Overview

Useful For
Diagnosis of brucellosis in blood specimens

Reflex Tests

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Reporting Name</th>
<th>Available Separately</th>
<th>Always Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMALD</td>
<td>Ident by MALDI-TOF mass spec</td>
<td>No, (Bill Only)</td>
<td>No</td>
</tr>
<tr>
<td>ISAE</td>
<td>Aerobe Ident by Sequencing</td>
<td>No, (Bill Only)</td>
<td>No</td>
</tr>
</tbody>
</table>

Testing Algorithm
When this test is ordered, the reflex tests may be performed and charged.

Method Name
Conventional Culture Technique

NY State Available
Yes

Specimen

Specimen Type
Whole Blood Culture

Advisory Information
Mayo Clinic Laboratories does not perform species identification of Brucella; these isolates should be submitted to the State Health Department laboratory.

Necessary Information
Specimen source is required.

Specimen Required
Container/Tube: Blood Isolator tube

Specimen Volume: Entire collection

Reject Due To
All specimens will be evaluated by Mayo Clinic Laboratories for test suitability.

Specimen Stability Information

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Blood Culture</td>
<td>Ambient</td>
<td>24 hours</td>
</tr>
</tbody>
</table>
Clinical and Interpretive

Clinical Information

*Brucella* species are facultative intracellular Gram-negative-staining bacilli capable of producing the disease “brucellosis” in humans. Human disease likely is acquired by contact with animals infected with the organism (*Brucella abortus*, *B suis*, *B melitensis*, and occasionally *B canis*) either by direct contact or by ingestion of meat or milk. The signs and symptoms associated with brucellosis may include fever, night sweats, chills, weakness, malaise, headache, and anorexia. The physical examination may reveal lymphadenopathy and hepatosplenomegaly. A definitive diagnosis of brucellosis is made by recovering the organism from blood, fluid (including urine), or tissue specimens.

Reference Values

No growth after 14 days

Interpretation

Isolation of a *Brucella* species indicates infection

Cultures of blood and/or bone marrow are positive in 70% to 90% of acute *Brucella* infections, but much less so in subacute or chronic infections. In these latter instances, culture yield is highest from the specific tissue involved, or serology may be necessary to establish diagnosis.

Cautions

Although *Brucella* species are relatively resistant to adverse environmental conditions, excessive delay in the transport of material for culture to the laboratory may result in a lower yield.

If a significant delay is expected, specimens should be refrigerated.

Clinical Reference


Performance

Method Description

Specimens submitted in Isolator tubes are concentrated and inoculated onto blood and chocolate blood agar incubated at 35 degrees C with increased carbon dioxide (CO2). Cultures are incubated for 14 days before issuing a negative report.

Microorganisms recovered are identified by matrix-assisted laser desorption/ionization time-of-flight (MALDI-TOF) mass spectrometry and/or nucleic acid sequencing of the 16S ribosomal RNA (rRNA) gene. Antimicrobial susceptibility testing is not performed on isolates of *Brucella* species. (Araj GF: Chapter 49: Brucella. In Manual of Clinical Microbiology. 12th edition. Edited by KC Carroll, MA Pfaller. Washington DC, American Society for Microbiology, 2019, pp 883-892)
Test Definition: BRUCB
Brucella Culture, B

PDF Report
No

Day(s) and Time(s) Test Performed
Monday through Sunday

Analytic Time
14 days

Maximum Laboratory Time
17 days

Specimen Retention Time
14 days

Performing Laboratory Location
Rochester

Fees and Codes

 Fees
- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact Customer Service.

Test Classification
This test uses a standard method. Its performance characteristics were determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information
87081-Brucella Culture, Blood
87153-Aerobic Ident by Sequencing (if appropriate)
87077-Ident by MALDI-TOF mass spec (if appropriate)

LOINC® Information

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<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<tr>
<td>BRUCB</td>
<td>Brucella Culture, B</td>
<td>551-2</td>
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<table>
<thead>
<tr>
<th>Result ID</th>
<th>Test Result Name</th>
<th>Result LOINC Value</th>
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<tr>
<td>BRUCB</td>
<td>Brucella Culture, B</td>
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