



Food and Drug Administration  
10903 New Hampshire Avenue  
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April 9, 2015

InControl Medical, LLC  
Jessica Andreshak  
Director of Quality Assurance and Regulatory Affairs  
3225 Gateway Road, Suite. 250  
Brookfield, WI 53045

Re: K150183  
Trade/Device Name: ApexM  
Regulation Number: 21 CFR 876.5320  
Regulation Name: Nonimplanted electrical continence device  
Regulatory Class: Class II  
Product Code: KPI  
Dated: January 26, 2015  
Received: January 27, 2015

Dear Jessica Andreshak,

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the [Federal Register](#).

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in

the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address

<http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to

<http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address

<http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,

  
**Benjamin R. Fisher -S**

Benjamin R. Fisher, Ph.D.  
Director  
Division of Reproductive, Gastro-Renal,  
and Urological Devices  
Office of Device Evaluation  
Center for Devices and Radiological Health

Enclosure

## 6. Statement of Indications for Use

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**510(k) Number (if known)** K150183

### Device Name

ApexM

### Indications for Use

ApexM is a non-implanted muscle stimulator designed to treat stress, urge and/or mixed urinary incontinence in women. It applies stimulation to the pelvic floor muscles and surrounding structures to improve strength and support.

Prescription Use \_\_\_\_\_  
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_X\_\_\_  
(21 CFR 807 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

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Concurrence of CDRH, Office of Device Evaluation (ODE)

## 510(k) Summary

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### Submission Date

January 26<sup>th</sup>, 2015

### Submitter Information

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### Device Information

Table 7.1: Device Information

|                                       |   |
|---------------------------------------|---|
| <b>Type of 510(k):</b>                | Traditional 510(k)  |
| <b>Common Name:</b>                   | Pelvic Floor Muscle Stimulator                            |
| <b>Trade Name (proprietary name):</b> | ApexM   |
| <b>Classification name:</b>           | Stimulator, Electrical, Non-Implantable, For Incontinence |
| <b>Classification Regulation:</b>     | 21 CFR 876.5320   |
| <b>Class:</b>                         | Class II  |
| <b>Product Code:</b>                  | KPI   |

### Legally Marketed Device for Substantial Equivalence

Table 7.2: Predicate Device Information

| 510(k)  | Name   | Product Code | Manufacturer  |
|---------|--------|--------------|---|
| K110179 | InTone | KPI          | InControl Medical, LLC<br>3225 Gateway Road, Ste. 250<br>Brookfield, WI 53045 USA |
| K141158 | Apex   | KPI          | InControl Medical, LLC<br>3225 Gateway Road, Ste. 250<br>Brookfield, WI 53045 USA |

## Device Summary

ApexM is a hand-held, home-use device designed to treat female urinary incontinence. The device includes an inflatable probe. The inflatable probe is inserted into the vagina and manually inflated by the end user to ensure a customized fit. Electrical stimulation is delivered via stainless steel electrodes on the inflatable probe to induce a contraction of the pelvic floor muscles. Muscle stimulation is used to train and strengthen the pelvic floor muscles in a controlled manner. Muscle stimulation is used to improve the ability of muscles to hold a contraction for an extended period of time and is a treatment for urinary incontinence. During a session, high and low frequency stimulation is delivered by the device. The higher frequency stimulation is delivered to specific muscles to encourage their contraction, strengthening the muscles and helping the end user recognize which muscles to activate during self-directed contractions. Lower frequency stimulation calms the detrusor muscle, decreasing symptoms of urgency. The level of electrical stimulation is easily controlled by the end user using manual, push-button controls.

## Intended Use

ApexM is a non-implanted muscle stimulator designed to treat stress, urge and/or mixed urinary incontinence in women. It applies stimulation to the pelvic floor muscles and surrounding structures to improve strength and support.

