ARCHITECT SYSTEM

en

Toxo IgM

REF 6C20

48-1856/R1

B6C200

Toxo IgM

Customer Service
For additional product information, please contact your local customer service organization.

This package insert must be read carefully prior to use. Package insert instructions must be followed. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this package insert.

Key to symbols used

REF	List Number	CAL 1	Calibrator 1
IVD	*In Vitro* Diagnostic Medical Device	ASSAY CD-ROM	Assay CD-ROM
LOT	Lot Number	CONTROL NO.	Control Number
	Expiration Date	REAGENT LOT	Reagent Lot
2°C 8°C	Store at 2-8°C	REACTION VESSELS	Reaction Vessels
	Caution, consult accompanying documents	SAMPLE CUPS	Sample Cups
		SEPTUM	Septum
SN	Serial Number	REPLACEMENT CAPS	Replacement Caps
	Manufacturer	CONTROL –	Negative Control
		CONTROL +	Positive Control

See **REAGENTS** section for a full explanation of symbols used in reagent component naming.

ABBOTT
Diagnostics Division

NAME

ARCHITECT Toxo IgM

INTENDED USE

The ARCHITECT Toxo IgM assay is a chemiluminescent microparticle immunoassay (CMIA) for the qualitative detection of IgM antibodies to *Toxoplasma gondii* in human serum and plasma.

SUMMARY AND EXPLANATION OF TEST

Toxoplasma gondii is an obligate intracellular protozoan parasite that infects most species of warm-blooded animals, including humans[1]. Toxoplasmosis is primarily acquired by ingestion of undercooked, infected meat; via oocysts from fecally contaminated hands, food and water; and maternally through transplacental transmission[2]. In addition, transmission associated with organ transplantation and during blood transfusion has been reported, although the risk of transmission through blood transfusion is extremely low[3].

Acquired infection with *Toxoplasma gondii* in healthy individuals is commonly asymptomatic, however 10-20% of patients with acute infection may develop lymphadenopathy[4].

Severe infections can occur in AIDS patients and adults immunocompromised by cancer chemotherapy or transplant recipients receiving immunosuppressive treatment. These infections can be fatal. Toxoplasmic encephalitis is the most common presentation and is the most frequent cause of focal central nervous system lesions in AIDS patients[5].

Primary infection during pregnancy can result in transplacental transmission of the parasite resulting in congenital infection. The risk of congenital infection is lowest (10-25%) if acute maternal infection occurs during the first trimester and highest (60-90%) if it occurs during the third trimester[2]. Severity of congenital infection is greatest when maternal infection is acquired early during pregnancy. Common outcomes of congenital toxoplasmosis includes chorioretinitis, intracranial calcifications, and hydrocephalus. The majority of infants infected later in pregnancy are asymptomatic at birth, with sequelae occurring later in life.

Early treatment after prenatal diagnosis of *Toxoplasma gondii* infection has been shown to reduce the frequency and severity of congenital toxoplasmosis[6]. Serological tests can be used to identify seronegative women, who then should be monitored during pregnancy.

The presence of IgG antibodies to *Toxoplasma gondii* indicates that infection has occurred but does not distinguish between recent and past infection. IgM antibodies are detected in individuals with a recently acquired infection, but antibodies may persist for up to 18 months post-infection[2]. To differentiate between a recently acquired and a past infection, IgM and IgG positive specimens should be tested for IgG avidity. A high avidity index for IgG antibodies is a strong indication that an infection took place more than 4 months ago. Low avidity results cannot be used to diagnose an acute toxoplasmosis.

Toxo IgG	Toxo IgM	Toxo IgG Avidity	May indicate…/ Testing recommendation
nonreactive	nonreactive	N/A	no infection
nonreactive	reactive	N/A	obtain new sample 2-3 weeks after initial sample and test for Toxo IgG and Toxo IgM
reactive	nonreactive	high avidity	past infection. Strong indication that an infection took place more than 4 months ago
reactive	reactive	low avidity	obtain new sample 3 weeks after initial sample and test for Toxo IgG and Toxo IgM
reactive	reactive	high avidity	past infection. Strong indication that an infection took place more than 4 months ago

BIOLOGICAL PRINCIPLES OF THE PROCEDURE

The ARCHITECT Toxo IgM assay is a two-step immunoassay for the qualitative detection of IgM antibodies to *Toxoplasma gondii* in human serum and plasma using CMIA technology with flexible assay protocols, referred to as Chemiflex.

