Toxoplasma gondii test update

UTCVM PARASITOLOGY LABORATORY

Effective August 1, 2021, the parasitology laboratory will discontinue the currently offered ELFA test and replace it with the MAT (Modified Agglutination Test) for the detection of anti-Toxoplasma gondii antibody in serum samples. We are able to offer this test through collaboration with Dr. Chunlei Su’s laboratory in UT Microbiology. The MAT test is a common diagnostic method across a wide spectrum of tested animal species and yields a positive or negative result with the IgG titer reported. Comparing sequential IgG titers can stage the infection as acute vs. chronic with more confidence than alternative methods like IgM assays.

**Interpretation**

Results are reported as positive or negative and highest positive dilution (titer). Serum samples that yield a positive result at 1:40 and greater are interpreted as positive for anti-Toxoplasma IgG antibody, those that yield no agglutination at 1:40 are interpreted as negative. The assay can be repeated 2-3 weeks after the initial test to evaluate for seroconversion in the case of acute infection with an initially negative result; an increase in the convalescent titer of 4 times or more than the acute titer is considered evidence of acute infection.

**Considerations/Limitations**

As with any toxoplasmosis assay, the life cycle of *T. gondii* may impact antibody detection. Acute infections may yield negative results, thus resubmit serum 2-3 weeks after a negative result in the case of a suspected acute infection. Conversely, antibodies may remain detectable in infected hosts for years following initial infection.

<table>
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<tr>
<th>Test Value Thresholds</th>
<th>Interpretations</th>
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<tbody>
<tr>
<td>Test Value &lt; 1.40</td>
<td>Negative (No anti <em>T. gondii</em> antibodies)</td>
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<tr>
<td>Test Value ≥ 1.40</td>
<td>Positive (Presence of anti <em>T. gondii</em> antibodies)</td>
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**SAMPLE TYPE**

0.5 mL of serum (not lipemic, hemolyzed or icteric)

**TEST SCHEDULE**

Thursday afternoons (samples must be received by noon and are reported on Friday)

**AVAILABLE FOR**

ALL MAMMALS & BIRDS