

Chapter 21: Haircoloring

Cosmetologists should study and have a good understanding of haircoloring *because knowledge of excellent haircolor services provide stylists with an opportunity for creative expression, they allow stylists to cover grey and enhance haircuts and hide facial imperfections, and ensure stylists have the ability to work safely with the chemicals in the products to ensure the client is protected from harm.*

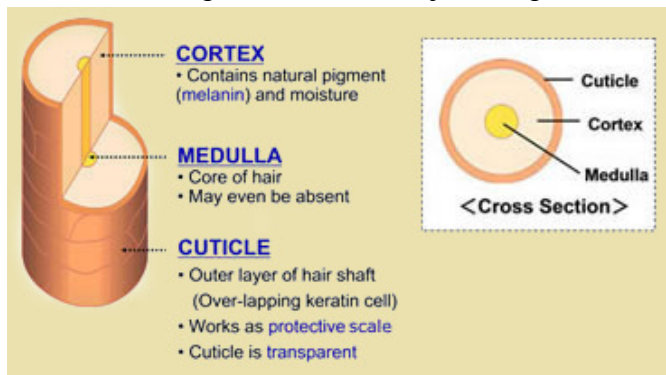
Why Do People Color Their Hair?

- Cover up or blend grey (pigmented) hair
- Enhance and existing haircolor
- Create a fashion statement
- Correct unwanted tones in hair created by the environment (such as sun or chlorine)
- Accentuate a particular haircut

Hair Facts (p. 630-631)

Hair Structure

Hair is composed of three major components:



- **Cuticle**- outermost layer; protects the interior cortex and contributes up to 20% percent of the overall strength of hair
- **Cortex**- middle layer; gives hair the majority of its strength and elasticity
- **Medulla**- innermost layer of the hair; ; it is sometimes absent from the hair and does not play a role in haircoloring

Texture

Hair texture is the diameter of a single strand of hair.

- **Coarse**- large diameter
- **Medium**- medium diameter
- **Fine**- small diameter

***Melanin** is distributed according to hair structure

- **Fine hair**- melanin granules are tightly grouped, take color faster and look darker
- **Medium hair**- average reaction to haircolor
- **Coarse hair**- melanin granules are loosely grouped meaning color takes longer to process

Density

Hair density refers to *the number of hairs per square inch*; can range from thin to thick; must be considered to ensure proper coverage

Porosity

Hair porosity refers to hair's *ability to absorb moisture*.

- **Low porosity**- *cuticle is tight*; hair is resistant; requires longer processing time
- **Average porosity**- *cuticle is slightly raised*; hair is normal and processes in average amount of time
- **High porosity**- *cuticle is lifted*; hair takes color quickly; also tends to fade quickly

Test for porosity:

- Take several strands of hair from four different sections of the head
- Hold strands securely and slide thumb and forefinger of other hand from ends to the scalp
- If hair feels smooth, the cuticle is compact, dense, and hard (low porosity); if hair feels rough (average porosity); if hair feels very rough, dry or breaks (high porosity)
- Observe hair wet and dry to see porosity
- Extremely porous hair rejects warmth when color is applied and can process more quickly which results in deeper color

Identifying Natural Hair Color and Tone (p. 631-636)

Natural Hair Color

Natural hair colors range from black to dark brown to red and from dark blond to light blond.

There are three types of melanin in the cortex:

- **Eumelanin**- lends *black and brown* colors to the hair
- **Pheomelanin**- gives hair *blond and red* colors
- **Mixed melanin**- combination that contains *both* eumelanin and pheomelanin

Contributing pigment- also known as undertone; varying degrees of warmth exposed during a permanent or color lightening process

The Level System



The level system is a system used by colorists to determine the lightness or darkness of a hair color.

1 is the darkest and 10 is the lightest

Identifying the Natural Level

- Take a ½” square section in the crown area and hold it up from the scalp, allowing light to pass through it
- Use the natural level-finder swatch provided by the manufacturer, select the swatch you think matches and place it against the hair
- Move the swatch from the scalp area along the hair strand
- Determine the natural-hair color level

Gray Hair

Gray hair is hair that has lost its pigment and is normally associated with aging; most people retain a certain percentage of grey hair

Color Theory

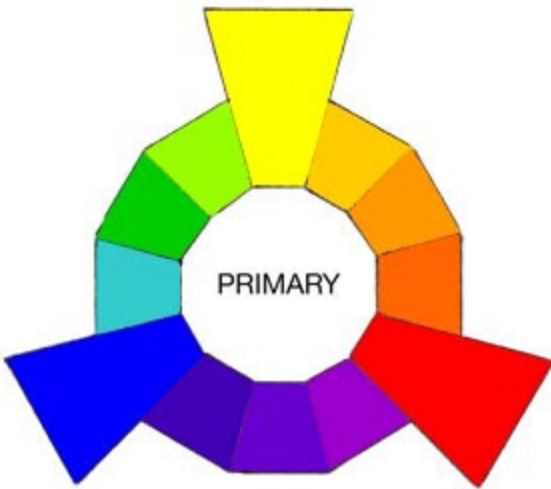
Color is describes as a property of objects that depends on the light they reflect and is perceived by the human eye as red, green, blue, or other shades.

