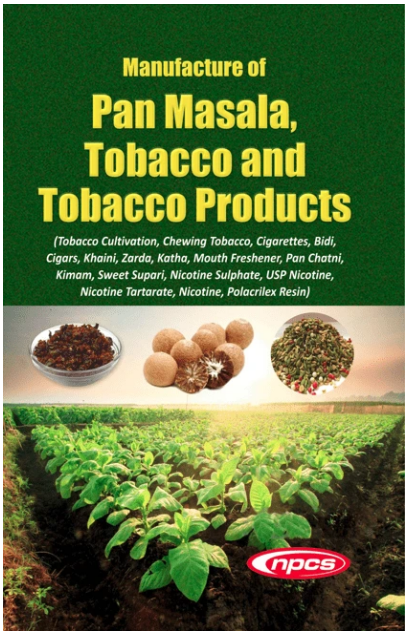
Entrepreneur India

106-E, Kamla Nagar, New Delhi-110007, India.
Tel: 91-11-23843955, +91 9097075054
Mobile: +91-9097075054
Email: npcs.ei@gmail.com, info@entrepreneurindia.co
Website: www.entrepreneurIndia.co



Manufacture of Pan Masala, Tobacco and Tobacco Products. 2nd Revised Edition

Code	NI317
Format	paperback
Indian Price	₹2225
US Price	$200
Pages	448
ISBN	9788194737971

Publisher	NIIR PROJECT CONSULTANCY SERVICES

Description

Manufacture of
Pan Masala, Tobacco and Tobacco Products
(Tobacco Cultivation, Chewing Tobacco, Cigarettes, Bidi, Cigars, Khaini, Zarda, Katha, Mouth Freshener, Pan Chatni, Kimam, Sweet Supari, Nicotine Sulphate, USP Nicotine, Nicotine Tartarate, Nicotine, Polacrilex Resin)

Tobacco comes from a leafy plant that tends to grow in warm tropical areas. It is famously grown all over the Caribbean, where the warm, sunny conditions make for a perfect growing climate. Tobacco is usually smoked as a nicotinic stimulant and is mostly processed, rolled and dried before being smoked. Different geographies produce different types of the plant. The taste and flavor of the leaves are the characteristic trademarks of different types. The process of curing also determines the type of tobacco.
Tobacco products include cigarettes, cigars, loose pipe tobacco, chewing tobacco and snuff. These products contain the dried, processed leaves of the tobacco plant nicotiana rustica or nicotiana tabacum. All tobacco contains nicotine, an addictive drug. Today’s tobacco also contains thousands of other chemicals designed to make the products more user-friendly and addictive.
Nicotine is a nitrogen-based compound which dissolves in organic compounds. Tobacco leaves contain plenty of nicotine which evaporates on burning. This nitrogen-based compound is addictive in low amounts and toxic in high doses. Nicotine Sulfate is a potent pesticide, known for its high toxicity.
A large proportion of Indian economy is agro based in which Tobacco is one of the principal cash crops. The tobacco production and its allied products’ sales in the country have played a prominent role in the development of nation’s economy. India is the largest tobacco market in the world in terms of tobacco consumption. The smokeless tobacco has historically been served as a tradition in India for many decades.
Tobacco Waste or dust is generated at various stages of post-harvest processing of tobacco and also while manufacturing various tobacco products mainly during manufacture of tobacco products like cigarette and Beedi. The types of wastes generated during pre and post-harvest practice of tobacco include suckers, stems, mid ribs, leaf waste and dust.
The main contents of the book are Tobacco Cultivation, Tobacco Diseases and Pests, Organic Tobacco Production, Chewing Tobacco, Cigarettes, Bidi, Cigars, Readymade

Khaini, Chewing Tobacco (Khaini), Zarda, BIS Specifications, Katha, Mouth Fresheners, Pan Chutney, Pan Masala, Kimam, Tobacco of Various Grade, Sweet Supari, Nicotine Sulphate, USP Nicotine, Nicotine Tartarate, Nicotine Polacrilex Resin, Smokeless Tobacco (SLT), Hookah, Tobacco Products Manufacturing Processes, E-Liquid (Main Chemicals, Compounds, Components), Additives in Tobacco Products, Additives Products, Packaging & Labeling (Design Trends & Technologies), Plastics in Food Packaging, Packaging Laws and Regulations and Photographs of Machinery with Supplier's Contact Details.

