

light

ACTIVE

Photoactivator - L.E.D.P.A.



LED System (Light Emitting Diodes)
for skin rejuvenation



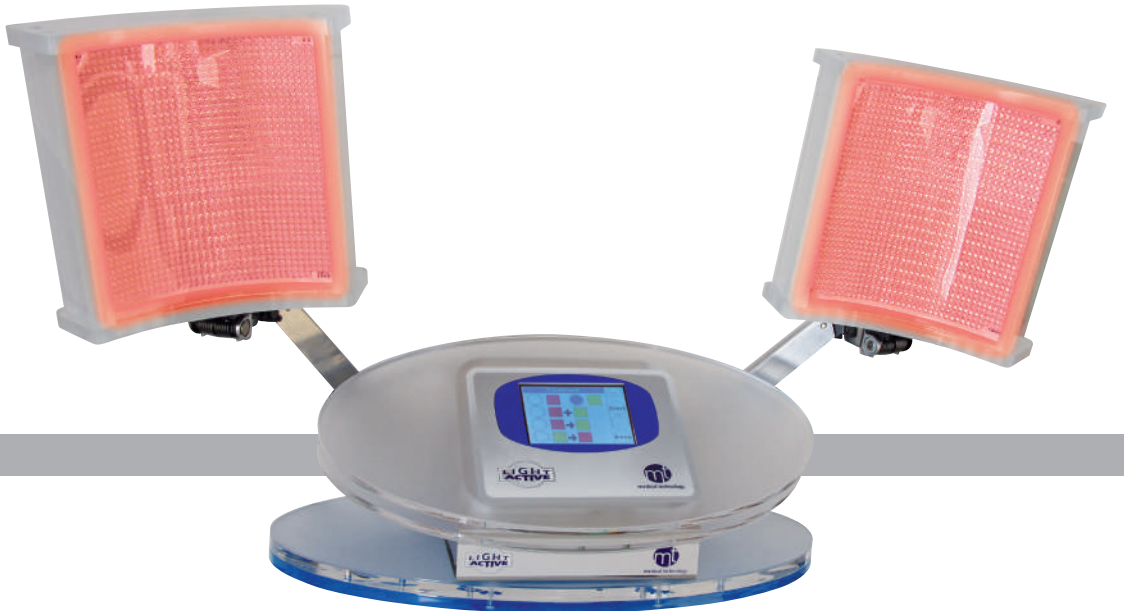
*To take care of and rejuvenate the skin
with gentle and rapid treatments
Easier than the most invasive methods*



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L.E.D.P.A. Light
Emitting
Diodes
Photo
Activator





Over 40: beauty has never been so easy

THE LED SYSTEM

Photorejuvenation and photo-stimulation systems today welcome a new technique that exploits the features of light.

Many wavelengths in the visible spectrum ensure treatment and aesthetic benefits for active tissues. This approach is the basis for the application of LED (Light Emitting Diodes) systems in medicine, since certain wavelengths stimulate important physiological functions in skin tissues.

The LightActive system exploits the properties of light through specifically programmed LED systems to reduce the effects of skin ageing: these light-emitting-diodes stimulate bio-chemical processes in epidermal cells.

Two kinds of positive effects are achieved regarding skin tissue: the first stimulates the production of collagen and elastine, the second simultaneously inhibits the enzyme that causes deterioration of collagen (collagenase).

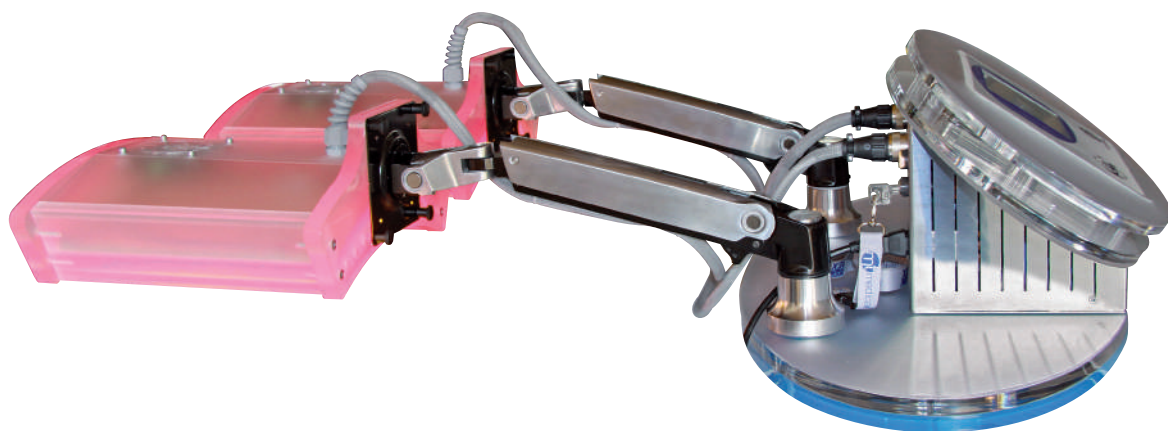
HOW TO WORKS

LED technology stimulates non-ablative bio-chemical effects as a new kind of phototherapy based on the latest developments and studies in the laser industry.

