Hair Coloring Theory (12 hours)

Continuing Education Course - Cosmetic Art

Presented by:

ContinuingCosmetology.com

info@continuingcosmetology.com

407-435-9837

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Course Outline
- Color Theory
- Product Formulations
- Color Wheels
- Level Charts
- Precautions
- Client Procedures

Key Terms

aniline	*consultation*	*porosity*	*service plan*
client intake form	*decolorization*	*predisposition*	*single-process application*
color maintenance	*eumelanin*	*pheomelanin*	*tertiary*
color restoration	*melanin*	*release form*	*texture*
complementary	*oxidation*	*scenario*	

Learning objectives:
After completing this lesson you will be able to:
- identify safety precautions
- describe the porosity test
- define types of melanin
- describe the level system chart and it's values
- describe properties of the color wheel
- identify primary, secondary, tertiary and complementary colors
- list the different types of hair coloring product formulations and their use
- describe the patch test
- describe hair coloring product developers
- describe the process of decolorization
- describe the decolorization chart and it's values
- describe the contributing pigment chart and it's values
- identify the client consultation
- define inclusions of the client intake form
- describe hair analysis
- identify inclusions of a service plan
- define inclusions of the release form
- describe color restoration

Introduction

The purpose of this study module is to review the principles, practices and theories of hair coloring. **Precautions:** To ensure the safety and accuracy of product use for coloring services that you perform, please consult the product company and their published instructions and information regarding their formulations. Never take for granted that you already know how to prepare or process hair coloring products that you are unfamiliar with. To do so could cause injury to yourself or your client. Also, keep in mind that companies sometimes change their formulations. This may or may not effect the way you mix and apply their product. However, to be abreast of any changes, you should establish the practice of reading all packaging enclosures, labels and instructions as part of your customary preparations prior to performing color services.

Color Theory

Porosity

One of the first things to consider when planning a color service is the degree of porosity of the hair. **Porosity is defined as the hair's ability to absorb moisture.** It is not to be confused with hair texture. These are two different terms that refer to two different aspects of the hair.

The amount of porosity is to be analyzed and placed into one of three categories. Cosmetic Art Science terms these categories as "degrees of porosity".

The degrees of porosity are: low, average and high.

There are clinical techniques to determine hair porosity. During testing you will be using your sense of touch to categorize the client's hair.

You will test the four main areas of the head:

1. the front hairline
2. the temple
3. the crown
4. the nape

Create a small strand of just a few hairs and hold it perpendicular to the head. With the opposite hand, grasp the hair strand using your thumb and forefinger then slide your fingers slowly and gently from the ends to the scalp. You are feeling for the amount of roughness of the hair cuticle.

The smoother the hair feels the lower the degree of porosity that is present. **The rougher the hair feels   the higher degree of porosity that is present.**

Low Porosity: The hair feels smooth when tested.

Hair that has a low degree of porosity has a lessened ability to absorb moisture and is considered resistant to chemicals. **Hair that has a low degree of porosity might take longer to process.**

Average Porosity: The hair feels slightly rough.
Hair that has an average degree of porosity is considered normal. It is for this degree of porosity that chemical formulations of hair color are designed for when the label refers to processing instructions for "normal" hair.

High Porosity: The hair feels very rough.
Hair that has a high degree of porosity is considered overly porous. **Color processing takes less time and the hair may lose it's color quicker due to the open cuticle.**

Texture
Texture is the term used in Cosmetic Art Science to describe the diametric measurement of a hair strand. There are three categories of measurement when analyzing the diameter of a hair strand: large, medium and small. The corresponding terms for these textures are termed as:**coarse, medium and fine.**

Analyzing the clients' hair texture is important when planning a color service for the following reasons.

Melanin
Melanin (pigment) is created and dispersed in varying amounts in each of the texture categories. **Melanin is most compact in fine hair and less compact in coarse hair.** Where there is more compact melanin, the hair can take on more depth and become darker during a color service. Where there is less compact melanin, the hair can take longer to process. It is important to consider this theory during the planning phase of a color service.

Eumelanin
Eumelanin is the pigment that is found in natural hair that gives it tonal hues of blacks and browns.
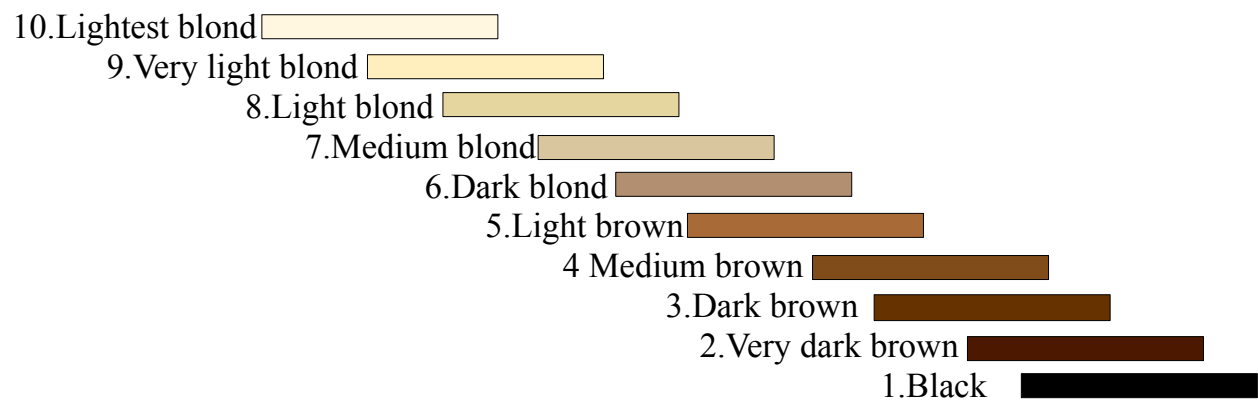
Pheomelanin
Pheomelanin is the pigment that is found in natural hair that gives it tonal hues of blonds and reds.

The Level System
Cosmetic Art Science has developed a way to identify and categorize the lightness or darkness of the color of hair into units of measurement. It is called the level system and is used to identify and put into perspective color density. It is also described as: the amount, concentration or saturation of color.

The Level System
Figure 1 (levels of color)

10.Lightest blond
9.Very light blond
8.Light blond
7.Medium blond
6.Dark blond
5.Light brown
4 Medium brown
3.Dark brown
2.Very dark brown
1.Black

There are ten units of measurement in the level system. Level 1 is black and level ten is lightest blond. Each unit of measurement, from level one, gets lighter and lighter until it reaches the lightest color labeled as #10 - lightest blond.
The units are as follows: 10.Lightest blond; 9.Very light blond; 8.Light blond; 7.Medium blond; 6.Dark blond; 5.Light brown; 4 Medium brown; 3.Dark brown; 2.Very dark brown; 1.Black

It is important to note that the names given to the 10 degrees of color level can vary among product companies who manufacture color level swatches. The focus here is to identify degrees of color saturation and depth between levels, the degrees of lightness to darkness.