In the first step, pre-diluted sample and anti-human IgM mouse monoclonal antibody coated paramagnetic microparticles are combined. Together with IgM antibodies of other specificities, anti-Toxo specific IgM present in the sample is bound by the anti-human IgM mouse monoclonal antibody coated microparticles, forming an antibody-antibody complex. After washing, a conjugate complex consisting of an acridinium-labeled anti-Toxo p30 antigen mouse monoclonal F(ab')2 fragment and native *Toxoplasma gondii* lysate, containing the p30 antigen, is added to create a reaction mixture in the second step. This conjugate complex is bound by anti-Toxo specific IgM that has been captured by the anti-human IgM mouse monoclonal antibody coated microparticles in the first step, forming an antibody-antibody-conjugate complex. Following another wash cycle, pre-trigger and trigger solutions are added to the reaction mixture.

The resulting chemiluminescent reaction is measured as relative light units (RLUs). A direct relationship exists between the amount of anti-Toxo IgM in the sample and the RLUs detected by the ARCHITECT *i* System optics. The presence or absence of anti-Toxo IgM in the sample is determined by comparing the chemiluminescent signal in the reaction to the cutoff signal determined from an active calibration curve. If the chemiluminescent signal in the specimen is greater than or equal to the cutoff signal, the sample is considered reactive for anti-Toxo IgM.

For additional information on system and assay technology refer to the ARCHITECT System Operations Manual, Section 3.

REAGENTS

Reagent Kit, 100 Tests/500 Tests

NOTE: Some kit sizes are not available in all countries or for use on all ARCHITECT *i* Systems. Please contact you local distributor.

ARCHITECT Toxo IgM Reagent Kit (6C20)

- **MICROPARTICLES** 1 Bottle (6.6 mL per 100-test bottle/27.0 mL per 500-test bottle) anti-human IgM (mouse, monoclonal) antibody coated microparticles in TRIS buffer with protein stabilizers and detergent. Minimum concentration: 0.08% solids. Preservatives: antimicrobial agents.
- **CONJUGATE** 1 Bottle (5.9 mL per 100-test bottle/26.3 mL per 500-test bottle) conjugate complex consisting of acridinium-labeled anti-Toxoplasma p30 antigen (mouse, monoclonal) antibody and native *Toxoplasma gondii* lysate in phosphate buffer with protein stabilizers and detergent. Minimum concentration: 25 µg/mL. Preservative: sodium azide.

Other Reagents

ARCHITECT *i* Pre-Trigger Solution

- **PRE-TRIGGER SOLUTION** Pre-Trigger Solution containing 1.32% (w/v) hydrogen peroxide.

ARCHITECT *i* Trigger Solution

- **TRIGGER SOLUTION** Trigger Solution containing 0.35 N sodium hydroxide.

ARCHITECT *i* Wash Buffer

- **WASH BUFFER** Wash Buffer containing phosphate buffered saline solution. Preservatives: antimicrobial agents.

WARNINGS AND PRECAUTIONS

- **IVD**

Safety Precautions

- **CAUTION**: This product contains human-sourced infectious and/or potentially infectious components. Refer to the **REAGENTS** section of this package insert. No known test method can offer complete assurance that products derived from human sources or inactivated microorganisms will not transmit infection. Therefore, it is recommended that all human-sourced materials be considered potentially infectious and handled with appropriate biosafety practices.

- For product not classified as dangerous per European Directive 1999/45/EC as amended - Safety data sheet available for professional user on request.
- For information on the safe disposal of sodium azide and a detailed discussion of safety precautions during system operation, refer to the ARCHITECT System Operations Manual, Section 8.

Handling Precautions

- Do not use reagent kits beyond the expiration date.
- **Do not pool reagents within a kit or between reagent kits.**
- Before loading the ARCHITECT Toxo IgM Reagent Kit on the system for the first time, the microparticle bottle requires mixing to resuspend microparticles that have settled during shipment. For microparticle mixing instructions, refer to the **PROCEDURE, Assay Procedure** section of this package insert.
- **Septums MUST be used to prevent reagent evaporation and contamination and to ensure reagent integrity. Reliability of assay results cannot be guaranteed if septums are not used according to the instructions in this package insert.**
- To avoid contamination, wear clean gloves when placing a septum on an uncapped reagent bottle.
  - Once a septum has been placed on the reagent bottle, **do not invert the bottle** as this will result in reagent leakage and may compromise assay results.
  - Over time, residual liquids may dry on the septum surface. These are typically dried salts, which have no effect on assay efficacy.
- For a detailed discussion of handling precautions during system operation, refer to the ARCHITECT System Operations Manual, Section 7.

