

MIRACLE SKIN CARE DEVICE AND AMPOULES**Dr. Yukito Sasaki***

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ABSTRACT

Skin rejuvenation using LED is a FDA approved method to improve the skin. It was first developed by NASA(USA) in the 1980s to rejuvenate healing of skins and improve skin trouble.^[1] According to NASA it uses perfectly safe wavelengths. It stimulates skin cells, increases micro-circulation and promotes collagen re-growth.^[2] It is a painless method and non-invasive treatment that energizes dermal cells, stimulates elastin and collagen, and returns the skin back its baby-like look.^[3] We are using the Nine Tailed Fox Monteranc LED mask, made up of 32 powerful LEDs that are very good for the skin. Skin cells that receive the light of MONTERANC LED Mask produce ATP, which has various effects, such as improving circulation, enhancing lymphatic system (immunity), increasing collagen formation, increasing fibroblast formation, inhibiting melanin formation, increasing water retention, increasing skin density, increasing skin elasticity, improving wrinkles, supplying nutrition and regenerating the skin.

KEYWORDS: Skin rejuvenation using LED.**INTRODUCTION**

The Nine Tailed Fox Monteranc LED mask (Monteranc Inc, South Korea) equipment has three different wavelengths of color: Red, Orange and Blue (Fig. 1). Each color has own properties that yields different outcomes from improving wrinkles and fine lines, toning and strengthening muscles, improving circulations and increasing collagen growth, calming and reducing inflammation and hyper-pigmentation to purifying with anti-bacterial properties to kill acne causing bacteria thereby treating mild to severe acne (Table 1).

It is a totally safe, non-toxic method to improve the condition of the skin. This study have shown that cells that have been exposed to MONTERANC LED Light Therapy have a great enhancement to their cellular metabolism, thereby accelerating the repair and replenishment of damaged cells.

It is a technology based skin treatment that uses specific wavelengths of natural light energy to restore skin's normal, healthy activity. Different color wavelengths produce different results from reduction in fine lines and wrinkles, toning and strengthening muscles, killing the p-acne bacteria that causes acne breakouts to reducing inflammation and hyper-pigmentation

Nine Tailed Fox Monteranc LED Mask as a Phototherapy

Monteranc LED light phototherapy, also known as photobiomodulation, uses three different wavelengths each with their own properties which re-growth, heal, firm and rejuvenate the skin. The blue, which has powerful antibacterial properties and is used to treat acne and calm the skin. "the blue light is also very calming" reducing redness. Blue also works in conjunction with the next level of light red, to reduce over-secretion of oils in the skin.

Red penetrates to a deeper level than blue and into the skin cells so is used to stimulate, re-vitalize, rejuvenate, re-energize, moisturize and regenerate. "skin cells hold your mitochondria, which is your powerhouse and holds all the energy needed to regenerate."^[4] The fuel supply is called adenosine triphosphate(ATP) and as we age ATP levels start to decline so your skin cells don't repair as quickly as they should. All LED does is stimulate mitochondriaa to develop more ATP, it is recharging the skins battery.^[5] With new ATP the skin begins to regenerate and repair again. Red also stimulates micro-circulation which brings fresh oxygen and nutrients to the skin's surface improving the tone and texture and giving the skin a fresh glow.^[6] It also drains the lymphatic system which evens out the tone and texture of the surface of the skin. Red stimulates the Glycosaminoglycans (GAGS) which produces natural hydration, especially important at this time of year as

most people are dehydrated. The deepest penetrating light is near infrared which improves vascular health, reducing swelling and inflammation.^[7] This light helps strengthen the capillaries so this can help blood rushing to the surface of the vessels. It also suppresses the enzyme tyrosinase which causes pigmentation so helps to even out skin tone and texture.^[8]

Blue light therapy is of a short wavelength (450-510nm). Blue light is right next to UV light on the electromagnetic spectrum and brings the antibacterial properties of UV light, without the risks associated with UV exposure.^[9] Blue light therapy penetrates the skin very superficially (approximately 1 mm). However, it has been shown (and FDA approved) to kill the bacteria associated with some forms of acne (Propionibacterium acnes, or 'P.acnes'). P. acnes produce porphyrins as part of its normal metabolism.^[10] These porphyrins absorb blue light (and red to a lesser extent) generating reactive oxygen which is toxic to the P. acnes bacteria. Blue light therapy indeed plays a role with the treatment of acne. The use of blue light therapy combined with the right dietary and topical regimen is a recipe for significant improvement of mild to moderate inflammatory acne.^[11]

