

K073582

**510(k) Summary**

**Deep Breeze, Ltd**

**VRI<sub>XV</sub> System**

**OCT 15 2008**

**Applicant's Name:**

Deep Breeze Ltd.  
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**Contact Person:**

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**US Correspondent:**

Becker & Associates Consulting, Inc.  
Attn: Jeffrey A. Baetz  
2001 Pennsylvania Ave. NW, #950  
Washington, DC 20006

**Date Prepared:**

December 20, 2007

**Trade Name:**

VRI<sub>XV</sub> System

**Classification Name:**

Electronic Stethoscope (21 CFR 870.1875)

**Classification:**

Class II; Product Code OCR

**Predicate Devices:**

The VRI<sub>XV</sub> System is substantially equivalent to the previous version of the device, the VR Lung Electrosonograph (K061495).

**Device Description:**

The modified VR Lung Electrosonograph, the VRI<sub>XV</sub> is intended for use in monitoring and recording lung sounds. The VRI<sub>XV</sub> is a non-invasive device designed to facilitate visualization and monitoring of regionally distributed vibration energy. The VRI<sub>XV</sub> is comprised of three primary components: 1) Electronic stethoscopes designed to collect lung sounds via dermal contact with the human thorax; 2) A Digital Collection Module ("DCM") for the conversion of analog data to digital data; and, 3) A mobile computer workstation to assist in processing, displaying, and/or storing recorded information.

The VRI<sub>XV</sub> represents a natural progression in the company's desire to improve bedside monitoring capabilities, and is designed to provide lung imaging capability in spontaneously breathing patients, as well as mechanically ventilated patients. In the latter, monitoring capabilities are enhanced by the synchronization of the VRI<sub>XV</sub> image and vibration energy graph, with the pressure and flow waveform sampled from a ventilator. All dynamic images can be viewed as video file or frame-by-frame. The vibration energy of the lungs can be depicted in grayscale or color. Patient recording and all associated data are stored in the VRI<sub>XV</sub> system. Current and/or previous recordings can be viewed side-by-side in order to compare patients' lung sound images during hospitalization. These recordings and associated reports can be viewed or exported for offline viewing or printed on a conventional PC computer.

The VRI<sub>XV</sub> is intended to be used by trained healthcare practitioners and has been designed to accommodate most clinic, treatment center, or hospital settings. The VRI<sub>XV</sub> is not intended to be used as a diagnostic instrument.

**Intended Use:**

The VRI<sub>XV</sub> is intended for use in monitoring and recording lung sounds.

**Performance Standards:**

No performance standards have been established for such device under Section 514 of the Federal Food, Drug, and Cosmetic Act. However, the VRI<sub>XV</sub> System complies with the voluntary standards IEC 60601-1, IEC 60601-1-2, IEC 60601-1-4, AAMI / ISO 14971-1 and AAMI ANSI ISO 10993-1:2003.

**Performance Data & Substantial Equivalence**

The VRI<sub>XV</sub> System is substantially equivalent in all aspects, e.g., technological characteristics, mode of operation, performance characteristics, intended use, etc., to the VR Lung Electrosonograph cleared under K061495.



Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

**OCT 15 2008**

Deep Breeze Limited  
C/O Mr. Jeffrey A. Baetz  
Project Manager  
Becker & Associates Consulting, Incorporated  
2001 Pennsylvania Avenue, N.W. #950  
Washington, DC 20006

Re: K073582  
Trade/Device Name: VRI<sub>XV</sub> System  
Regulation Number: 21 CFR 870.1875(b)  
Regulation Name: Electronic Stethoscope  
Regulatory Class: II  
Product Code: OCR  
Dated: September 16, 2008  
Received: September 16, 2008

Dear Mr. Baetz:

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 Center for Devices and Radiological Health's (CDRH's) Office of Compliance at (240) 276-0115. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding postmarket surveillance, please contact CDRH's Office of Surveillance and Biometric's (OSB's) Division of Postmarket Surveillance at 240-276-3474. For questions regarding the reporting of device adverse events (Medical Device Reporting (MDR)), please contact the Division of Surveillance Systems at 240-276-3464. 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,



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 STATEMENT

510(k) Number (if known): \_\_\_\_\_

Device Name: VRIxv System

Indications for Use:

The VRIxv is intended for use in monitoring and recording lung sounds.

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

510(k) Number: K073582

Prescription Use   
(Part 21 C.F.R. 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_  
(Part 21 C.F.R. 807 Subpart C)

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

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Concurrence of CDRH, Office of Device Evaluation (ODE)