

# BD Phoenix™ M50 Automated Microbiology System

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## New BD Phoenix™ M50



**MODULARITY**



**RELIABILITY**



**EASE OF USE**



**DIVERSE PANELS**

## Why BD Phoenix™ M50 ?

- Rapid results
- Accurate results
- Easier workflow for customers
- Offers complete testing to customers
- Advanced Data Management – BD EpiCenter™
- Monitor – Instrumentation and results
- Analyze – Taxonomy notes and BDXpert
- Communicate – Laboratory and beyond

## Modularity to adapt to any organisation

As simple as stack,  
plug and use

Double capacity  
with small footprint

Modularity &  
Scalability

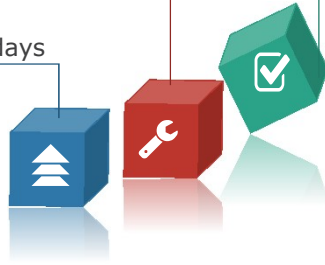


## BD Phoenix™ M50 – Reliability & Robustness

New..!!!! LEDs and Sensors

Improved serviceability

MTBF > 660 days

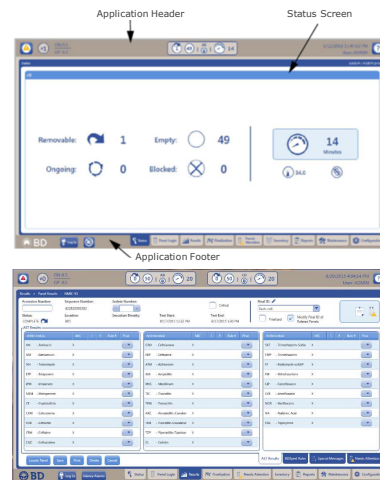


## BD Phoenix™ M50 – Ease of use

Touch screen for Easy Access

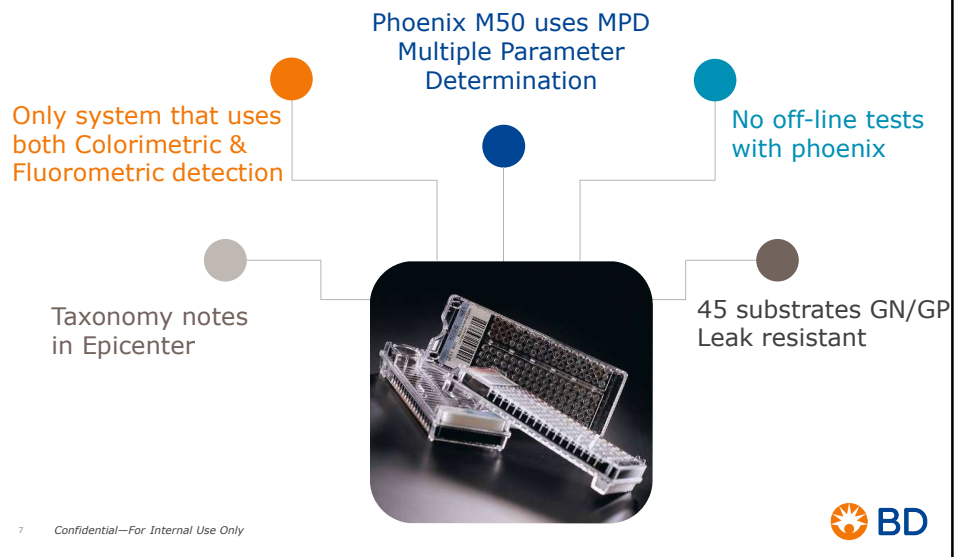
Easy validation of results

All-In-One (AIO) PC



BD Phoenix M50 User Interface results screen

## BD Phoenix M50 Identification



## BD Phoenix™ M50 Instrument

- 50 Panel/test Capacity
- Free Standing Design
- Direct LIS Connection
- EpiCenter data management
- Minimal Maintenance
- Random Panel Entry as additional scanner available internally
- No Calibration Required- as calibrator panels on board
- Incubates panels and reads every 20 minutes
- Time dependent Identification database
- BDxpert system



## BD Phoenix™ M50 Panel

- Identification only
- Room temp storage
- Leak Resistant
- 51 ID wells (45 substrates)
- Gram negative organisms
  - Enterics and non fermenters
  - 161
- Gram positive organisms
  - catalase positive and negative
  - 140
- Strep- 32
- Yeast-64



### BD Phoenix™ M50 Software

- Log in panels
- View or change results
- Review BDXpert recommendations
- Print lab reports
- Finalize results
- Quality Control

