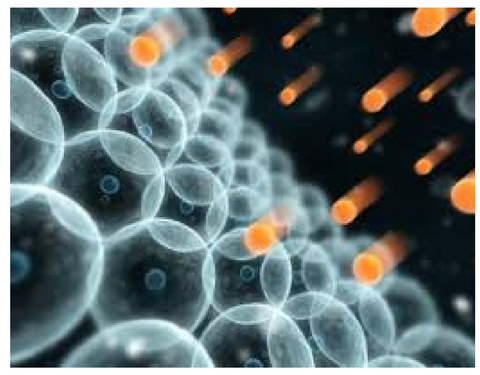
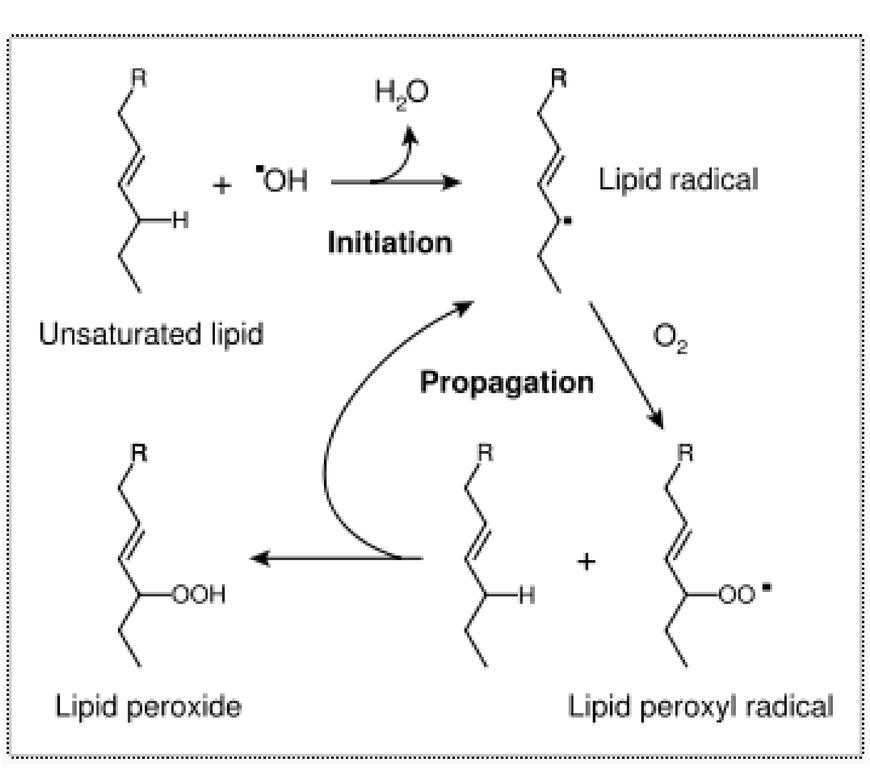
Free radicals in cosmetic products generates free radicals in skin



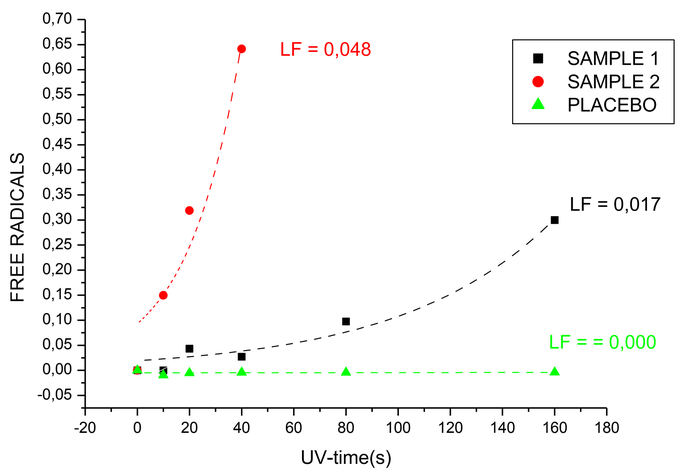
Skin care formulations: meaning good, doing bad?

Modern, multifunctional cosmetic products are increasingly complex and confront the cosmetic industry with new problems in product development. Active ingredients and particularly basic raw materials may increase the burden of free radicals in the formulations and/or inside the skin, even though they were designed to do just the opposite.
First, protecting the formulation from free radicals is pivotal for proper product function and stability.
Second, free radical protection of the skin is important to prevent premature skin-ageing.
Surprisingly, many cosmetic raw materials, when applied to the skin and exposed to sunlight, provoke massive oxidative stress in the skin. Incorporation of cosmetic actives completely counterbalanced the raw material-induced oxidative stress in the skin.
We conclude that the selective addition of appropriate cosmetic actives will help to guarantee that cosmetic products that are meant to do a good deed will indeed do so.

Lipid peroxidation is devastating and ***rapid,*** because every lipid radical formed in the process can burn another lipid molecule. And so it goes. It's like zombies or body-snatchers. Until something comes along to terminate the process by sopping up all those rad electrons, the fire will just keep burning.

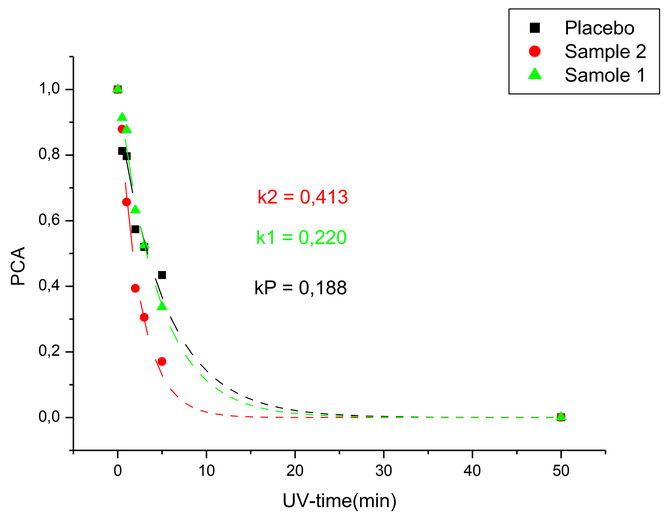


in vitro



Generated radicals in formulations after UV radiation

ex vivo



Reduction of spin probe PCA after application of different products on skin during UV radiation

Sample	RSF	gen. radicals
Placebo	1	0 %
Sample 1	0,75	33 %
Sample 2	0,24	316 %

RSF determination of skin after application of different formulations during UV radiation

Gematria Test Lab GmbH - Pestalozzistr. 5-8 - 13187 Berlin - +49 (0)30 43737764 - email@gematria-test-lab.com - www.gematria-test-lab.com