



Chikungunya, Dengue, and Zika PCR and Serology Specimen Criteria



Testing Criteria

- **All REQUIRED items on submission form(s) must be completed prior to testing**
- Complete the “Chikungunya, Dengue, and Zika Testing Supplemental Information” form
- **PRIOR TO SHIPPING:** contact your Local Health Department or DSHS Health Service Region (www.dshs.state.tx.us/Regions/lhds.shtm) to ensure patient meets criteria for testing
- **TESTING CRITERIA**

To make the most effective and appropriate use of the DSHS Laboratory resources in the primary mission of supporting public health activities, DSHS is providing criteria for specimens submitted to the laboratory for testing. These criteria may be updated as the situation changes.

Specimens submitted to the DSHS Laboratory must be collected from an individual in one of the categories listed below. Testing every patient who meets these criteria is not mandatory; the decision to test a patient is appropriately made by the patient’s attending physician in consultation with public health. DSHS has developed these criteria based on CDC guidance, Texas’ international border, and the potential for public health or patient care actions. Specimens from individuals in these categories will be prioritized for testing based on resources. If resources at DSHS are at capacity, specimens meeting the CDC criteria will be forwarded to CDC for testing.

Qualifying Criteria:

- **Pregnant women** who have a clinical illness consistent with Zika virus disease during or within 2 weeks of travel to areas with ongoing Zika virus transmission
 - Maternal reverse transcription-polymerase chain reaction (RT-PCR) for specimens collected < 7 days after onset of symptoms
 - Maternal Immunoglobulin M (IgM) for specimens collected ≥ 4 days after onset of symptoms
 - Both maternal RT-PCR and IgM for specimens collected on day 4, 5, or 6 after onset of symptoms
- **Pregnant women** who have an epidemiologically-defined exposure to Zika virus AND have findings of fetal microcephaly or intracranial calcifications on prenatal ultrasound: maternal serologic testing (IgM)[†]
- Asymptomatic **pregnant women** (women who do not report clinical illness consistent with Zika virus disease) with travel history to areas with ongoing Zika virus transmission: maternal serologic testing (IgM) 2 – 12 weeks after return from area with ongoing Zika virus transmission
 - Information about the performance of serologic testing of asymptomatic people is limited; a negative serologic test (IgM) result obtained 2–12 weeks after travel cannot definitively rule out Zika virus infection
- Asymptomatic **pregnant women** with a male sexual partner who has traveled to an area of ongoing Zika virus transmission and who reports clinical illness consistent with Zika virus disease during travel or within 2 weeks of his return: maternal serologic testing (IgM) 2-12 weeks after initial unprotected sexual contact occurring after male partner’s symptom onset
- Asymptomatic **pregnant women** residing in or with frequent travel to and from areas with ongoing Zika virus transmission: maternal serologic testing (IgM) at the initiation of prenatal care
 - Among women with negative serologic IgM results, consider repeat testing in the mid-second trimester because of the risk for Zika virus exposure and infection throughout pregnancy
 - Consider maternal serologic testing (IgM) at the time of delivery[†]

- Asymptomatic **pregnant women** with a male sexual partner who resides in or frequently travels to an area with ongoing Zika virus transmission: maternal serologic testing (IgM) at the initiation of prenatal care
 - Among women with negative serologic IgM results, consider repeat testing in the mid-second trimester because of the risk for Zika virus exposure and infection throughout pregnancy
 - Consider maternal serologic testing (IgM) at the time of delivery†
- **Infants** born to women who, during pregnancy, traveled to or resided in an area with ongoing Zika virus transmission AND have microcephaly or intracranial calcifications detected prenatally or at birth: both infant reverse transcription-polymerase chain reaction (RT-PCR) and serologic testing (IgM) should be collected within 2 days of birth†
 - If not already performed during pregnancy, consider maternal serologic testing (IgM)
- **Infants** born to women who, during pregnancy, traveled to or resided in an area with ongoing Zika virus transmission AND who have positive or inconclusive maternal test results for Zika virus infection both infant reverse transcription-polymerase chain reaction (RT-PCR) and serologic testing (IgM) should be collected within 2 days of birth†
- **Infants** born to women who, during pregnancy, traveled to or resided in an area with ongoing Zika virus transmission within 2 weeks of delivery AND have clinical illness consistent with Zika virus disease during the first 2 weeks of life
 - Reverse transcription-polymerase chain reaction (RT-PCR) for specimens collected < 7 days after onset of symptoms
 - Serologic testing(IgM) for specimens collected ≥4 days after onset of symptoms
 - Both RT-PCR and IgM for specimens collected on day 4, 5, or 6 after onset of symptoms
 - Consider maternal serologic testing (IgM)
- **Infants and children** aged <18 years who have a clinical illness consistent with Zika virus disease during or within 2 weeks of travel to areas with ongoing Zika virus transmission
 - Reverse transcription-polymerase chain reaction (RT-PCR) for specimens collected < 7 days after onset of symptoms
 - Immunoglobulin M (IgM) for specimens collected ≥4 days after onset of symptoms
 - Both RT-PCR and IgM for specimens collected on day 4, 5, or 6 after onset of symptoms
- Individuals who have a clinical illness consistent with Zika virus disease during or within 2 weeks of travel to areas with ongoing Zika virus transmission
 - Reverse transcription-polymerase chain reaction (RT-PCR) for specimens collected < 7 days after onset of symptoms
 - Serologic testing(IgM) for specimens collected ≥4 days after onset of symptoms
 - Both RT-PCR and IgM for specimens collected on day 4, 5, or 6 after onset of symptoms
- Individuals who develop a clinical illness consistent with Zika virus disease within 2 weeks after an epidemiologically-defined exposure to an individual diagnosed with Zika virus disease

