

Instructions for Mycobacteria Specimen Collection and Submission

Instructions for Referred Cultures

Sample Acceptability Criteria:

1. Referred Mycobacterium cultures must be submitted on **solid medium**, in screw-cap tubes or Mycobacterium **pellets** in screw-cap tubes. Secure the cap with tape.
2. The requisition form must have the following:
 - a. The patient's name or unique patient identifier.
 - b. The sex and age or date of birth of the patient.
 - c. The test(s) to be performed.
 - d. The source of the specimen, when appropriate.
 - e. The date and, if appropriate, time of specimen collection.
 - f. The submitter's name and location or submitter's code.
3. The specimen container must have the patient's name and/or identification number and must match the name and/or identifier number on the "Communicable Diseases Laboratory Test Requisition."
4. Deliver specimens to the laboratory as soon as possible.

Sample Rejection Criteria:

1. Specimen not labeled.
2. The names on the specimen and requisition form do not match.
3. Broken specimen containers or leaking specimens
4. Specimen in non-sterile container
5. Prolonged delivery time
6. Insufficient culture growth or pellets

Referred Mycobacterium tuberculosis complex (MTBC) isolates sent for genotyping testing:

1. All laboratories are required to send one isolate per patient with culture-confirmed TB to the IDPH Lab for genotyping.
2. This requirement is in the Control of Tuberculosis Administrative Code (Section 696.170-part d) on Reporting from Laboratories:
 - a. Laboratories shall send one isolate for each person to the State Public Health Laboratory within seven days after culture results are positive for the MTB complex.
 - b. If specimens are submitted to an out-of-state reference laboratory, the submitter shall ensure that the isolate is sent to the State Public Health Laboratory.
3. If your laboratories perform susceptibility testing on the isolate, please fax or email the report upon test completion. This report will ensure patients are receiving appropriate treatment and help reduce redundant testing.

Packaging and Shipping of Mycobacterium Tuberculosis Referred Cultures:

1. Package as a Category A infectious substance using United Nations (U.N.) certified 6.2 packaging according to DOT 49 Parts 171-178 and the U.S. Postal Service regulations.
2. If you are using a private carrier (i.e., Fed Ex) follow their requirements.
3. Following the certified packaging manufacturer's instructions for packaging and labeling compliance with the regulations is the shipper's responsibility.

Instructions for Specimens sent for Diagnosis

Acceptable Specimens Criteria:

1. Successful isolation of the pathogen requires that the best specimen be properly collected, promptly transported, and carefully processed.
2. If possible, collect specimens before chemotherapy is started.
3. Collect specimens in sterile, leak-proof containers; DO NOT use waxed containers.
4. Label the specimen container with the patient's name and/or identification number.
5. Identification must match the name on the requisition.
6. Complete the requisition to include the patient's name, provider name and location or provider code; collection date and time, and test requested.
7. Label induced sputum specimens as "Induced" since they resemble saliva.
8. Collect only one early morning specimen on three different days (only 1/day); **Do Not Pool specimens.**
9. Collect specimens aseptically, minimizing contamination with indigenous microbiota.
10. Collect sufficient materials for the test requested. **Refer to attached chart, "Specimen Requirements for Mycobacterial Isolation," for additional information.**
11. For optimal pulmonary specimens (not saliva or nasopharyngeal discharge), collect sputum from the lung after a deep, productive cough.
12. Other acceptable pulmonary specimens are bronchial washing, bronchial biopsies, bronchial brushing, and trans-tracheal aspirate.
13. Collect body fluids aseptically, such as spinal, pleural, pericardial, synovial, ascitic fluids, blood, pus, and bone marrow.
14. Use yellow top tubes and isolator tubes for blood and bone marrow.
15. Consider collecting gastric aspirate if other methods fail to produce a valid specimen. See page three for special instructions for this source.
16. Collect laryngeal swabs from children or patients unable to produce sputum.
17. Urine specimens:
 - a. Submit a single first morning specimen.
 - b. Wash the external genitalia before the specimens are collected.
 - c. Process the urine immediately or refrigerate.
 - d. **Urine specimens are not recommended for the isolation of Mycobacteria.**
18. Transport specimens to the laboratory as soon as possible; specimens should reach the laboratory within 5 days of collection.