The building block for any color service is the initial analysis of the clients' level of color. Without mastering this step it is impossible to achieve accuracy in predicting the end results. Many hair product manufacturers include color level system swatches to make the job easier. After familiarizing yourself with the color levels you will become less dependent upon using the level system swatches. However, it is the best practice to continue using this tool throughout your entire career as a colorist in order not to inadvertently stray from accuracy of good analysis.

While learning the level system, it is imperative to use swatches otherwise you may develop an altered sense of level recognition. It is similar to a professional singer. Unless the performer practices with an accurately tuned instrument, such as a professionally tuned piano, he is at risk of altering his ability to recognize true and perfect intonation. This is a good example to compare with the professional colorist. Unless you train your eye with an "in tune" instrument, such as color level swatches, you are at risk of failing to develop a strong eye for color level recognition.
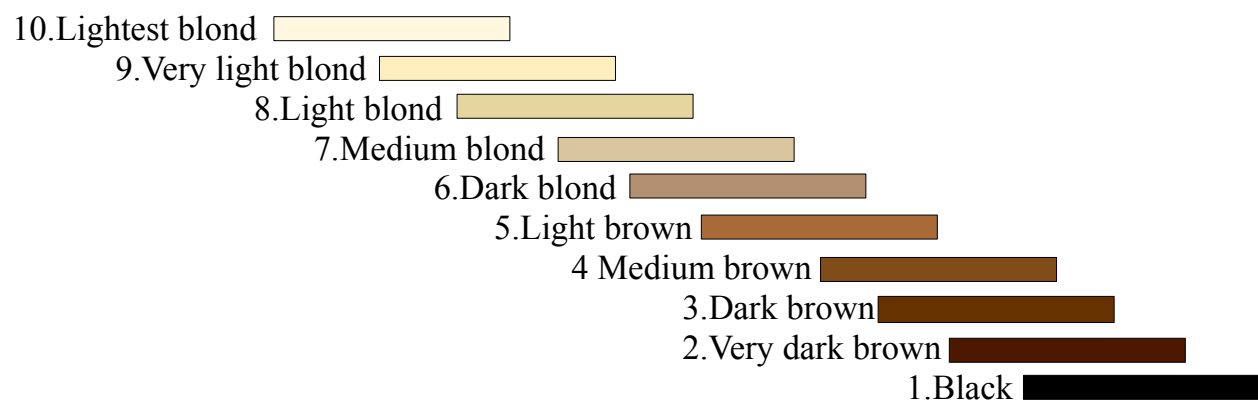
None the less it is superb practice to continue using color level swatches as customary practice for each color service no matter how trained your eye. All tools are to be implemented as appropriate to the service being rendered to maintain a level of excellence.

Again, we reiterate, it is the best practice to continue using this tool throughout your entire career as a colorist in order not to inadvertently stray from accuracy of good analysis.

Review this chart again.
The Level System
Figure 2 (levels of color)

10.Lightest blond
     9.Very light blond
        8.Light blond
          7.Medium blond
            6.Dark blond
              5.Light brown
                4 Medium brown
                  3.Dark brown
                    2.Very dark brown
                      1.Black

How To Use Color Level Swatches

The primary use of the color level swatch is during the initial client consultation. Later in this study we will discuss at greater length all components of a professional consultation, however for now we will focus on hair color analysis.

First determine the client's natural color level by sectioning the hair into about a half inch square at the crown of the head. Hold it perpendicular to the scalp so that light passes through it.

Select the natural color level hair swatch that you think best matches and place it against the strand to compare. You can check the hair at the scalp and throughout the strand by sliding the swatch up and down the strand to see if all parts of the hair strand are within the same level. Once you have determined color level, you will apply other color laws and factors that help in determining the services to be performed.

To develop the plan of service we also need to consider hues.

Color Hues

Also called tones, color hues are what hair color is all about when it comes to chemistry. Tones or hues are colors that we will be studying using the Color Wheel.
Without a complete understanding of color hues it is impossible to achieve natural results. The average patron coming into the salon to get their hair colored requires natural colored hair. Very few people, in comparison to the mass majority, want extreme or vivid colors such as green, purple or fire engine red. Most people want an attractive natural hair color. So the goal of creating natural color is a primary basic of color analysis.

We take into consideration the tone of the natural hair and the tones that we will add with hair coloring products in order to achieve the desired results. All tones play a part of the hair coloring equation. Becoming an expert color analyst is only achievable by learning the color wheel, it's tones and the theory behind it.

The Law of Color

Color is described as the property of an object that determines what the eye is perceiving based on how it reflects light. Hair can reflect components that we perceive as brown or blond but contain the colors of red, green, blue and other shades. In certain combinations of these colors, we perceive very dark brown hair. Other combinations of colors we perceive very light blond hair.
There are about as many shades and tones as your imagination will allow when it comes to color results. By adding blues and violets we can make the hair appear more ashy, by adding yellows and reds we make the hair appear more warm. Successful hair coloring is primarily the ability to properly add and remove colors.

We have many choices regarding hair color. We can add to the natural hair color. We can remove natural hair color, and we can also add and remove at the same time.
We can lighten the level and change the tone simultaneously. It is really an amazing art for the well-rounded colorist.
Becoming an expert colorist is one of the most important things you can do in the filed of Cosmetology. It is one of the most important services offered in the salon today. It is the best way to establish consistent repeat customers who due to the nature of hair growth must book their touch-ups regularly. This in turn, make for strong client-colorist relationships which results in dependable income.

Tonal Value

Here again the need for analyzing comes into play. Once you have established the level of hair color using the level system, now you must determine the different hues that the client's hair contains.
Determining levels and tones are the first steps in building the plan for the coloring process.
We take the natural color level, the natural color tones, and what the client tells you that she wants the end results to be, and work the equation.

The Basics of Hair Coloring Products and The Law of Color

Hair coloring products use primary and secondary colors. All hair coloring products have a base color which is the dominant color contained in the product. Base colors are determined by the product manufacturer with natural results in mind. The colorist will use the laws of color to determine how to use these products.
Through the ages several prolific scientists have discovered, theorized and defined what is now considered the laws of color. Whether in reference to an artist's paint on a canvass or a rainbow in the sky, there are certain laws we find in color creation that apply.

For example: always, without fail, **when you combine equal amounts of yellow and blue you will always get green. Equal amounts of red and yellow always make orange**. These examples are part of the laws of color and color creation.
Science has found that using the shape of a wheel and placing primary and secondary colors around the wheel in a certain order, they can best dictate color law into a meaningful conclusion.

Let's build a color wheel!
We will start with the primary colors.
Primary colors consist of yellow, red and blue.

