

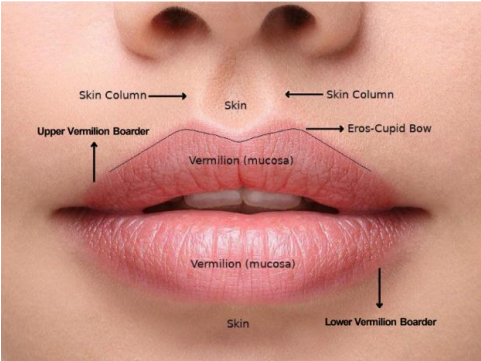
COLOR COSMETICS

LIP MAKEUP PRODUCTS

Lip makeup products

- are primarily used by women to enhance their attractiveness and femininity; however, there are products available for men as well.
- Products for men usually include uncolored sticks offering hydration and sun protection.

STRUCTURE OF HUMAN LIPS



- consist of **mucosa** and **skin**.
- The **outer surface** is covered by epidermis and hair, sweat glands, and sebaceous glands.
- face skin meets the mouth mucous membrane in a zone called the **vermilion border**.

Vermilion border

- is lightly keratinized epithelium;
- does not have hair or sweat glands.
- has rapid cell turnover
- provided with sensitive nerve endings

Vermilion zone

- where makeup products are applied

Lips Shape

- due to the muscles "*orbicularis oris muscle*" and soft connective tissue of which they are made



In the lips,

- production of natural emollients is very low
- contain less water than other areas of the face
- lose water faster than the cheeks

“Bleeding”

- fine lines and deeper wrinkles develop on the upper and lower lips that may cause lip makeup products to flow into these lines from the red area of the lips



HISTORY

- Most history of lipstick dates back to the prehistoric times.

Ancient Mesopotamia

- tinted their lips with crushed gemstones and inorganic ingredients

Ancient Egyptians

- squeezed out a purple-red color from plants, leading to death. "the kiss of death."
- Cleopatra used crushed ants and carmine in a base of beeswax

1915

- lipstick started to be sold in metal containers, with various push-up tubes.

Max Factor

- invented the first lip gloss in the 1930s

Ms. Bishop

- introduced the first long-lasting and non- smearing lipstick

Types of Lip Makeup Products

Lipsticks

- are designed to enhance the appearance of the lip by imparting color and gloss.

Lip Glosses

- are designed to give the lips a glossy luster and, sometimes, subtle color.

Lip Liners

- are designed to redefine the outline of the lips.

Lip Balm

- aka *Lip Protectant*, are designed to prevent dryness of the lips and help relieve chapping.

EFFECT OF LIP MAKEUP PRODUCTS ON HUMAN LIPS

Long wearing lipstickThs

- tend to dry the lips.
- Silicone
- "kiss-resistant"

Lip plumping lipstickThs

- tend to dry the lips.
- Menthol and Camphor

Lip cancer

- Occurs in men more frequently than in women.

LipsticThs and lip balms with UV filters

- Block the sun's rays and prevent penetration.

Lip balms containing sunscreens

- Prevent the reoccurrence of herpes simplex.

REQUIRED QUALITIES AND CHARACTERISTICS AND CONSUMER NEEDS

- Attractive shade
- Homogeneous color when applied
- Good coverage
- Long-lasting effect
- Pleasant taste and smell
- Easy to apply

- UV protection (common requirement)
- No staining or bleeding into the fine lines surrounding the lips

Lip glosses

- provide a wet and shiny look

Lip liners

- have high pigment content to accent the lines off the lips, firm enough not to run into the lines around the lips

Lip balms

- moisturize the lips and prevent chapping

TECHNICAL QUALITIES

- Long-term stability
- Dermatological safety
- Creamy gliding without a greasy sensation
- Firm adherence to lips without being brittle and tacky
- High retention of color intensity without any change in shade
- Appropriate rigidity and hardness
- Resistance to temperature from 39°F to 104°F (4-40 °C) without hardening or running.

INGREDIENTS

1. WAXES

- act as structuring agents, providing lipsticks with rigidity and solidity.
- allow lipstick to be molded into shape
- **Ex:** beeswax, candelilla wax, carnauba wax, paraffin wax, ozokerite wax, microcrystalline wax, polyethylene, and lanolin alcohol

2. OIL, FATS & BUTTERS

- Provide a slippery and soft texture to the formulations
- Have a moisturizing effect and act as emollients
- **Ex:**
 - 1. **Plant oils** (castor oil, grape-seed oil, almond oil, meadowfoam oil, olive oil, coconut oil, palm oil, and triglyceride)
 - 2. **Butters** (avocado butter, sheabutter, and coco butter)
 - 3. **fatty acid esters** (sopropyl myristate, so-propyl palmitate, isostearyl isostearate, and butyl stearate)
 - 4. **Hydrocarbons** (polyisobutene, mineral oil petrolatum, mododecane, and isowcosane)
 - 5. **Silicones** (dimethicone and cyclomethicone)

3. ANTIOXIDANTS

- Prevent rancidity and the oxidation of sensitive ingredients.
- **Ex:** Vitamin E butylated hydroxyanisole (BHA), and butylated hydroxytoluene (BHT)

4. PRESERVATIVES

- Provide protection against microbiological contamination.
- **Ex:** Parabens Phenoxxyethanol

5. COLOR ADDITIVES

- most important components from a commercial and appearance point of view.
- **Ex:**
 - 1. **Inorganic pigments:** iron oxides (red, yellow, brown, and black), titanium dioxide, and zinc oxide
 - 2. **Organic colors:** reds (such as Red 6, 7, and 21), yellows (such as Yellow 6), oranges (such as Orange 5 in a concentration ≤5%). Lakes such as Red 7 Lake and Yellow 5 Lake.

