

[REDACTED]

CHEMICAL TEXTURIZING

[REDACTED]

SAFETY AND DISINFECTION

CROSSWORD PUZZLE

-
-
1. _____ cleaning tools with warm, soapy water and submerging in an EPA-registered disinfectant
 2. _____ used to protect Guests' clothing and skin against chemicals and/or irritation
 3. _____ sets the standards for what information the SDS contains
 4. _____ a disease that is caused by overexposure to certain products or ingredients
 5. _____ mandates that every chemical located within a business has a SDS available
 6. _____ strand tests are to be performed before every chemical service to determine processing time
 7. _____ a form affirming that your Guest was advised of potential risks associated with a chemical service
 8. _____ cleaning tools with warm soapy water to remove all debris and then placing them in a high pressure steam unit

SAFETY AND DISINFECTION

CROSSWORD PUZZLE

D M X R T D C P P Q K J G L L
M P R E L I M I N A R Y C K D
L G M L N W Q L W G F J N K K
A C Z E M C P J Y N X O M L M
N N K A L M L D Q I I Z L L K
O D W S R C J P F T B M W R D
I L X E Z X R L A C Z H D L B
T J W S H M C Z T E L Y L N S
A T Q T V J I G L F C X L H K
P J T A D L J V D N W J G F Z
U Y V T R L C R V I M B N C G
C G G E M R A L B S K N H T C
C L T M X P N O T I F F X Z Q
O S T E I P F R S D Y N L D T
C H R N D X M N M H C Y Q T N
C T G T P H P T B H A R V Y G

COMPOSITION OF THE HAIR

protein building blocks of hair that link together and form tiny protein fibers



very strong and create a spiral chain effect



spiraling chain of amino acids joined together by peptide bonds



PROTOFIBRILS



MICROFIBRILS



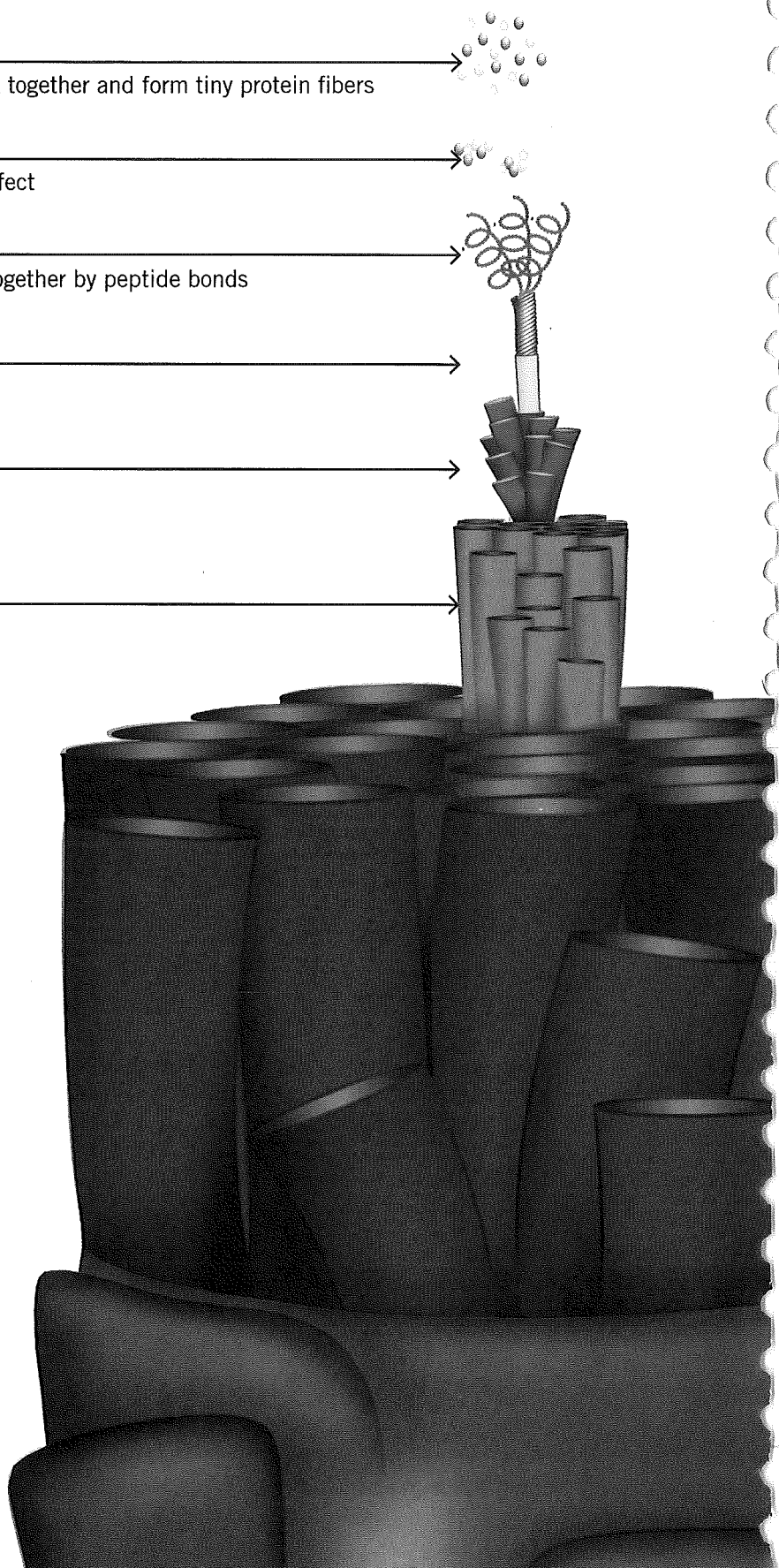
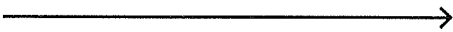
MACROFIBRILS