Primary Colors
Figure 3

Yellow

Red   Blue
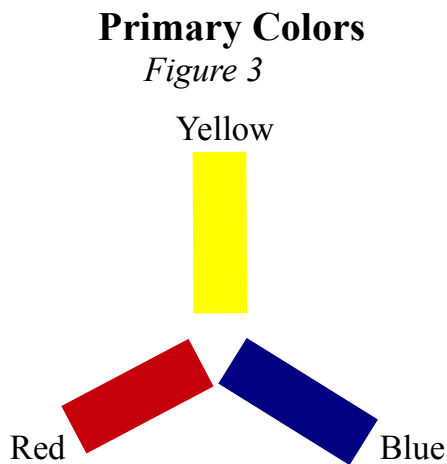
Primary colors are pure colors and can not be formed from combining any other colors. However you can use these colors to make other colors. In fact, **all colors are created from the three primary colors**.

Cosmetic Art Science uses the terms "cool" and "warm". **If a color has predominately blue tones it is considered to be cool.** If a color has predominately red or yellow tones it is considered to be warm.
This terminology helps in understanding color concepts when mixing hair coloring products.

To create a warmer shade, you can add more red. To create a cooler shade, you can add more blue. That would be a very basic rule of thumb however additional color concepts need to be mastered in order to have a complete understanding of hair coloring technology. For instance, blue is considered the strongest of all the primary colors and the only cool one.

In hair coloring concepts, it is good to know that the color blue can provide depth and darken any color.

As for red, it is considered a medium strength primary color. In hair coloring concepts, it is good to know that adding red to blue based colors makes them lighten. **Red added to yellow based colors makes them darken.**

Yellow is considered the weakest strength of the primary colors. When added to other colors it changes that color to a brighter and lighter appearance.

When the three primary colors (red, blue and yellow) are mixed together in equal parts, the following colors are created: black, gray and white, according to the level used.

When two primary colors are combined, a secondary color is created.
There are only three secondary colors. They are green, orange and violet.

Secondary Colors
Figure 4
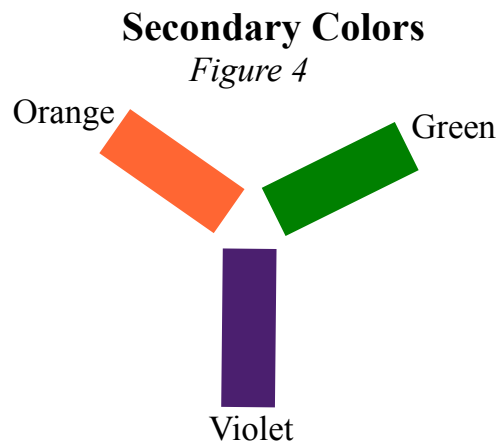
Orange
Green
Violet

Combing equal amounts of blue and yellow make green.
Combing equal amounts of red and yellow make orange.
Combing equal amounts of blue and red make violet.

By looking at the color wheel we can see that colors are in a specific order. **Tertiary colors are the colors created when combining equal amounts of a primary color and it's neighboring secondary color on the color wheel.**
Tertiary colors are: blue-green, blue-violet, red-violet, red-orange, yellow-orange and yellow-green.

Tertiary Colors
Figure 5

Yellow Orange

Yellow Green

Red Orange

Blue Green

Red Violet

Blue Violet
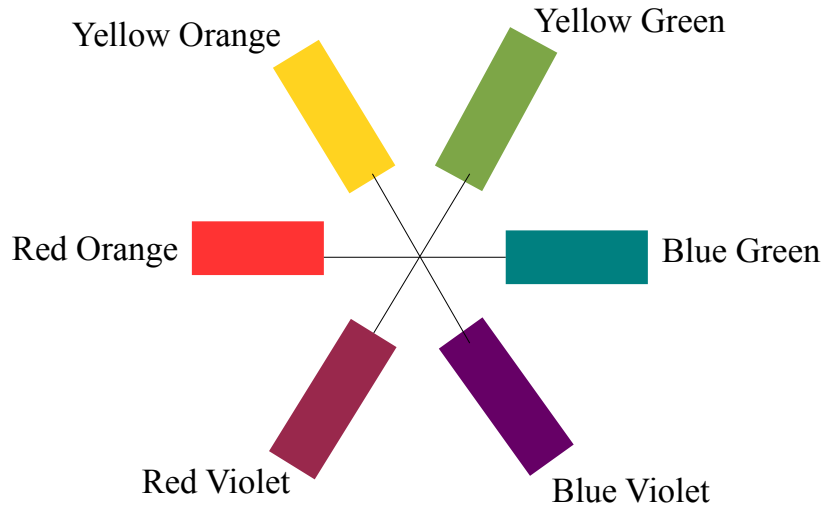
Complementary Colors

Complementary is the term used for primary and secondary colors that are directly opposite each other on the color wheel. Each color's complementary color neutralizes it's tone. For example: to neutralize an over abundance of yellow in the hair, use equal level of it's complementary color violet.

Complementary Colors
Figure 6

Yellow

Yellow Orange

Yellow Green

Orange

Green

Red Orange

Blue Green

Red

Blue

Red Violet

Blue Violet

Violet
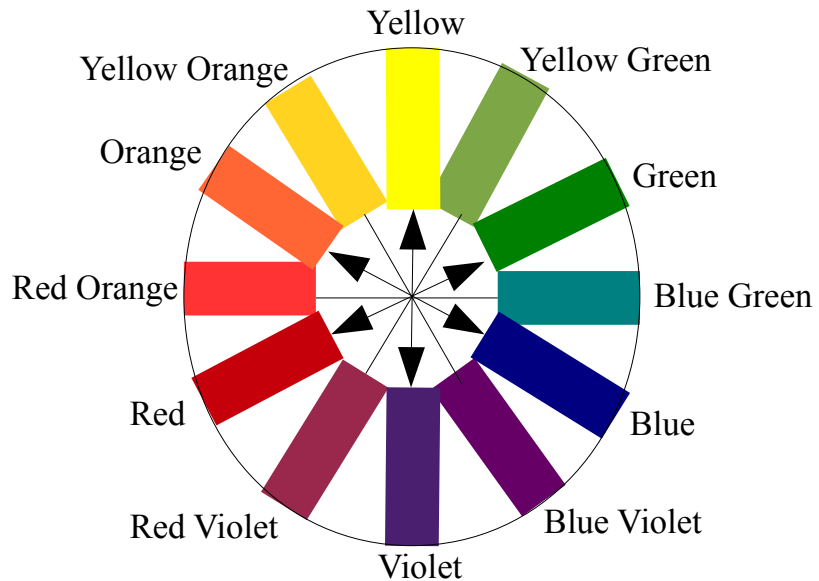
Hair Coloring Product Formulation

Cosmetic Art Science defines hair coloring products into two main categories:
Oxidative and Non-oxidative

Oxidative hair coloring products are classified into two groups:
1.Permanent
2.Demi-permanent

Non-oxidative hair coloring products are classified into two groups:
1.Temporary
2.Semi-permanent

Oxidation is when the chemical substances combine with oxygen.
Oxidative hair coloring products are designed using oxidation as a necessary action to achieve hair coloring.

