| Collection | • The Rhode Island State Health Laboratories, like Public health laboratories throughout the country, performs diagnostic and reference services in support of the National Plan for elimination of TB in the United States. Since the accuracy of laboratory testing for tuberculosis is directly related to the quality of the specimen, we offer these guidelines for specimen collection and transport. Properly collected and handled specimens provide optimal conditions for AFB recovery. |
| Abscess-General or open cellulitis, eye exudate, tissue, skin lesion | • **Collection:** General: Remove surface exudate by wiping with sterile saline or 70% alcohol. Collect fluid abscess material with Luer tip syringe and/or remove tissue aseptically. For open lesions/abscess, aspirate, if possible, material from under the margin of the lesion/abscess. Remove tissue aseptically.  
**NOTE:** Swabs are not recommended for the recovery of *Mycobacteria* species.  
• **Transport device:** Fluid abscess material should be submitted in a sterile leak-proof container such as a sterile 15 or 50 mL conical tube or sterile urine container. Do not transport the specimen in a commercial swab transport device or in transport medium.  
• **Transport time and temperature:** Transport as soon as possible at room temperature. If transport is delayed for more than one hour, refrigerate.  
• **Comments:** Tissue (at least 1g, if possible) or fluid is preferred. A swab is strongly discouraged unless it is the only specimen available; submit swabs in 2 to 3 mL sterile saline. Swabs submitted in transport medium or a commercial swab transport device are unacceptable. Do not freeze or preserve tissue. |
| Body fluids: abdominal, amniotic, ascites, bile, joint, paracentesis, pericardial, peritoneal, pleural, synovial, thoracentesis | • **Collection:** Aseptically collect 10 mL or more of fluid in a sterile container. Never submit a swab dipped in fluid.  
• **Minimum volume:** 10 mL  
• **Transport device:** Fluid should be submitted in a sterile, leak-proof container such as a 50 mL conical tube or sterile urine collection container.  
**NOTE:** Swabs of fluids are not acceptable for AFB testing and will be rejected.  
• **Transport time and temperature:** Transport as soon as possible at room temperature. If transport is delayed, refrigerate, but do not freeze specimen.  
• **Comment:** Recommended volume is 15 mL. |
| Bone marrow aspirate | • **Collection:** Prepare the puncture site as for surgical incision. Use a blood collector tube and mix contents of tube after collection.  
• **Transport device:** 10mL yellow-top collectors containing SPS are preferred. A sterile, leak-proof container such as a sterile 15 or 50 mL conical tube or sterile urine collection container is also acceptable.  
• **Transport time and temperature:** Transport as soon as possible at room temperature. If transport is delayed, store specimen at room temperature. Do not refrigerate or freeze. |
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<th>Specimen Type</th>
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| **CSF**       | - Collection: Aseptically collect 2 to 3 mL of cerebrospinal fluid.  
                - Minimum volume: 2 mL  
                - Transport device: Sterile, leak-proof container such as a 15 or 50 mL conical tube.  
                - Transport time and temperature: Transport as soon as possible at room temperature. If transport is delayed, store specimen at room temperature. Do not refrigerate or freeze the CSF specimen. |
| **Feces**     | - Collection: Pass specimen directly into a sterile, leak-proof container. Do not use holding or transport medium or preservatives.  
                - Minimum volume: 1g  
                - Transport device: Sterile, leak-proof container such as a 50 mL conical tube or sterile urine collection container.  
                - Transport time and temperature: Transport as soon as possible at room temperature. If transport is delayed for more than one hour, refrigerate specimen. Do not freeze specimen.  
                - Comment: Do not submit rectal swab for mycobacterial culture. |
| **Gastric wash or lavage** | - Collection: Collect in early morning before patients eat and while they are still in bed. Perform lavage with 25 to 50 mL of chilled, sterile, distilled water. Recover sample and place in a leak-proof, sterile container such as a 50 mL conical tube.  
                - Transport device: Gastric wash or lavage material should be submitted in a sterile, leak-proof container such as a sterile 50mL conical tube or sterile urine collection container.  
                - Transport time and temperature: Transport as soon as possible at room temperature. If transport is delayed for more than one hour from time of collection, neutralize with 100 mg sodium carbonate. Store neutralized specimen at room temperature and transport as soon as possible at room temperature.  
                - Comment: Maximum volume of specimen recommended is 15 mL. Please contact the Special Pathogens laboratory prior to submission of this type of specimen. |
| **Respiratory, lower bronchoalveolar lavage, brush or wash, endotracheal aspirate, transtracheal aspirate** | - Collection: Collect washing or aspirate in a sputum trap and place the brush in a sterile, leak-proof container with up to 5 mL of sterile saline.  
                - Minimum volume: 3 mL  
                - Transport device: Transport in sterile container such as a sterile 50mL conical tube or sterile urine collection container.  
                - Transport time and temperature: Transport as soon as possible at room temperature. If transport is delayed for more than one hour, refrigerate specimen. |
| **Sputum, expectorated or induced** | - Collection: Instruct the patient to cough deeply to produce a lower respiratory specimen (not postnasal fluid). Collect in a sterile container.  
                - Minimum volume: 3 mL  
                - Transport device: Sterile container such as a 50 mL conical tube (preferred)  
                - Transport time and temperature: Transport as soon as possible at room temperature. If transport is delayed for more than one hour, refrigerate specimen.  
                - Comments: Early morning sputum specimen is preferred. Do not pool specimens. |
**SP-Guidelines for the Collection and Transport of Specimens for Tuberculosis Testing**

