Iontophoresis is an active transdermal drug delivery system that delivers drug ions through the skin using a low level electric current.

Direct Current is used to move a drug or therapeutically active ion through the skin. When direct current (DC) is applied to an ionized drug solution, the ions that have the same charge as the current are repelled by the current and are delivered through the skin. The aim is to drive active ions locally rather than having to inject them or have them taken systemically.
Indications:
Iontophoresis is used to administer water-soluble ionic medications to:
• Treat Acute Tendonitis
• Treat Pain Associated with Calcific Deposits
• Provide Dermal Anesthesia

Alternatives to iontophoresis are injections, oral medications and passive transdermal medications.
Benefits of iontophoresis over the alternatives:

Compared to injections:
• Virtually painless
• Non-invasive minimizing:
  - Risk of infection
  - Risk of tissue necrosis, tendon rupture, etc.

Compared to oral medications:
• Localized drug delivery, non-systemic
• Avoid risk of systemic side effects

Contraindications:
• Damaged or denuded skin
• Recent scar tissue
• Drug allergies
• Trans-cranial
• Orbital region
• Electrically sensitive support systems
  - Pacemaker

Considerations:
• Diabetes
• Pregnancy
• Over external metal fixation devices
• “Elderly” skin

References:
3. Dosis recomendadas
Iontophoresis

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>1315</td>
<td>Chattanooga Ionto Dose Controller (Includes lead wire, batteries, case, instruction guide and warranty card)</td>
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<tr>
<td>13214</td>
<td>Replacement Leadwire (Use Chattanooga Ionto Dose Controller)</td>
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<td>1336</td>
<td>Black Snap Adapters, (Pack of 2)</td>
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<td>5020014</td>
<td>Twin Lead for the Chattanooga Ionto Dose Controller</td>
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TECHNICAL SPECIFICATIONS

- Output Specs: ±19% unless noted
- Current Range: 0.5 - 4mA ±10% at 100 to 12k ohm load
- Dose Range: 0 to 160mA/minute
- Dose Accuracy: ±2mA minute
- Ramp Up/Ramp Down: 30 seconds
- Battery: 9V Alkaline
- Dimensions: 2 x 6 x 9 cm (L x W x H)
- Weight: 77g
- Safety Tests: EN60601-1-2

FEATURES

The dual channel Chattanooga Ionto device delivers a constant direct current no matter the resistance level. By varying the voltage output as resistance changes, the device consistently delivers the programmed dose.

The device’s pause feature lets you check the treatment area without restarting the session. Chattanooga Ionto gives you the user-friendly features and reliability you expect.

- 2-channels to treat 2 sites or deliver 2 medications simultaneously
- Previous dosage can be set as default to maintain frequently used treatment parameters
- Beeping alerts if electrode fault for open current or high impedance, low battery, treatment completion or power left on
- Automatic 30 second current ramp up and down during power on/off keeps patient comfortable
- Constant current provides precise, accurate delivery regardless of skin impedance
- Current can be set in 0.1 mA increments between 0.5 mA and 4 mA
COMPANION 80™

FEATURES

Designed to deliver an 80 mA-minute dose over 24 hours, allowing the patient to tend to normal daily activities while receiving treatment.

Battery-Powered
- Internal 1 volt battery - no wires to connect
- Reserve battery capacity compensates for patients with higher skin resistance

Silver-Silver Chloride pH Stabilizing
- Conducts more efficiently than Carbon
- Stabilizes pH without using chemical buffers

Hypoallergenic Adhesive
- Adheres well, even in the shower
- Conforms well to treatment areas
- Fits comfortably beneath clothing

Current Profile Comparison

**In vitro test data on file at IOMED, Inc.**

**5000 Ohm load simulates skin resistance**

REFERENCES


These products are protected by one or more of the following U.S. Patents: 4,744,787; 4,752,285; 5,135,477; 5,374,241; 5,415,628; 5,558,632; 5,846,217; 6,731,977. Other Patents Pending.
# Iontophoresis

## ORDERING INFORMATION

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<tr>
<th>Part Number</th>
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<tr>
<td>5000008</td>
<td>TransQ E, Medium (Disposable electrodes, 2.5 cc - 3.0 cc fill, 12 kits* per box)</td>
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<tr>
<td>5000009</td>
<td>TransQ E, Small (Disposable electrodes, 1.5 cc - 2.0 cc fill, 12 kits* per box)</td>
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<tr>
<td>5000033</td>
<td>TransQ Flex (Disposable electrodes, 2.5 cc fill, 12 kits* per box)</td>
</tr>
</tbody>
</table>

* Kits above include one each: drug delivery electrode, disposable dispersive pad, and alcohol wipe.