This book is one-stop guide to one of the fastest growing sector of the Pan Masala, Tobacco and Tobacco Products, where opportunities abound for manufacturers, retailers, and entrepreneurs. This is the only complete handbook on Pan Masala, Tobacco and Tobacco Products. It serves up a feast of how-to information, from concept to purchasing equipment.

Content

1. INTRODUCTION
History of Tobacco
Varieties of Tobacco
Origin and Distribution
Area and Production
Types of Tobacco
Climate and Soil
Tobacco Growing
Nursery Management
Tillage
Topping
Desuckering or Suckering
Ecological Requirement for Tobacco Cultivation
(A) Climatic Requirement for Tobacco Cultivation
(B) Soil Requirement for Tobacco Cultivation
Harvesting of Tobacco
Favoring Leaf Growth
After the Harvest
Curing Tobacco Leaves
Air-cured Tobacco Leaves
Flue-cured Tobacco Leaves
Sun-cured Tobacco Leaves
Fermenting (A.K.A. Sweating) Tobacco Leaves
Stacking

Kiln Fermenting
Methods of Harvesting
Priming
Stalk Cut Method
Harvesting Method of Tobacco Based on Different Types
Plant Protection
1. Pests
Tobacco Leaf-Eating Caterpillar
Controls
2. Stem Borers
Control
3. Aphids
Control
2. TOBACCO CULTIVATION
Soils
Climate
Preparing the Seedbeds
Sowing the Seeds
Crop Cultivation
Transplanting
Fertilize
Irrigate
Topping and Suckering
Worms and Suckers
Tobacco Growing
Varieties of Tobacco Growing in Different States
FCV Tobacco (A.P.)
HDBRG Tobacco
Burley Tobacco
Natu Tobacco
Lanka Tobacco
Bidi Tobacco
Chewing and Hookah Types of Tobacco
Wrapper, Filler, Jati & Motihari Tobacco in North Bengal
Types of Soil Required for Tobacco Cultivation
Northern Black Soils (NBS)
Central Black Soils (CBS)
Southern Black Soils (SBS)
Southern Light Soils (SLS)

Northern Light Soils (NLS)
Karnataka
Karnataka Light Soils (KLS)
Ecological Requirement for Tobacco Cultivation
(A) Climatic Requirement for Tobacco Cultivation
(B) Soil Requirement for Tobacco Cultivation
Factors Affecting Tobacco Growth
Temperature
Rain
Evaporation
Humidity
Sunshine
Wind
Types of Tobacco
Beedi Tobacco
FCV Tobacco
Burley Tobacco
Hookah Tobacco
Natu Tobacco
Cigar Tobacco
Forms of Tobacco
(1) Flue-cured
(2) Fire-cured
(3) Maryland Air-cured
(4) Dark Air-cured
(5) Cigar Types: Filler, Binder And Wrapper
(6) Perique
Process of Tobacco
The Harvest
The Corojo Harvest
The Criollo Harvest
Air-Drying
The First Fermentation
DE-Ribbing and Sorting
The Second Fermentation
Storage
The Preparation of the Tobacco
Alternative Uses of Tobacco
Integrated Barn
Banana Fibre Extractor
Palmyrah Fibre Seperator

3. TOBACCO DISEASES AND PESTS
Bacterial Diseases
Fungal Diseases
Nematodes, Parasitic
Viral and Phytoplasma Diseases
Miscellaneous Diseases and Disorders
Granville Wilt (Ralstonia Solanacearum)
Symptoms
Cause
Comments
Management
Symptoms
Cause
Comments
Management
Blue Mold (Peronospora Tabacina)
List of Symptoms/Signs
Symptoms
Leaves
Stems
Cause
Comments
Management
1. Resistant Cultivars
2. Cultural Methods
(a) Chemical Control
(b) Induced Resistance
3. Collar Rot (Sclerotinia Sclerotiorum)
Symptoms
Factors that Affect the Development of Collar Rot
Cause and Disease Development
Management
Fungicides
Control Recommendation
Cultural Practices
Frogeye Leaf Spot (Cercospora Nicotianae)
Cause
Comments
Symptoms
Favorable Conditions
Disease Cycle

