

TB Specimen Requirements

The Respiratory Disease Division provides diagnostic and reference services to both public and private health care providers. This Division receives a grant from CDC from the Division of TB Elimination (DTBE) to enhance its activities. This laboratory is open Monday through Friday except for holidays. All specimens received by 7:30 a.m. will have a fluorescent smear result posted that day; in addition, all smear positive specimens will be called by telephone. Cultures will be reported as they become positive and a copy of all TB positive smear and culture results will be forwarded to State TB Control. All negative reports are finalized at 8 weeks. Drug susceptibilities (DST) are routinely done on all new TB patients. DST's are automatically repeated every 3 months as long as the patient is still culture positive. The only non-tuberculosis *Mycobacteria* that receives routine DST is *M. kansasii*. All other species of *Mycobacteria* for DST will be done by special request only.

Specimen Collection:

The Respiratory Disease Division requires that all specimens be submitted in a Corning orange capped centrifuge tube that is supplied by us. We also need both smear and culture forms filled out so that all four copies are legible. Date of collection on the form and patient name on the specimen are mandatory by Federal Regulations. These may be shipped in a double walled container that meets USPS regulations. We provide mailing containers to the County Health Department providers. Private providers must obtain their own mailers, and we will return them as a service. The centrifuge tubes, forms, and Zorb™ sheets are provided to everyone at no cost.

Sputum

A 5-10 ml. sample is best for the detection of *M. tuberculosis* complex. We do not pool samples. More than 10 ml. is not desirable and can possibly cause leaks. An ideal specimen should arrive at the laboratory within 24 hours of collection. If it must be held for any reason, please refrigerate it. A series of 3 early morning specimens are the most desirable with the first one being collected before antimicrobial therapy has begun. Specimens should be submitted as they are collected.

Bronchial Washings/ BAL

A 5-10 ml. sample is best for the detection of *M. tuberculosis* complex. More than 10 ml. is not desirable and can possibly cause leaks. These specimens should arrive at the laboratory within 24 hours of collection. If it must be held for any reason, please refrigerate it.

Gastric Washings

A gastric washing is very acidic; therefore, it is toxic to *Mycobacteria*. Please buffer these specimens before shipping. Please keep at ambient temperature and ship immediately for best results.

Urine

A series of three 5- 10 ml. samples that are clean catch first morning specimens are the best specimen. (Twenty four hour specimens are strongly discouraged.) See **Sputum** above for additional information.

Stools

Stools are not optimal for the recovery of *Mycobacteria*. Please submit no more than 5 ml. of specimen.

Sterile Specimens

All specimens collected surgically are considered sterile. Please indicate the exact specimen source especially if it is a wound, abscess, or exudate. Please do not add any preservative to the specimen. Swabs are not the best method for transport, but will be accepted. Please identify all autopsy specimens as such. Refrigerate if there is to be a delay in shipping.

Bloods, Bone Marrows, and CSF

These specimens should remain at ambient temperature while in transit. Do not refrigerate. Cerebral spinal fluids (CSF) that have less than 1 ml. volume will be QNS (quantity not sufficient) for smear will be so noted on the smear slip, and the culture will still be performed. Bloods and Bone Marrows will not be put into a broth system due to the interaction of blood in this method. They will be cultured by traditional agar methods.

Cultures for Identification

Please refer to shipping regulations for UN 6.2 Category A (*M. tuberculosis* complex) and for UN 3373 Category B (any other *Mycobacteria*). All broths should be centrifuged and the supernatant removed. All slants should have the moisture decanted from the bottom of the slant and wrap the lid with parafilm to prevent leakage. Please fill out both smear and culture forms, although only the culture form will be returned. If the culture is *M. tuberculosis* complex, a DST will be automatically performed according to CDC guidelines.

Nocardia Suspected Cultures

If *Nocardia* species is suspected in a patient or culture, please send it directly to the Mycobacteriology section. Please complete an AFB smear and culture form to accompany the specimen. Ship as described above.

Drug Susceptibility Testing

All first time TB patients will receive a drug susceptibility (DST) consisting of first line drugs, including Isoniazid (INH), Rifampin, Ethambutol, Streptomycin, and Pyrazinamide (PZA). This panel is done by the Bactec 960 broth method. It will automatically be repeated at every 3 month interval as long as the patient is culture positive.

If any of the above drugs appears to be resistant, a full panel of drugs will be done by the agar proportion method. These drugs include two dilutions of INH, two dilutions of Streptomycin, Rifampin, Ethambutol, Kanamycin, Ethionamide, and Ofloxacin. Capreomycin and Cycloserine are also available upon request. We have the ability to ship specimens for further studies to other locations. This is especially useful for non-tuberculosis *Mycobacteria* that may require a DST. To request additional testing please contact the lab at 334-260-3400.