Oxidative hair coloring products consist of a solution that contains dye *intermediates* which when mixed with a developer creates a dye as the chemicals react within the hair shaft.
Also contained in oxidative hair coloring products, are *preformed* dyes. They are included in hair coloring products in predetermined amounts according to the shade that is intended for the formulation.
Hair coloring products also contain soaps, detergents and conditioning agents.
The coloring product is designed to mix with the developer (hydrogen peroxide) right before application to the hair.
The terms hydrogen peroxide and developer are interchangeable and refer to the same additive.
The applied mixture causes the hair to swell, and the dye intermediates and preformed dyes penetrate the hair shaft and then have a chemical reaction. This reaction is what forms the final dye composition that will stain the hair.

Product Overview

Permanent hair coloring products are designed to lift existing color and deposit product color.
Permanent hair coloring products are used in coloring services for the following purposes.
1.To completely change one's hair color
2.To enhance one's natural hair color by brightening it, or darkening it
3.**To cover gray**

Demi-permanent hair coloring products are designed to only deposit product color. They contain coal-tar dyes that adhere to the hair shaft. Demi-permanent hair coloring products are not designed to lighten natural hair.

Demi-permanent hair coloring products are used in coloring services for the following purposes.
1.To refresh previously colored hair that has faded
2.To enhance one's natural hair color
3.To deemphasize gray hair so it blends in better to the overall color of the person's hair
4.To use as a toner to chemically pre-lightened hair
5.To use as a filler for a color correction procedure

Temporary hair coloring products are used in coloring services for the following purposes.
1.To change the hair color temporarily
2.To neutralize an undesired tone

Semi-permanent hair coloring products are used in coloring services for the following purposes.
1.**Can be used as a toner** to pre-lightened hair
2.Can be used when a short-term change is desired, as it generally only lasts from four to six weeks

Semi-permanent hair coloring products are single products. They are not mixed with developers or peroxide. **Demi-permanent hair coloring products are mixed with developers.**

PATCH TEST REQUIRED

Permanent Hair Coloring Products
Permanent hair coloring products are always mixed with a developer.
Using a higher volume of developer creates more lightening results and using a lower volume of developer creates less lightening results.
Simultaneously with the lightening action, color is deposited.

Permanent hair coloring products are very versatile in that they can be used to match, darken, lighten or cover gray.

Aniline derivatives are used in permanent hair coloring products.
Aniline, phenylamine or aminobenzene is an organic compound; $C_6H_5NH_2$.

Any hair coloring product containing aniline dyes requires a patch test 24 to 48 hours before application.

The types of aniline are:
1.aniline oil for blue (pure aniline);
2.aniline oil for red (a mixture of equal parts - aniline and ortho- and para-toluidines);
3.aniline oil for safranine (aniline and ortho-toluidine) Safranin (basic red 2) is a biological stain that colors cell nuclei red.

Colors develop when the aniline derivatives combine with hydrogen peroxide.
The dye is deposited into the cortex of the hair. This is the oxidation process.
Oxidation is defined as: to undergo or cause to undergo a chemical reaction with oxygen.

Historians agree that aniline: was first isolated from the distillation of indigo (a plant-based blue dye such as; used in blue jeans) in 1826. This was done by Otto Unverdorben, who named it crystalline.
However in 1834 Friedlieb Runge isolated aniline using coal tar, which also in turn produced a blue color when lime chloride was added to it.

Aniline from coal tar is still widely used today in hair coloring products.

Over time aniline became greatly used commercially in many products such as plastics and dyes. There is now a giant synthetic dye industry based on aniline dyes.
Hair product manufacturers get their aniline derivatives from these dye companies to use in their hair coloring product lines.
Permanent hair coloring products are the best choice for dying gray hair.

Permanent hair coloring products create a permanent change in the hair by lightening the existing natural color by removing color pigments. This is the primary reason that they are called permanent colors – because of permanent removal of natural pigment.

PATCH TEST REQUIRED

Demi-Permanent Hair Coloring Products

Demi-permanent hair coloring products are oxidative. They require a developer. They only deposit color and do not lighten. They are less alkaline than permanent hair coloring products and require a lower volume developer. Many demi-permanent hair coloring products do not use hydrogen peroxide as the oxidizing agent like with permanent hair coloring products. They do contain the same dyes as permanent hair coloring products therefore requiring a patch test.

Demi-permanent hair coloring products do not have the ability to decolorize hair.

These no-lift deposit-only hair coloring products are great for:
1. a client's first color service
2. blending gray
3. to refresh faded permanent color on the mid-area and ends
4. restoring natural hair color
5. correcting off-tones

On natural hair, they can deepen or change the color.

Demi-permanent color is a great choice for refreshing the hair shaft area and ends when performing a new growth hair color service. It keeps hair coloring build-up to a minimum using this technique.

| NO PATCH TEST REQUIRED |

Temporary Hair Coloring Products

Temporary hair coloring products are non-oxidative. They do not require a developer. Temporary hair coloring products only coat the hair and are easily shampooed away. No chemical change in the hair occurs.
There are various types of temporary hair coloring products in the marketplace and many new products arriving frequently.

Some of the existing types of temporary hair coloring products are:
1. Spray on
2. Shampoo
3. Liquid / rinse
4. Mousse
5. Gel
6. Mascara / wand

Spray on temporary color products wash out easily with one shampoo. It is used for many looks from subtle to dramatic – from full coverage to streaks and designs. For dramatic designs, stencils can be used. It is fun for the client and the colorist can offer it as a specialty service during the Holidays. Stencils can be purchased or custom made from existing patterns.

Shampoo temporary color products are simply used like normal shampoo. Follow label instructions for best results. The color molecules coat the hair and you can blow-dry and style as usual.
The use of color shampoos is a very popular way to neutralize unwanted brassiness or yellow tones.

Liquid temporary color products, also known as rinses, are applied to freshly shampooed hair. Follow the directions on the label for recommended use for best results. Generally the rinse is applied after shampooing. Many stylists wrap the hair in a towel to blot all excess water.

The hair should not be dripping wet for proper application. The hair must be able to be coated and it can not do so if over-saturated with water. For full coverage, apply beginning at the hairline and comb through to the ends, applying more rinse as needed. Style as desired.

Mousse temporary color products should be used following label directions for best results. Most are designed for either wet or dry hair – full coverage or strategically placed.

Gel temporary color products can be applied the same as customary setting gels. Usually they can be applied to wet or dry hair however read the label for best results.
Mascara temporary coloring products and those that are applied with wands are great when you want perfect placement and control.
They are usually designed for use on dry hair. Of course many eye-lash mascaras are available in many colors, but so are designer hair mascaras.
It's a great way to temporarily color new growth around the hairline. Creative highlights can be perfectly placed using illuminating colors on styled dry hair.

PATCH TEST REQUIRED

Semi-Permanent Hair Coloring Products
Semi-permanent hair coloring products are designed to fade over time. They often last about four to six weeks depending on how many times the hair is shampooed. Semi-permanent hair coloring products are not mixed with peroxide. They do not lift or lighten the natural hair color and only deposit color.
Semi-permanent hair coloring products require a patch test.