Base color is the predominant tone of color.

Law of Color

- System for understanding color relationships
- When combining colors, you will always get the same result for the same combination

Primary Colors are pure or fundamental colors; colors with a predominance of blue are cool colors while colors with a predominance of red/yellow are warm colors.

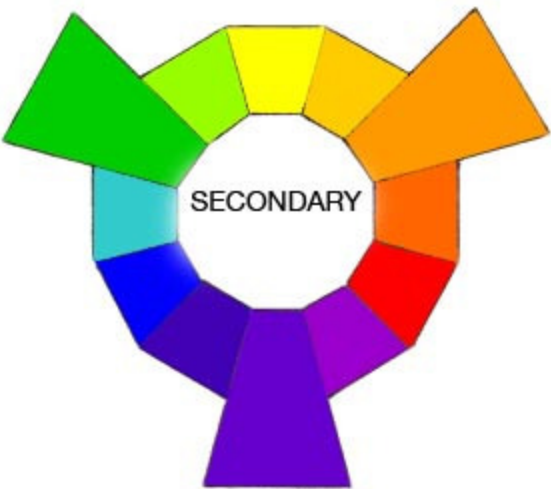


Blue- strongest of primary colors; can bring depth or darkness to any color

Red- medium primary color; adding to blue-based colors makes them appear lighter; adding to yellow makes them appear darker

Yellow- weakest of primary colors; when added to other colors they will appear lighter and brighter

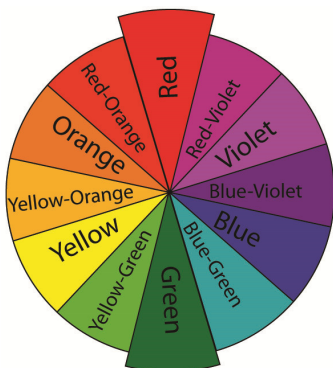
When all three primary colors are present in equal proportions, the resulting color is brown.



Secondary Colors are colors obtained by mixing equal parts of two primary colors. The secondary colors are green, orange, and violet.

Tertiary Colors are intermediate colors achieved by mixing a secondary color and its neighboring primary color on the color wheel in equal parts.

Natural-looking hair color is made up of a combination of primary colors, secondary colors, and tertiary colors.



Complementary Colors are primary and secondary colors positioned directly opposite each other on the color wheel (blue and orange; red and green; yellow and violet)

Tone or Hue of Color

Tone, also known as hue, is the balance of color.

Tone may be described as warm, cool, or neutral.

- **Warm tones-** look lighter than their actual level; typically are called golden, orange, red, and yellow (auburn, amber, copper, bronze, strawberry)
- **Cool tones-** can look deeper than their actual level; typically are called blue, green, and violet (smoky or ash)
- **Natural tones-** warm tones that are described as sandy or tan

Intensity refers to the strength of a color.

- May be described as soft, medium, or strong; color intensifiers are tones that can be added to a haircolor formula to intensify the result

Base color is the predominant tone of a color.

- Each color is identified by a number and a letter
- The number indicates the LEVEL and the letter indicates the TONE; example 6G is a Level 6-Dark Blonde with a G-Gold Base

TYPES OF HAIRCOLOR (p. 636-642)

Haircoloring products generally fall into two categories: non-oxidative (temporary and semi-permanent) and oxidative (demi-permanent and permanent). All (except temporary) require a patch test.

All permanent haircolor products and lighteners contain both a developer (oxidizing agent) and an alkalizing ingredient. The alkalizing agent: raises the cuticle so haircolor can penetrate the cortex, increase the penetration of dye within the hair, and trigger the lightening reaction of peroxide.

