

How to make Profits in Bakery Industry

(Manufacture of Bread, Biscuit, Cake, Cookies, Muffins, etc.)

Information

Baking is a food cooking method that uses prolonged dry heat by convection, rather than by thermal radiation. Heat is gradually transferred "from the surface of cakes, cookies and breads to their centre. As heat travels through it transforms batters and dough into baked goods with a firm dry crust and a softer centre".

Bakery products have become essential food items of the vast majority of population. The present day consumer looks for new bakery products, better appeal, taste and convenience from bakery foods. Bakery industry has also an important role in popularizing wheat in non-wheat consuming region of the World.

With good planning and access to good staff, raw materials and markets, setting up a bakery can represent an excellent enterprise opportunity.

The book is invaluable reading for those starting their own baking business or any baker looking to improve their existing business in order to increase profits. The book covers various aspects related to different bakery products with their manufacturing process and also provides contact details of raw material, plant and machinery suppliers with equipment photographs and their technical specifications.

It provides a thorough understanding of the many new developments shaping the industry and offers detailed technical coverage of the manufacturing processes of bakery products. It examines the nature of bakery products, the role of the ingredients in determining their quality, processing methods and their control. Various bakery products covered in the book are wheat ingredients, other grain ingredients, shortenings, emulsifiers, antioxidants, water and salt,

different types of breads and biscuits, cakes, buns, icings, production of cookie and cracker, spices, flavours, colors, leavened and unleavened products, air-leavened products, chemically leavened bread and rolls, chemically leavened sweet goods, Yeast-leavened plain bread, rolls, dough, preservation of bakery products, milk and egg ingredients, fruits, vegetables, nuts and many more.

Food Mixer, Cookie Extruder, Rotary Oven, Biscuit Sandwiching Machine, Tunnel Gas Oven, Flour Mixer, Cookies Rotary Moulder, Bun Divider Moulder, Planetary Mixer, Spiral Mixer, Pillow Packing Machine, Oil Spray Machine are the various equipments described in the book with their photographs and technical specifications. The book aims to provide comprehensive information on different types of bakery products. The book is aimed for food technologist, scientists, research scholars, as well as for new entrepreneurs and those who are engaged in this industry.

Table of Contents

1. **Ingredients Made From Wheat**
 - Introduction
 - Wheat
 - Commercial Wheat Varieties
 - Composition of Wheat
 - Lipids
 - Utilization of Wheat
 - Determining the Quality of Wheat

2. Other Grains Ingredients

Introduction

Durum

Special Quality Considerations

Utilization

Rye

Chemical Physical Characteristics

Triticale

General Characteristics

Quality, Composition, and Nutritional Factors

Utilization

Rice

Structure and Composition

Quality Factors

Use of Rice in the Baking Industry

Millet

Varieties and Distribution

Structure of the Seed

Food Uses

Corn

Structure and Composition

Quality Factors

Traditional Food Products From Corn

Oats

Classification

Structure and Composition

Barley

Description of Plant and Seed

Utilization of Barley

Structure and Composition of Barley Kernels

Quality Factors

3. Shortenings, Emulsifiers and Antioxidants

Introduction

The Chemistry of Fats and Oils

Shortenings From Natural Sources

Animal Fats and Oils

Vegetable Shortenings

Quality Assurance of Fat and Oil Products

Tests

Specifications

Emulsifiers

Lecithin

Monoglycerides and Deglycerides
Other Food Emulsifiers
Antioxidants
Synthetic Antioxidants
Natural Antioxidants
Fat Substitutes and Replacements

4. Water and Salt

Introduction

Water

Regulations Affecting Potable Water

Water Treatment

Effects of Water Impurities on Bakery Products

Water Treatment Mechods Used by Bakeries
Analyses of Water
Salt
Salt in the Human Diet
Containers and Storage
Types of Salt
Salt with Additives
Salt Substitutes in Bakery Products
Analytical Methods

5. Products of Bakery Industries

Bread
Introduction
Market Potential

Raw Materials

Flour

Yeast

Water

Salt

Sugar

Bulk Solids

Flavourings

Enrichment

Bread Manufacture

Straight Dough Method

Sponge Dough Method (Semi-Automatic)

