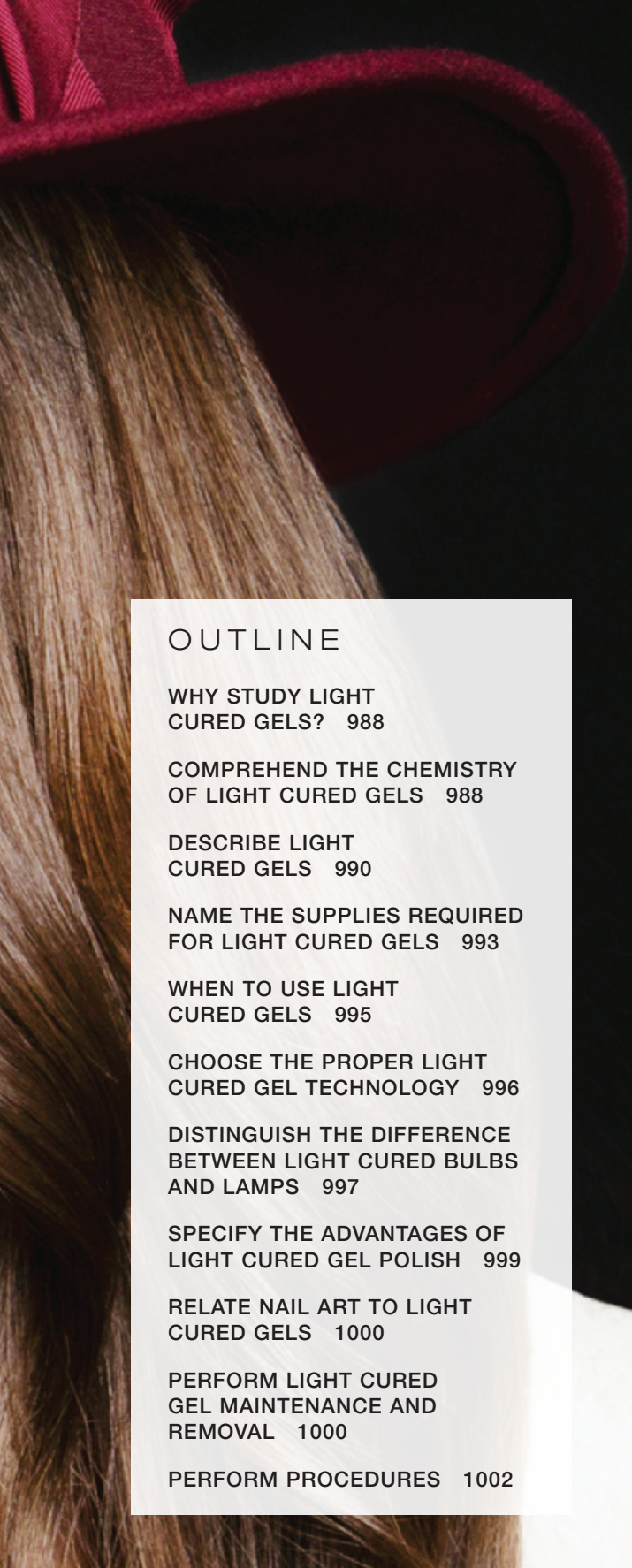


# 29



## LIGHT CURED GELS



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# LEARNING OBJECTIVES

After completing this chapter, you will be able to:

## LO 1

Describe the chemistry and main ingredients of light cured gels.

## LO 2

Explain when you would use a one-color or two-color method for applying UV or LED gels.

## LO 3

List the different types of light cured gels used in current systems.

## LO 4

Identify the supplies needed for light cured gel application.

## LO 5

Determine when to use light cured gels on your client.

## LO 6

List the four guidelines that will assist you in choosing the proper light cured gel technology for your client.

## LO 7

Discuss the differences between light cured lamps and bulbs.

## LO 8

Identify the advantages of using light cured gel polish.

## LO 9

Describe how to maintain light cured gel nail enhancements.

## LO 10

Explain how to correctly remove hard light cured gels.

## LO 11

Identify the correct way to remove soft light cured gels.

**Publisher's note:** The term *light cured gels* is used in this chapter to encompass UV and LED gels.

This chapter introduces **light cured gel**, also known as *UV and LED gel*, a type of nail enhancement product that hardens when exposed to a UV and LED light source. Light cured gel is an increasingly popular method for nail enhancement services.

why study

## LIGHT CURED GELS?

**Cosmetologists should study and have a thorough understanding of light cured gels because:**

- > Clients may be interested in receiving light cured gel services.
- > An understanding of the chemistry of light cured gel products will allow you to choose the best system and products to use in your salon.
- > An understanding of how light cured gel nails are made, applied, and cured will allow you to create a safe and efficient salon service.
- > Clients often become loyal and steadfast when they receive excellent light cured gel nail services, maintenance, and removal.

*After reading the next few sections, you will be able to:*

**LO 1** Describe the chemistry and main ingredients of light cured gels.

## Comprehend the Chemistry of Light Cured Gels

Nail enhancements based on light curing are not traditionally thought of as being methacrylates; however, they are very similar. Like wrap resins, adhesives, monomer liquid, and polymer powder nail enhancements, light cured gel enhancements rely on ingredients from the monomer liquid and polymer powder chemical family. Their ingredients are part of a subcategory of this family called acrylates. Wrap resins are called cyanoacrylates, and monomer liquid and polymer powder nail enhancements are from the same category called methacrylates.

Although most light cured gels are made from acrylates, new light cured gel technologies have been developed that use methacrylates. Like wraps and monomer liquid and polymer powder nail enhancements, light cured gels can also contain monomer liquids, but they rely mostly on a related form called an oligomer. The term *mono* means one, and *poly* means many. *Oligo* means few. An **oligomer** (uh-LIG-uh-mer) is a short chain of monomer liquids that is often thick, sticky, and gel-like and that

is not long enough to be considered a polymer. These chains are often referred to as a prepolymer. Nail enhancement monomer liquids are liquids, while polymers are solids. Oligomers are between solid and liquid.

Traditionally, light cured gels rely on a special type of acrylate called a urethane acrylate, while newer light cured gel systems use urethane methacrylates by themselves or in combination with urethane acrylates. **Urethane acrylate** (YUR-ah-thane AK-ri-layt) and **urethane methacrylate** (YUR-ah-thane meth-AK-ri-layt) are the main ingredients used alone or in combination with urethane acrylates to create light cured gel nail enhancements. The term *urethane* refers to the type of starting material that is used to create the most common light cured gel resins. The chemical family of urethanes is known for high abrasion resistance and durability.

Light cured gel resins react when exposed to the UV or LED light source that is recommended for the gel. A chemical called a **photoinitiator** (FOH-toh-in-ish-ee-AY-tohr) initiates the polymerization reaction. The key thing to remember here is that it takes the combination of the resin, photoinitiator, and the proper curing bulb to cause the gel to cure completely. Light cured gel systems employ a single component resin compound that is cured to a solid material when exposed to a UV or LED light source. Light cured gels typically do not use a powder that is incorporated into the gel resin. A few light cured gels on the market incorporate a powder that is sprinkled into the gel, but the rest of the chapter will refer to *gels* as being the more common single-component type.

The difference between light cured gels is the type of photoinitiator used in the formula and the measure of light that photoinitiator responds to. For example, LED gels cure when they are exposed to a certain measure of light found in LED lamps. When the LED gel is directly exposed to this light, it causes the oligomers to start to cure immediately. When exposed for the recommended amount of time, they will cure completely solid.

The photoinitiator found in UV gels cause the gel to cure when directly exposed to UV radiation at that certain measure found in UV lamps (**figure 29-1**). All gels will cure if exposed to natural and florescent or any type of light that is full spectrum, as these contain some measure of the light it takes to cure these gels. The process will just happen slower because they are not getting direct, intense exposure. That is why it is recommended to always keep your containers closed and gel brushes covered, so they do not slowly cure and harden while exposed to light.