PATCH TESTS ARE NOT INTENDED FOR DIAGNOSIS OR TREATMENT OF HEALTH CONDITIONS

Patch Test
A patch test is also known as a *predisposition* test.
The term predisposition is defined as: the state of being predisposed or susceptible to something, especially to a disease or health problem. In this case it refers to a client being predisposed to being allergic or sensitive to the aniline dye in the hair coloring product.

Therefore to determine whether a client will have a negative reaction, **we must perform the patch test 24 to 48 hours before an aniline hair coloring service.**

To perform a patch test:

Illustration 1: Wash, rinse and dry test area.

Illustration 2: Apply color mixture to the cleansed area.

1. Choose a testing area either on the inside of the elbow or behind the ear.
2. Wash a small area with a gentle soap, rinse and dry.
3. Mix a small amount of the hair coloring product (use the shade and brand that you intend on using for the service) in the same ratio as a customary application.
4. Using a cotton swab, apply color mixture to the cleansed area.
5. Do not rinse or remove for 24 to 48 hours.
6. After 24 to 48 hours look at the patch test area to determine if there are any signs of inflammation, rash or welts.
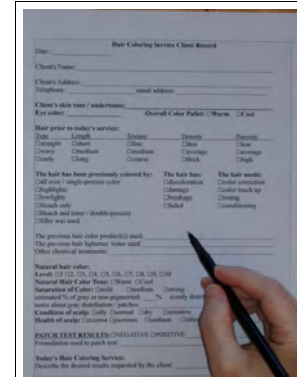7. Record the results onto the client's service record card.

Illustration 3: Record the results onto the client's service record.

Developer / Hydrogen Peroxide
The developer is what must be mixed with oxidative hair coloring products in order to create the chemical reaction needed to form and deposit color. Hydrogen peroxide also plays a part in the determination of the amount of lightening natural hair. **Hydrogen peroxide is the oxidizing agent that "develops" the hair coloring product thus called the developer.** When hydrogen peroxide is mixed with oxidative hair coloring products it creates oxygen gas that in turn forms the chemical action that creates color molecules that change the color of hair.

Hydrogen peroxide is available in different concentrations called volumes. The volume indicated on the labeling refers to the concentration. Concentration is also referred to as strength. The stronger the formulation the greater amount of lightening that can be achieved. Developer is somewhat customizable but there are specific limitations, scientifically speaking. Most hair coloring product companies design their permanent hair coloring products to use 20 volume developer for normal application. 20 volume peroxide is always used for achieving gray coverage.

Other volumes are used for various color applications.
10 volume is used for deposit-only applications.
30 volume is used when additional lightening is desired.
40 volume is used when maximum lightening is desired.

Hair Lightener / Bleach

Hair lighteners, also known as bleach, work by decolorizing the hair. Bleaching products are designed to use with hydrogen peroxide as the developer. The oxidation process is required to achieve decolorization. When this action happens within the cortex of the hair shaft, it displaces and eliminates the melanin pigment thus decolorizing the hair. You can control the amount of decolorization by choosing the volume of developer and adjusting the processing time the product is left on the hair.
Hair lighteners are designed to lift the hair to lighter levels than what permanent hair coloring products can achieve.

Bleaching is a very versatile tool and is used for various purposes.
Lighteners can be:
• used to lighten natural hair
• used to lighten colored hair
• used to lighten isolated parts of the hair
• used alone to achieve a color
• used as the first step to achieve a level and follow with a toner

Decolorization
The decolorization process begins immediately upon the application of a prepared lightening product.
The colorist predetermines the level of color that she wants to *remain* in the hair.
There is an invaluable tool for calculating decolorization. It is called the 10 degrees of decolorization.

The 10 degrees of decolorization chart is a representation Cosmetic Art Science uses to measure the amount of pigment remaining in the hair throughout the progression of stages of the bleaching process.
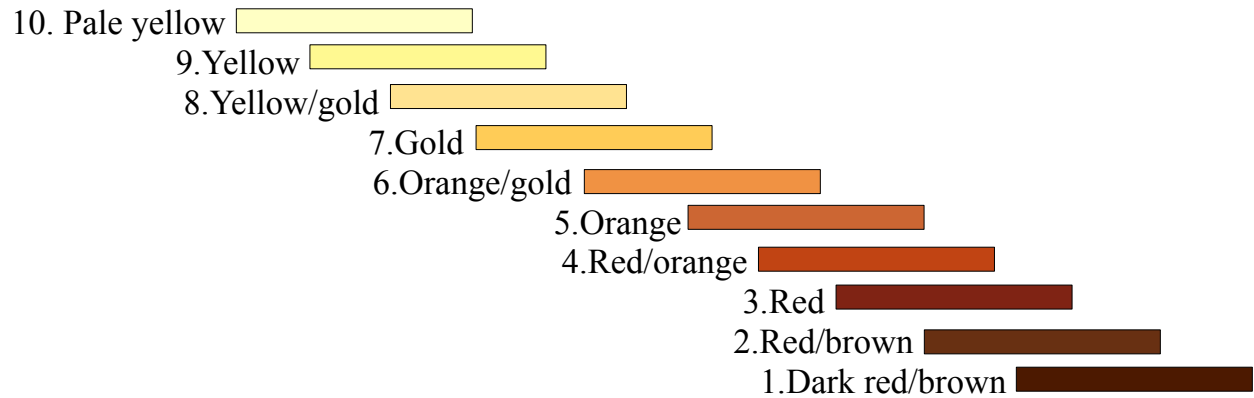
In order to show all possible degrees of decolorization for human hair, the following chart represents that the first degree of lightening for black hair is dark red-brown, and so forth. Hair will of course begin at different levels, but none the less will go through the remaining stages as the decolorization process progresses.
Predetermining the final degree of decolorization needed to achieve the desired results of a color service is a key part of pre-planning. Ending the decolorization process at the predetermined degree is crucial.

The amount of existing pigment in natural hair, the strength of the lightener and the amount of processing time all impact the lightening process. Also the temperature of the client and the ambient temperature of the room can also play a part in how fast the hair processes. Oftentimes it has been determined that the warmer a client and room the faster the decolorization process will be.

