

SHIELD PROTECTOR
AGAINST
URBAN POLLUTION

bicohair® up
by bicosome®

BICOHAIR ANTI URBAN POLLUTION



Bicohair®UP is a shield protector of the hair against urban pollution damages allowing consumers to freely enjoy the sun and outdoor activities.

In daily lives, hair is subject of many aggressions such as sun exposure, automobile exhaust, industrial emissions, cigarette smoke, etc.

These aggressions can cause many damages to the hair fibre such as degradation of structural proteins and color loss that leads to loss of shine and balance, opening cuticles, split ends, etc.

Bicohair® UP is a novel **Bicosome®** system specially created for hair care that works like a shield protector against urban pollution.

Bicohair® UP covers the hair fibre by electrostatic interactions adding a barrier that repels the particles, avoiding deposition.

Bicohair® UP protects the structural proteins of the hair from the degradation caused by sun exposure.

In addition, the smart lipid structures of Bicohair® UP delivers protective carotene molecules along the hair fibre, preventing the oxidation of pigments and the loss of color caused by UV exposure and daily washings.



FIGURE 1: PREVENTION OF HEAVY METALS DEPOSITION

Atmospheric particulate matter (PM2.5, PM 10) is mainly composed by heavy metals, carbons and combustion particles. In large cities, they are emitted mainly by automobile exhaust gases. In this experiment, hair tresses were treated in a sole application with Bicohair®UP (BH UP 1%) leave on formula or placebo formula and exposed to Barcelona outdoor air pollution for 1 week. Heavy metal content was measured in both samples. As shown in figure 1, the pre-treatment with Bicohair®UP leave on formula prevented the adhesion of high amounts of heavy metals in the hair fibres.

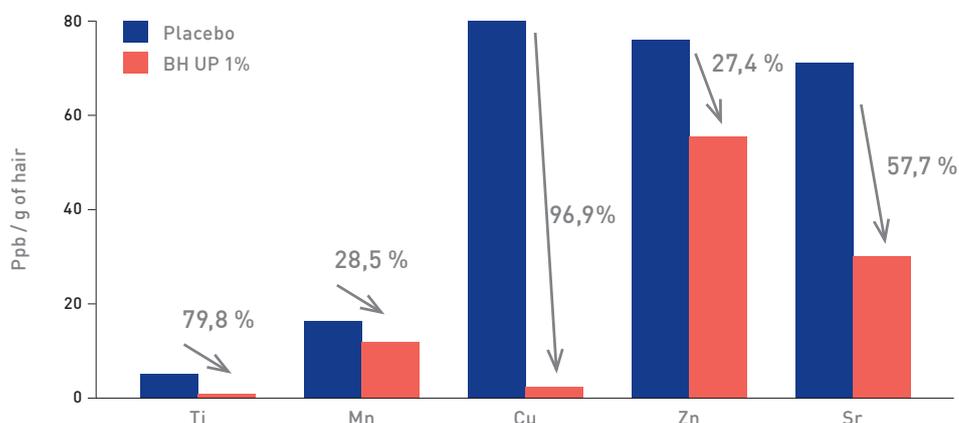


Figure 1. Metal levels determined on hair samples treated with placebo formula (blue bar) or with Bicohair UP 1% leave on formula (red bar) and exposed to Barcelona outdoor air pollution for 1 week.



FIGURE 2: HAIR PROTEIN LEVEL

Sun exposure causes photo-degradation of hair protein structures. Tryptophan has an important role in the internal structure of hair keratin and its level serves as an indicator of overall hair protein.

Treatment with Bicohair®UP prevents the degradation of Tryptophan produced by UV exposure. Figure 2 shows the protection provided after five cycles of UV exposure and treatment with placebo and Bicohair UP leave on formulation 1% (15% of protein protection) and 5% (85% of protein protection).

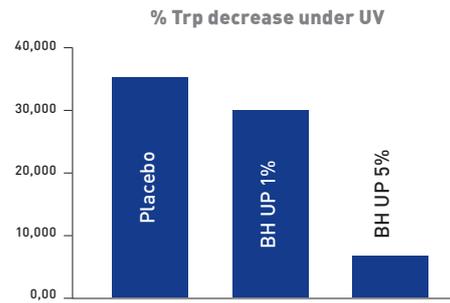


Figure 2: Tryptophan degradation after 5 cycles of UV irradiation and treatment with placebo and Bicohair UP leave on formulation 1% and 5%.

FIGURE 3: HAIR COLOUR PROTECTION

Dyed hairs use to suffer colour fading caused by the UV exposure and wash-offs. Bicohair® UP helps to prevent color loss and increases the duration of hair colorations. Figure 3 shows the color protection after 1, 5 and 10 cycles of UV exposure, washing with shampoo and treatment with placebo or Bicohair®UP 1% leave on formulation.

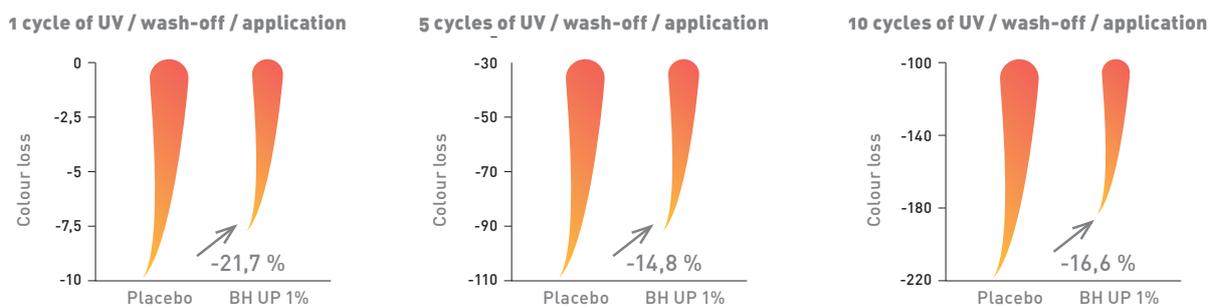


Figure 3: Colour loss after UV exposure and treatments with placebo or Bicohair® UP.

PRODUCT TYPES:



Summary of Bicohair® UP benefits:

- ⊙ Prevents the deposition of metals from urban pollution
- ⊙ Protects the hair structural proteins from UV degradation
- ⊙ Reduces the color loss caused by sun exposure and daily washings

Formulation with Bicohair® UP

Concentration of use: 0,5-1%

pH range: 3-9

INCI of Bicohair® UP:

AQUA, LECITHIN, GLYCINE SOJA OIL, PANTHENYL HYDROXYPROPYL STEARDIMONIUM CHLORIDE, PHENETYL ALCOHOL, TOCOPHERYL ACETATE, CAPRYLHYDROXAMIC ACID, CAPRYLYL GLYCOL, SODIUM PHYTATE, CITRIC ACID, TOCOPHEROL, BETA-CAROTENE, DAUCUS CAROTA SATIVA ROOT EXTRACT.

