

Logo

106-E, Kamla Nagar, New Delhi-110007, India.
Tel: 91-11-23843955, 23845654, 23845886, +918800733955
Mobile: +91-9811043595
Email: npcs.ei@gmail.com, info@entrepreneurindia.co
Website: www.entrepreneurIndia.co

The Complete Technology Book on Soaps (2nd Revised Edition)

Code: NI110	Format: hardcover
Indian Price: ₹1425	US Price: \$150
Pages: 496	ISBN: 9788178331676
Publisher: None	

Description

Soap is the traditional washing compound made from oil fats and caustic alkali. It is an item of daily necessity as cleaning agent. There are few specialty soaps like the washing soaps, castile soaps, sandal soap, specially flavored soaps, medicated soaps, toilet soaps and baby soaps. Population growth, especially households with children has a proportional impact on the growth of the manufacturing sector of the industry. The soap industry is vivacious, varied, creative and tricky, and has the prospective to provide a gratifying career. With increasing popularity there has been increase in potential competitors but it still has the opportunity of further exploitation.

Today with increase in disposable incomes all around the world, demand for these products expected to increase because consumers are moving up towards premium products. With increasing awareness of hygienic standards, the market for the Soap is growing at a rate higher than 8% annually. People have become more creative in trying to find new ways in which they can make soap either for domestic use or commercial purposes. This book will provide all the basic facts and information you need to get started. You will be able to slowly build your way up to completely master the art of soap making.

The book contains processes formulae, Photographs of Plant & Machinery with Supplier's Contact Details, Addresses of Raw Material Suppliers and providing information regarding manufacturing method of different washing and toilet soaps. Some of the fundamentals of the book are raw material oil and fats, fatty acids, manufacture of soap products, technology of soap manufacturing, various formulations of soaps, soap perfumery, management of soap factories, analytical methods.

This book will be a mile stone for its readers who are new to this sector, will also find useful for professionals, entrepreneurs, those studying and researching in this important area.

Content

1. Introduction

Definition

Uses

Cleansing Mechanism

Characteristics of Soap

Saponification of Fats - The Basic Chemical
Reaction Making Soap

2. Raw Materials Oil and Fats

(The Main Raw Materials for Soaps)

Classification of Fats/Oils

Some of the Most Useful Fats and Oils

Tallow

Coconut Oil

Palm Oil

Palm Kernel Oil

Cottonseed Oil

Castor Oil

Chinese Vegetable Tallow

Corn Oil

Rice Bran Oil

Linseed Oil

Olive Oil

Groundnut Oil

Tall Oil

Mahua Oil

Babassu Oil

Neat's-Foot Oil

Lard

Greases

Fish Oil

Hydrogenated Oils

Purification of Soap Fats

Acid Washing
Alkali Refining
Bleaching
Absorbent Bleaching
Bleaching By Using Oxidizing Agents
Testing Of Soap Fats
Properties
Non Fatty Raw Materials For Soap
The Alkalis
Soap Builders
Filler
Stabilizers, Anti-oxidants
Other Additives (Foam Producers)
Foaming Agents Used in Soap
Solvents
Medicaments/Deodorants/Bacteriostatic Agents
Clarifiers
Colouring Matters
Preparation of Colours
Water Soluble
Oil Soluble
Alcohol Soluble
Milled Soaps
Full-boiled/Semi-boiled/cold-made Soaps
Soap Bases and Liquid Soaps
Washing/Laundry Soaps
Medicated Soaps
Perfumes
Comprehensive Details
Essential Oils
Isolates
Synthetic Chemicals

3. Fatty Acids

Types of fatty acids and their physical properties
Physical properties of fatty acids
Melting point

