

Louisiana Office of Public Health Laboratories	
Test Name	Rule out Brucella
PHL Location	Office of Public Health Laboratory Baton Rouge
CPT Code	N/A
Synonyms	BT Test, Bioterrorism Test, Clinical Rule Out
Brief Description of Test	<p>Prior notification requested. Contact Infectious Disease Epidemiology at 800-256-2748 or BT Program Advisor at 225-219-5241.</p> <p>To rule out or confirm bacterial isolates as <i>Brucella spp.</i> or to rule out or confirm presence/absence of <i>Brucella spp.</i> in direct patient specimens.</p> <p><i>Brucella</i> is suspected and cannot be ruled out if the isolate fulfills the following characteristics:</p> <ul style="list-style-type: none"> • Direct Gram staining reveals small Gram-negative coccobacillus • Grows on blood without the need to satellite around <i>S. aureus</i> at 24-48 hrs. • Does not grow on MAC (or EMB) • Catalase – positive • Motility – positive • Urea - positive
Possible Results	<p>Direct Sample Testing Presumptive Positive Equivocal Inconclusive Negative</p> <p>Culture Isolate Testing Presumptive Positive. Note: isolate will be sent to LRN for speciation confirmation Equivocal Negative</p>
Reference Range	Negative/Not Detected
Specimen Type	Direct Sample – clinical specimens require prior approval

	A. Collection and Transport of Clinical Specimens for Laboratory Rule-Out Testing	
	Bone marrow or whole blood	<ul style="list-style-type: none"> Considered the best specimen for culture but can be limited in chronic cases. Collect directly into an appropriate blood culture bottle Transport bottles at room temperature as soon as possible to obtain the diagnosis
	Joint or abdominal fluid	<ul style="list-style-type: none"> Collect directly into an appropriate blood culture bottle Transport bottles at room temperature as soon as possible to obtain the diagnosis
	Spleen, liver abscesses	<ul style="list-style-type: none"> Tissue pieces (at least the size of a pea) should be collected and kept moist Transport in sterile container at room temperature within 1 hour of collection
	Serum	<ul style="list-style-type: none"> Collect at least 1 ml without anticoagulant for serologic diagnosis^a Store at 4°C until testing is performed. Acute specimen is collected as soon as possible after onset of disease Convalescent-phase should be collected >14 days after the acute specimen.
<p>^a Tests include the titrated Rose Bengal test, microagglutination test, microtiter-adapted Coombs test, and immunocapture-agglutination test, all of which are more sensitive than EIA tests, which vary in their sensitivity and specificity (3,10).</p> <p>Culture Isolate Actively growing, pure culture inoculated in/on unexpired media</p>		
Specimen Container(s):	Specimen must be transported in “triple” packaging (primary receptacle, water tight secondary packaging and durable outer packaging) required for a biological agent of human disease.	
Minimum volume accepted:	1mL of blood, joint or abdominal fluid, 0.1g of tissue Serum samples would be sent to LRN for serology testing	
Collection Instructions	<p>BSL-2 practices, containment equipment, and facilities are recommended for routine clinical specimens of human or animal origin. Products of conception containing or believed to contain pathogenic Brucella should be handled with BSL-3 practices due to the high concentration of organisms per gram of tissue.</p> <p>BSL-3 practices, containment equipment, and facilities are recommended, for all manipulations of cultures of pathogenic Brucella spp.</p> <p>Package such that each sample is kept separate and is individually labeled, contained in its own bag/container and labeled with a unique identifier.</p> <p>Decontamination of laboratory surfaces is easily accomplished using a fresh solution of 10% bleach.</p> <p>Label specimen with Patient Name and a 2nd Unique Identifier such as a chart number or medical record number. DOB is not considered unique.</p> <p>Complete a LAB Form 93 to accompany the sample. Lab submission form must be thoroughly completed with patient’s first and last name, 2nd patient identifier, gender, date of birth, date and time of collection, specimen source, test requested, submitter’s name, address, fax and contact number. Additional information regarding patients’ address is requested.</p>	

	<p>The same two unique identifiers MUST be recorded on the tube AND the Lab 93 form.</p> <p>Transport specimen to laboratory as soon as possible after collection/incubation. Keep submission forms insulated from specimens.</p>
<p>Storage and Transport Instructions</p>	<p>Culture may be shipped ambient. For storage and transport of clinical samples, contact BT Program Advisor at 225-219-5241.</p> <p>Send sample to the Office of Public Health Laboratory Baton Rouge, 1209 Leesville Avenue, Baton Rouge, LA 70802</p> <p>LRN (Laboratory Response Network) guidance for the packaging and shipping of infectious substances and biological agents should be consulted for recent changes. IATA and DOT publications continue to be revised frequently. Submitters should frequently and regularly consult IATA publications, the Federal Register, and the publications of other governing agencies for more complete instructions. It is the shipper’s responsibility to ensure adherence to the most current regulations.</p> <p>Useful web sites that address the shipping of infectious substances and biological agents: International Air Transport Association: https://www.iata.org Department of Transportation: http://phmsa.dot.gov American Society for Microbiology: http://www.asm.org American Biological Safety Association: http://www.absa.org/ Animal and Plant Health Inspection Service: http://www.aphis.usda.gov/ Centers for Disease Control and Prevention: http://www.cdc.gov/od/ohs/</p>
<p>Causes for Rejection</p>	<ul style="list-style-type: none"> • Incorrect source • Incorrect labeling • Expired collection tubes • Not approved for testing by Infectious Disease Epidemiology
<p>Limitations of the Procedure</p>	<p>If inhibitors are present in a DNA extraction, PCR assays may produce a false negative result.</p> <p>A false negative result may occur if a sample is improperly collected, transported or handled. False negative results may occur if inadequate numbers of organisms are present in the sample.</p>
<p>Interfering Substances</p>	<p>N/A for direct culture testing</p>
<p>References</p>	<p>Sentinel Level Clinical Laboratory Guidelines for Suspected Agents of Bioterrorism and Emerging Infectious Diseases – <i>Brucella spp.</i> http://www.asm.org/images/PSAB/LRN/Brucella316.pdf</p> <p>Laboratory Response Network</p>
<p>Additional Information</p>	<p>If <i>Brucella spp.</i> is suspected, contact Infectious Disease Epidemiology at 1-800-256-2748 or BT Program Advisor at 225-219-5241.</p>

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