Management
Chemical Methods
Loopers (Cabbage Looper, Alfalfa Looper)
Trichoplusia ni Autographa Californica
Symptoms
Cause
Comments
Management
4. ORGANIC TOBACCO PRODUCTION
Introduction
Tobacco Culture
Transplant Production
Pests and Diseases in Seedling Beds
Field Growing
Harvesting
Curing
5. CHEWING TOBACCO
Chewing Tobacco and Other Forms of Smokeless Tobacco
6. CIGARETTES
Raw Materials
Main Steps in the Manufacturing Process of Cigarettes
Growing and Harvesting
Curing the Leaf
First Processing
Preparation of Basic Blends and Making of Cigarettes
Adding of Humectants, Flavors and Flavourings
Packaging
7. BIDI
Birth of Bidi and the Industry
The Bidi Industry
Flavored and Herbal Bidis
Growth of the Tobacco Industry in India
Characteristics of the Bidi Industry
Women, Families, and the Bidi Industry
Tendu Leaves Drying in Sun for Beedi Cigarettes
Major Features of the Beedi Industry
Process of Work in Bidi Manufactory
Role of Women in the Bidi Industry

Methods of Production
Production Process: A Detailed Description
Interesting Bidi Facts
Marketing Channels of Cigarettes and Bidi
8. CIGARS
Lighting
Flavour
Smoke
Raw Materials
The Manufacturing Process
Cultivation of Tobacco
Curing
Fermenting
Stripping
Hand Rolling
Machine Rolling
The Production of Cigars
The Escaparate
Color Determination and Attachment of Cigar
Bands
9. READYMADE KHAINI
Introduction
Uses & Application
Manufacturing Process
Chemical Composition of the Fermented Chewing
Tabacco
Process Flow Diagram
10. CHEWING TOBACCO (KHAINI)
Introduction
Uses & Application
Process of Manufacture
Curing
Chemical Composition of the for Mented Chewing
Tabacco
Fermentation
Flow Sheet Diagram for Chewing Tobacco
11. ZARDA
Introduction
Chemical Composition of Smokeless Tobacco
Different Formulation of Zarda
Baba Zarda

Tulsi Zarda
Gopal Zarda
Bhola Zarda
Perfume & Tobacco Formulation for Zarda
Essence of Tobacco
Formula – A
Perfume formulation for No. 300 Type Zarda
Formula – B
No. 300 Types Zarda
Manufacturing Process of Zarda
Basic Raw Materials Required
Formulation
Process
Quality Control
Process Flow Diagram
12. BIS SPECIFICATIONS
13. KATHA
Introduction
Uses
Process of Manufacture
Process Flow Sheet for Katha & Cutch
14. MOUTH FRESHENERS
Properties
Uses and Applications
Manufacturing Process
Sweet Scented Supari
Process
Scented Sweet Chikni Supari
Process
Process Description
Formulation of Scented Supari
For Scented Coloured Supari
Process Flow Diagram
15. PAN CHUTNEY
Introduction
Formulations of Pan Chutney
Ingredients
Manufacturing Process
Preparation of Pan Chutney
Process Flow Diagram
16. PAN MASALA

Introduction
Uses & Applications
Manufacturing Process
Process Details
Making of Lime and Katha Solution
Katha Solution
Formulation for Pan Masala Tobacco Gutka
Flow Diagram
17. KIMAM TOBACCO OF VARIOUS GRADE
Introduction
Preparation of Kimam
Composition of Raw Material
18. SWEET SUPARI
Introduction
Uses and Applications
Manufacturing Process
Formulation of Scented Supari
Process Flow Diagram
19. NICOTINE SULPHATE
Manufacturing Process
Flow Diagram
Material Balance of Nicotine Sulphate
20. USP NICOTINE
Introduction
Manufacturing Process
Flow Diagram of the Product USP Nicotine
Mass Balance for USP Nicotine
21. NICOTINE TARTARATE
Manufacturing Process
Flow diagram of the product Nicotine Tartarate
Material Balance of Nicotine Tartarate
22. NICOTINE POLACRILEX RESIN
Introduction
Pharmacology
Pharmacokinetics
Manufacturing Process
Flow Diagram of the Product Nicotine Polacrilex
Resin
Material Balance of Nicotine Polacrilex Resin
23. SMOKELESS TOBACCO (SLT)
The Smokeless Industry