Boiling point

Viscosity
Density
Solubilities
Refractive Index
Heat of crystallisation
Polymorphism
Fatty acids of oils and fats
Raw materials of fatty acids
Animal fats
Tall oil
Vegetable oils and soap stocks
Manufacture of fatty acids
Pretreatment of feed stock
Fat splitting
High pressure catalytic splitting
High pressure steam splitting
Continuous fat splitting
Refining of crude fatty acids
Distillation of fatty acids
Mazzoni fat splitting and distillation process
Distillation of crude fatty acid
Splitting
Distillation
Splitting plant using thermic fluid instead
of steams
Fractional distillation of fatty acids
Development trends in fatty acid distillation
Panning & pressing process
Solvent crystallisation process
Lurgi Wetting Method
Recovery of glycerine
Pre-treatment and evaporation of spent-lye
Pre-treatment and evaporation of sweet water
Distillation of crude glycerine
Synthesis of fatty acids

4. Manufacture of Soap Products

Health and safety Factors
Classification of Soap Products
Methods of Manufacture

Various Finishing Methods

Production

Full Boiling Process (Description)

The Process

First Stage

Second Stage

Third Stage

Fourth Stage

Fifth Stage

Washing Bar/Cake Soap From Neat Soap

Jet Saponification Process

Glycerine Recovery

Semi-Boiling Process and Cold-Made Process

General Description

Production of Washing Bar/Cake Soap

by Semi-Boiling/Cold-Made Process

Equipments

Process Operations

Examination of Cold-Made Products

Formulations for Washing Soaps

Washing Soap Using Soap Stock as Main

Fatty Raw Material

A Typical Batch

Toilet Soap

Milling Process

Floating Toilet Soap Cake

Manufacture of Toilet Soap by Semi-Boiled/

Cold-Made Process

Procedure

Alkali

Milled Finished Soap

A Typical Batch For Toilet Soap

Mottled Soap

Carbolic Acid Soap

Suggested Formulation

Procedure

Medicated Soaps

Castile Soap

Castile Soap by Boiling Process

Some Suggested Formulations for Castile Soap

Deodorant Soaps
Various Industrial Soaps
Textile Soaps
Laundry Washing Aids
A Fabric Cleaning Compound
Cotton Scouring Soap
Dry Cleaner's Soap
Water Softener
Jelly Soap/Soft Soap
Automobile Soap
Wire Drawing Soap
Scouring Soap
Preparation of Washing Soap Powder
Simplified Method
Powdered By Pulverising Method
Washing Powder by Spray-Crystallization
Soap Beads or Granules by Spray-Drying
Soap Flakes
Shaving Soaps
Procedure
Shaving Cream
Other Formulation
Brushless/Latherless Shaving Cream
Liquid Shaving Cream
Basic Combination
Thicker Cream
Aerosol Package
Liquid Soaps/Shampoos
Process of Manufacture
Equipments
Liquid Toilet Soap Concentrates
Liquid Washing Soap Concentrate
Shampoos
Classification
Physical States
Characteristics
Various Additives of Shampoos Imparting
Special Properties
Solubilizer
Opacifiers

Thickeners for Body or Viscosity
Foam Stabilizers
Conditioning Agents
Agents for Resistance of Hard-Water
Germicidal Agents
Preservatives
Soap Shampoos
Older Methods
Modern Methods
Some Typical Formulations
Shampoos Based on Synthetic Surfactants
General Formulations
Liquid Cream Shampoos and Paste Cream
Foamless Oil Shampoos
Baby Shampoos
Medicated Dandruff Shampoos
Other Miscellaneous Shampoos
Aerosol Shampoos (Pressure Dispersed)
Method of Continuous Saponification of Fats
by Alkali Solution
Method of Continuous Splitting of fats into
fatty Acids and Glycerol with Simultaneous
Neutralization of free fatty Acids with Alkali
Yielding Soap
Continuous Neutralization Process
Description of A Process
Advantages
Disadvantages
Continuous Neutralization Process using Fatty
Acids Instead of fats
Batch Methods of Splitting fats into fatty
Acids and Glycerol
Purification of Fatty Acids

5 Technology of Soap Manufacturing
Manufacturing Soap
Techniques
Saponification Equipments used by the
Small-scale sector
Equipment for batch soapmaking