Orange light therapy is a medical treatment with a photosensitizing drug that becomes activated by light exposure to the applied drug.^[12] Orange light therapy is currently used in oncology, dermatology, and cosmetic surgery. It uses blue light to kill the cells of tumors or atypical growths close to the surface of the skin; it is also used for sun damage, cosmetic skin improvement, oily skin, enlarged sebaceous glands, rejuvenation (anti-aging), and many other skin conditions.^[13] More recently, the FDA has approved its use for non-small cell lung and esophageal cancer and precancerous changes of Barrett's esophagus.^[14]

9 kinds of skin care courses with the combination of near-infrared ray + three-wavelengths, Skin improvement in 4 weeks

It presents the most diverse skin care courses, the effect has been proven by previous study.

"Expensive skin care, every day at home in 10 min. + 10 min." Baby Skin Course; An all-in-one course that provides all care for collagen, melanin, sebum and pore (Fig. 2). Watery Shine Course; A course that stimulates water activity factor and water retention factor and makes the skin moist as if it is just after a shower (Fig. 3). Collagen Course; A collagen up! course that facilitates collagen formation from deep in the skin and makes it filled tightly (Fig. 4). Power Illuminating Course; A lightening course that reduces melanin and makes the skin gorgeous and bright (Fig. 5). Anti-trouble Course; A course that clears acne and trouble and overcomes acne *necrotica miliaris* and pustular acne in every part of the face (Fig. 6). Blemish Clear Course; A course that suppresses skin inflammation and improves blood circulation to shrink blood vessels and improve redness

(Fig. 7). Activating Course; A skin care course that rejuvenates the face when one feels crumbliness (Fig. 8). Balancing Course; A skin care course for the optimum oil and moisture conditions through caring the pores and sebaceous gland clean and tight (Fig. 9). Vitalizing Course; A skin care course that stimulates collagen and fibroblast to make the skin vital (Fig. 10). (Table 2).

Using these various courses every day showed effects on skin improvement in 4 weeks (As a result of clinical trials for 4 weeks, selecting 20 or more women in each group).

Not all LEDs are the same

MONTERANC uses third-generation LED specially designed in MONTERANC LAB, which can permeate deep into the skin by removing the diffused reflection of the first-generation LED (Fig. 11)! The light of most of the low-cost generic first-generation LEDs is reflected off the skin. Thus, MONTERANC, though much more expensive than the generic LEDs put expensive LED generously for your skin, instead of profit. The mask was designed and LED was placed, so that it can be transmitted to every part of the skin without a blind spot, with an ergonomic design. It realizes an ultra-light material for the mask, too, with an expensive, special material.

Best of the Best Ampoule: Synergy effect maximized when used with MONTERANC LED Mask

The Repair Ampoule repairs skin caused by damaged and cracked, healing skin. By increasing the cytokine of skin healing pathway. By effectively healing skin, the products enhances the repair of new skin. Powerful healing effect even with one drop.

The blemish-clear ampoule, the power-illuminating ampoule and the pore-tightening ampoule are very effective when using each LED phototherapy course. Finally, we recommend the product to the people who has all the type of skin anxiety.

Effect on the eye

MONTERANC does not use the first-generation, low-cost LED for cost-saving. The third-generation LED used for expensive equipment used in famous domestic dermatology clinics and luxury aesthetic clinics. LED wavelength is used for the treatment of eye diseases, such as macular degeneration, diabetic retinopathy, and amblyopia. The LED of MONTERANC LED Mask is the one in the grade that can be used for treatment, which is safe. You may just feel the effect of the mask, closing your eyes, comfortably.

Table 1: The summary of basic effect of three colors.

Color	Effect
Red (625-530nm)	
Blue (465-470nm)	Powerful anti-bacterial properties that cleanse and purify the skin. They kill the acne-causing bacteria P. acne, and have anti-spasmodic properties that relieve tension.
Orange (600-610nm)	Returns a vitality to skin that has lost its sheen. Especially recommended for wedding days and portraits, orange light works on dull complexions to bring out a brilliant healthy glow.