Cortical fibers grouped together produce



The dried, dead cells that surround the cortex



BONDS OF THE HAIR

Like the steps on a ladder, _____ connect polypeptide chains side-by-side and are responsible for the hair's strength and elasticity.

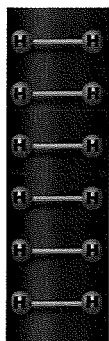
TYPES OF SIDE BONDS

TYPE	STRENGTH	BROKEN BY	REFORMED BY

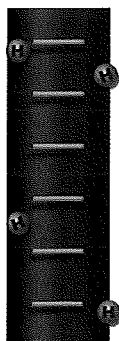
PHYSICAL AND CHEMICAL CHANGES TO THE HAIR

Describe what happens to hair when it is temporarily altered:

Describe what happens to hair when it is permanently altered:



STRAIGHT, DRY HAIR;
HYDROGEN BONDS
ARE INTACT



HAIR IS WET;
HYDROGEN
BONDS DETACH



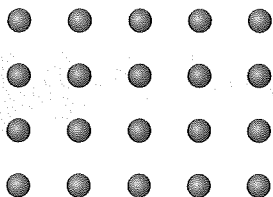
WET HAIR IS
STRETCHED
AROUND ROLLER



HYDROGEN BONDS
RE-ATTACH IN
NEW POSITION

MIXTURES IN CHEMISTRY

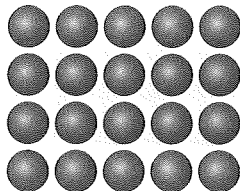
3 FORMS OF MATTER



Consists of molecules that are very far apart

1. _____

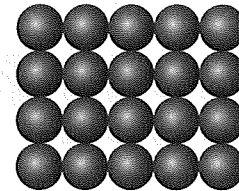
Examples:



Consists of molecules that are very close together

2. _____

Examples:



Consists of molecules that are the closest together

3. _____

Examples:

A physical combination of 2 or more types of matter blended together is _____.

When one substance is able to be mixed with another substance to form a stable substance, they are called _____.

Give examples of each type of substance:

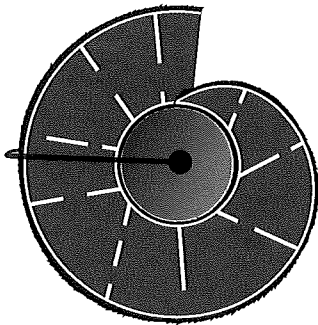
MISCIBLE	IMMISCIBLE

PERMANENT WAVING

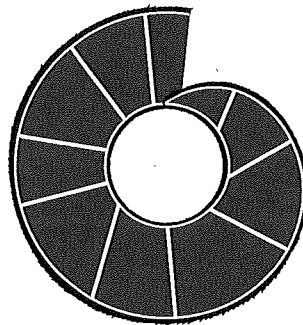
What is Permanent Waving?

