



Life connected to every blood culture

Your choice in blood culture solution can affect blood stream infection management goals and improve laboratory outcomes.



Managing and preventing sepsis are key challenges faced by healthcare institutions

Clinical studies have demonstrated a twofold increase in mortality caused by sepsis when inappropriate antimicrobial therapy is given¹

An estimated **48.9 million cases of sepsis** were reported in 2017 with an estimated **11 million deaths** reported²



BD offers an integrated blood culture solution across all three phases of the diagnostic pathway, that may help in clinical decision making

Pre-analytical phase

The right diagnosis begins with proper specimen collection

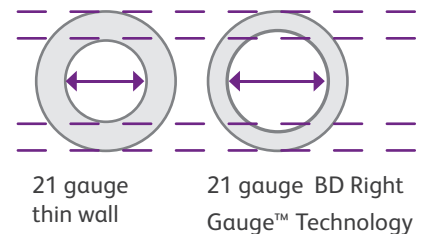


Challenges in patient preparation and specimen collection may result in pre-analytical errors, accounting for up to 70% of all clinical errors made in laboratory diagnostics.³ Improper collection of blood culture specimens can lead to contamination events, which may:⁴

- Impact length of hospital stay
- Lead to inappropriate antimicrobial treatment
- Result in repeat diagnostic testing

BD Vacutainer® UltraTouch™ Push Button Blood Collection Sets with Pre-attached Holder are designed to improve safety, while maintaining sample integrity and workflow efficiency^{5,6,7}

- Pre-attached holder reduces the number of steps in the phlebotomy procedure, helping to simplify the collection process
- Push button collection sets decrease insertion pain vs. 23-gauge Safety-Lok™ due to cannula design⁷
- Single-handed, in vein activation reduces needle stick injuries by up to 88%⁵
- BD RightGauge™ Ultra-Thin Wall Cannula Technology provides a larger inner diameter while maintaining a set outer diameter



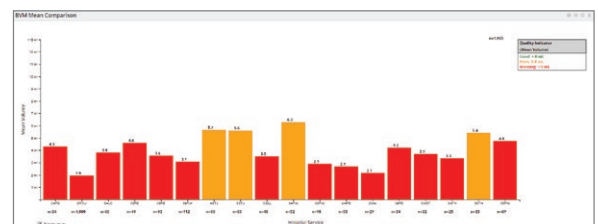
BD BACTEC™ blood culture media bottles help streamline the blood collection process

- Unique bottle neck design allow for compatibility with standard blood collection sets which:
 - Reduces inventory requirements
 - Reduces the need to switch out adapters mid draw
 - Reduces cost of overall specimen collection



BD Synapsys™ informatics offers insights that may help support quality improvement initiatives such as:

- Blood volume monitoring
- Blood culture contamination rates
- Blood culture positivity rates
- Blood culture media utilization (e.g.: number of bottles collected)



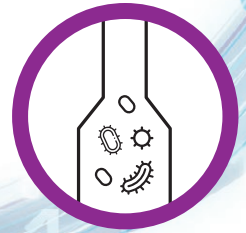
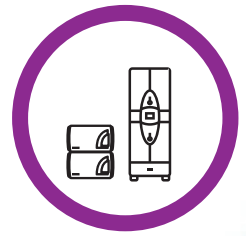
Blood volume monitoring report

Analytical phase

Media selection and instrumentation can impact recovery and time to detection of clinically significant organisms

Greater than one third of patients hospitalized with sepsis may die prior to hospital discharge.⁸ To help reduce morbidity and mortality of septic patients, best practices recommend:⁹

- Collection of proper blood volume
- Collection of at least two sets of blood cultures prior to antimicrobial therapy
- Incubation of blood culture bottles as soon as possible



BD BACTEC™ perfect media pair

The combination of BD BACTEC Plus Aerobic and Lytic Anaerobic media have shown to improve time to detection and recovery of organisms.¹⁰



BD BACTEC™ Myco F/Lytic medium

A uniquely formulated medium for the recovery of yeast and fungi from sterile body fluids and blood specimens, with additional recovery of mycobacterium from blood specimens.