- The most frequently used special effect pigments include lead, **micas coated** with iron oxides and titanium dioxide and bismuth oxychloride.

6. FLAVORING AGENTS

- Provide a pleasant taste.
- **Ex:** Sweeteners such as sodium saccharin, cinnamon or menthol.

7. TEXTURIZING ING.

- Improve the texture, application, and stability of products.
- **Ex:** talc, silica, and mica, titanium dioxide and bismuth oxychloride

8. FIXATIVES

- Prevent colors from bleeding on the lips, they help seal the lipsticks on the lips.
- **Ex:** Silicone resins

9. FRAGRANCE

- Mask fatty or wax odor.

10. ACTIVE ING.

- lip protectant ingredients and UV filters
 - Allantoin in 0.5-2%
 - Cocoa butter in 50-100%
 - Dimethicone in 1-30%
 - Glycerin in 20-45%
 - White petrolatum in 30-100%

TYPICAL LIPSTICK TYPES

Matte

- These are rich in pigments and waxes but lighter in emollients. Mattes can often be longer wearing than shinier types of lipstick.

Glossy or Gaze

- These are heavy in oil and often contain flavors and scents as well. They usually add shine and volume to the lips.

Creme

- As well as satin and sheer lipsticks usually fall between mattes and glosses. Crème lipsticks typically contain pigments with a smaller particle size to achieve a silky effect.

Shimmer

- It is also known as frosted sticks, containing light reflecting particles, such as coated micas with a larger particle size, to add luster to the color.

Long-wearing

- These are usually two-part systems consisting of a colored base formula and a colorless cover. It may also contain silicones and hydrocarbons, which seal in the color.

Lip plumping

- Are designed to make lips appear fuller by slightly irritating the delicate skin on the lips to make them swell. Ingredients used to provide this effect include ginger, cinnamon, cayenne, camphor, and menthol.

FORMULATION OF LIP MAKEUP PRODUCTS

MOLDING

- The most frequently applied technique to produce lipsticks and lip balms is the process.

THE USUAL STEPS OF THIS TECHNIQUE INCLUDE:

1. Pigment premilling

- A step where agglomerates in the powder color are broken up. This step is generally performed by preparing a "pigment grind" using an oil, such as castor oil, with a triple roll mill, bead mill, or similar conventional mill, or pestle and mortar for the laboratory-scale preparation.

2. Melting and Mixing

- Since waxes are solid at room temperature, they cannot be mixed with the other components and poured into the lipstick molds. In order to make these steps possible, waxes should be heated and melted.

3. Molding

- The actual step where the melted lipstick mix is poured into plastic or metal molds.
- The mix is typically poured in excess since its base (which is the top during molding) shrinks as it cools.
- Most commonly, plastic or metal vertical split molds are used.

4. Flaming

- The last step of lipstick formulation where sticks are passed through flame, e.g., using a gas burner, to produce a glossy finish to lipsticks.

Variations for the Molding Technique

- Additional techniques include molding without laming, simple mixing without heating, as well as extrusion.

Lip balms

- formulated using a base similar to that of lipsticks
- Contain additional moisturizers, sunscreens, or other active ingredients
- Lip balms In a stick form are usually formulated with the molding technique.

Lip Glosses

- Contain a smaller amount of waxes and larger amounts of oils
- If they contain waxes, melting is still necessary to mis the ingredients
- They will also formulated via molding.

Lip Liners

- pencils can be made via molding.
- product can be placed into a refrigerator until the filling solidifies
- Melted mix is injected directly into the hollow barrels using a syringe.
- Before use it should be sharpened

Extrusion

- Pencil form lip makeup product are formulated by special technique called "extrusion"
- a roller mill is used to mill the whole mixture

TYPICAL QUALITY PROBLEMS

- Aeration
- Laddering
- Chipping or Cracking
- Deformation
- Cratering
- Streaking
- Sweating
- mushy Failure

- Seams
- Bleeding



Evaluation of Lip Makeup Products

Break Strength

- it must not bend crumble, crack or application break during
- Hemispherical-edged blade

Color matching

- a process when dispersed pigments and the finished product are compared to a previously approved standard color
- Spectrophotometers

Color Brightness and Streakiness

- evaluated visually, and using a spectrophotometer or colorimeter

Rigidity of Lip Liner Pencils

- must allow the tip to be sharpened to a certain point to provide a defined line upon application
- Rigidity Test

Efficacy Parameter Generally Tested

moisturizing Effect

- lip makeup products claiming to moisturize the lips should truly provide moisturization on application.

Methods:

- Conductance
- capacitance.

Main Ingredient that caused safety concerns

Lead Content

- can be found color additives used for lip makeup products especially in red colors.
- Lead contamination: lipsticks may be ingested during wear high poisonous

PACKAGING

Lipstick Cases

- "aka tubes " Lipsticks are placed in the cases after molding and cooling, while lip balms are directly molded into the tubes.

Lip Gloss tubes

- dispensed from clear glass or plastic tubes to which is fitted cap that incorporates a wand with an applicator attached

Jars & Pots

- Alternatively, lip glosses and lip balms can be packed into small jars, pots, or thin metal tins, which are then applied with fingers.

Pencil Cases

- similar to the lipstick cases, they can twist and push the lead up during application.