THE THREE PHASES OF A PERMANENT WAVE PROCESS:

1. _____ requires applying a permanent waving lotion to hair that has been wrapped.
2. _____ requires the application of a chemical solution to stop the waving process.
_____ is the chemical solution applied to stop the waving process and to rebuild the bonds into their new form.
_____ is the complete process.
3. _____ determines the required processing time and ensures that the desired curl has been achieved.
_____ - _____ causes dry, damaged hair with increased breakage.
_____ - _____ causes insufficient curl pattern due to timing or inadequate saturation.



Waving lotion is applied, disulfide bonds separate.



Neutralizer reforms disulfide bonds in their new curled position, perm rod is removed.

In your own words, explain the processes of **reduction** and **oxidation**:

PERM CATEGORIES

PERM TYPE	RECOMMENDED HAIR TYPE	PROCESSING (HEAT / NO HEAT)	ACTIVE INGREDIENT	pH
(A.K.A COLD WAVES)		no heat		
	Porous, fragile, color-treated, damaged			4.5 to 7.0
			typically Glyceryl Monothioglycolate (GMTG)	
		no heat	Glyceryl Monothioglycolate (GMTG)	
ENDOTHERMIC				4.5 to 7.5
	Coarse, resistant, extremely thick		Ammonium Thioglycolate	
		no heat	Monoethanolamine (MEA) / Aminomethylpropanol (AMP)	
THIO-FREE			Mercaptamine / Cysteamine	
		with heat		6.5 to 7.0

DOWN

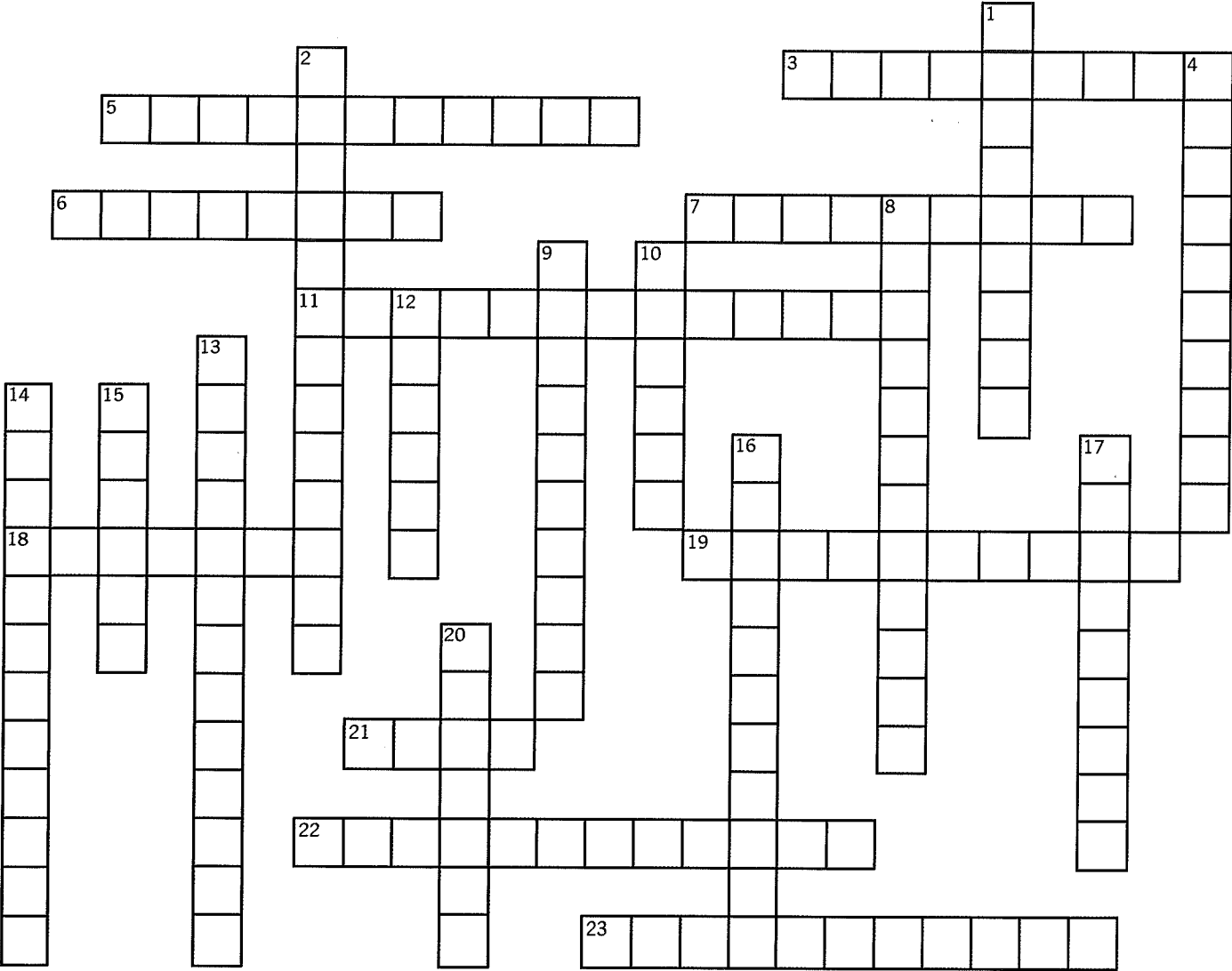
1. wrap technique using controlled sections of hair in which perm rods are placed in rectangular sections
2. wrap technique that utilizes two rods, one rod wrapped mid-strand to scalp, one rod wrapped mid-strand to ends
4. wrap technique used on hair longer than 8" to provide a uniform pattern from scalp to ends
8. wrap technique that consists of multiple small ponytails throughout the head, each wrapped with 5 to 7 rods
9. wrap that requires one paper placed on top of remaining exposed hair, ensuring all hair is wrapped smoothly around the rod
10. perm rods that are foam covered and easily bent
12. wrap technique that creates a coiling, springing effect on the hair
13. wrap technique that consists of partings that follow the shape of the head
14. wrap technique that has no exact sections, rods are staggered
15. perm rods that are pliable foam and create a soft-end result
16. wrap technique that produces curls that are tighter on the ends and larger at the scalp
17. wrap technique that consists of controlled sections of hair using zigzag partings
20. wrap that requires only one paper, which is folded in half