BD BACTEC™ FX instrument
e.g., Central laboratory

BD BACTEC™ FX instrumentation

BD BACTEC FX instruments allow for simple, and rapid workflow across multiple sites of a healthcare system. Scalable and modular design offers flexibility to support placement of an instrument near point of collection that helps to reduce time to result for organism identification and susceptibility testing which may enable earlier decision-making regarding antimicrobial treatment.¹¹



BD BACTEC™ FX40 instrument
e.g., Emergency room

BD BACTEC™ FX40 instrument
e.g., Satellite laboratory



BD Synapsys™ informatics offers secure connectivity and tools to monitor:

- Workflow
- Compliance to best practices
- Instrument utilization

Post-analytical phase

Actionable insights help drive continuous improvement

An estimated 23% of clinical errors occur in the post-analytical phase of testing, and are partly due to:

- Improper validation of analytical data
- Failure in reporting
- Inappropriate follow-up plans¹²



BD Synapsys™ informatics solution

Access to data analytics enables key metric comparison within a laboratory network or against a benchmark

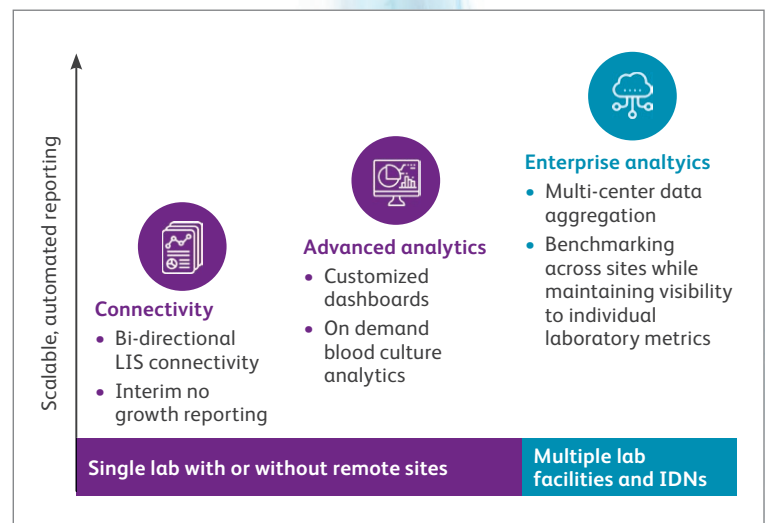
- Blood culture contamination and positivity rates
- Blood volume collection
- Track time of removal of positive blood culture by laboratory personnel
- Track blood culture media utilization



Positivity and contamination rate monitoring

Distinct modules allow for the appropriate level of capabilities to meet individual institutional needs

- Connect multiple laboratories to automatically collect and aggregate data
- Integrate data from multiple laboratory locations for benchmarking purposes, while maintaining visibility to individual laboratory data
- Empowering healthcare professionals to drive standardized blood culture collection metrics which may impact financial and operational outcomes
- Scalable, automated reporting to drive standardization



BD Synapsys™ informatics offers security by design

The risk to patient privacy due to data breaches is of increasing cybersecurity concern within the healthcare community. BD Synapsys informatics provides:



UL CAP certification, which verifies that the system has proven robustness against tested software vulnerabilities and weaknesses.



Compliance with SOC2 guidelines, which ensures that service procedures are aligned with the most stringent cybersecurity requirements.

From the detection of a positive blood culture, BD offers a full suite of identification and antimicrobial susceptibility testing solutions:



The BD™ Bruker MALDI Biotyper™ offers:

- Rapid identification of microorganisms isolated from positive blood cultures
- A broad library of organisms to ensure accurate interpretation
- Batching capabilities helps to improve workflow



The BD Phoenix™ automated ID/AST solution provides:

- Demonstrated performance in the detection of emerging resistance
- Timely and accurate results
- Built in resistance marker testing including detection of carbapenemase producing organisms



The BD BBL™ Sensi-Disc™ portfolio for disc diffusion offers:

- Flexibility to select specific drugs for efficient and targeted antimicrobial susceptibility testing
- Extensive menu of available antibiotic discs
- Accurate, standardized, and cost effective solution

BD, a trusted partner in meeting your current and future blood culture needs

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