

JUL 29 1998

K982156

(2)

510(k) SUMMARY

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DATE: JUNE 16, 1998

CONTACT PERSON: Linda K. Dillon
Barbara C. Lamoureux

TRADE NAME OF DEVICE: Pasco MIC and MIC/ID Panels

COMMON NAME: Antimicrobial Susceptibility Test

CLASSIFICATION NAME: Class II Antimicrobial Susceptibility
Test Microbiology Panel #83

SUBSTANTIAL EQUIVALENCE:

In review of previous 510(k) notifications for the Pasco MIC and MIC/ID panels (most recently K980955 May 18, 1998 RE: Trovafloxacin; K974362, February 12, 1998 RE: Cefepime; K973317, November 14, 1997 RE: Cefpodoxime; K973695, November 5, 1997 RE: Meropenem; K972567, August 20, 1997 RE: Sparfloxacin; K971951, August 15, 1997 RE: Levofloxacin; and K946126, January 17, 1995 RE: Detection of Resistant pneumococci), the FDA has determined the Pasco panels to be substantially equivalent to devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments.

The term "substantial equivalence" as used in this 510(k) notification is limited to the definition of substantial equivalence as found in the Federal Food, Drug, and Cosmetic Act, as amended and as applied under 21 CFR 807, Subpart E under which a device can be marketed without pre-market approval or reclassification. A determination of substantial equivalency under this notification is not intended to have any bearing whatsoever on the resolution of patent infringement suits or any other patent matters. No statements related to, or in support of substantial equivalence herein shall be construed as an admission against interest under the US Patent Laws or their application by the courts.

DESCRIPTION OF THE DEVICE:

Varying concentrations of antimicrobial agents (usually in two-fold dilutions) are dispensed into the Pasco panels and the panels are then frozen. Panels are thawed prior to use, inoculated with the test organisms, incubated the traditional 16-24 hours and then observed for visible growth or color changes as described in the package insert.

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The lowest concentration of each antimicrobial agent with no apparent visible growth of the test organism is recorded as the minimum inhibitory concentration (MIC). Changes in pH and production of specific metabolites from growth in biochemical substrates are interpreted as described in the package insert for conventional tubed media.

INTENDED USE FOR THE PASCO MIC AND MIC/ID PANELS:

PASCO MIC AND MIC/ID PANELS are used for quantitatively measuring (with the exception of the Breakpoint/ID panel which provides qualitative measurement or category results) the susceptibility of rapidly growing aerobic and facultative anaerobic bacterial pathogens to a battery of antimicrobial agents and determining the biochemical identification of those organisms.

SUMMARY/CONCLUSION OF SUBSTANTIAL EQUIVALENCE TESTING:

Test panels containing Cefdinir at concentrations ranging from 8 to 0.03 mcg/ml were prepared in-house at Pasco using routine manufacturing procedures. Comparative testing of the Pasco test panel to a reference panel was performed at two sites using CDC challenge strains and clinical Isolates.

Test results of the 334 gram-negative strains demonstrated acceptable Essential Agreement (EA) of 97.6% upon initial testing and 98.8% upon retesting. Seven Very Major (VM) errors were observed with the following strains: one *E. aerogenes* which was resolved upon retest, three *P. rettgeri* with one of the VM errors resolved upon retest, two *P. vulgaris* and one *P. stuartii* which was an EA error upon retest. Category Agreement (CA) was 97.3% with five random minor errors noted

Further testing was conducted in a effort to determine the reason for the Very Major discrepancies which occurred with the *P. vulgaris*, *P. rettgeri* and *P. stuartii* strains at both test sites. To determine if the errors resulted from inoculum concentration differences, the inoculum for both the Pasco test method and reference panels were carefully adjusted to 5×10^5 CFU/ml, however, the differences were not resolved. Since these errors occurred at both sites, primarily with the same strains, technique and equipment related problems were ruled out. Cefdinir is not used in treatment of infections with these organisms as these species are not included in the Indications and Usage statements of the PARKE-DAVIS package insert.