Unlike lasers, impulsed light or radio-frequencies, the LED used in the LightActive device, release low-intensity energy, without thermal effects and without ablation of the surface of the skin. Rapid applications are ideal for all skin types (including dark and sensitive complexions).

The Light Active software emits two specific wavelengths (red and yellow): they can be used separately or simultaneously to enhance their benefits. The built-in microprocessor emits a single wavelength and/or both in sequence, depending on the specific requirement identified by the operator.

The fundamental capacity of LED technology is to stimulate and inhibit certain types of cells: recent in vitro studies have shown how wavelengths close to infra-red stimulate the synthesis of fibroblasts and in this context, promote the production of endothelium growth factors.



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The light emitting diodes in the Light Active system are appropriately modulated by the microprocessor to activate the living cells of the dermis and thereby stimulate production of new collagen.

The energy emitted by the Light Active system is not thermal but luminous energy: such treatment rapidly encourages and stimulates synthesis of collagen and elastin and – in this context – helps inhibit collagenase.

This process very rapidly regulates and conditions the activity of certain cells: it stimulates biological response without any thermal damage to tissues. In this period of time, targeted alternating on-off stages ensure precise dosing of the photonic energy emitted so that it can be absorbed through the enzymatic components of the mitochondrial respiratory chain.

Several biochemical effects are sequentially stimulated and promote synthesis of neo-collagen and elastin by the fibroblasts of the papillary dermis which, in this context, regulate the inhibition of certain collagenase enzymes such as type I metalloproteinase.

The important benefits are:

- Treatments is totally painless
- It is safe, since it does not involve heat or thermal energy
- It does not require downtime
- It is effective on all skin types
- Acceptable treatment costs: less expensive than laser or other anti-ageing treatments.

Light Active is a new generation system for physical skin improvement that is easy to use for beauty or medical centres; it can be perfectly integrated with beauty treatments and is synergically compatible and applicable to other techniques (such as peeling or surgical lifting).



The Light Active system
exploits LEDs to regenerate the skin
without heat



Over 40: beauty has never been so easy

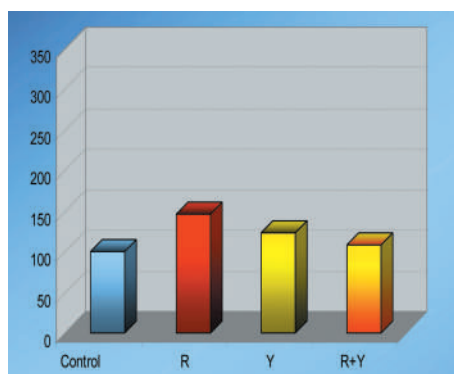
IN VITRO STUDY

Irradiation of fibroblasts by the Light Active – LED system.

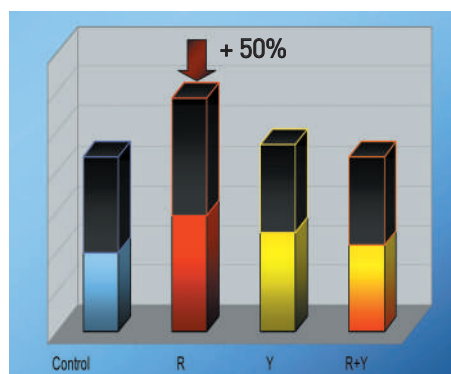
The fibroblast cells are irradiated by the Light Active device through two wavelengths (yellow and red). The fibroblasts are cells of connective origin and have a large size, with a flat shape. They secrete an extracellular matrix, rich of collagen and other macromolecules. They represent a good model for preliminary study in dermatologic-cosmetic field.

The results red on the spectrophotometer and the imagines visible under the microscope, confirm the cellular proliferation with red light, as observed after the first irradiation. The lenght of time of the irradiation, less than one minute, is proved to be sufficient for cellular proliferation.

The fibroblasts irradiated by two sessions of red light, show an average increase of cellular proliferation over 50%, in regard to the control (untreated cells).



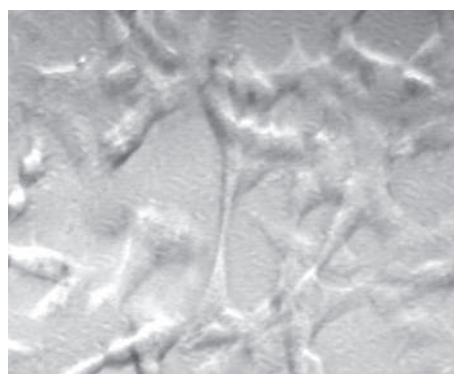
First irradiation



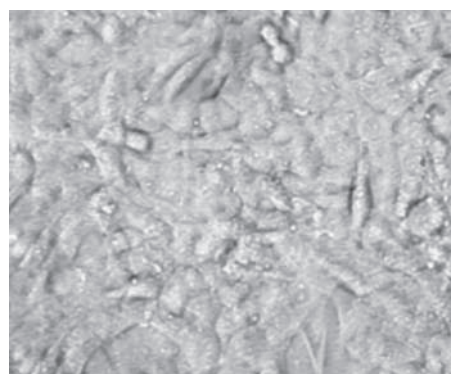
Second irradiation

After the first irradiation the average increase is of 30%.

