

**510(k) SUMMARY**

AUG 10 2009

K090662

**Submitted by:** Masimo Corporation  
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**Company Contact:** Marguerite Thomlinson, Manager of Regulatory Affairs

**Date Summary Prepared:** March 9, 2009

**Trade Name** Masimo SET Reusable Soft Oximetry Sensors

**Common Name** Oximeter Sensor

**Classification Name and Product Code:** Oximeter (74DQA) (870.2700)  
Cable, Transducer and Electrode (74DSA) (870.2900)

**Substantially Equivalent Devices:** Masimo LNCS Oximetry Sensors , 510(k) No. K051212

**Device Description**

The Masimo SET Reusable Soft Oximetry Sensors (DBI/P Sensors) are fully compatible reusable sensors for use with Masimo SET and Masimo SET compatible pulse oximeter monitors. The DBI/P Sensors are also fully compatible for use with Masimo Rainbow SET and Masimo Rainbow SET compatible pulse CO-oximeter monitors. Additionally, the DBI Sensors are also compatible with Nellcor and Nellcor compatible pulse oximeter monitors.

**Predicate Device**

The predicate devices used in this filing are the Masimo LNCS Oximetry Sensors (K051212).

**Intended Use**

The Masimo SET Reusable Soft Sensors are indicated for the continuous noninvasive monitoring and spotchecking of functional oxygen saturation of arterial hemoglobin (SpO<sub>2</sub>) and pulse rate (measured by an SpO<sub>2</sub> sensor) for use with adult and pediatric patients during no motion conditions, and for patients who are well or poorly perfused in hospitals, hospital-type facilities, mobile, and home environments.

## 510(k) SUMMARY

### Technology

The DBI/P Sensors are substantially equivalent in design, principles of operation, materials, and performance to predicate device LNCS Oximetry Sensors. The DBI/P Sensor performance is equivalent to those of the LNCS Oximetry Sensor.

The specifications for the DBI/P Sensors for adults (> 30 kg) and pediatrics (10-50 kg) are the following:

FEATURES	SENSOR SPECIFICATIONS with Masimo SET and Masimo Rainbow SET Technology	SENSOR SPECIFICATIONS with Nellcor and Nellcor Compatible Technology
Accuracy – SpO <sub>2</sub> During No Motion Conditions	Adults, Pediatrics: 70% - 100% ± 2% Adults, Pediatrics: 0% - 69% unspecified	Adults, Pediatrics: 70% - 100% ± 2% Adults, Pediatrics: 0% - 69% unspecified
Accuracy – SpO <sub>2</sub> Low Perfusion	Adults, Pediatrics: 70% - 100% ± 2% Adults, Pediatrics: 0% - 69% unspecified	N/A
Accuracy – Pulse Rate During No Motion Conditions	Adults, Pediatrics: 25 - 240 ± 3 bpm	Adults, Pediatrics: 25 - 240 ± 3 bpm
Accuracy – Pulse Rate Low Perfusion	Adults, Pediatrics: 25 - 240 ± 3 bpm	N/A

### Test Summary

The DBI/P Sensors comply with the voluntary standards as detailed in this submission. The following quality assurance measures were applied to the development of the DBI/P Sensors:

- Risk Analysis
- Design Reviews
- Biocompatibility Testing
- Performance Testing
- Safety Testing
- Environmental Testing
- Clinical Testing

### Conclusions

The information in this 510(k) submission demonstrates that the Masimo SET<sup>®</sup> Reusable Soft Oximetry Sensors are substantially equivalent to the predicate device, with respect to safety, effectiveness, and performance.



DEPARTMENT OF HEALTH & HUMAN SERVICES

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

Ms. Marguerite Thomlinson  
Manager of Regulatory Affairs  
Masimo Corporation  
40 Parker  
Irvine, California 92618

AUG 10 2009

Re: K090662  
Trade/Device Name: Masimo SET Reusable Soft Sensors  
Regulation Number: 21 CFR 870.2700  
Regulation Name: Oximeter  
Regulatory Class: II  
Product Code: DQA  
Dated: July 29, 2009  
Received: August 4, 2009

Dear Ms. Thomlinson:

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 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 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/cdrh/mdr/> 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 (240) 276-3150 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely yours,



Susan Runner, D.D.S., M.A.  
Acting Division 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 (if known): \_\_\_\_\_

Device Name: Masimo SET Reusable Soft Sensors

### Indications For Use:

The Masimo SET Reusable Soft Sensors are indicated for the continuous noninvasive monitoring and spotchecking of functional oxygen saturation of arterial hemoglobin (SpO<sub>2</sub>) and pulse rate (measured by an SpO<sub>2</sub> sensor) for use with adult and pediatric patients during no motion conditions, and for patients who are well or poorly perfused in hospitals, hospital-type facilities, mobile, and home environments.



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

510(k) Number:       K090662      

Prescription Use   X    
(Per 21 CFR 801.109 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_  
(Per 21 CFR 801.109 Subpart C)

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

Concurrence of CDRH, Office of Device Evaluation (ODE)