

# Diagnostic stewardship for tuberculosis (TB) testing

BD offers a legacy of trust and leadership in options for TB testing



From specimen collection to final result, BD offers products to support *M. tuberculosis* and other mycobacteria testing needs



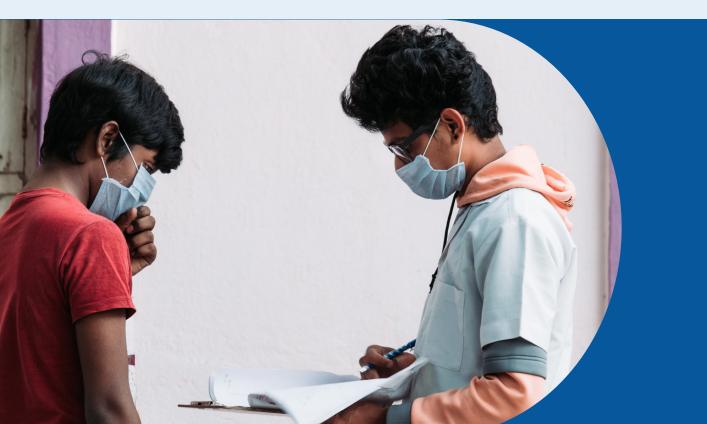
The COVID-19 pandemic has **reversed years of global progress** in tackling tuberculosis.<sup>1</sup>



For the first time in over a decade, **TB deaths have increased**, according to the World Health Organization's 2020 Global TB report.<sup>1</sup>



In the face of **increasing multidrug-resistant TB (MDR-TB)** BD offers both culture based drug susceptibility testing (DST) and rapid molecular testing.





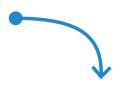
### **Specimen collection** with BD<sup>®</sup> Sputum Collection System



## Digestion, decontamination, staining and microscopy

with the BD BBL<sup>™</sup> Mycoprep<sup>™</sup> kit and BD BBL<sup>™</sup> Acid Fast and Fluorescent Stains





Direct molecular testing with the BD MAX<sup>™</sup> Automated Molecular System



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#### Fully automated liquid culture with the BD BACTEC<sup>™</sup> MGIT<sup>™</sup> System

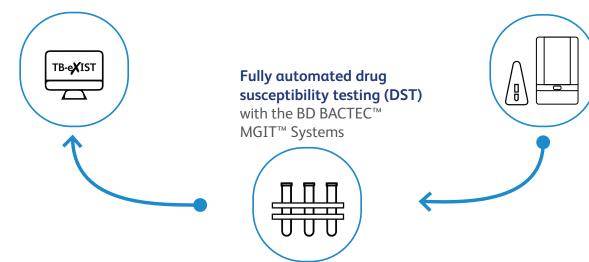


## Data management and reporting tools

with the BD EpiCenter<sup>™</sup> Data Data Management System and TB-eXiST\* Extended Susceptibility Testing Software

## Direct, fast ID from culture

with the BD MGIT™ TBc Identification Test\* and the BD Bruker MALDI Biotyper®



\*Ex-US only

# The gold standard in phenotypic testing continues the legacy of trust

The BD BACTEC<sup>®</sup> MGIT<sup>®</sup> Mycobacterial System<sup>2</sup> offers:

- Detection and drug susceptibility testing for example: Streptomycin, Isoniazid, Ethambutol, Pyrazinamide and Rifampin
- Plastic tubes and no sharps for safe handling





## Innovation in molecular testing with a rapid, multiplex test—four results in one test

## MDR-TB Assay on the BD MAX<sup>®</sup> Molecular Diagnostic System<sup>3</sup>

An integrated molecular assay for the detection of TB complex and mutations associated with the resistance of Rifampin and Isoniazid in one test.

- Simple implementation and a standardised workflow<sup>4</sup>
- Fully automated testing for IVD and open-system reagent capabilities<sup>4,5</sup>
- Allows for increased throughput without additional staff<sup>5</sup>
- Requires no visual interpretation of results<sup>6,7</sup>
- Easy to use<sup>8</sup>

The WHO recommends testing for genetic mutations associated with resistance to isoniazid (katG or inhA).<sup>8</sup>

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## **BD MAX<sup>™</sup> MDR-TB**

A single test. One assay. Four results.

MTB
RIF-R
INH-R (katG and inhA)

## sting bciated d

## Data Management

The BD EpiCenter<sup>®</sup> data management system provides advanced informatics capabilities that are designed for the continuous monitoring, analysis and reporting of all TB testing on BD BACTEC<sup>®</sup> MGIT<sup>®</sup>. The optional TB-eXiST module (ex-US only) supports processing and reporting custom drug susceptibility testing.

- Simplified LIS interfacing
- Flexible reporting and analytics
- Customized DST panels with multiple drugs and concentrations, and growth curve displays to support interpretation.

