

***Mycobacterium tuberculosis* complex drug susceptibility**

Revised 9/25/2023

Test Description	Drug susceptibility testing (DST) of <i>Mycobacterium tuberculosis</i> complex (MTBC) isolates to the anti-tuberculous drugs rifampin, isoniazid, pyrazinamide, ethambutol. Streptomycin testing is referred upon request.
Test Use	To inform effective drug therapy decisions in patients diagnosed with tuberculosis.
Test Department	Mycobacteriology Laboratory Phone: (860) 920-6649 FAX: (860) 920-6721
Methodology	BACTEC™ MGIT™ 960 Method.
Availability	Daily, Monday-Friday. Results generally available within 14-21 days from identification of <i>Mycobacterium tuberculosis</i> complex in culture.
Specimen Requirements	Pure culture isolates of MTBC on solid or in liquid media commonly used for the isolation of mycobacteria, such as Lowenstein-Jensen and Middlebrook agar, and media from automated test systems (e.g. BACTEC™ MGIT™ broth).
Collection Kit/Container	Follow applicable federal regulations for packaging of infectious substances.
Specimen Handling & Transport	Transport cultures to the laboratory at room temperature (15-25°C). Avoid temperature extremes. Cultures suspected to contain <i>M. tuberculosis</i> must be packaged and shipped in accordance with "Category A Infectious Substances" guidelines.
Unacceptable Conditions	Unlabeled specimen. Specimens that have leaked or containers that have broken in transit. Cultures mixed with non-tuberculous mycobacteria or non-acid fast bacteria.
Requisition Form	Clinical test requisition OL-9B (select AFB Referred Culture). Drug susceptibility testing is automatically performed on all initial patient isolates of MTBC. Contact the Mycobacteriology Laboratory to request drug susceptibility testing on subsequent patient isolates as necessary.
Required Information	Name and address of submitter. Two patient identifiers (ie. name, DOB, Acc. #, MRN), Town of residence (city, state, zip), specimen type or source of collection, date of collection, test requested. Please ensure information on requisition matches that on the specimen.
Limitations	Drug susceptibility testing is not performed on non-tuberculous mycobacteria. Drug susceptibility testing cannot be performed on MTBC cultures mixed with non-tuberculous mycobacteria or other acid-fast or non-acid fast organisms.
Additional Comments	<ul style="list-style-type: none"> • MTBC isolates resistant to at least rifampin are automatically forwarded to CDC for Molecular Detection of Drug Resistance (MDDR) testing. Results are generally available within 3-5 days of culture receipt by the CDC. Contact the Mycobacteriology Laboratory for more information. • MTBC isolates showing resistance to isoniazid and/or ethambutol are automatically sent to CDC for confirmation of resistance using the Indirect Agar Proportion Method. This testing requires a minimum of 21 days from initiation of testing by CDC.