## Equivalence Comparison to the Predicate

Electrical muscle stimulation is the technological principle for ApexM and the predicate devices. It is based on the use of the electrical muscle stimulator to strengthen the pelvic floor muscles and surrounding structures. The chart below summarizes the shared and unique technological elements between ApexM and the predicate devices. The intended use, technology, engineering, performance and user interface for ApexM is substantially equivalent to the predicate devices.

Table 7.3: Substantial Equivalence Comparison Table

| Feature/ Function   | K110179 InTone (Predicate)  | K141158 Apex (Predicate)   | ApexM (New Device)  | Comparison                      | Impact on Safety and Performance  |
|---|---|--|---|---------------------------------|---|
| <p><b>Intended Use</b><br/>An explicit description of all clinical functions performed by the device</p> <p><b>Indications for Use</b><br/>Explain when the device is to be clinically used and the intended patient population</p> | <p>The InControl device is a non-implanted electrical stimulator indicated for use in the treatment of female urinary incontinence. It applies electrical stimulation to the pelvic floor musculature and surrounding structures. It is intended for acute and ongoing treatment of mixed urinary incontinence where the following results may improve urinary control:</p> | <p>Apex is a non-implanted muscle stimulator designed to treat female stress urinary incontinence. It applies stimulation to the pelvic floor muscles to improve strength and support.</p> | <p>ApexM is a non-implanted muscle stimulator designed to treat stress, urge and/or mixed urinary incontinence in women. It applies stimulation to the pelvic floor muscles and surrounding structures to improve strength and support.</p> | <p>Substantially equivalent</p> | <p>None:<br/>These devices apply electrical stimulation to strengthen the pelvic floor muscles, as supported by literature.</p> |

| Feature/ Function  | K110179 InTone (Predicate)   | K141158 Apex (Predicate)  | ApexM (New Device)  | Comparison        | Impact on Safety and Performance  |
|--|--|---|---|-------------------|---|
|  | strengthening of pelvic floor muscles, inhibition of the detrusor muscle through reflexive mechanisms. The biofeedback feature can be used for muscle re-education purposes.   |   |   |                   |   |
| <b>Primary Function</b>  | Delivery of electrical stimulation   | Delivery of electrical stimulation  | Delivery of electrical stimulation  | Identical         | None  |
| <b>Warnings or Precautions</b>   | (see product labeling)   | (see product labeling)  | (see product labeling)  | Identical to Apex | None:<br>ApexM warnings and precautions are identical to Apex, which were defined according to the FDA guidance document and validated through the Human Factors and Usability Testing. |
| <b>Contraindications</b><br>Explain when the device is not to be clinically used | <ul style="list-style-type: none"> <li>This device is not intended for diagnostic purposes or critical patient monitoring.</li> <li>The device is not defibrillator proof.</li> <li>The device should not be used on patients with cardiac pacemaker, implanted defibrillator, or other implanted metallic or electronic device. Do not use if patient has a history of rate or conductive disturbance</li> <li>Do not use if patient has symptoms of an active urinary tract infection</li> <li>Do not use if the patient has vaginal infections, localized lesions, or other undiagnosed symptoms.</li> <li>Do not use if patient has undiagnosed pain.</li> <li>Do not use if patient has a neurological deficiency that does not permit proper sensory perception or stimulation</li> <li>Do not use if patient has diminished mental capacity or physical competence that limits use of the device or interaction with the care provider regarding the device settings.</li> <li>Do not use if patient is currently pregnant or attempting to get pregnant.</li> <li>Do not use if patient has</li> </ul> | <ul style="list-style-type: none"> <li>Do not use if you are pregnant</li> <li>Do not use if you are attempting to get pregnant</li> <li>Do not use if you have a cardiac demand pacemaker or implanted defibrillator</li> <li>Do not use if you have symptoms of active urinary tract infection, vaginal infections, or localized lesions</li> <li>Do not use if you have a diagnosis of extra-urethral or overflow incontinence</li> <li>Do not use if you have severe urine retention</li> <li>Do not use if you have poor sensation in the pelvic region</li> <li>Do not use if you have cognitive disabilities, i.e.; Alzheimer’s disease or dementia</li> <li>Do not use if you are unable to properly insert the device per instructions</li> <li>Do not use if you have active pelvic cancer</li> <li>Do not use if you have an intestinal clamp</li> <li>You must be 6 weeks post-pelvic surgery or vaginal childbirth to use this device</li> <li>Do not use this device for diagnostic purposes or critical patient monitoring</li> <li>This device is not (external) defibrillator-proof</li> </ul> | <ul style="list-style-type: none"> <li>Do not use if you are pregnant</li> <li>Do not use if you are attempting to get pregnant</li> <li>Do not use if you have a cardiac demand pacemaker or implanted defibrillator</li> <li>Do not use if you have symptoms of active urinary tract infection, vaginal infections, or localized lesions</li> <li>Do not use if you have a diagnosis of extra-urethral or overflow incontinence</li> <li>Do not use if you have severe urine retention</li> <li>Do not use if you have poor sensation in the pelvic region</li> <li>Do not use if you have cognitive disabilities, i.e.; Alzheimer’s disease or dementia</li> <li>Do not use if you are unable to properly insert the device per instructions</li> <li>Do not use if you have active pelvic cancer</li> <li>Do not use if you have an intestinal clamp</li> <li>You must be 6 weeks post-pelvic surgery or vaginal childbirth to use this device</li> <li>Do not use this device for diagnostic purposes or critical patient monitoring</li> <li>This device is not (external) defibrillator-proof</li> </ul> | Identical to Apex | None:<br>ApexM contraindications are identical to Apex, which were validated through the Human Factors and Usability Testing.   |

