



"Advantages in every dimension"

BacT/ALERT 3D TB Culture



1. **BacT/ALERT[®] 3D**

Instrumentation

The **BacT/Alert 3D** system offers the most **technologically advanced** fully automated walk away microbial detection system presently available in the world.

The **BacT/ALERT 3D** offers **advantages in every dimension** of microbial growth detection utilizing the same **proven colorimetric detection system** as the old classic system. Sophisticated algorithms are designed to detect microorganisms early, even with **delayed entry**.

The BacT/ALERT 3D systems deliver high performance detection of positive results as they occur, and the industry's lowest false positive rates. Based on bioMérieux's proprietary colorimetric sensor technology, each culture bottle is continuously monitored for organism growth by a highly sensitive reflectometer. Changes are immediately recognized and reported via visual and audible alerts.

The Cell Flag present in each cell provides a physical standard of reflectance and this eliminates manual calibration checks. There is **no need** for **daily quality control check** on the system, as the system performs this function itself. **This is unique to the 3D system.**

All **BacT/ALERT 3D** systems share a common operator interface with touch screen, icon driven commands that make procedures easy to follow with minimal training. The unique and patented bottle detection system allows random loading and unsurpassed workflow efficiencies. Consequently, the potential for human error is dramatically reduced.

In the event of power failure the cabinets have backup battery power and data will be stored in the cabinets until such time as power is restored to the system within 36 hours.

The **BacT/ALERT 3D** are manufactured to the highest quality standards in the industry (ISO 9001, FDA, and Quality systems Regulations).

The **BacT/ALERT 3D** has **modular design** and delivers excellent performance with unsurpassed information management capabilities. The 3D family consists of the original **BacT/ALERT 3D 240**; the **BacT/ALERT Combination Module 120** and the **BacT/ALERT 3D 60**.

The modular design of this system provides flexibility for changing volumes and the needs of each laboratory. The modular design also adapts to the layout of any laboratory.

The ability to stack incubator modules frees valuable laboratory space and helps the laboratory to increase throughput in the same space. If the laboratory has extreme space constraints the BacT/Alert 3D will help to save space.

BacT/ALERT 3D 240:

The BacT/ALERT 3D 240 consists of the **Controller Module** (Figure 1) and the accompanying **Incubator 240 module** (Figure 1).

The **Controller Module** manages all of the incubator functions such as loading and unloading of bottles, collects the data as the instrument reads the bottles and analyses the readings. The Controller software is a touch LCD screen with graphical user interface, making it user friendly and easy to operate with single step loading and unloading of bottles. The controller module can link up to six incubator modules.

The **Incubator module** consists of 4 drawers and each contains 60 cells for bottles. The total capacity of each incubator module is 240 cells. Each incubation drawer may be configured for processing blood, body fluids or mycobacterium testing.



Figure 1: BacT/ALERT 3D 240

The system has small dimensions only one third of the size of other systems, with the same capacity.

The dimensions are:

Incubator Module	width	48,8 cm
	height	90,0 cm
	depth	60,8 cm
	Weight	110 kg with 240 bottles

Controller Module	width	35,6 cm
	height	91,4 cm
	depth	61,7 cm
	weight	57,2kg

The system is expandable and six incubator modules can be linked to one controller module for a total capacity of 1440 bottles. The system also has **small dimensions** only **one third** of the size of other systems, with the same capacity.

The system was designed with the operator in mind as either left or right handed incubator modules are available to minimize body movement during loading of bottles.

BacT/ALERT 3D Combination Module 120:

The **BacT/ALERT 3D Combination Module** (Figure 2) combines the BacT/ALERT 3D capabilities in a surprisingly compact format: a Control and Incubation module in a single instrument.

The system shares the user interface of the BacT/ALERT 3D 240 system and consists of 2 drawers, each containing 60 cells for bottles for an on-board capacity of 120 bottles. The system is expandable and up to three 240 Incubator Modules can be added, expanding the systems capacity to 840 bottles.

The BacT/ALERT Combination Module 120 brings the advantages of the **BacT/ALERT 3D** to medium volume laboratories.

The system dimensions are 50 x 78 x62 cm and weighs 90 kg.



Figure 2: BacT/ALERT 3D Combination Module 120

2. **BacT/ALERT[®] 3D**

Media

The system uses advanced colorimetric detection of carbon dioxide reduction and a sophisticated computer algorithm, for the detection of positive cultures. It provides a fast time to detection of positives (**98% of all positives are detected within 72 hrs**). The LES sensor at the bottom of each bottle undergoes a **colour change** from blue to yellow; this **change is permanent and visible**.

No venting of aerobic cultures is required.

All media formulations are available in revolutionary **PLASTIC BOTTLES**. These bottles are **virtually unbreakable** eliminating accidental spills, potential biohazard exposure and glass cuts. The bottles can be used in the **pneumatic transport** system without the need for dedicated transport containers.

The bottles are also **30% lighter** than the glass bottles, which **reduce disposable costs** dramatically.

The BacT/Alert has a history of **unsurpassed recovery of rare microorganisms**. This includes recovery of fastidious, micro aerophilic, anaerobic microorganisms, as well yeast and fungi.

Pre-printed bar code labels assign unique ID numbers to each bottle, this reduces data entry and clinical errors. BacT/Alert culture bottles are available in several media formulations with color-coded labels and caps for easy identification.

BacT/ALERT Blood collection adapters can be used for direct draw of the blood cultures and BacT/ALERT Blood Collection Adapter Inserts can be used to facilitate collection of evacuated tubes after filling blood culture bottles.

All BacT/ALERT media are **FDA cleared** and compliant with the in-vitro diagnostics directive of the European Community.

All BacT/ALERT standard and FAN media are **exempt from user quality control** under NCCLS guideline M22-2A.

Pre-printed bar code labels assign unique ID numbers to each bottle, this reduces data entry and clinical errors. BacT/Alert culture bottles are available in several media formulations with color-coded labels and caps for easy identification.

Mycobacterial testing:

For Mycobacterial testing the drawer rocking mechanism is disabled. It is possible for both the 240 and 120 systems to combine both blood culture and mycobacteria culture in the same instrument.

For Mycobacterial testing 2 bottles are available:

- The **MP Process Bottles** are for all specimen types except whole blood. The bottles contain 10ml. of Middlebrook 7H9 media. An antibiotic supplement is added to each bottle to prevent bacterial or fungal growth, the supplement contains: Polymixin B, Azlocillin, Nalidixic Acid, Trimethoprim, Amphotericin, Vancomycin and growth factors. It is also tinted red for procedural integrity
- The **MB Blood bottles** are for Mycobacteria detection in whole blood, and contain an anticoagulant as well as a lytic agent.

The MB/BacT Process bottles are FDA Approved.



Figure 9:
BacT/ALERT MB
Blood



Figure 10:
BacT/ALERT MB
Process