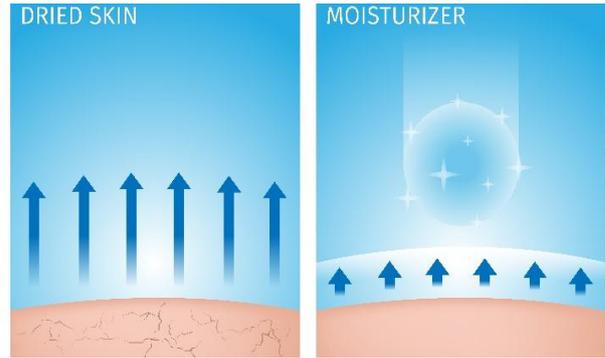


Figure 3: Watery shine course: Blue (10 min) after Red (10 min).

Table 2: 9 modes of Monteranc LED mask.

Mode	First 10 minutes	Second 10 minutes
Baby skin	Red	Red
Watery Shine	Red	Blue
Collagen	Red	Orange
Power illuminating	Blue	Red
Anti-trouble	Blue	Blue
Blemish clear	Blue	Orange
Activating	Orange	Red
Balancing	Orange	Blue
Vitalizing	Orange	Orange

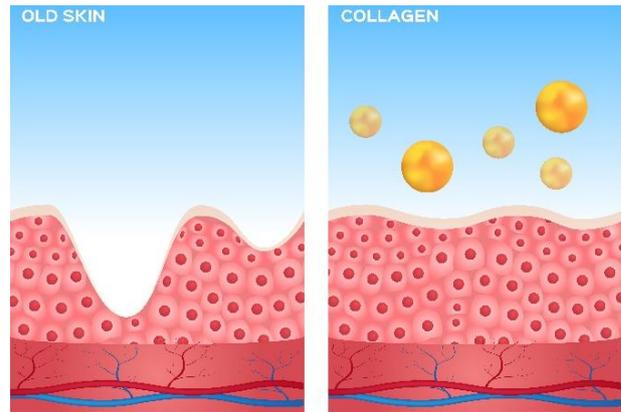


Figure 4: Collagen course: Orange (10 min) after Red (10 min).

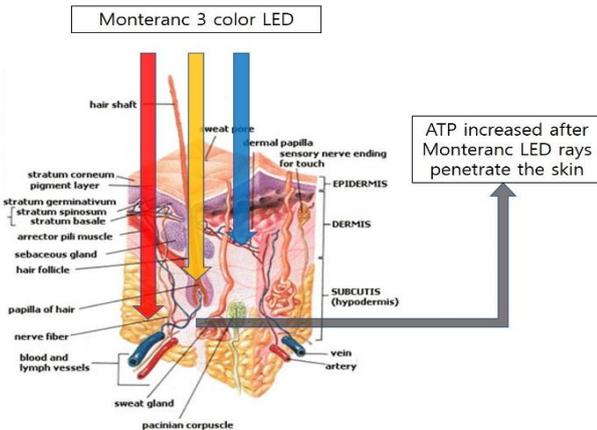


Figure 1: The third generation LED penetrates the skin and enhances ATP increased.

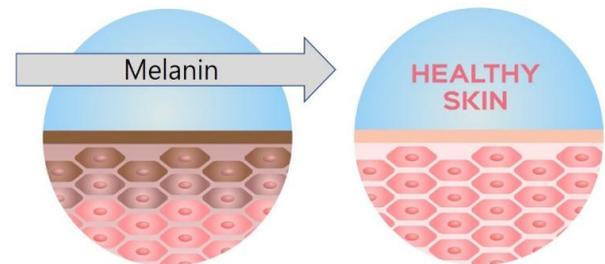


Figure 5: Power illuminating course: Red (10 min) after Blue (10 min).

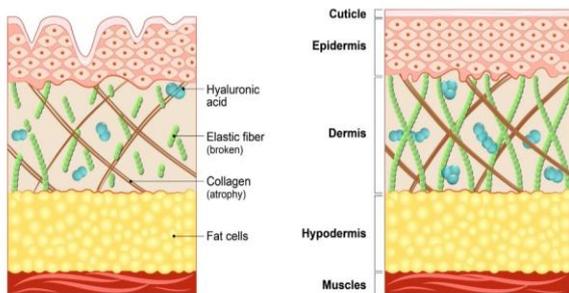


Figure 2: Baby skin course: Red (10 min) after Red (10 min).

