

# Specimen Submission Guidelines

## Rickettsial Zoonoses Branch

### Reference Diagnostic Laboratory

#### Sample Specifications and Packaging Guidelines for Rickettsial Testing

Specimen type	Sample specifications	Possible tests	Packaging guidelines	Other considerations
<b>Serum</b>	Serum separator tube, or cryo-tubes <ul style="list-style-type: none"> <li>Preferred: 3-5 mL</li> <li>Minimum: 1 mL</li> </ul>	<ul style="list-style-type: none"> <li>Serology</li> <li>Molecular detection</li> </ul>	Refrigerated on cold packs.	<ul style="list-style-type: none"> <li>Paired samples should be taken 2-4 weeks apart for serology.<sup>1</sup></li> <li>Molecular detection is most sensitive during the first week of acute illness and within 24 hours of appropriate antibiotic therapy.<sup>2</sup></li> </ul>
<b>Whole blood</b>	EDTA-treated <ul style="list-style-type: none"> <li>Preferred: 3-5 mL</li> <li>Minimum: 1 mL</li> </ul>	<ul style="list-style-type: none"> <li>Molecular detection</li> <li>Culture</li> </ul>	Refrigerated on cold packs.	<ul style="list-style-type: none"> <li>Molecular detection is most sensitive during the first week of acute illness and within 24 hours of appropriate antibiotic therapy.<sup>2</sup></li> </ul>
<b>Tissue (Fresh)</b>	<ul style="list-style-type: none"> <li>Skin biopsies should be taken from the site of rash or eschar.</li> <li>Autopsy specimens may include spleen, liver, lung, kidney, lymph node, heart and brain tissue.</li> </ul>	<ul style="list-style-type: none"> <li>Molecular detection</li> <li>IHC</li> <li>Culture</li> </ul>	Preferred: refrigerated on cold packs. Will also accept: frozen on dry ice (for IHC or molecular detection only).	<ul style="list-style-type: none"> <li>Place fresh material on a gauze pad moistened with sterile saline in a sterile collection cup. <b>Do not immerse the tissue in saline solution.</b></li> <li>Molecular detection and culture are most sensitive during the first week of acute illness and within 24 hours of appropriate antibiotic therapy.<sup>2</sup></li> </ul>
<b>Tissue (Formalin fixed, paraffin embedded)</b>		<ul style="list-style-type: none"> <li>Molecular detection</li> <li>IHC</li> </ul>	Preferred: room temperature Will also accept: refrigerated on cold packs; <b>do not freeze.</b> <ul style="list-style-type: none"> <li>During warm months ship with cold packs to prevent the melting of formalin-fixed, paraffin-embedded tissue during transit.</li> </ul>	<ul style="list-style-type: none"> <li>Formalin-fixation may limit the sensitivity of molecular detection.</li> </ul>
<b>Skin swab</b>	Swab of eschar.	<ul style="list-style-type: none"> <li>Molecular detection</li> </ul>	Preferred: refrigerated on cold packs. Will also accept: frozen on dry ice.	Molecular detection is most sensitive during the first week of acute illness and within 24 hours of appropriate antibiotic therapy. Swabs should be sent dry. <sup>2</sup> <b>Do not immerse swab in saline solution.</b>
<b>Other<sup>3</sup></b>	Consult with diagnostic laboratory about sample specifications and packaging guidelines.			

1. Paired serology samples are ideally tested at the same time. If paired samples are anticipated, samples should be held at submitting laboratory until convalescent is available.
2. Due to the decreased sensitivity of PCR and culture following antibiotic therapy, samples drawn before or within 24 hours of antibiotic therapy are preferred.
3. Other specimens may include cerebrospinal fluid (CSF), blood clots, tissue sections, or blood smears on glass slides.