

## Clinical Testing Viral Serology

### Specimen Requirements

#### **Serum Specimen (Arboviruses, Measles, Mumps, Rubella and Herpes Types 1 and 2)**

Collect at least 5 mL of whole blood in the Autosep™ tube or a red top tube. Allow the blood to clot at room temperature. Centrifuge at 2,000-3,000 rpm for 10 minutes. Serum specimens should be stored refrigerated until shipment. Ship as promptly as possible.

#### **CSF Specimen**

Collect 1mL to 3 mL CSF. CSF must be kept refrigerated or frozen prior to and during shipment (wet ice for refrigerated, dry ice for frozen specimens).

#### **Criteria for Rejection**

Plasma; hemolysis, lipemia, bacterial contamination, specimen not labeled, insufficient quantity

### Test Methodology

MIA (Microspere Immunofluorescence Assay): IgM antibodies to WNV and SLE

MACELISA (IgM Antibody Capture ELISA): IgM antibodies to CE\*, EEE\*\*, WEE\*\*

Plaque Reduction Neutralization test (PRNT): neutralizing antibodies to WNV, SLE and CE

IFA (Indirect Fluorescence Assay): IgG antibodies to Rubella, IgG antibodies to HSV-1 & HSV-2\*\*\*

#### **Information Required**

Complete all of the information on the test requisition form. For all human arbovirus test requests, complete the "Test Request for Human Arbovirus Panel" form. For all other viral serology test requests, use the Communicable Diseases Laboratory Test Requisition form.

\*Tests for CE (LaCrosse) routinely performed on patients younger than 18 years of age. Requests for CE on patients 18 or older must be directed to the Infectious Disease Program, 217-782-2016, for authorization prior to submitting specimens to the Department laboratory.

\*\*All requests for WEE and EEE must be directed to the Infectious Disease Program, 217-782-2016, for authorization prior to submitting specimens to the Illinois Department of Public Health laboratory.

\*\*\*Requests for HSV type-specific serology (fee-for-service), call 312-793-4760.

## Clinical Testing Viral Serology

**Table 11. Viral Serology**

Disease or Agent	Paired Sera	Single Sera	CSF	TAT(Days)
California Encephalitis, LaCrosse Strain (CE) <sup>1,2</sup>	X (IgM)	X (IgM)	X (IgM)	7
Western Equine Encephalitis (WEE) <sup>1,3</sup>	X (IgM)	X (IgM)	X (IgM)	7
Eastern Equine Encephalitis (EEE) <sup>1,3</sup>	X (IgM)	X (IgM)	X (IgM)	7
St. Louis Encephalitis (SLE) <sup>4</sup>	X (IgM)	X (IgM)	X (IgM)	7
West Nile Virus (WNV) <sup>4</sup>	X (IgM)	X (IgM)	X (IgM)	7
Measles, Mumps, Rubella (MMR) <sup>5</sup>	X (IgG)	X (IgG)		7
Herpes Simplex 1 & 2 (HSV-1 & HSV-2) <sup>6</sup>		X (IgG)		7

Performed at the Chicago Laboratory

<sup>1</sup>Requests for viral serological tests to detect IgM antibodies to CE (on patients 18 and older), WEE and SLE must be directed through the Infectious Disease Program 217-782-2016 for authorization prior to submitting specimens to the Illinois Department of Public Health laboratory.

<sup>2</sup>Specimens testing positive or equivocal for CE will be confirmed by the plaque reduction neutralization test (PRNT) at the Illinois Department of Public Health's laboratory.

<sup>3</sup>Specimens testing positive or equivocal for EEE or WEE will be forwarded to the CDC for confirmation by the plaque reduction neutralization test (PRNT).

<sup>4</sup>Serum specimens testing positive or non-specific for SLE or non-specific for WNV IgM antibodies will be confirmed by the PRNT at the Illinois Department of Public Health's laboratory.

<sup>5</sup>For MMR immunity status testing for health care workers submit a single serum specimen. For measles, mumps, or rubella diagnostic testing (titer values), submit paired sera.

<sup>6</sup>Herpes type-specific serology (HSV-1, HSV-2) is available on a fee-for-service basis. Contact the Illinois Department of Public Health Chicago laboratory 312-793-4760 for further details.

The following viral serology tests are available through the Illinois Department of Public Health's Chicago laboratory: Varicella zoster, Dengue Fever, Chikungunya, Yellow Fever, Japanese Encephalitis, Brucella serology, Rocky Mountain Spotted Fever and Typhus. Testing for these agents is performed by the CDC or another reference laboratory.

### Instructions for Herpes (HSV-1/HSV-2) Serologic Specimen Submission

1. Collect at least 3.0 mL of whole blood in the auto-sep tube provided.
2. Label the specimen with the patient's name/identification number and collection date.
3. Allow the blood to clot at room temperature. Centrifuge at 2000 rpm for 10 minutes.
4. Complete all information on the Communicable Disease test requisition. The patient identifier on the test requisition must match the identifier on the specimen.
5.
  - a. By ground transport
    - i. Wrap specimen(s) individually in absorbent material.
    - ii. Place wrapped specimen(s) into a biohazard labeled bag and seal securely.
    - iii. Place the test requisition(s) in the biohazard bag outside pouch so that it does not come in contact with the specimen sealed inside the bag.
    - iv. Place the sealed biohazard bag and test requisition(s) inside the shipping container.
    - v. The shipping container must be rigid such as a cooler and labeled with the UN 3373 Biological Substance Category B marking.
    - vi. Close securely.
  - b. Commercial carrier by ground/air transport
    - i. Wrap specimen(s) individually in absorbent material.
    - ii. Place the wrapped specimen(s) inside a biohazard labeled 95 kPa bag and seal following the instructions on the bag.

## Clinical Testing

### Viral Serology

- iii. Place the test requisition(s) in the 95 kPa bag outside pouch so that it does not come in contact with the specimen sealed in the bag.
  - iv. Place the sealed 95 kPa bag and completed test requisition(s) inside the outer shipping container and close securely.
  - v. Label the outer shipping container with the appropriate Illinois Department of Public Health laboratory address.
  - vi. Complete the return address section to include the name of the person shipping the package, business name and address and a business phone number.
  - vii. The shipping container must include the UN3373 Biological Substance Category B marking.
6. Ship using United Parcel Service (U.P.S.) ground.
  7. **Herpes specimens must reach the laboratory within 48 hours of collection.**

Ship to:

Illinois Department of Public Health Laboratory

2121 W. Taylor St.

Chicago, IL 60612-7260

Phone 312-793-4760

Fax 312-793-1322