Temporary Haircolor (p. 637)

- Neutralizes yellow hair or unwanted tones
- Non-permanent color whose large pigment molecules prevent the penetration of the cuticle
- A coating action that may be removed by shampooing
- Makes only a physical change, not a chemical change
- No patch test required
- Available as: color rinses, colored mousses and gels, hair mascara, spray-on color, and color-enhancing shampoos

Semi-Permanent Haircolor (p. 637)

- No-lift, deposit only, non-oxidation haircolor
- Lasts through several shampoos (depending on hair porosity)
- Are not mixed with peroxide; used straight from the bottle
- Does require a patch test

Demi-Permanent Haircolor (p. 638)

- No-lift, deposit-only haircolor
- Does not lighten color
- Deepen or create a change in tone on natural haircolor
- Hair color glaze- adds shine and color to the hair

Permanent Haircolor (p. 638)

- Lighten and deposit color in a single process because they are more alkaline than demi-permanent colors and are usually mixed with a higher-volume developer
- Used to match, lighten, and cover grey hair
- Requires a patch test
- Contain uncolored **dye precursors** called **aniline derivatives** which are small, uncolored dyes that combine with hydrogen peroxide to form larger, permanent dye molecules within the cortex
- Not easily shampooed out
- **Soap Cap**- equal parts of permanent color mixture and shampoo used during the last five minutes of a hair color service and worked through the hair to refresh the ends

Natural and Metallic Haircolors (p. 639)

- Not usually used in the salon
- Natural (vegetable) haircolors- do not lighten; end result tends to be weak; shade ranges are limited; many chemical products cannot be applied over natural haircolors
- Metallic (gradual) haircolor- contain metallic salts that change haircolor gradually by progressive buildup and exposure to air
- Create a dull, metallic appearance

Hydrogen Peroxide Developers p. 639)

- One of the most commonly used developers
- Supplies the necessary oxygen gas to develop the color molecules and create a change in natural haircolor
- Volume- measures the concentration and strength of hydrogen peroxide
 - Lower the volume- less lift; higher the volume-greater the lift

Lighteners (p. 640)

- **Lighteners**- chemical compounds that disperse, dissolve, and decolorize the natural hair pigment
- **Double-process application**- also known as two-step coloring; a lightener is used to achieve the desired lift, then a toner is used to add a soft tone back to the hair
- **Decolorizing**- hair can go through as many as ten stages (although not all hair will go through all ten stages); allows the colorist to create the exact degree of contributing pigment needed for the final result

Consultations are the most important part of the color service.

A release statement should be signed by a client whose hair is in questionable condition and may not withstand the requested chemical treatment.

Haircolor Formulation (p. 643)

- **Mixing permanent colors**: this is determined by the type of application you are using
 - Applicator bottle- large enough to hold the color and the developer with room for shaking until the mixture is thoroughly mixed
 - Brush and bowl- use non-metallic bowl and applicator brush

HAIRCOLOR APPLICATIONS (p.647-650)

- **Patch test (predisposition test)**: USFDC requires a patch test 24-48 hours before each application of an aniline haircolor; a small amount of the haircoloring to be used is swabbed behind the client's ear or inside the client's elbow; redness, rashing, or a welt is a sign of an allergic reaction and the haircoloring should not be used.
- **Strand test**- determines how the hair will react to the color formula and how long the formula should be left on the hair; performed after the client is prepared for the coloring service
- **Single-process permanent color**- lightens and deposits color in a single application; used for virgin applications and color retouch applications
- **Virgin application**- first time hair is colored
- **Color retouch applications**- haircolor is applied to new growth and to refresh faded ends
- **Glaze**- a non-ammonia color that adds shine and tone to hair
- **Line of demarcation**- a visible line separating colored hair from new growth
- **Double-process haircolor**- also known as hair lightening or bleaching; chemical process involving the diffusion of the natural hair color pigment; pre-lightening is the first step

Lighteners (p. 650)

- **Cream, oil, and powder lighteners** are used on the scalp because they are easy to apply
 - Oil- the mildest type; appropriate for one or two levels of lift (may be used to lighten facial and body hair as well)
 - Cream- strong enough for high-lift blonding but gentle on the scalp; thicker
- **Activators (boosters, protinators, accelerators)**- powered sulfate salts added to haircolor to increase its lightening ability
- **Powdered off-the-scalp lighteners**- also known as quick lighteners; cannot be used directly on the scalp; strong-acting; may dry out quickly but do not run or drip

Special Effects Haircoloring (p. 653)

- **Highlighting**- involves coloring some hair strands lighter than the natural coloring to add the illusion of depth
- **Lowlighting (reverse highlighting)**- technique that adds darker color to some strands in order to make less detail visible
- **Cap technique**- pulling clean dry hair through a perforated cap with a thin metal or plastic hook and then combing them to remove tangles and then applying lightener
- **Foil technique**- slicing or weaving out sections of hair, placing them on foil or plastic wrap, applying lightener or permanent haircolor, then sealing them in for processing
- **Baliage** (free-from technique)- painting lightener on clean, styled hair; very subtle look