Degrees of Decolorization

Figure 8 (decolorizing process)

10. Pale yellow
9. Yellow
8. Yellow/gold
7. Gold
6. Orange/gold
5. Orange
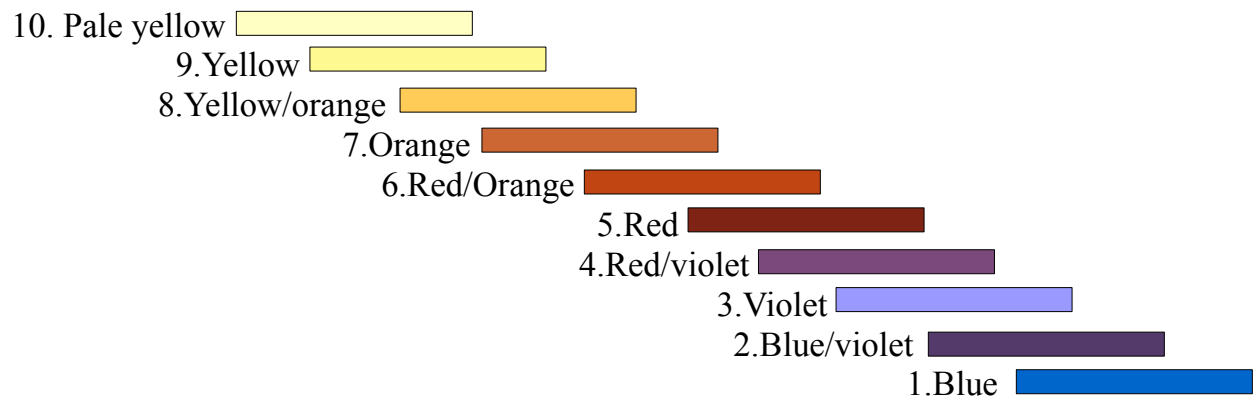4. Red/orange
3. Red
2. Red/brown
1. Dark red/brown

The natural pigment left in the hair is referred to as contributing pigment or undertones.

Cosmetic Art Science has determined the amount of pigments left in the hair for each stage.

Contributing Pigment

Figure 9 (undertones)

10. Pale yellow
9. Yellow
8. Yellow/orange
7. Orange
6. Red/Orange
5. Red
4. Red/violet
3. Violet
2. Blue/violet
1. Blue

It is the undertone and level of the remaining contributing pigment that determines how to tone the lightened hair. It is rather rare to leave bleached hair non-toned. It usually has an unnatural and unappealing appearance. Therefore toners are more often used than not when using lighteners. The more pigment that you can leave in the hair and the less time you leave the product on the hair the healthier and stronger the hair will be at the completion of the color service. That is why the colorist tries to never go lighter than what is needed during the bleaching process.

Also, the colorist should maintain conscious observation of how fast the client's hair is processing. Sometimes passing through the lower degrees of decolorization may seem to take longer than the higher degrees. Some colorists have observed that after the hair passes through red-orange stage – degrees 4, it tends to progress more rapidly through the remaining degrees.

Severe damage can occur if the hair is processed beyond the pale yellow stage. Toners can not be accepted into hair that has been bleached beyond the pale yellow stage. Bleach is therefore not designed to bring the hair into a white blond level. Only those who are poorly trained in hair coloring will attempt this irreversible error.
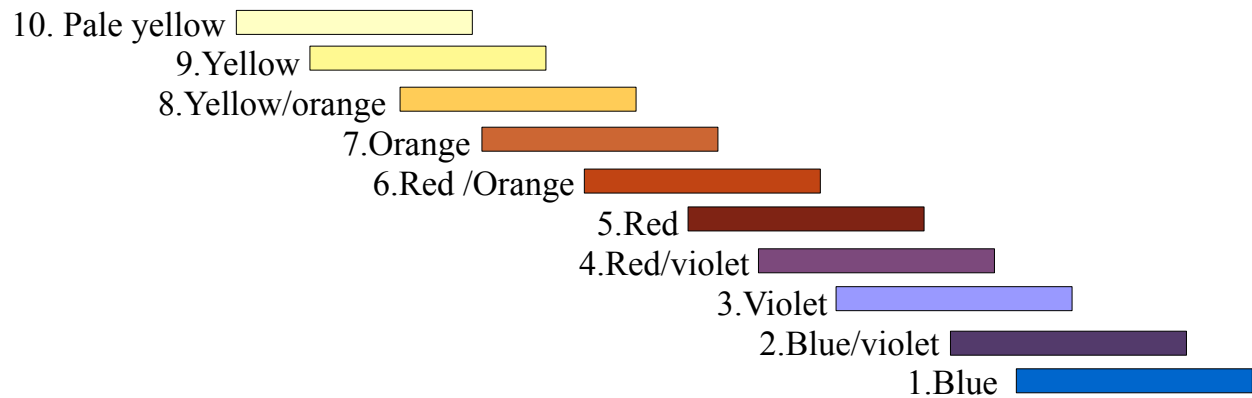
However, toners can easily create the white blond look without over lightening the hair. Instead of removing all pigment, you need only to neutralize the yellow to give a white blond appearance.
Any professional hair coloring product can be used as a toner other than temporary hair coloring. That would include: permanent, semi-permanent, or demi-permanent hair coloring products.

Review this chart again.
Contributing Pigment
Figure 10 (undertones)

10. Pale yellow
     9.Yellow
     8.Yellow/orange
        7.Orange
         6.Red /Orange
            5.Red
          4.Red/violet
            3.Violet
            2.Blue/violet
             1.Blue

The Client and the Color Service

Precautions: Cosmetic Art Science has developed precise practices for every type of hair coloring service available. These procedures are followed in all modern salons and are compliant with State and Federal Laws. Each procedure covered in this module is the acceptable and customary method for the specified application. By following prescribed procedures, the colorist can expect text book results with very little variance.

Before performing any hair coloring service, read and follow manufacturer's instructions for the products to be used in the procedure. Be cautious while performing hair coloring applications and never underestimate the necessity of observing every level of safety. During this study, take special note of which prescribed procedures are specifically designed to protect the colorist and which procedures are designed to protect the client.

The Consultation

The first procedure for any hair coloring service is the initial client consultation.
Prior to patch tests, strand tests or any other format of analysis, we must find out what the client wants in order to know what direction to go in. Find out if the client wants to go lighter, darker, highlights, lowlights, new growth retouch, virgin color, cover gray, color correction or a combination of those services. Conclude if the goal is realistic and achievable in regard to her natural color level, and the condition of her hair.

The consultation should be done facing the client and observing her hair in natural sun light and not under artificial lighting. Many salons do not have natural sun light at their work stations, and if that is the case for you, go to a windowed area where the sun light is available in order to see the true level and shade of her hair. If the client has had previous color treatments, look for any over processed areas or discoloration. Look at her new growth, mid length and ends. Look at her scalp for any signs of conditions.

When booking the client for the consultation, pencil-in no less than 15 minutes. If she is a new client introduce yourself and tell her a little bit about your services and your salon.

Make her feel welcome and at ease. There should be an understanding of etiquette to all employees in your salon that interruptions or intrusions are forbidden when stylists are with their clients.

Give the client an information card and pencil so she can give you information about her hair care history and any previous chemical services she has had.

Analyze the client's hair to determine amount of gray, texture, length and condition.
Observe her seasonal color pallet. Is she warm, cool, what color are her eyes and skin undertones?
Ask her leading questions to get her talking about what she wants so you can be fully informed of her ideas. Allow her to speak with no interruptions.
She might remember additional information such as chemical services in the past that maybe she had forgotten about that might still remain on her ends. This would be important to know. Getting a full and complete history is irreplaceable in the color consultation.

If you are consulting at your work station, remember to face the client and do not look at her through the mirror to communicate. It is impersonal to communicate in that manner. Look directly at her and not her reflection to see all things and to communicate all things. It is however acceptable to do that later while servicing the client, but not during the consultation stage.

