

JAN 10 2005

## 510(k) Summary

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**Introduction** According to the requirements of 21 CFR 807.92, the following information provides sufficient detail to understand the basis for a determination of substantial equivalence.

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**1) Submitter name, address, contact** Roche Diagnostics  
9115 Hague Rd.  
Indianapolis, IN 46250  
(317) 521-7688

Contact Person: Dimitris Demirtzoglou

Date Prepared: November 29, 2004

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**2) Device name** Proprietary name: ONLINE DAT Phencyclidine Plus  
  
Common name: Phencyclidine test system  
  
Classification name: Enzyme immunoassay, Phencyclidine

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**3) Predicate device** We claim substantial equivalence to the currently marketed Abuscreen OnLine Phencyclidine assay (K983704).

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## 510(k) Summary, Continued

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### 4) Device Description

The Roche ONLINE DAT Phencyclidine Plus reagent is an in vitro diagnostic test for the qualitative and semi-quantitative detection of phencyclidine in human urine on automated clinical chemistry analyzers at a cutoff of 25 ng/ml. Semi-quantitative test results may be obtained that permit laboratories to assess assay performance as part of a quality control program.

### Principal of procedure

The ONLINE DAT Phencyclidine Plus assay is based on the kinetic interaction of microparticles in a solution (KIMS technology). Assay measurement is based on measurable changes in light transmission related to the interaction of microparticles in a solution and the sample drug of interest, if present. Phencyclidine drug derivative is conjugated to microparticles in solution, and phencyclidine monoclonal antibody (mouse) is solubilized in buffer. In the absence of sample drug, free antibody binds to drug-microparticle conjugates causing the formation of particle aggregates. As the aggregation reaction proceeds in the absence of sample drug, the absorbance increases.

When a urine sample contains the drug in question, this drug competes with the particle-bound drug derivative for free antibody. Antibody bound to sample drug is no longer available to promote particle aggregation, and subsequent particle lattice formation is inhibited. The presence of sample drug diminishes the increasing absorbance in proportion to the concentration of drug in the sample. Sample drug content is determined relative to the value obtained for a known cutoff concentration of drug.

#### *Negative Sample*

drug-conjugated microparticles + free antibody = particle aggregates  
(↑ absorbance)

#### *Positive Sample*

sample drug + drug-conjugated microparticle = particle aggregation inhibited  
drug-conjugated microparticles + free antibody = particle aggregates

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## 510(k) Summary, Continued

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### 5.) Intended Use

The Phencyclidine Plus is an in vitro diagnostic test for the qualitative and semi-quantitative detection of phencyclidine and its metabolites in human urine on automated clinical chemistry analyzers at a cutoff of 25 ng/ml. Semi-quantitative test results may be obtained that permit laboratories to assess assay performance as part of a quality control program.

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### 6.) Comparison to the Predicate Device

The Roche ONLINE DAT Phencyclidine Plus is substantially equivalent to other products in commercial distribution intended for similar use. Most notably, it is substantially equivalent to the currently marketed Roche Abuscreen OnLine Phencyclidine (K983704).

Both the new and predicate device assays are based on the kinetic interaction of microparticles in a solution (KIMS technology). Differences between this application and the predicate cleared assay include:

- a change in the accelerant / activator contained in the diluent solution used to make the antibody working solution (R1 reagent), and
  - use of new (previously cleared) calibrators and unassayed controls.
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DEPARTMENT OF HEALTH & HUMAN SERVICES

Food and Drug Administration  
2098 Gaither Road  
Rockville MD 20850

JAN 10 2005

Dimitris Demirtzoglou  
Regulatory Affairs Consultant  
Roche Diagnostics  
9115 Hague Road, P.O. Box 50457  
Indianapolis, IN 46250-0457

Re: k043305  
Trade/Device Name: ONLINE DAT Phencyclidine Plus  
Regulation Number: 21 CFR 862.3100  
Regulation Name: Amphetamine Test Systeme  
Regulatory Class: Class II  
Product Code: LCM  
Dated: November 20, 2004  
Received: November 30, 2004

Dear Mr. Demirtzoglou:

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 Title 21, Code of Federal Regulations (CFR), Parts 800 to 895. In addition, FDA may publish further announcements concerning your device in the Federal Register.

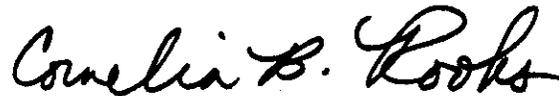
Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Parts 801 and 809); and good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820).

Page 2 –

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 information about the application of labeling requirements to your device, or questions on the promotion and advertising of your device, please contact the Office of *In Vitro* Diagnostic Device Evaluation and Safety at (240)276-0484. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). 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) 443-6597 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely yours,

A handwritten signature in black ink that reads "Cornelia B. Rooks". The signature is written in a cursive style with a large, prominent initial "C".

Cornelia B. Rooks, MA  
Acting Director  
Division of Chemistry and Toxicology  
Office of *In Vitro* Diagnostic Device  
Evaluation and Safety  
Center for Devices and  
Radiological Health

Enclosure

# Indications for Use

510(k) Number: **K043305**

Device Name: ONLINE DAT Phencyclidine Plus

## Indications For Use:

The Phencyclidine Plus is an in vitro diagnostic test for the qualitative and semi-quantitative detection of phencyclidine and its metabolites in human urine on automated clinical chemistry analyzers at a cutoff of 25 ng/ml. Semi-quantitative test results may be obtained that permit laboratories to assess assay performance as part of a quality control program.

Phencyclidine Plus provides only a preliminary analytical test result. A more specific alternate chemical method must be used in order to obtain a confirmed analytical result. Gas chromatography/mass spectrometry (GS/MS) is the preferred confirmatory method. Clinical consideration and professional judgment should be applied to any drug of abuse test result, particularly when preliminary positive results are used.

Prescription Use X  
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_  
(21 CFR 807 Subpart C)

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

Concurrence of CDRH, Office of In Vitro Diagnostic Devices (OIVD)

  
Division Sign-Off

Office of In Vitro Diagnostic  
Device Evaluation and Safety

510(k) K043305

Page 1 of 1