

CDC Model Performance Evaluation Program (MPEP) for
Mycobacterium tuberculosis Drug Susceptibility Testing

Attachment 11
Expected Results Report

March 2024 TB MPEP

Expected Results Report

Results listed are expected results and may not necessarily be consistent with aggregate data when results from all participating laboratories are analyzed. Please refer to the forthcoming Final Report for aggregate data and detailed information for each isolate.

Expected Growth-based Results

Isolate	RIF	INH	EMB	PZA	FQ	Second-line Drug Resistances:
2024A	S	R (low-level*)	S	S	S	
2024B	S	S	S	S	R	
2024C	S	R (high-level†)	S	S	S	
2024D	R	S	S	S	S	RBT
2024E	S	S	S	R	S	

Note: RIF=rifampin, INH=isoniazid, EMB=ethambutol, PZA=pyrazinamide, FQ=fluoroquinolones, RBT=rifabutin, S=susceptible, R=resistant. Growth-based DST results were obtained by agar proportion method, except for pyrazinamide, in which MGIT™ was performed.

*Resistant at 0.2 µg/ml by agar proportion.

†Resistant at 0.2 and 1.0 µg/ml by agar proportion.

Expected Molecular Results

Isolate	<i>rpoB</i> *	<i>inhA</i>	<i>katG</i>	<i>gyrA</i>	<i>pncA</i>
2024A		C-15T			
2024B				Ala90Val	
2024C			Ser315Thr		
2024D	Ser450Leu				
2024E					His57Asp

Note: Empty cell=No mutation detected. Molecular results were obtained by whole genome sequencing. High confidence mutations were not detected in these loci: *fabG1*, *embB*, *ethA*, *eis*, *rrs*, and *tlyA*.

* *M. tuberculosis* numbering system used [1, 2]

1. Andre, E., et al., *Consensus numbering system for the rifampicin resistance-associated rpoB gene mutations in pathogenic mycobacteria*. Clin Microbiol Infect, 2017. **23**(3): p. 167-172.
2. APHL, *Issues in Mycobacterium tuberculosis complex (MTBC) Drug Susceptibility Testing: Rifampin (RIF)*, in APHL *Issues in Brief: Infectious Diseases*. 2019, Association of Public Health Laboratories: Washington, D.C.