Make Up

Recipies for Breads

White Pan Bread

Milk Bread

Sweet Bread

Rice Bread

Closed Pan Bread

Sponge Dough

Final Dough

Make up and Baking of the Bread

Egg Bread

French Bread

Straight Dough Method

Raisin Bread

Whole Wheat Bread (Straight Dough Method)

Rye Bread
Rye Bread (Leay Sow)
Vienna Bread
Special Breads
Date-Nut Bread
Low Sodium Bread
Cheese Bread
Specification for Various Types of Breads
White Bread
Other Requirements
Mass of the Bread
Wheat Meal Bread
Other Requirements

Crust and Crumb

(a) Optional Ingredients

(b) Mould Inhibitors

Bread Improver

Requirements

Biscuits

Introduction

Biscuit Raw Materials

Cereals

Sweetener

Shortening

Milk

Leavening Agents and Nutrients

Miscellaneous Products
Market Potential
Statewise Units of Biscuits in Organised Sector
Manufacturing Process
Recipes for Various Types of Biscuits
Arrowroot Biscuit
Shell Biscuits
Digestive Biscuits
Honey Comb or Crimp Biscuits
Almond Fruit Biscuits
Walnut Biscuits
Soda Biscuit
Coconut Biscuits

Nice Biscuits
Saltish Biscuits
Marie Biscuits
Ester Biscuits
Sandwich Type Biscuits
Cheese Biscuits
Rice Biscuits
Corn Flour Biscuits
Coffee Biscuits
Victoria Biscuits
Edinburg Biscuits
Snow Drop Biscuits
Luncheon Biscuits

Special Combination Wheat Biscuits

Simple All Purpose Biscuits

Soojee Biscuits

Special Nut Biscuits

Directions

Corn Flour Coconut Biscuit

Chocolate Vanilla Biscuit

For Icing

Peppermint Cream Biscuits

Biscuit Coatings

White Coating

Dark Chocolate Coating

Lemon Coating

Orange Coating
Malt Milk Coating
Few Points for Making Good Biscuits
Cookies
Basic Ingredients
Bonding Materials or Toughers
Tenderizing Materials
Floors
Shortening
Sugar
Lecithin
Milk
Eggs
Rotary Moulded Cookie

Cutting Machine Cookie
Wire Cut Cookie
Spread of the Cookies
Equipments For the Manufacture of Cookies
Wire Cut Machine
Stamping and Rotary Catting Machines
Rotary Moulded Cookies
Formula for Sugar Wafer Butter
Processing of Sugar Wafer
Coatings for Cookies
Coatings for Cookies Enrobing
Vanilla Coating

Dark Chocolate
Dark Cocoa
Coconut
Peanut Coating
Pie Fillings
Fruit Fillins
Apple Pie Fillings
Banana Cream Starch-Based Gel Filling
Strawberry Flavoured Fillings
Cream Style Fillings
Pie Crusts
The Flour
The Shortening

The Salt
Sugar
Flaky Crusts
Mealy Crusts
Formulations and Procedures for Pie Crusts
Long Flake Pie Crusts
Dough for Fried Peas
Fruit Pie Dough
Mealy Crust Dough
Fried Pies
Faults in Pie Crusts
Soda Crackers
Flour
Water

Shortening
Salt
Yeast Food
Formulas for Soda Crackers
Fermentation
Manufacturing
Absorption
Salt
Sugars
Amylolytic Enzymes
Cakes
The Flour
Soft Straight Flour
Sugar
Shortening

Egg
Milk
Formulation Guidelines
Cake Processing
Common Faults in Cakes
Texture Defects
Defects of Crust Appearance
Too Low Volume
Irregular or Coarse Grain
Various Types of Cakes
Corn Flour Cake
Fruit Cake
Rece Cake
Petha Cake
Maize Floor Cake

