4/19/99

K990972

10.0 510(k) Summary

This summary of 510(k) safety and effectiveness information is submitted in accordance with the requirements of the Safe Medical Devices Act of 1990 and 21 C.F.R. §807.92.

1. The submitter of this premarket notification is:

Egon Pfeil
Regulatory Affairs
Medical Products Group-Europe
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This summary was prepared on March 11, 1999

2. The name of this device is the Hewlett-Packard family of Viridia Patient Monitors individually known as the M1175A/76A/77A (Viridia CMS), the M1205A (Viridia 24/26), and the M3000A/M3046A (Viridia M3/4). The common name is patient monitor. Classification names are as follows:

Regulation Number	Classification Name
870.2700	Oximeter
870.2710	Ear Oximeter
870.1435	Computer, Diagnostic, Pre-Programmed, Single-Function
870.1025	Detector and Alarm, Arrythmia
870.2900	Cable, Transducer and Electrode, Patient (including connector)

3. The new combination device is substantially equivalent to previously cleared HP devices marketed pursuant to K971910, K981576 and K990125, K903523, and K923343.

4. The modification is a software based change that involves only the SpO_2 algorithm of the measurement computer processing unit of each device.

5. The new device has the same intended use as the legally marketed predicate devices. When used in the hospital environment or mobile environment for patient transport monitoring, the device is intended for measuring and displaying, recording and alarming multiple physiological parameters and waves in adult, pediatric, and neonatal patients.

6. The new combination device has the same technological characteristics as the legally marketed predicate devices.

7. Verification, validation, and testing activities were conducted to establish the performance and reliability characteristics of the new SpO_2 algorithm using neonatal and adult patient data. Testing involved system level tests, integration tests, safety testing from hazard analysis, interference testing, and hardware testing. Pass/Fail criteria were based on the specifications cleared for the predicate devices and test results showed substantial equivalence.

   Clinical performance evaluations using the new algorithm were conducted with ICU neonates to validate the measurement of oxygen saturation, and with adults, for the purpose of validating accuracy by conducting a desaturation study with co-oximeters as a reference. All tested sensor-monitor combinations passed test criteria and test results showed substantial equivalence. No adverse events occurred during the studies.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
9200 Corporate Boulevard
Rockville MD 20850

APR 19 1999

Mr. Egon Pfeil
Medical Products Group-Europe
Hewlett-Packard GmbH
Herrenberger Strasse 110-140
Boeblingen, Germany 71034

Re: K990972
Viridia Component Monitoring System M1175A/76A/77A and Viridia 24/26 M1205A Rev.K and The Viridia HP M3000A/M3056A, Rev.B Patient Monitors
Regulatory Class: III (three)
Product Code: 74 DSI
Dated: March 20, 1999
Received: March 23, 1999

Dear Mr. Pfeil:

We have reviewed your Section 510(k) notification of intent to market the device referenced above and we 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). 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 (Premarket Approval), 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 895. A substantially equivalent determination assumes compliance with the Current Good Manufacturing Practice requirements, as set forth in the Quality System Regulation (QS) for Medical Devices: General regulation (21 CFR Part 820) and that, through periodic QS inspections, the Food and Drug Administration (FDA) will verify such assumptions. Failure to comply with the GMP regulation may result in regulatory action. In addition, FDA may publish further announcements concerning your device in the Federal Register. Please note: this response to your premarket notification submission does not affect any obligation you might have under sections 531 through 542 of the Act for devices under the Electronic Product Radiation Control provisions, or other Federal laws or regulations.

This letter will allow you to begin marketing your device as described in your 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 and additionally 809.10 for in vitro diagnostic devices), please contact the Office of Compliance at (301) 594-4648. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification"(21 CFR 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers Assistance at its toll-free number (800) 638-2041 or (301) 443-6597, or at its internet address "http://www.fda.gov/cdrh/dsma/dsmamain.html".

Sincerely yours,

Thomas J. Callahan

Thomas J. Callahan, Ph.D.
Director
Division of Cardiovascular,
Respiratory, and Neurological Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

3.1 ODE Indications Statement

Indications for Use Statement

510(k) Number
(if known)

Device Name

The Hewlett-Packard Company (HP) family of Viridia patient monitors. These devices are individually known as the Viridia Component Monitoring System M1175A, M1176A, M1177A /Viridia 24/26 M1205A Rev.K, and the Viridia HP M3000A/M3046A Patient Monitor Rev.B.

Indications for Use

The Hewlett-Packard family of patient monitor products is intended for monitoring, recording, and alarming of multiple physiological parameters. The devices are indicated for use in health care facilities by health care professionals whenever there is a need for monitoring the physiological parameters of adult, neonatal, and pediatric patients.

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 Cardiovascular, Respiratory, and Neurological Devices

510(k) Number _____

Prescription Use X OR Over-The-Counter Use _____
(Per 21 CFR 801.109)