

International Clinical Laboratories *Test Review*



Automated TB Detection-MGIT 960 System

In the management of tuberculosis epidemics rapid detection of infective patients and early detection of drug resistance is crucial. Multidrug resistant *Mycobacterium tuberculosis* (MDR-TB) has also recently become a serious public health problem. Resistance to any of the primary drugs, including pyrazinamide, makes the disease more difficult and expensive to treat. There has also been an increase in the number of infections caused by mycobacteria other than *Mycobacterium tuberculosis* (MOTT), which pose a particular threat to the growing populations of immune compromised patients. Consequently, the major targets for improvement of the laboratory diagnosis of mycobacterial infections centers are speeding up detection and identification of mycobacteria and rapid detection of resistant isolates and also increasing the sensitivity of detection of MOTT.



The new automated MGIT 960 system is the world first instrumented system for mycobacteria testing and stills the benchmark of quality and reliability. The BACTEC MGIT 960 System is noradiometric. It uses MGIT media and patented sensors, making efficient use of advanced fluorometric technology, which permits highly accurate detection of O₂ consumption without sharps. The BACTEC MGIT 960 instrument automatically directs the placement of each tube within the instrument and indicates positives with both a visual and an audible signal as they occur. Fully automated testing identifies positives often at a much faster rate than other conventional methods. **Automated quality control** is performed continuously to ensure precise and reliable operation. Results are provided as **positive/ negative** and numerical **Growth Units**. It has also enhanced isolation of MOTT, particularly the *M. avium* complex. It is also used for the antimicrobial susceptibility testing of mycobacteria, including SIRE (streptomycin, isoniazid, rifampin and ethambutol) and PZA (pyrazinamide) for a qualitative test lasting 4 - 17 days. Thus, faster results with MGIT 960 will improve patient care and lower health care costs by reducing hospital stays.

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Thus, ICL is proud to present you with the new automated MGIT 960 system which identifies positives often at a much faster rate than other conventional methods-**starting from 8 days**. Other bacteriological tests combined with our **Quality control certified**- Pre-plated media and API identification system- and the new automated BD BACTEC™ 9050 blood culture system improve the efficiency of your Microbiological diagnosis.

1. Hanna B A, Ebrahimzadeh A, Elliott L B, Morgan M A, Novak S M, Rusch-Gerdes S, Acio M, Dunbar D F, Holmes T M, Rexer C H, Savthyakumar C, Vannier A M. Multicenter evaluation of the BACTEC MGIT 960 system for recovery of mycobacteria. J Clin Microbiol. 1999; 37:748-752.
2. Chew W K, Lasaitis R M, Schio F A, Gilbert G L. Clinical evaluation of the Mycobacteria Growth Indicator Tube (MGIT) compared with radiometric (Bactec) and solid media for isolation of *Mycobacterium* species. J Med Microbiol. 1998; 47:821-827.

INTERNATIONAL CLINICAL LABORATORIES /ICL/

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