Cream Cake
Cheese Cake
Sponge Cake
White Layer Cakes
Rich White Layer Cake
Universal Cake Mix
Yellow Layer Cake
Chocolate Cake
Devil's Food Cake
Chiffon Cake
Layer Cake
Pound Cake
Hard Rolls
Soft Rolls

Vienna (Kaiser) Rolls
Make up of the Rolls
Hamburger Rolls
Make up and Baking of the Rolls
Buns
Bath Buns
Saffron Buns
Cross Buns
German Buns
Sweet Crumb Buns
Round Shaped Filled Bun
Dough
Syrup Wash
Braid Buns
Square Buns
Figure 8 Shaped Buns

Muffins, Nankhati and Pizza

Mufins

Bran Muffins

Whole Wheat Muffins

Nankhatai

Pizzas

Recipe for Pizza

Icings

Some Guidelines for Icing Preperation

Flavours Development in Icings

Fluffy Icings

Recipes for Various Types of Icing

Chocolate Icing

Butter Icing

Water Icings

Royal Icings

Icing Paste (General)
Vanilla Icing
Butter Scotch Icing
Butter Scotch Paste Icing
Banana Icing
Caramel Boiled Icing
Honey Macaroon Icing
Spice Cake Icing
Orange Icing
Orange Sunshine Icing
Chocolate Fudge Icing
Butter Cream Icing

6. Milk and Eggs Ingredients

Introduction

Ingredients Derived From Milk

Composition of Milk

Types of Milk Ingredients

Milk Protein Concentrate

Dairy Blends and Milk Replacers

Cheese

Quality Tests for Milk and Milk Products

Ingredients From Eggs

Functional Properties

Compositon
Commercial Products
Storage

7. Fruits, Vegetables and Nuts

Introduction

Nuts

Almonds, Almond Butter, and Almond Paste

Coconut

Kernel Paste

Peanuts and Peanut Butter

Pecans

Poppy Seeds

Walnuts

Nut Substitutes and Defatted Nuts

Fruits

Dried Fruits

Candied or Glace Fruit

Canned Fruits

Frozen Fruits

Fruit Jams, Jellies and Preserves

Vegetables

Potatoes

Onions

Tomatoes

Carrots

8. Bakery Machinery and Equipment

Weighing Equipment

Manual Scales

Automatic Weighing Equipment

Liquid Measuring Equipment

Mixing

Mixing Equipment

Dry Blenders

Ribbon Blenders

Tumbler with Agglomerate Breakers

Vertical Screw Mixer

Equipment Selection

Continuous Pre-Mixing Equipment

Horizontal Dough Mixer

Banbury Mixers
Miscellaneous Horizontal Dough Mixing
Equipment
Mixing Mechanism
Vertical Planetary Mixers
Continuous Mixers
Temperature and Mixing
Make-up Equipment
Dividers
Effect of Dividing Action on Dough Properties
Divider
Rounders
Controlling and Adjusting the Rounder
Proofer

Tray Type Intermediate Proofer
Maintenance
Intermediate Proofers
Moulders
Moulders for Cookies
Biscuit Rolling Machine
Biscuit Cutters
Fermentation and Proofing Enclosures
Construction Details
Baking Equipments
Ovens
Chamber Type Oven
Draw Plate Oven
Reel Oven

Tunnel Oven
Oven Heating
Fuels
Slicing Equipment
Reciprcating Slicers
Blade Slicer
Packaging Equipment

9. Spices, Flavors and Colors

Introduction
Coloring Additives
Uncertified Color Additives
Certified Color Additives

Natural and Artificial Flavors

Vanilla

Cocoa Products

Spices and Herbs

General Considerations

Spices Used in Bakery Products

Cinnamon

10. Cookie and Cracker Production

Ingredients Handling

Mixing

Dough Relaxation and Fermentation

Dough Machining and Forming

Dough Relaxing

Cutting Stage
Scrap Return
Salter of Sugar Sprinkling
Rotary Molding
Extruder-Dough Formers
Wire Cut
Rout Press
The Fruit Bar Co-Extruder
Baking
Direct-Fired Ovens, Gas Fired
Convection (Indirect) Ovens
Post Conditioning
Secondary Process
Icings

