

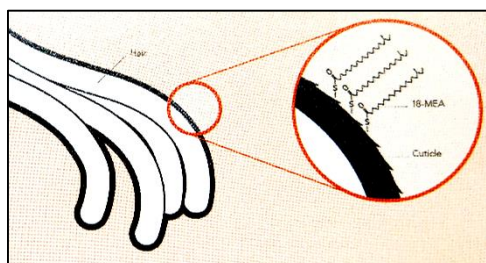
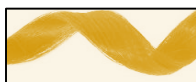
# HI

## Hair Integrity

- ❑ Measures the structural hair damage of oxidative stressed hair.
- ❑ Detection the availability of cysteine groups of the outer keratin layers of the hair by Cu-complexation
- ❑ The effect of complexing agents, functional silicones and film formers can be analysed quantitatively.
- ❑ Determination of efficacy of repair treatments, conditioners, actives to restore a hydrophobic character to the hair and the functionality of the F-layer and protecting cysteine groups.
- ❑ ESR (Electron Spin Resonance) spectroscopy specifically quantifies the amount of Cu-Cystein-complexes compared to untreated hair.

### Structural hair damage

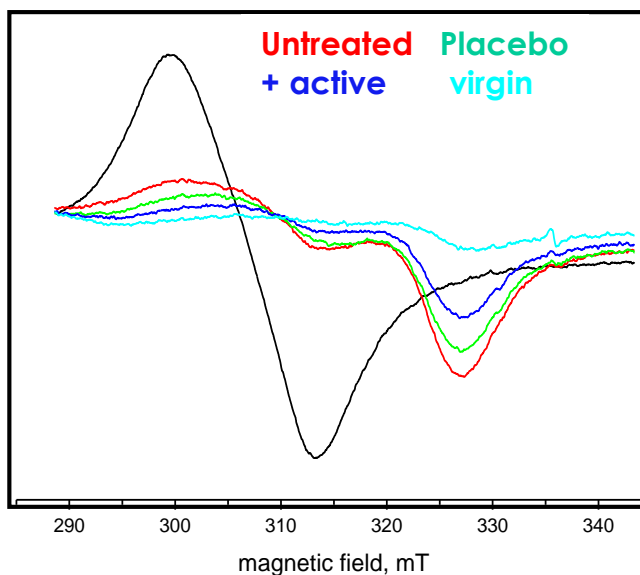
Oxidative Stress  
(Bleached hair)



free accessible cysteic acid

### Cu-complexation on cystein-residues on hair surface

Cu(II) incubation



### Test Products:

cosmetic formulations / raw materials

### Principle:

direct ESR spectroscopy of the amount of Cu(II) complexes formed on bleached human hair.

### Conditions:

Measurements are performed at RT on bleached human hair

Concentration: tbd

Application time: tbd