ACCELERATE

pheno® SYSTEM

Upgrade your susceptibility testing with the speed and simplicity of the Accelerate Pheno® system

Built for extraordinary speed and simplicity, the Accelerate Pheno® system leverages several technologies to speed up the reporting time for antimicrobial susceptibility testing and optional identification results.

Recent studies show susceptibilities are available in approximately 7 hours from positive blood culture samples. These faster results help clinicians to optimize antimicrobial therapy approximately 40 hours faster.[1]

Accelerate Pheno technology incorporates dynamic dilution which automatically ensures consistent bacterial starting concentrations prior to susceptibility testing to enhance performance.

Maximize the benefits of your fast results with a workflow that's simple enough to run on every shift.

1. Based on Accelerate PhenoTest BC kit, ID/AST configuration data

Run on any shift

High-Speed Susceptibilities

Phenotypic antimicrobial susceptibilities

MIC results and S/I/R interpretation

Controlled inoculum concentration

Morphokinetic cellular analysis

Optional ID

2 hour pathogen identification[2]

Polymicrobial capability[2]

Fully automated FISH[2]

Automatic ID entry[3]

Unmatched Workflow

Minimal hands-on time

Automated sample preparation

LIS and remote connectivity

Scalable to meet demand

2. Applicable to ID/AST configuration
3. Applicable to AST configuration

Empower your antimicrobial stewardship team with the Accelerate PhenoTest® BC kit

The Accelerate PhenoTest BC kit delivers fast, actionable answers to help clinicians make targeted, life-saving therapy decisions earlier for patients with bacteremia, a leading cause of sepsis.

Provide your antimicrobial stewardship team with the results they need to personalize antimicrobial therapy for patients with bloodstream infections up to 2 days faster than conventional methods.*

Shortening the time patients are on broad-spectrum, empiric therapy can dramatically improve outcomes, reduce risks of toxicity and preserve antimicrobials for future use. The Accelerate PhenoTest BC kit has the potential to make you the source of dramatic improvement in the treatment of bloodstream infections.

Get fast MIC-based susceptibilities your way

It's your lab. The Accelerate PhenoTest BC kit provides the flexibility you need to save technician time and integrate fast ID/AST* or fast AST into your workflow.

Two configurations are available offering both susceptibility or identification + susceptibility for bloodstream pathogens.

Automatic or manual ID entry options are available for the AST configuration.

Already have rapid ID?

FAST AST configuration

[Get the answers you're missing.]

Speed up release of MIC-based AST results coupled with your own rapid ID method

Need faster ID & AST?

FAST ID/AST configuration

[Speed up and simplify both.]

Provides complete ID & AST results in a single run

*Based on Accelerate PhenoTest BC kit, ID/AST configuration data

*AST: Antimicrobial susceptibility testing

Start directly from positive blood culture

Imagine providing your antimicrobial stewardship team with results up to 2 days faster than conventional methods.*

**Based on Accelerate PhenoTest BC kit, ID/AST configuration data*

The Accelerate PhenoTest BC kit is clinically proven* to:

Reduce time to AST results by ~40 hours[1-8]

Reduce time to optimal therapy by up to 26.4 hours[4]

Reduce length of stay by up to 2.2 days[3]

> **"We have seen a substantial impact on decreasing hospital costs with savings coming from LOS from €130k–€175k each year."**
>
> **Michael Miller, PharmD**
> Head of Antimicrobial Stewardship
> Peninsula Regional Medical Center

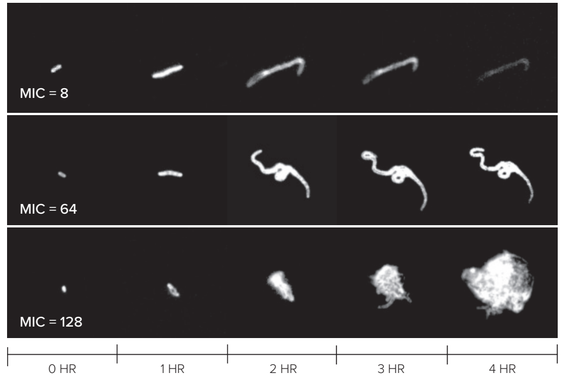
1. Banerjee 2020; 2. Chirca 2019; 3. Walsh 2019; 4. Dare 2020; 5. Johnson 2017; 6. Brazelton de Cárdenas 2017; 7. Kidd 2018; 8. Marschal 2017

