GO BLONDE!
Bleaching Without The Breakage

ActiveLite Hair®
THE HAIR
• The hair shaft is made up of 3 keratin layers

• **Medulla:** the innermost core of the hair shaft

• **Cortex:** the middle layer, which makes up the majority of the hair shaft

• Both the medulla and cortex contain **Melanin** which is responsible for giving hair its colour

• **Cuticle:** The outermost layer of the hair which is formed by tightly packed scales
• Keratin exists naturally as a cross-linked helical structure

• This cross-linkage accounts for the strength and extensibility of the hair

• Allows for inter-bonding between side chain molecules of individual amino acids

• Three types of bonds present:
  - Disulphide Bond
  - Salt Bond
  - Hydrogen Bond

• **Disulphide Bond**: chemical bond that cannot be broken by heat or water. Can only be manipulated through chemical straightening, curling, or bleaching
BLEACHING
Bleach Powder (Alkaline Agent)
Usually Sodium Metasilicate
- Provides the optimal alkaline pH range
- Causes swelling of the hair shaft and raises the cuticle scales

Developer (Oxidizing Agent)
Usually Hydrogen Peroxide (H₂O₂)
- The nascent oxygen produced upon (H₂O₂) oxidizes the melanin granules of the cortex
**Healthy Hair:** non-porous, has a healthy well-sealed cuticle, shines and feels pleasant to the touch

**Damaged Hair:** high porosity, open and worn cuticle, lacklustre, feels rough and is easily tangled
**Active.Lite® Hair** is a complex blend that creates a highly effective Bio-Film, reducing breakage during the colour service and transforming brittle broken hair.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Function</th>
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<tbody>
<tr>
<td>Polyquaternium-80</td>
<td>Creates a hydrophobic film</td>
</tr>
<tr>
<td>Pisum Sativum (Pea) Peptide</td>
<td>Provides a complete source of amino acids</td>
</tr>
<tr>
<td>Selaginella Lepidophylla Extract</td>
<td>A rich source of carbohydrates</td>
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<tr>
<td>Conditioning &amp; Shine</td>
<td>Rich in lysine</td>
</tr>
<tr>
<td>Provides excellent wet combability</td>
<td>Provides antioxidant protection</td>
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<tr>
<td>Provides intense moisturisation</td>
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Bio-Film: “a polymeric chain forming a conglomeration of proteins, amino acids and polysaccharides that creates a complex supporting interwoven matrix”

- Alone each substance provides benefits to the hair
- Combined, this complex kick-starts small scale biochemical interactions
- Acts as a scaffolding rather than a true barrier
- Supports and protects the hair
- Simultaneously allowing small molecules and hydrogen ions to pass through
Active.Lite® Hair; How it works

- Cationically charged Active.Lite® Hair ionically bonds to the hairs cuticle
- Active.Lite® Hair penetrates between uplifted scales to seal and close the cuticle while small molecules and hydrogen ions can still pass through its semipermeable facades
- Yields a smooth, stronger hair protected form the harsh effects of bleach

Bleach’s effect on Hair Cuticle  Active.Lite® Hair’s effect on Hair Cuticle
Bleaching Protocol: Preparation Guidelines

1. Prepare a solution of 10% Active.Lite® Hair in water

2. Weigh the desired amount of the Bleach Powder and mix with 2 parts of the Developer

3. Add 25% of the Active.Lite® Hair solution based on the amount of Powder used.
   
   *Example: 20g of Bleach Powder plus 40g of Developer = 5g of Active.lite® Hair Solution*

4. Apply the Bleach to hair as usual
Hair Tress Bleaching

Bleached hair with no additive

Bleached hair with Active.Lite® Hair
Microscopy Imaging of the Hair

SEM Condition of the Cuticle
30 Volume, No Treatment, 100 μm

SEM Condition of the Cuticle
30 Volume, Treatment with Active. Lite® Hair, 100 μm

SEM Condition of the Hair Tip
40 Volume, No Treatment, 100 μm

SEM Condition of the Hair Tip
40 Volume, Treatment with Active. Lite® Hair, 100 μm
Colouring Protocol: Preparation Guidelines

1. Virgin Blonde hair swatches were dyed with temporary hair colors (blue, teal, orange, pink, and dark pink)

2. After dying one set of hair swatches was conditioned with Pravana Nevo Color Enhancer

3. The other set was conditioned with Pravana Nevo Color Enhancer combined with Active.Lite® Hair 10% solution

4. For each 30g of colour conditioner used, 4g of Active.Lite® Hair 10% solution was added to the mix
Hair Tress Colouring

When added to a hair colour conditioner, Active.Lite® Hair enhanced the colour deposit while also providing an improved hair feel.

<table>
<thead>
<tr>
<th>Colour Protecting Conditioner</th>
<th>Control</th>
<th>Blue</th>
<th>Light Pink</th>
<th>Orange</th>
<th>Teal</th>
<th>Dark Pink</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional additives</td>
<td></td>
<td></td>
<td></td>
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Colour Protecting Conditioner
With Active.Lite® Hair
Hair Tress Colouring – L*A*B Test

• In order to substantiate these visual results further quantitative data was collected in the form of L*a*b-values

• Three points per hair swatch were measured to give a mean value

• This was then analysed using the L*a*b scale to determine the colour light fastness of the hair samples

• L* = lightness therefore, as the L*-value increases it can be shown that the colour fastness decreases and the subsequent colour of the hair is faded
Lightening of hair colour expressed as \( L^* \) (Lightness) to show the influence of Active.Lite® Hair in a colour enhancing conditioner compared to the colour enhancing conditioner without additives.
Summary: Active.Lite® Hair

- Patent-pending Active
- Allows for the lifting of hair colour (bleaching) whilst limiting hair damage
- Transforms brittle and broken hair
- For salon or at home colour care
- Independent testing by professional hair salons in Germany
- Fills an active market need
Patent Pending: Application Number 62/289,493

INCI: Polyquaternium-80 & Aqua & Hydrolyzed Pea Protein & Selaginella Lepidophylla Extract & Leuconostoc/Radish Root Ferment Filtrate

Appearance: Clear to Slightly Hazy Semi-Viscous Liquid

Suggested Applications: Hair Protecting, Strengthening & Nourishing, Hair Bleach & Colour Support
THANK YOU

Anna Crovetto
Active Concepts Srl - Marketing Manager Europe

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