

FEB - 7 2011

### 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 807.92.

510(k) Number :     K082255    

**A. Submitter:**

Bodystat Ltd  
P O Box 50  
Douglas  
Isle of Man  
IM99 1DQ  
British Isles

Phone: +44-1624-629571  
Fax: +44-1624-611544

Contact: I J Meeuwssen

Date Prepared: January 24, 2011

**B. Device Names:**

Classification name	Body Composition Analyzer
Common/usual name	Body Composition Analyzer
Proprietary name	Bodystat QuadScan 4000 Body Composition & Fluid
Monitoring	Unit

**C. Predicate Device:**

The BODYSTAT® QuadScan 4000 Body Composition & Fluid Monitoring Unit is substantially equivalent to the QuadScan Quad Frequency Monitoring Unit & QuadScan Wellness and Hydration Software Program cleared under K002835.

**D. Device Description:**

The QuadScan 4000 Body Composition & Fluid Monitoring Unit is a light weight, handheld, battery operated device that uses bio-electrical impedance analysis (BIA) to measure the impedance of the flow of an electrical current through the body; impedance is measured at four frequencies: 5, 50, 100, and 200 kHz. The impedance of tissue is proportional to the amount of fluid in the tissue; water is low in fat tissues, thus fat tissue has a high impedance, and lean tissue is high in water, thus lean tissue has a low impedance. The subject's age, sex, height, weight, waist measurement, and hip measurement are also used to calculate various values.

In practice, a small constant current is passed between electrodes spanning the body and the voltage drop between electrodes provides a measure of impedance. Prediction equations, previously generated by correlating impedance measures against an independent estimate of TBW (total body water) and ECW (extra-cellular water), may be used subsequently to convert measured impedances to corresponding estimates of TBW and ECW. By deduction, ICW is estimated. By applying the unique Bodystat® equation, Body Fat, Lean Mass and

Dry Lean Mass can be assessed. The QuadScan 4000 contains separate body composition equations for children 6 years to 17 years, and adults 18 – 70 years.

**E. Intended Use:**

For the purposes of performing non-invasive bio-electrical impedance analysis (BIA) measurements on healthy human adults and children to determine their Body Composition status.

Such measurements include Body Mass Index (BMI), waist/hip ratio, and tissue Impedance at 5, 50, 100 and 200 kHz. These measurements are used to calculate the estimated levels of extra-cellular water, intracellular water, total body water, body fat, body lean and dry lean, and metabolic rates.

QuadScan 4000 for Windows Software Program is automatically included with the device.

**F. Comparison with the Predicate Device:**

The BODYSTAT® QuadScan 4000 Body Composition and Fluid Monitoring Unit is a hardware and software modification of the previously cleared Bodystat QuadScan device.

Based on the data and information presented here, the BODYSTAT® QuadScan 4000 Body Composition Unit is substantially equivalent to the previously cleared predicate device.



DEPARTMENT OF HEALTH & HUMAN SERVICES

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

Mr. I. J. Meeuwsen  
President  
Bodystat® Ltd.  
P.O. Box 50  
Douglas, Isle of Man, IM99 1DQ  
BRITISH ISLES

FEB - 7 2011

Re: K082255

Trade/Device Name: Bodystat QuadScan 4000 Body Composition & Fluid  
Monitoring Unit

Regulation Number: 21 CFR §870.2770

Regulation Name: Impedance plethysmograph

Regulatory Class: II

Product Code: MNW

Dated: September 27, 2010

Received: September 30, 2010

Dear Mr. Meeuwsen:

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.

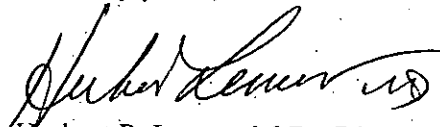
Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's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



Herbert P. Lerner, M.D., Director (Acting)  
Division of Reproductive, Gastro-Renal  
and Urological Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

**Indications for Use**510(k) Number :     K082255    Device Name: **Bodystat QuadScan 4000 Body Composition & Fluid Monitoring Unit****Indications for Use:**

For the purposes of performing non-invasive bio-electrical impedance analysis (BIA) measurements on healthy human adults and children to determine their Body Composition & Hydration status.

The measurements include Body Mass Index (BMI), waist/hip ratio, tissue impedance at 5, 50, 100, and 200 kHz. These measurements are used to calculate the estimated levels of extra-cellular water, intracellular water, total body water, body fat, body lean and dry lean, metabolic rates.

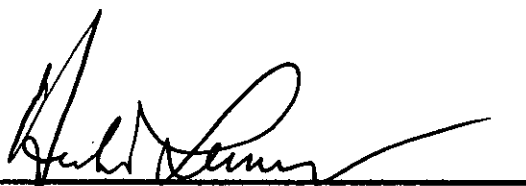
QuadScan 4000 for Windows Software Program is automatically included with the device.

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

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

---

Concurrence of CDRH, Office of Device Evaluation (ODE)



(Division Sign-Off)  
Division of Reproductive, Gastro-Renal, and  
Urological Devices  
510(k) Number     K082255