



## *World Skill Development Institute*

### **Cosmetics making and formulation certificate course**

#### **Course Duration – 6 Months.**

Cosmetics products are created for application on the body for the purpose of cleansing, beautifying or altering appearance and enhancing attractive features. It is not similar like medicines in addition to it cannot be used to modify the physique function or performance. The cosmetic Industry has witnessed rapid growth over the last couple of decades. Now a day the range of cosmetic and beauty products has widened tremendously. The use of cosmetics has increased exponentially not only among in females but the male population also indulges in their use. A wide range of chemical and natural materials is used in the formulation of cosmetic and toiletry preparations. Cosmetics like creams, gels, face powder, eye makeup, shaving cream, and colognes are used on a daily basis by both women and men. The Indian cosmetic Industry has witnessed rapid growth over the last couple of decades. In that time the range of cosmetic and beauty products in India has widened tremendously. Beauty products manufacturers in India mostly cater to the great demand for cosmetics and toiletries that fall into the low or medium price categories as the greatest demand in India has always been for these economically priced products. Bearing a long glowing heritage of cosmetic and beauty, aesthetic makeup products is being used since olden days and nowadays it appear like a booming economy in India which would be the largest cosmetic consuming country in a next few decades. While the demand of beautifying substances are growing day by day, a large number of local as well as international manufacturers gradually extend their ranges and products in different provinces of India.

Course Syllabus and modules.

#### 1. Regulation of Cosmetic Products

Historical Development

Self-regulation

Regulations.

#### 1. Federal Regulation of Cosmetics

2. Cosmetic Composition
3. Cosmetic Labeling
4. The Relationship of Cosmetic Products to Drugs
5. Regulation of Cosmetics by Other Federal Agencies
6. Cosmetics and the Consumer Product Safety Commission
7. Regulation of Cosmetics by the States
8. Conclusion

## 2. Sensitivity Testing

Diagnostic Sensitivity Testing

Technique of Diagnostic Patch Testing

The Interpretation of Patch Test Reactions

Uncovered versus Covered • Patch-Test Technique

Features of Patch Testing with Paraphenylenediamine

Uncovered Patch-Test Method for PPDA Sensitivity

Covered Patch-Test Technique for PPDA Sensitivity

Evaluation of Patch-Test Reactions to PPDA

Features of Patch Testing with Nail Polish

Patch Testing with Lipstick

Testing with Permanent Wave Solutions

Testing for Sensitivity to Perfumes

Testing for Lanolin Sensitivity

Diagnostic Photosensitivity Testing

Light Sources for Photosensitivity Testing

Testing Cosmetics for Photosensitization

Testing Antimicrobial Agents in Soaps and Cosmetics

Patch Test Table for Specific Ingredients in Cosmetics

Patch Tests with Unlisted Cosmetic Ingredients

Prophetic or Predictive Sensitivity Testing

Predictive Testing for Allergic Contact Sensitization

Predictive Testing for Photosensitizing Capacity

### 3. Quality Assurance

Quality Control

Raw Material Inspection

Inspection of the Finished Product

Inspection of Containers and Packaging Materials

In-Process Control

Finished Goods Control

Good Laboratory Practice (GLP)

Good Manufacturing Practice (GMP)