Enrobing
Sandwiched Cookies and Crackers
Biscuit Packaging

11. Unleavened Bakery Products

Introduction

Pie Crusts

General Considerations

Types of Pie Crusts

Baked Pies

Long-Flake Crust

Short-Flake Crust

Mealy Crust

Pressed Crumb Crusts

Savory Pies

Fried Pies

Causes of Faults in Pie Crusts
Strudel, Phyllo and Egg Rolls
Unleavened Cookies

12. Products Leavened Primarily With Water Vapor

Puff Pastry

Theoretical Considerations Affecting Layering

Practical Methods of Puff Pastry Production

Traditional Puff Pastry method

Automated Puff Pastry Production

Formin and Baking Puff Pastry

Trouble Shooting Puff Pastry

Crispbread

Eclair Shells, Cream Puffs, and Popovers
Cookies and Crackers
Beaten Biscuits
Puff Biscuits
Sugar Wafers

13. Air-Leavened Products

Introduction
Angel Food Cakes
General Considerations
Ingredients and Formulas
Procedures
Meringue Layer for Tortes
Foam Type Angel Food Cake

Continuous Mix Angel Food Cake
Cakes Made With Foams of Whole Eggs or Egg Yolks

Effects of Whole Eggs

Pound Cakes

Sponge Cakes

Chiffon Cakes

Cheese Cakes

Snow White California Cheese Cake

Fruit Cakes

Cookies

14. Chemically Leavened Bread and Rolls

Introduction

Chemical Leavening Systems

Effects of Air, Water Vapor, and Carbon Dioxide on
Volume

Characteristics of Chemical Leavening Systems

Function of Ingredients

Soda Breads

Buttermilk Bread

Irish Soda Bread

Irish Soda Bread

Boston Brown Bread

Chemically Leavened White Bread

Other Bread Varieties

Soda Biscuits

Scones

Muffins

Veggie Muffins

Snack Crackers

15. Chemically Leavened Sweet Goods

Composition

General Rules For Developing Formulas

Layer Cakes

Examples of Cake Formulas

Processing Chemically Leavened Sweet Goods

Trouble Shooting Cake Faults

Cup-Cakes

Cake Doughnuts

Formulation and Processing

Doughnut Trouble Shooting

Cookies

Relationship of Formula to Processing Method
Ingredients
Representative Formulas

16. Yeast-Leavened Plain Bread and Rolls

Principles of Plain Bread and Roll Production

White Bread

French Bread

White Rolls

Wheat Bread

Two Traditional Bread Processing Schemes

Straight Dough Method

Sponge-and-Dough Method

Reaction During Mixing

Dough Development
Establishing Vesicle Size
Conditioning the Dough
Temperature Rise During Mixing
Fermentation
Bulk Fermentations
Proofing
Pan Proofing
Dividing and Rounding
Bread-Molding Processes
Roll-Forming Processes
Baking
Effect of Form and Size of the Dough Piece

Cooling and Depanning
Defects of the Crust
Defects in the Crumb
Defects of Volume
Defects of Taste or Odor
Defects in Shelf-Life

17. Doughs

Introduction
Continuous Processing of White Bread and Rolls
Principles of Operation
Formulating White Bread for Continuous Plants
Making Fermentation Processes More Efficient

Three Kinds of Sponge Replacement Systems Conditioning by Mechanical or Chemical Means Systems Relying Principally on Chemical Modification

18. Breads

Sour Dough Breads

Microflora of Sour Doughs

San Francisco (Pacific Slope) Sour Dough Bread

Sour Dough French Bread

Panettone

Sal-Rising Bread

Rye and Multi-Grain Breads

Multi-Grain Breads

Rye Bread

Rye Bread Formula and Process

Other Variety Breads
Breads with Vegetable Ingredients
Breads with Dairy Ingredients
Dietetic Bakery Products
Reduced Salt
Reduced Fat
Gluten-Free
"Diabetic" or Sugar-Free
Reduced Calorie
No Cholesterol