Storage Instructions

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The ARCHITECT Toxo IgM Reagent Kit must be stored at 2-8°C in an upright position and may be used immediately after removal from 2-8°C storage.
- When stored and handled as directed, reagents are stable until the expiration date.
- The ARCHITECT Toxo IgM Reagent Kit may be stored on board the ARCHITECT *i* System for a maximum of 30 days. After 30 days, the reagent kit must be discarded. For information on tracking onboard time, refer to the ARCHITECT System Operations Manual, Section 5.
- Reagents may be stored on or off the ARCHITECT *i* System. If reagents are removed from the system, store them at 2-8°C (with septums and replacement caps) in an upright position. For reagents stored off the system, it is recommended that they be stored in their original trays and boxes to ensure they remain upright. **If the microparticle bottle does not remain upright (with a septum installed) while in refrigerated storage off the system, the reagent kit must be discarded.** For information on unloading reagents, refer to the ARCHITECT System Operations Manual, Section 5. After reagents are removed from the system, initiate a reagent scan to update the onboard stability timer.

Indications of Reagent Deterioration

When a control value is out of the specified range, it may indicate deterioration of the reagents or errors in technique. Associated test results are invalid and samples must be retested. Assay recalibration may be necessary. For troubleshooting information, refer to the ARCHITECT System Operations Manual, Section 10.

INSTRUMENT PROCEDURE

- The ARCHITECT Toxo IgM assay file must be installed on the ARCHITECT *i* System from the ARCHITECT *i* System Assay CD-ROM before performing the assay. For detailed information on assay file installation and on viewing and editing assay parameters, refer to the ARCHITECT System Operations Manual, Section 2.
- For information on printing assay parameters, refer to the ARCHITECT System Operations Manual, Section 5.
- For a detailed description of system procedures, refer to the ARCHITECT System Operations Manual.
- The default result unit for the ARCHITECT Toxo IgM assay is Index. An alternate result unit, S/CO, may be selected for reporting results by editing "Result units" to "S/CO". The conversion formula used by the system is: Index value ÷ 0.60 = S/CO.

SPECIMEN COLLECTION AND PREPARATION FOR ANALYSIS

Specimen Types

The specimen collection tubes listed below were verified to be used with the ARCHITECT Toxo IgM assay.

- Human serum (including serum collected in serum separator tubes)
- Human plasma collected in:
  - Plasma separator tubes (lithium heparin)
  - Potassium EDTA
  - Sodium heparin
  - Lithium heparin
- Liquid anticoagulants may have a dilution effect resulting in lower concentrations for individual patient specimens.
- Sodium citrate tubes cannot be used with the ARCHITECT Toxo IgM assay.
- The ARCHITECT *i* System does not provide the capability to verify specimen type. It is the responsibility of the operator to verify that the correct specimen types are used in the ARCHITECT Toxo IgM assay.

Specimen Conditions

- Do not use specimens with the following conditions:
  - heat-inactivated
  - pooled
  - grossly hemolyzed (> 500 mg/dL)
  - obvious microbial contamination
  - cadaver specimens or any other body fluids
- For accurate results, serum and plasma specimens should be free of fibrin, red blood cells, and other particulate matter. Serum specimens from patients receiving anticoagulant or thrombolytic therapy may contain fibrin due to incomplete clot formation.
- Use caution when handling patient specimens to prevent cross contamination. Use of disposable pipettes or pipette tips is recommended.
- For optimal results, inspect all specimens for bubbles. Remove bubbles with an applicator stick before analysis. Use a new applicator stick for each specimen to prevent cross contamination.
- All samples (calibrator, controls, and patient specimens) should be tested within 3 hours of being placed on board the ARCHITECT *i* System.