Remember that some gels react to UV, some to LED, and some to both. Many still only respond to UV, so be sure to review the manufacturer's recommendations for the type of lamp you will need for the specific product you are using.

Light cured gels can be easy to apply, file, and maintain, and create beautiful, long-lasting nail enhancements (**figure 29-2**). They also have the advantage of having very little or no odor. Although they typically are not as hard as monomer liquid and polymer powder nail enhancements, they are more flexible.

The light cured gel application process differs from other types of nail enhancements. After the nail plate is properly prepared, each layer of



**figure 29-1**  
Position the client's hand in the UV lamp for the required cure time.

**?** **DID YOU KNOW?**  
Ultraviolet light is really not light at all. UV light is really wavelengths of electromagnetic radiation that are just beyond the visible spectrum of light. In this chapter UV light and UV radiation are the same thing.

**figure 29-2**  
Technician applying black gel using a natural hair brush to create a permanent french look to the gel nail enhancements.





**figure 29-3**  
A cosmetologist in nitrile gloves applies clear gel overlay on natural colored nail tip.

product applied to the natural nail, nail tip, or form requires exposure to a UV or LED light source to **cure**, which means to harden. The UV or LED radiation required for curing comes from a special bulb designed to emit the proper type and intensity of UV or LED radiation.

After reading the next few sections, you will be able to:

- LO 2** Explain when you would use a one-color or two-color method for applying UV or LED gels.
- LO 3** List the different types of light cured gels used in current systems.

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## Describe Light Cured Gels

There are many types of light cured gels. Choosing a favorite and relied-upon gel is as important as choosing the monomer liquid and polymer powder system that you prefer. Some cosmetologists favor a gel that is thick and will not level by itself. Other cosmetologists like to use gels that quickly self-level. It is up to you to find the gel that you prefer to use and to learn how to use it well.

The different light cured gels can be described as thin-viscosity gels, medium-viscosity gels, thick-viscosity gels, and building or sculpting gels. Remember that **viscosity** (vis-KAHS-ut-tee) is the measurement of the thickness or thinness of a liquid and that viscosity affects how the fluid flows. Manufacturers have a market name for gels that they make, but most light cured gels fall under these general categories:

- The **one-color method** is the method whereby one color of UV or LED gel is applied over the entire surface of the nail. This method is used for clients who wish to wear colored polish or UV or LED gel polish over the enhancement (**figure 29-3**).
- The **two-color method** is a method whereby two colors of resin are used to overlay the nail; usually pink and white are used, allowing for a French or American manicure finish in which lacquer is not needed. There are many processes for performing a two-color method over tips or natural nails. The process varies from one gel manufacturer to another and can even vary within one manufacturer's product lines. Consult with the UV or LED gel manufacturer about the product you intend to use before you perform a two-color method.

### **?** DID YOU KNOW?

It is very common for gel manufacturers to have many colored gels for the two-color method. These pigmented gels can vary in opacity and viscosity. You should follow the manufacturer's recommendations for applying the pigmented gel in a two-color method. Usually, the more opaque gels have thinner viscosities and are applied after the second coat of building gel. The less-opaque pigmented gels are often thicker in viscosity and are applied before the first coat of building gel.

**P 29-1** **One-Color Method UV or LED Gel on Tips or Natural Nails Finishing With UV or LED Gel Polish** See page 1002

**P 29-2** **Two-Color Method UV or LED Gel on Tips or Natural Nails** See page 1006

## Types of Light Cured Gels

**Bonding gels** are used to increase adhesion to the natural nail plate, similar to a monomer liquid and polymer powder primer. Bonding gels will vary in consistency and chemical components. The increased adhesion decreases the tendency for enhancements to separate from the natural nail. Some bonding gels contain certain chemicals that smell like a monomer liquid and polymer powder primer, while other bonding gels do not have a strong odor. Light cured gel manufacturers are constantly developing new technology in the formulation of bonding gels. These technologies could make the use of odiferous chemicals obsolete. Some light cured gel manufacturers use air-dry bonding systems. Just because the bonding product may not be cured in a UV or LED lamp does not make it any less effective than a bonding system that is cured in a UV or LED lamp.

When applying primer or bonding gel, insert the brush into the nail primer or bonding gel, wipe off any excess from the brush, and using a slightly damp brush, ensure that the nail plate is completely covered per the manufacturer's recommendations. Avoid using too much product to prevent running into the skin, which can increase the risks of developing skin irritation or sensitivity to the enhancement system.

**Building gels** include any thick-viscosity resin that allows the cosmetologist to build an arch and curve into the fingernail. When applying this gel, do not pat the gel as you would monomer liquid and polymer powder material; instead, gently brush or float the gel material onto the fingernail. Avoid introducing air into the gel, as this will reduce the strength of the cured gel and may lead to bubbles and cracking.

Always cure each layer of the light cured gel for the time required by the manufacturer's instructions. Curing for too little time can result in service breakdown, skin irritation, and/or skin sensitivity. Improper positioning of the hands inside the bulb also can cause improper curing.

Light cured building gels can be used with self-leveling gels, and if done correctly, this combination can reduce the amount of filing and shaping required to contour the enhancement later in the service. Some light cured building gels have fiberglass strands compounded into the gel during the manufacturing process. These gels typically have hardness and durability properties that closely resemble monomer liquid and polymer powder systems. This type of gel can be very helpful when repairing a break or crack in a client's enhancement.

**Self-leveling gels** are thinner in consistency than building gels, allowing them to settle and level during application. These gels are used to enhance the thickness of the overlay while providing a smoother surface. Cosmetologists who are experienced in light cured gel application often will choose to apply a building gel first, and then apply a self-leveling gel to create the enhancement, which will help to reduce filing and contouring.

**Pigmented gels** can be building gels or self-leveling gels that include color pigment. Pigmented building gels can be used earlier in the service to create art or a traditional French manicure look by using a white and pink pigmented gel. To complete this look, you would use the two-color method, which is similar to a two-color monomer liquid and polymer powder process. Self-leveling pigmented gels can also be used near the end



### CAUTION

Be careful to not get UV or LED gel products on the skin during application or while you are removing the inhibition layer. Continued over exposure of gel products on the skin can cause a client to become sensitive to the product and could eventually cause an allergic reaction.



### DID YOU KNOW?

Light cured gel polishes are also referred to in the industry as *no-chip manicures*, *soak-off gel color*, *soft gels*, and even *power polish*. Despite the assorted names, they are all referring to UV and LED gel polish.



**figure 29-4**

Gel polish comes in a variety of colors. In this example, the technician wears nitrile gloves while applying gel polish from a pot.

### ACTIVITY

Acquire samples of gels that are on the market by calling a few popular companies. When you receive the gels, place a small amount of gel on a plastic tip that you have adhered to a wooden stick. Study the gel as it moves over the tip. Try applying the gel in a different way (such as brushing a thin layer, then applying a ball of gel in the stress area). Then observe the gel again. Repeat this procedure with all of the samples. The more you know about how the gels work and behave, the easier it will be for you to apply the gel on your client.

of the application, after filing. Because self-leveling pigmented gels are applied much more thinly, a French manicure look is easily achieved over the filed enhancement, before applying a finishing gel.

**Gel polish** is a very thin-viscosity gel that is usually pigmented and packaged in a pot or a polish bottle; it is used as an alternative to traditional nail lacquers (figure 29-4). Light cured gel polishes do not dry the same way as nail lacquers; they cure in a UV or LED lamp. When gel polish is finished curing, a gloss gel can be applied over it to create a high, lustrous shine. Since the products are cured, the end result appears lacquered but does not have any solvent odor and is immediately dry to the touch. Another advantage of light cured gel polishes is that the color stays without chipping three to four times longer than traditional nail lacquers. Light cured gel polish may be used on natural nails or nail enhancements.