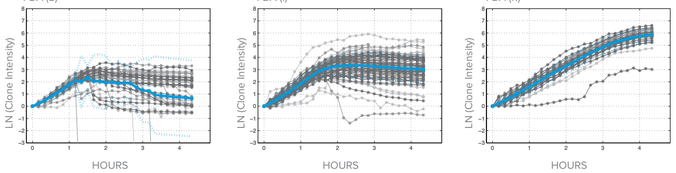
Provide fast phenotypic susceptibility results

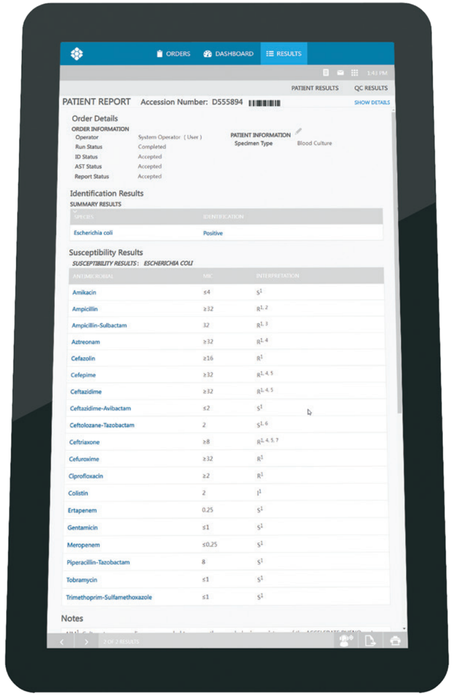
Morphokinetic Cellular Analysis (MCA)

Antimicrobial susceptibility results are reported as MICs and are determined by measuring morphokinetic changes in cell and colony growth in the presence of select concentrations of antibiotics. The growth patterns are compared to reference growth profiles which have been correlated to broth microdilution MICs. Results are then interpreted based on breakpoints and expert rules.

E. COLI STRAINS VS. PIPERACILLIN-TAZOBACTAM







Close the genotypic gap with faster phenotypic results

MIC results provided through phenotypic susceptibility testing offer additional value when compared with genotypic resistance marker testing.

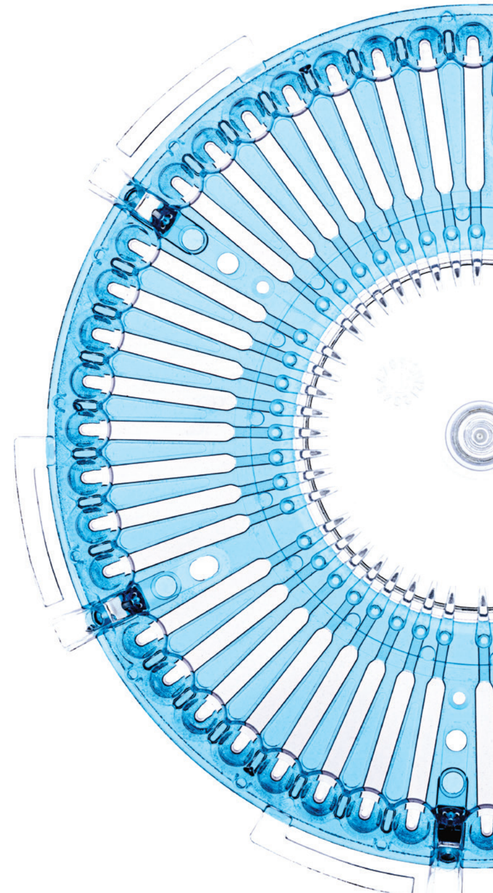
Presumptive genotypic results offer early indications of potentially resistant infections. While certain gene-based results may drive decisions to escalate therapy, clinicians often choose to wait for phenotypic susceptibility testing results before modifying antimicrobial treatment.

Harris and colleagues found nearly 26% of ceftriaxone-resistant isolates would be misidentified with commercially-available genotypic testing (CTX-M resistance marker) during the MERINO Trial.[1] The Accelerate PhenoTest BC kit reports ceftriaxone susceptibility in approximately 7 hours direct from positive blood culture.

The **absence** of a resistance gene does not always guarantee susceptibility to a class of antimicrobials

The **presence** of a resistance gene does not always correlate with results from phenotypic susceptibility testing

Resistance markers have limited ability to guide individualized therapy for patients



1. Harris PNA, et al. *JAMA* 2018; 320(10):984-994.

Affordably priced

Several acquisition options are now available to easily adopt the Accelerate Pheno system–just another way we're flexible to fit your needs.

