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**9. 510(K) SUMMARY OF SAFETY AND EFFECTIVENESS**

This summary of safety and effectiveness information is being submitted in accordance with the requirements of The Safety Medical Devices Act of 1990 (SMDA 1990) and 21 CFR Part 807.92.

Assigned 510(k) Number: K042629

Date of Summary Preparation: September 21, 2004

Manufacturer: Sweden Diagnostics (Germany) GmbH  
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Device Name: Varelisa® Sm Antibodies

Common Name: Antinuclear antibody  
immunological test system

**Classification**

<u>Product Name</u>	<u>Product Code</u>	<u>Class</u>	<u>CFR</u>
Varelisa® Sm Antibodies	LKP	II	866.5100

**Substantial Equivalence to**

Varelisa® Sm Antibodies (510(k) number: K000312)

### **Intended Use Statement of the New Device**

#### Intended use/Indication for use

The Varelisa Sm Antibodies EIA kit is designed for the semiquantitative and qualitative determination of SmD antibodies in serum or plasma to aid in the diagnosis of systemic lupus erythematosus (SLE).

#### Special condition for use statement

The device is for prescription use only.

#### Special instrument requirements

A microplate reader capable of measuring OD at 450 nm and 620 nm is required.

### **General Description of the New Device**

The new device is an enzyme-linked immunosorbent assay (ELISA) using microtiter plates as the solid phase. The plate wells are coated with a synthetic SmD peptide as antigen, which allow anti-SmD antibodies to react with the immobilized antigen (sample). The conjugate is rabbit anti-human IgG horseradish peroxidase (HRP), which uses 3, 3',5, 5' tetramethylbenzidine dihydrochloride (TMB) as substrate. The kit contains a set of six calibrators, positive and negative controls. The kit also contains sample diluent, wash buffer concentrate and stop solution.

### **Test Principle of the New Device**

The new device is an indirect noncompetitive enzyme immunoassay for the semiquantitative and qualitative determination of SmD antibodies in human serum or plasma. The wells of a microplate are coated with a synthetic SmD peptide. Antibodies specific for SmD present in the patient sample bind to the antigen.

In a second step the enzyme labeled second antibody (conjugate) binds to the antigen-antibody complex which leads to the formation of an enzyme labeled conjugate-antibody-antigen complex. The enzyme labeled antigen-antibody complex converts the added substrate to form a colored solution.

The rate of color formation from the chromogen is a function of the amount of conjugate complexed with the bound antibody and thus is proportional to the initial concentration of the respective antibodies in the patient sample.

### **Device Comparison**

The new device is developed as successor of the predicate device. Both assays share the same assay principle and indications for use. They are indirect noncompetitive enzyme immunoassays for the semiquantitative and qualitative determination of IgG antibodies against Sm in serum and plasma. Both assays recommend the same sample dilutions and use identical reagents (including the conjugate). The evaluation of the assays is identical. In accordance to the relevant scientific literature both assays state in the Intended Use, that the measuring of antibodies against Sm provides aid in the diagnosis of systemic lupus erythematosus (SLE).

**Varelisa® Sm Antibodies – New Device**  
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The new device is based on a synthetic peptide of the human SmD protein while the predicate device contains a native Sm protein isolated from calf thymus. Minor differences between the two devices pertain to the packaging size of the reagents and the leaving out of the prewashing step of the antigen strips.

**Laboratory equivalence**

The comparability of predicate device and new device is supported by a data set including

- results obtained within a comparison study analyzing positive, equivocal and negative sera.
- results obtained for clinically defined sera and for international reference sera.
- results obtained for samples from apparently healthy subjects (normal population).

In summary, all available data support that the new device is substantially equivalent to the predicate device and that the new device performs according to state-of-the-art expectations.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
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Re: k042629

Trade/Device Name: Varelisa® Sm Antibodies  
Regulation Number: 21 CFR 866.5100  
Regulation Name: Antinuclear Antibodies Immunological Test Systems  
Regulatory Class: Class II  
Product Code: LKP  
Dated: September 21, 2004  
Received: September 27, 2004

Dear Dr. Klugbauer:

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.

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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 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 Office of Compliance at (240) 276-3084. 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/dsma/dsmamain.html>

Sincerely yours,



Robert L. Becker, Jr., M.D., Ph.D.

Director

Division of Immunology and Hematology Devices

Office of In Vitro Diagnostic Device Evaluation and Safety

Center for Devices and Radiological Health

Enclosure

