

Manufacture of Food & Beverages with Project Profiles (3rd Edn.)

Author: P.K. Tripathi

Format: Hardcover

ISBN: 9788195577583

Code: NI14

Pages: 227

Price: Rs. 2,295.00 US\$ 200.00

Publisher: NIIR PROJECT CONSULTANCY SERVICES

Usually ships within 5 days

Manufacture of Food & Beverages with Project Profiles

(Food Processing, Beverages, Potato Powder, Herbal Health Drink, Carbonated Health Drinks, Chocolate, Candy, Toffee, Microbrewery, Functional Food Based Bakery Products (Modern Bakery Unit), Rice Beer, Craft Beer, Lemon-Lime Flavoured Soft Drink (Nimbu Pani) and Fruit Juice (Apple, Plum and Peach))

The Food and Beverage industry in India has been growing at a fast pace, with an annual growth rate of 10%. The food and beverage industry is an essential sector of any nation's economy, since it offers basic needs for survival. The industry provides employment to thousands of people across all levels; from suppliers to people in distribution, manufacturing, sales and marketing. Every country has its own market dynamics that contribute to a specific food culture as well as its own specialty products. In general terms, there are two ways: one method involves processing raw materials into packaged foods which can be sold at supermarkets or grocery stores; another method involves cooking meals or drinks at restaurants or bars. Some companies focus on only one aspect of production while others handle both aspects. Regardless of what method is used, it's important to keep in mind that these products need to be transported from their place of origin (i.e., farms) all over a country and eventually reach consumers' homes. This process is called distribution. Distribution channels vary greatly by region but usually include wholesale suppliers, retailers (grocery stores), wholesalers and local distributors who sell directly to customers through restaurants or small shops. The industry also includes packaging manufacturers, advertising agencies and event planners for food festivals like Taste of Chicago.

The money-making opportunities are very huge because most Indians eat three times a day. Snacks have become an important part of our daily life, some people have them at breakfast while others prefer to have their favourite snack during lunch or dinner time. Some of these companies provide all kinds of food products like readymade meals, vegetables, fruits, bakery products etc. There are various kinds of snacks available for various tastes like salty snacks for those who love salty foods; sweet ones for those who love sweets; spicy ones for those who love spicy foods; crunchy ones for those who love crunchy foods; soft drinks for children and adults alike; fruit juices which can be prepared from fresh fruits or by adding water to powder concentrates. These companies also supply dairy products like milk, cheese, butter, paneer (cottage cheese), curd (yoghurt) etc. These days many fast food chains are coming up in big cities where you can get your favourite fast food on your doorstep within minutes after placing your order over phone or internet. Many of these companies sell frozen foods too. Frozen food items include ice creams, kulfi (Indian ice cream), rasgullas (sweet dumplings made with cottage cheese), samosas, vadas etc. In addition to that there are large number of beverage companies which make carbonated and non-carbonated drinks like aerated water, juice drinks, squashes, lemonades etc. For example Coca Cola has more than 200 brands worldwide including Thums Up in India; Pepsi has Slice and Mirinda in India; Cadbury Schweppes sells Fanta and

Sprite in India. All these beverage companies manufacture carbonated as well as non-carbonated drinks but they do not manufacture any alcoholic beverages.

The market is growing at a CAGR of 9.5%. The rise in CAGR is attributable to this market's demand and growth returning to pre-pandemic levels and even exceeding once the pandemic is over. Functional foods and beverages are enriched with functional nutrients, in addition to the basic nutritional value of the product, to provide multiple health-related benefits. These nutrients include amino acids, vitamins, minerals, proteins, fatty acids, and prebiotics. Functional products have gained importance in recent years due to the increased awareness among consumers.

Rising Spending on Healthy & Nutritious Diet Products to Fuel Market Growth The functional food and beverage market trends are driven by the rising demand for healthy and nutrition-rich diets. Evolving lifestyles and increasing incomes of consumers across the world have fueled the demand for products with superior nutritional profiles. Functional beverages, for instance, are designed to be consumed on-the-go, providing enhanced nutrition. Increasing product development and innovation activities, the availability of a wide variety of products, especially across e-commerce platforms, and the adoption of unique promotional strategies by market players are collectively furthering the growth of this market.