# A comprehensive portfolio of TB testing products



#### **BD BACTEC**<sup>®</sup> MGIT<sup>®</sup> Instruments

Cat. No.	Description	Quantity
441743	BD BACTEC <sup>™</sup> MGIT <sup>™</sup> 320	320 tubes
445870	BD BACTEC <sup>™</sup> MGIT <sup>™</sup> 960	960 tubes



## BD BACTEC™ MGIT™ tubes and supplements Cat. No. Description Quantity 245122 BD BACTEC™ MGIT™ Mycobacteria Growth Indicator Tubes 7 mL 100/pk 245124 BD BACTEC™ MGIT™ 960 Supplement Kit 100/pk



BD MAX <sup>™</sup> Instrument				
Cat. No.	Description	Quantity		
441916	BD MAX™ Molecular Diagnostic System	1		

CE



#### BD MAX<sup>™</sup> Assays

Cat. No.	Description	Quantity	
443878	BD MAX™ Multi Drug Resistant Tuberculosis (MDR-TB) assay including PCR reagents	24 tests	<b>CE</b> 2797
443806	BD MAX <sup>™</sup> STR including raw and processed sputa samples treatment reagent	48 tests	CE
437519	BD MAX <sup>™</sup> PCR Cartridges	24 tests	CE

## BD BACTEC™ MGIT™ 1st line drugs, media and kits



Cat. No.	Description	Quantity
245123	SIRE KIT, 1 bottle each: Streptomycin, Isoniazid, Rifampin, Ethambutol	
245125	Streptomycin 4.0 Kit	1/pk
245126	Isoniazid 0.4 Kit	1/pk
245127	Ethambutol 7.5 Kit	1/pk
245157	IR (Isoniazid and Rifampicin) Kit (2 vials PZA and 6 vials PZA supplement)	1/pk
245128	PZA Drug Kit	1/pk
245115	PZA Medium	25/pk
245114	PANTA Antibiotic Mixture, Lyophilized	6/pk
245116	OADC Enrichment	6/pk C

### **BD BACTEC MGIT 2nd line drugs\***

Cat. No.	Description	Quantity
215348	Kanamycin* (830 ug/vial, lyophilized)	6/pk
215404	Moxifloxacin* (249 ug/vial, lyophilized)	6/pk
215350	Amikacin* (332 ug/vial, lyophilized)	6/pk
215351	Capreomycin* (830 ug/vial, lyophilized)	6/pk
215352	Ofloxacin* (664 ug/vial, lyophilized)	6/pk
215355	Ethionamide* (830 ug/vial, lyophilized)	6/pk
215356	p-aminosalicylic acid* (1328 ug/vial, lyophilized)	6/pk
215449	Bedaquiline* (170 ug/vial, lyophilised) requires DMSO diluent, sold separately Available ex-US only	2/pk
246017	DMSO Diluent* (16 mL/vial)	2/pk
	215348 215404 215350 215351 215352 215355 215356 215449	215348Kanamycin* (830 ug/vial, lyophilized)215404Moxifloxacin* (249 ug/vial, lyophilized)215350Amikacin* (332 ug/vial, lyophilized)215351Capreomycin* (830 ug/vial, lyophilized)215352Ofloxacin* (664 ug/vial, lyophilized)215355Ethionamide* (830 ug/vial, lyophilized)215356p-aminosalicylic acid* (1328 ug/vial, lyophilized)215449Bedaquiline* (170 ug/vial, lyophilised) requires DMSO diluent, sold separately Available ex-US only

\*For laboratory use only. Not for drug, household or other uses.



## Specimen collection and decontamination

Cat. No.	Description	Quantity
290020	BD Sputum Collection System	72
240862	BD MycoPrep™ specimen decontamination kit – 75 mL	Kit
240863	BD MycoPrep™ specimen decontamination kit – 150 mL	Kit
		CE

Prepared tubed media			
Cat. No.	Description	Quantity	
220908	Lowenstein-Jensen Medium Slants. 20 x 148 mm tube with cap	Pkg. of 10	
220909	Lowenstein-Jensen Medium Slants. 20 x 148 mm tube with cap	Ctn. of 100	
		CE	



Cat. No.	Description	Quantity
212521	BD BBL™ TB Stain Kit T	1 Each
	1 250 mL bottle each of TB Auramine-Rhodamine T,	
	TB Decolorizer TM, TB Potassium Permanganate	
212522	BD BBL™ TB Stain Kit K	1 Each
	1 250 mL bottle each of TB Carbolfuchsin KF,	
	TB Decolorizer, TB Brilliant Green K	
		(



## Rapid confirmatory testing

Cat. No.	Description	Quantity
245159	BD MGIT™ TBc Identification Test	25/pk

#### **References:**

- 1. BD-65863 BD\_BACTEC\_MGIT\_Systems\_EMEA. 2. BD-30038 MDR\_TB\_Brochure.
- 3. FIND BD BACTEC" MGIT" 960 TB User Manual 2006.
- A. Bauman M. Transitioning from culture to molecular: implementation and integration of BD MAX<sup>®</sup> Enteric Bacterial Panel at Cincinnati Children's Hospital. BD Advertorial. Franklin Lakes, NJ: Becton, Dickinson and Company, 2015.
   5. Hirvonen JJ, Kaukoranta S-S. Comparison of BD MAX Cdiff and GenomEra C. difficile molecular assays for detection of toxigenic Clostridium difficile from stools in

- conventional sample containers and in FecalSwabs. *Eur J Clin Microbiol Infect Dis.* 2015:1-5. 6. BD MAX<sup>-</sup> Enteric Bacterial Panel [package insert]. Becton, Dickinson and Company: Franklin Lakes, 2014. 7. Shah M, Paradis S, Betz J, et al. Multicenter Study of the Accuracy of the BD MAX Multidrug-resistant Tuberculosis Assay for Detection of Mycobacterium tuberculosis Complex
- and Mutations Associated With Resistance to Rifampin and Isoniazid. *Clin Infect Dis.* 2020;71(5):1161-1167. 8. World Health Organization. *WHO consolidated guidelines on drug-resistant tuberculosis treatment*. Geneva: 2019. Accessed June 30, 2020.

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