†Please refer to the CDC guidance for alternative specimens types to be submitted to CDC for testing

Note: At this time, testing of exposed, asymptomatic men for the purpose of assessing risk for sexual transmission is not recommended. Sexual transmission of Zika virus from infected women to their sex partners has not been documented, nor has transmission from persons who are asymptotically infected.

	<ul style="list-style-type: none"> • For Serologic testing (IgM) fill out the DSHS G2A submission form (specimens collected ≥ 4 days after onset of symptoms) • For PCR testing (RT-PCR) fill out the DSHS G2V submission form (specimens collected < 7 days after onset of symptoms) • PLEASE NOTE: For specimens collected 4-6 days after symptom onset, request both PCR and Serology [submit a G2V and G2A form, and submit 2 specimens (at least 1 mL each)]
Specimen Types	<ul style="list-style-type: none"> • Serum Aliquot (Please ship a minimum of 2-3 mLs) • DO NOT ship whole blood • Contact the Viral Isolation or Serology team regarding testing of other specimens
Specimen Collection and Handling	<ul style="list-style-type: none"> • Collect the specimen as soon as possible after onset of illness • Collect at least 5 mL blood in a blood collection tube • Centrifuge within 2 hours from the time of collection to separate the serum from the red blood cells (clot) • Transfer the serum from the collection tube into a serum transport tube for shipment • PLEASE NOTE: The use of gloves, lab coat, mask, and eye protection/face shield are recommended when transferring serum into a transport tube. For additional information, see www.cdc.gov/hicpac/2007IP/2007ip_part3.html • Specimens should be placed in a biohazard bag and stored at 4°C or -20°C as indicated below: <ul style="list-style-type: none"> ○ Specimens that are shipped the same day of collection and will arrive at the lab within 48 hours of collection can be stored at 4°C and should be shipped with cold packs ○ Specimens that will be stored and arrive at the lab more than 48 hours after collection should be stored at -20°C and shipped on dry ice
Specimen Shipping	<ul style="list-style-type: none"> • Transport specimens to the laboratory as soon as possible • Do not ship on Fridays or before government holidays. Ship serum transport tubes Monday-Thursday by overnight delivery. Specimens collected Friday-Sunday should be centrifuged, transferred into a serum transport tube, stored at -20°C, and shipped as described above. • PCR testing: Complete the G2V form for each specimen (instructions to request G2V form or a DSHS Submitter ID number are at www.dshs.state.tx.us/lab/MRS_forms.shtm#Microbiological) <ul style="list-style-type: none"> ○ Check “Chikungunya PCR” and “Dengue PCR” in Section 4 of the G2V and record the date of onset and travel history (required prior to testing). Check “Other” and write in “Zika” • Serology testing: Complete the G2A form for each specimen (instructions to request G2A form or a DSHS Submitter ID number are at www.dshs.state.tx.us/lab/MRS_forms.shtm#Microbiological) <ul style="list-style-type: none"> ○ Check “Other” in Section 7 and write in “Chikungunya, Dengue, Zika” • The name on the tube should match the name on the form exactly • Ship to the physical address: TX DSHS Lab Services, ATTN: Walter Douglass 512-776-7569, 1100 W. 49th Street, Austin TX, 78756 • Record the shipping tracking number and notify your local health department that a specimen is being shipped
Additional Information	<ul style="list-style-type: none"> • For questions about Chikungunya, Dengue, or Zika PCR testing, please contact the Viral Isolation Team at 512-776-7594 or 512-776-7515 • For questions about Chikungunya, Dengue, or Zika Serology testing, please contact the Serology Team at 512-776-7514 or 512-776-7760