| **Tissue, lymph node** | • **Note:** For initial diagnosis of pulmonary TB, collect a series of 3 sputum specimens, 8-24 hours apart, at least one of which is an early morning specimen. Optimally, specimens should be collected before drug therapy is started, as even a few days of treatment may inhibit growth and prevent isolation of M. tuberculosis complex.  
• **Collection:** Aseptically collect during surgery or cutaneous biopsy procedure.  
**NOTE:** Swabs are not recommended for the recovery of *Mycobacteria* species.  
• **Transport device:** Sterile, leak-proof container, such as a sterile 50mL conical tube.  
• **Transport time and temperature:** Transport as soon as possible at room temperature.  
• **Comments:** Always submit as much tissue as possible. Add 2 to 3 mL sterile saline to tissue for transport. |
| **Urine, including collections from a catheter** | • **Collection:** Collect approximately 40mL of urine (midstream is never advised). A first morning specimen is preferred. Do not pool urine specimens or use preservatives.  
• **Minimum volume:** 10 mL  
• **Transport device:** Sterile, leak-proof container, such as a sterile 50mL conical tube.  
• **Transport time and temperature:** Transport as soon as possible at room temperature. If transport is delayed for more than one hour, refrigerate specimen. |
| **Transport** | • Specimens for TB testing must be transported to the laboratory as soon as possible after collection. Guidelines developed by the APHL TB Steering Committee recommend that specimens be delivered to the public health laboratory within 24 hours of collection.  
• Every effort should be made to eliminate the risk of exposure during the transport of clinical specimens. The use of triple containment is key to achieving that goal. The primary receptacle should be securely closed and placed within a disposable, leak-proof bag (secondary packaging). Per Department of Transportation regulation, the tertiary packaging must be a rigid outer container with a UN3373 label placed on the outside of the container. The Rhode Island State Health Laboratory provides pre-labeled orange-top transport containers for the submission of AFB specimens. |

*Specimens for AFB culture are processed in 50 mL conical tubes. For optimal results, it is recommended that sputum be collected and processed in the same container. Thus, the preference for the 50mL conical tube collection.*

**REFERENCE**

Clinical Laboratory Standards Institute (CLSI), *Laboratory Detection and Identification of Mycobacteria* (M48-A)