Preparation for Analysis

- Follow the tube manufacturer's processing instructions for serum and plasma collection tubes. Gravity separation is not sufficient for specimen preparation.
- Mix thawed specimens thoroughly by low speed vortexing or by inverting 10 times. Visually inspect the specimens. If layering or stratification is observed, continue mixing until specimens are visibly homogeneous.
- To ensure consistency in results, specimens must be transferred to a centrifuge tube and centrifuged at ≥ 10000 RCF (Relative Centrifugal Force) for 10 minutes before testing if
  - they contain fibrin, red blood cells, or other particulate matter,
  - they require repeat testing, or
  - they were frozen and thawed.
- Transfer clarified specimen to a sample cup or secondary tube for testing.
- Centrifuged specimens with a lipid layer on the top must be transferred to a sample cup or secondary tube. Care must be taken to transfer only the clarified specimen without the lipemic material.

Storage

- Specimens may be stored on or off the clot, red blood cells, or separator gel for up to 3 days at 15-30°C or 14 days refrigerated at 2-8°C.
- If specimens are stored at 15-30°C and testing will be delayed more than 3 days, remove serum or plasma from the clot or red blood cells and store frozen at -20°C or colder.
- If specimens are stored at 2-8°C and testing will be delayed more than 14 days, remove serum or plasma from the clot or red blood cells and store frozen at -20°C or colder.
- No qualitative performance differences were observed between experimental controls and nonreactive or reactive specimens subjected to 6 freeze/thaw cycles; however, multiple freeze/thaw cycles should be avoided.

Shipping

- Before shipping specimens, it is recommended that specimens be removed from the clot, red blood cells, or separator gel.
- When shipping specimens, package and label specimens in compliance with applicable state, federal, and international regulations covering the transport of clinical specimens and infectious substances.
- Specimens may be shipped on wet ice or dry ice. Do not exceed the storage time limitations listed above.

PROCEDURE

Materials Provided

- 6C20 ARCHITECT Toxo IgM Reagent Kit

Materials Required but not Provided

- ARCHITECT *i* System
- ARCHITECT *i* System **ASSAY CD-ROM**
- 6C20-01 ARCHITECT Toxo IgM Calibrator
- 6C20-10 ARCHITECT Toxo IgM Controls
- ARCHITECT *i* **PRE-TRIGGER SOLUTION**
- ARCHITECT *i* **TRIGGER SOLUTION**
- ARCHITECT *i* **WASH BUFFER**
- ARCHITECT *i* **REACTION VESSELS**
- ARCHITECT *i* **SAMPLE CUPS**
- ARCHITECT *i* **SEPTUM**
- ARCHITECT *i* **REPLACEMENT CAPS**
- Pipettes or pipette tips (optional) to deliver the volumes specified in the protocol.

For information on materials required for maintenance procedures, refer to the ARCHITECT System Operations Manual, Section 9.

Assay Procedure

- Before loading the ARCHITECT Toxo IgM Reagent Kit on the system for the first time, the microparticle bottle requires mixing to resuspend microparticles that have settled during shipment. After the first time the microparticles have been loaded, no further mixing is required.
- **Invert the microparticle bottle 30 times.**
- Visually inspect the bottle to ensure microparticles are resuspended. If microparticles remain adhered to the bottle, continue inverting the bottle until the microparticles have been completely resuspended.
- **If the microparticles do not resuspend, DO NOT USE. Contact your local Abbott representative.**
- Once the microparticles have been resuspended, place a septum on the bottle. For instructions on placing septums on bottles refer to the **Handling Precautions** section of this package insert.
- Load the ARCHITECT Toxo IgM Reagent Kit on the ARCHITECT *i* System.
  - Verify that all necessary assay reagents are present.
  - Ensure that septums are present on all reagent bottles.
- Order calibration, if necessary.
  - For information on ordering calibrations, refer to the ARCHITECT System Operations Manual, Section 6.
- Order tests.
  - For information on ordering patient specimens and controls and for general operating procedures, refer to the ARCHITECT System Operations Manual, Section 5.
  - If utilizing ARCHITECT system software version 5.0 or higher, refer to the ARCHITECT System Operations Manual, Section 5 for information on ordering patient specimens and controls, and for general operating procedures.
  - If utilizing an ARCHITECT system software version lower than 5.0, use the following instructions to order patient specimens and controls:
  - For information on ordering patient specimens and the positive control and for general operating procedures, refer to the ARCHITECT System Operations Manual, Section 5.
  - Use the following instructions to order a negative control:
    - Order the negative control as a patient specimen, not as a control.
    - Manually verify the validity of the negative control every time it is run. Because the control is run as a patient specimen, a result will not be flagged by the ARCHITECT *i* System if it is outside the acceptable control range. To troubleshoot control values that fall outside the control range, refer to the ARCHITECT System Operations Manual, Section 10.
- The minimum sample cup volume is calculated by the system and is printed on the Orderlist report. No more than 10 replicates may be sampled from the same sample cup. To minimize the effects of evaporation, verify adequate sample cup volume is present before running the test.
  - Priority: 70 µL for the first ARCHITECT Toxo IgM test plus 20 µL for each additional ARCHITECT Toxo IgM test from the same sample cup.
  - ≤ 3 hours on board: 150 µL for the first ARCHITECT Toxo IgM test plus 20 µL for each additional ARCHITECT Toxo IgM test from the same sample cup.
  - > 3 hours on board: additional sample volume is required. For information on sample evaporation and volumes, refer to the ARCHITECT System Operations Manual, Section 5.
  - If using primary or aliquot tubes, use the sample gauge to ensure sufficient patient specimen is present.
- Prepare calibrator and controls.
  - Mix ARCHITECT Toxo IgM Calibrator and Controls by gentle inversion before use.
  - To obtain the recommended volume requirements for the ARCHITECT Toxo IgM Calibrator and Controls, hold the bottles **vertically** and dispense 6 drops of Calibrator 1 or 4 drops of each control into each respective sample cup.
- Load samples.
  - For information on loading samples, refer to the ARCHITECT System Operations Manual, Section 5.
- Press RUN.
- For additional information on principles of operation, refer to the ARCHITECT Operations Manual, Section 3.
- For optimal performance, it is important to perform routine maintenance as described in the ARCHITECT System Operations Manual, Section 9. Perform maintenance more frequently when required by laboratory procedures.

