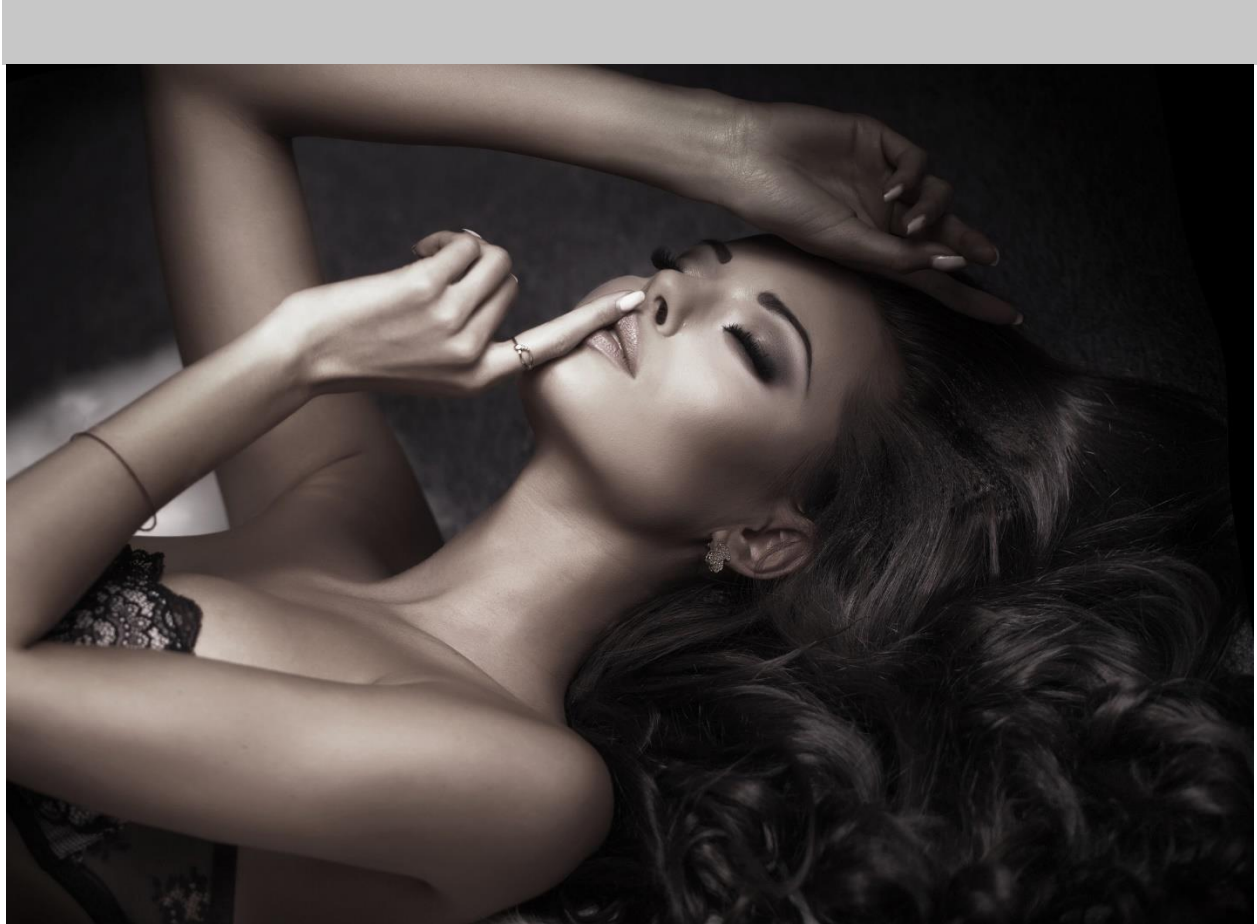


Hair Color 101



Hair is constituted for a percentage between 65% and 95% of solid proteins such as keratin and for the rest of water, lipids, pigments and trace elements. Melanin is also another solid protein that gives color to the hair. Keratin is composed of amino acid called lysine and cystine. Aron followed by zinc, magnesium and cooper are other important substances in the life of the hair and all take part of the melanin process formation. They look like fluff in the fourth month of their fetal life. They grow to a speed of around 0,3 mm a day (1 cm for month). The hair has a circular growth of 2 to 6 years even if there are documented cycles of over 10 years. The hair falls and is replaced at the end of each cycle.

