

Transderm® Ionto System

- *FDA Cleared*
- *Dermoelectroporation® Technology*
Promotes the transdermal delivery rate by means of microdermabrasion and pulses delivery
- *Treat the Face and Body*
- *Comfortable for the Patient*
- *Ultrapeel® Compatible*



Suitable for:

Local administration of ionic drug solutions into the body

Skin texture enhancement treatments

Anesthetic purposes prior to laser procedures

Mesotherapy treatments

Advantages:

Capability to transdermally deliver macromolecules

No variation in the ionic drug solution pH

Ensures reproducibility of dose delivered

Benefit to Patients:

Same results... but without a needle

Comfortable treatment sessions

No irritations, burnings or inflammations on return electrode placement



The Transderm® Ionto system is a powered drug-delivery system that has been FDA approved for the "local administration of ionic drug solutions into the body for medical purposes and can be used as an alternative to injections". The Transderm® Ionto system uses Dermoelectroporation® Technology to deliver ionic drug solution into the body, and when connected to Ultrapeel® microdermabrader, allows for a very efficient transdermal delivery of products.

The Transderm® Ionto System is used to provide the following:

- Skin Bio Revitalization Treatments
- Needle Free Mesotherapy – such as cellulite reduction and body shaping
- Pre- Laser Treatments
- Skin Resurfacing

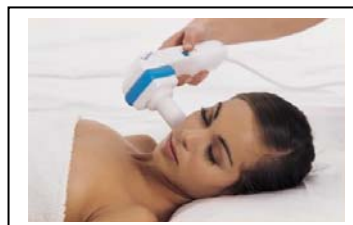
Macromolecules previously not transdermally deliverable by traditional Iontophoresis, are now successfully deliverable due to the new Dermoelectroporation® Technology. Doctors are successfully using the device for transdermal delivery of Hyaluronic Acid, Carnitine, Aminophiline aminoacids, vitamins, steroids and other water-based solutions under the doctor's indication and prescription.

Both positive and negative ions of the drug are transdermally delivered. This means that the technology works like an injection, but it is not invasive as an injection is.

The Transderm Ionto can be connected to the newest Ultrapeel® II Microdermabrader. This configuration enhances the transdermal delivery flux and allows users to deliver ionic solutions faster than traditional Iontophoresis.

Patients will enjoy treatments with the Transderm® Ionto due to the comfortable sessions. A vibration feature hides the perception of the electrical pulses.

Microdermabrasion enables a standardization of the skins characteristics, so the drug delivery rate is reproducible.



FDA Cleared 510K number K032968 – Dec. 2003

Indication of Use

The Transderm® Ionto is a powered drug delivery system that is indicated for the local administration of ionic drug solutions into the body for medical purposes and **can be used as an alternative to injections**.

Ultrapeel® Transderm System



*Ultrapeel® II plus
microdermabrasion
Connectivity*



*Individually Packaged
Disposable Electrode Caps
And Precision Liquid
Dispenser*

TECHNICAL SPECIFICATIONS

Power Supply: 9 V DC, 1A max, external

Average Pulse Current : +/-1 mA, 2 mA, 3 mA, 4 mA, 5 mA, user selectable, $\pm 20\%$

Load Impedance: 0 -15 KOhm

Pulse Frequency: 2200 Hz

Burst Time: 10 msec.

Burst Frequency: 50 Hz.

TRANSDERMAL DELIVERY AND DERMOELECTROPORATION®

Dermaelectroporation® is a new patented proprietary technology of Mattioli Engineering Labs. Dermaelectroporation® technology utilizes the skin's water based "channels" to allow ionic drug solutions to penetrate due to controlled "electroporation-like" continuous reversed polarity electrical pulses delivery. These pulses **increase the skin's permeability** and allow for the transdermal delivery of drugs as occurs in traditional Iontophoresis - even if the average current value on the patient is zero. Both micro-molecules and **macro-molecules** (such as Hyaluronic acid, Vitamins, Amino acids, Heparin, Ant-inflammatories, etc.) **are safely delivered** into the body without modifying the ionic drug solution's pH. There is also no electrolysis effect of the ionic solution itself. **This is not possible with traditional Iontophoresis systems.** Dermaelectroporation® Technology has no effect on the ionic drug solution being delivered. It takes less time (vs. traditional Iontophoresis devices) to deliver the same amount of ionic drug solution, while eliminating the irritations associated with traditional Iontophoresis, so that skin pH-compensating patches are not needed.

No return electrode, no pre-charged drugs and no driving gels are needed.

Dermaelectroporation® is carried out by Mattioli Engineering's Transderm® Ionto device.

Mattioli Engineering - A New Science in Skin Care™

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