Environmental Protection

Quality Promotion

Works Proposal System

Quality Teams

### 4. Raw Materials

Introduction

Basic Surfactants

Alkyl Ether Sulfates

Alkyl Sulfates

$\alpha$ -Olefin Sulfonates

Other Basic Surfactants

Mild Anionic Surfactants

Sulfosuccinates

Cocoyl Isethionates

Acyl Amides

Alkyl Ether Carboxylates

Magnesium Surfactants

Alkyl Ether Carboxylates

Magnesium Surfactants

Alkyl Phosphates

Amphoteric Surfactants

Alkyl Betaines

Alkylamido Betaines

Acylamphoglycinates and Acylamphopropionates

Amine Oxides

Non-ionic Surfactants

Ethoxylates Products

Alkyl Polyglycosides

Cationic Surfactants

Monoalkyl Quaternaries

Dialkyl Quaternaries

Trialkyl Quaternaries

Benzyl Quaternaries

Ester Quaternaries

Ethoxylated Quaternaries

Shampoo and Bath Additives

Thickeners

Foam Stabilizers

Pearlescent Agents

Conditioning Agents

Emollients

Sequestering Agents

Oil Components

Mineral Oil

Natural Oils

Triglycerides

Jojoba Oil

Synthetic Oils

Isopropyl Esters

Ethylhexyl Esters

Oleic Acid Esters

Caprylic / Capric Acid Esters

Isocetyl Stearate

Octyldodecanal

N-Butyl Stearate

Diisopropyl Adipate

Pentaerythritol Tetraistearate

Waxes

Natural Waxes

Synthetic Waxes

Silicone Oils

Cream Bases

Fatty Alcohols

Polyol Esters

Fatty Acids

Oil-in-Water (O/W) Emulsifiers

Water-in-oil (W/O) Emulsifiers

## 5. Preservation of Cosmetics

Factors Affecting Preservation

Organisms Found in Cosmetics

Molds

Yeasts

Bacteria

Factors Influencing the Growth of Microorganisms

Minerals

Growth Factors

Moisture Content

pH

Temperature

Oxygen

Other Ingredients

Factors Affecting the Action of Preservatives in Cosmetics

Concentration

Solubility Relationships

pH

Surface-Active Agents

The Interference of Nonionic Emulsifiers with Preservatives

Suitability of Substrate for Growth of Organisms

Amount of Inoculum

Synergism or Antagonism with Other Compounds

Evaluation of Preservatives for Cosmetics

Methods of Testing Antimicrobial Agents

Choice of Organism

Practical Tests

Preservatives

Organic Acids

Alcohols

Aldehydes

Essential Oils

Phenolic Compounds

Esters of p-Hydroxybenzoic Acid

o-Phenylphenol

Mercury Compounds

Surface-Active Agents

Miscellaneous Nitrogen Compounds

Polyols

Miscellaneous Antimicrobials

Mechanism of Preservative Action

Allergic Response to Preservatives and Antimicrobials

Photosensitization

Manufacturing

Prevention of Microbial Contamination

Deionizer Contamination

Filter Contamination

Raw Material Contamination

Sanitation

Microbial Corrosion

Emulsion Preservation

Preservation of Shampoos

Chelation

Antioxidants

Rancidity

Mechanism of Action

Classification of Antioxidants

Considerations for Use of Antioxidants

## 6. Antiperspirants and Deodorants

Introduction

Regulations

Mechanism of Sweating

Antiperspirant Active Properties

Basic Aluminum Chloride



Aluminum Zirconium Complexes

Clinical Assessment

Formulatory Considerations

Performance

Cost

Esthetics

Formulations

Roll-on Products

Stick Products

Spray Products

Deodorants

Odor Control

Clinical Assessment

Formulations

## 7. Cleansing Creams And Lotions

Properties Sought

History

Types of Cleansing Cream

Beeswax-Borax Emulsion Type

Basic Materials

Liquefying Cleansing Creams

Miscellaneous Emulsion Types

Sorbitan Fatty Acid Ester Emulsions

Acid-Containing Cleansing Creams

Detergent Cleansing Creams  
Antibacterial Cleansing Preparations  
Cleansing Lotions  
Cleansing Preparations for Oily Skin  
Consideration of Safety  
Equipment and Manufacturing

## 8. Emollient Creams And Lotions

Theoretical Aspects of Emollience  
Emollient Materials  
Emollient Evaluation  
Emulsion Types  
Penetration  
Formulations  
Emollient Creams  
Raw Materials  
Glyceryl Monostearate (from Triple-Pressed Stearic Acid)  
Polyethylene Glycol Fatty Acid Esters  
Stearic Acid  
Beeswax  
Fatty Alcohols  
Lanolin  
Hydrocarbon Waxes  
Manufacturing Procedure  
Emollient Lotions