| Feature/ Function  | K110179 InTone (Predicate)  | K141158 Apex (Predicate) | ApexM (New Device)     | Comparison               | Impact on Safety and Performance  |
|--|---|--------------------------|------------------------|--------------------------|---|
|  | anatomical vaginal structures that do not permit proper and complete placement of the Insertion Unit <ul style="list-style-type: none"> <li>Do not use if the patient has irregular menstrual bleeding cycles</li> <li>Do not use if the patient has a history or symptoms of urinary retention.</li> <li>Do not use if the patient has extra-urethra incontinence, (i.e. syrxinx, ectopic, urethra).</li> <li>Do not use if the patient has overflow incontinence caused by evacuation problems.</li> <li>Do not use if the patient has severe urine retention in the upper urethras.</li> <li>Do not use if the patient has complete peripheral denervation of the pelvic floor.</li> <li>Do not use if the patient has an intestinal clamp.</li> </ul> |                          |                        |                          |   |
| <b>Labeling Summary</b><br>Clarity to insure safer or more effective use | User Manual   | User Manual              | User Manual            | Substantially equivalent | None:<br>ApexM user manual was based on the predicate, Apex, which was validated through the Human Factors/Usability testing.   |
| <b>Environmental Specifications</b>                                      | For indoor use only   | For indoor use only      | For indoor use only    | Identical                | None  |
| <b>Power Source</b>  | 4/5 AA nickel metal hydride battery   | 4 AAA Alkaline battery   | 4 AAA Alkaline battery | Identical to Apex        | None:<br>ApexM battery is identical to Apex, which leverages 4 AAA Alkaline batteries for ease of use and acquisition for the end user. Battery insertion was validated through the Apex Human Factors and Usability Testing. |
| <b>Method of line current isolation</b>                                  | N/A (battery)   | N/A (battery)            | N/A (battery)          | Identical                | None  |
| <b>Patient leakage current</b>   | N/A (battery)   | N/A (battery)            | N/A (battery)          | Identical                | None  |
| <b>Number of output modes</b>  | 1   | 1                        | 1                      | Identical                | None  |
| <b>Number of output channels</b>   | 1   | 1                        | 1                      | Identical                | None  |
| <b>Regulated current or voltage?</b>                                     | Regulated voltage   | Regulated voltage        | Regulated voltage      | Identical                | None  |
| <b>Firmware controlled?</b>  | Yes   | Yes                      | Yes                    | Identical                | None  |

