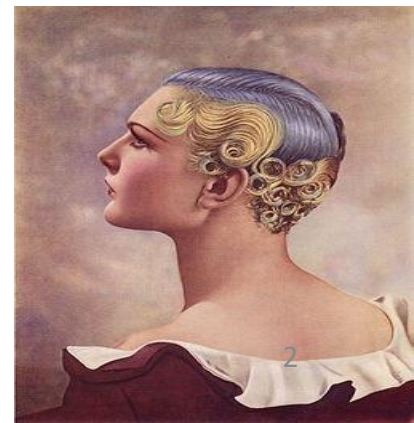


# cosmetics



# Introduction

- ❑ **Cosmetics:** are substances used to enhance or protect the appearance or odor of the human body.
- ❑ include skin-care creams, lotions powders, perfumes, lipsticks, fingernail and toenail polishes, eye and facial makeup, permanent waves, hair colors, hair sprays and gels, deoderants, baby products, bath oils, bubble baths, bath salts, butters and many other types of products.
- ❑ Their use is widespread, especially among women



# Introduction...

- **FDA** defines cosmetics as: "intended to be applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance without affecting the body's structure or functions."
- The devices used in applying the cosmetics as brush, comb razor blades they are not included in cosmetics

# Introduction...

- ❑ Many manufacturers distinguish between decorative cosmetics and care cosmetics
- ❑ recent years have seen an increasing market for prescription or surgical cosmetic procedures
  - ✓ range from temporary enhancements, such as cosmetic colored contact lenses, to major cosmetic surgery.



## 2. History of cosmetics

- ❑ The Romans and ancient Egyptians used cosmetics (mercury and often lead) .
- ❑ The Palestine, Jezebel painted her eyes—approximately 840 BC recorded in the Old Testament—2 Kings 9:30
- ❑ The Biblical book of esther describes various beauty treatments as well.
- ❑ Cosmetic use was frowned upon at some points in history.
  - ✓ in the 1800s, make-up was used primarily by prostitutes, and queen victoria publicly declared makeup improper, vulgar, and acceptable only for use by actors

# History of cosmetics...

- By the middle of the 20th century, cosmetics were in widespread use in nearly all societies around the world
- Cosmetics have been in use for thousands of years.

but the absence of regulation of the manufacture and use of cosmetics has led to negative side effects, deformities, blindness, and even death through the ages.

E.g. blindness caused by the mascara Lash



# Formulation and common ingredients of cosmetics

- the target substance in cosmetic products may not be easily applied on the human body
  - ✓ may be dissolved into or
  - ✓ mixed with different kinds of chemical additives.
- Excipients are used to bulk up cosmetical formulations with very potent target substances, to allow for convenient and accurate dosage.

# Formulation and common ingredients...

- ❖ once cosmetic products have been formulated, it cannot stay in purified form for long
  - ✓ will denature,
  - ✓ fall out of solution,
  - ✓ or stick to the sides of the container
- ❖ To stabilize the product, some **excipients** are added, ensuring that the target ingredient stays "active", and, just as importantly, stable for a sufficiently long period of time



# Formulation and common ingredients...

- All ingredients in cosmetics, as well as their chemical decomposition products are to be identified and guaranteed to be safe.
  - ✓ excipients are only used when absolutely necessary
  - ✓ in the smallest amounts possible.
- ❖ Fragrances and preservatives are the main ingredients in cosmetics.

# Formulation and common ingredients...

## Fillers/Diluents/vehicle

- Fillers fill out the amount of the product, making it practical to produce and convenient for the consumer to use.
- Provide **proper volume** for consumer handling.
  - a varied group of oily or water soluble polymers

## colors:

- ✓ added to improve appearance of a formulation
- ✓ Color consistency allows easy identification of a product

# Formulation and common ingredients...

## Lubricants

- prevent ingredients from clumping together
- prevent ingredients from sticking the processing machines.

## An antioxidant

- preventing the oxidation of other additives
  - Oxidation reactions can produce free radicals, which start chain reactions that damage cells.
- ❖ Antioxidants terminate these chain reactions by removing free radical intermediates, and inhibit other oxidation reactions by being oxidized themselves.
- eg. thiols or polyphenols.

# Formulation and common ingredients...

## Fragrances

- Give the product a fresh, pleasing odor and cover up the smell of other ingredients.
- Fragrances in skin-care products are the most likely cause of skin irritations or contact allergies.

cinnamic alcohol, hydroxycitronella and isoeugenol

# Formulation and common ingredients...

## Preservatives

- Any product that includes water and oil must contain one or more preservatives
- may cause skin reactions  
eg quaternium and imidazolidinyl urea.