When speaking with the client, ask her questions that give you precise knowledge about what she has in mind.
Ask her directly, "are you thinking more of a temporary color change or a permanent color change?".
Are you thinking of overall color or highlights?
Are you thinking of overall color enhancement similar to what your natural color is?
Would you like to look at several models in my styling books that demonstrate these examples?

Show her your portfolio. Nothing personalizes your relationship more with your client than to show her photos of your work. It's also the most accurate way to show her your level of ability.

Show her color swatches of different shades that are possible to achieve her planned new hair color.
Show her colors that are best for her skin tone and eye color. Keep her in her appropriate color pallet with either warm, cool or neutral shades.

If the client says, "I want a dark chocolate brown" shade, then by showing her color swatches you will be able to determine exactly what level of "dark chocolate brown" she plans to go. In her mind, it may be dark chocolate but in reality she may point to a color swatch that is in fact more of a light brown as in a "milk chocolate" or tan family. Having an understanding of your client's idea of color level is imperative. What better way to find out the true meaning of her terminology than with a visual example.

Upon reaching an understanding of what the client wants, it is now time to explain to her what processes need to happen to achieve it. Explain to her whether it will be one or two steps (or more) and the reality of how close you can come to exactly what she has described.

If several steps are involved and there is not sufficient time to perform them in one day, let the client know that it will take several visits to complete.

The service can be scheduled 24 to 48 hours after the patch test is performed. Upon determining that the patch test is negative the hair coloring process can be performed at any time thereafter. Make clear that the hair coloring service is completely contingent upon having a negative patch test.

Also, different hair coloring services are going to be different prices. You must be complete and accurate in quoting the exact cost for the services. If there are any problems with affordability for the client to get what she wants, you can suggest alternative services that will still give her a desirable color change but will fit better for her budget.

For example: if she really wants an overall color, to cover gray and additional highlights in 2 different shades, from the occipital bone and up, that could run into quite a bill at the end of the day. If she can not afford that, suggest to her a one-step color that will cover the gray as well as lighten her level 2 shades.

Suggest that she can come back in a couple of weeks to add a more dimensional look using highlights and /or lowlights, when she can work that in to her budget. Often times the client will see that suggestion as a good alternative and it allows them to still be able to make an immediate change for a new look.

So get creative not only with your coloring talents but with alternative budget solutions. The client will appreciate your thoughtfulness and it will prevent the client from feeling embarrassed about her monetary limitations. You could gain a customer for a life-time by making sure that she never feels humiliated.

Remember to discuss hair color maintenance. Give her true ideas of how often she will need to come back for touch-ups to maintain her new look. Give her the estimated price for those future visits as part of the initial consultation.

The following is a sample of a Client Intake Form. This form is to be presented to the client just before you begin the formal consultation.

Client Intake Form

Dearest Client,

We want today's visit to be the most outstanding salon experience you have ever had! To achieve excellent service for you in a personal way, we would like to know about your preferences regarding your hair. You hair is as important to us as it is to you! Please complete the following questionnaire so we may better serve you. All information will be kept private and will only be used as a reference in order to give you excellent personal service. Thank you for your time.

Name: _____

Address: _____

Telephone number: _____

Email address: _____

Were you referred to us by a friend?_____Who?_____

In the past 6 months, have you had any of the following services?

Haircut _____

Hair Coloring Service _____

Lightening / bleach _____

Highlights _____

Permanent Wave _____

Texturizing Service _____

Relaxer _____

Straightener _____

What hair service would you like to discuss today? _____
_____

Are you allergic to any salon chemicals? Please list allergies in the space provided and include nail, skin and hair product allergies._____
_____

For your protection, please list any medication that you are currently taking or have taken for the past year._____
_____

What hair products do you use on a regular basis? _____
_____

What styling tools (blow-dryer, curling iron, etc.) do you use on a regular basis? _____
_____

What additional information would like the stylist to know about your hair? _____
_____
_____
_____

DATE: _____   Consulting Stylist_____

There are 10 key points to every basic consultation.

They are:

1.Review the Client Intake Form: Please do not interrupt the client when she is completing the Client Intake Form. Wait to begin your conversation after she is done and you have thoroughly read all of her answers. Do not ask her the same questions that she has just answered on her form. Ask questions that relate or give your further information about specifics that she has listed.

2.Assess your client's hair style: Observing the overall style of the client and her current hairstyle *can* give you insight as to what she may want, however do not underestimate the possibility that the client may want to go with a whole new look. It *is* typical that a person with an older classic style may want to stay classic -but would like a newer more updated cut and color. Keep an open mind with your observation.

3.Client preferences: Ask the client what are her preferences when it comes to styling her hair at home. Does she mind spending 20 minutes instead of 10? Does she incorporate blow-drying or flat-ironing? Find out what she likes about her current style and what she doesn't like.

4.Analysis: Assess the length, thickness, condition, texture and color of your client's hair. Make notes especially if you observe any problems that will need attention in the upcoming service. **Take note of baldness, thinness, discolorations, damage or breakage.**

5.Lifestyle of the client:A client's lifestyle often dictates the amount of time and effort she is willing to give to her hair on a daily basis. Is she solely in a professional environment in which her hairstyle is a significant part of her persona, or does she work at home in which she can have a less formal styling regimen?

6.Show her visuals:During the consultation provide the client with hairstyling books and see what styles she gravitates to. See if she has unrealistic expectations, or if she seems drawn to near-opposite hair textures as to what she possesses. If she tends to be drawn to smooth straight styles but her hair is over-curly, she will need to be informed of the process that would be necessary in achieving straight hair and what it will take to maintain and style it. However most people are abundantly aware of the hair that is on their head and what it will and will not do. Be open to what they tell you. The client is the one who has experienced the ups and downs personally and she will be your best source of knowledge.

7.Cut suggestions: After gathering this vast array of knowledge, use your best judgment and lay out the possibilities. Consider her hair type, her facial shape, her body type, her lifestyle and her color pallet. Show her haircuts that suit her hair texture.

8.Color suggestions: Show her hair coloring applications that fit her persona, lifestyle and hair type. Show her color swatches and color charts and explain several looks you could achieve and the colors you could use. Find out which ideas appeal to her the most.

9.Maintenance: Inform the client as to how often she will need to visit the salon to maintain cut and color. Inform her about home haircare, products that she will need to use and products or environmental elements to avoid.

10.Re-cap the plan: Repeat the plan to the client and confirm with her each step – and that all is understood.

You are ready to begin the next step.
Book the date in which your client can make her hair coloring service appointment.
At least 24 to 48 hours before that day, your client must come in for a patch test. It might be possible that your client is ready to do the patch test during your initial consultation. As long as her appointment for hair coloring services is made after the 24 to 48 hours required.

Day of Service
In previous studies, we identified procedures for the predisposition test or the patch test. Upon determining that the patch test you have given your client is negative, you are ready to proceed with the hair coloring service. **The first procedure in performing a hair coloring service is to acquire a completed Release Form from your client.**

The Release Form
Most every salon, spa or school requires a Release Form.
To further familiarize yourself with this part of the client-side procedure, please review this form.

