

K973448

SEP 17 1998

BECKMAN**SUMMARY OF SAFETY AND EFFECTIVENESS INFORMATION**

This summary of 510(k) safety and effectiveness is being submitted in accordance with the requirements of SMDA 1990.

1. General Information

Device Classification Name: ELISA, *Toxoplasma gondii*
 Device Trade Name: ACCESS® Toxo IgM Reagents
 Applicant's Name and Address: Beckman Instruments, Inc.
 1000 Lake Hazeltine Drive
 Chaska, MN 55318

2. Predicate Device

Platelia® Toxo IgM
 Sanofi Diagnostics Pasteur, Inc.
 France

3. Device Description

The ACCESS® Toxo IgM assay is a paramagnetic-particle chemiluminescent immunoassay for the **qualitative** detection of anti-*Toxoplasma* IgM in adult human serum, using the ACCESS® Immunoassay System. The ACCESS® Toxo IgM assay is **presumptive for the diagnosis of acute, recent, or reactivated *Toxoplasma gondii* infections in males and pregnant or non-pregnant females.** It is recommended this assay be performed in conjunction with an anti-*Toxoplasma gondii* IgG antibody assay.

4. Summary of Studies

In clinical studies, the ACCESS® Toxo IgM assay was compared to Platelia® Toxo IgM on 822 patient serum samples. The overall sensitivity and specificity compared to Platelia® were 96% and 99.7%, respectively. After discrepancy analysis, the resolved sensitivity and resolved specificity remained 96% and 99.7%, respectively. In a prospective population with a prevalence of 1.25% (5/400), specificity was 99.2% relative to a consensus result.

The ACCESS® Toxo IgM assay demonstrates intra-assay precision CV's of <5% and total imprecision CV's of <10%.

5. Conclusion

The Beckman Instruments ACCESS® Toxo IgM assay is substantially equivalent to the Platelia® Toxo IgM assay currently in commercial distribution for the detection of anti-*Toxoplasma* IgM in adult human serum samples.

02/20/98

Beckman Instruments, Inc.

PRODUCT INFORMATION

Cat. No. 34460: 100 determinations, 60 tests/pack

Provided ready to use. Store upright at +2-10 °C. Refrigerate packs to +2-10 °C before loading or storing in the instrument. Stable until the expiration date stated on the label when stored at +2-10°C. After initial use, pack is stable for 28 days. Signs of possible deterioration are a broken elastomeric layer on the pack or a cloudy appearance that may indicate microbial contamination.

Access® TOXO IgM Reagent Pack: 2 packs R1

- R1a: Paramagnetic particles coated with a polyclonal anti-human IgM antibody (goat) suspended in TRIS buffered saline, with surfactant, bovine serum albumin (BSA), 0.1% sodium azide, and 0.1% ProClin™ 300.
- R1b: TRIS buffered saline with surfactant, BSA, 0.1% sodium azide, and 0.1% ProClin™ 300.
- R1c: *T. gondii* (strain RH) solubilized membrane antigen - alkaline phosphatase (bovine) conjugate in TRIS buffered saline with surfactant, BSA, 0.1% sodium azide, and 0.1% ProClin™ 300.

WARNINGS AND PRECAUTIONS

1. For in vitro diagnostic use.
2. Patient samples and blood-derived products may be routinely processed with minimum risk in the procedure described. However, because no test method can offer complete assurance that laboratory specimens do not contain HIV, hepatitis B virus, or other infectious agents, handle these products as potentially infectious, regardless of their origin, treatment, or prior certification. Follow universal laboratory precautions in storing, handling, and disposing of these materials and their containers (11).
3. Reagents containing animal sourced biologicals may be routinely processed with minimum risk. However, handle these products as potentially biohazardous according to universal precautions and good clinical laboratory practices.
4. The *Toxoplasma gondii* antigen labeled with the alkaline phosphatase has been treated by ultrasound. However, handle and dispose of the reagent packs as potentially infectious material.
5. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. On disposal of liquids, flush with a large volume of water to prevent azide build-up (12).
6. ProClin™ 300 is a potential skin sensitizer. Avoid spilling or splashing this reagent on skin or clothing. In case of contact with the reagent, thoroughly flush with water.

SPECIMEN COLLECTION AND PREPARATION

1. Serum is the recommended sample. For the evaluation of immune status, collect a single serum sample. For the evaluation of seroconversion due to recent infection (the conversion of an individual patient's serum from non-reactive to reactive), collect 2 serum samples. Collect the 2nd serum sample 10-20 days after the 1st and test both sera within the same run.
2. The National Committee for Clinical Laboratory Standards (NCCLS) of the United States of America provides the following recommendations for handling, processing, and storing blood samples (13,14).
 - Collect all blood samples observing routine precautions for venipuncture.
 - Allow serum samples to clot adequately before centrifugation.
 - Keep tubes stoppered at all times.
 - Within two hours after centrifugation, transfer at least 500 µl of cell-free serum to a tightly stoppered storage tube.
 - Store samples at room temperature for no longer than 8 hours.
 - If the assay will not be completed within 8 hours, refrigerate the sample at +2-8°C.
 - If the assay will not be completed within 48 hours, or for shipment of samples, freeze at -20°C.