19. Yeast-Leavened Sweet Doughs

Plain and Roll-In Sweet Doughs
Ingredients
Formulas, General

Straight Sweet Dough Formula and Procedure
Sponge Sweet Dough Formula and Procedure
Roll-in Sweet Dough Formula and Procedure
Procedures
Fruited Rolls and Stollen
Doughnuts and Other Fried Goods
General Formulas
Ingredient Specifications and Functions
Procedures
Danish Pastry
History
Experimental Studies
Ingredients and Formulas
Procedures

Examples of Pruducts
Almond Crumb Coffee Cake
Apple Filled Coffee Cakes
Yeast-Leavened Cookies
Fried Yeast-Leavened Cookie

20. Preservation of Bakery Products

Introduction
Refrigerated Dough Products
Freezing Preservation
Freezing Equipment and Methods
Freezing Doughs and Batters
Freezing Baked Products and Adjuncts

Heat Processing in Hermetically Sealed Containers
Modified Atmosphere Packaging
Chemical Preservation
Irradiation
Other Methods

21. Photographs of Machinery and Equipment

Food Mixer
Cookie Extruder
Rotary Oven
Pillow Packing Machine
180° Layout Turning Machine
Oil Spray Machine
Biscuit Sandwiching Machine

Tunnel Gas Oven

Rotary Print Biscuit Forming Machine (Soft Biscuit)

Tunnel Electric Oven

Flour Mixer

Cookies Rotary Moulder

Bun Divider Moulder

Bread Moulder

Double Trolley Bakery Oven

Cookie Dropping Machine

Planetary Mixer

Spiral Mixer

22. Raw Material Suppliers

Starch

Bakery Chemicals

Baking Enzymes
Baking Powder
Bread Improver
Cake Gel
Egg Powder
Flavouring Emulsion
Flexible Packaging
Glucose Lecithin
Plastic Crates
Milk Products
Wheat Gluten
Yeast

23. Machinery and Equipment Suppliers

See more

<http://goo.gl/l9MQ6D>

<http://goo.gl/RekgcM>

<http://goo.gl/Q9Zch0>

Visit us at :

www.entrepreneurindia.co



***Take a look at NIIR PROJECT CONSULTANCY
SERVICES on #StreetView***

<https://goo.gl/VstWkd>

Locate us on Google Maps

<https://goo.gl/maps/BKkUtq9gevT2>



Niir PROJECT CONSULTANCY SERVICES

An ISO 9001:2008 Company

Who are we?

- *One of the leading reliable names in industrial world for providing the most comprehensive technical consulting services*
- *We adopt a systematic approach to provide the strong fundamental support needed for the effective delivery of services to our Clients' in India & abroad*

What do we offer?

- *Project Identification*
- *Detailed Project Reports/Pre-feasibility Reports*
- *Market Research Reports*
- *Technology Books and Directory*
- *Databases on CD-ROM*
- *Laboratory Testing Services*
- *Turnkey Project Consultancy/Solutions*
- *Entrepreneur India (An Industrial Monthly Journal)*

How are we different ?

- *We have two decades long experience in project consultancy and market research field*
- *We empower our customers with the prerequisite know-how to take sound business decisions*
- *We help catalyze business growth by providing distinctive and profound market analysis*
- *We serve a wide array of customers , from individual entrepreneurs to Corporations and Foreign Investors*
- *We use authentic & reliable sources to ensure business precision*



Our Approach

Requirement collection

Thorough analysis of the project

Economic feasibility study of the Project

Market potential survey/research

Report Compilation

Who do we serve?

