

AF -300/600

Automated identification and susceptibility testing system

Technical specifications

	AF-300	AF-600
Capacity options	32	64
Height	700mm	700mm
Width	500 mm	500mm
Depth	710mm	710mm
Clearance (Right)	240mm	240mm
Clearance (front)	298mm	298mm
Weight	60±2kg	64±2kg
Power requirement	110~220 V/A; 50~60Hz 10 amp circuit	110~220 V/A; 50~60Hz 10 amp circuit

AF -300/600

Automated identification and susceptibility testing system

When comprehensive ID/AST panel meets accurate results and a smart workflow



Fighting Against AMR

Antimicrobial resistance (AMR) is one of top 10 global public health threats facing humanity.

A study concluded in 2019 over **1.2 million deaths** could be directly attributed to AMR.

And this number will go up to **10 million in 2050 and exceed that of deaths from cancer.**

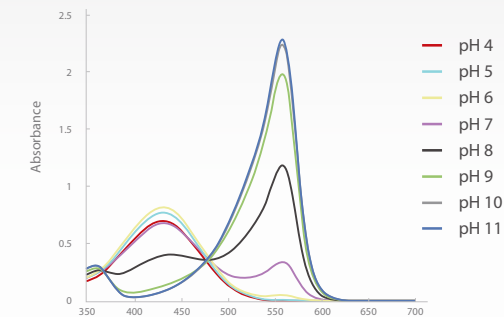


ACCURACY : YOU CARE, WE DO

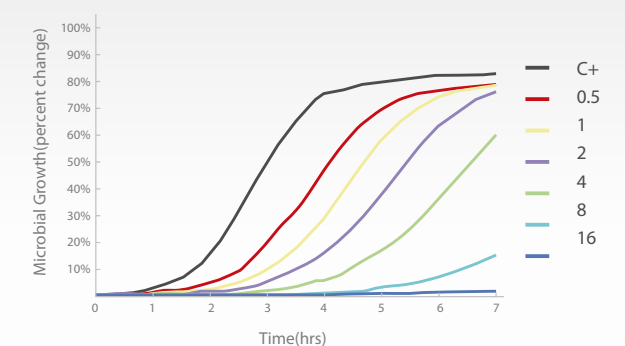


The test hole structure is uniquely designed to be cone-shaped to facilitate bacterial growth and enrichment.

AF-300/600 incorporates a five-wavelength detection system, which accurately matches the characteristics of different biochemical color reactions to provide more detailed results and make the interpretation more accurate.



Each of the cells in the testing panel is detected and analyzed by an intelligent dynamic algorithm every 20 min. This ensures higher accuracy and a short detection time, reducing the report time to as low as 4 to 5 hours.



To help control the spread of AMR bacteria within medical institutions and communities in the shortest time possible, **Mindray AF-300/600 adopts direct minimum inhibited concentrations (MICs) for detecting emerging resistant pathogens with a smart streamlined workflow, providing timely and accurate results.**

Comprehensive ID/AST panels: Discover more possibilities



The system provides panels with various combinations, i.e., Sensitivity-only Panel and Identification & Sensitivity Panel.



The primary panel can identify over 500 bacterium species with high sensitivity, including Enterobacteriaceae, Non-fermentation bacteria, Staphylococci, Enterococci, Streptococci, Neisseria, Haemophilus, Yeast-like fungi, Corynebacterium*, Vibrio*, Bacilli*, and Anaerobes*. (* on development)



96 wells are designed to combo ID/AST panel



The primary panel can identify various emerging resistance mechanisms that may be present in samples, including MRSA, BORSA, MRCoNS, VISA, hVISA, VRSA, VRE, HLGR, CRE, CRAB, CRPAE, MLSb, PRSP, PISP, and BLNAR.



Estimation of susceptibility based on serial double microbroth dilution of MICs in line with CLSI and EUCAST guidelines, without skipping the dilution of antibiotics.