ACROSS

3. absorbent pieces of thin tissue-type paper that control and protect the hair ends while perming
5. wrapping technique that provides curl or wave to small areas of the head
6. perm rods that have an even diameter and width throughout their entire length
7. used to maintain balance and eliminate pressure by lifting the bands of perm rods off the hair
11. the position of a perm rod within a section
18. perm rods that have a small diameter in the center with a larger diameter increase throughout the remaining length
19. wrap that requires hair to be placed between two end papers
21. perm rods that are long and plastic; wrapped straight, then bent and connected to form a circle
22. subsections located within a larger section
23. position of a tool in relation to its base section and is determined by the angle at which the hair is wrapped

PERM TOOLS AND TECHNIQUES

CROSSWORD PUZZLE

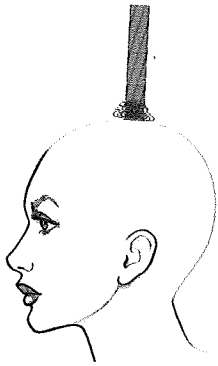


TESTING THE HAIR

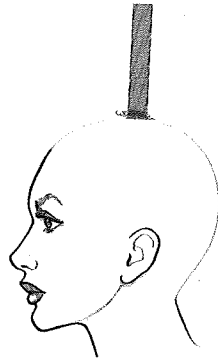
When performing chemical services on your Guest's hair, you will need to perform a simple, but necessary test to determine if the hair is healthy or in need of some TLC (tender loving care).

The ability of the hair to absorb any liquid is _____.

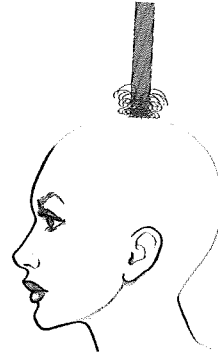
Fill in the blanks and describe the three types of porosity.



POROSITY



POROSITY



POROSITY

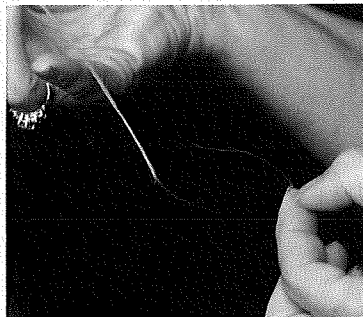
The capability of the hair strand to stretch and return to its previous form without breaking is _____.