The market segments for functional foods and drinks, based on type, include functional dairy products as the leading product type. Increased consumer inclination towards aiding digestive health has contributed to raising the demand for prebiotics and probiotics dairy products. The higher affordability of functional dairy products such as yogurt is further boosting its demand across developing economies where per capita income and spending on health food products are comparatively lower. The cereal and grain segment is another important segment that is generating the highest revenue after functional dairy products. The fortification of cereals & grains is one of the most effective methods to tackle nutrient deficiencies. Governments and regulatory authorities across the world have been taking initiatives to address the growing concern of nutrient deficiencies among populations with fortified foods. The addition of iodine in salt, vitamin D in milk, and vitamin B and iron in flour and bread are some of the examples of food fortification.

The book covers a wide range of topics connected to Food Industry, Potato Powder, Herbal Health Drink, Carbonated Health Drinks, Chocolate, Candy And Toffee, Microbrewery, Functional Food Based Bakery Products (Modern Bakery Unit), Rice Beer With Can & Bottle Packaging, Craft Beer, Lemon-Lime Flavoured Soft Drink (Nimbu Pani), Fruit Juice (Apple, Plum And Peach), as well as their manufacturing processes and plant economics.

A thorough guide on Food and Beverage manufacture and entrepreneurship. This book is a one-stop shop for everything you need to know about the Food and Beverage Industry, which is ripe with opportunity for producers, merchants, and entrepreneurs. This is the only book that covers the process of making commercial Food and Beverage. From concept through equipment procurement, it is a veritable feast of how-to information.

Contents

CONTENTS

- 1. INTRODUCTION 1**
 - 1.1. HISTORY**
 - 1.2. F&B INDUSTRY IN INDIA**
 - 1.3. OTHER SECTORS IN THE F&B INDUSTRY**
 - 1.4. GROWTH OF FOOD AND BEVERAGE INDUSTRY**
 - 1.5. DEMAND OF FOOD AND BEVERAGE INDUSTRY**

- 1.6. PROFIT IN FOOD AND BEVERAGE INDUSTRY
- 1.7. BUSINESS PROFIT IN THE FOOD AND BEVERAGE INDUSTRY IN INDIA
- 1.8. FUTURE OF FOOD AND BEVERAGE INDUSTRY IN INDIA
2. HOW TO START FOOD BUSINESS 9
 - 2.1. DECIDE THE BUSINESS STRUCTURE
 - 2.2. RESEARCH THE MARKET WELL
 - 2.3. GET FSSAI LICENSE/REGISTRATION
 - 2.4. APPLY FOR THE TRADEMARK
 - 2.5. VERIFY NUTRITION CHART
 - 2.6. LOCATION OF THE ORGANIZATION
3. FOOD PROCESSING INDUSTRY 12
 - 3.1. PRODUCTION
 - 3.2. METHODS
 - 3.3. REASONS AND CONSEQUENCES
 - 3.4. HOW DOES PROCESSED FOOD FIT INTO A HEALTHY DIET?
4. HOW TO START BEVERAGES INDUSTRY 16
 - 4.1. HOW TO START BEVERAGES INDUSTRY
 - 4.2. DIFFERENT TYPES OF SOFT DRINKS
 - 4.3. CONDUCT MARKET RESEARCH
 - 4.4. ANALYSIS OF RECIPES
 - 4.5. KEEP CHANGING
 - 4.6. REGISTRATION OF THE COMPANY
 - 4.7. CERTIFICATES AND LICENSES
 - 4.8. PROMOTE DRINKS BUSINESS
 - 4.9. INFRASTRUCTURE AND THE LOCATION
 - 4.10. EQUIPMENT AND RAW MATERIALS
 - 4.11. PROCESSING AND PACKAGING
 - 4.12. MERCHANDISING
5. BEVERAGES INDUSTRY 20
 - 5.1. PRODUCTION OF BEVERAGE INDUSTRY
 - 5.2. TYPES OF BEVERAGE
 - 5.3. BEVERAGE PROCESSING STEPS
 - 5.4. SELECTING A CLARIFYING OR PREFILTER
 - 5.4.1. Final Filtration Processing Steps
 - 5.4.2. Process Monitoring Processing Steps
 - 5.4.3. Tank Venting Processing Steps
 - 5.4.4. Gas Filtration Processing Steps
 - 5.4.5. Housings Processing Steps
 - 5.4.6. Integrity Testing Processing Steps
 - 5.4.7. Diffusion Test Processing Steps
 - 5.4.8. Pressure Hold Testing
6. POTATO POWDER 31
 - 6.1. INTRODUCTION
 - 6.2. PROPERTIES
 - 6.2.1. Physical Properties
 - 6.2.2. Chemical Properties
 - 6.2.3. Microbiological Properties
 - 6.3. USES
 - 6.4. BENEFITS OF POTATO POWDER
 - 6.5. B.I.S. SPECIFICATIONS
 - 6.6. NUTRITION VALUE OF POTATO POWDER
 - 6.7. DESCRIPTION OF RAW MATERIALS
 - 6.7.1. Properties of Raw Material

