



Zika Virus Specimen Submission Instructions for RT-PCR

1. Criteria for Zika Virus Testing Approval:

- **Patients must meet epidemiologic testing criteria prior to approval for testing.**
 - To discuss testing, clinicians within Tarrant County should contact the TCPH Epidemiology Division at 817-321-5350 (after business hours 817-994-3708) and complete the required TCPH Zika Virus Specimen Submission Form.
 - Clinicians outside of Tarrant County should contact either their respective county health department or the Texas DSHS HSR 2/3 Epidemiology division at 817-264-4541 or 817-822-6786 and complete the required TCPH Zika Virus Specimen Submission Form.
- **Testing criteria include:**

Any patient with **2 or more symptoms** compatible with Zika virus infection (e.g., fever, rash, joint pain/myalgia, conjunctivitis, headache, vomiting, or diarrhea).
For pregnant women: a minimum of **1 major symptom** (fever, rash, joint pain/myalgia, or conjunctivitis). Please indicate if the patient (including pregnant women) is **within 2 weeks of travel** to an area with Zika virus transmission.
- **To diagnose Zika virus**, always collect serum. In addition, it is recommended to also collect urine, which increases the probability of detection of Zika virus in a patient with Zika disease. In order for the specimen to be tested by RT-PCR, serum and urine samples must be taken during the acute period of the disease (<14 days after symptom onset). If the patient makes the first visit to the physician ≥ 14 days after onset of symptoms, serum may still be collected for serology, but RT-PCR testing will not be performed. Please note, NTRL does not perform Zika serology at this time.
- In addition, cerebrospinal fluid (CSF) and amniotic fluid are approved specimen types for Zika. Please note, a serum sample must also be submitted when a CSF or amniotic fluid specimen is submitted. The serum specimen may be tested by RT-PCR and/or serology, as appropriate.
- When more than one specimen type is submitted, ensure that the tubes are labeled in a manner that will allow NTRL to differentiate the specimens.

2. Specimen Collection and Types Accepted:

Serum:

- At least 2 mL of **serum** is required; whole blood will not be accepted.
 - Collect at least 5 mL blood in a **red top** blood collection tube. Centrifuge within 2 hours from the time of collection to separate the serum from the red blood cells. Transfer the serum from the red top tube into a serum transport tube with a screw cap.
- OR**
- Collect at least 5 mL blood in a serum separator tube (e.g., SST, gold top, tiger top). Centrifuge within 2 hours from the time of collection to separate the serum from the red blood cells. Transfer the serum into a serum transport tube with a screw cap. **DO NOT freeze** the serum separator tube for shipping. Freezing will cause hemolysis, and hemolyzed specimens will be unsatisfactory for testing.
 - Specimens must be placed in a biohazard bag and stored at 2-8°C or frozen as indicated below:
 - Specimens that are shipped the same day of collection and will arrive at the lab within 48 hours of collection can be stored at 2-8°C and must be shipped with cold packs.
 - Specimens that will be stored and arrive at the lab more than 48 hours after collection must be stored frozen and shipped on dry ice.



Urine, CSF, Amniotic Fluid:

- At least 1 mL of **urine, cerebrospinal fluid (CSF), or amniotic fluid** is required.
- Collect urine, CSF, or amniotic fluid without any additives.
- Transfer urine to a tube with a tight-sealing lid – **DO NOT** submit urine collection cups.
- Transfer any other body fluid (CSF, amniotic fluid) to a tube with tight-sealing lid or screw cap.
- Specimens must be placed in a biohazard bag and stored at 2-8°C or frozen as indicated below:
 - Specimens that are shipped the same day of collection and will arrive at the lab within 48 hours of collection can be stored at 2-8°C and must be shipped with cold packs.
 - Specimens that will be stored and arrive at the lab more than 48 hours after collection must be stored frozen and shipped on dry ice.

3. Criteria for Specimen Handling:

- All specimen containers **MUST** be labeled with the patient's first name, patient's last name, and patient's date of birth, specimen collection date, and specimen collection time.
- All specimens should be placed in a biohazard bag and must be accompanied by a completed printed copy of the TCPH Zika Virus Specimen Submission Form placed in the outer pouch of the biohazard envelope.

4. Specimen Transport:

- **Approval of the TCPH Epidemiology division for facilities within Tarrant County is required before a specimen can be sent to the Tarrant County Public Health LRN Laboratory for testing.**
- **Facilities outside of Tarrant County must contact their respective county or regional health department for case reporting and approval prior to specimen submission to the TCPH LRN Laboratory.**
- All healthcare facilities must arrange for transport of specimens from their facility to TCPH. TCPH will not pick up specimens from any submitters.
- Refrigerate urine, CSF, AF and/or serum samples at 2-8°C and ship on cold packs within 48 hours of collection. Specimens that will arrive at the lab more than 48 hours after collection must be stored frozen and shipped on dry ice.
- Follow packing and shipping instructions for Category B, Biological Substances.
- Ship according to IATA (International Air Transport Association) guidelines using overnight courier to arrive during business hours Monday-Friday, 8:00 AM-4:00 PM.
- Specimens delivered by same-day courier services will also be accepted.

