# Modern Technology of Soaps, Detergents & Toiletries (with Formulae & Project Profiles) 4th Revised Edition

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There has been consistent rise in Indian toiletries Industry. Novelty in ideas and marketing seems to be the major subject matter of the Indian soap industry. With increasing popularity there has been increase in potential competitors but it still has the opportunity of further exploitation. The soaps, detergent and toiletries product industry is vivacious, varied, creative and tricky, and has the prospective to provide a gratifying career. Since these are basic requirements throughout the world undoubtedly the toiletries industry is one of the fastest growing and most profitable markets in international arena has been for the past many years.

Total quality management has its importance in managing every industry so is its importance and relevance in Oils, Soaps, and Detergents Industries. Featured as one of best seller the book modern technology of soaps, detergent and toiletries is another resourceful book written by P. K. Chattopadhyay. The author is highly experienced consultant to cosmetics and toiletries industries.

The book contains the formulae of diverse types of soaps, detergents (cake, powder and liquid) toiletries, methodical testing method, quality control of complete products, packing criterion of cosmetics and toiletries along with project profiles, machinery photographs and addresses of raw material, plant and machinery suppliers.

The book contains detail chapter on: Principal Groups of Synthetic Detergents Classification, Detergent Bar, Washing Soap: Laundry Soap Formulation, tooth paste, after shave lotion, Hair Shampoo, Fundamentals of Science, Testing of Finished Goods, Finished Product Quality Control Procedures, Natural Essential Oils in India: A Perspective, Essential Oils in India and Trade Summary and Conclusion, etc.

Basic information in entering a market and the opportunities and requirements of the potential sector has been the best way to penetrate in a market. How and what if properly answered can take you to a long way. The first hand information on different types of toiletries product have been properly dealt in the book and can be very useful for those looking for entrepreneurship opportunity in the soap industry.

Introduction
Soap Manufacturing Process
BIS Specification for Soap
Properties of Soaps and Detergents

Detergent

Market Potential of Detergents

**BIS Specification for Detergents** 

**Toiletries** 

**BIS Specifications for Toiletries** 

**Quality Control** 

Branding

## 2. Packaging Criteria for Cosmetics and Toiletries

**Evolution of Packaging** 

Functional Requirements of Packaging

**Technical** 

Aesthetic

Cost

**Chemical Compatibility** 

Physical Compatibility

Retantion of Volatiles

Leak proof caps

Tamper-proof Seal

**Transport Hazards** 

**Aesthetic Factors** 

Presentability/Appearance

Packaging Design

Package Design - Practicability

Cost-effectiveness of Pack

**Packaging Materials** 

Glass

Metal

**Plastics** 

Papar

**Product Evaluation** 

**Transit Trials** 

**Products Characteristics and Packaging Materials** 

Legal Requirements

Closing

Specification for Polycoated Paper

Specification of Gum Tape

Specification of Corrugated Fibreboard Boxes

## 3. Principal Groups of Synthetic Detergents

Classification

**Anionic Detergents** 

Alkyl Aryl Sulphonates

Long-Chain (Fatty) Alcohol Sulphates

Sulphonated Olefins

Sulphated Monoglycerides

Sulphated Ethers

Sulphosuccinates

Sulphonated Methyl Esters

Alkane Sulphotes

**Phosphate Esters** 

Alkyl Isethionates

**Acyl Sarcosides** 

Alkyl Taurides

Fluorosurfactants

**Cationic Detergents** 

Non-ionic Detergents

**Fatty Acid Condensates** 

Condensation of Ethylene Oxide with an Amine

Condensation of Ethylene Oxide with an Amide

**Block Polymers** 

Sucrose Esters

Sorbitan Esters

Alkylolamides

Fatty Amine Oxides

Amphoetrics and Zwitterionics

Biodegradability

#### 4. Application and Formulae of Detergents

Foam

Household Cleaning

**Heavy-Duty Laundering** 

Foam Control

**General-Purpose Detergents** 

Choice of Non-Ionic

**Concentrated Powders** 

**Cold Water Washing** 

Hard-Surface Cleaners

Machine Dishwashing

Abrasive-Type Cleaners

Miscellaneous Household Cleaners

Commercial Laundering

Solvent Detergents

Carpet and Upholstery Cleaners

**Textile Dressing** 

Mercerizing

Food and Dairy Industries

**Detergent Sanitizers** 

**Metal Cleaners** 

Miscellaneous Cleaners

Lavatory Cleaner

**Hand Cleaners** 

Waterless Hand Cleansers

## 5. General Discussion of Detergents

Industrial-Detergents - Applications

Cosmetic Industry on Path of Progress

#### 6. Detergent Bar

Formulation

Sequence of Additions

Note

Specification

Type of Defects

What are the main defects in bar detergent?