Light cured gels are available in a wide array of colors. They are available in cream and frosted colors, and some even include glitter! These gels can be mixed together to create a few hundred more colors. Light cured gels provide the cosmetologist and client with a wide variety of colors and options for expressing their personality and creativity.

**Glossing gel**, also known as *sealing gel*, *finishing gel*, or *shine gel*, is used over the finished and filed gel application to create a high shine, in much the same way a top coat would be applied over colored nail polish. Light cured gloss gels do not require buffing and can also be used over a monomer liquid and polymer powder enhancement. There are two types of light cured gloss gels: traditional gloss gels that cure with a sticky inhibition layer that requires cleaning and tack-free gloss gels that cure to a high shine without the inhibition layer.

An **inhibition layer** is a tacky surface left on the nail after a UV or LED gel has cured. Choose the gloss gel that is best for you. Traditional light cured gloss gels do not discolor after prolonged exposure to UV radiation, while tack-free gloss gels often discolor. Many light cured gel manufacturers are developing tack-free gloss gels that do not discolor upon exposure to UV radiation. These advancements may make traditional light cured gloss gels obsolete; but for now, traditional light cured gloss gels still hold the market on non-yellowing performance.

After you have determined how each type of gel behaves on the fingernail, learn how to use the pigmented pink and white gels in the same

### ACTIVITY

We have discussed how gels require a UV or LED light source to cure properly. Gels will not cure if the light cannot penetrate through the gel. If the gel is pigmented, then the pigment can block the transmission of the UV and LED light into the gel and decrease its curing potential.

Place some gel on a disposable form, and spread it using a gel brush. Apply the gel so that you are able to see through it onto the surface of the form. Cure the gel in your UV and LED bulb for the recommended period of time. Clean the surface of the gel to remove the sticky residue—the inhibition layer. Peel the gel from the form and examine the side of the gel that was against the form. If there is a layer of uncured gel, then the gel was applied too thickly. Reapply the gel application thinly and repeat the curing and examination process until you get a full cure.

fashion. Similar to clear gels, pink gels and white gels can be formulated in a variety of viscosities (the measurement of the extent of a liquid to flow), colors, and degrees of opacity. **Opacity** (oh-PAY-sit-ee) is the amount of colored pigment concentration in a gel, making it more or less difficult to see through. If a light cured gel has a high degree of opacity, the gel will be better able to camouflage the nail bed. If a gel has a low degree of opacity, the nail will more clearly show through. There are many different gels on the market, and each of these gels can be combined to give any appearance that you and your client desire.

After reading the next few sections, you will be able to:

**LO4** Identify the supplies needed for light cured gel application.

## Name the Supplies Required for Light Cured Gels

Just as every type of nail enhancement service requires specific tools, implements, equipment, and supplies, so do light cured gel enhancements. Here is a list of those requirements ([figure 29-5](#)). In addition to the supplies in your basic manicuring setup, you will need:

- **Light curing gel lamp.** Choose a light curing gel lamp designed to produce the correct amount of UV or LED light needed to properly cure the gel nail enhancement products you use.
- **Application Brush.** Choose brushes with small, flat (or oval) bristles to hold and spread the light cured gels. Ensure gel brushes have caps to protect them from collecting dust and debris as well as shield them



**figure 29-5**

Supplies needed for a UV gel service (left to right): a) UV lamp; b) cleanser; c) gel primer; d) gel brush; e) abrasive; f) nail tips; g) lint-free nail wipes; h) clear self-leveling gel; i) pink building gel; j) red gel polish; k) nail forms.



from light. Exposure to light can cause the gel to cure in the brush, and then the brush is no longer useable.

- **Gel primer or bonding gel.** Primers and bonding gels are designed specifically to improve adhesion of UV and LED gels to the natural nail plate. Use gel primers as instructed by the manufacturer of the product that you are using.
- **Light cured gel.** This should include pigmented gel(s) for a one-color or two-color service. This will also include a gel that creates a gloss, depending upon the gel system that you choose.
- **Nail forms.** Depending on the manufacturer recommendation, clear plastic forms are sometimes used to allow UV and LED radiation to penetrate from the underside for more complete curing of the free edge. With some brands, a traditional single-use form is acceptable. If using a reusable or multiuse form, remember to clean and disinfect in between uses.
- **Nail tips.** It is important when using nail tips with UV or LED gel to size the tip so that the curve of the tip matches the curve of the nail. If the curves do not match and the tip is spread too flat, then the tip could crack lengthwise down the center. It's also important to ensure the width of the tip measures from one side of the natural nail to the other. If the tip is measured too small it will crack on the side.
- **Nail adhesive.** There are many types of nail adhesives for securing preformed nail tips to natural nails. Select a type and size best suited for your work.
- **Nail dehydrator.** This product removes surface moisture and tiny amounts of oil left on the natural nail plate (both of which can block adhesion) and help prevent lifting of the nail enhancements.
- **Abrasive files and buffers.** Select a medium to fine abrasive buffer (180-240 grit) for natural nail preparation. Choose a medium to fine abrasive file (180- to 240-grit) for smoothing the surface. When contouring the surface, file carefully near the sidewalls and eponychium to avoid injuring the client's skin. Check the free edge thickness and even out imperfections with gentle strokes with the abrasive.

Make certain that you avoid excessive filing of the gel on the sidewalls of the enhancements. Excessive filing may lead to the enhancement being too thin, which can result in cracking at the sidewalls of the enhancement. Remember that nail enhancements must have a slightly rough surface in order for the finishing or glossing gels to adhere, so buffing after surface filing is not necessary. Light cured gel manufacturers may have other recommendations for abrasives; please consult the manufacturer's guidelines for more information on the specific system you are using.

- **A cleansing solution.** Cleansing solutions usually contain isopropanol, and they may contain additional solvents. This solution can be used to cleanse the natural nail as well as to remove the sticky inhibition layer from the gel after curing. The cleansing solution you choose should be the one recommended by the manufacturer.



- **Lint-free cleansing wipes.** Select an appropriate lint-free wipe to cleanse the nail surface. When removing the inhibition layer from light cured gel, avoid cleaning the nail in a manner that would put the gel onto the surface of the skin. Using your cleansing wipe, start at the top of the fingernail nearest the cuticle, and wipe away from the cuticle to the free edge of the fingernail.

## Storing Light Cured Gels

When storing light cured gels, ensure the lids are on tight and the containers are upright to avoid leakage. Since light cured gels are light sensitive, meaning light can cure the product, gels should be stored in a dark, cool place to prolong the life of the product.

During a gel procedure, keep the brush and open gel containers away from sunlight, gel lamps, and full-spectrum table lamps to prevent the gel from hardening. When the service is completed, store the application brush away from all sources of UV radiation. Do not leave your open container of gel near a window or a UV or LED lamp. If the gel is exposed to these sources of light, it will cure and become polymerized in the container

*After reading the next few sections, you will be able to:*

**LO5** Determine when to use light cured gels on your client.

# When to Use Light Cured Gels

When to use light cured gels may seem like a question of personal preference, but it really is a question of logic. The general answer could be, “Anytime!” Gel technology has been able to create some very hard, durable, and tough light cured gels. The new light cured resin technology allows light cured gel manufacturers to create tough, durable, and hard products that will perform as well as many of the monomer liquid and polymer powder systems on the market. The answer could easily be, “Never,” because there are customers that prefer to wear monomer liquid and polymer powder. It is what they know—they have been wearing these products for years and refuse to change. Most clients will do what you recommend. If you wear and recommend monomer liquid and polymer powder enhancements, that is what most of your clients will wear. If you wear and recommend light cured gels, that will be their preference. You are the professional and, as such, you should recommend a system that you have used and feel will perform best for the client. There may be a situation when you use a system on your client and that is not performing as the two of you would like. It may be best to try something else. Maybe a different gel resin or a change to monomer liquid and polymer powder

might be best. The answer to this question remains in your capable hands. It is also possible to use a monomer liquid and polymer powder system for the fill or full-set and to combine that with a light cured gloss gel to create the shine over the enhancement. Pigmented gels, such as light cured gel polishes, may also be used over the monomer liquid and polymer powder system, if that is what you prefer.