6.8. MANUFACTURING PROCESS	
6.8.1. Basic Raw Material Required	
6.8.2. Packing and Marking	
6.9. PROCESS FLOW DIAGRAM	
6.10. PLANT ECONOMICS	
7. HERBAL HEALTH DRINK 44	
7.1. INTRODUCTION	
7.2. BENEFITS OF HERBAL HEALTH DRINK	
7.3. B.I.S. SPECIFICATIONS	
7.4. LIST OF PLANT AND MACHINERY	
7.5. FORMULATIONS	
7.6. MANUFACTURING PROCESS	
7.7. PROCESS FLOW DIAGRAM	
7.8. PLANT ECONOMICS	
8. CARBONATED HEALTH DRINKS 52	
8.1. INTRODUCTION	
8.2. CARBONATED SOFT DRINKS	
8.3. B.I.S SPECIFICATIONS	
8.4. ADDITIONAL LABEL INFORMATION	
8.5. BENEFITS	
8.6. MANUFACTURING PROCESS	
8.7. PROCESS FLOW DIAGRAM	
8.8. PLANT ECONOMICS	
9. CHOCOLATE, CANDY AND TOFFEE 61	
9.1. INTRODUCTION	
9.2. COMPOSITION OF PRODUCTS	
9.2.1. Chocolate	
9.2.2. Candy	
9.2.3. Toffee	
9.3. TYPES OF PRODUCT	
9.3.1. Chocolate	
9.3.2. Candy and Toffee	
9.4. USES OF PRODUCTS	
9.5. HEALTH BENEFIT OF PRODUCTS	
9.5.1. Chocolates	
9.5.2. Candy & Toffee	
9.6. B.I.S. SPECIFICATIONS	
9.7. NUTRITIONAL PROPERTIES OF CHOCOLATES PRODUCTS	
9.7.1. White Chocolate	
9.7.2. Dark Chocolate	
9.8. FORMULATIONS	
9.8.1. Milk Chocolates	
9.8.2. Coating Chocolate	
9.8.3. Couverture Chocolate	
9.8.4. Dark Chocolates	
9.8.5. Dark Chocolates	
9.8.6. Milk Chocolate	
9.8.7. English Milk Chocolate	
9.8.8. Chocolate Toffee	
9.8.9. Chocolate Annex Caramels	
9.9. CHOCOLATE MANUFACTURING PROCESS	
9.9.1. List of Machine	
9.9.2. Chocolate Products	

