

# Modern Technology Of Milk Processing & Dairy Products (4th Edition)

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The dairy industry plays an important role in our daily life. It is difficult to realize how fast changes are taking place in the dairy industry. Milk is an important human food, it is palatable, easy to digest and highly nutritive. One of the important factors affecting the total amount of milk produced and the way in which this milk is utilized is the demand for the various products. In order to prepare such a diversity of products, many different processes have been developed by the industry. There are numerous types of milk products such as ghee, butter, paneer, cheese, yogurt, ice cream powder, baby cereal food, cream, and so on. Each of these has been designed to take advantage of some particular property of milk. Dairy products are generally defined as food produced from the milk of mammals; they are usually high energy yielding food products. Enzymes play an important role in the production of cheese. Raw milk contains several native enzymes some of which can be used for analytical and quality purposes for example pasteurization can be assessed by determining indigenous alkaline phosphate activity. India is known as the Oyster of the global dairy industry, with opportunities galore to the entrepreneurs globally. Anyone might want to capitalize on the largest and fastest growing milk and milk products market. The dairy industry in India has been witnessing rapid growth. The liberalized economy provides more opportunities for MNCs and foreign investors to release the full potential of this industry. The main aim of the Indian dairy industry is only to better manage the national resources to enhance milk production and upgrade milk processing using innovative technologies.

The major contents of the book are cholesterol, coronary heart disease and mil fat, cholesterol and cardio vascular diseases, fatty acids & cholesterol, factors affecting cardio vascular disease, application of enzymes in dairy and food processing, utilisation of milk components: casein, advances in the heat treatment of milk, varieties of sheep's cheese, whey cheese, potted cheese, filled cheese, testing butter at different stages, presentation of butter at different stages, condensed and evaporated milk, dried milk powder, skimmed powder, malted powder, butter powder, ghee yoghurt, technology processing of dairy and dairy products, dried milk shake, milk powder, dahi from sweet cream butter milk, packaging of dairy and milk products, dairy farm, dairy products & milk packaging in pouches, etc.

Developments in the dairy industry are enough to justify a revision of a considerable amount of material in this book. This book deals with processes, formulae, project profiles, details of plant, machinery & raw materials with their resources etc. of various dairy products. This book will help all its readers from entrepreneurs to food industries, technocrats and scientists.

Cholesterol and Cardio Vascular Diseases  
Fatty Acids & Cholesterol  
Factors Affecting Cardio Vascular Disease  
Dietary Recommendations  
Conclusion

## 2. Application of Enzymes in Dairy and Food Processing

Introduction

Enzymes in Dairy Industry

Enzymes in Food Industry

## 3. Utilisation of Milk Components: Casein

Extraction of Casein from Milk

Properties of Casein from Milk

Composition of Caseinates

Composition of Co-Precipitates

Industrial Uses of Casein

Uses of Rennet Casein

## 4. Developments in Cream Separation and Processing

Separation and Development in Separators

Vacreation

Consumer Cream Products

Packaging & Presentation of Cream

## 5. Advances in the Heat Treatment of Milk

Raw Milk

Pasteurisation

Sterilised and UHT Milks

Comparison of Direct/Indirect Processes

Volatile Sulphur components Milk

Flavour Improvement

Nutritional Value

Texture of UHT Milks

Heat Exchanger Fouling

Concluding Remarks

## 6. Utilisation of Milk Components: Whey

Production

Whey Characteristics

Processing of Whey

Unit Processing and Products

Lactose Production

Conclusion

## 7. Grading Dairy Produce

Early History

The Separator

## 8. The Cream Supply

Value of Well Mixed Cream

## 9. Grading of Milk and Cream

## Knowledge Required Grading Milk

### 10. Butter Grading

Microflora of the Dairy

Framing for Flavours

Standardise

Grading Statistics

Commercial Grading & Buying

Fixity of Flavour in Butter

Butter Grading

### 11. Cheese

Hard Varieties

Factors of Viral Importance

Process of Making Cheese

Value of Experiments

Varieties of Sheep's Cheese

Whey Cheese

Potted Cheese

Filled Cheese

### 12. Refrigeration

Testing Butter at Different Stages

Presentation of Butter at Different Stages

### 13. Condensed and Evaporated Milk

Dried Milk Powder

Skimmed Powder

Malted Powder

Butter Powder

Ghee

Yoghurt

Cheese

Presentation of Common Defects in Cheese

Processed Cheese

### 14. Milk

### 15. Co-Operative Role in Dairy Development

### 16. Technology Processing of Dairy and Dairy Products

Milk Shake

Combination

Steps in Processing

Dried Milk Shake Milk Powder

Dahi from Sweet Cream Butter Milk

Composition

Acidoptiles Milk

Yoghurt from Butter Milk

Cheddar Cheese from Cow Milk

Cheddar Cheese from Buffalo Milk

Mozzarella Cheese

Cottage Cheese  
Surti Cheese  
Soft Cheese

## 17. Packaging of Dairy and Milk Products

Form Fill & Seal (FFS) System

Aseptic System

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## 18. Baby Cereal Food & Milk Powders

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Uses & Application

Manufacturing Processes of Milk Powder

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Supplier of Plant & Machinery

## 19. Confectionery Industry-Semi Automatic Plant

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Uses and Application

Formulations

Process of Manufacturing

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Suppliers of Raw Materials

## 20. Condensed Milk (Sweetened)

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Uses & Application

Methods of Manufacturing

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Address of Plant & Machinery Suppliers

List of Plant & Machinery

## 21. Dairy Farm

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Composition of Milk

Manufacturing Process

Refrigeration or Freezing System

Addresses of Complete Plant & Machinery Suppliers

List of Plant & Machinery

## 22. Dairy Products & Milk Packaging in Pouches

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Uses & Application

Manufacturing Process

Suppliers of complete Plant & Machinery

Suppliers of Raw Material

## List of Plant & Machinery

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Flouring Essence

Process of Manufacture

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### 24. Ice Cream of Different Flavours

Introduction

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Complete Plant & Machinery Suppliers

Raw Material Suppliers

### 25. Milk Powder

Introduction

Composition of Dry Milk Powder

Property of Milk Powder

Process of Manufacture

Suppliers of Raw Materials

Suppliers of Plant & Machinery

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Introduction

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### 28. Paneer

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Raw Material supplier

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Our Detailed Project report aims at providing all the critical data required by any entrepreneur vying to venture into Project. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line.

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