There are other factors that will assist you in your choice of gels or acrylics. The salon that you choose to work in or the environment you create in your work area could impact your decision. Gels commonly have fewer odors than acrylics, and if you are trying to create an environment with fewer odors, a gel may be the right choice for you and your clients.

There is one more choice to consider for gels: Consider the new, common gel polishes that are now on the market. Gel polishes are applied in a similar manner to a traditional nail polish but contain less solvent, cure under LED or UV light, and wear longer than traditional nail polish. The choice of when to use a gel polish versus a traditional polish is yours to make with your client. Questions to consider include:

- How easily would your client like the polish to be removed from the fingernail? If the polish is to be removed away from the salon, perhaps a traditional polish should be used.
- How long does the client desire the polish to last? If the polish is meant to remain on the fingernail for two weeks, the best choice is a gel polish.

**P 29-3** Sculpting Light Cured Gel Using Forms *See page 1009*

**P 29-5** Monomer Liquid and Polymer Powder Nail Enhancements Finished with UV or LED Gel Polish *See page 1015*

*After reading the next few sections, you will be able to:*

**LO 6** List the four guidelines that will assist you in choosing the proper light cured gel technology for your client.

## Choose the Proper Light Cured Gel Technology

There are many gels to choose from to perform your service. Here are a few guidelines that will help you make the best choice:

- If the client has flat fingernails, more building will need to be done to create an arch and curve. This building will be easiest when done with a thicker UV or LED building gel.
- If the client has fingernails that have an arch and curve, then a self-leveling gel may be the best option. Choose the self-leveling gel that you prefer—either a medium- or thick-viscosity gel.

- If your client returns to the salon often with broken enhancements, then a gel that uses fiberglass may be the best product for the next service.
- If a client is in search of manicure with long-lasting polish, a soak-off gel polish will be a great option.

After reading the next few sections, you will be able to:

**LO7** Discuss the differences between light cured lamps and bulbs.

## Distinguish the Difference Between Light Cured Bulbs and Lamps

What is the difference between a UV bulb and a UV lamp?

A **UV bulb**, also known as *UV light bulb*, is a special bulb that emits UV radiation to cure UV gel nail enhancements. There are a number of bulbs that are used to cure light cured gels: 4-, 6-, 7-, 8-, and 9-watt bulbs.

A **UV lamp** also known as *UV light unit*, is a specialized electronic device that powers and controls UV bulbs to cure UV gel nail enhancements. Lamps that are currently being sold may look similar at first but there are differences, including the number of bulbs in the unit, the distance the bulbs are from the bottom of the unit, and the size of the unit. These factors affect the curing power of the unit.

These bulb and lamp features are similar to **LED**, also known as *light emitting diodes*. These small bulbs emit the correct wave of LED light to cure LED gel products. A **LED lamp** is the electronic device that houses the LED bulbs. Most LED lamps cure gel about four times faster than UV lamps. Remember that the gel must have LED photo-initiators in order to cure in a LED lamp. See manufacturer's directions to see if the product should cure in a UV or LED lamp. Most LED gel products also have UV photo-initiators so they can be cured in either lamp; they just require different cure times. For example, usually a cure time for a gel is 30 seconds in an LED or two minutes in a UV lamp.

Lamps are typically referred to by the number of bulbs inside the lamp multiplied by the wattage. Remember that **lamp wattage** is the measure of how much electricity the bulb consumes, much like miles per gallon tell you how much gasoline a car requires to drive a certain distance. Miles per gallon will not tell you how fast the car can go, just as wattage does not indicate how much UV or LED light a bulb will produce. For example, if a unit has four bulbs in it and each bulb is nine watts, then the lamp is called a 36-watt lamp. Likewise, if the lamp only has three bulbs and each bulb is also nine watts, then it is called a 27-watt lamp. Wattage does not indicate how much UV or LED light a lamp will emit (**figure 29-6**).





**figure 29-6**  
UV nail lamp

UV and LED gel lamps are designed to produce the correct amount of UV or LED light needed to properly cure the gel nail enhancement products. Light cured gels are usually packaged in small opaque pots or squeeze tubes to protect them from UV and LED light. Even though UV and LED light is invisible to the eye, it is found in sunlight and tanning bulbs. Both true-color and full-spectrum bulbs emit a significant amount of ultraviolet radiation. If the gel product is exposed to these types of ceiling or table bulbs, the product's shelf life may be shortened, causing the product to harden in its container.

Depending on their circuitry, different bulbs produce greatly differing amounts of UV and LED light. This is referred to as the UV and LED bulb intensity or concentration. The intensity will vary from one lamp to the next and is more important than the rating of a UV and LED lamp based on the wattage of the bulb or the number of bulbs in the unit. For these reasons, it is important to use the UV or LED bulb that was designed for the selected UV and LED gel product. This will give you a much greater chance of success and fewer problems. Also, keep in mind that some lamps are designed to cure four fingers at once and recommend that the thumbs be cured separately. There are also lamps that are designed to allow enough light for the thumb to cure with the rest of the hand. These units are usually referred to as five-finger lights. You will need to know this information when using your lamp during the service so that the gels are cured correctly.

UV bulbs will stay violet for years; however, after a few months of use, they may produce too little UV radiation to properly cure the enhancement. Typically, UV bulbs must be changed two or three times per year, depending on frequency of use. If the bulbs are not changed regularly, gels may cure inadequately, meaning the oligomers and additional chemicals are not hardened. This can cause service breakdown, skin irritation, and product sensitivity.

The most common UV bulb that is on the market is a nine-watt bulb. While many of the UV gel systems use the nine-watt bulb, most of the gels can be cured in any manufacturer's 36-watt lamp. A gel that has been specifically designed to cure in a 36-watt lamp may not be able to be cured properly in a 16-watt lamp. The UV gel may become hard when cured in the 16-watt lamp, but it may not become as hard or cure completely. If the gel does not cure completely, it will crack, lift, and separate from the nail. It may not have a high shine, and the client will not be pleased with the service. The result will be similar to a monomer liquid and polymer powder system that has been applied with an incorrect mix-ratio between the liquid and the powder.

LED lights are becoming more common in the salon—most are used to cure the new gel polishes that are applied similarly to a traditional nail polish. These LED lights are not UV and therefore will not cure most of the traditional UV gels to their completed cure strength. There is a wide selection of LED lights on the market, and as such, it is strongly

recommended that you use only lights that the manufacturer endorses. Using the wrong LED light source could drastically effect the curing of the LED gel.

While this chapter was being written in 2014, a media release was published that claimed that UV nail curing lights could cause skin cancer<sup>1</sup>. There have been no studies to date that support this claim. Three UV gel manufacturers conducted a series of independent studies that found little to no evidence to support the claim that UV nail lights could cause cancer.

The lamp has as much to do with the proper curing of the UV or LED gel as the bulb! Not all lamps are the same. The differences between the structures of the lamps will alter the curing potential of the unit. For example, if two lamps are similar in every other respect, but lamp A has been constructed with the UV or LED bulbs closer to the fingernails than lamp B, lamp A will have more curing potential than lamp B. Thus, the bulbs are not going to provide the same results. The lamps are both nine-watt and have the same number of bulbs, but lamp A is more powerful than lamp B.

