## Lab Dept: Serology

## Test Name: LEPTOSPIRA ANTIBODY

### *General Information*

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| **Lab Order Codes:** | LEPA |
| **Synonyms:** | Leptospira Agglutination, Serum; Weil's disease; Leptospirosis Antibody: Leptospira IgM Ab |
| **CPT Codes:** | 86720 – Antibody; Leptospira |
| **Test Includes:** | Leptospira Antibody reported as negative, equivocal or positive. |

### *Logistics*

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| **Test Indications:** | As an aid in the diagnosis of leptosprirosis.<br><br>Known exposure to contaminated water. Usually abrupt onset with fever; may occur in 2 phases. Phase 1 has fever, chills, headache, muscle aches, vomiting or diarrhea. The patient may recover for a time but will become ill again. If a second phase occurs, it is more severe. The person may have kidney or liver failure or meningitis. This phase is also called Weil's disease. Incubation range is 2 days–4 weeks. |
| **Lab Testing Sections:** | Serology - Sendouts |
| **Referred to:** | Mayo Medical Laboratories (MML Test: LEPDT) |
| **Phone Numbers:** | MIN Lab: 612-813-6280<br><br>STP Lab: 651-220-6550 |
| **Test Availability:** | Daily, 24 hours |
| **Turnaround Time:** | 1 – 3 days, test performed Monday, Wednesday and Friday |
| **Special Instructions:** | Acute and convalescent specimens obtained to determine seroconversion should be collected 2 or more weeks apart. |

### *Specimen*

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| **Specimen Type:** | Blood |
| **Container:** | SST (Gold, marble top or red tube) |

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| **Draw Volume:** | 1 mL (Minimum: 0.3 mL) blood |
| **Processed Volume:** | 0.3 mL (Minimum: 0.1 mL) serum |
| **Collection:** | Routine venipuncture |
| **Special Processing:** | Lab Staff: Centrifuge specimen, remove serum aliquot. Store and ship at refrigerated temperatures. Mark specimens as acute or convalescent. Forward promptly. |
| **Patient Preparation:** | None |
| **Sample Rejection:** | Mislabeled or unlabeled specimens |

***Interpretive***

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| **Reference Range:** | **Negative:** No significant level of Leptospira IgM detected.<br><br>Since antibodies may not be present at undetectable levels during early disease, repeat testing of a convalescent sample collected in 2-3 weeks is recommended. |
| | **Positive:** IgM antibodies to Leptospira species detected suggesting recent infection. Antibody presence alone cannot be used to definitively diagnose acute infection, as antibodies from a prior exposure or infection may remain detectable for a prolonged period of time. Semi-Urgent result. |
| **Critical Values:** | N/A |
| **Limitations:** | The temporal IgM immune response can vary among patients. Therefore, a single negative result by this assay should not be used to exclude diagnosis, especially in patients with symptoms suggestive of leptospirosis who have an appropriate exposure history.<br><br>This test does not distinguish between acute and past infection. Clinical correlation is required. Patients may remain seropositive for months to possibly years following resolution of disease; therefore, this test cannot be used to establish cure or response to therapy. |
| **Methodology:** | Enzyme-Linked Immunoassay Dot (Immunoblot) |
| **References:** | Mayo Medical Laboratories February 2017 |

**Updates:**

3/25/2004: Test moved from the Minnesota Department of Health to Mayo Medical Laboratories.
4/24/2008: Draw volumes temporarily increased for forward to ARUP.
2/17/2011: Testing performed internally at MML. Reference range and volume update.
7/8/16: Test update, MML now forwards to ARUP. Volume, Method and Ref Range updates.
2/9/2017: MML performs test inhouse, no longer forwarding to ARUP. Volume and ref range updates.