Chemical Composition of Smokeless Tobacco
Nicotine Content in Smokeless Tobacco
Carcinogenic Compounds in Smokeless Tobacco
(a) Volatile N-nitrosamines
(b) PAHs
(c) Other Carcinogenic Compounds and Constituents
Types of Smokeless Tobacco
Snuff
Snus
Dissolvable Tobacco
Pattiwala
Gutka
Dry Snuff (Tapkeer)
Uses of Smokeless Tobacco
(a) Betel Quid with Tobacco
(b) Chimó
(c) Creamy snuff
(d) Dry Snuff
(e) Gudhaku
(f) Gul
(g) Gutka
(h) Iq’mik
(i) Khaini
(j) Khiwam
(k) Loose-leaf
(l) Maras
(m) Mawa
(n) Mishri
(o) Moist Snuff
(p) Naswar
(q) Plug Chewing Tobacco
(r) Red Tooth Powder
(s) Shammah
(t) Snuff
(u) Tobacco Chewing Gum
(v) Tobacco Tablets
(w) Toombak
(x) Tuibur
(y) Twist/Roll Chewing Tobacco
(z) Zarda

Nasal Use
(a) Dry Snuff
(b) Liquid Snuff
24. HOOKAH
How Hookah Tobacco is Manufactured
Which Hookah Coals are Best for Pipes?
How to Set up a Hookah
Hookahs are Built by Combining Multiple Parts
Hookahs Today
Components
The Bowl
Windscreen (Optional)
Hose
Body and Gaskets
Purge Valve (Optional)
Plate
Grommets
Operation
What is a Water Bong? How does a Water Bong Work?
What’s a Smoking Pipe? How does a Pipe Work?
How to Use a Hookah Shisha Pipe
Preparing Your Pipe
Preparing the Molasses
Lighting the Charcoal
Final Preparation
Further Tips
Foil and Air Holes
Heat Transfer to Your Pipe
Storing Your Shisha Molasses
Charcoal
Dehydration
Hookah Flavors of All Time
1. Al Fakher Mint
2. Tangiers Noir Cane Mint
3. Starbuzz Blue Mist
4. Nakhla Double Apple
5. Al Fakher Double Apple
6. Starbuzz Pirates Cave
7. Social Smoke Absolute Zero
8. Fumari White Gummi Bear

25. TOBACCO PRODUCTS MANUFACTURING PROCESSES
Primary Tobacco Processing
Expanded Tobacco Process
Flavor Making
Reconstituted Tobacco Manufacturing
26. E-LIQUID (MAIN CHEMICALS, COMPOUNDS, COMPONENTS)
Main Components
Propylene Glycol (PG) Vegetable Glycerine (VG)
Polyethylene Glycol (PEG)
Propylene Glycol is
Vegetable Glycerin also known as Glycerol - is
Pharmaceutical Grade Glycerine is Named
Glycerine, USP
Composition
Main Components
Main Chemicals, Compounds, Components
Propylene (PG)
Vegetable Glycerin (VG)
Nicotine
Chemistry’s Role
27. ADDITIVES IN TOBACCO PRODUCTS
Reasons for Adding Additives to Cigarettes
GRAS and FEMA Approval of Tobacco Additives
Carob Bean Extract
Function of the Additive
Amount of Carob Bean Extract Added to Cigarettes
Pyrolysis and Reaction Products in Cigarette Smoke
Cellulose Fibre
Function of the Additive
Amount of Cellulose Fibre
Guar Gum
Function of the Additive
Amount of Guar Gum Added to Cigarettes
Pyrolysis and Reaction Products in Cigarette Smoke
Liquorice
Function of the Additive
Amount of Liquorice Added to Cigarettes