Consult with the gel manufacturer to receive more detailed information on which lamp and bulb will properly cure their light cured gels.



#### HERE'S A TIP

The heat from the chemical reaction caused when UV or LED gels cure can make some clients uncomfortable. The heat can be controlled by slowly inserting the hand into the UV or LED lamp. This will help to slow the chemical reaction and generate less heat. The heat is a result of the exothermic reaction of the gel as each bond of the polymer is created; the more bonds that are formed when the gel cures, the more heat is generated. In addition, the more bonds that are created when the gel polymerizes, the stronger the gel will be.

*After reading the next few sections, you will be able to:*

**LO8** Identify the advantages of using light cured gel polish.

## Specify the Advantages of Light Cured Gel Polish

Light cured gel polish has become a popular service to complement gels and all other enhancement services, including natural nails. Light cured gel polish is a relatively new system that evolved in 2000 with the emergence of new chemistries that became available to the beauty industry. The more popular light cured gel polishes are highly pigmented, which gives these systems the appearance of a traditional solvent-based nail lacquer. Light cured gel polishes are available in hundreds of shades, much the same as traditional nail polish, to suit every client.

Wearing light cured gel polishes instead of traditional nail lacquers does offer great advantages; however, they are removed differently than traditional nail polish. One advantage of light cured gel polishes is that they do not dry—they cure. Cured gel polish systems will not imprint or smudge if the client hits her hands while the nail lacquer is still drying. Another advantage is that the light cured gel polish does not thicken over time because the solvent does not evaporate. Solvent evaporation makes nail lacquers thicken and dry more slowly after the bottle of nail polish has been open for a few months. Since the solvent does not evaporate in light cured gel polish, a container of such polish will last longer.

After reading the next few sections, you will be able to:

- LO 9** Describe how to maintain light cured gel nail enhancements.
- LO 10** Explain how to correctly remove hard light cured gels.
- LO 11** Identify the correct way to remove soft light cured gels.

## Relate Nail Art to Light Cured Gels

Light cured gels can be used to create beautiful nail enhancements and can also be a very lucrative nail art medium. There are many colors of pigmented light cured gels on the market today, and by using some simple techniques you can create an array of inlaid art that your clients will love. Inlaid art is art sandwiched between two layers of enhancement products. The finished art is inside the nail. The surface of the nail is smooth, and the nail structure is not compromised by the art inside. It's also fun to add embellishments, such as glitter or confetti to clear UV or LED gel. This technique can be used to create the nail enhancement itself or to apply over a nail enhancement (figure 29-7).

## Perform Light Cured Gel Maintenance and Removal

Light cured gel enhancements must be maintained regularly, depending on how fast the client's nails grow. Maintenance service every two weeks is customary for this service.

### Gel Maintenance

Begin the maintenance using a medium-grit abrasive file (180-grit) to thin and shape the enhancement. Be careful not to damage the new growth on the natural nail plate with the abrasive when you are preparing the nail for the UV or LED gel maintenance.

Before adding UV or LED gel to the new growth area of the natural nail, be sure to clean the nail with the manufacturer's recommended cleanser or isopropanol (99 percent or better). This removes oils from the fingernail and results in better adhesion of the gel to the nail plate. It is important to remember that you must file with a light touch, because it is usually easier to file light cured gel enhancements than monomer liquid and polymer powder enhancements, as the product is softer and removes easily.



**figure 29-7**  
Sculptured UV gel enhancements with confetti and glitter inlaid designs

**P 29-4** Light Cured Gel Maintenance See page 1012

## Light Cured Gel Removal

There are two types of gel, and each employs a different removal method.

- **Hard UV and LED gels**, also known as *traditional gels*, cannot be removed with a solvent, such as acetone. These traditional gels, including colored gels, must be filed off the natural nail to be removed.
- **Soft UV and LED gels**, also known as *soakable gels*, including gel polishes, are removed by soaking in acetone for approximately 5 to 15 minutes or product remover to soften them, allowing the cosmetologist to easily scrape off the loosened gel polish with a wooden stick.

It is important that you read and follow the manufacturer's directions before removing light cured gel nails.

**P 29-6** Light Cured Gel Removal—Hard Gel *See page 1017*

**P 29-7** Light Cured Gel Removal—Soft or Soakable Gel Polishes  
*See page 1018*

### ✓ HERE'S A TIP

When providing enhancement services, ask whether the client would like enhancements that are removed easily. If the client does, use a soak-off UV or LED gel as the base coat (following the manufacturer's recommendations on that gel product application), and then perform the remainder of the service. Before the client leaves the salon, arrange a date for her to return to have the UV or LED gel removed.





# ONE-COLOR METHOD UV OR LED GEL ON TIPS OR NATURAL NAILS FINISHING WITH UV OR LED GEL POLISH



## IMPLEMENTS & MATERIALS

In addition to the basic materials on your manicuring table, you will need the following supplies:

- Cleansing solution
- Gel brush
- Lint-free cleansing wipes
- Nail dehydrator
- Nail tips and resin
- Nylon brush (for removing dust)
- UV or LED gel for the application
- UV or LED gel lamp
- UV or LED gel polish
- UV or LED gel primer or bonding gel

## PREPARATION

Perform:

**P 25-1** Pre-Service Procedure *See page 880*

## PROCEDURE

- 1 Clean the nails with soap and water. Dry the hands thoroughly with a clean disposable towel, and then remove the existing polish. Begin with your client's little finger on the right hand and work toward the thumb. Repeat on the left hand.
- 2 Apply cuticle remover to the nail plate, if needed. Gently push back the eponychium, and carefully remove cuticle tissue from the nail plate.



- 3 Gently file or buff the nail plate with medium/fine abrasive (180- to 240-grit) or the abrasive recommended by the gel manufacturer, to remove the shine on the surface of the nail plate. After filing and/or buffing, remove dust from the nail surface with a clean, dry nylon brush.
- 4 Use a cleanser and a dehydrator per the manufacturer's recommendation to remove any oils and debris from the fingernail. This increases the adhesive properties of the gel.

5 If your client requires nail tips, apply them according to **Procedure 27-1, Nail Tip Application**, in Chapter 27, Nail Tips and Wraps. Be sure to shorten and shape the tip before the application of the UV or LED gel. During the procedure, the UV gel overlaps the tip's edge to prevent lifting. This seal can be broken during the filing process, allowing the UV gel to peel or lift. Be careful not to break this seal.



6 If applicable, follow the manufacturer's instructions for applying the bonding gel or primer. Using the applicator brush, insert the brush into the nail primer or bonding gel. Wipe off any excess from the brush, and, using a slightly damp brush, ensure that the nail plate is completely covered per the manufacturer's recommendations. Avoid using too much product to prevent running into the skin.

7 If applicable, cure the bonding gel according to the manufacturer's directions.

8 Gently brush or float the UV or LED gel onto the fingernail surface, including the free edge. Leave a  $\frac{3}{16}$ -inch (4.76 mm) gap around the cuticle and sidewall area of the fingernail. Keep the UV or LED gel from touching the cuticle, eponychium, or sidewalls. Apply on four fingers, from pinky to pointer finger.



10 Repeat steps 8 and 9 on the left hand, and then repeat the same steps for both thumbs.



9 Properly position the hand under the UV or LED bulb for the required cure time, as indicated by the manufacturer.

11 Apply a small bead of UV or LED gel to the apex of the nail to create a slight arch. Repeat this application process on the remaining three fingernails.

12 Cure the gel application by properly positioning the hand in the UV or LED lamp for the manufacturer's required cure time.

13 Repeat steps 11 and 12 on the left hand, and then repeat the same steps for both thumbs.

14 Apply a layer of self-leveling gel if needed. This layer is to perfect the shape and add thickness to the enhancement. Cure for the time required by the manufacturer. This step is not necessary when applying to the natural nail.



