

## Zika, Chikungunya, and Dengue PCR and Serology: Specimen Criteria

<b>Specimen Types</b>	<ul style="list-style-type: none"> <li>• Serum (minimum of <b>1 mL</b>); <b>DO NOT</b> ship whole blood.</li> </ul>
<b>Specimen Collection and Handling</b>	<ul style="list-style-type: none"> <li>• Collect at least 5 mL blood each in <b>TWO red, gold, or tiger top</b> blood collection tubes. Centrifuge according to collection tube manufacturer’s guidelines to separate the serum from the red blood cells (clot).</li> <li>• Transfer the serum from the blood collection tubes into separate serum transport tubes and label with patient information. The second sample will be forwarded to DSHS should additional testing be required.</li> <li>• 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"> <li>○ 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.</li> <li>○ Specimens that will arrive at the lab more than 48 hours after collection should be stored frozen (-20°C) and shipped on dry ice.</li> </ul> </li> </ul>
<b>Specimen Shipping</b>	<ul style="list-style-type: none"> <li>• Transport specimens to the laboratory as soon as possible.</li> <li>• Do not ship on Fridays or before government holidays (except in cases where prior arrangements have been discussed).</li> <li>• Ship serum transport tubes Monday-Thursday by overnight delivery.</li> <li>• Specimens collected on Friday-Sunday should be centrifuged, transferred into a serum transport tube, and frozen (-20°C).</li> <li>• The name and patient information on the tubes <b>MUST</b> match the forms <b>EXACTLY</b>.</li> <li>• <b>PCR testing:</b> PCR testing will be done on all samples collected less than 7 days after symptom onset. Complete the <b>HHD Zika Virus Specimen PCR Submission Form</b>. Onset of symptoms, travel history, and vaccination history are required prior to testing.</li> <li>• <b>IgM Antibody testing:</b> IgM antibody testing will be done on all asymptomatic persons, all samples collected Day 7 or more after symptom onset, and all PCR-negative samples collected Day 4-6 after symptom onset. NOTE: Day 0 is day of symptom onset. This testing is performed only at DSHS or CDC.             <ul style="list-style-type: none"> <li>○ If the sample is collected Day 4-6 after symptom onset, submit required DSHS forms <u>and</u> <b>HHD Zika Virus Specimen PCR Submission Form</b> to the HHD Laboratory.</li> <li>○ If the sample is collected Day 7 or more after symptom onset or the person is asymptomatic, follow DSHS guidelines for submission of the specimen directly to the DSHS laboratory.</li> </ul> </li> <li>• Specimens may be delivered or shipped to the physical address. Submitter is responsible for transport to the lab: <b>Houston Health Department Laboratory, 2252 Holcombe Blvd., Houston, Texas 77030</b>. REMINDER: Specimens should be shipped according to regulations for UN3373 Biological Substance, Category B. Additionally, frozen specimens should be shipped according to UN1845, Class 9 regulations for dry ice.</li> </ul>
<b>Additional Information</b>	<ul style="list-style-type: none"> <li>• Collect the specimen as soon as possible after onset of illness.</li> <li>• <b>PLEASE NOTE:</b> Request testing by PCR for specimens collected Day 0-3 after symptom onset; submit <b>2 tubes of serum along with the HHD Zika Virus Specimen PCR Submission Form</b> to the HHD Laboratory. NOTE: Day 0 is day of symptom onset.</li> <li>• <b>PLEASE NOTE:</b> Request <b>both PCR and IgM Serology</b> for specimens collected on Day 4-6 after symptom onset; submit <b>2 tubes of serum along with the HHD Zika form and Texas DSHS G2A and Zika Testing Supplemental Information Forms</b> to the HHD Laboratory.</li> <li>• <b>PLEASE NOTE:</b> Request IgM serology for specimens collected on or after Day 7 following symptom onset and for asymptomatic patients. Send sample directly to Texas DSHS laboratory with required DSHS forms.</li> <li>• For general questions about Zika, Chikungunya, and dengue viruses in Texas, please contact the DSHS Zoonosis Control Branch at (512) 776-7255 or access CDC factsheets at the below links:             <ul style="list-style-type: none"> <li><a href="http://www.cdc.gov/media/dpk/2016/dpk-zika-virus.html">http://www.cdc.gov/media/dpk/2016/dpk-zika-virus.html</a></li> <li><a href="http://www.cdc.gov/chikungunya/">http://www.cdc.gov/chikungunya/</a></li> <li><a href="http://www.cdc.gov/dengue/">http://www.cdc.gov/dengue/</a></li> </ul> </li> </ul>

<p><b>Testing Approval</b></p>	<p><b>Zika virus testing MUST be approved by your Health Department epidemiologist. Specimens received without approval will be held pending approval.</b></p> <ul style="list-style-type: none"> <li>• To discuss approval for testing, clinicians within the City of Houston should contact HHD Epidemiology at (832) 393-5080 and complete the required HHD Zika Virus PCR Submission Form.</li> <li>• Clinicians <b>outside</b> of the City of Houston should contact their respective local health department and complete the required <b>HHD Zika Virus PCR Submission Form</b>.</li> <li>• The HHD Laboratory can only accept specimens from facilities within the following counties: Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Matagorda, Montgomery, Orange, San Jacinto, Walker, Waller, and Wharton.</li> <li>• <b>Testing criteria:</b> Any patient with <b>2 or more symptoms</b> compatible with Zika infection <b>within 2 weeks of travel</b> to an area with Zika virus transmission.</li> <li>• Patients with compatible illness who do not meet above testing criteria but may have an alternative mode of transmission (e.g. sexual or mother-child) should discuss with their local health department on a case-by-case basis.</li> <li>• To diagnose Zika virus by PCR, the HHD laboratory requires a serum sample taken within the between Day 0 - 6 after symptom onset. <b>Specimens taken Day 7 or more after symptom onset will be rejected for testing by PCR.</b></li> <li>• Samples from <b>asymptomatic</b> patients will <b>NOT</b> be tested via PCR. Forward samples directly to DSHS for IgM ELISA after approval from your local health department. Follow DSHS guidelines found at <a href="http://www.texaszika.gov">www.texaszika.gov</a></li> <li>• Regional epidemiologists <b>MUST</b> notify the HHD laboratory that a sample has been approved for testing. Notify by phone at (832) 393-3912, (832) 393-3956 or (832) 393-3968 <b>and</b> FAX epidemiology investigation form to (832) 393-3983. Please indicate on epidemiology investigation form that the specimen is "Approved for serology", "Approved for RT-PCR" or "Approved for RT-PCR and serology".</li> </ul>
<p><b>Contact Information</b></p>	<p><b>Houston Health Department</b></p> <ul style="list-style-type: none"> <li>• <b>Lab (notification of sample approval): 832-393-3912, 832-393-3956, or 832-393-3968</b></li> <li>• <b>Lab (fax number for Epidemiology Investigation Forms): 832-393-3983</b></li> <li>• <b>Bureau of Epidemiology: 832-393-5080</b></li> </ul> <p><b>Department of State Health Services</b></p> <ul style="list-style-type: none"> <li>• <b>Zoonosis Control Branch: 512-776-7255</b></li> <li>• <b>DSHS Lab (to request G2A/G2V forms): 512-776-7578 or <a href="http://www.dshs.state.tx.us/lab/mrs_forms.shtm#email">http://www.dshs.state.tx.us/lab/mrs_forms.shtm#email</a>.</b></li> <li>• <a href="http://www.texaszika.org">www.texaszika.org</a></li> </ul>