| Feature/ Function  | K110179 InTone (Predicate)     | K141158 Apex (Predicate)                       | ApexM (New Device)   | Comparison               | Impact on Safety and Performance  |
|--|--------------------------------|--|--|--------------------------|---|
| <b>Automatic Overload Trip?</b>  | Yes                            | No   | No   | Identical to Apex        | None:<br>ApexM overload trip is identical to Apex. Although there is no overload trip, ApexM does not introduce any safety risks because of the circuit design. The maximum level of stimulation is self-limiting and will not cause end user injury if maximum output is applied.  |
| <b>Automatic No-Load Trip?</b>   | Yes                            | No   | No   | Identical to Apex        | None:<br>ApexM no-load trip is identical to Apex. Although there is no no-load trip, ApexM does not cause any safety risks because of the circuit design. The maximum level of stimulation is self-limiting and will not cause end user injury if powered with no load.             |
| <b>Automatic Shut Off?</b>   | Yes                            | Yes  | Yes  | Identical                | None  |
| <b>Indicator Display</b><br><ul style="list-style-type: none"> <li>On/Off Status</li> <li>Low Battery</li> </ul> | Yes<br>Yes                     | Yes (via display illumination)<br>No           | Yes (via display illumination)<br>No   | Identical to Apex        | None:<br>ApexM indicator display is identical to Apex. This does not introduce a safety risk because the device will power off when the battery power is too low.   |
| <b>Waveform, shape</b>   | Dual phase, rectangular pulses | Monophasic, alternating polarity, square pulse | Monophasic, alternating polarity, square pulse   | Identical to Apex        | None:<br>ApexM waveform shape is identical to Apex. The square/rectangular shape defines the DC component common with both waveforms. The dual phase and monophasic alternating polarity waveform delivery both provide a balanced positive/negative alternating waveform delivery. |
| <b>Frequency</b><br><ul style="list-style-type: none"> <li>Mixed</li> <li>Stress</li> <li>Urge</li> </ul>        | 50 Hz<br>-<br>-                | -<br>50 Hz<br>-                                | 13, 50 Hz<br>-<br>-  | Substantially equivalent | None:<br>ApexM has a combination of 50Hz and 13Hz frequency. These frequencies treat stress, urge and mixed urinary incontinence as supported by literature.  |
| <b>Pulse width</b>   | 200 μs/phase                   | 200 μs/phase                                   | 200 μs/phase   | Identical                | None  |
| <b>Time</b><br><ul style="list-style-type: none"> <li>On</li> <li>Off</li> </ul>                                 | 20 seconds<br>10 seconds       | 1 second at 50 Hz<br>2 seconds no stimulation  | 1 second at 50 Hz<br>2 seconds no stimulation<br>2 seconds at 13 Hz<br>2 second no stimulation | Substantially equivalent | None:<br>ApexM time on and off is identical to Apex for the 50Hz frequency. The additional time on and off is to account for a second frequency of 13Hz.  |