15 Remove the inhibition layer by cleaning with the manufacturer's cleanser on a lint-free wipe. Avoid skin contact.



16 Using a medium or fine abrasive (180- or 240-grit), refine the surface contour. File carefully near the sidewalls and eponychium to avoid injuring the client's skin. Check the free edge thickness and even out imperfections with gentle strokes.



17 Remove the dust and filings with a clean and disinfected nylon brush. Cleanse the nails with surface cleanser and a lint-free wipe. Now evaluate the work you just completed and make any necessary adjustments.



18 To add gel polish to the final look, brush the first coat of light cured gel polish thinly over the entire surface of the enhancement. Apply a small amount of the light cured gel polish to the free edge of the fingernail to cap the end and create an even and consistent appearance. Apply to remaining three fingernails.

---

19 Place the hand inside the UV or LED lamp in the proper location and cure the first coat of gel polish for the recommended period of time.

---



20 Repeat steps 18 and 19 on the opposite hand, then repeat the same steps for both thumbs.



21 Apply UV or LED glossing gel (sealer, gloss, or finisher gel) and cure.



22 Remove the inhibition layer, if required.

23 Apply and rub nail oil into the surrounding skin, massaging briefly to speed up penetration.

24 Ask the client to wash her hands with soap and water at the hand washing station, or ask her to use the nail brush to clean her nails over a finger bowl. Rinse with clean water to remove soap residue. Dry the hands thoroughly with a clean disposable towel.

25 Apply hand cream and massage the hands and arms.



26 Finished look.

## POST-SERVICE

Complete:

**P** 25-2 Post-Service Procedure *See page 884*

# TWO-COLOR METHOD UV OR LED GEL ON TIPS OR NATURAL NAILS



## IMPLEMENTS & MATERIALS

In addition to the basic materials on your manicuring table, you will need the following supplies:

- Cleansing solution
- Gel brush
- Lint-free cleansing wipes
- Nail dehydrator
- Nail tips
- Nylon brush
- Pink UV or LED gel and white UV or LED gel
- UV or LED gel lamp
- UV or LED gel primer or bonding gel

## PREPARATION

Perform:

**P 25-1** Pre-Service Procedure *See page 880*

## PROCEDURE

- 1 Clean the nails and remove existing polish.
- 2 Apply cuticle remover to the nail plate, if needed. Gently push back the eponychium and remove cuticle tissue from the nail plate.
- 3 Gently file or buff the nails with a medium/fine (180- to 240-grit) buffer or the abrasive recommended by the gel manufacturer, to remove the shine on the surface of the nail plate.
- 4 Remove the dust from the nail surfaces.
- 5 Use a cleanser and dehydrator per the manufacturer's recommendation to remove any oils and debris from the fingernail. This increases the adhesive properties of the gel.
- 6 Apply primer or bonding gel to the natural nail only. Apply nail tips with resin, if desired.
- 7 Cure bonding gel, if required, following the manufacturer's directions.



8 Select the desired white gel, and apply it over the tip and along the sidewalls of the fingernail to create the smile line. Be sure to apply this layer of gel thin enough to allow the gel to cure completely through to the surface of the tip. If there is white gel where you do not want it to be, wipe the unwanted gel from the fingernail tip.

9 Using a lint-free nail wipe, pinch the bristles of the brush in the nail wipe to pull off excess gel. Do not use solvents to clean the bristles.



10 Using the tip of your clean gel brush, wipe across the smile line to create a clean, crisp, U-shaped line. Repeat this process until you have the desired smile line. Make certain that all smile lines are uniform from nail to nail before curing the gel.



11 Flash cure the white gel one or two fingers at a time in the lamp for the product manufacturer's recommended time. Repeat steps until each finger is cured.

12 If the white gel does not have the same brightness and consistency on all fingers, repeat steps 8-11.



13 Gently float a pink-tinted gel onto the fingernail surface, including the free edge. Leave a  $\frac{3}{16}$ -inch (4.76 mm) gap around the cuticle and the sidewall area of the fingernail. Keep the gel from touching the cuticle, eponychium, or sidewalls.



14 After the application of four fingers, cure the pink gel in the UV or LED lamp for the recommended time.

15 Repeat steps 13 and 14 on the left hand, and then repeat the same steps for both thumbs.



16 Apply a small amount of pink self-leveling gel across the first layer, and float it into place. Float the self-leveling gel over and around the free edge to create a seal. Avoid touching the skin under the free edge to prevent skin irritation and sensitivity. Repeat this application for all four nails.

17 Cure the self-leveling gel.

18 Repeat steps 16 and 17 on the left hand, and then repeat the same steps for both thumbs.



19 Another layer of the UV or LED gel will add thickness to the enhancement if it is desired. Cure the nails.

20 Remove the inhibition layer.

21 Contour the nails with a medium/fine-grit abrasive (180- or 240-grit).

22 Remove the dust with a nylon brush. Evaluate the work you just completed and make any necessary adjustments.

23 Apply the UV or LED gloss gel (sealer, gloss, or finisher gel). Cure the nails.

24 Remove the inhibition layer, if required.

25 Apply and rub nail oil into the surrounding skin, massaging briefly to speed up penetration.

26 Ask the client to wash her hands with soap and water at the hand washing station, or ask her to use the nail brush to clean her nails over a finger bowl. Rinse with clean water to remove soap residue. Dry thoroughly with a clean disposable towel.

27 Apply hand cream and massage the hands and arms. Thoroughly clean each nail of lotion.



28 Finished look.

## POST-SERVICE

Complete:

**P** 25-2 Post-Service Procedure *See page 884*

# SCULPTING LIGHT CURED GEL USING FORMS



## IMPLEMENTS & MATERIALS

In addition to the basic materials on your manicuring table, you will need the following supplies:

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Cleansing solution | <input type="checkbox"/> Lint-free cleansing wipes | <input type="checkbox"/> Nail forms    | <input type="checkbox"/> UV or LED gel lamp                  |
| <input type="checkbox"/> Gel brush          | <input type="checkbox"/> Nail dehydrator           | <input type="checkbox"/> UV or LED gel | <input type="checkbox"/> UV or LED gel primer or bonding gel |

## PREPARATION

Perform:

**P 25-1** Pre-Service Procedure *See page 880*

## PROCEDURE

- 1 Clean the nails with soap and water and dry hands thoroughly. Remove the existing polish.
- 2 Apply cuticle remover to the nail plate if needed. Gently push back the eponychium and remove cuticle from the nail plate. File the free edge of the nails as needed.
- 3 Gently buff the nails with a medium (180-grit) buffer, or the abrasive recommended by the gel manufacturer, to remove the shine on the surface of the nail plate. Then remove dust using a clean, dry nail brush.
- 4 Use a cleanser and/or nail dehydrator per the manufacturer's recommendation to remove any oils and debris from the fingernails. This increases the adhesive properties of the gel.



- 5 Fit forms onto all fingers (as described in Chapter 27, Nail Tips and Wraps).





6 Apply the primer or bonding gel.



7 Cure the bonding gel, if required.

8 Repeat steps 6 and 7 on the left hand, and then repeat the same steps for both thumbs.



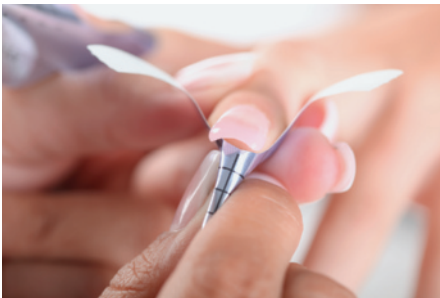
9 Apply the first coat of UV or LED gel (building or self-leveling gel). Consider applying the first coat to one finger at a time to prevent the gel from running.