Save time
Save money

Cut your wait time for MIC results by half, reduce duration of therapy for your patients and lower their length of stay.*

**Based on Accelerate PhenoTest BC kit, ID/AST configuration data*

Value to stewardship where it counts

Clinical endpoints for bacteremic patients before and after adoption of the Accelerate PhenoTest BC kit.

Allegheny General Hospital (Non-ICU)[1]
576-bed academic medical center serving
Pittsburgh, PA and Allegheny County

Time to Definitive Therapy (TTDT)

Time to definitive therapy (TTDT) was defined as the difference between the Gram stain result time and the time the first dose of definitive antibiotic therapy was administered. Definitive antibiotic therapy was defined as the regimen which was utilized by the primary team once AST results were available.

Median (IQR)[2] in hours

Pre	32.6	
Post	10.5	P-value: <0.001

Length of Stay (LOS)

Duration of a defined period of hospitalization.

Mean (SD)[3] in days

Pre	7.9	
Post	5.3	P-value: 0.047

Duration of Therapy (DOT)

Duration of antibiotic treatment over a defined period of time.

Median (IQR) in days

Pre	14.2	
Post	9.5	P-value: <0.001

1. Walsh et al. *Infection*. 2021;49(3):511-519.
2. Interquartile range
3. Standard deviation

One integrated panel

Labs have the flexibility to initiate an Accelerate PhenoTest run before or after a Gram stain is read.

The choice is yours

Use fluorescence *in situ* hybridization (FISH) identification results from the Accelerate PhenoTest BC kit, ID/AST configuration or enter the bacterial identification from your own rapid ID system and use our AST configuration. Automatic or manual ID entry options are available for the AST configuration.

Gram-Positive

	ID*	Susceptibility						
		Ampicillin	Ceftaroline	Daptomycin	Linezolid	Trimethoprim-Sulfamethoxazole	Vancomycin	Methicillin resistance (Cefoxitin)
S. aureus	●		●	●	●	●	●	●
S. lugdunensis	●			●	●	●	●	●
Coagulase-Negative Staphylococcus spp.	●			●	●		●	●
E. faecalis	●	●		●	●		●	
E. faecium	●	●		●	●		●	
Streptococcus spp.	●							
								Resistance Phenotype

Yeast

	ID*
Candida albicans	●
Candida glabrata	●

Positive blood culture panel for *In Vitro* Diagnostic Use. CLSI CE-IVD (10102028)
* Identification reported on Accelerate PhenoTest BC kit, ID/AST configuration only

Gram-Negative

	ID*	Susceptibility																		
		Ampicillin	Ampicillin-Sulbactam	Piperacillin-Tazobactam	Ceftazidime-Avibactam	Ceftolozane-Tazobactam	Cefazolin	Cefuroxime	Ceftriaxone	Ceftazidime	Cefepime	Ertapenem	Meropenem	Gentamicin	Tobramycin	Amikacin	Aztreonam	Ciprofloxacin	Colistin	Trimethoprim-Sulfamethoxazole
E. coli	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Klebsiella spp.	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Enterobacter spp.	●			●	●	●			●	●	●	●	●	●	●	●	●	●	●	●
Proteus spp.	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●		
Citrobacter spp.	●			●	●	●			●	●	●	●	●	●	●	●	●	●	●	●
S. marcescens	●			●	●	●			●	●	●	●	●	●	●	●	●	●		●
P. aeruginosa	●			●						●	●		●	●	●	●	●	●	●	
A. baumannii	●		●	●							●		●			●		●	●	●

ID INCLUSIVITY

Coagulase-Negative *Staphylococcus* spp.
S. capitis
S. epidermidis
S. haemolyticus
S. hominis
S. lugdunensis
S. warneri

***Streptococcus* spp.**
S. agalactiae
S. gallolyticus
S. mitis
S. oralis
S. pneumoniae

***Klebsiella* spp.**
K. oxytoca
K. pneumoniae

***Proteus* spp.**
P. mirabilis
P. vulgaris

***Enterobacter* spp.**
E. cloacae
E. (Klebsiella) aerogenes

***Citrobacter* spp.**
C. freundii
C. koseri

See labeling for additional details and instructions

We put our customers first.

Your Accelerate Team

We take a holistic approach to implementing and supporting the Accelerate Pheno system in your institution. Your service team members include highly skilled laboratory, clinical, IT, and business specialists who are adept at navigating the complexity of implementing a new test and tailoring solutions to your unique needs. We provide comprehensive training and service for the laboratory staff and clinicians, data analysis, LIS integration, metrics and measurement consulting, and help with business justification reporting and clinical studies. And unmatched 24x7 customer support, of course.