The cycle of the hair is formed by the succession of three phases:

- Anagen
- Catagen
- Telogen

Even the hair length is very variable and rarely reaches the meter. Hair is the only part of the body that keeps on growing during its life, together with nails and shave.

The Hair follicles have androgen receptors, and other enzymes responsible for their conversion into other androgenic hormones in the scalp:
Androgen receptors contained in the women's follicles are approximately 40% less than in men.

The hair is divided into three parts:

- The cuticle: is the external layer of the hair and it is constituted by cells that have to protect the inside of the hair from possible chemical damages, physical and also from mechanical traumas.
- The bark: is the intermediary layer of the hair and is also the most abundant. It has a melanin pigment and it is the layer in which most of the chemical treatments operate. It is responsible for the main physical properties of the hair such as resistance and elasticity.
- The marrow: is the central part of the hair. It is very abundant in animals and it is 50% of the mass of its hair. However, it is very scarce and sometimes it is absent in the human hair. Its function is not well known and it is probably related to the thermoregulation.

by [Kendra Aarhus](#)
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Have you ever heard your hairdresser talking about your hair color and wondered what planet she was living on? It's not just you: Hair color can be confusing. Color names geared for the consumer are rather artful and subject to interpretation (think "cafe au lait"). Technical color designations, on the other hand, typically consist of numbers and letters that describe nuances about the color in a language only your hairstylist seems to understand.

Here, we dissect the very basics of hair color, what your hairdresser knows, and how you can be more informed when speaking to your stylist or choosing your next color.

What Hair Color Is—and Isn't

First, let's define hair color. Basically, it's a formulation of pigments and chemicals designed to enhance or [change your hair's color](#). Don't call it "dye," though, Those in the beauty industry never refer to hair color as "hair dye." As beauty school instructors tell their students, "You dye an Easter egg; you don't dye hair."

Defined as your hairstylist communicates it, the term [hair color](#) refers to the combined level and tone of a person's hair. These are two distinct elements, and they're crucial for you to understand to get the hair color results that best match your desires.

Hair Color Level

The "level" of a hair color is its relative lightness or darkness. All hair colors have levels, whether you're talking about your natural color or choosing a new one.

Standard hair color levels are defined on a scale of 1 to 10, with level 1 being the darkest, blackest color and level 10 being a very light blond color. The scale is understood throughout the beauty industry and is used across brands and formulations. Here are the 10 standard hair color levels:

- Level 1: Black
- Level 2: Darkest (almost black) brown
- Level 3: Very dark brown
- Level 4: Dark brown
- Level 5: Brown
- Level 6: Light brown
- Level 7: Dark blond
- Level 8: Medium blond
- Level 9: Blond
- Level 10: Light blond

In addition, the very lightest platinum-[blond colors](#) are often referred to as level **Super Blond** with Philip Martin's Organic Based Color.

Hair Color Tone

After establishing the level of your natural or desired hair color, you'll next have to figure out its tone. Hair color tones generally fall into three standard categories: warm, cool, and neutral. When hairstylists discuss color, or if you are choosing a color from a swatch book, the tones are often indicated with a letter. Here are examples of standard color tones:

Cool Tones

- A: Ash
- B: Beige
- B: Blue
- G: Green
- V: Violet

Warm Tones

- C: Copper
- G: Gold
- O: Orange
- R: Red
- W: Warm
- RB: Brown/Red
- RO: Red/Orange

Neutral Tone

- N: Neutral—neither warm nor cool

Tones are often combined in hair color formulas to create the perfect shade. For example, an auburn color is achieved by combining neutral or warm tones with red tones. Red hair color can be made cool by adding violet tones to the color formula. Sometimes, hair colorists achieve the right color combination by mixing different color tones together; they receive training in school or through color manufacturers in creating these custom combinations.

[Hair color companies](#) typically offer colors that feature ready-mixed tones, as well.

