



InfraGuard  
Powerful protection against  
IR-induced photo-aging



# InfraGuard

## Powerful protection against IR-induced photo-aging

### Expand Skin Protection against Solar Radiation

InfraGuard combines tara tannins, which are a powerful antioxidant, with organic sunflower sprouts in order to efficiently protect the skin against the harmful effects of infrared (IR).

Recent studies have shown that IR generates high amounts of free radicals in the skin. More importantly, the studies confirmed that sunscreens neither filter nor reflect IR radiation and therefore do not protect our skin against this oxidative stress. Both UV and IR induce collagen destruction, although in different ways. Indeed, contrary to UV, IR is mainly absorbed by the mitochondria, which are the “powerhouses” of our cells. It is there that IR disturbs the production of energy which is essential for the proper functioning of our cells and tissues.

InfraGuard protects the skin against the pro-aging effects of IR through two mechanisms:

- by blocking the formation of reactive oxygen species (ROS) inside the mitochondria and the resulting MMP-1 synthesis in the cells
- by supporting mitochondrial functions.

In vitro studies demonstrated that InfraGuard neutralized free radicals almost as efficiently as vitamin C. Besides succeeding in scavenging 100% of the ROS induced by IR inside the mitochondria, InfraGuard protected their functions and their DNA against IR-induced stress.

InfraGuard was also shown to protect skin collagen by blocking the synthesis of MMP-1 following exposure to IR. This impressive result was confirmed clinically during the summer with volunteers who applied either a sun cream SPF30 or the same cream enriched with 2% InfraGuard. Whilst skin firmness and density were reduced for the volunteers who applied the sun cream SPF30, both parameters were improved for the group that used the same cream enriched with 2% InfraGuard. This clearly confirms the considerable additional protection offered by InfraGuard to UV sunscreens.

### Claim Ideas for InfraGuard

- Protects mitochondrial DNA
- Blocks IR-induced free radical formation
- Inhibits light-induced skin aging – even in deep skin layers
- Prevents the loss of skin density

### Applications

- Sun care
- Advanced antioxidant formulations
- Energizing products

### Formulating with InfraGuard

Recommended use level: 2–3%

Incorporation: For cold processes, dissolve InfraGuard into the aqueous phase. In hot/cold processes, add during the cooling phase below 40°C.

Thermostability: Temperatures of up to 40°C for a short time will not affect the stability of InfraGuard.

### INCI (EU/PCPC) Declaration

InfraGuard (standard version):

Caesalpinia Spinosa Fruit Pod Extract (and)  
Propylene Glycol (and) Helianthus Annuus (Sunflower)  
Sprout Extract (and) Sodium Benzoate (and)  
Phenoxyethanol (and) Aqua/Water

InfraGuard pwd (powder version, 2-fold concentrated):

Caesalpinia Spinosa Fruit Pod Extract (and)  
Helianthus Annuus (Sunflower) Sprout Extract (and)  
Maltodextrin (and) Sodium Benzoate (and) Aqua/Water