

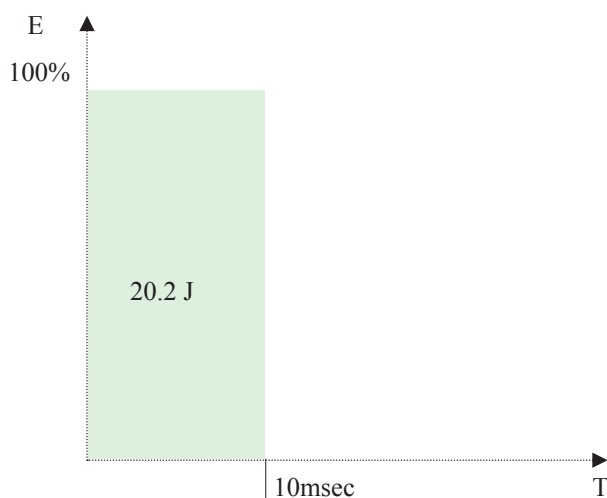
Hair Removal by Forma™ IPL System, Study of Efficiency and Side Effects

Dr. E. Krieger, University of Ferrara - Italy

Background: Intense pulsed light (IPL) devices use flash-lamps and band-pass filters to emit polychromatic incoherent high-intensity pulsed light of determined wavelength spectrum, fluence, and pulse duration. Similar to lasers, the basic principle of IPL devices is a more or less selective thermal damage of the target (Photothermolysis). The combination of prescribed wavelengths, fluences, pulse durations, and pulse intervals facilitates the treatment of a wide spectrum of skin conditions. The basic principle is the absorption of photons by chromophores contained in the hair (Melanin) and the transfer of energy to these chromophores that generates heat and subsequently destructs the target structure (follicle and papilla). This leads to deactivation of the hair growth mechanism, without causing damage to the epidermis layer.

Objective: To test the effectiveness of the equipment and report side effects of Forma® IPL system (Formatk Ltd. Israel) in the hair removal function.

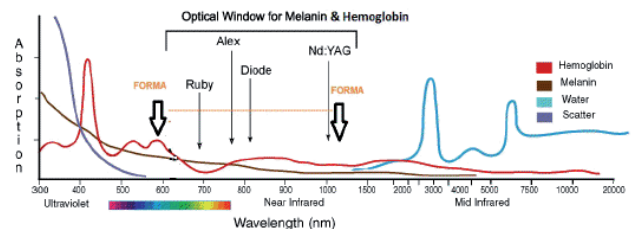
Method: treatments were performed using the Forma™ IPL technology, (Formatk Ltd) BHR applicator with a wavelength range of 1100 nm and fluence up to 20,2 J/cm² within 10 ms (TRT).



A group of 8 volunteers, all females (ages 16- 51) were chosen according to inclusion criteria and were classified in base of their skin photo-type (Fitzpatrick scale III - IV) with variable unwanted hair distribution and density. Four applications were performed in 30 days interval over different anatomical areas; results after 3 months follow up.

Results: After the 4th session we observed a significant reduction of about 80% of the unwanted hair in all 8 volunteers, in all of the treated areas. Minor side effects were reported and included some superficial skin irritation with the appearance in two cases of slight erythema, which gradually fade over time. The application of Biafine Cream gave immediate relief to those symptoms. The irritation, however, has disappeared in all cases within 24 hours after the application of pulsed light without leaving a trace.

Conclusions: Forma™ IPL system (Formatk systems Ltd. Israel) results highly effective, fast and safe technology to reduce unwanted hair in various body areas of skin types 3 and 4.

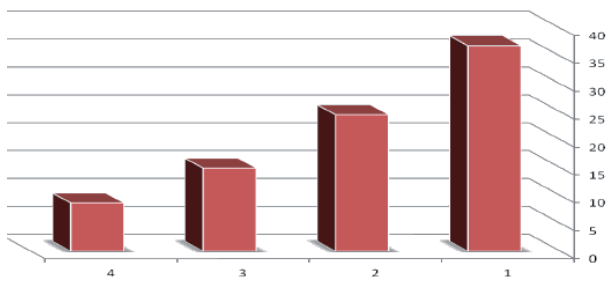


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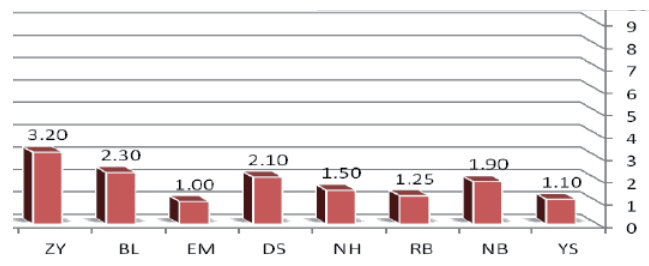
Description: The Forma™ IPL device is equipped with a Xenon lamp, air cooled and has 2~ sec. Interval between pulses. The prism used for hair removal application has band-pass wavelength of 590 nm - 1100 nm. Considered the wavelengths 590 nm - 1100 nm absorption occurs both by the melanin and hemoglobin. This facilitates the heat conduction from the surface to the hair root (papilla, capillaries) resulting in atrophy of the entire hair bulb

TOTAL HAIR COUNT



The hair count was performed in 1.5 cm² spot size within the treated area. The average count of all 8 cases shows a significant reduction of hair density in all 8 patients, of about 80%, three months after last session. The patients were asked as well to evaluate the pain level of each session in 1 - 10 scale, where 1 is referred to a minimum and tolerable pain perception and 10, to acute, insupportable pain. An average value of all sessions per patient is described in the following graph:

AVERAGE PAIN LEVEL



Forma™ IPL system (Formatk systems Ltd. Israel) resulted highly effective, fast, painless and safe technology to reduce unwanted hair in various body areas of skin types 3 and 4.