Pyrolysis and Reaction Products in Cigarette Smoke
Menthol
Function of the Additive
Amount of Menthol Added to Cigarettes
Prune Juice Concentrate
Function of the Additive
Pyrolysis and Reaction Products in Cigarette Smoke
Vanillin
Function of the Additive
Amount of Vanillin Added to Cigarettes
28. GLOSSARY OF TERMS FOR TOBACCO AND TOBACCO PRODUCTS
1. Scope
2. Terms
29. PACKAGING & LABELING (Design Trends & Technologies)
Reclosability
Spout & Fitments
Flexible Packaging Shapes
Retort - Shelf Stable
Stick-Packs
Food Supply and the Protective Role of Packaging
The Value of Packaging to Society
Definitions and Basic Functions of Packaging
Packaging Strategy
Packaging Design and Development
The Packaging Design and Development Framework
Product Needs
Distribution Needs and Wants of Packaging
Packaging Materials, Machinery and Production Processes
30. PLASTICS IN FOOD PACKAGING
Introduction
Use of Plastics in Food Packaging
Types of Plastics Used in Food Packaging
Manufacture of Plastics Packaging
Plastic Film and Sheet for Packaging
Pack Types Based on Use of Plastic Films,

Laminates etc.
The Standards of Weights & Measures Act (SWMA)
Standard Units (Section 4)
31. PACKAGING LAWS AND REGULATIONS
Declaration on Packaged Commodities for
Interstate Trade or Commerce
Further Requirements Include
Standard Packages
Maximum Permissible Error
Label Declarations
General Provisions Relating to Declaration of
Quantity
Symbols for Unit
General Guidelines on Giving Declarations
Violation of Law
The Prevention of Food Adulteration Act
Food and Adulteration
Packaging and Storage Requirements
Other Packaging Requirements under PFA
32. PHOTOGRAPHS OF MACHINERY WITH
SUPPLIER’S CONTACT DETAILS
Dynamics 2500 Filter Assembler
Supari Chips & Ruff Cutting Machine
Automatic Supari Cutting Machine
Supari Chips Cutting Machine Auto Press
Supari Fadcha Machine
Automatic (Heavy Hopper Type) Bulk Supari
Multiple Cutting Machine
Automatic (Hoper Type) Circle, Routh Mamri
Supari Cutting Machine
3" Tobacco Cutting Machine
4.5" Tobacco Cutting Machine
6" Double Tobacco Cutting Machine
9" Double Tobacco Cutting Machine
6 Inch Tobacco Cutting Machine
Protos-M8
Tobacco Recycler
Filter Khani Packing Machine
Filter Snus Tobacco Portion Making Machine
Shisha Tobacco Packing Machine
Automatic Hukkah Pouch Packing Machine

Automatic Cigarette Filling Machine (Ryo-Mini-III)
Full-Automatic Drawing Cigarette Paper Machine
High Speed Gutkha Packing Machine
Tobacco Packing Machine
Supari Cutter
Supari Grader
Supari Polisher
Dynamics 2500 Cigarette Making Machine
Cigarette Making Machine
Mark-9/Max-S Cigarette Maker
Mark8/Max3 Cigarette Maker
Cigarette Making Machine
Semi-Automatic Agro Waste Briquette Making Machine
Khaini Packing Machine
Khaini Tobacco Packing Machine
Coating Pan Machine

About Niir

NIIR Project Consultancy Services (NPCS) is a reliable name in the industrial world for offering integrated technical consultancy services. Its various services are: Pre-feasibility study, New Project Identification, Project Feasibility and Market Study, Identification of Profitable Industrial Project Opportunities, Preparation of Project Profiles and Pre-Investment and Pre-Feasibility Studies, Market Surveys and Studies, Preparation of Techno-Economic Feasibility Reports, Identification and Selection of Plant and Machinery, Manufacturing Process and/or Equipment required, General Guidance, Technical and Commercial Counseling for setting up new industrial projects and industry. NPCS also publishes various technology books, directories, databases, detailed project reports, market survey reports on various industries and profit making business. Besides being used by manufacturers, industrialists, and entrepreneurs, our publications are also used by Indian and overseas professionals including project engineers, information services bureaus, consultants and consultancy firms as one of the inputs in their research.