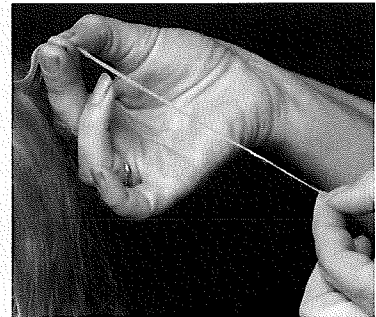
Wet hair can generally be stretched on average _____% of its length.

Dry hair can generally be stretched on average _____% of its length.

Describe each step of an elasticity test:





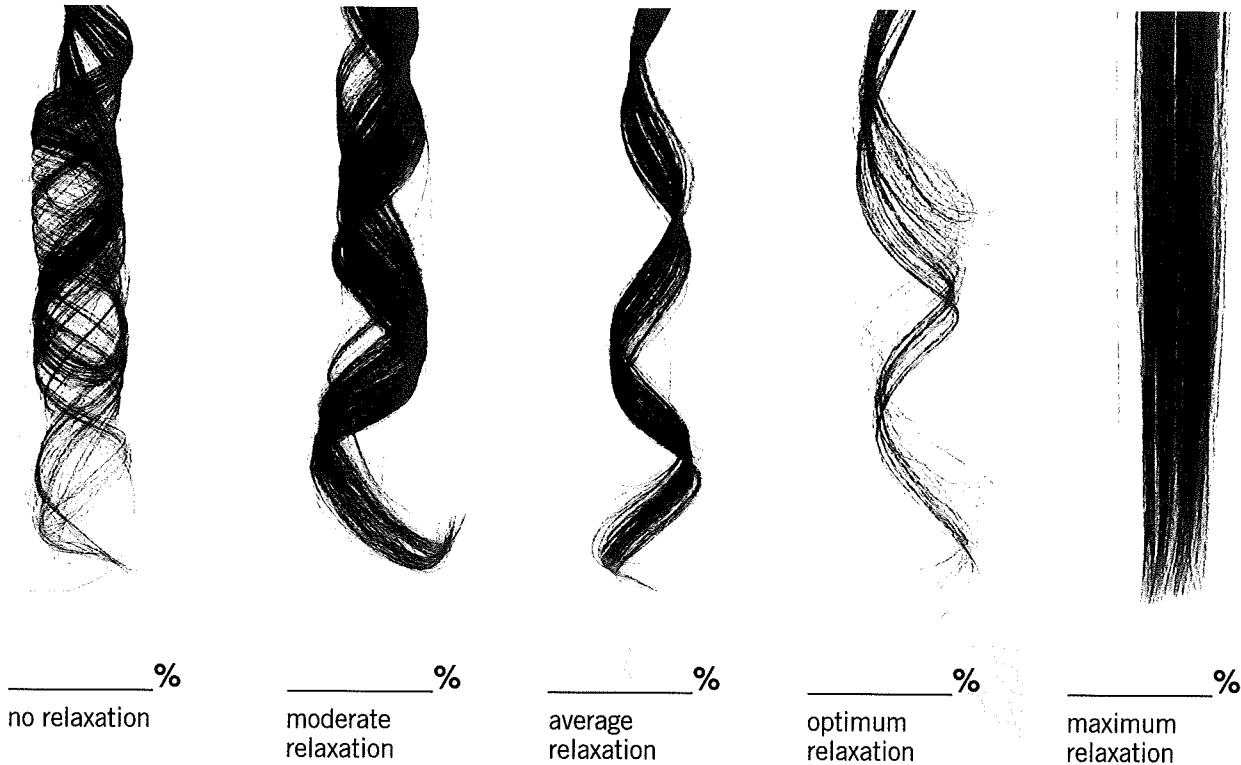


CHEMICAL STRAIGHTENING

What is Chemical Relaxing?

CURL REDUCTION

Determine the percentage of curl relaxation and fill in the blank under each.



TWO PHASES OF A CHEMICAL RELAXING PROCESS:

1. _____ is the application of a chemical agent to the hair, followed by a series of steps necessary to straighten the hair.

_____ is used as a barrier to protect the scalp and is applied prior to a chemical relaxer service.

2. _____ requires applying a chemical that reconnects the disulfide bonds for thio relaxers or restores the pH back to normal when using hydroxide relaxers.

_____ chemically restores the disulfide bonds to their newly hardened shape.

_____ this process neutralizes any remaining alkaline residue left by a hydroxide relaxer and helps to restore the pH of the hair and scalp.

