

Conditioning the Hair, Part III

How Conditioners Can Help Repair Chemical-Related Damage



by Ali Syed,
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In "Conditioning the Hair, Part II," we discussed how combing and the weather can damage the hair and how conditioners can help. Here, we take a look at chemicals, in part three of this four-part series.

Relaxers contain sodium hydroxide, potassium hydroxide, lithium hydroxide or guanidine hydroxide as active ingredients. (To date, sodium hydroxide and guanidine hydroxide are the most effective straightening agents.) Relaxers work by changing a third of the cystine bonds into lanthionine bonds, and in the process, the hair experiences a twelve-to-fourteen per-

cent loss in tensile strength.

Permanent waves contain ammonium thioglycolate as an active ingredient and have a pH of 9.0-9.5. (The pH level is attained when ammonium or monoethanolamine—MEA—is added to the ammonium thioglycolate creme rearrangers or boosters during manufacturing.) Ammonium thioglycolate cremes reduce (or break) 20-40 percent of cystine bonds into cysteine (or 1/2 cystine) bonds before the hair is rodde. During neutralization process, the reduced bonds are oxidized with the help of sodium bromate, reforming 80-85 percent of the broken bonds.

Therefore, 15-20 percent of reduced (broken) cystine bonds never reform, thus causing dryness to permanently waved hair.

Permanent hair colors contain hydrogen peroxide as one of the active ingredients at 20-to-40 volume concentration. As the color of the hair is permanently altered, cystine bonds are changed to cysteic acid. This process is also extremely drying to the hair.

In each of the chemical processes described above, it is important that hair be well conditioned before, during and after the procedure and that any existing damage be repaired. Attending to the hair in this way, while it's being chemically treated, will also help eliminate combing damage. Be sure to select chemical systems that incorporate such complete conditioning features.

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About The Author

Ali N. Syed is a master chemist, possessing a wealth of experience in the formulation of hair care products. He has an impressive 22-year career as a research chemist, with a total of five published patents to his credit.

Since 1984, Mr. Syed has served as president of Avlon Industries which is located in the Chicago metropolitan area. From that time, Avlon has remained solidly committed to the manufacture of superior-quality hair care products and to the exclusive sale of those products to salon professionals. Among the wide array of Avlon products are the state-of-the-art Affirm® Conditioning Relaxer, Ferm® Conditioning Curl & Body Perm and the KeraCare™ line of cleansing, conditioning and finishing products.

With an abiding affinity for chemistry, Ali Syed personally manages each and every research & development project undertaken by Avlon's expert team of chemists. Equal to his regard for chemistry, is the respect he holds for the professional hairstylist. Always positive towards the ideas and opinions of stylists, Mr. Syed considers cosmetologists to be an important part of the Avlon company team. His on-going goal is to provide the very best products that advanced research and innovative thinking can offer, and always with an eye towards continual upgrading.