#### **Detergent Bar Cost Calculations**

7. Liquid Soap and Detergents

**Product Introduction** 

Method of Manufacture

Liquid Detergents

Weight Equivalents of DDBSA

Molecular Weights

Special Procedures for Compounding

8. Washing Soap: Laundry Soap Formulation

Manufacture of Laundry Neat soap from Oil Blend

Harding of RBD

Acid wash for RBHT

Salt Wash for Neem Oil

Blending

Neem Soap Manufacture

Manufacture of Laundry Soap

Theory

**Process and Raw Material** 

**Product Profile** 

Washing Soaps

**Brand Name** 

#### 9. Deodorant

Zinc Ricinoleate

Deodorant pump Spray

Name of the Manufacturers

Zinc Ricinoleate

Market Size of Deodorant

**Growth Barrier** 

#### 10. Tooth Paste

Introduction

Consumers and Predicted Demand

**Production Target and Quality Control** 

Requirement of Land and Building

Availability of Raw Materials

Machinery and Equipment

Office Equipment

Man Power Required

Raw Materials Per Month

## 11. After Shave Lotion

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Uses of After shave Lotion

Market Position

Advertising

Distribution

Formulations with Process

**Process** 

Note

**Process** 

**Plant Economics** 

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Plant and Machinery

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Utilities and Overheads (Annual)

Personnel Requirement (Annual)

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**Uses and Application** 

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The Nonionic Detergent Raw Materials

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**Perfumes** 

**Preservatives** 

New Shampoo Development

Protein and Egg Shampoo

Herbal Shampoo

Vitamin Shampoos

Antidandruff Shampoos

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Coconut oil Shampoo

Triethanolamine Shampoo

Liquid Cream Shampoos

Liquid Cream Shampoo

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Manufacturing Process

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Hexachlorophene Soaps

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Measurement

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Diversion

Pressure and Vacuum

**Surface Tension** 

Viscosity

Flow

Acid, Bases and Neutral Solution

Normal Solutions and Normality

Unloading of Oleum tanker

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Raw Materials Characteristics and Storage

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Caustic Soda

Other Process Chemicals and Ingredients

Bleach liquor

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Oils/Fatty Material

Chemicals

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Report for the Central Laboratory (Test of Oil)

**Determination of Moisture** 

Determination F. F. A.

Determination of Iodine value

Colour

Specification Value

**Unsap Value** 

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Bleaching of oil

Wesson loss

Test for HCN

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Scope

**Apparatus** 

Procedure

Calculation

**Determination of Total Fatty Matter** 

Procedure

Alcohol Insoluble matter

**Detergent Powder** 

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Sulphonation

Neutralisation and Bleaching

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Blowing of Slurry

Filling and Packing

NSD-Bar

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Noodler and Mill

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Aluminium Sulphate

Determination of pH

**Determination of Iron** 

**Determination of Aluminium** 

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Iron As Fe2O3 (Total and Free)

Loss on Drying

**Determination of Silica** 

China Clay - Paste with Glycerine

Loss on Ignition

Matter Soluble in Water

Matter Soluble in Acid

Water Absorption Value

Determination of Calcium and Magnesium In Dolomite

Moisture Content

Matter Insoluble in Acid

**Bulk Density of Dolomite** 

Determination of Available Lime (as Cao)

Solubility of Liquid Paraffin

Reaction of Liquid Paraffin

Readily Carbonisable Substances in Liquid Paraffin

Sulphur Compounds in Liquid Paraffin

Reaction to Acid and Alkali

Solubility in Water

Colour Value

Determination of Matter Insoluble in Water

**Volatile Matter Content** 

Total Alkalinity as Na2CO3

**Determination of Chlorides** 

**Determination of Sulphates** 

Iron Content

Determination of Iron (as Fe)

Total Soluble Silicates and Na2O: SiO2 Ratio

Moisture

Temperature Rise Test

**Phosphorus Content** 

Determination of Tripolyphosphate Content (Na5P3O10)

Active Detergent Content of Detergent Paste

Total Anionic Detergent: Hyamine titration

Moisture and Volatile Matter of Detergent paste

Colour of Detergent Paste

**Available Chlorine** 

Non-Detergent Organic Matter

19. Natural Essential Oils in India: A Perspective

Introduction

Essential Oils in India and Trade

Summary and Conclusion

Plant Economics

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