9.9.3. Packaging	
9.10. PROCESS FLOW DIAGRAM	
9.11. TOFFEE MANUFACTURING PROCESS	
9.11.1. List of Machinery	
9.11.2. Process	
9.12. PROCESS FLOW DIAGRAM	
9.13. CANDY MANUFACTURING PROCESS	
9.13.1. List of Machinery	
9.13.2. Process	
9.14. PROCESS FLOW DIAGRAM	
9.15. PLANT ECONOMICS	
10. MICROBREWERY 86	
10.1. INTRODUCTION	
10.2. MICROBREWERY	
10.2.1. Nanobrewery	
10.2.2. Farm Brewery	
10.2.3. Craft Brewery	
10.3. RAW MATERIAL DETAILS	
10.4. MANUFACTURING PROCESS	
10.5. PROCESS FLOW DIAGRAM	
10.6. PLANT ECONOMICS	
11. FUNCTIONAL FOOD BASED BAKERY PRODUCTS (MODERN BAKERY UNIT) 100	
11.1. INTRODUCTION	
11.1.1. Biscuit	
11.1.2. Cookies	
11.1.3. Bread	
11.2. PROPERTIES	
11.3. USES	
11.4. TYPES OF BISCUITS & COOKIES	
11.5. B.I.S. SPECIFICATIONS	
11.6. RAW MATERIAL DETAILS	
11.6.1. Flour	
11.6.2. Functional Food	
11.6.3. Functional Flour	
11.6.4. Leavening	
11.7. MANUFACTURING PROCESS DETAILS	
11.7.1. General Process of Bread	
11.7.2. White Bread	
11.7.3. Multigrain Bread	
11.7.4. Process Flow Diagram of Bread	
11.7.5. General Process of Biscuits	
11.7.6. Process Flow Diagram of Biscuits	
11.7.7. Process of Cream Biscuits	
11.7.8. Process Flow Diagram of Cream Biscuits	
11.7.9. Biscuits from Soy Flour and Rice Bran	
11.7.10. Process Flow Diagram of Biscuits from Soy Flour and Rice Bran	
11.7.11. Chocolate Chips Cookies	
11.7.12. Process Flow Diagram of Chocolate Chips Cookies	
11.7.13. Oatmeal Raisin Cookies	
11.7.14. Process Description	
11.7.15. Process Flow Diagram of Oatmeal Raisin Cookies	
11.8. PRESERVATIVES AND STORAGE	
11.8.1. Leavening Agents	

- 11.8.2. Fully Saturated Mono and Diglycerides
- 11.8.3. Whey-Based Ingredients
- 11.9. COOKIE STORAGE
- 11.10. PLANT ECONOMICS
- 12. RICE BEER WITH CAN & BOTTLE PACKAGING 131
- 12.1. INTRODUCTION
- 12.2. PROPERTIES OF THE RICE BEERS
 - 12.2.1. Physicochemical Properties
 - 12.2.2. Volatile Compounds in the Rice Beers
- 12.3. B.I.S. STANDARDS
- 12.4. TYPES OF RICE BEER
- 12.5. TOP 10 BEER BRANDS IN INDIA
- 12.6. RAW MATERIAL
- 12.7. MANUFACTURING PROCESS
 - 12.7.1. Lautering
 - 12.7.2. Fermentation
 - 12.7.3. Maturation
 - 12.7.4. Filtration
 - 12.7.5. Packaging, Storage and Distribution
- 12.8. UTILITIES IN A BREWERY
- 12.9. REFRIGERATION TECHNOLOGY
- 12.10. PROCESS CONTROL SYSTEM FOR THE BREWING PROCESS
- 12.11. PROCESS FLOW DIAGRAM
- 12.12. HAZARD ANALYSIS CRITICAL CONTROL POINTS (HACCP)
- 12.13. FERMENTER & FERMENTATION EQUIPMENT-BEER EQUIPMENT
- 12.14. PLANT ECONOMICS
- 13. CRAFT BEER 156
- 13.1. INTRODUCTION
- 13.2. MICROBREWERY
- 13.3. CRAFT BREWERY
- 13.4. HEALTH BENEFITS ASSOCIATED WITH MODERATE CONSUMPTION OF BEER
- 13.5. CHARACTERISTICS
- 13.6. APPEARANCE
- 13.7. AROMA
- 13.8. FLAVOR AND MOUTHFEEL
- 13.9. ALCOHOL CONTENT
- 13.10. B.I.S. SPECIFICATIONS
- 13.11. RAW MATERIAL DETAILS
- 13.12. TYPES OF HOPS
- 13.13. MANUFACTURING PROCESS
- 13.14. PROCESS FLOW DIAGRAM
- 13.15. LICENSES REQUIRED FOR OPENING A MICROBREWERY IN INDIA
- 13.16. FORMALITIES FOR SETTING UP BEER INDUSTRY
 - 13.16.1. Technical Requirements
 - 13.16.2. Existing Machines:
 - 13.16.3. Licence
- 13.17. PLANT ECONOMICS
- 14. LEMON-LIME FLAVOURED SOFT DRINK (NIMBU PANI) 173
- 14.1. INTRODUCTION
- 14.2. BENEFITS OF SOFT DRINKS
- 14.3. RAW MATERIALS
- 14.4. RAW MATERIAL PROPERTY AS PER STANDARDS
 - 14.4.1. IS 10500: Drinking Water