Specimen Dilution Procedures

Specimens cannot be diluted for the ARCHITECT Toxo IgM assay.

Calibration

- To perform an ARCHITECT Toxo IgM calibration, test Calibrator 1 in replicates of three. A single sample of each ARCHITECT Toxo IgM control level must be tested to evaluate the assay calibration. Ensure that assay control values are within the concentration ranges specified in the control package insert. Calibrator 1 should be priority loaded.

- Once an ARCHITECT Toxo IgM calibration is accepted and stored, all subsequent samples may be tested without further calibration unless:
  - A reagent kit with a new lot number is used.
  - Controls are out of range.
- It is recommended that the assay be calibrated every 30 days.
- For detailed information on how to perform an assay calibration, refer to the ARCHITECT System Operations Manual, Section 6.

QUALITY CONTROL PROCEDURES

The recommended control requirement for the ARCHITECT Toxo IgM assay is that a single sample of each control be tested once every 24 hours each day of use. If your laboratory quality control procedures require more frequent use of controls to verify test results, follow those procedures.

The ARCHITECT Toxo IgM Control values must be within the acceptable ranges specified in the control package insert. If a control is out of its specified range, the associated test results are invalid and samples must be retested. Recalibration may be indicated.

Verification of Assay Claims

For protocols to verify package insert claims, refer to the ARCHITECT System Operations Manual, Appendix B. The ARCHITECT Toxo IgM assay belongs to method group 5 (except functional sensitivity).

RESULTS

Calculation

The ARCHITECT *i* System calculates the Calibrator 1 mean chemiluminescent signal from three Calibrator 1 replicates and stores the result. Results are reported by dividing sample result by the stored Calibrator 1 result. The default result unit for the ARCHITECT Toxo IgM assay is Index. Sample results may also be reported as sample to cutoff (S/CO). Index value divided by 0.60 equals S/CO value.

Interpretation of Results

- Specimens with results < 0.50 Index (< 0.83 S/CO) are considered nonreactive for IgM antibodies to *Toxoplasma gondii*.
- Specimens with results ≥ 0.60 Index (≥ 1.00 S/CO) are considered reactive for IgM antibodies to *Toxoplasma gondii*.
- Specimens with results within the interval 0.50 ≤ x < 0.60 Index (0.83 ≤ x < 1.00 S/CO) are considered grayzone. It is recommended to take a second sample within a reasonable period of time (*e.g.* two weeks) and repeat ARCHITECT Toxo IgM testing.

Flags

Some results may contain information in the Flags field. For a description of the flags that may appear in this field, refer to the ARCHITECT System Operations Manual, Section 5.