The following table supplies general guidelines for the interpretation of *Toxoplasma gondii* serology results.

Anti-T. gondii IgG result	Anti-T. gondii IgM result	Report/Interpretation for Adult Serum Samples
Non reactive	Non reactive	No serological evidence of infection with <i>Toxoplasma gondii</i> .
Non reactive	Equivocal	Possible early acute infection with no evidence of previous infection with <i>Toxoplasma gondii</i> . Obtain a new specimen in 10-20 days for determination of IgM and IgG antibodies to <i>Toxoplasma gondii</i> . If results repeat, infection unlikely.
Non reactive	Reactive	Possible acute infection. Obtain a new specimen in 10-20 days for both IgG and IgM repeat testing. If results repeat, send for confirmatory testing.
Equivocal	Non reactive	Indeterminate. Obtain a new specimen in 10-20 days for both IgG and IgM repeat testing.
Equivocal	Equivocal	Indeterminate. Obtain a new specimen in 10-20 days for both IgG and IgM repeat testing.
Equivocal	Reactive	Possible acute infection. Obtain a new specimen in 10-20 days for both IgG and IgM repeat testing. If results repeat, send for confirmatory testing.
Reactive	Non reactive	Presumptive for previous <i>Toxoplasma gondii</i> infection of greater than 12 months.
Reactive	Equivocal	Presumptive for previous <i>Toxoplasma gondii</i> infection. Obtain a new specimen in 10-20 days for both IgG and IgM repeat testing. If results repeat, send for confirmatory testing.
Reactive	Reactive	Presumptive for previous <i>Toxoplasma gondii</i> infection within the last 12 months. Obtain a new specimen in 10-20 days for both IgG and IgM repeat testing. If results repeat, send for confirmatory testing.
NOTE:		
<ol style="list-style-type: none"> 1. The predictive value of a positive test decreases when prevalence decreases. Interpretation of positive results in a low risk patient population should be made with caution. 2. Samples testing Equivocal or Reactive for anti-T. gondii IgM should be sent to a reference laboratory with experience in the diagnosis of toxoplasmosis for confirmatory testing. 3. Toxo IgM test results should be used in conjunction with Toxo IgG results and information available from the patient clinical evaluation. 		

LIMITATIONS OF THE PROCEDURE

1. Toxo IgM test results should be used in conjunction with Toxo IgG results and information available from the patient clinical evaluation.
2. The presence of anti-T.gondii IgM does not always indicate a recent infection, because IgM can persist for many months, or even for several years after infection. It is recognized that an IgM response may occur in secondary and reactivated infections.
3. The magnitude of the measured result, above the cutoff, is not indicative of the total amount of antibody present.
4. Assay performance has not been established in newborns, in cord blood, or in matrices other than serum.
5. If a collection is made too early at the beginning of a primary infection, specific antibodies of IgM class may be absent. To confirm a primary infection, a second collection must be performed 10-20 days later and tested concurrently with the first specimen to look for seroconversion.

TOXO IgM CALIBRATORS

34465

The Access® TOXO IgM Calibrators are intended for use with the Access® TOXO IgM assay for the qualitative detection of anti-Toxoplasma IgM in adult human serum, using the Access® Immunoassay System.

PRODUCT INFORMATION

Cat. No. 34485

Provided ready to use. Mix contents by gently inverting before use. Avoid bubble formation. Calibrators are stable until the expiration date stated on the vial labels when stored at +2–10°C. Quality Control values out of the defined ranges are a sign of possible deterioration of this product.

- Access® TOXO IgM Calibrators: 1.0 ml/vial
 - S0: Non-reactive human serum (0 AU/ml) for anti-Toxoplasma gondii IgM containing 0.1 % sodium azide.
 - S1, S2, S3: Reactive human sera with approximately 140, 400 and 800 AU/ml anti-Toxoplasma gondii IgM and 0.1 % sodium azide. Refer to vial labels for exact concentrations.
- Calibration Card: 1

WARNINGS AND PRECAUTIONS

1. For in vitro diagnostic use.
2. Human source material used in the preparation of this product has been tested and found non-reactive for hepatitis B surface antigen (HBsAg), antibodies to human Immunodeficiency virus (HIV-1 and HIV-2), and antibodies to hepatitis C virus (HCV). Because no known test method can offer complete assurance that these or other infectious agents are absent, handle these reagents and all patient samples as potentially infectious, regardless of their origin, treatment, or prior certification. Follow universal precautions in storing, handling, and disposing of these materials and their containers (11).
3. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. On disposal of liquids, flush with a large volume of water to prevent azide build-up (12).