## FEATURES

### Silver-Silver Chloride pH Stabilizing Electrodes
IOMED’s proprietary Silver-Silver Chloride conductive element prevents water hydrolysis, thereby eliminating the need to add a chemical buffer and minimizing skin irritation. Designed in a variety of Shapes for Treating many different areas of the body.

#### TransQ E
- Rectangular and circular shapes for various treatment sites
- Adhesive Foam
- Stretches and adheres well under stress

#### TransQ Flex
- Clover Shape
- Surrounds highly contoured treatment area
- Perfect for fingers, hands, feet and ankles
- Superior Adhesion
- Adds more surface area to increase adhesion when under stress
- Patented Hydrogel
  - Provides uniform current distribution
  - Consistent drug delivery

## OPTIMA™

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<tr>
<td>5000050</td>
<td>Optima, Small (Disposable electrodes, 1.5 cc fill, 12 kits* per box)</td>
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<td>Optima, Medium (Disposable electrodes, 2.0 cc fill, 12 kits* per box)</td>
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<td>5000052</td>
<td>Optima, Large (Disposable electrodes, 3.0 cc fill, 12 kits* per box)</td>
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</tbody>
</table>

* Kits above include one each: drug delivery electrode, disposable dispersive pad, and alcohol wipe.

## FEATURES

### pH Buffered Iontophoresis Electrodes
Adjusts the pH to the ideal target of 4.5 to optimize transport when using a carbon conductive element and maintains that ideal pH for better drug delivery.

#### pH Defining Agent
- Adjusts pH to ideal target to optimize transport when using a carbon conductive element
- Conforms to a wide variety of treatment sites
- Stretches and adheres well when under stress

#### pH Buffering Agent
- Maintains ideal pH

#### Viscosity Enhancing Element
- Creates uniform current distribution for greater patient comfort
IOGEL®

FEATURES
Silver-Silver Chloride pH Stabilizing Electrodes
- Elliptical shape: Follows the line of the tendon
- Clear Adhesive: Allows precise placement on target site

GelSponge®
- Ensures complete contact between the electrode and the skin surface with low impedance
- Provides a conductive medium similar to ultrasound gel
- Protects adhesive during hydration and handling

DUPEL B.L.U.E.

FEATURES
pH Balancing Electrode
- High efficiency, bi-layer design for optimal drug delivery
- Patented ion-exchange buffering system ensures pH shifts occurring during iontophoresis are controlled
- Four shapes/sizes for best adhesion, conformability and coverage
- Latex Free

DUPEL WHITE

FEATURES
The Dupel White Electrodes are a cost effective option in iontophoretic drug delivery. Using a patented design, the active electrode employs a unique buffering system that enhancing efficiency and comfort.
- Capable of delivering 80 mA/min
- Cost-Effective
- Available in various sizes
- Latex Free

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<tr>
<td>5000021</td>
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<td>5000022</td>
<td>Iogel, Medium (Disposable electrodes, 2.5 cc fill, 12 kits* per box)</td>
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<td>Iogel, Large (Disposable electrodes, 3.55 cc fill, 12 kits* per box)</td>
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* Kits above include one each: drug delivery electrode, disposable dispersive pad, and alcohol wipe

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<td>199332-001</td>
<td>Dupel B.L.U.E., Small (Disposable electrodes, 1.5 cc fill, 12 kits* per box)</td>
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<td>199334-001</td>
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<td>Dupel B.L.U.E., Large (Disposable electrodes, 4.0 cc fill, 12 kits* per box)</td>
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