"The implementation of Accelerate PhenoTest BC kit as a microbiological diagnostic tool in our routine work of critical patients with positive blood cultures provides us with accurate and early diagnostic information, since it allows us to safely optimize antibiotic treatment in a targeted way in each patient. The impact has repercussions both on the quality of the clinical evolution of these patients and on a decrease in antimicrobial resistance in our hospital environment."

DRA. CARMEN PAZOS
Microbiologist
Hospital San Pedro de Alcantara
Cáceres, SPAIN

Implementation Process

When your institution decides to implement the Accelerate Pheno system, we mobilize with a project manager who leads the entire process, coordinates the team's actions, and ensures we meet your needs and timeline. The 3-phase process is designed to be straightforward and efficient, but it's also tailored to your institution and flexible enough to account for those unforeseen challenges.

"Accelerate offered an effective technical assistance team in solving problems. There was quick intervention whenever necessary to clarify doubts and adjust results reports. The introduction of this methodology in the laboratory's workflow allowed for the rationale of a phenotypic AST option for sepsis fast track workflow: time to ID <2 hours and time to AST results "7 hours with MICs for multiple antibiotics. The whole approach was crucial to optimization of antimicrobial choice, antibiotic dose and dosing frequency."

DRA. CATARINA CHAVES
Consulting Clinical Pathologist
Head of Bacteriology Department
Centro Hospitalar e Universitário de Coimbra
Coimbra, PORTUGAL

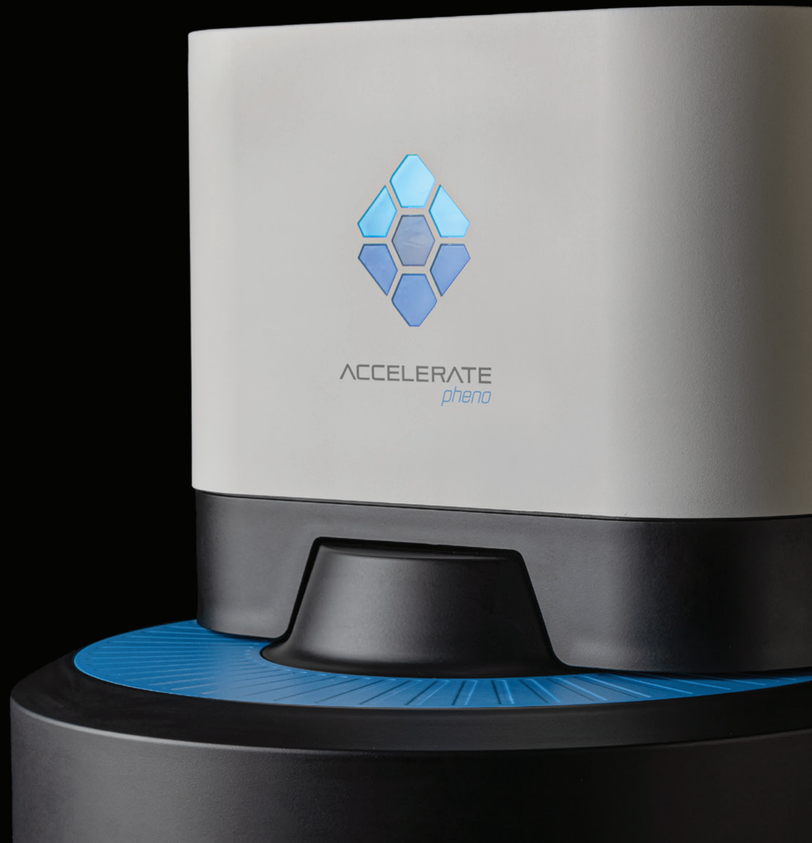
Clinical Adoption

Before and after Go-Live, we give your clinicians the same level of attention we give to your lab staff. Our clinical services team, made up of stewardship professionals with real-world experience, work with your clinicians to ensure they utilize the Accelerate Pheno system's fast results as soon as they get them. We assist with integrating lab and clinical workflows, developing notification pathways, sharing best practices and resources, and providing education to facilitate your successful clinical adoption.

"The Accelerate Pheno system solution gave justification to the specialty of Clinical Pathology - Microbiology at Centro Hospitalar Tâmega e Sousa, within 24 hours of the Laboratory, reducing the response time of Identification and antibiogram of the infectious agent by at least 21 to 40 hours, with clinical benefits in quick decision making"

DRA. MARÍA CALLE VELLÉS
Director of the Clinical Pathology Service
Centro Hospitalar do Tâmega e Sousa
Guilhufe – Penafiel, PORTUGAL

We're with you



Delivering lifesaving answers for patients with serious infections.