10 Properly position the hand in the lamp and cure the gel for the required time.

11 Apply a second layer of the UV or LED gel (building or self-leveling gel). Properly position the hand and cure the gel for the required time.

12 If the extension still bends, apply another layer of building or self-leveling UV or LED gel over the entire enhancement and cure. Repeat as needed until the extension doesn't bend.



13 Remove the nail forms by pinching the form just before the hyponychium of the finger and then gently pulling the form down and away from the finger.

14 Cure the gel (building or self-leveling gel). Then remove the inhibition layer.

15 Use a medium abrasive (180-grit) to file and shape the free edge of the enhancement.



16 Apply another layer of UV or LED gel (building or self-leveling gel), if needed, over the entire enhancement.



17 File the nails by using a medium/fine abrasive (180- to 240-grit), and refine the surface contour. Be certain to file the enhancement to create an arch and curve in order to optimize the strength of the overlay and create an elegant beauty to the enhancement.

18 Remove the dust. Evaluate your work, and make any necessary adjustments. If finishing with gel polish, do so now, according to Procedure 29-1, steps 18-20, on page 1004. Otherwise, proceed to step 19.

19 Apply the gloss UV or LED gel (sealer, gloss, or finisher).

20 Cure the nail gel.

21 Remove the inhibition layer, if required, with cleanser and a lint-free wipe.

22 Apply and rub nail oil into the surrounding skin and nail enhancement, massaging briefly to speed up penetration.

23 Ask the client to wash her hands with soap and water at the hand washing station, or ask her to use the nail brush to clean her nails over a finger bowl. Rinse with clean water to remove soap residue. Dry thoroughly with a clean, disposable towel.

24 Apply hand cream and massage the hands and arms. Thoroughly clean each nail of lotion.

25 Apply nail polish, if desired.



26 Finished look.

## POST-SERVICE

Complete:

**P** 25-2 Post-Service Procedure *See page 884*

# LIGHT CURED GEL MAINTENANCE



## IMPLEMENTS & MATERIALS

In addition to the basic materials on your manicuring table, you will need the following supplies:

- Cleansing solution
- Lint-free cleansing wipes
- UV or LED gel
- UV or LED gel primer or bonding gel
- Gel brush
- Nail dehydrator
- UV or LED gel lamp

## PREPARATION

## PROCEDURE

Perform:

**P 25-1** Pre-Service Procedure *See page 880*

**1** Clean the nails with soap and water, and dry the hands thoroughly. Remove the existing polish.

**2** Apply cuticle remover to the nail plate if needed. Gently push back the eponychium and remove cuticle from the nail plate.



**3** File (gently) the nail plate with medium/fine abrasive (180- to 240-grit) to reduce and shape the nail surface.

**4** Lightly buff the natural nail regrowth with a medium (180-grit) buffer or the abrasive recommended by the gel manufacturer to remove the shine on the surface of the natural nail plate.

**5** Remove dust from the nail surfaces.

6 Use a cleanser and/or dehydrator per the manufacturer's recommendation to remove any oils and debris from the fingernail. This increases the adhesive properties of the gel.



7 Apply primer or bonding gel to the natural nail according to the manufacturer's directions.

8 Cure the bonding gel if required.



9 Lightly brush the UV or LED gel onto the nail from the natural nail regrowth to the free edge. Keep the gel from touching the cuticle, eponychium, or sidewalls. Apply the gel to the client's right hand, from little finger to pointer finger.

10 Cure the gel on the right hand for the manufacturer's recommended time.

11 Repeat steps 9 and 10 on the left hand. Then repeat the same steps for both thumbs.



12 Remove the inhibition layer from all nails with cleanser on a lint-free wipe.



13 File and buff using a medium or fine abrasive (180- to 240-grit). Refine the surface contour. Evaluate the work you just completed, and make any necessary adjustments.

- 14 Remove the dust, and then clean the fingernails. If finishing with gel polish, do so now, according to Procedure 29-1, steps 18-20, on page 1004. Otherwise, proceed to step 15.
- 15 Apply the UV or LED gloss gel (sealer, gloss, or finisher gel).
- 16 Cure the gloss gel.
- 17 Remove the inhibition layer, if required.
- 18 Apply and rub nail oil into the surrounding skin and nail enhancement, massaging briefly to speed up penetration.
- 19 Ask the client to wash her hands with soap and water at the hand washing station or ask her to use the nail brush to clean her nails over a finger bowl. Rinse with clean water to remove soap residue. Dry thoroughly with a clean disposable towel.
- 20 Apply hand cream and massage the hands and arms. Thoroughly clean each nail of lotion.
- 21 Apply nail polish, if desired.



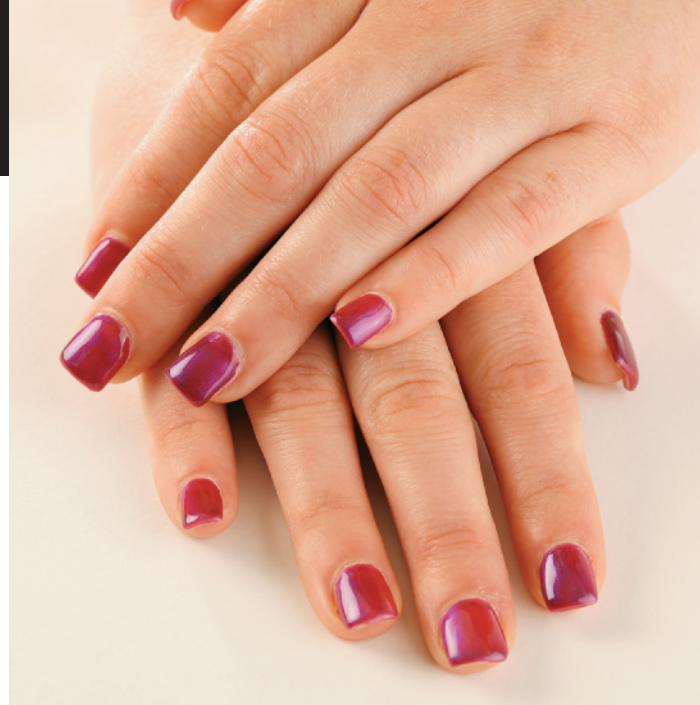
- 22 Finished look.

## POST-SERVICE

Complete:

**P** 25-2 Post-Service Procedure *See page 884*

# MONOMER LIQUID AND POLYMER POWDER NAIL ENHANCEMENTS FINISHED WITH UV OR LED GEL POLISH



## IMPLEMENTS & MATERIALS

In addition to the basic materials on your manicuring table, you will need the following supplies:

- Cleansing solution
- Lint-free cleansing wipes
- UV or LED gel lamp
- UV or LED gel sealer or top coat
- Gel brush
- Nylon brush
- UV or LED gel polish

## PREPARATION

## PROCEDURE

Perform:

**P 25-1** Pre-Service Procedure *See page 880*



**1** Perform monomer liquid and polymer powder application described in Chapter 28, Monomer Liquid and Polymer Powder Nail Enhancements. Once the monomer liquid and polymer powder enhancements have been filed and contoured to the correct shape and length, they will be ready for the gel polish application. Note: Do not buff the nails smooth or use any oils during the filing process as this can prevent adhesion.



**2** Remove the dust and filings with a clean and disinfected nylon brush. Remove any oils that may have been deposited on the fingernails during filing.



③ Apply a very thin coat of UV or LED gel polish over the entire surface and edge of the enhancement in a brushing technique. Apply to all five nails on one hand, or as recommended by the manufacturer.

- ④ Place the hand inside the UV or LED lamp in the proper location and cure for the recommended period of time.
- ⑤ Repeat steps 3 and 4 on the opposite hand.
- ⑥ Apply a second thin coat of UV or LED gel polish over the entire surface of the enhancement on one hand and cure. Repeat on opposite hand.