Specialized Creams and Lotions

Eye Creams

All-Purpose Creams

Therapeutic Creams

9. Baby Toiletries

Epidermal Physiology

Skin Care of the Newborn

Baby Oils

Baby Lotions

Cationic Lotions

Care of the Diaper Area

Diaper Rash

Cationic Ointments

Baby Oils

Baby Lotions

Baby Creams

Soap

Baby Powders

Diaper Laundering

Disposable Diapers

Infantile Eczema

Care of the Hair and Scalp

Formulation

Raw Materials

Baby Oils

Baby Lotions

Baby Creams

Baby Powders

Literature

## 10. Face Powders

Loose Face Powder

Raw Materials

Formulations

Compact Face Powder

Raw Materials, Binding Agents, and Preservatives

Binding Agents

Compression Methods

Face Powder Manufacturing Process

Base Powder Preparation

Color Extenders

Combination: Base Powder and Color Extenders

Mills

Pressing Machines and Pressure Considerations

Packaging

Quality Control and Laboratory Practices

Shade Control and Lighting

Dispersion of Color

Pay off

Pressure Testing

Breakage Test

11. Eye Makeup

Raw Materials

Pigments

Basic Ingredients

Petrolatum

Lanolin

Ceresin

Carnauba

Beeswax

Stearic Acid

Isopropyl Myristate

Propylene Glycol

Gum Tragacanth

Methyl Cellulose

Preservatives

Pearl essences

Perfuming

Formulation and Manufacture

Eye shadow

Mascara

Eyebrow Pencils

Eye Liners

False Eyelashes

Eye Cover Products

Eye Makeup Removers

Eye Creams and Eye Sticks

Analysis

General Remarks

## 12. Aerosol Cosmetics

Definitions

Historical Background

Principle and Mechanism

The Package and its Components

Container

Metals

Industry Specifications for Fabricated Aerosol Cans

Glass

Plastics

Valves

Valve Specialties

Actuator Cover Cap

Powder or Paint Valves

Foam Valves

Spray Anyway Valves

Metering Valves

Special Applicators

Codispensing Valves

Propellants

Concentrate

Production

Cold Filling

Pressure Filling

Under-the-Cup Filling

Formulation

Hair Products

Hair Sprays

Hairsets and Conditioners

Hairdressing

Color Rinse and Sprays

Wave Lotions

Shampoos

Skin Products

Deodorants and Antiperspirants

Fragrances

Sunscreen

Shaving Cream

Shaving Accessories

Feminine Deodorant Spray

Nail Preparations

Powders

Face Creams and Lotions

## Oral Products

### 13. Shaving Preparations: Soaps, Creams, Oils, and Lotions

#### Shaving Soaps, Sticks and Powders

Shaving Soaps

Shaving Sticks

Shaving Powders

Lather Shaving Cream

Brushless Shaving Cream

Shaving Oils and Lotions

### 14. Pre shave and Aftershave Preparations

Pre shave Preparations

Skin Conditioners

Beard Softeners

Pre-electric Shave Preparations

Aftershave Preparations

Clear Lotions

Stick Lotions and Gels

Creams and Emulsified Lotions

Powders

Styptics

Aerosols

### 15. Hair-Grooming Preparations



Properties of a Good Hair dressing

Types of Hair dressing

Brilliantines

Liquid Brilliantines

Solid Brilliantines

Alcoholic Lotions

Hair Tonics

Two-Layer Lotions

Gum-Base Hairdressings

Oil-in-Water Emulsions

Water-in-Oil Emulsions

Aerosol Hairdressings

16. Hair Straighteners

Morphological Considerations

General Chemical Composition

Keratin

Hair Treatment Reactions

Oxidation

Diffusion of Reagents

D-Cystine Fraction

Measurement of Physical Changes Related to Fibre Treatment

Form-related Compositions

Temporary Straightening

Permanent Straightening

Thioglycolate Compositions

Neutralizers

Manufacturing and Material Specifications

Packaging Considerations

Method of Application

Other Materials

Silicones

Sulfites

Manufacture

Procedure

Neutralization

General Considerations

17. Bleaches, Hair Colorings and Dye Removers

Demands in Hair Coloring

Classes of Coloring Agents

Bleaching Agents

Early Bleaches

Chemical Bleaches

Hydrogen Peroxide

Action of Peroxide on Hair

Bleaching Agents and Treatments

Platinum Bleaching

Blanching of Hair

After Treatment of Bleached Hair

Synthetic Organic Dyes  
Range of Shades Required  
Special Shades  
Temporary Colorings  
Coloured Rinses  
Rinses for Gray Hair  
Importances of Instructions  
Color Shampoos  
Powders  
Crayons  
Semi-Permanent Dyes  
Nitro Dyes  
Self-Oxidizing Dyes  
Solvent-Assisted Dyes  
Anion-Cation Complexes  
Reactive Dyes  
Aminoanthraquinone Dyes  
Permanent Dyes  
(Oxidation Dyes)  
Pyrogallol  
Introduction of Amino Dyes  
Early Commercial Development  
Quest for Substitutes; Protective Measures  
Research for Improved Products and Processes  
Advantages and Disadvantages of Oxidation Dyes

Composition of Modern Oxidation Dyes

Forms of Oxidation Dyes

Regulations Governing Amino Dyes

Research for New Days

Plant Derivatives

Henna

Indigo

Camomile

Wood Extracts

Mixed Wood Dyes

Miscellaneous Plant Products

Use of Mordants

Advantages and Disadvantages of Natural Dyes

Metallic Dyes

Lead Dyes

Silver Dyes

Dyes for Eyebrows and Eyelashes

Copper Dyes

Compound Hennas

Miscellaneous Metallic Dyes

Advantages and Disadvantages of Metallic Dyes

Toxicity of Metallic Hair Dyes

18. Packaging Cosmetic Preparations

Packaging Requirements and Functions

Packaging Materials and Containers

Tins and Jars

Bottles and Flacons

Tubes

Stick Applicators

Spray Cans

Decoration of Cosmetics Packaging

Future Ecological and Economic Challenges

WASDI