- *Public-sector Companies*
- *Corporates*
- *Government Undertakings*
- *Individual Entrepreneurs*
- *NRI's*
- *Foreign Investors*
- *Non-profit Organizations, NBFC's*
- *Educational Institutions*
- *Embassies & Consulates*
- *Consultancies*
- *Industry / trade associations*

Sectors We Cover

- *Ayurvedic And Herbal Medicines, Herbal Cosmetics*
- *Alcoholic And Non Alcoholic Beverages, Drinks*
- *Adhesives, Industrial Adhesive, Sealants, Glues, Gum & Resin*
- *Activated Carbon & Activated Charcoal*
- *Aluminium And Aluminium Extrusion Profiles & Sections,*
- *Bio-fertilizers And Biotechnology*
- *Breakfast Snacks And Cereal Food*
- *Bicycle Tyres & Tubes, Bicycle Parts, Bicycle Assembling*

- *Bamboo And Cane Based Projects*
- *Building Materials And Construction Projects*
- *Biodegradable & Bioplastic Based Projects*
- *Chemicals (Organic And Inorganic)*
- *Confectionery, Bakery/Baking And Other Food*
- *Cereal Processing*
- *Coconut And Coconut Based Products*
- *Cold Storage For Fruits & Vegetables*
- *Coal & Coal Byproduct*

- *Copper & Copper Based Projects*
- *Dairy/Milk Processing*
- *Disinfectants, Pesticides, Insecticides, Mosquito Repellents,*
- *Electrical, Electronic And Computer based Projects*
- *Essential Oils, Oils & Fats And Allied*
- *Engineering Goods*
- *Fibre Glass & Float Glass*
- *Fast Moving Consumer Goods*
- *Food, Bakery, Agro Processing*

- *Fruits & Vegetables Processing*
- *Ferro Alloys Based Projects*
- *Fertilizers & Biofertilizers*
- *Ginger & Ginger Based Projects*
- *Herbs And Medicinal Cultivation And Jatropha (Biofuel)*
- *Hotel & Hospitality Projects*
- *Hospital Based Projects*
- *Herbal Based Projects*
- *Inks, Stationery And Export Industries*

- *Infrastructure Projects*
- *Jute & Jute Based Products*
- *Leather And Leather Based Projects*
- *Leisure & Entertainment Based Projects*
- *Livestock Farming Of Birds & Animals*
- *Minerals And Minerals*
- *Maize Processing(Wet Milling) & Maize Based Projects*
- *Medical Plastics, Disposables Plastic Syringe, Blood Bags*
- *Organic Farming, Neem Products Etc.*

- *Paints, Pigments, Varnish & Lacquer*
- *Paper And Paper Board, Paper Recycling Projects*
- *Printing Inks*
- *Packaging Based Projects*
- *Perfumes, Cosmetics And Flavours*
- *Power Generation Based Projects & Renewable Energy Based Projects*
- *Pharmaceuticals And Drugs*
- *Plantations, Farming And Cultivations*
- *Plastic Film, Plastic Waste And Plastic Compounds*
- *Plastic, PVC, PET, HDPE, LDPE Etc.*

- *Potato And Potato Based Projects*
- *Printing And Packaging*
- *Real Estate, Leisure And Hospitality*
- *Rubber And Rubber Products*
- *Soaps And Detergents*
- *Stationary Products*
- *Spices And Snacks Food*
- *Steel & Steel Products*
- *Textile Auxiliary And Chemicals*

- *Township & Residential Complex*
- *Textiles And Readymade Garments*
- *Waste Management & Recycling*
- *Wood & Wood Products*
- *Water Industry(Packaged Drinking Water & Mineral Water)*
- *Wire & Cable*

Niir Project Consultancy Services

106-E, Kamla Nagar, New Delhi-110007, India.

Email: npcs.india@gmail.com , info@niir.org

Tel: +91-11-23843955, 23845654, 23845886

Mobile: +91-9811043595

Fax: +91-11-23841561

Website :

www.niir.org

www.entrepreneurindia.co

Take a look at NIIR PROJECT CONSULTANCY SERVICES on #StreetView

<https://goo.gl/VstWkd>



➤ <https://www.linkedin.com/company/niir-project-consultancy-services>



➤ <https://www.facebook.com/NIIR.ORG>



➤ <https://www.youtube.com/user/NIIRproject>



➤ <https://plus.google.com/+EntrepreneurIndiaNewDelhi>



➤ https://twitter.com/npcs_in



➤ <https://www.pinterest.com/npcsindia/>



THANK YOU!!!

For more information, visit us at:

www.niir.org

www.entrepreneurindia.co