LIMITATIONS OF THE PROCEDURE

- If the ARCHITECT Toxo IgM results are inconsistent with clinical evidence, additional testing is suggested to confirm the result.
- For diagnostic purposes, results should be used in conjunction with other data; *e.g.*, results of other tests (Toxo IgG, Toxo IgG Avidity), clinical impressions, etc.
- Heterophilic antibodies in human serum can react with reagent immunoglobulins, interfering with *in vitro* immunoassays.[7] Patients routinely exposed to animals or to animal serum products can be prone to this interference and anomalous values may be observed. Additional information may be required for diagnosis.
- Specimens from patients who have received preparations of mouse monoclonal antibodies for diagnosis or therapy may contain human anti-mouse antibodies (HAMA).[8,9] Specimens containing HAMA may produce anomalous values when tested with assay kits (such as ARCHITECT Toxo IgM) that employ mouse monoclonal antibodies.[8]
- Specimens from patients with high levels of IgM, *e.g.* from patients with multiple myeloma, may show depressed values when tested with µ-capture format assays.
- Human plasma collected in sodium citrate tubes cannot be used with this assay, since the ARCHITECT Toxo IgM results may be affected by this tube type.

SPECIFIC PERFORMANCE CHARACTERISTICS

Precision

The ARCHITECT Toxo IgM assay is designed to have a total** precision of ≤ 10% CV for a positive specimen in the range of 0.60 – 2.40 Index. The study was performed at one internal and one external evaluation site each using one instrument. Precision was assessed on a panel consisting of three different control lots and one human plasma specimen.

Panel members were tested in replicates of four across three reagent lots and one calibrator lot at the external site and three calibrator lots at the internal site, on one instrument at each site. Each combination of panel members and reagent lots was tested in four runs across several days. Data from this study are summarized in the following table*.

		Mean	Within Run		Total**	
Member	**N**	**Index**	**SD**	**%CV**	**SD**	**%CV**
Negative Control	288	0.03	0.01	16.79	0.01	17.13
Positive Control	**288**	**1.52**	**0.04**	**2.80**	**0.05**	**3.02**
Human Plasma Specimen	**96**	**1.42**	**0.05**	**3.26**	**0.05**	**3.72**

* Representative data; results in individual laboratories may vary from these data.

** Total is an accumulation of within run, between run and between day.

Seroconversion Sensitivity

The assay is designed to show a seroconversion sensitivity comparable to a commercially available diagnostic kit. A total of 122 bleeds from 39 different individuals seroconverting during acute toxoplasmosis infection were tested. Data from seven representative seroconverting individuals are shown in the following table*.

Sample ID	**Months after last negative bleed**	**ARCHITECT Toxo IgM [Index]**	**Commercially available diagnostic kit [Index]**	**Isaga (Toxo-M) [Index]**	**Sabin-Feldman Dye Test [IU/mL]**	**HS Agglutination Test [IU/mL]**
Grayzone		*0.50 - 0.59*	*0.500 - 0.599*	*6-8*	*N/A*	*1*
Reactive cutoff		**0.60**	**0.600**	**9**	**2**	**2**
30944001	0.0	0.05	0.061	0	< 2	< 1
30944002	1.2	*0.56*	0.351	4	**5**	*1*
30944003	2.1	**0.89**	*0.588*	**10**	**800**	**64**
30944004	2.2	**0.77**	*0.542*	**10**	**800**	**64**
30944005	4.3	0.38	0.193	1	**1600**	**200**
30944016	0.0	0.04	0.099	0	< 2	< 1
30944017	1.4	**1.16**	**1.038**	**11**	**20**	**2**
30944018	1.6	**1.04**	**0.897**	**10**	**20**	**4**
30944019	4.1	*0.52*	0.380	**9**	**10**	**8**
30944033	0.0	0.04	0.218	0	< 2	< 1
30944034	2.6	**1.99**	**2.026**	**12**	**400**	**64**
30944035	7.5	0.05	0.057	0	**800**	**100**
30944073	0.0	0.04	0.078	0	< 2	< 1
30944074	0.9	**1.32**	**1.125**	**12**	**5**	*1*
30944075	1.4	**2.35**	**1.733**	**12**	**200**	**16**
30944076	3.8	**1.12**	**0.877**	**12**	**100**	**8**
30944086	0.0	0.30	0.437	*7*	**2**	< 1
30944087	0.5	**10.39**	**7.974**	**12**	**40**	**8**
30944088	1.3	**9.23**	**6.464**	**12**	**400**	**128**
30944089	2.3	**8.53**	**5.398**	**12**	**400**	**50**
30944090	0.0	0.05	0.081	0	< 2	< 1
30944091	1.2	**5.95**	**4.195**	**12**	**20**	**2**
30944092	1.5	**5.72**	**3.679**	**12**	**200**	**16**
30944093	4.7	**2.66**	**1.700**	**12**	**400**	**50**
30944118	0.0	0.05	0.113	0	< 2	< 1
30944119	1.0	**5.76**	**3.784**	**12**	**2**	*1*
30944120	1.8	**6.56**	**3.536**	**12**	**200**	**64**
30944121	2.5	**3.88**	**1.910**	**12**	**1600**	**100**