| Feature/ Function                       | K110179 InTone (Predicate)  | K141158 Apex (Predicate)   | ApexM (New Device)   | Comparison        | Impact on Safety and Performance  |
|---|---|--|--|-------------------|---|
| <b>Total Session Time</b>               | 12 minutes  | Total session time of 10-15 minutes <ul style="list-style-type: none"> <li>5-10 minutes electrical stimulation</li> <li>5 minutes self-directed contraction (recommended)</li> </ul> | Total session time of 10-15 minutes <ul style="list-style-type: none"> <li>5-10 minutes electrical stimulation</li> <li>5 minutes self-directed contraction (recommended)</li> </ul> | Identical to Apex | None:<br>ApexM session time is identical to Apex. Small variances in session time are allowed due to end user preferences.  |
| <b>Max output voltage (500Ω)</b>        | 50 Vdc  | 40 Vdc   | 40 Vdc   | Identical to Apex | None:<br>This value is identical to Apex and IEC60601-2-10 requirements are met.  |
| <b>Max output current (500Ω)</b>        | 100 mA  | 80 mA  | 80 mA  | Identical to Apex | None:<br>This value is identical to Apex and IEC60601-2-10 requirements are met.  |
| <b>Maximum phase charge (500Ω)</b>      | 20 μC   | 16 μC  | 16 μC  | Identical to Apex | None:<br>This value is based on the output current which meets IEC60601-2-10 requirements. The pulse width is identical to the predicates.  |
| <b>Electrode surface area</b>           | 10.5 cm <sup>2</sup> x 2  | 6.00 cm <sup>2</sup> ± 0.5 cm <sup>2</sup> (x 2)   | 6.00 cm <sup>2</sup> ± 0.5 cm <sup>2</sup> (x 2)   | Identical to Apex | None:<br>ApexM electrode size is the same as Apex.  |
| <b>Max current density</b>              | 9.5 mA/cm <sup>2</sup>  | 13.3 mA/cm <sup>2</sup>  | 13.3 mA/cm <sup>2</sup>  | Identical to Apex | None:<br>This value is based on the output current which meets IEC60601-2-10 requirements. The electrode surface area is identical to Apex.   |
| <b>Max average power density (500Ω)</b> | 4.8 mW/cm <sup>2</sup>  | 5.33 mW/cm <sup>2</sup>  | 5.33 mW/cm <sup>2</sup>  | Identical to Apex | None:<br>This value is based on the output current which meets IEC60601-2-10 requirements. The electrode surface area, pulse width and max frequency are identical to Apex.   |
| <b>Biofeedback</b>                      | Air pressure, 0 – 2 psi   | None   | None   | Identical to Apex | None:<br>Biofeedback is a removed feature on both Apex and ApexM. Biofeedback is strictly an enhanced feature for neuromuscular re-education and the omission of this feature does not adversely impact the safety of the device. |
| <b>Dimensions (Insertion Unit)</b>      | Insertion Unit (overall): 12.2" x 2.5" x 4.0"<br>Inflatable Probe (avg. inflated): 5.5" x 2.2" x 2.5" | Insertion Unit (overall): 12.2" x 2.5" x 4.0"<br>Inflatable Probe (avg. inflated): 5.5" x 2.2" x 2.5"  | Insertion Unit (overall): 12.2" x 2.5" x 4.0"<br>Inflatable Probe (avg. inflated): 5.5" x 2.2" x 2.5"  | Identical         | None  |



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## Traditional 510(k) Submission



| Feature/ Function  | K110179 InTone (Predicate)  | K141158 Apex (Predicate)  | ApexM (New Device)  | Comparison        | Impact on Safety and Performance   |
|--|---|---|---|-------------------|--|
| <b>Control housing material</b>  | ABS plastics  | N/A   | N/A   | Identical to Apex | None:<br>ApexM does not include a control unit, identical to Apex. The control unit is intended to store and review data collected and to set stimulation levels by the clinician. Since ApexM is OTC, there is no need for a control unit.  |
| <b>Insertion material</b>  | Silicone, plastics  | Silicone, plastics  | Silicone, plastics  | Identical         | None   |
| <b>Packaging or Expiration Dating</b>  | 1 year for Insertion Unit   | N/A   | N/A   | Identical to Apex | None:<br>The expiration date for ApexM is identical to Apex. There is no need for an expiration date since the components are stable.  |
| <b>Sterilization</b>   | N/A   | N/A   | N/A   | Identical         | None   |
| <b>Operational Method: Clinical Use</b><br>e.g., ambulatory use, home use  | Clinic or Home use, under direction of physician  | Home use, Over-the-counter  | Home use, Over-the-counter  | Identical to Apex | None:<br>ApexM operation method for clinical use is identical to Apex. An over-the-counter indication does not impact safety because the stimulation is controlled by the end user per end user response. Additional safety features are built into the design of the device for the maximum frequency and automatic shut-off. |
| <b>Patient Interaction: Functions Controllable:</b> An explanation of how the device interacts with the patient. | The patient can control the starting and stopping of each session. However, the device will stop on its own once the session is normally completed. | The end user can control the electrical stimulation levels and the duration of the stimulation session. | The end user can control the electrical stimulation levels and the duration of the stimulation session. | Identical to Apex | None:<br>ApexM patient controlled functions are identical to Apex. Stimulation is controlled by the end user per individual response. Additional safety features are built into the design of the device for the maximum frequency and automatic shut-off.   |
| <b>Patient Interaction: Programming Capability</b><br>Whether the device can be programmed and to what extent    | None, programming can only be changed by clinician  | Electrical stimulation levels are set by the end user   | Electrical stimulation levels are set by the end user   | Identical to Apex | None:<br>ApexM patient programming capability is identical to Apex. Stimulation is controlled by the end user per individual response. Additional safety features are built into the design of the device for the maximum frequency and automatic shut-off.  |

