

Specimen Submission Guidelines

Rickettsial Zoonoses Branch



Reference Diagnostic Laboratory

Sample Specifications, Storage, and Packaging Guidelines for Rickettsial Testing

Specimen Type	Sample Specifications	Possible Tests	Sample Storage	Packaging and Shipping
Serum	Draw in serum collection tube, process per manufacturer's instructions Ship in collection tube, or cryo-tubes if frozen (preferred) <ul style="list-style-type: none">Preferred: 3–5 mLMinimum: 1 mL	<ul style="list-style-type: none">Serology¹Molecular detection²	<ul style="list-style-type: none">2–8°C up to 7 days≤-20°C up to 2 months≤-70°C up to 1 year	<ul style="list-style-type: none">2–8°C on cold packs≤-20°C on dry ice
Whole Blood	Acute whole blood (taken within 14 days after illness onset or while symptomatic): EDTA treated, or ACD-A treated collection tubes (CTs) <ul style="list-style-type: none">Transfer to cryotubes before freezing, if applicableShip refrigerated specimens in CTs or cryotubes; or frozen specimens in cryotubesPreferred: 3–5 mLMinimum: 1 mL	<ul style="list-style-type: none">Molecular detection²	<ul style="list-style-type: none">2–8°C up to 7 days≤-20°C up to 2 months≤-70°C up to 1 year	<ul style="list-style-type: none">2–8°C on cold packs≤-20°C on dry ice
Tissue*	Vascularized tissue biopsies, including (but not limited to) skin biopsy specimens from the site of rash or eschar ³	<ul style="list-style-type: none">Molecular detection²	<ul style="list-style-type: none">2–8°C up to 7 days≤-20°C up to 35 days≤-70°C up to 1 year	<ul style="list-style-type: none">2–8°C on cold packs≤-20°C on dry ice
Swab	Swab specimens of eschar, using a dry, sterile cotton swab (include eschar scab when available) ⁴	<ul style="list-style-type: none">Molecular detection²	<ul style="list-style-type: none">2–8°C up to 7 days≤-20°C up to 2 months	<ul style="list-style-type: none">2–8°C on cold packs≤-20°C on dry ice

* Fixed tissue specimens should be submitted to the CDC Pathology lab. Contact Pathology@cdc.gov for pre-approval.

NOTE: CLIA regulations require that all specimens and CDC 50.34 forms are submitted with a minimum of two primary patient identifiers to be accepted by the laboratory for testing.

1. Acute-phase serum (taken within 14 days after illness onset or while symptomatic) paired with convalescent-phase serum (taken 2–10 weeks after initial sample). Serology samples are ideally tested at the same time. If paired samples are anticipated, samples should be held at the submitting laboratory at the proper storage temperature until the convalescent is available.
2. Due to the decreased sensitivity of PCR following initiation of a tetracycline-class antibiotic (e.g., doxycycline), molecular samples must be collected before or within 72 hours of treatment (within 48 hours is preferred), or patients must be symptomatic at the time of collection if occurring outside of this established time frame.
3. For tissue at 2–8°C storage, tissue samples should be placed in a sterile specimen cup with a gauze slightly moistened with sterile saline. To freeze tissue, place specimen in cryogenic container at -20°C or lower. Do not immerse the tissue in saline solution. Tissue samples submerged in saline buffer will be rejected. Tissue samples in other shipping media will be rejected.
4. For swab, place in sterile specimen container without any medium. <https://www.cdc.gov/ncezid/dvbd/pdf/Collection-Submission-Eschar-Swab-Specimens-Rickettsial-Disease-508.pdf>



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Other specimen types may be submitted with prior approval for surveillance purposes only. Please contact RZBrefdxlab@cdc.gov for more information.