CHEMICAL RELAXERS

STRENGTHS

best used on color treated,
fine textured hair with severe porosity

typically used on
medium textured hair with normal porosity

best used on
coarse textured hair with resistant porosity

TYPES

have a high alkaline content; available in varying formulas;
strongest relaxer with an alkaline pH above 12

are chemical compounds with the additive ingredient ammonia;
process in the same manner as a perm; have a low pH

FORMS

CATEGORIES

SODIUM / LYE

pH: _____

Use on: _____

POTASSIUM / LITHIUM / NO-LYE

pH: _____

Use on: _____

METAL HYDROXIDE

pH: _____

Use on: _____

GUANIDINE

pH: _____

Use on: _____

CATEGORIES

AMMONIUM THIOGLYCOLATE

pH: _____

Use on: _____

AMMONIUM BISULFITE

pH: _____

Use on: _____

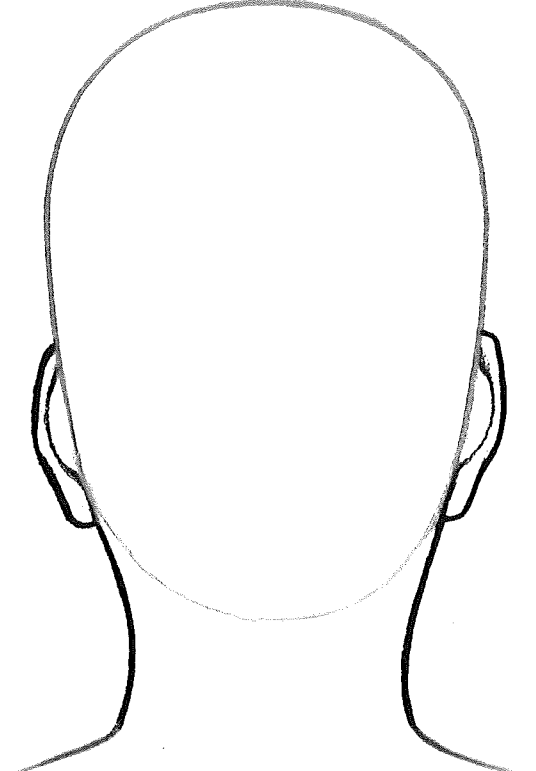
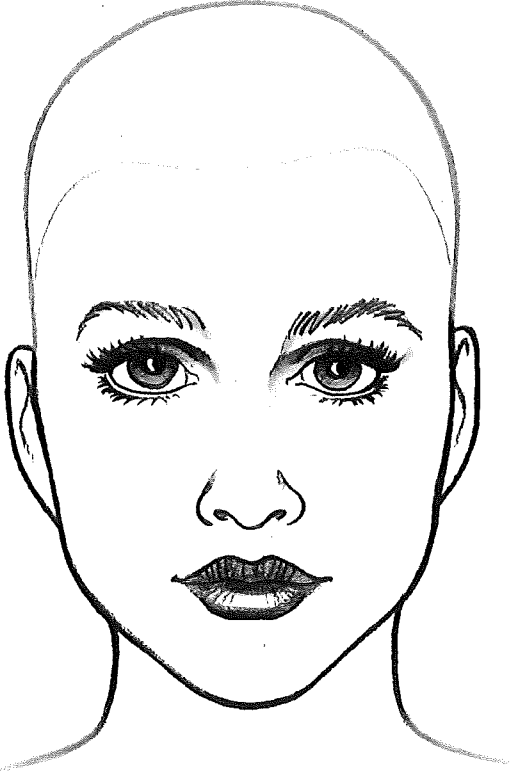
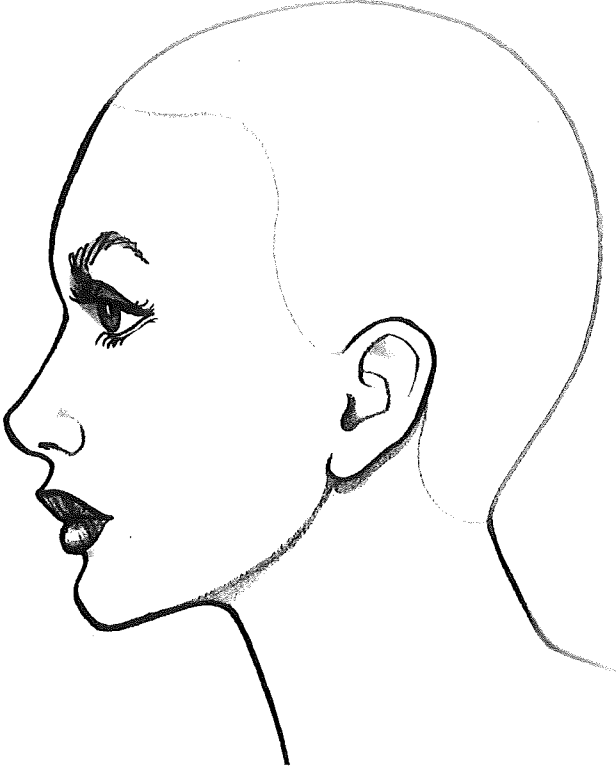
NEUTRALIZATION