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Test results of the 294 gram-positive strains demonstrated acceptable Essential Agreement (EA) of 97.7% upon initial testing and 99.4% upon retesting. Three Major (M) errors were observed: two *E. faecium* strains, with one M error resolved upon retest and one *E. faecalis* strain which resolved upon retest. One Very Major (VM) error occurred with a coagulase negative oxacillin (R) staph strain which was not resolved upon retest. Category Agreement (CA) was 95.6% with nine random minor errors noted.

Further testing of the Very Major discrepancy with the coagulase negative oxacillin (R) staph was conducted as previously described above, however, the cause of the discrepancy was not determined. Since oxacillin-resistant Staph. are resistant to all currently available β -lactam antibiotics there is no indication of clinical use of this agent for this organism based on the PARKE-DAVIS package insert and NCCLS document M100-S8. Additionally, Cefdinir is not effective clinically for *Enterococcus* spp. (Major errors listed above) and therefore should not be reported for cephalosporins (NCCLS document M100-S8).

QC endpoints from both the reference and Pasco panels through 25 days of testing at CMI and 26 days of testing at Pasco were within the recommended acceptable ranges listed in the product information and NCCLS with the exception of one test panel for *S. aureus* ATCC 29213 and one test panel for *M. morgani* ATCC 7028 both of which were performed at CMI.

Reproducibility testing of 9 organisms at each site provided 5 on-scale endpoints. Overall reproducibility data demonstrated 98.8% within the acceptable plus or minus 1 dilution.

The results of the clinical testing, reproducibility testing and QC performance testing supports Substantial Equivalence as outlined in the FDA draft document "Review Criteria For Assessment Of Antimicrobial Susceptibility Devices" (May 1991).



JUL 29 1998

Food and Drug Administration
2098 Gaither Road
Rockville MD 20850

Linda K. Dillon
Technical Manager
Pasco Laboratories, Inc.
12750 West Forty-Second Avenue
Wheat Ridge, Colorado 80033

Re: K982156
Trade Name: Pasco MIC and MIC/ID Panels/Celdinir
Regulatory Class: II
Product Code: JWY
Dated: June 16, 1998
Received: June 18, 1998

Dear Ms. Dillon:

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.

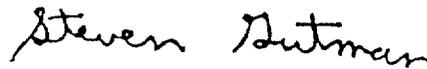
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Under the Clinical Laboratory Improvement Amendments of 1988 (CLIA-88), this device may require a CLIA complexity categorization. To determine if it does, you should contact the Centers for Disease Control and Prevention (CDC) at (770)488-7655.

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) 594-4588. 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 at (301) 443-6597 or at its internet address "<http://www.fda.gov/cdrh/dsmamain.html>"

Sincerely yours,



Steven I. Gutman, M.D., M.B.A.
Director
Division of Clinical Laboratory Devices
Office of Device Evaluation
Center for Devices and Radiological Health

Enclosure

Device Name:

PASCO MIC and MIC/ID Panels;
Inclusion of Cefdinir

Indication For Use:

Pasco MIC and MIC/ID panels are used for quantitatively measuring (with the exception of the Breakpoint/ID panel which provides qualitative measurement of category results) the susceptibility of rapidly growing aerobic and facultative anaerobic bacterial pathogens to a battery of antimicrobial agents and determining the biochemical identification of those organisms.

This 510(k) notification is for the addition of Cefdinir to Pasco panels at concentrations of 0.03 to 8 mcg/ml for use in determining the susceptibility of methicillin susceptible strains of *S. aureus*. Clinical testing of *Streptococci spp.* including *S. pneumoniae* with Cefdinir has not been performed with the Pasco system.

Woody Dubois

(Division Sign-Off)

Division of Clinical Laboratory Devices

510(k) Number K982156

Prescription Use X
(Per 21 CFR 801.109)

OR

Over-The Counter Use _____

(Optional Format 1-2-96)