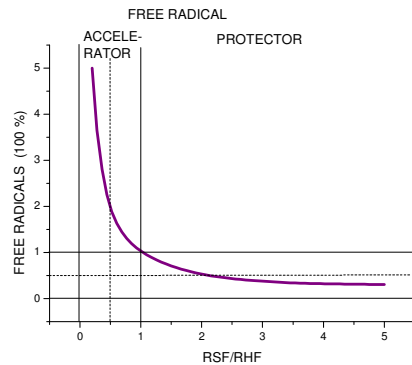


THE RADICAL SKIN and HAIR PROTECTION FACTOR RSF and RHF of COSMETICS and DETERGENTS

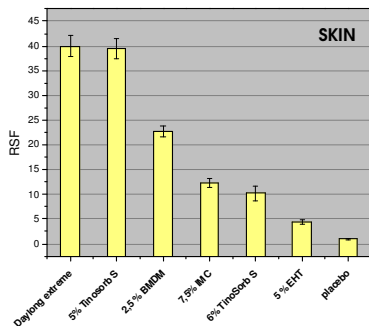
Free Radical Test on Skin/Hair characterizing the Effect of applied Cosmetics and Detergents

Are COSMETIC PRODUCTS or DETERGENTS **ACCELERATORS** or **PROTECTORS** against free radicals ?



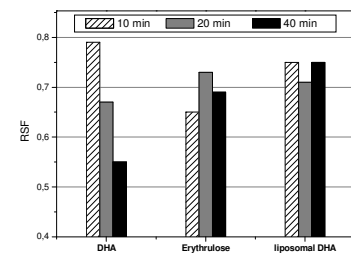
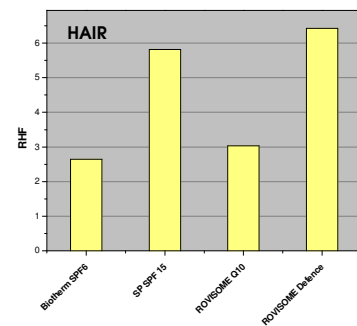
TEST PARAMETERS:

RSF / RHF : PROTECTION FACTOR of SKIN /HAIR AGAINST FREE RADICALS GENERATED by EXTERNAL OXIDATIVE STRESS (UV RADIATION; CHEMICAL HAZARDS)



UV FILTERS /ANTIOXIDANTS

UV filters can avoid the generation of free radicals by absorbing or scattering the ultraviolet irradiation. Antioxidants can neutralize free radicals generated in skin and hair. The protection provided by both systems can be determined by the RSF (for skin) and by the RHF (for hair).

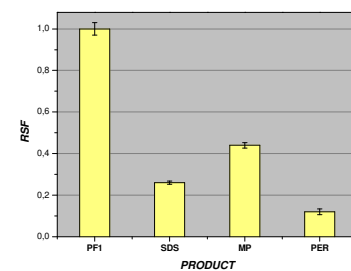


SELF TANNERS

Self tanners induce Maillard reactions in skin and hair and during UV radiation the intermediates cause chain reactions leading to a free radical explosion in skin and hair. The higher is the free radical injury, the lower is the RSF value. The radical injury is a function of applied concentration and application time.

Strategies to avoid free radical injury during self tanning:

- Avoidance of sun exposure
- Combination of UV filters and self tanners
- Addition of antioxidants



DETERGENTS

Surfactants and emulsifiers can lead to lipid disorder in the skin and can enhance the free radical injury during sun exposure. Detergents, shampoos and conditioners have RSF values < 1, thus they are radical accelerators.