Combining Level and Tone

A hair color's technical name is a letter-number combination that denotes its level and tone. For example, a warm brown color would be defined as a "7W." The number indicates the hair color level (dark blond), and the letter indicates that the tone is warm. Here are a few other examples of hair color as defined by level and tone:

- 8A: Medium ash blond
- 4RV: Dark red/violet
- 6C: Light copper brown
- 5N: Neutral Brown
- 9W: Light warm blond

Determining Hair Color Level and Tone

Figuring out a hair color level is pretty simple once you get the hang of it. Your opinion might be a level off from the next person's opinion, but generally speaking, the level is fairly obvious. Hair color tone, however, is not as easily defined by the eye.

What one person may see as "red" the next person may describe as "copper." This is where pictures and swatches come in handy to ensure that everyone is speaking the same language.

The most important thing to remember when discussing hair color with your stylist is that hair color is not flat (or, at least, it shouldn't be). It's a complex interplay of depth and temperature that can enhance or detract from your skin color and features. Communicating with her using the terms "level" and "tone" helps her understand what you want. Likewise, understanding the two will help you choose wisely.

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Be on the Level

The first step to formulating perfect hair color is to determine the natural level of your client's hair. Level 1 is the darkest and 10 is the lightest (level 12 high-lift blonde is not included in natural levels). Once you know the natural level you can then move on to determine what the desired level will be.

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Underlying Pigment - Use It or Lose It?

Let's say your client is a natural level 6 and their desired color is a level 9 ash. The [underlying pigment](#) of a level 6 is red-orange, so, in this case, you will have to 'loose' the red-orange pigment. If your client wants a desired color that is warm, then you could 'use' the underlying pigment in your favor.

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Texture, Porosity and Density

The last step before formulation is to determine your client's texture, porosity, and density. If your client has a lot of thick, coarse hair, then you will need to mix the appropriate amount of color.

-Note that coarse hair can be more difficult to penetrate and in some cases a higher volume of developer is required to open the cuticle.

Next, you will determine the porosity of the hair. If the client has very porous hair that will grab color in an instant, then you will have to formulate accordingly. For example, shorter processing times and/or using a level lighter than the desired outcome.

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Application

However, you choose to apply your client's color — balayage, all-over, highlights or a gloss, the most important step in application is organization.

Mix enough color, but not too much (all of that wasted color adds up in dollars!) and make sure that once you start applying the color you have everything you need.

Your client should be draped, and a color barrier (conditioner or any type of styling cream) should be applied to the hairline and ears. Once you've applied your color, make sure to double check that the hairline is completely saturated, as this is the area that gets missed most often.

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Rinse On, Rinse Off

Once you have shampooed the color out, you can determine if you will need to [break the base](#) or do a gloss. If you're using a [semi or demi-permanent color](#), you can wet the hair down a bit and run the color through the ends for a few minutes to freshen them up.

Tip - If your client can tolerate it, try [rinsing color out](#) with luke-warm or cool water. Hot water opens up the cuticle and allows the color to fall out, while cool water seals the cuticle and the color in it.

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Toning and Glossing

If you are applying a toner or gloss, shampoo the hair but do not apply conditioner. Towel dry the hair until it is damp, not wet.

Back to our client with the natural level 6 hair who wants to be a level 9 ash

- Once you've lightened the hair, you'll most likely be left with color that is warmer than desired. To counteract warmth in the hair, you will need to apply a green or blue based color. You can also check your color wheel to determine the best base for your toner or gloss.

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Clean Up!

Make sure to check your client's hairline for any leftover color. Nothing is worse than a [beautiful hair color](#) with big telltale color blotches on the face or neck.

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Cut and Style

If you will be cutting your client's hair, always color the hair first. This way you won't have to bother with shampooing the hair twice.

While you are styling your client's hair, this is a perfect time to educate them about taking care of their color at home.

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After Care Products

Using after care products at home can be the difference between color that lasts a few weeks to a few months.

Clients can purchase color safe shampoo and conditioner or a shampoo that deposits a bit of color each time they wash. Also warn your clients about the sun and chlorine as they can be big factors in altering their [hair color](#).

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Write Down That Formula!

Make your life a whole lot easier by recording your client's formulas in a client book. It takes two seconds, and when your client comes back asking for that perfect hair color you did last time, you'll know exactly what they're talking about!

Where creativity lives