

COBIODEFENDER EMR

Skin Electromagnetic Defense

INCI NAME:

Aqua (Water), Glycerin, Glycogen

DOSE OF USE:

2%- 6%

SOLUBILITY:

HYDRO-SOLUBLE

PRESERVATIVE:

Phenoxyethanol

COSMETIC USE:

- › First active ingredient focused on reducing biological skin disorders resulting from exposure to EMR
- › Electromagnetic waves protection: Neutralizes the harmful effects of electronic pollution
- › Counteracts the aging effects of electromagnetic waves: Prevents EMR-induced ROS increase

**PATENT
PENDING**

DESCRIPTION:

We live in a sea of **invisible electronic pollution**, which has become quite toxic.

Cell phones and electronic devices generate electromagnetic fields (EMF) and emit electromagnetic radiation (EMR).

EMR is an environmental stress factor for human health, and skin, as physiological barrier, is the first objective of this radiation.

In the last decade the EMR levels have increased dramatically. We cannot hide from it and we are starting to realize its negative consequences.

Skin exposure to EMR radiation suffers several biological parameter alterations such as:

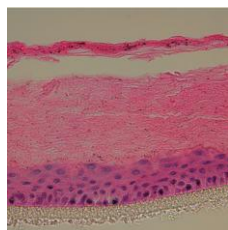
- Massive increase of ATP as a sign of cell damage
- Massive increase of Oxygen species (ROS) provoking DNA damage
- ROS and DNA damages induces cell death (Apoptosis)
- Skin's structure disruption
- Heat-Shock Proteins production

COBIODEFENDER EMR, is a functional ingredient proved to **reduce the skin biological alterations**, resulted from the exposure to **EMR**. It helps in the **restoration process of the skin** being a **specific anti-stress agent**.

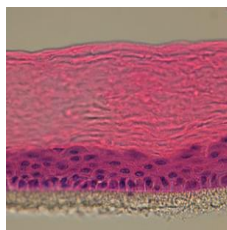
COBIODEFENDER EMR plays a **key role at the repair and epidermal defense** against cell phone and other electronic devices radiation.

PROTECTIVE EFFECT AGAINST STRUCTURAL CHANGES

CONTROL IRRADIATED



COBIODEFENDER IRRADIATED



The area of skin where COBIODEFENDER EMR was applied is located on top of the right image. Corneum stratum appears compacted and well stratified.

PROPERTIES:

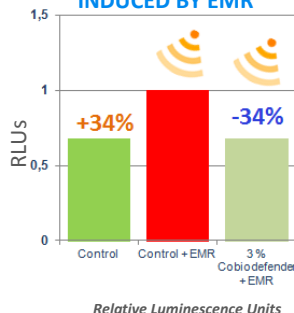
Effects of COBIODEFENDER EMR Preventing & Protecting From Skin damage caused by EMR:

Human keratinocyte cells and Reconstructed Human Epidermis were exposed to **6 hours of EMR** (generated by a mobile phone). Treated samples were cultivated with 3% COBIODEFENDER EMR.

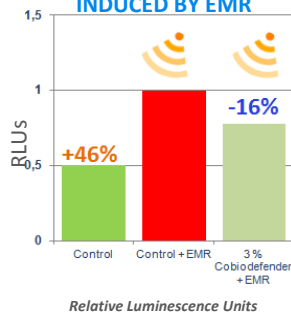
COBIODEFENDER EMR probed to **protect** and **prevent** skin damage:

- Neutralizing Oxidative stress
- Reducing massive ATP accumulation
- Increasing the expression of cytoprotective HSP70
- Reducing apoptosis in skin cells
- Preventing skin desquamation

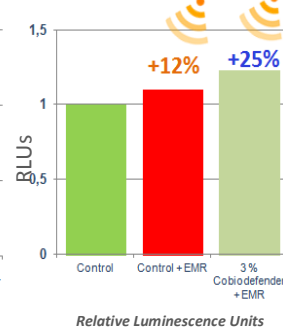
ROS MASSIVE PRODUCTION
INDUCED BY EMR



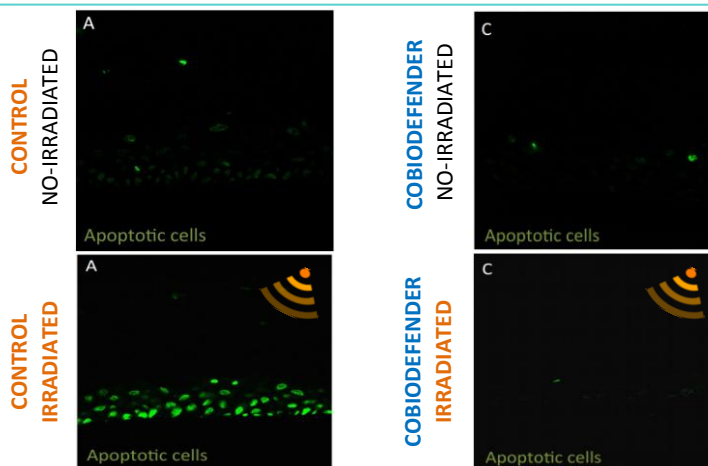
ATP MASSIVE INCREASE
INDUCED BY EMR



HSP70 EXPRESSION



PROTECTIVE EFFECT AGAINST APOPTOSIS



N a t u r a l l y E f f e c t i v e