## BD Phoenix™ M50 Workflow

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## BD Phoenix™ M50 Workflow

Pick Colonies from an overnight culture  
Prepare suspension in Phoenix ID broth



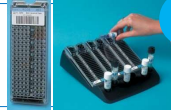
1



Standardize suspension in the ID Broth  
0.20-0.30(Low inoculum) OR 0.50-0.60 McFarland

2

Pour Broth into Panel and cap  
Panel is now ready to put into the instrument



3



Scan the panel sequence number  
Place the panel into the instrument

4

## BD Phoenix™ Workflow Study (Time required for 50 panels)

Task	Phoenix
Inoculum Prep	N/A
Log-in	3 min 20 sec
Label Panels	7 min 41 sec
Inoculate Panel	14 min 38 sec
Load Panel	3 min 45 sec
<b>Total</b>	<b>29 min 24 sec</b>

Meyer et.al., ASM, May 2000

## Instrument Processing: What happens behind the closed door?

### Inventory scan

- Door locks
- Barcode reader reads panel barcodes
- Scans with red LED's to determine missing panels
- Needs Attention posted for:
  - Missing acc #
  - Unreadable barcodes
  - Missing panels

### Reading

- Each well divided into pixels
- Readings taken for each pixel
- Entire process takes 7 minutes

### Calculate data

- Pixel data analyzed for each well
- Readings for each well compared to previous reading and baseline
  - Well is complete when specific amount of change is not seen
  - Substrate algorithm dependent
- Instrument will post results when enough data collected

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## BD Phoenix <sup>TM</sup> M50 -21CFR compliance

- Different user logons capability.
- Current user name is displayed in the upper right corner of application header region and also printed with result.
- After 5 unsuccessful login attempts, the user account will be locked.
- All users will be required to change their passwords.
- Administrator
  - Lab administrator for lab location. All system functionality is accessible including system configuration. Administrators can create and delete other lab administrators and general lab users.
- General User
  - All system functionality is accessible except system configuration, which is read only. Users can reset their own password.
- Lab Administrator Users
  - Users that are at the Lab Administrator level will be able to access the full set of user management features.
- Event log and audit trails- Un-editable event log is available.
- Software backup- Automatic on BD Epicenter, or can be manually taken.

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## BD Phoenix™ M50 -21CFR compliance

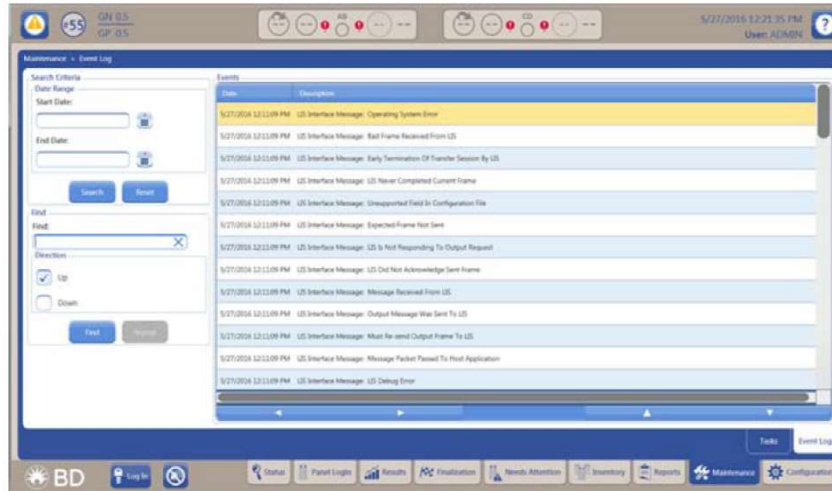


Figure 3-12 – Event Log Screen

# Phoenix™ M50 ID

## Overview

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## Media:ID Only

- Trypticase™ Soy Agar w/o blood
- Trypticase™ Soy Agar with 5% Sheep Blood
- Trypticase Soy Agar with Lecithin and Polysorbate 80
- BBL™CHROMagar™ Orientation Agar
- Chocolate Agar
- Columbia Agar with 5% Horse Blood
- Columbia Agar with 5% Sheep Blood
- Columbia CAN Agar with 5% Sheep Blood
- Bromthymol Blue Lactose Agar
- Cystine-Lactose-Electrolyte Deficient Agar
- Dey/Engley Neutralizing Agar
- Eosin Methylene Blue Agar
- Hektoen Enteric Agar
- MacConkey Agar
- Phenylethanol Agar
- Xylose Lactose Desoxycholate

## Phoenix Identification Features

- 45 Substrates GN / 46 Substrates GP/45 substrates Yeast
- Five databases per panel type (GN, GP, Strep)
  - Time specific = 2, 3, 4, 6, 12 hrs (GN, GP)
  - Time specific = 2, 4, 6, 8, 12 hrs (Strep)
- Taxonomy Notes in BD EpiCenter
- Low Inoculum Mode- both 0.25 and 0.50McF
- With 45 substrates and time dependent database, 175 trillion biochemical profiles are created

### Phoenix Yeast ID

- Approximately 70 taxa
- 2 Database Options (Sab Dex / TSA)
- Time to Results = 4 to 15 hours
- Average TTR for most common species ~ 6 hrs.