is the process of removing 1 sulfur atom and replacing it with a disulfide bond.

Neutralizing lotions are:

Neutralizing shampoos help to:

HEAD DIAGRAM



DEVELOPING YOUR CHEMICAL TEXTURIZING COMMUNICATION AND SOLUTION SKILLS

What consultation question(s) would you have prepared to ask your Guest for the following:

Permanent Waving: _____

Relaxer: _____

Keratin Smoothing: _____

Your Guest informs you that they would like to completely remove all curl from their hair.
What straightening service would you use for the following hair types and why?

Fine: _____

Medium: _____

Coarse: _____

Your Guest states that they would like to change their haircolor after having a straightening service.
How would you respond and proceed?

Your Guest tells you that they experienced some scalp and/or skin irritation after their last service.
Given this information, how would you respond and proceed?

SERVICE RECOMMENDATIONS

What styling recommendations will you discuss with your Guest for:

Permanent Waving: _____

Relaxer: _____

Keratin Smoothing: _____

MAINTENANCE RECOMMENDATIONS

When discussing a maintenance routine with your Guest, how often will you suggest they rebook for the following?

Permanent Waving: _____

Relaxer: _____

Keratin Smoothing: _____

PRODUCT RECOMMENDATIONS

What product recommendations will you discuss with your Guest and why?

Shampoo: _____

Conditioner: _____

Styling: _____

Finishing: _____

SITUATIONAL SCENARIOS

1. Throughout the service, your Guest expressed concerns regarding the condition of their hair after the chemical service. How should you address their concern?

- a) Chemicals do not cause any damage to the hair, so there is no need for concern
- b) Suggest various shine products that will camouflage any damage
- c) To alleviate any damage, suggest reconstructing conditioners to help repair their hair
- d) Recommend a new haircolor and haircut to draw the attention away from the damaged hair

2. During the chemical straightening process, your Guest begins to feel a burning in the nape area. You have just started applying the relaxer and have two additional sections to complete. What action should be taken to assist in reducing the burning?

- a) Apply a piece of cotton saturated with neutralizer to the sensitive area
- b) Immediately stop the application and rinse it from the head
- c) Continue with application and explain they will need to deal with the burning since you are done applying the relaxer
- d) Wipe the sensitive area and apply additional base cream

3. Tonya requests a perm wrap technique that will make her one-length hair have uniform curl from the scalp to the ends. What type of perm wrap technique will you recommend to achieve the final results?

- a) Croquignole wrap
- b) Bricklay wrap
- c) Spiral wrap
- d) Weave wrap

4. After a permanent wave service on your new Guest, you notice that the curl pattern appears weak and limp. What could have been the cause of this problem?

- a) Under-processing; test curl done incorrectly
- b) Perm processed too long
- c) Vigorous shampoo prior to the perm
- d) Poorly conditioned hair

5. During a scalp and hair analysis for a permanent wave, you notice that your Guest has a severe case of eczema in the nape that appears to be infected, scaly and bleeding. How should you proceed?

- a) Inform your Guest of the scalp situation and proceed with the service
- b) Ignore the problem and continue with the service
- c) Explain to your Guest that you will not be able to proceed with the permanent wave service and recommend they see a medical professional
- d) Reschedule the perm service in two days and recommend the proper ointment to clear the problem

6. To achieve the best results, what perm should be recommended to a perm Guest who recently began receiving haircolor services?

- a) Cold wave
- b) Acid wave
- c) Ammonium thioglycolate wave
- d) Ammonia-free wave

7. During a consultation, Kelly reveals that she is having a difficult time maintaining the style of her newly layered 3 inch haircut. Her hair lacks fullness and movement. You recommend a body wave. What color and/or size rods would you use to achieve the desired wave pattern?