Sample Rejection Criteria:

1. Swabs are not recommended for the isolation of Mycobacteria.
 - a. They are acceptable ONLY if a specimen cannot be collected by other means.
 - b. This must be stated on the test requisition.
 - c. The laboratory smear report will state that the specimen was submitted on a swab and another specimen should be submitted as soon as possible.
2. Specimens received more than 5 days after collection will be rejected as unsatisfactory.
3. Specimens that have leaked
4. Blood collected in ethylene diamine tetra-acetic acid (EDTA)
5. Specimens collected in formalin.
6. All pooled specimens are unacceptable.
7. Unlabeled specimens.
8. Specimen Name/ID number on specimen does not match on requisition form.

Instructions for Packaging and Shipping Specimens for Diagnosis:

Messenger/Courier by ground transport

1. Wrap specimen in absorbent material.
2. Place wrapped specimen into a biohazard labeled bag and seal securely.
3. Place the test requisition on the outside of the biohazard labeled bag.
4. Place the sealed biohazard bag and test requisition inside the shipping container.
5. The shipping container must be rigid such as a cooler and labeled with the UN 3373 f.
6. Biological Substance Category B marking.
7. Close securely

Commercial carrier by ground/air transport

1. Wrap specimen in absorbent material.
2. Place the wrapped specimen inside a biohazard labeled 95 kPa bag and seal following the instructions on the bag.
3. Place the test requisition on the outside of the 95 kPa bag.
4. Place the sealed 95 kPa bag and completed test requisitions inside the outer shipping container and close securely.
5. Label the outer shipping container with the appropriate Illinois Department of Public Health laboratory address.
6. Complete the return address section to include the name of the person shipping the package, business name and address and a business phone number.
7. The shipping container must include the UN3373 Biological Substance Category B marking.

If the specimen(s) cannot be shipped immediately:

1. Store at 4 to 8° C.
2. Transport specimens to the laboratory as soon as possible
 - a. Specimens must reach the laboratory within 5 days of collection.

Send to:

Illinois Department of Public Health
Division of Laboratories
2121 W. Taylor St.
Chicago, IL 60612
Phone: 312-793-1063
Fax: 312-793-7764

SPECIMEN REQUIREMENTS FOR MYCOBACTERIAL ISOLATION

Specimen Type	Optimal Specimen Requirements	Special Instructions
Abscess content, aspirated fluid	>1mL in sterile screw capped tube	Cleanse skin with alcohol before aspirating sample. Disinfect site as for routine.
Blood	10 mL (yellow top) blood collection tube	Blood culture. Mix tube contents immediately after collection.
Body Fluids	As much as possible in a sterile container	Volumes of <10 mL may be directly inoculated into MGIT tubes.
Bone	Bone in sterile container without fixative	
Broncho-alveolar lavage or bronchial washing	>5 mL in sterile container	Collect aseptically
Bronchial brushing	Bronchial brush in sterile container	
CSF	>2 mL in sterile container	Use maximum volume attainable.
Gastric aspirate	>5-10 mL in sterile container	Collect early morning specimen on three consecutive days. Adjust pH by adding 100 mg of sodium carbonate following collection.
Lymph node	Node or portion without fixative	Collect aseptically.
Skin lesion	Submit biopsy in sterile container	Collect biopsy from periphery of lesion or aspirate material from under margin of lesion.
Sputum	5 mL in sterile, wax-free disposable container. Collect an early morning specimen from deep, productive cough on at least three different days. Do not pool specimens. For follow up on patient therapy, collect at weekly intervals beginning after initiation.	Instruct patient on how to produce sputum. Have patient rinse mouth with water before collecting.
Stool	>1 gm in sterile container	Collect specimen directly into container.
Tissue biopsy sample	Gram of tissue in sterile container	Collect aseptically.
Urine	Minimum 40 mL of first morning specimen	Collect first morning specimen on three different days. Accept only one specimen per day.
Trans-tracheal aspirate	As much as possible in sterile container	