Comprehensive ID/AST panels: Uniquely designed for fastidious and yeast-like fungi

Antibiotics	TDR NH-96	TDR NH-AST
Penicillin		0.03-4
Ampicillin	0.12-2	0.06-4
Chloramphenicol	2-16	1-8
Ampicillin-sulbactam	1/0.5-4/2	1/0.5-4/2
Cefuroxime	2-8	2-16
Ceftazidime		1-2
Cefixime	0.5-2	0.5-2
Amoxicillin-clavulanic acid	2/1-8/4	2/1-8/4
Piperacillin - tazobactam		0.5/4-2/4
Meropenem	0.25-8	0.12-16
Ceftriaxone	0.12-2	0.12-2
Cefepime	0.25-2	0.25-2
Aztreonam	1-2	2-4
Lomefloxacin	1-2	1-2
Azithromycin	0.25-4	0.25-4
Erythromycin	1-2	
Clindamycin	0.5-2	
Tetracycline	1-4	1-4
Levofloxacin	0.03-4	0.03-4
Rifampin	0.5-2	0.12-4
Co-trimoxazole	0.12/2.4-2/38	0.12/2.4-4/76

TDR NH-96/AST

- 21 antibiotics included for β -lactamase testing
- A full range of concentrations for testing, including S/I/R breakpoints from CLSI and Eucast (2022)
- Modified M-H Broth without defibrillated blood
- Designed for *Haemophilus*, *Neisseria*, and *Moraxella catarrhalis*



Antifungal Drugs	Yeast-96	Yeast-AST
Flucytosine	0.5-64	0.12-128
Amphotericin B	0.25-4	0.008-4
Ketoconazole	0.5-32	
Itraconazole	0.06-2	0.008-4
Fluconazole	0.002-64	0.12-128
Caspofungin	0.002-8	0.008-8
Micafungin	0.002-8	0.008-8
Voriconazole	0.06-2	0.008-8
Terbinafine		0.008-8

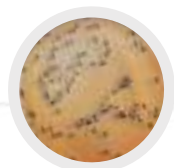
TDR YEAST-96/AST

- 8 to 9 antifungal drugs included in each panel, including caspofungin and micafungin
- Designed for yeast-like fungi
- A full range of concentrations for testing, including S/I/R breakpoints from CLSI and EUCAST (2022)
- Serial double dilution for each tested antifungal facilitates clinical and epidemiology research

A smart workflow enhances efficiency for laboratories

- ▶ Inoculation is performed by an automated dosing system to ensure accuracy and safety.
- ▶ Panel ID barcodes are scanned in batch with the in-built barcode scanner to ensure efficient panel loading.
- ▶ Panels that are ready for unload are automatically collected for batch unload.

Pick 3~5 colonies from overnight inoculated agar



Prepare McFarland suspension with ID broths



Inoculate panels with AP-100



Place panels in AF-300/AF-600

Wait 5~24h to get results



A smart workflow enhances efficiency for laboratories

EXPERT SYSTEM → Better interpretation of ID and AST results

The AF-300 expert system offers an outstanding tool for clinical microbiology laboratories to learn about the epidemiology, resistance mechanism and therapy-related information of microorganisms and antimicrobials based on multiple international clinical practice guidelines, laboratory standard guidelines and expert panels.

- ▶ ID encyclopedia provides morphology, culture and epidemiology information to medically important bacteria and fungi
- ▶ User-definable expert rules can be easily figured as enabled v/s manual interpretation v/s automated interpretation
- ▶ Provides detailed information for result interpretation, such as like intrinsic resistance, contradictory resistance and rare resistance
- ▶ Pools together treatment suggestions from multiple international clinical practice guidelines for certain MDR bacteria and management reports

WHONET CONNECTION → Seamless convergence

— One-click export and submission of WHONET analysis, requiring no other software for data format conversion



Result statistics → Real-time monitoring

— Generates antibiograms, tendency of AMR and other results upon request