- a) Red
- b) Blue
- c) Purple
- d) Brown

8. When performing your Guest's scalp and hair analysis, you notice hair breakage in the back of their head. As you proceed with the consultation, your Guest states that they have never had a chemical relaxer done professionally in the salon. What are some precautionary measures you should take prior to the chemical relaxer?

- a) Test a strand of hair every three minutes or as directed by manufacturer
- b) Do not overlap the relaxer during application
- c) Choose the correct strength of relaxer based on the texture and porosity
- d) All of the above

9. Your 2:00 pm appointment is a new Guest scheduled for a soft curl reformation. During the hair and scalp analysis, you notice that 2 inches of her hair has some type of chemical straightening process. When you question your Guest, she explains that her last relaxer was done 6 months ago. How should you proceed to achieve the best results?

- a) Explain to your Guest that the two chemical processes cannot be combined. To achieve the proper results, the 2 inches of chemically straightened hair will need to be removed before receiving the service
- b) Explain to your Guest that she will need to grow her hair for another 6 months before even considering the soft curl reformation
- c) Proceed with the soft curl reformation service and the ends will curl
- d) Under no circumstances can the service be performed; explain to the Guest they will never be able to receive the service

10. Mrs. Smith, a new Guest, wants her layered hair straight. During the consultation Mrs. Smith reveals that her past relaxers caused scalp irritation. What type of relaxer should be used on Mrs. Smith to assist in avoiding scalp irritation?

- a) Sodium hydroxide
- b) Lithium hydroxide
- c) Potassium hydroxide
- d) Guanidine hydroxide

11. Charlotte requested a straightening service that will help to eliminate the frizz and improve the manageability of her hair. She does not want to commit to the new style for more than 10 to 12 weeks. What procedure would you recommend to Charlotte?

- a) Sodium hydroxide relaxer
- b) Ammonium thioglycolate relaxer
- c) Keratin smoothing treatment
- d) Japanese thermal straightener

12. Felicia, your 5:00 pm permanent wave appointment calls to say she is running late. It is taking her longer to get to the salon from her new house. During the consultation, she states that recently her hair has been slightly drier and stiff.

- a) Inform your assistant to use a moisturizing shampoo on her
- b) The new house could have well water, complete a clarifying treatment to remove any mineral deposits on the hair
- c) Felicia's hair does not feel dry, so just ignore the problem
- d) Reschedule Felicia's permanent wave appointment and give Felicia a conditioning treatment today, especially since she is late

WORKSHOP standards

MET
SKILL

Safety and Infection Control:

Disinfect work station (*before and after each service*)
Set up work station with required, clean service tools

Consultation:

Scalp Analysis: oily normal dry abrasions
Hair Analysis: density texture elasticity porosity
Drape: neck strip, towel, cape, towel

Shampoo Bowl Safety:

Maintain control of nozzle at all times, with constant temperature check
Gently cleanse scalp and hair (*if applicable*)
Disinfect shampoo bowl and water nozzle

Permanent Wave: 9-Block Basic Perm Wrap

Application of perm rods: on-base off-base half off-base
Neatly apply protective cream and cotton around hairline and ears
Apply waving lotion to top and bottom of perm rod along full length of rod; then apply lotion to middle of perm rods
Remove saturated cotton; replace with new cotton
Apply processing cap; process according to manufacturer's directions
Test Curl – check for 'S' shaping
When processing is complete, remove cap and cotton; continue to 'Finishing of Service'

Relaxer: Virgin Application

Apply gloves
Section into 4 quadrants
Part hair into ¼" to ½" subsections, applying base to entire scalp (including hairline and ears)
Starting at most resistant area – part hair into ¼" subsections
Apply relaxer to most resistant area, staying ½" away from scalp
Continue applying relaxer using ¼" subsections, staying 1" away from ends, covering both sides of subsection
Starting at nape area, part hair into 1" subsections
Using a tail comb or spine of comb, smooth hair, applying slight firm pressure; continue to smooth all sections
Process according to manufacturer's directions
Perform curl relaxation strand test

Finishing of Service:

Rinse hair thoroughly for a minimum of 5 minutes
Towel blot; apply neutralizing product; process according to manufacturer's directions
Perm: Remove rods without tension; rinse
Relaxer: Apply a conditioner, comb through; rinse
Complete style as desired
Recommend at-home maintenance product(s)