## An emulsifier

- a type of surfactant typically used to keep emulsion well dispersed.
- form a protective layer so that the oil molecules cannot "clump"

# Formulation and common ingredients...

**Humectants** (urea, glycerin, alpha hydroxy acids, lactic acid, others).

- substances that absorb water from the air and hold the moisture in the skin.
- Humectants need very high humidity levels to be effective.
- are also useful in softening thickened or scaly skin.

# Formulation and common ingredients...

**Emollients** (butyl stearate, glycerin, lanolin, mineral oil, petrolatum, others).

- These ingredients fill in the spaces between the cells in the skin,
  - ✓ replace lipids thus smoothing and lubricating rough skin
- Emollients are either:
  - ✓ oil based,
  - ✓ water based, which means they are primarily water
    - Oil-based creams leave a slight residue on the skin
    - Most creams and lotions on the market are water based.

# Classification of cosmetics

1. Depending up on the physical form cosmetics can be classified as.

- Emulsions eg: cold cream; vanishing cream
- Powders eg: face powder: talcum powder, tooth powder.
- Sticks eg: Lipsticks.
- Oils eg: hair oils.
- Jellies eg: hair jelly
- Paste eg: Tooth past
- Soap eg; shampoo, shaving soap
- Solution eg: After shave solution
- Aerosols eg: After shave spray



# Classification of cosmetics...

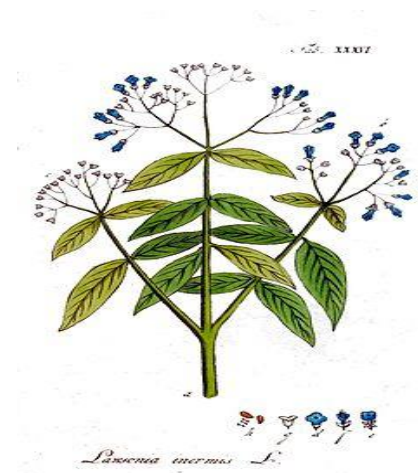
2. Can be classified based on widely used body parts as:

- Hair cosmetics
- Face cosmetics
- Eye make ups
- Lip decorators and carers
- Nail cosmetics
- Skin cosmetics

# Classification of cosmetics...

## 1. Hair cosmetics

- **Hair-coloring dyes (tint)** available in many colors, are widely used cosmetic products.
  - ✓ Henna is a vegetable dye, used for centuries to impart a red tint to the hair.
  - ✓ Weak solutions of  $\text{H}_2\text{O}_2$  are often employed as hair bleaches
- **Hair lotions and hair sprays** are used to condition the hair, keep it in place, or make it glossy.



# Classification of cosmetics...

- **Shampoos** are based on soap or synthetic detergent
  - ✓ used to cleanse, and leave the hair lustrous
- **Hair Restorers**
  - Minoxidil produce a growth of fine hair any place on the skin where there are hair follicles.
  - sold under the trade name **Rogaine**



Jon Ross

Before Minox

After Minox

# Classification of cosmetics...

## Hair removers (depilatories)

- Used to remove unwanted hair from the body.
- When the hair is removed by chemical method it is known as depilation. The chemicals used are barium sulfide and calcium sulfides.
- When the hair is removed by plucking it is known as Epilation



**Hair removal**

# Classification of cosmetics...

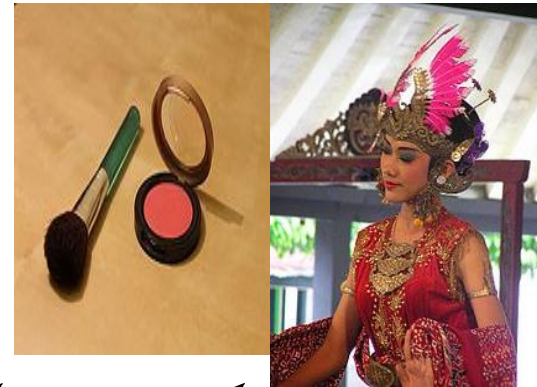
## 2.Face cosmetics

- **Face powder** is a cosmetic powder applied to the face to set foundation
- can also be reapplied throughout the day to minimize shininess caused by oily skin
- **A concealer or colour corrector** is a type of makeup used to cover pimples, dark circles and other small blemishes visible on the skin.
- mainly used by women but also by some men



# Face cosmetics...

- **Rouge** also called *blush*, is a cosmetic typically used by women to redden the cheeks
  - to provide a more youthful appearance, and to emphasis the cheekbones
- **Foundation** , used to color the face and conceal flaws ( defect) to produce an impression of health and youth.



Usually a liquid, cream, powder.