Improved methods of saponification
Lye Absorption
Saponification Loop
Saponification of Distilled Fatty Acids
Alfa Laval Continuous Saponification
Washing of saponified soap
Staight washes
Counter current washes using a set of pans
Counter current washes in a single
divided pan
Rotating disc contactor (RDC)
Fitting of Soap
Method of Expressing Free Alkali, Chloride
and TFM
Plant for Total Soapmaking Operation
Construction Materials for Soapmaking Plants
Earth bleaching of oils
Chemical bleaching
Fatty acids
Lye treatment
Storage of raw lye
Output of Soap and Glycerine
Analysis of oils
Ester value of oils
Glycerine Recovery
Introduction
Glycerine Recovery Procedure
Purpose of Lye Treatment
Method of Lye Treatment
Treatment of Sweet Water
First treatment
Second treatment
Evaporation
Continuous Finisher
Refining of Crude Glycerine
Production of Laundry and Toilet Soaps
Introduction
Frame Cooling of Soap
Production of Filled Soaps on the Mazzoni
Billeting

Technology of Toilet Soaps

Introduction

Oil blend

Production of toilet soap

Mixing of soap

Preservatives

Perfumes

Colours

Opacifiers

Optical brighteners

Super-fatting agent

Structurants

Bactericides and germicides

Miscellaneous additives

Design of mixers

Refiners vs. Mills

Plodding

Stamping

Wrapping

Packing

Carbolic Soap

Transparent Soaps

Introduction

Manufacturing methods

Manufacturing method

Translucent Soaps

Oil blend

Floating Soap

Marbled Soap

Process Control

Introduction

Pre-treatment of Raw Materials

Soapmaking

Fat charge control

Colour of soap base

Free alkali and chloride

Unsaponified fat

Glycerol in soap

Process Controls Beyond Pan Room:

Domestic Soap

Toilet Soap
Other Soaps
Soap Chips
Soap Noodles
Soap Flakes
Soap Powder for Laundries
Shaving Cream
Soft Soap
Medicated Soap
Shaving Soap

6 Various Formulations of Soaps

Toilet Soap of Inferior Quality

Process

Toilet Soap of Lux Type

Process

Khas Soap

Amla Soap

Rose Soap

Sandal Soap

Musk Soap

Almond Soap

Transparent Soaps

Process

Medicated Soaps

Stock Soap

Formulae and Process Description for

Various Medicated Soaps

Process

Carbolic Soap

Process

Procedure

Neem Soap

Process

Camphor Soap

Procedure

Chaulmogra Soap

Procedure

Shaving Soaps and Creams

Shaving Soaps

Solid Shaving Preparation
Lather Shaving Cream
Liquid Soaps and Shampoos
Process of Manufacture
Liquid Shampoos
Egg Shampoos
Herbal Shampoos
Washing Soap (Various Types)
Precautions regarding Manufacture of Soap
Nerol Washing Soap
Process
Soap Removal Procedure
Formulae for Nerol Soap

7 Soap perfumery

Soap compounds

Brown Windsor

Carnation

Chypre

Cologne

Cyclamen

Fougere

Heliotrope

Hyacinth

Jasmin

Lavender

Lilac

Lily

8 Management of Soap factories

Technical Efficiency

Introduction

Yield

Fatty acid yield

Glycerol yield

Active detergent yield

Over/under usage of materials

Packing loss/gain

Oil usage pattern

Scrap and downgrading losses

Productivity
Steam, water, electricity
Financial Summary
Pollution Control
Introduction
Source of Pollution
Oil spills
Chemical spills
Bleaching
Chemical treatment
Soap-making
Glycerine Recovery
Laundry Soaps
Toilet Soap
Synthetic Detergents
Sulphonation
Detergent powder manufacture
Boiler House
Coal spillages
Water treatment Section
Boiler Blow Down
Chimney exhaust
Boiler ash
Effluent Treatment
Space and location
Effluent characteristics
The requirements of treated effluent
Effluent treatment methodology
Treatment of Gaseous Effluents
Chemical bleaching
Saponification of oils
Toilet soap mixer
Refrigeration system
Oleum handling in the sulphonation plant
Oleum still furnace
Exhaust from spray drying tower and air lift
NSD bar mixer exhaust
Boiler exhaust
Analytical Support
Introduction