RELEASE FORM

I, _____
(client's full name)
have been fully advised of the risks that are involved with chemical services that I am about to receive. I do hereby release all employees, owners, affiliates, agents and representatives of any claims or damages arising in any way connected with receiving these services.

Client signature: _____

Date: _____

Salon representative:_____

Is the client under age 18? _____

If so, guardian signature required:_____

Date: _____

Salon representative: _____

Throughout the consultation and coloring service stages it is necessary to keep the client's hair coloring service record nearby. It contains all pertinent information regarding the condition of the client's hair before services are rendered as well as other details.
It should also include facts such as the results of the patch test, the results of the strand test, the complete coloring service plan, and the end results. As you will see, there are other important topics that will be recorded as well.

Below is an example of a well written Hair Coloring Service Client Record.
(Beauty establishment records vary.)

Review the following:
Hair Coloring Service Client Record

<div align="center">

Hair Coloring Service Client Record
</div>

Date: _____

Client's Name:_____

Client's Address:_____
Telephone: _____ email address: _____

Client's skin tone / undertones:_____
Eye color: _____   Overall Color Pallet: ☐Warm   ☐Cool

Hair prior to today's service:

Type	Length	Texture	Density	Porosity
☐straight	☐short	☐fine	☐thin	☐low
☐wavy	☐medium	☐medium	☐average	☐average
☐curly	☐long	☐coarse	☐thick	☐high

The hair has been previously colored by:	**The hair has:**	**The hair needs:**
☐all over / single-process color	☐discoloration	☐color correction
☐highlights	☐damage	☐color touch up
☐lowlights	☐breakage	☐toning

☐bleach only   ☐faded   ☐conditioning
☐bleach and toner / double-process
☐filler was used

The previous hair color product(s) used:_____
The previous hair lightener /toner used :_____
Other chemical treatments: _____

Natural hair color:
Level: ☐1 ☐2, ☐3, ☐4, ☐5, ☐6, ☐7, ☐8, ☐9, ☐10
Natural Hair Color Tone: ☐Warm   ☐Cool
Saturation of Color: ☐mild   ☐medium   ☐strong
estimated % of gray or non-pigmented: ____%   evenly distributed ☐yes ☐no
notes about gray distribution / patches:_____
Condition of scalp: ☐oily ☐normal ☐dry   ☐sensitive
Health of scalp: ☐eczema ☐psoriasis   ☐sunburn   ☐other_____

PATCH TEST RESULTS:☐NEGATIVE ☐POSITIVE _____
Formulation used to patch test: _____

Today's Hair Coloring Service:
Describe the desired results requested by the client: _____
_____

Will color filler be used?: ☐yes ☐no
reason for filler and color of filler to be used:_____
Will a pre-conditioner be used?: ☐yes ☐no type:_____

Describe hair coloring process to be performed:_____
_____
_____
Formula used:_____
Describe application technique:_____
_____

Completed Service Results:
☐above average   ☐average   ☐below average   ☐too light   ☐too dark
☐streaks or demarcations ☐unnatural tones

Comments: _____
_____
_____

What home maintenance advice did you give to client?:

_____
_____
_____
What retail products did you sell to him?: _____
_____
_____

Did you book his next appointment? Yes __ No ___   If not, did you give him a dated window of time that he needs to call you to schedule in order to maintain his new look? Yes __ No __

Date: _____ Stylist: _____

Color Restoration
Restoring Naturally Dark Blond Hair
Cases will vary slightly, however there is one excellent base approach that is a solid start when beginning a successful restoration service for dark blond hair.

The first step is to pre-color or pre-soften the new growth. It is necessary to do this first step so that the end results will be color that is congruent from scalp to ends.
Use a level 6 violet based hair coloring product with 20 volume peroxide. Apply to the new growth only and process for 30 minutes, rinse and towel dry.

The next several steps also will be to achieve congruency of color from scalp to ends. We do this by adding proper amounts of certain pigments.

The next application is a mixture of deposit only glazes: 1 ounce of a level 8 neutral base and 1 ounce of a level 9 red-orange base. Apply this mixture to all hair except the new growth. Process for 20 minutes, rinse and towel dry.

Next apply a deposit only glaze of 2 ounces of level 6 neutral blond from scalp to ends. Process 20 minutes checking color every 5 minutes. Rinse and towel dry.

Note: at any time throughout the process if you see that the hair is too warm, you can use a cool toned blond glaze instead of a neutral toned glaze.

Study the following terms and definitions.

aniline dye	an·i·line [an-l-in] Origin: 1860–65 *any of a large number of synthetic dyes derived from aniline, usually obtained from coal tar.
client intake form	A paper form given to clients upon their first visit to the salon in order to gather information to better serve them.
color maintenance	Performing color services to hair approximately every 4 to 6 weeks, to keep the new growth matching the rest of the hair.
color restoration	Coloring the hair with the goal of achieving (restoring) one's natural hair color.
consultation	The initial meeting with a client in order to obtain information and analysis to properly serve her.
decolorization	de·col·or·iza·tion [dē-ˌkəl-ə-rə-ˈzā-shən] Origin:1830–40 *the act of displacing and eliminating melanin pigment in the hair
developer	de·vel·op·er [dih-vel-uh-per] Origin: 1825–35 *an agent that when added to an oxidative hair coloring product creates a chemical reaction using oxygen to form color dyes in order to stain hair
eumelanin	eu·mel·a·nin [yoo-mel-uh-nin] *the pigment that is found in natural hair that gives it tonal hues of blacks and browns
hydrogen peroxide	Origin: 1870–75 *a colorless liquid, H_2O_2, used chiefly as an antiseptic and a bleaching agent

level	lev·el [lev-uhl] Origin: 1300–50 Middle English, variant of livel - plummet line, level, diminutive of lībra balance, scales; for formation *position or status in a scale of values; *amount or degree of progress; stage; *A relative degree, as of intensity or concentration
melanin	mel·a·nin [mel-uh-nin] Origin: 1835–45 *any of a group of pigments present in the hair
oxidation	ox·i·da·tion [ok-si-dey-shuh n] Origin: 1785–95 *the chemical combination of a substance with oxygen
pheomelanin	*Pheomelanin is the pigment that is found in natural hair that gives it tonal hues of blonds and reds.
primary colors	*the 3 pure colors that can not be created by combining other colors: *yellow, red, blue
release form	A paper form given to the client that requires her signature acknowledging the risks of chemical services.
scenario	an outline of the plot of a dramatic work, giving particulars as to the scenes, characters and situations.
secondary colors	*the colors created from combining equal parts of 2 primary colors: *orange, green, violet

service plan	A plan developed by the colorist that represents product formulation and application procedures determined by information and analysis gathered from the client consultation.
tertiary colors	the colors created when combining equal amounts of a primary color and it's neighboring secondary color on the color wheel: *yellow-orange, yellow-green, red-orange, blue-green, red-violet, blue-violet

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