# Classification of cosmetics...

## 3. Eye make ups

- **Eye liner** is a cosmetic used to define the eyes.
  - applied around the contours of the eye to create a variety of aesthetic illusions.
- **Eye shadow** is a cosmetic that is applied on the Eyelids and under the eyebrows.
  - commonly used to make the wearer's eyes stand out or look more attractive.
  - Eye shadow adds depth and dimension to one's eyes, complements the eye color, or simply draws attention to the eyes..



# Classification of cosmetics...

## Eye make ups

- **Mascara** is a cosmetic used to darken, thicken and define eyelashes.
- Mascara comes in different forms: **liquid/cream**.

The general purpose of mascara is to **emphasise, thicken, lengthen, and define lashes**.

- Mascara is available with **tube** and **wand** applicators.
- Eye brow pencils**, creams, waxes, gels and powders are used to fill in and define the brows.





# Classification of cosmetics...

## 4. Lip decorators and carers

**Lip gloss** is a cosmetic product used primarily to give the lips shine and sometimes subtle color.

- is distributed as a liquid or a soft solid.
- can be completely clear, translucent, or various shades of opacity

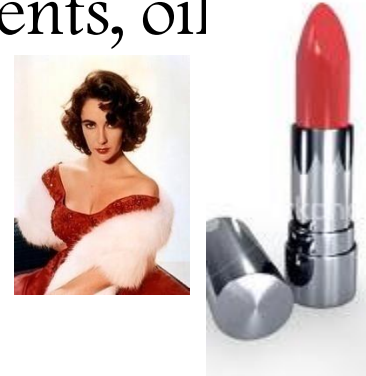
Lip balm is a lip cosmetic product which generally has medicinal purposes



# Classification of cosmetics...

- **Lipstick** is a cosmetic product containing pigments, oil waxes, and emollients that applies color and texture to the lips.

Lippy is a common British equivalent for lipstick.



- **Lip Plumper** is a cosmetics product used to give the lips an enhanced, fuller look.
- Lip Plumper is distributed as a viscous liquid applied to the lips with a roller or brush applicator.



# Classification of cosmetics...

- It can be translucent or have various tints, and can be worn alone or over regular lipstick.
- Lip Plumpers are popular with women due to the many perceived benefits including lip enhancement, collagen stimulation, moisturizing effect, ease of application, and sexy look they help to give the lips



# Classification of cosmetics...



## 5. Nail cosmetics

- **Nail polish** or **nail varnish** is a lacquer that is applied to the nails of both the fingers and toes usually cosmetically,
- The act of simply polishing the nails without applying a chemical layer afterwards is called nail buffing



## 6.Skin cosmetics

- Cosmetics are applied to the dead cells of the corneal layer.
  - ✓ Moisturizers hold moisture in the skin.
- work best when applied while the skin is still wet from a bath or shower.
- don't actually add moisture to skin.
- form a physical barrier that hinders evaporation of water from the skin.

# Skin cosmetics...

- Anti-aging creams are moisturizers marketed with the promise of making the consumer look younger and reducing visible wrinkles on the skin.
- Despite great demand, many such products and treatments have not been proven to give lasting or major positive effects.
- A decrease in wrinkle depth of 10% is typical.



# Skin cosmetics...

- **Depilatories** are sulfides of calcium and barium
  - have the property of removing hair from the skin
- **Bronzers** are creams that impart a color to the skin
- **Deodorants** are products that have perfume to mask body odor and a germicide to kill odor-causing bacteria.



# Skin cosmetics...

- **Antiperspirants:** are usually deodorants
  - but they also retard perspiration
- **Zirconium and aluminum chlorides and hydroxides**  
functions as astringents, which constrict the openings of the sweat glands,
  - ✓ thus restricting the amount of perspiration that can escape.





# Skin cosmetics...

## Sunscreen Lotions



- UV rays in sunlight triggers production of the pigment melanin, which then protects the deeper layers of the skin from damage.
- Excessive exposure to ultraviolet radiation causes premature aging of the skin and leads to skin cancer.
- Most sunscreen lotions block UV-B radiation while letting through the less energetic long-wave UV-A rays that promote.
- PABA derivatives OMC (Octyl methoxycinnamate) is now used as a UV-B filter in about 90% of all sunscreen lotions.



# ASSIGNMENT

- ❖ Are cosmetics safe?
- ❖ How can I protect myself against the dangers of cosmetics?
- ❖ What are “cosmeceuticals?”
- ❖ What are hypoallergenic cosmetics?
- ❖ Can cosmetics cause acne?
- ❖ Are permanent make-up safe?
- ❖ Are hair dyes safe?