5. All Sections of the Form MUST be Completed in Their Entirety.

6. The TCPH LRN Laboratory Can Only Accept Specimens for PCR Results From Facilities within the Following Counties Comprising its Service Area: Archer, Baylor, Brown, Callahan, Clay, Comanche, Coleman, Cooke, Denton, Eastland, Erath, Foard, Hardeman, Haskell, Hood, Jack, Johnson, Jones, Knox, Montague, Palo Pinto, Parker, Runnels, Shackelford, Somervell, Stephens, Tarrant, Taylor, Throckmorton, Wichita, Wilbarger, Wise, and Young.

TCPH LRN Shipping and Delivery Address:

Tarrant County Public Health
North Texas Regional Laboratory
Bioterrorism and Emerging Agents Section
1101 South Main Street
Fort Worth, Texas 76104

Contact Phone Numbers:

North Texas Regional Laboratory:
817-321-4774
Tarrant County Epidemiology:
817-321-5350
Texas DSHS HSR 2/3 Epidemiology:
817-264-4541



Tarrant County Public Health
North Texas Regional Laboratory
 Bioterrorism Response/Emerging Agents Section
 1101 South Main Street, Fort Worth, TX 76104
 Phone: 817-321-4774
 CLIA# 45D0659873

For TCPH Use Only:

TCPH Lab ID:	
Epi Case #:	
Condition at receipt:	<input type="checkbox"/> Frozen <input type="checkbox"/> Refrigerated <input type="checkbox"/> Ambient <input type="checkbox"/> Appropriate for testing <input type="checkbox"/> Rejected
Received by:	
Date/Time Received:	

Zika Virus Specimen Submission Form for RT-PCR

Note: Submissions Will Also Be Tested for Chikungunya and Dengue Viruses As Appropriate

All Patient, Submitter, and Specimen Information Sections MUST be completed in their entirety for specimen acceptance

Patient	Last Name: _____	First Name: _____	Patient ID/ Medical Record: _____
	Date of Birth: _____ <i>MM/DD/YYYY</i>	Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female	Race/Ethnicity: _____
	Address: _____ <i>Street Address or PO Box</i> _____ <i>City</i> _____ <i>State</i> _____ <i>Zip Code</i> _____		
	County: _____	Phone No: _____	Alternate Phone No: _____

Submitter	Hospital/Lab/Clinic Name: _____
	Physician Name: _____
	Address: _____ <i>Street Address or PO Box</i> _____ <i>City</i> _____ <i>State</i> _____ <i>Zip Code</i> _____
	Contact Name: _____ Phone No: _____ Fax No: _____
County: _____	Name of Person Completing This Form: _____

Specimen(s)

Important Specimen Collection Instructions: Collect blood specimen in a red top, SST, gold top or tiger top blood tube. Specimen MUST be centrifuged and serum removed from red cells within two hours of collection. Refrigerate (2-8 °C) all sample types and deliver to lab on cold packs within 48 hours of collection. Specimens that will arrive at the lab more than 48 hours after collection must be stored frozen and shipped on dry ice. Specimens not meeting these submission requirements cannot be tested.

To diagnose Zika virus by RT-PCR, the laboratory requires a serum or urine sample collected <14 days after symptom onset. Cerebrospinal fluid (CSF) and amniotic fluid are also approved specimen types. Serum must always be submitted, even if urine, CSF, or amniotic fluid is submitted. Urine and amniotic fluid are only approved for Zika testing. Please indicate specimen type on each tube or vial.

Serum: Date of Collection: _____ Time of Collection: _____ Time of Centrifugation: _____
MM/DD/YYYY *Hour : Min; Indicate AM or PM* *Hour : Min (AM/PM)*

Additional Specimen: Urine (Zika testing only) Amniotic Fluid (Zika testing only) CSF
 Date of Collection: _____ Time of Collection: _____
MM/DD/YYYY *Hour : Min; Indicate AM or PM*

Storage Condition of Specimen(s) Prior to Shipment: Refrigerated Frozen

Epidemiology	Flavivirus Exposure History	Yes	No	Unk	Date	Symptoms (check all that apply)
	Yellow Fever					
		Vaccination				
		Disease				
	Japanese Encephalitis	Vaccination				
		Disease				
	Tick-borne Encephalitis	Vaccination				
		Disease				
Is patient pregnant?	<input type="checkbox"/> No <input type="checkbox"/> Yes; # of weeks gestation: _____					Date of Symptom Onset: _____ <input type="checkbox"/> Rash <input type="checkbox"/> Conjunctivitis <input type="checkbox"/> Joint Pain/Myalgia <input type="checkbox"/> Fever; Temp: _____
Did the patient travel to an area with Zika transmission [†] within 14 days prior to symptom onset?	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes					Minor symptoms: <input type="checkbox"/> Diarrhea <input type="checkbox"/> Vomiting <input type="checkbox"/> Headache
If yes, list all countries/cities/dates of travel: _____						
Does the patient's sexual partner have a history of illness consistent with Zika virus disease and a history of travel to an area with Zika transmissions? <input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes						
If yes, date of symptom onset: _____ AND list all countries/cities/dates of travel _____						

† See cdc.gov/zika/geo/index.html for current list