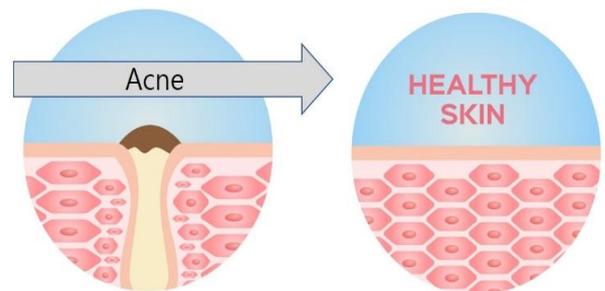


Figure 6: Anti-trouble course: Blue (10 min) after Blue (10 min).

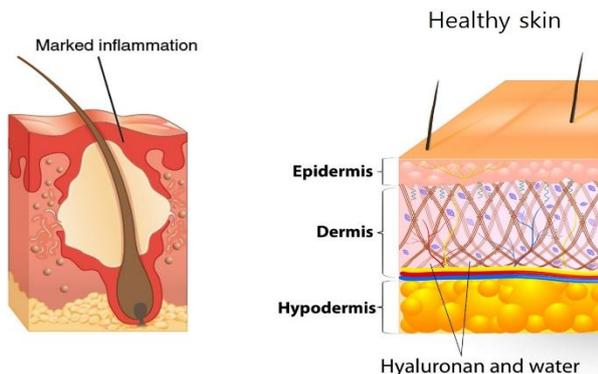


Figure 7: Blemish clear course: Orange (10 min) after Blue (10 min).

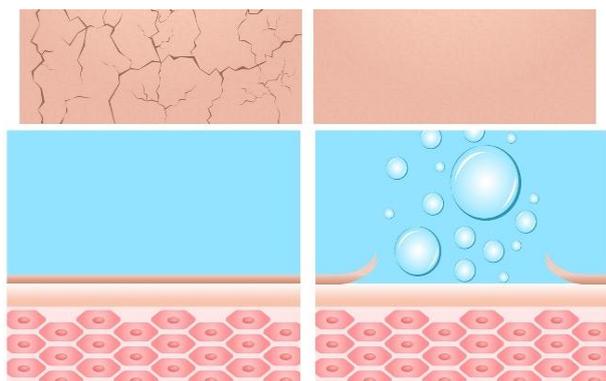


Figure 8: Activating course: Red (10 min) after Orange (10 min).



Figure 9: Balancing course: Blue (10 min) after Orange (10 min).



Figure 10: Vitalizing course: Orange (10 min) after Orange (10 min).

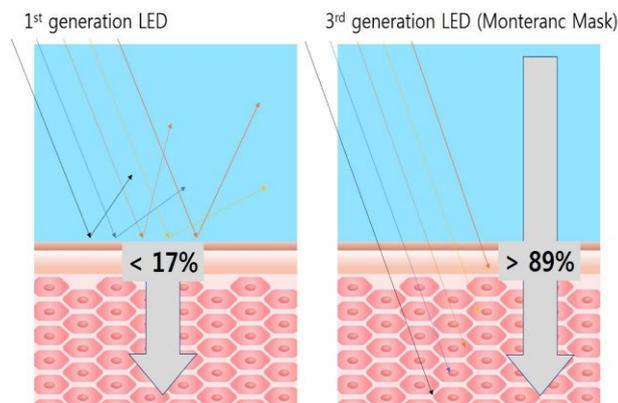


Figure 11: 1st generation LED lights penetrate the skin only under 17%. 3rd generation LED lights penetrate the whole skin over 89%.

CONCLUSION

The Nine Tailed Fox Monteranc LED mask was tested in 180 volunteers and showed obvious skin improved in each mode (20 volunteers of each course). Three kind of the MNF Ampoule and the Repair Ampoule was tested in 80 volunteers and showed synergistic effect with the Nine Tailed Fox Monteranc LED mask (20 volunteers of each ampoule). Global effective functional cosmetics brand MONTERANC for medical equipment and beauty device!

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