- 14.4.2. Sugar
- 14.4.3. Acidity Regulator IN 330
- 14.4.4. Stabilizer (445)
- 14.4.5. Preservative (E Number 202)
- 14.5. MANUFACTURING PROCESS
- 14.6. QUALITY CONTROL
- 14.7. PROCESS FLOW DIAGRAM
- 14.8. MACHINERY DETAILS
 - 14.8.1. Bottle Preparation Equipment
 - 14.8.2. Mixing Equipment
 - 14.8.3. Filling Machinery
 - 14.8.4. Conveyor System
- 14.9. PLANT ECONOMICS
- 15. FRUIT JUICE (APPLE, PLUM AND PEACH) 184
- 15.1. INTRODUCTION
- 15.2. HEALTH BENEFITS OF FRUITS
 - 15.2.1. Apple
 - 15.2.2. Health Benefits of Apple
 - 15.2.3. Peach
 - 15.2.4. Health Benefits of Peaches
 - 15.2.5. Plums
 - 15.2.6. Health Benefits of Plums
- 15.3. B.I.S. SPECIFICATION
- 15.4. MANUFACTURING PROCESS
 - 15.4.1. Acceptance of Raw Material
 - 15.4.2. Fruit Pulp Preparation and Processing
- 15.5. OTHER ENZYMES IN JUICE PRODUCTION
- 15.6. PROCESS FLOW DIAGRAM
- 15.7. COLD-PRESSED JUICE PROCESS
- 15.8. HIGH PRESSURE PROCESSING
- 15.9. ASEPTIC PACKAGING FOR FRUIT JUICE
- 15.10. PACKAGING TECHNOLOGY IN FRUIT JUICE INDUSTRY
 - 15.10.1. Aseptic Packaging
 - 15.10.2. Tetra Packaging
 - 15.10.3. Layers of Aseptic Carton Package
 - 15.10.4. PET Bottle Packaging
- 15.11. SPOUT PACKAGING
 - 15.11.1. Canning Packaging
- 15.12. FOOD SAFETY REQUIREMENTS & STANDARD REQUIRED FOR CONSTRUCTING FRUIT PROCESSING UNIT
- 15.13. WASTE COLLECTION & MANAGEMENT PROCEDURES
 - 15.13.1. Major Waste Generating Activities
 - 15.13.2. Waste Management Practices
 - 15.13.3. Zero Emissions Systems Concepts
- 15.14. POLLUTION PREVENTION AND CONTROL
- 15.15. PLANT ECONOMICS

About NIIR

NIIR PROJECT CONSULTANCY SERVICES (NPCS) is a reliable name in the industrial world for offering integrated technical consultancy services. NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.

Our various services are: Detailed Project Report, Business Plan for Manufacturing Plant, Start-up Ideas, Business Ideas for Entrepreneurs, Start up Business Opportunities, entrepreneurship projects, Successful Business Plan, Industry Trends, Market Research, Manufacturing Process, Machinery, Raw Materials, project report, Cost and Revenue, Pre-feasibility study for Profitable Manufacturing Business, Project Identification, Project Feasibility and Market Study, Identification of Profitable Industrial Project Opportunities, Business Opportunities, Investment Opportunities for Most Profitable Business in India, Manufacturing Business Ideas, Preparation of Project Profile, Pre-Investment and Pre-Feasibility Study, Market Research Study, Preparation of Techno-Economic Feasibility Report, Identification and Section of Plant, Process, Equipment, General Guidance, Startup Help, Technical and Commercial Counseling for setting up new industrial project and Most Profitable Small Scale Business.

NPCS also publishes various process technology, technical, reference, self employment and startup books, directory, business and industry database, bankable detailed project report, market research report on various industries, small scale industry and profit making business. Besides being used by manufacturers, industrialists and entrepreneurs, our publications are also used by professionals including project engineers, information services bureau, consultants and project consultancy firms as one of the input in their research.

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.

NIIR PROJECT CONSULTANCY SERVICES , 106-E, Kamla Nagar, New Delhi-110007, India. **Email:** npcs.india@gmail.com **Website:** NIIR.org

Wed, 20 Mar 2024 15:07:55 +0530