

AUG 13 2007

510(k) Summary

This summary of 510(k) safety and effectiveness information is being submitted in accordance with the requirements of SMDA 1990 and 21 CFR 9807.92.

The Assigned 510(k) Number is:

K070371 (see 205)

1. Applicant Device Information

510(k) Preparation Date: Jan 23, 2007

Trade/Proprietary Name: Fingertip Pulse Oximeter MD300C

Common Name: Oximeter

Classification Name: Oximeter

Device Class: II

Product Code: DQA

Regulation Number: 870.2700

Intended Use:

Fingertip Pulse Oximeter MD300C is a portable non-invasive, spot-check, oxygen saturation of arterial hemoglobin (SpO₂) and pulse rate of adult and pediatric patient at home, and hospital (including clinical use in internist/surgery, Anesthesia, intensive care and etc). Not for continuously monitoring.

2. Submitter Information

Manufacturer Name:

Beijing Choice Electronic Technology Co., Ltd.
Bailangyuan Building B 1127-1128, Fuxing Road A36
Beijing, China 100039

Contact Person of the Submission:

Ms. Diana Hong

Mr. Eric Chen

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Shanghai, China 20020

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3. Predicate Device

The Legally Marketed Contact Lens Case as predicate devices is identified as followings:

Model 9550 Onyx® II Finger Pulse Oximeter

K-number: K051107

Product Code: DQA

Intended Use: The Nonin® Onyx® II Model 9550 Finger Pulse Oximeter is a small, lightweight portable device indicated for use in measuring and displaying functional oxygen saturation of arterial hemoglobin (SpO₂) and pulse rate. It is intended for spotchecking of adult and pediatric patients on fingers (other than the thumb) between 0.3 - 1.0 inch (0.8 - 2.5 cm) thick. The index finger is the recommended site.

Manufactured by:

Nonin Medical, Inc.

13700 1 st Ave. N.

Plymouth, MN 55441-5443

4. Device Description

The applicant device of Fingertip Pulse Oximeter MD300C is a fingertip device, which can display % SpO₂, pulse rate value.

The applicant device consists of detector and emitter LED, signal amplify unit, CPU, data display unit and power unit.

The Pulse oximetry works by applying a sensor to a pulsating arteriolar vascular bed. The sensor contains a dual light source and photo detector. The one wavelength of light source is 660 nm, which is red light; the other is 940 nm, which is ultra red light. Skin, bone, tissue, and venous vessels normally absorb a constant amount of light over time. The photodetector in fingersensor collects and converts the light into electronic signal which is proportional to the light intensity. The arteriolar bed normally pulsates and absorbs variable amounts of light during systole and diastole, as blood volume increases and decreases. The ratio of light absorbed at systole and diastole is translated into an oxygen saturation measurement. This measurement is referred to as SpO₂.

The applicant device has low battery voltage alarm function and automatically power of function. The power source of the applicant device is 2 AAA alkaline or rechargeable batteries.

The applicant device is not for life-supporting or life-sustaining, not for implant. The device or transducers are not sterile and the transducer does not need sterilization and the transducer is reusable but does not need re-sterilization since it is not sterile. The device is not for prescription. The device does contain drug or biological products.

The device is electrically operated and the Electrical Safety Test report of R-006-2006 and Electromagnetic Compatibility Test report of BJ690108-1 following IEC 60601-1-2 with was conducted as the environmental test for the home use. Please see the **Attachment 2** Electrical Safety and EMC Test.

The device is software-driven and the software validation is provided in **Chapter VIII** Software Validation.

The Performance Test reports regarding with safety and effectiveness test of the safety mechanism preventing the excess current from leading to burning injury to user (**Report No. MD300C-01-001**) and Low-Voltage Alarm System (**Report No. MD MD300C-01-002**) are presented in **Attachment 3** Performance Bench Test.

The Clinical Test reports following ISO 9919:2005, Medical electrical equipment - Particular requirements for the basic safety and essential performance of pulse oximeter equipment for medical use are conducted in Beijing Friendship Hospital and Wulanchabu City Center Hospital provided in **Attachment 4** Clinical Test Reports.

All applicable standards are listed in **Chapter II** Standards.

The device is not kit.

5. Effectiveness and Safety Considerations

Effectiveness:

The Clinical Test reports following ISO 9919:2005, Medical electrical equipment - Particular requirements for the safety and essential performance of pulse oximeter

The accuracy of MD300C pulse oximeter equipment is compliance to the requirement, and the product is safe during the use. It can be used in the clinical environment. It is substantially equivalent to other pulse oximeter product with the same effectiveness and safety.

Safety Considerations:

The Performance Test reports regarding with safety and effectiveness test of the safety mechanism preventing the excess current from leading to burning injury to user (**Report No. MD300C-01-001**) and Low-Voltage Alarm System (**Report No. MD MD300C-01-002**) are presented in **Appendix 3** Performance Bench Test.

Safety mechanism preventing the excess current from leading to burning injury to user is effective. And low voltage alarm system meet the function requirement of the design input.

The test results of biocompatibility of all the skin-contacting material are presented as **Table IV-2** for the consideration of Biological Specifications. Please see **Appendix 1** Biocompatibility Reports.

The Biological Evaluation Tests are in compliance with the standards of ISO 10993, "Biological Evaluation of Medical Devices". The compatibility of the skin-contact component material in the finished product meets the requirement of Biocompatibility.

The applicant device is compliance with IEC60601-1, Medical electrical equipment - Part 1: General requirements for safety and IEC60601-1-2, Medical electrical equipment - Part 1-2: General requirements for safety -Collateral standard: Electromagnetic compatibility -. Requirements and tests

The Software Validation is in compliance with FDA Guidance to Compliance with FDA Guidance for the Content of PreMarket Submissions for Software Contained in Medical Devices.

6. Substantially Equivalence Determination

Comparison Analysis

The applicant device has same classification information, same indications and intended use, same design principle, similar product design and specifications, same performance effectiveness, performance safety as the predicate device. The only difference is working time Operating temperature, PR display range, Relative humidity, Atmosphere pressure. These differences are slight and do not effluence the effectiveness and safety of the device and don't raise new question of effectiveness and safety.

Conclusion:

The applicant device is **Substantially Equivalent (SE)** to the predicate device which is US legally market device. Therefore, the applicant device is determined as safe and effectiveness.



AUG 13 2007

Food and Drug Administration
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Rockville MD 20850

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General Manager
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Shanghai, 20020
CHINA

Re: K070371
Trade/Device Name: Fingertip Pulse Oximeter MD300C
Regulation Number: 21 CFR 870.2700
Regulation Name: Oximeter
Regulatory Class: II
Product Code: DQA
Dated: July 23, 2007
Received: July 26, 2007

Dear Ms. Hong:

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.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such 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); 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.

This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (240) 276-0120. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely yours,



Chiu Lin, Ph.D.

Director

Division of Anesthesiology, General Hospital,

Infection Control and Dental Devices

Office of Device Evaluation

Center for Devices and

Radiological Health

Enclosure

Indications for Use

510(k) Number: Pending

Device Name: Fingertip Pulse Oximeter MD300C

Indications for Use:

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Prescription Use ✓
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use _____
(21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE—CONTINUE ON ANOTHER PAGE OF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)


(Division Sign-Off) (acting B.C.)
Division of Anesthesiology, General Hospital
Infection Control, Dental Devices

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