Oils
Chemicals
Packaging Materials
In-process Materials
Finished Products
Microbiological Controls
Analytical Equipments
General Comments
Quality Control
Introduction
Organisation
Facilities
Specifications
Chemicals
Packaging materials
Finished Product
Manufacturing Method
Fat Charge
Chemicals for soap-making
Sampling
Sampling of Raw Materials
Packing materials
Finished Products
Vendor education and rating
Process audit
Reporting
Micro-biological Controls
Bureau of Indian Standards Specifications
Quality Assurance
Introduction
Conventional Approach to Quality
Recommended Approach to Quality
Implementation of Quality Assurance
Quality Control
Quality Audit
Summary
Total Quality Management (TQM)
ISO 9000 Series Standards
Common Quality Problems of Soaps
Introduction

Laundry Soaps

Lather

Cracking

Detergency

Toilet Soaps

Base odour

Rancidity

Discoloration of soap

Cracking

Blisters

Sandiness

Mushiness

Wear

Hardness

Lather

Efflorescence

Storage and Product Assessment Tests

Storage

Product Assessment

Assessment in laundry soaps

Detergency

Lather

Perfume Impact

Wear

Cracking

Assessment of toilet soaps

Feel of soap in use

Mush

Common Quality Problems of Detergents

Detergent Powder

Solubility

Skin irritation

Poor lather/detergency

Detergent Cake

Sogginess

Roughness

Whitish deposit

Poor colour

Poor lather and detergency

Stain Removal

Introduction

Type of stains

Removal of Stains

Lime soap

Protein stains

Iron compounds

Stains due to dyes

Mildew stains

Physical methods of stain removal

Assessment of stain removal

9 Analytical Methods

Determination of Soap Composition

For Nature of Fatty acids in soap

For Anhydrous soap and total alkali content

Procedure

Isolation of Fatty Acids and Rosin Acid

From Soap

Acid Value

Saponification Value

The Saponification

Iodine Value

Wijs Solution (Iodine monochloride solution)

Determination

Titer Test

Procedure

Rosin Value

Procedure

Determination of Total Anhydrous Soap and

Combined Alkali Content

Procedure

Unsaponified and Unsaponifiable Matter

Determination

Testing of Fatty Oils used for Soap

Moisture and Volatile Matter

Insoluble Impurities

Soluble Mineral Matter

Determination of Total Fatty Acids of soap

stock and acidulated soap stock

Acid value

Ester value
Determination of rancidity
Rosin Test
Colour Test
Bleach Test
Smoke Point
Flash Point
Turbidity Point
Cloud Point

10 Plant and Machinery
Four Blades Chipping Machine
Other Chipping Machines
Packing Machine
Spray Drier for making Detergent Powder
Portal Stirrer (Mechanical Agitator)
High Speed Dissolver
Planetary Mixer
Centrifuge
Emulsifier
Edge Runners
Ball and Pebble Mills
Automatic Liquid Filling and Weighing Machine
Automatic Paste Filling and Crimping Machine
Automatic Power Filling Machine
Marking and Printing Machine
Marking and Printing Machine
Bottle Washing Machine
Ribbon Blender
Batch Mixer
Plodders
Cutters
Soap Press

11 Addresses of Raw Material Suppliers

12 Photographs of Plant & Machinery with Supplier's Contact Details

About NIIR Project Consultancy Services (NPCS)

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.

NIIR PROJECT CONSULTANCY SERVICES

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

Tel: 91-11-23843955, 23845654, 23845886, +918800733955

Mobile: +91-9811043595

Email: npcs.ei@gmail.com, info@entrepreneurindia.co

Website: www.entrepreneurIndia.co