FA-N120

Automated Microbial Culture System

Specifications of Culture Bottles

Types and Models

Aerobic culture bottle (AC)

Anaerobic culture bottle (NC)

Pediatric aerobic culture bottle (PC)

Packing Specifications

25 bottles/box, 50 bottles/box

Supported Sample Types

Blood and other sterile body fluids

Blood Sampling Tips

Adults: Each bottle should contain a sample volume of 5–10 mL.

Children: Each bottle should contain a sample volume of 1–3 mL.

Specifications of the Culture System

Operating system: Linux

Memory: 32 GB

Automatic backup available

Normal test environmental conditions

Ambient temperature: 10 °C ~ 30 °C

Relative humidity: 10% ~ 90% RH

Atmospheric pressure: 80.0 kPa ~ 106.0 kPa

Operating altitude: -400 m ~ 2000 m

Power Requirements

Power voltage: ~220 V ± 10%

Frequency: 50 Hz ± 1 Hz

Power: 600 VA for FA-N120

Dimensions and Weight

Unit	Dimensions (Width x Depth x Height **mm**)	Weight (**kg**)
Main unit	≤ 560 x 690 x 900	≤ 120
Extension unit	≤ 290 x 690 x 900	≤ 85

Extension Mode

	FA-N 120
Extensibility	Up to 3 modules (480 bottle positions)
Throughput	24 bottles/day, extensible to 96 bottles/day

References

[1] Hardy, Liselotte, et al. "Affordable blood culture systems from China: in vitro evaluation for use in resource-limited settings." EBioMedicine101 (2024).

[2] Aydemir, Özlem, et al. "Comparison of time-to-detection of Mindray TDR and BacT/ALERT® 3D blood culture systems using simulated blood cultures." Acta Clinica Belgica 79.3 (2024): 168-173.

Mindray Medical Official WeChat

Service Center Official WeChat

Service Hotline 400 700 5652

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FA-N120

Automated Microbial Culture System

Rapid Diagnosis of Bloodstream Infections With Optimized Workflow

Quality Results Enhanced Antibiotic Neutralization and Enriched Culture Media Enable Early Detection of Bloodstream Infections

Enhanced Neutralization | For Multiple Antimicrobials

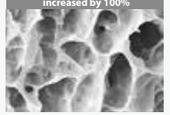
MPC (Multi-Porosity Cross Linked) resin neutralizes 17 categories of antimicrobials, such as *Imipenem, Meropenem, Piperacillin-tazobactam, Cefoperazone-sulbactam, Tigecycline, Vancomycin, Levofloxacin, Amikacin, Colistin, Caspofungin, Voriconazole, and Amphotericin B.*

MPC (Multi-Porosity Cross Linked) Resin

Improved Affinity

Improved affinity of resin for antimicrobial drugs

Enhanced Neutralization



Improved neutralization of resin for antimicrobial drugs

Threefold Increase

Improved neutralization of resin for antimicrobial drugs

Enriched Culture Media

A set (aerobic and anaerobic bottles) is able to recover and detect a broad range of microorganisms (bacteria and fungi)[1][2] in blood and other sterile body fluid samples.

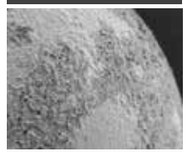
Multi-nutrient Factor Formula

Fastidious bacteria (difficult to grow)

Haemophilus influenzae, Streptococcus pneumoniae, Streptococcus pyogenes, Cardiobacterium hominis, etc.

A variety of growth factors for fastidious bacteria are added to solve the problem of nutrient adsorption by resin and promote the growth of fastidious bacteria

Smooth surface of normal resin under an electron microscope



Nutrients adsorbed onto resin under an electron microscope

Fungi (easily attachable)

Candida glabrata, Cryptococcus neoformans, etc.

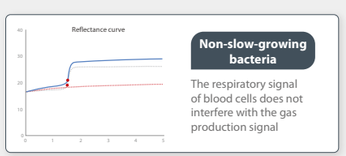
Anti-adsorption factors are added to prevent fungi from enveloping and growing on the resin, which shortens the time-to-positivity

Microorganisms adsorbed onto resin (with anti-adsorption factor) under an electron microscope

Microorganisms adsorbed onto resin under an electron microscope

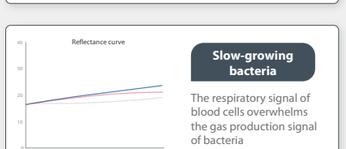
Shorter Time-to-Positivity

Reduced interference from blood cell respiration, along with a customized algorithm for slow-growing bacteria, such as *Talaromyces marneffei, and Cryptococcus neoformans*.



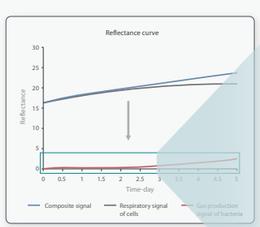
Non-slow-growing bacteria

The respiratory signal of blood cells does not interfere with the gas production signal

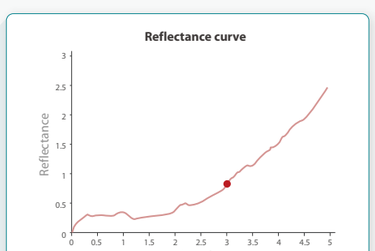


Slow-growing bacteria

The respiratory signal of blood cells overwhelms the gas production signal of bacteria



A technological breakthrough: development of an algorithm for slow-growing bacteria



Shorter time-to-positivity

Efficient Results An Extensible and Intelligent POC Information System Enables Effective and Qualified Results

Integrated | In-time Blood Volume Monitoring Technology

Volume information

Ensuring qualified blood sampling volumes and avoiding over-filling or under-filling

Bottle information

Improving traceability

Patient information

Assisting interpretation

Point-of-care | Satellite Blood Culture System

Blood sampling	Immediate	Cultivation	Next day	Transfer	Waiting	Report
Sample loading ≤2h Reference: CLSI M47	→	ICU, emergency laboratory	→	Cultivation in progress/ positive bottle	→	Can be received promptly on various devices

Intelligent | Data Management Software

Microbiology laboratory

Outpatient/emergency laboratories

Information system server

Cloud server mindray

Clinical departments-Emergency, Infectious Disease, Hematology, ICU, etc.

Mobile device

Any location in the hospital
- Targeted push via WeChat Official Account
- SMS notifications

Computer

Office | Laboratory

Microbiology laboratory technicians

1. Allows users to receive positive-result reporting reminders via various devices, including computers, tablets, and mobile phones.
2. The software automatically analyzes crucial parameters, including the number of specimen bottles (sets), time-to-positivity, positive rate, and sample volume, then presents results in an intuitive and customized manner.
3. The software facilitates analysis and assessment of time-to-positivity, loading/unloading delays of bottles for TAT analysis and workflow optimization.

Note: "*" indicates a feature that will be available in the near future.