CLAIMS

[Claim 1]

An apparatus for treating vessel in skin, comprising:

A plurality of electrodes that can be inserted in skin to deliver an electrical signal to a target vessel;

an electrical signal generator electrically coupled to the plurality of electrodes; and

a power supply unit for supplying power to the electrical signal generator,

wherein the target vessel in skin is positioned between two electrodes among the plurality of electrodes,

thermal damage is induced to the target vessel in skin by an electrical signal applied to a portion of the electrode, which is inserted into skin to be treated, and

a voltage of 20 Vrms to 250 Vrms is applied to the electrode for a time of 10 msec to 300 msec.

[Claim 2]

The apparatus of claim 1, wherein the electrical signal delivered to the plurality of electrodes is a repetitive electrical signal with at least one delay time (pause).

[Claim 3]

The apparatus of claim 1, wherein an electric field is formed between the plurality of electrodes.

[Claim 4]

The apparatus of claim 1, wherein an electric field of Alternating Current (A.C.) is formed between the plurality of electrodes.

[Claim 5]

The apparatus of claim 4, wherein the plurality of electrodes include a bipolar configuration.

[Claim 6]

The apparatus of claim 1, wherein the plurality of electrodes are to be placed on the surface of the skin without penetrating into the skin.

[Claim 7]

The apparatus of claim 1, wherein the apparatus is suitable for treating at least one among melasma, dermal melasma, hyperpigmentation, hypopigmentation, rosacea, flushing, erythema, or telangiectasia lesions.

[Claim 8]

The apparatus of claim 1, wherein an electrical signal delivered into the skin induces a thermal effect independently on the outer layer of a target vessel in a lesion.

[Claim 9]

The apparatus of claim 1, wherein a thermal effect is

induced independently around the electrode and a vessel located in skin.

[Claim 10]

The apparatus of claim 1, wherein a thermal effect is not generated between the area around the electrode and the area around a vessel in skin.

[Claim 11]

The apparatus of claim 1, wherein the plurality of electrodes are to be inserted into the dermal layer of the skin.

[Claim 12]

The apparatus of claim 1, wherein the electrical signal generator may be a high-frequency signal generator, which frequency ranges from 0.1 MHz to 100 MHz.

[Claim 13]

The apparatus of claim 1, wherein at least one parameter among the depth of electrode penetration into the target skin, the voltage applied to electrode, the power transmitted to electrode, the duration over which an electrical signal is conducted to electrode, and the delay time during which an electrical signal is not conducted to an electrode, is set preliminarily.

[Claim 14]

The apparatus of claim 1, wherein the apparatus includes an electrode module comprising an array to which the plurality of electrodes are fixed.

[Claim 15]

The apparatus of claim 14, wherein the apparatus may include a motor unit for driving the electrode or the electrode module to penetrate the electrode into the skin.