After the second irradiation, further increase of 50%.



Fibroblasts untreated



Fibroblasts treated by the Light Active: increase after two treatments (+50%)

ADVANTAGES FOR PHYSICIAN AND PATIENT

The Light Active system is an ideal technic for “light” rejuvenation treatments and proves to be an excellent complimentary application with other kinds of photorejuvenation treatments as IPL or laser: it optimizes the results and slows down skin aging. It ensures a complete, significant “full face” treatment. Many specialists already use the Light Active system to increase and to finish anti wrinkles treatments, pigmented injuries and all photoaging damages.

The skin does not suffer thermal trauma, pain or adverse effects. The main benefits observed, even in immediate post-treatment stages, is a more relaxed, smooth and softer appearance of the skin, with a significant reduction of minor wrinkles, dark spots and minor vascular lesions.

Treatments by Light Active have demonstrated anti-inflammatory action against UV-related erythema.

The Light Active session does not interfere with daily life of patients.



1 before



1 after

*Courtesy of Fabio Rinaldi, MD
Studio Rinaldi, Milano, Italy*



2 before



2 after

*Courtesy of Fabio Rinaldi, MD
Studio Fumagalli, Milano, Italy*



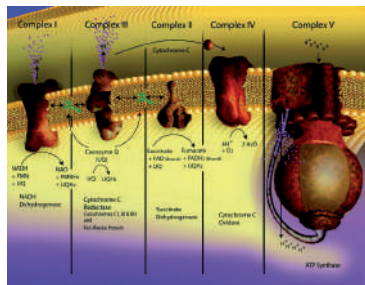
3 before



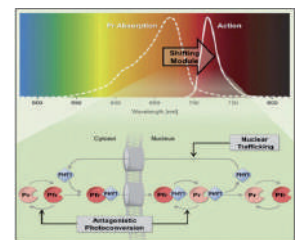
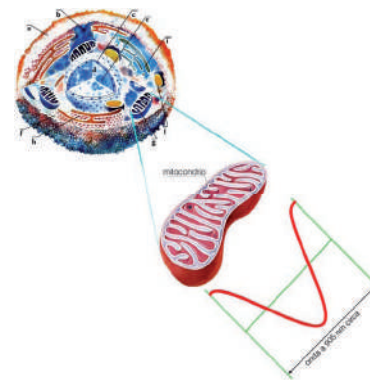
3 after

*Courtesy of Fabio Rinaldi, MD
Studio Rinaldi, Milano, Italy*

Biostimulation and rejuvenation vulvovaginal with photochemical action using led technology



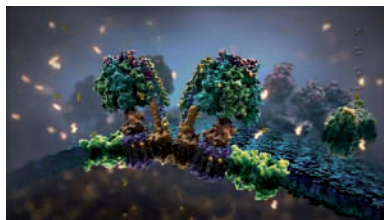
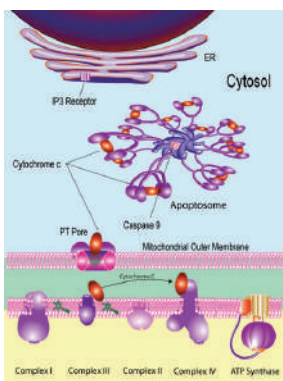
630 to 880 NM PHOTON EMISSION BIOSTIMULATION



Through the energy being absorbed by the target cell chromophores, the LED-emitted photons with a specific wavelength stimulate the photoreceptors and cellular substrates, causing a chain of cellular biochemical/biophysical reactions.

The wavelength is essential in phototherapy, as the cellular reactions are linked to the wavelength diffusion specificity.

Light absorption brings about changes in the mitochondrial membrane structural formation.



Mitochondria and energy switches

The Cryptochrome CRY1 is a molecule that can "measure" the amount of light and energy available to a cell. Cryptochromes are light-sensitive photoreceptors initially discovered in plants. They can also be found in Fibroblasts. They play a role in maintaining animals' circadian rhythms.



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What is Light Active

Light Active is a skin rejuvenation system based on safe, low energy LED. Skin absorption of this energy stimulates the production of new collagen and inhibits collagenase.

Advantage for the skin

Thanks to the stimulation of new collagen, the skin appears younger and smoother, minor wrinkles and even minor skin blemishes are reduced.

Important advantage

Totally painless.
Fast treatment.
No-downtime: does not interfere with work-personal life of patients.

How many treatments and duration

Treatment is very rapid: less than a minute.

Compatibility with other treatments

Total compatibility with other anti-ageing techniques (botox, laser, ipl, fillers).



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TECHNOLOGICAL SYSTEMS
FOR THE MEDICINE AND THE AESTHETIC



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