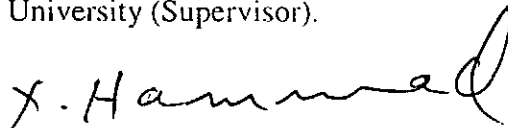
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ABSTRAT

Reda Abdel-Latif. Mostafa Sabek, Studies on the manufacture of Halloumi cheese from buffaloes milk. Unpublished Doctor of Philosophy dissertation, Department of Food Science, Faculty of Agriculture, Ain Shams University, 2002.

Halloumi cheese was made traditionally from normal sheep's, cow's milk and compared with cheese from standardized buffalo'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 buffalo'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 buffalo'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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8

9

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CONTENTS

	Page
I- Introduction	1
II- Review of Literature	3
III- Materials and Methods	10
Materials	10
1- Raw milk	10
2- Retentate	10
Methods.....	10
- Manufacture of Halloumi cheese	10
a- Traditional sheep's milk method	10
b- Method using cow's milk	11
c- Modified buffalo's milk method.....	14
d- Modified ultrafiltered buffalo's milk method	14
3- Methods of analyses	
A) Chemical analysis	17
B) Rheological properties of cheese.....	18
1- Meltability and fat leakage	18
2- Free oil test	18
C) Calculation of yield, recovery and loss	18
D) Microstructure of cheese	19
a- Transmission	19
b- Scanning electron microscope	20
E) Organoleptic evaluation of cheese	20
F) Statistical analysis	20
IV- RESULTS AND DISCUSSION	21
PART I. EFFECT OF FAT CONTENT OF CHEESE MILK ON	
COMPOSITION, PROPERTIES AND QUALITY OF	21
HALLOUMI CHEESE	
1- Chemical composition of milk.....	22

II

	Page
2- Chemical composition of Halloumi cheese curd	22
3- Chemical composition of whey	26
4- Chemical composition of filtered whey of Halloumi cheese made from standardized buffaloe's milk	28
5- Chemical composition of Halloumi cheese and Anari ...	30
6- Yield production of Halloumi cheese and cheese by products.....	32
7- Recovery of DM, fat and protein of Halloumi cheese.....	34
8- Losses of dry matter, fat and total protein in Halloumi cheese whey and filtered whey.....	39
9- Fat leakage, oiling off and meltability of Halloumi cheese	44
10- Organoleptic quality of Halloumi cheese	49
PART II. EFFECT OF pH OF MILK AND COOKING	55
TEMPERATURE OF CURD ON THE	
PRODUCTION AND CHARACETRISTICS OF	
HALLOUMI CHEESE	
1- Chemical composition of milk.....	56
2- Chemical composition of Halloumi cheese curd	56
3- Effect of the pH value of pre-cheese milk and cooking temperature on the required floating time (min) of curd...	59
4- Effect of pH value of pre-cheese milk and cooking temperature of curd on calcium and phosphorus content in Halloumi cheese.....	62
5- Effect of pH value of pre-cheese milk and cooking temperature of curd on meltability in Halloumi cheese	67
6- Effect of pH value of pre-cheese milk and cooking temperature of curd on organoleptic properties of Halloumi cheese.....	70

PART III. EFFECT OF ULTRAFILTRATION AND HOMOGENIZATION ON THE PROPERTIES, QUALITIES AND MICROSTRUCTURE OF HALLOUMI CHEESE.....	78
Section I. Effect of ultrafiltration and homogenization on the qualities and properties of Halloumi cheese.....	79
1- Chemical composition of milk	79
2- Chemical composition of Halloumi cheese curd	81
3- Chemical composition of Halloumi cheese	84
4- Fat leakage, oiling off and meltability of Halloumi cheese	86
Section II. Effect of ultrafiltration and homogenization on the microstructure of Halloumi cheese....	92
II.1. Effect of homogenization on the manufacture of Halloumi cheese	93
II.2. Effect of ultrafiltration processing	94
II.3. Effect of Homogenization on ultrafiltered milk retentate	94
II.4. Effect of cooking processing	96
V- SUMMARY	115
VI- REFERENCES	119
ARBIC SUMMARY	

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