* Representative data; results in individual laboratories may vary from these data.

Resolved Relative Specificity

The ARCHITECT Toxo IgM assay is designed to have a resolved relative specificity comparable to a commercially available diagnostic kit. A study was performed at one internal and one external evaluation site. From the 2772*** specimens evaluated to assess resolved relative specificity 36 specimens were concordant reactive and additional three were confirmed positive after discordant resolution and therefore excluded from the specificity calculation.

*** **NOTE:** Specimens that could not be resolved or showed grayzone result interpretation on any assay being compared or used for discordant resolution were not included in the evaluation of resolved relative specificity.

Data from this study are summarized in the following table*.

Resolved Relative Specificity

	ARCHITECT Toxo IgM		Commercially available diagnostic kit	
Sample Type	**Observed**	**Lower 95% Confidence Limit**	**Observed**	**Lower 95% Confidence Limit**
Pregnant Women	99.95% (1987/1988)	99.72%	99.95% (1987/1988)	99.72%
Diagnostic / Hospital Patients	100% (451/451)	99.19%	100% (451/451)	99.19%
Blood Donors (Serum)	100% (154/154)	97.63%	100% (154/154)	97.63%
Blood Donors (Plasma)	98.57% (138/140)	94.93%	100% (140/140)	97.40%
Total	99.89% (2730/2733)	99.68%	99.96% (2732/2733)	99.80%

* Representative data; results in individual laboratories may vary from these data.

Interference

No interference was observed between experimental controls and nonreactive or reactive specimens tested with elevated levels of bilirubin (20 mg/dL), triglycerides (3000 mg/dL), protein (12 g/dL), red blood cells (0.4% v/v), or hemoglobin (500 mg/dL).

Other Potential Interferants

Additional studies were performed to evaluate other potential interfering disease states on the ARCHITECT Toxo IgM assay. Sample categories were tested both unspiked and spiked with anti-Toxo IgM positive plasma.

A total of 167 unspiked specimens and a total of 165 spiked anti-Toxo IgM reactive specimens were tested from the following categories: Anti-nuclear antibodies (ANA), anti-dsDNA antibodies, Rheumatoid Factor, Herpes Simplex Virus 1 (anti-HSV-1 positive), Herpes Simplex Virus 2 (anti-HSV-2 positive), Epstein-Barr Virus (anti-EBV positive), Measles, Parvovirus B19 (anti-B19 virus positive), Varicella Zoster Virus (anti-VZV positive), Rubella Virus (anti-Rubella positive), Cytomegalovirus (anti-CMV positive), Hyperpolyclonal IgG, Hyperpolyclonal IgM, Monoclonal IgG, Monoclonal IgM, Human anti-mouse antibodies (HAMA), Influenca vaccine recipients, and Syphilis.

ARCHITECT Toxo IgM showed expected qualitative results in all categories with the exception of the categories summarized in the following table*.

		ARCHITECT Toxo IgM		
Category	**N tested**	**Nonreactive**	**Reactive**	**Grayzone**
Anti-nuclear Antibodies (ANA) Unspiked	10	8	1	1
Hyperpolyclonal IgM Spiked Reactive	10	1	8	1
Monoclonal IgM Spiked Reactive	5	4	0	1

* Representative data; results in individual laboratories may vary from these data.

After discordant resolution the unspiked ANA specimen tested reactive on ARCHITECT Toxo IgM could not be resolved. Specimens from patients with high levels of IgM, *e.g.* from patients with multiple myeloma, may show depressed values when tested with µ-capture format assays. Refer to the **LIMITATIONS OF THE PROCEDURE** section of this package insert.

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