



Faculty of Agriculture, Alexandria University
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Effect of Different Milk Types on Physicochemical and Rheological Properties of Stirred Greek-Style Yoghurt

A Thesis submitted in partial fulfillment of the requirements for the degree of Master science

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Submitted by

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Abstract

Greek-style yoghurt, known as "concentrated yoghurt" became the fast-growing fermented foods worldwide due to its acceptability, rich in dietary protein, fat, calcium and vitamins. It could be service as full breakfast. The goal of this study was to evaluate some recombined formulas containing buffalo or cow milk to produce Greek-style yoghurt with highly acceptability and high nutrition values. Sixteen trials of Greek-style yoghurt were made using different ingredients with protein levels of 5 or 6% and fat levels of 0.5, 6 and 10%. Modified starch was incorporated in trials with low fat content as well as some trials were made with strawberry fruit preparation. All samples were evaluated for physicochemical, rheological, microbiological and sensory properties during 14 days at refrigerator conditions. The obtain results revealed that the chemical properties of all treatments were within the calculation in recipes. The ingredients used have little effect on ash, acidity and pH of the final products, but the water holding capacity was influenced by the ingredients as the trials made with cow milk received higher water holding capacity when compared with that made from buffalo milk. Trials made with skimmed milk powder received higher water holding capacity when compared with that made using milk protein concentrate. Modified starch increased the water holding capacity of final products. Buffalo Greek yoghurts gained high scoring of sensory acceptability compared to cow Greek yoghurts. Utilization of SMP improved the quality and overall acceptability compared to MPC. Modified starch improved the physicochemical, sensorial, and texture properties of medium and low-fat Greek yoghurts. The results recommended making Greek-style yoghurt using buffalo milk and increasing the protein by SMP and MPC in ratio 2:1, as well as the modified starch could be used to improve the texture and sensory properties of low-fat Greek yoghurt.

TABLE OF CONTENTS

Subject	Page
Table of contents	I
List of Tables	IV
List of Figures	V
List of Abbreviations	VI
CHAPTER ONE	1
1. Introduction	1
1.1. Objectives of study.....	2
CHAPTER TWO	3
2. Review of Literature	3
2.1. Definition.....	3
2.2. History of fermented milk.....	3
2.3. Manufacturing of fermented milk.....	4
2.4. Therapeutic properties of fermented milk products.....	6
2.5. Yoghurt.....	7
2.5.1. Main Types of Yoghurts and Fermented Milks.....	7
2.5.2. Manufacture of Yoghurt.....	8
2.6. Concentrated yoghurt.....	9
2.7. Greek-style yoghurt and related products.....	11
2.7.1. Compositional standards for Greek-style yoghurt.....	11
2.7.2. Greek Yoghurt Manufacture	12
2.7.2.1. Traditional method.....	12
2.7.2.2. Methods based on mechanical separators.....	14
2.7.2.3. Methods based on membrane processes.....	14

Subject	Page
2.7.2.4. Methods based on direct recombination.....	15
2.8. Modified starch.....	17
CHAPTER THREE	19
3. Materials and Methods	19
3.1 Materials.....	19
3.2. Methods.....	19
3.2.1. Manufacturing of Greek style yoghurt.....	19
3.2.2. Physicochemical analysis of yoghurt.....	22
3.2.2.1. Titratable acidity and pH	22
3.2.2.2. Total Solids determination.....	22
3.2.2.3. Water holding capacity (WHC)	22
3.2.2.4. Ash content determination	22
3.2.2.5. Determination of protein content.....	22
3.2.2.6. Determination of fat content	23
3.2.3. Microbiological analysis of Greek yoghurt.....	23
3.2.4. Texture analysis.....	23
3.2.5. Determination of viscosity	23
3.2.6. Sensory evaluation.....	23
3.2.7. Statistical analysis.....	23
CHAPTER FOUR	24
4. Results and Discussion	24
4.1. Buffalo Greek yoghurt.....	24
4.1.1. Physicochemical analysis of buffalo Greek –style yoghurt.....	24
4.1.2. Texture analysis of buffalo Greek –style yoghurt	27
4.1.3. Sensory evaluation of buffalo Greek –style yoghurt.....	29

Subject	Page
4.2. Cow Greek style yoghurt.....	32
4.2.1. Physicochemical analysis of cow Greek yoghurt.....	32
4.2.2. Texture analysis of cow Greek –style yoghurt	34
4.2.3. Sensory evaluation of cow Greek –style yoghurt.....	37
4.3. Fruit Greek yoghurt.....	40
4.3.1. Physicochemical analysis of fruit Greek yoghurt.....	40
4.3.2. Texture profile analysis of fruit Greek-style yoghurt	41
4.3.3. Sensory evaluation of fruit Greek yoghurt.....	42
4.4. Low fat Greek-style yoghurt.....	45
4.4.1. Physicochemical analysis of low fat Greek yoghurt.....	45
4.4.2. Texture analysis of low Greek style yoghurt	47
4.4.3. Sensory evaluation of low fat Greek yoghurt.....	48
4.5. Microbiological analysis of Greek yoghurt.....	48
5. Summary and Conclusion	50
6. References.....	53
Arabic Summary.....	1

List of Table

No.	Title	page
2.1	Different names of yoghurts and fermented milks around of the world	4
2.2	Synonyms for concentrated fermented milk in different countries	10
2.3	CODEX compositional standards for concentrated fermented milks	11
2.4	Summary of starch modifications with organic acids	18
3.1.	Ingredients for the Greek-style yoghurt making	21
4.1.	Physicochemical analysis of buffalo Greek –style yoghurt	25
4.2	Texture analysis of buffalo milk Greek –style yoghurt	28
4.3	Sensory evaluation of buffalo milk Greek –style yoghurt.	30
4.4	Physicochemical analysis of cow milk Greek –style yoghurt	33
4.5	Texture analysis of cow milk Greek –style yoghurt.	35
4.6	Sensory evaluation of cow milk Greek –style yoghurt.	38
4.7	Physicochemical analysis of fruit Greek yoghurt.	41
4.8	Texture analysis of fruit Greek yoghurt.	43
4.9	Sensory evaluation of fruit Greek-style yoghurt.	44
4.10	Physicochemical analysis of low fat Greek yoghurt.	46
4.11	Texture analysis of low fat Greek yoghurt.	47
4.12	Sensory evaluation of low fat Greek yoghurt.	83

List of Figures

page	Title	No.
2.1	The steps of manufacturing of fermented dairy products.	5
2.2	Health benefits of fermented dairy products.	6
2.3	Classification and outline for yoghurts and fermented milks.	8
2.4	Generalized scheme illustrating the different methods for the production of yoghurt.	9
2.5	Two methods of concentrating yoghurt to Greek-style using ultrafiltration.	13
3.1	Manufacturing of Greek- style yoghurts from recombined milk ingredients	20



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