

510(k) Summary K121697

OCT 15 2012

This summary of 510(k) safety and effectiveness information is being submitted in accordance with the requirement of SMDA and 21 CFR 807.92.

1.0 submitter's information

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Date of Application: 05/25/2012

2.0 Device name

Device name: APO-8284 Fingertip Pulse Oximeter

3.0 Classification

Production code: DQA - Oximeter
Regulation number: 870.2700
Classification: II
Panel: Cardiovascular

4.0 Predicate device information

Manufacturer: Beijing Choice Electronic Technology Co., Ltd.

Device: MD300C1 Fingertip Pulse Oximeter

510(k) number: K093757

5.0 Intended use

The APO-8284 Fingertip Pulse Oximeter is a non-invasive device intended for spot-checking of functional oxygen saturation of arterial hemoglobin (SpO₂) and pulse rate. The portable fingertip device is indicated for adult patients in home and hospital environments (including clinical use in internist/surgery, anesthesia, intensive care, etc). The APO-8284 Fingertip Pulse oximeter is not intended for continuous monitoring.

6.0 Device description

Our device APO-8284 Fingertip Pulse Oximeter is a fingertip device, which can measure the arterial SpO₂ and pulse rate value and can display the results to the user.

It is a noninvasive measurement instrument with a pair of small light-emitting diodes (LEDs) facing a photodiode through a fingertip. One LED is red, with wavelength of 660 nm, and the other is infrared, 880 nm. The MCU calculates the ratio of these two wavelengths and get the results of the SPO₂. At the same time, by examining only the varying part of the absorption spectrum, a monitor can ignore other tissues or nail, and discern only the absorption caused by arterial blood to detect the pulse rate.

More over, the APO-8284 also has the function of low battery voltage alarm and automatically power off. The power source is 2×AAA batteries.

The device is for prescription. It is neither for life-supporting nor for implanting. It does not contain any drug or biological product and it does not need to be sterile.

The intended use and the indication for use of APO-8284 Fingertip Pulse Oximeter, as described in the labeling are the same as their predicated device MD300C1 Fingertip Pulse Oximeter (K093757)

7.0 Summary comparing technological characteristics with predicate device

Technological Characteristics	Comparison result
Design principle	Identical
Appearance	Similar
Patients contact Materials	Identical
Performance	Similar
Biocompatibility	Identical
Mechanical safety	Identical
Energy source	Identical
Standards met	Identical
Electrical safety	Identical
EMC	Identical
Function	Similar

8.0 Performance summary

APO-8284 Fingertip Pulse Oximeter conforms to the following standards:

- IEC 60601-1, Medical Electrical Equipment - Part 1: General Requirements for Safety, 1988; Amendment 1, 1991-11, Amendment 2, 1995.
- EN 60601-1-2, Medical Electrical Equipment - Part 1-2: General Requirements for Safety - Collateral standard: Electromagnetic Compatibility - Requirements and Tests, 2007.
- ISO 9919:2005: Medical electrical equipment – Particular requirements for the basic safety and essential performance of pulse oximeter equipment for medical use.
- ISO 10993: Biological evaluation of medical devices Part 1: Evaluation and testing within a risk management process.
- ISO 10993: Biological evaluation of medical devices Part 5: Test for in vitro cytotoxicity.
- ISO 10993: Biological evaluation of medical devices Part 10: Test for irritation and skin sensitization.

9.0 Comparison to the predicate device and the conclusion

The applicant device APO-8284 Fingertip Pulse Oximeter is substantially equivalent to MD300C1 Fingertip Pulse Oximeter whose 510(k) number is K093757.

Similarities and differences comparison		
Characteristics	Subject device APO-8284	Predicate device (K093757)
Intended use	blood oxygen aturation (SpO ₂), and pulse rate(bpm) measurement	blood oxygen aturation(SpO ₂), and pulse rate(bpm) measurement
Design priciple		
Presentation or OTC	Presentation	Presentation
Contact material	Silica gel	Silica gel
SpO ₂ measuring range	70%-99%	70%--99%
SpO ₂ Accuracy	± 2%	80-99%: ± 2% 70-79%: ± 3%
Pulse Rate Measuring Range	30-250bpm	30-235bpm
Pulse Rate Accuracy	± 2 bpm during the pulse rate range of 30-99 bpm and 2% during the pulse rate range of 100-235 bpm	± 2 bpm during the pulse rate range of 30-99 bpm and 2% during the pulse rate range of 100-235 bpm
Operation Temperature	5°C-40°C	5°C-40°C
Power Source	2*AAA batteries	2*AAA or rechargeable batteries
Operation Humidity	<80%	15%~80%
Other function	low battery voltage alarm: automatically power off	low battery voltage alarm: automatically power off

As a result, APO-8284 is very similar with its predicate device in the intended use, the design principle, the material, the performance and the applicable standards. Only their appearance, the power source, the pulse rate range and the operation humidity range are a little bit different. However, the test in this submission provides demonstration that these small differences do not raise any new questions of safety and effectiveness to the new devices.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

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Tianjin, China 300190

OCT 15 2012

Re: K121697

Trade/Device Name: APO-8284 Fingertip Pulse Oximeter
Regulation Number: 21 CFR 870.2700
Regulation Name: Oximeter
Regulatory Class: II
Product Code: DQA
Dated: September 13, 2012
Received: September 13, 2012

Dear Mr. Yi:

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.

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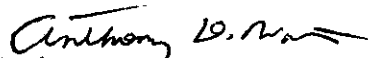
Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's 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 go to

<http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm> for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR 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 Small Manufacturers, International and Consumer Assistance 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,



Anthony D. Watson, B.S., M.S., M.B.A.

Director

Division of Anesthesiology, General Hospital,

Infection Control and Dental Devices

Office of Device Evaluation

Center for Devices and

Radiological Health

Enclosure

Statement of Indications for Use

510(k) Number: K121697

Device name: APO-8284 Fingertip Pulse Oximeter

Indications for use:

The APO-8284 Fingertip Pulse Oximeter is a non-invasive device intended for spot-checking of functional oxygen saturation of arterial hemoglobin (SpO₂) and pulse rate. The portable fingertip device is indicated for adult patients in home and hospital environments (including clinical use in internist/surgery, anesthesia, intensive care, etc). The APO-8284 Fingertip Pulse oximeter is not intended for continuous monitoring.

Prescription use AND/OR Over-The-Counter Use
Part 21 CFR 801 Subpart D) (21 CFR 807 Subpart C)

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

Concurrence of CDRH, Office of Device Evaluation (ODE)



(Division Sign-Off)
Division of Anesthesiology, General Hospital
Infection Control, Dental Devices

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