LIMITATIONS

1. Use of these Calibrators has not been established with assays other than the Access® Toxo IgM Assay.

PROCEDURE

One calibration for the Access® Toxo IgM assay requires approximately 150 µl per sample cup (=4 drops) of each of the 4 calibrators. The system will run two replicates of each calibrator. For calibration procedures, refer to the Operator's Guide of the Access® Immunoassay System.

DETAILS OF CALIBRATION

The Access® Toxo IgM Calibrators are provided at four levels: zero, and approximately 140, 400 and 800 AU/ml prepared from human sera non-reactive and reactive for anti-Toxoplasma gondii IgM. Assay calibration curve is valid for 28 days.

The Access®-QC Toxo IgM controls are intended for the use in clinical laboratories as quality control materials to monitor precision and system performance of the Access® Toxo IgM assay.

SUMMARY AND EXPLANATION

The Access®-QC Toxo IgM controls are intended for use as quality control sera in the clinical laboratory to monitor precision and system performance of the Access® Toxo IgM assay. Quality control materials are used to ascertain the acceptability or unacceptability of patient data and are an integral part of good laboratory practices (16, 17, 20, 22). One non-reactive and one low level reactive control are provided to allow performance monitoring in the most relevant areas of the assay range.

PRODUCT INFORMATION

Cat. No. 34469

Provided ready to use. Mix contents by gently inverting before use. Avoid bubble formation. Stable until the expiration date stated on the vial label when stored at +2–10°C. Open vial stability is 30 days when properly handled and stored.

- **Access®-QC Toxo IgM:** 2.5 ml/vial
 - QC1:** Human serum with 0.1% sodium azide, non-reactive for anti-Toxoplasma IgM.
 - QC2:** Human serum with 0.1% sodium azide, reactive for anti-Toxoplasma IgM.
- **QC Data Card:** 1

WARNING AND PRECAUTIONS

1. For *in vitro* diagnostic use.
2. Human source material used in the preparation of this product has been tested and found non-reactive for hepatitis B surface antigen (HBsAg), antibodies to human immunodeficiency virus (HIV-1 and HIV-2), and antibodies to hepatitis C virus (HCV). Because no known test method can offer complete assurance that these or other infectious agents are absent, handle these reagents and all patient samples as potentially infectious, regardless of their origin, treatment, or prior certification. Follow universal precautions in storing, handling, and disposing of these materials and their containers(11).
3. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. On disposal of liquids, flush with a large volume of water to prevent azide build-up (12).

LIMITATIONS

1. Use of these Controls has not been established with assays other than the Access® Toxo IgM Assay.
2. If there is evidence of microbial contamination or excessive turbidity in a control, discard the vial.

PROCEDURE

The Access®-QC Toxo IgM controls should be treated the same way as patient specimens. To process a single determination of the Access®-QC Toxo IgM Controls, a minimum of 150 µl per sample cup (≈4 drops) is required for each control. Refer to the Access® Immunoassay System Operator's Guide and Reference Manual for information on configuring controls, QC sample test request, and reviewing control data.

QUALITY CONTROL

Controls must be run within the 24 hour period prior to running patient samples. Include any commercially available controls and/or additional controls obtained from other sources for the laboratory's quality control program. Assay controls should contain levels of analyte at or near the decision cutoff points and be used in accordance with the appropriate accrediting organization requirements



SEP 17 1998

Food and Drug Administration
2098 Gaither Road
Rockville MD 20850

Michele Burtness
Regulatory Specialist
Beckman Instrument
Immunodiagnosics Development Center
1000 Lake Hazeltine Drive
Chaska, Minnesota 55318-1084

Re: K973448
Trade Name: Access Toxoplasma IgM Reagents on the
Access Immunoassay Analyzer
Regulatory Class: II
Product Code: LGD
Dated: July 23, 1998
Received: July 24, 1998

Dear Ms. Burtness:

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.

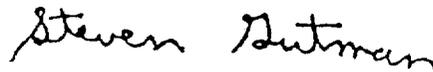
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Under the Clinical Laboratory Improvement Amendments of 1988 (CLIA-88), this device may require a CLIA complexity categorization. To determine if it does, you should contact the Centers for Disease Control and Prevention (CDC) at (770)488-7655.

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

INDICATIONS FOR USE STATEMENT

510(k) Number (if known): K973448

Device Name:

ACCESS® Toxo IgM Reagents on the ACCESS® Immunoassay Analyzer

Indications For Use:

The Access® Toxo IgM assay is a paramagnetic-particle chemiluminescent immunoassay for the **qualitative** detection of anti-Toxoplasma IgM in adult human serum, using the Access® Immunoassay System. The Access® Toxo IgM assay is presumptive for the diagnosis of acute, recent, or reactivated *Toxoplasma gondii* infections in **males and pregnant or non-pregnant females**. It is recommended this assay be performed in conjunction with an anti-*Toxoplasma gondii* IgG antibody assay.

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

Concurrence of CDRH, Office of Device Evaluation (ODE)

Woody DeChoi
(Division Sign-Off)

Division of Clinical Laboratory Devices

510(k) Number K973448

02/20/98

PRESCRIPTION USE X