

Food and Drug Administration 10903 New Hampshire Avenue Document Control Center - WO66-G609 Silver Spring, MD 20993-0002

June 23, 2016

WaisMed Ltd. % Mr. Jonathan Kahan Partner Hogan Lovells US, LLP Columbia Square, 555 Thirteenth St Washington, DC 20004

Re: K160805

Trade/Device Name: NIO-P

Regulation Number: 21 CFR 880.5570

Regulation Name: Hypodermic Single Lumen Needle

Regulatory Class: II Product Code: FMI Dated: April 29, 2016 Received: April 29, 2016

Dear Mr. Kahan:

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,

Tina Kiang

for Erin I. Keith, M.S.

Director
Division of Anesthesiology,
General Hospital, Respiratory,
Infection Control, and Dental Devices
Office of Device Evaluation
Center for Devices and Radiological Health

Enclosure

# DEPARTMENT OF HEALTH AND HUMAN SERVICES Food and Drug Administration

### **Indications for Use**

Form Approved: OMB No. 0910-0120 Expiration Date: January 31, 2017 See PRA Statement below.

10(k) Number ( <i>it known)</i> K160805	
Device Name NIO-P	
ndications for Use (Describe) The NIO-P for Pediatrics is intended to provide intraosseous acculternative to IV access during emergencies. The device is for used 12 years of age.	
Type of Use (Select one or both, as applicable)	
Prescription Use (Part 21 CFR 801 Subpart D)	Over-The-Counter Use (21 CFR 801 Subpart C)

CONTINUE ON A SEPARATE PAGE IF NEEDED.

This section applies only to requirements of the Paperwork Reduction Act of 1995.

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# 510(k) SUMMARY K160805

## **Applicant Name:**

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#### **Contact Person:**

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**Date Prepared:** June 17, 2016

**Trade Name:** NIO-P

**Classification Name:** 880.5570 Hypodermic single lumen needle, (Product code FMI)

**Classification:** Class II

**Predicate Devices:** 

		Manufacturer / Owner	510(k) No.
<b>Predicate Device</b>	NIO Adult	WaisMed Ltd.	K142086
Reference Device	B.I.G Bone Injection for	WaisMed Ltd.	K022415
	Pediatrics	waiswed Ltd.	

#### **Device Description:**

The NIO product family (Adult and Pediatric) is an upgrade in terms of design and structure to the company's B.I.G. Bone Injection Gun product family. The NIO product family has already one cleared model, for the adult population NIO Adult (K142086).

Both product families NIO and BIG are composed of a trocar needle, spring, piston, and housing that contains safety mechanisms to prevent accidental device activation. Both devices are positioned onto the appropriate insertion site.

Both product families have the same principle of operation. The device resembles a syringe and, when activated, a loaded spring is released and the device injects a needle to a predetermined depth into the bone marrow cavity. The user then pulls out the trocar needle, leaving the cannula inside the bone marrow cavity. Through the cannula, fluids and drugs can be delivered to the vascular system via the bone marrow cavity.

The NIO-P device is designed to detect the proper injection point. In addition, the NIO-P is also equipped with a unique, adjustable needle penetration depth according to the age group, as part of the stabilizer. Both features are designed to improve accuracy in detecting the insertion point and needle penetration depth.

#### **Indications for Use:**

The NIO-P for Pediatrics is intended to provide intraosseous access in the proximal tibia, as an alternative to IV access during emergencies. The device is for use in pediatric patients between 3 and 12 years of age.

#### **Performance Data:**

Provided performance data include the following validations and studies:

- 1) Insertion Point and Penetration Depth Validation.
- 2) Adequate Spring Force and Bone Integrity Following Activation Validation.
- 3) Needle Stabilizer Validation.
- 4) Hub-Cannula/Hub-Needle Bond Strength Testing (According to ISO 7864).
- 5) Structural Deformation and Needle Integrity Test.

#### **Substantial Equivalence:**

The indications of the NIO-P are identical to those of the reference device, the BIG-P (K022415), except that the NIO-P is specifically indicated for pediatric patients between 3 and 12 years of age. The technological characteristics of the modified NIO-P device, as compared to

the predicate NIO-A device (K142086) are identical except for the modification of the needle stabilizer to allow detection of the accurate insertion point and the adjustable needle depth penetration. This modification has been validated by bench testing, and does not raise new types of safety or effectiveness questions. A comparison table between the subject and predicate devices is provided below.

	NIO-A Waismed	BIG-P Waismed	NIO-P Waismed
	Ltd. Predicate	Ltd. Reference	Ltd. (Modified
	Device	<b>Device (K022415)</b>	Device)
	(K142086)	-	
Product	Regulation number:	Same	Same
Classification	880.5570		
	Code: FMI,		
	Class: II		
Indications for	The NIO is intended to	The Bone Injection Gun	The NIO-P for pediatrics is
Use	provide intraosseous	(B.I.G.) for pediatric is	intended to provide
OSC	access in the proximal	intended to provide	intraosseous access in the
	tibia, as an alternative to	intraosseous access in the	proximal tibia, as an
	IV access during	proximal tibia, as an	alternative to IV access
	emergencies. The device	alternative to IV access	during emergencies. The
	is for use in adult patients	during emergencies. The	device is for use in pediatric
	only.	device is for use in pediatric patients up to 12	patients between 3 and 12 years of age.
	The NIO is indicated for	years of age.	years or age.
	use in providing	years or age.	
	intraosseous access as an		
	alternative to IV access		
	during emergencies.		
	Humeral head IO access is		
	indicated when rapid fluid		
	or pharmacological		
	resuscitation is required and intravenous access is		
	not possible. The device		
	is for use in adult patients		
	only.		
Environment	Hospital, Clinic,	Same	Same
Used	Emergency Care		
Design:	Consists of trocar needle,	Same	Same
	spring, piston and		
	housing.		
Dimensions	Length 17.5cm	Length 16.5cm	Length 17.5cm
(packaging)	Width 8.8cm	Width 7.4cm	Width 8.8cm
	Depth 4.7cm	Depth 2.8cm	Depth 4.7cm
Weight (in	113.8gm (0.25lbs)	80gm (0.18lbs)	107.6gm (0.24lbf)
package)			

	NIO-A Waismed Ltd. Predicate Device (K142086)	BIG-P Waismed Ltd. Reference Device (K022415)	NIO-P Waismed Ltd. (Modified Device)
Materials	Stainless steel (trocar needle & cannula) Brass 360 nickel-plated (hub) Makrolon® Rx2530 polycarbonate (Plastic parts with direct contact to skin)	Same	Same
Hub Interface	The cannula hub is a standard metal hub Luer Lock appropriate for connecting to any standard infusion system.	Same	Same
Needle length	42.0mm (1.65")	23.6mm (1.31")	38.1mm (1.5")
Needle gauge	15G	18G	18G
Sterilization	Single use, sterile	Same	Same
Sterilization method	Gamma sterilization	Same	Same

# **Conclusions**:

Based on the performance testing and comparison to the predicate and reference devices, the modified NIO-P is substantially equivalent to the NIO-A.