⑦ Apply the gel polish top gel, sealer, finish, or gloss gel on one hand. Starting from the base of the nail plate, stroke toward the free edge, using polish-style strokes and covering the entire nail surface and edge. Avoid touching the client's skin, as this will cause lifting.

- ⑧ Cure the gloss gel.
- ⑨ Remove the inhibition layer, if required.
- ⑩ Apply and rub nail oil into the surrounding skin and nail enhancement, massaging briefly to speed up penetration.
- ⑪ Ask the client to wash her hands with soap and water at the hand washing station, or ask her to use a nail brush to clean her nails over a finger bowl. Rinse with clean water to remove soap residue that may cause lifting. Dry thoroughly with a clean disposable towel.
- ⑫ Apply hand cream and massage the hands and arms. Thoroughly clean each nail of lotion.



⑬ Finished look.

**POST-SERVICE**

Complete:

**P** 25-2 Post-Service Procedure *See page 884*

# LIGHT CURED GEL REMOVAL—HARD GEL

## IMPLEMENTS & MATERIALS

In addition to the basic materials on your manicuring table, you will need the following supplies:

Abrasives

Nail buffer

Nail oil

## PREPARATION

Perform:

**P 25-1** Pre-Service Procedure See page 880

## PROCEDURE

**1** Clean hands and remove polish if applicable.



**2** Use a medium-grit abrasive (150- to 180-grit) to reduce the thickness of the enhancement on the fingernail. Take care not to file into the natural nail.



**3** Use a fine grit nail buffer (240-grit or higher) to smooth the enhancement. Talk with the client about how to allow the rest of the enhancements to grow out and off of the fingernails. Evaluate the work you just completed, and make any necessary adjustments.

**4** While massaging nail oil into the nail and surrounding skin, suggest that your client have natural nail manicures to ensure that the enhancements grow off correctly. Have your client wash her hands and dry thoroughly. Perform an arm and hand massage before completing the service.



**5** Finished look.

## POST-SERVICE

Complete:

**P 25-2** Post-Service Procedure See page 884



# LIGHT CURED GEL REMOVAL—SOFT OR SOAKABLE GEL POLISHES

## IMPLEMENTS & MATERIALS

In addition to the basic materials on your manicuring table, you will need the following supplies:

- Abrasives
- Buffer
- Gel product remover (as recommended by the gel manufacturer)
- Nail oil
- Wooden pusher
- Metal or glass bowl

## PREPARATION | PROCEDURE

Perform:

**P 25-1** Pre-Service Procedure See page 880

**1** Clean hands and remove polish if applicable. Gently file the surface of the gel enhancement or gel polish with a 180-grit file.



**2** Pour the soak-off solution into a finger bowl or other glass or metal container so that the level of the remover is sufficient to completely immerse the fingernails in the solution.

**3** Soak the client's fingernails in the solution for the manufacturer's recommended period of time.



**4** Use a wooden stick to ease the gel off the fingernail.

- 5 Lightly buff the fingernail with a fine-grit buffer (240-grit or higher) to remove any remaining gel material from the fingernail area.
- 6 While massaging nail oil into the nail and surrounding skin, evaluate the work you just completed, and make any necessary adjustments. Have your client wash her hands and dry thoroughly. Perform an arm and hand massage before completing the service.



- 7 Finished look.

## POST-SERVICE

Complete:

- P** 25-2 Post-Service Procedure *See page 884*

## REVIEW QUESTIONS

- 1 Describe the chemistry and main ingredients of light cured gels.
- 2 When would you use a one-color method of applying light cured gels? When would you use a two-color method for applying light cured gels?
- 3 What are the different types of light cured gels found in current systems?
- 4 What supplies are needed for light cured gel application?
- 5 When should you use light cured gels?
- 6 When should you use a building gel, a self-leveling gel, or a light cured gel that uses fiberglass?
- 7 What are the differences between light cured lamps and light cured bulbs?
- 8 List the steps to use when applying one-color, light cured gel on tips or natural nails.
- 9 Describe how light cured gels are applied over forms.
- 10 Describe how to maintain light cured gel nail enhancements.
- 11 Explain how to correctly remove hard light cured gels.
- 12 Identify how to correctly remove soft light cured gels.

## STUDY TOOLS

- **Reinforce what you just learned:** Complete the activities and exercises in your Theory or Practical Workbook, or your Study Guide.
- **Expand your knowledge:** Search for websites about the topics in this chapter and make a list of additional resources.
- **Study and prepare for your quiz:** Take the chapter test in your Exam Review or your Milady U: Online Licensing Prep.
- **Re-Test your knowledge:** Take the Chapter 29 Quizzes!
- **Learn even more:** Look up in a dictionary or search the internet for the definitions of any additional terms you want to learn about.

## CHAPTER GLOSSARY

<b>bonding gels</b>	p. 991	Gels used to increase adhesion to the natural nail plate.
<b>building gels</b>	p. 991	Any thick-viscosity adhesive resin that is used to build an arch and curve to the fingernail.
<b>cure</b>	p. 990	To harden.
<b>gel polish</b>	p. 992	A very thin-viscosity, light cured gel that is usually pigmented and packaged in a pot or a polish bottle and used as an alternative to traditional nail lacquers.
<b>glossing gel</b>	p. 992	Also known as <i>sealing gel</i> , <i>finishing gel</i> , or <i>shine gel</i> ; these gels are used over the finished light cured gel application to create a high shine.

<b>hard UV and LED gels</b>	p. 1001	Also known as <i>traditional UV and LED gels</i> ; gels that cannot be removed with a solvent and must be filed off the natural nail.
<b>inhibition layer</b>	p. 992	The tacky surface left on the nail after a light cured gel has cured.
<b>lamp wattage</b>	p. 997	The measure of how much electricity the bulb consumes.
<b>LED</b>	p. 997	Light emitting diode.
<b>LED lamp</b>	p. 997	The electronic device that houses the LED bulbs.
<b>light cured gel</b>	p. 988	Also known as <i>UV and LED gel</i> ; type of nail enhancement product that hardens when exposed to a UV and LED light.
<b>oligomer</b> uh-LIG-uh-mer	p. 988	Short chain of monomer liquids that is often thick, sticky, and gel-like and that is not long enough to be considered a polymer.
<b>one-color method</b>	p. 990	When one color of gel, usually clear, is applied over the entire surface of the nail.
<b>opacity</b> oh-PAY-sit-ee	p. 993	The amount of colored pigment concentration in a gel, making it more or less difficult to see through.
<b>photoinitiator</b> FOH-toh-in-ish-ee-AY-tohr	p. 989	A chemical that initiates the polymerization reaction.
<b>pigmented gels</b>	p. 991	Any building or self-leveling gel that includes color pigment.
<b>self-leveling gels</b>	p. 991	Gels that are thinner in consistency than building gels, allowing them to settle and level during application.
<b>soft UV and LED gels</b>	p. 1001	Also known as <i>soakable gels</i> ; these gels are removed by soaking in acetone.
<b>two-color method</b>	p. 990	A method whereby two colors of resin are used to overlay the nail.
<b>urethane acrylate</b>	p. 989	A main ingredient used to create light cured gel nail enhancements.
<b>urethane methacrylate</b>	p. 989	A main ingredient used alone or in combination with urethane acrylates to create light cured gel nail enhancements.
<b>UV bulb</b>	p. 997	Also known as <i>UV light bulb</i> ; special bulb that emits UV and LED light to cure UV and LED gel nail enhancements.
<b>UV lamp</b>	p. 997	Also known as <i>UV light unit</i> ; specialized electronic device that powers and controls UV and LED bulbs to cure UV and LED gel nail enhancements.
<b>viscosity</b> vis-KAHS-ut-tee	p. 990	The measurement of the thickness or thinness of a liquid and how the fluid flows.