| Feature/ Function  | K110179 InTone (Predicate)  | K141158 Apex (Predicate)  | ApexM (New Device)  | Comparison        | Impact on Safety and Performance  |
|--|---|---|---|-------------------|---|
| <b>Override</b>  | Yes   | No  | No  | Identical to Apex | None:<br>ApexM override is identical to Apex. The predicate, InTone, includes two units (Control Unit and Insertion Unit) and has an override feature so that the patient can pause the session on the Control Unit without powering the unit off. Apex and ApexM are single unit devices (Insertion Unit only) and therefore do not have an override option for suspending the stimulation function. Apex and ApexM are designed to be powered off by the end user to stop stimulation and improve ease of use. Powering off the devices reset the stimulation level to 0. |
| <b>Patient Interaction: Operator Requirements</b><br>Knowledge or training required of the operator, | Intended as part of a complete therapy program with physician coaching. No special knowledge or training; instruction manual provided | Over-the-counter device. No special knowledge or training required; instruction manual provided | Over-the-counter device. No special knowledge or training required; instruction manual provided | Identical to Apex | None:<br>ApexM operator requirements are identical to Apex. The ApexM device has been designed to be more intuitive for use by the end user without physician oversight. In both cases, no special knowledge or training is required. End user interaction was validated by the Apex Human Factors and Usability Validation.  |
| <b>Software Level of Concern</b>   | Moderate  | Moderate  | Moderate  | Identical         | None  |

ApexM has the same internal electronics and hardware as the predicate Apex (K141158). ApexM has the same patient contacting materials as InToneMV (K134020).

The predicate device, Apex (K141158), was evaluated for safety when supplied over-the-counter through a human factors / usability study. The device labeling and packaging (which includes an educational consumer-focused box, detailed instructions for use, laminated quick reference guide and instructional video) allow the end user to accurately self-diagnose as having stress urinary incontinence (allowing for the use of the product) while also self-identify as not having urge urinary incontinence (excluding them from use). The verbiage used in the educational materials was found to be appropriate for this kind of self-identification in a general population of women. ApexM labeling and packaging is substantially equivalent to Apex (K141158). Users of ApexM will be able to properly self-identify as having urinary incontinence (either stress, urge, and/or mixed) as they will not have to exclude themselves from any specific diagnosis. Therefore, ApexM is also safe for over-the-counter use.

## Testing Summary

The following performance testing was provided in support of the substantial equivalence. The testing for ApexM included software verification and validation, and ApexM successfully passed the testing. As a result of the similar features between ApexM and the predicates, this claim of substantial equivalence references the electrical safety, and EMC testing performed on the predicates InTone and Apex, and the biocompatibility testing performed on InToneMV (K131420). New electrical safety, EMC, and biocompatibility testing did not need to be performed to demonstrate the equivalent safety and effectiveness of ApexM.

### Software Verification and Validation Testing:

Software verification and validation testing were conducted and documentation was provided as recommended by FDA's Guidance for Industry and FDA Staff, "Guidance for the Content of Premarket Submissions for Software Contained in Medical Devices." The software for this device was considered to be a "moderate" level of concern, since a failure or latent flaw in the software could directly result in minor injury to the end user.

### Electrical Safety and Electromagnetic Compatibility Testing:

Electrical safety and EMC testing was conducted on the predicates InTone and Apex. The device complies with the IEC 60601-1 and IEC 60601-2-10 standards for safety and the IEC 60601-1-2 standard for EMC. New electrical safety and EMC testing did not need to be performed to demonstrate the equivalent safety and effectiveness of ApexM.

### Biocompatibility Testing:

The biocompatibility evaluation was completed for InToneMV (K131420). Testing was conducted in accordance with International Standard ISO 10993-1 "Biological Evaluation of Medical Devices – Part 1: Evaluation and Testing within a Risk Management Process," as recognized by FDA. The inflatable probe on the Insertion Unit is considered tissue contacting for a duration of less than 24 hours. The biocompatibility testing included the following tests:

- Cytotoxicity
- Sensitization
- Irritation

New biocompatibility testing did not need to be performed to demonstrate the equivalent safety and effectiveness of ApexM.

### Clinical Testing:

A clinical literature evaluation was conducted to provide evidence of the safety and efficacy of electrical stimulation for the treatment of female urinary incontinence. An appraisal of each article was completed as part of the literature evaluation. The appraisal included an assessment of suitability of each article, a device performance assessment and a device safety assessment.

A human factors / usability study was conducted on the predicate device Apex (K141158) to assess the safety for over-the-counter use. The human factors / usability study objectives were to: 1) determine if a subject can self-diagnose using package labeling, 2) self-limit usage if a

contraindication is present, and 3) safely use the device referencing only the instructions for use (IFU) provided. The results were favorable leveraging the original packaging and IFU; however, InControl Medical collaborated with the supervising physician to make further labeling enhancements including an educational consumer-focused box, detailed instructions for use, laminated quick reference guide and instructional video. The human factors / usability study can be applied to ApexM since women using ApexM will be able to properly self-identify as having urinary incontinence (either stress, urge, and/or mixed) as they will not have to exclude themselves from any specific diagnosis. The labeling and packaging for ApexM is substantially equivalent to Apex (K141158).

## Risk Management Summary

ApexM has been designed according to InControl Medical's internal procedures with traceability between the design inputs, design outputs, verification and validation activities.

ApexM has been evaluated for risks according to InControl Medical's internal procedures based on ISO14971. The risks associated with ApexM were reduced to as low as possible and the risk/benefit analysis was acceptable.

## Conclusion

The non-clinical data on the predicate devices support the safety of the device, and the software verification and validation demonstrates that ApexM performs as intended in the specified use conditions. The clinical literature evaluation, as well as the technological comparison to the predicate device, supports the use of electrical stimulation as an effective treatment of urinary incontinence in women. Like the predicate device Apex (K141158), ApexM is intended for over-the-counter use. The usability study completed for the Apex device was designed to ensure that potential users could self-identify as having stress urinary incontinence (allowing for the use of the product) while also self-identify as not having urge urinary incontinence (excluding them from use). The verbiage used in the educational materials was found to be appropriate for this kind of self-identification in a general population of women. Since users of ApexM will be able to properly self-identify as having urinary incontinence (either stress, urge, and/or mixed) as they will not have to exclude themselves from any specific diagnosis, a new human factors / usability study did not need to be performed. The labeling and packaging between ApexM and Apex (K141158) is substantially equivalent, supporting the safety of product labeling for self-diagnosis and use. The data included within this submission supports ApexM as an over-the-counter treatment for stress, urge and/or mixed urinary incontinence in women as safe and effective.