GRAM-POSITIVE ID TAXA'		GRAM-NEGATIVE ID TAXA'		STREPTOCOCCI ID TAXA'		YEAST ID TAXA'	
<i>Aerococcus urinae</i>	<i>Enterococcus casseliflavus</i>	<i>Pragia fontium</i>	<i>Acinetobacter baumannii</i>	<i>Streptococcus dysgalactiae</i>	<i>Candida membranaefaciens</i>	<i>Hortaea werneckii</i>	
<i>Aerococcus viridans</i>	<i>Micrococcus luteus</i>	<i>Proteus mirabilis</i>	<i>Acinetobacter lwoffii</i>	subsp. equisimilis	<i>Candida nonergensis</i>	<i>Klebsiella species**</i>	
<i>Alloisoccus otitidis</i>		<i>Proteus penneri</i>	<i>Acinetobacter species*</i>	<i>Streptococcus equi</i> subsp. equi	<i>Candida parapsilosis</i> complex	<i>Malassezia furfur</i> complex**	
<i>Arcanobacterium haemolyticum*</i>		<i>Proteus vulgaris</i>	<i>Alcaligenes faecalis</i>	<i>Streptococcus equi</i> subsp. zoepidemicus	<i>Candida parapsilosis</i>	<i>Malassezia pachydermatis**</i>	
<i>Arcanobacterium (Actinomyces) pyg</i>		<i>Providencia alkalicoccus</i>	<i>Beggiella zoohelium</i>	<i>Streptococcus equinus</i>	<i>Candida pelliculosa</i>	<i>Malassezia sympodialis**</i>	
<i>Bacillus cereus*</i>		<i>Providencia rettgeri</i>	<i>Borrelia bronchospica</i>	<i>Streptococcus gordonii</i>	<i>Candida pulcherrima</i>	<i>Pichia burtonii</i>	
<i>Bacillus coagulans*</i>		<i>Providencia rustigianii</i>	<i>Brevundimonas dimorpha</i>	<i>Streptococcus intermedius</i>	<i>Candida rugosa</i>	<i>Pichia fermentans</i>	
<i>Bacillus licheniformis*</i>		<i>Providencia stuartii</i>	<i>Brevundimonas vesicularis</i>	<i>Streptococcus mitis</i>	<i>Candida sakei</i>	<i>Prottheca wickerhamii</i>	
<i>Bacillus megaterium*</i>		<i>Rahnella aquatilis</i>	<i>Burkholderia cepacia</i>	<i>Streptococcus mutans</i>	<i>Candida glabrata**</i>	<i>Prottheca zophii</i>	
<i>Bacillus pumilus*</i>		<i>Raoultella (Klebsiella) ornithinolytica</i>	<i>Burkholderia gladioli</i>	<i>Streptococcus oralis</i>	<i>Candida guilliermondii</i>	<i>Rhodotorula glutinis</i>	
<i>Bacillus sphaericus*</i>		<i>Salsarella (Klebsiella) subsp. aquatica</i>			<i>Candida lusitanae</i>	<i>Rhodotorula minuta</i>	
<i>Bacillus subtilis</i>					<i>Candida lusitanae</i>	<i>Rhodotorula mucilaginosa</i>	
<i>Bacillus thuringiensis*</i>					<i>Candida lusitanae</i>	<i>Saccharomyces cerevisiae</i>	
<i>Brevibacterium brevis*</i>					<i>Candida lusitanae</i>	<i>Sporobolomyces salmonicolor</i>	
<i>Brevibacterium species*</i>					<i>Candida lusitanae</i>	<i>Trichosporon asahi</i>	
<i>Cellulomonas (Cerskovia) turbata*</i>					<i>Candida lusitanae</i>	<i>Trichosporon ericksonii**</i>	
<i>Corynebacterium amycolatum*</i>					<i>Candida lusitanae</i>	<i>Trichosporon kribbenii**</i>	
<i>Corynebacterium bovis*</i>					<i>Candida lusitanae</i>	<i>Trichosporon mucroides</i>	
<i>Corynebacterium diphtheriae*</i>					<i>Candida lusitanae</i>	<i>Trichosporon vander***</i>	
<i>Corynebacterium jeikeium*</i>					<i>Candida lusitanae</i>	<i>Wangiella dermatitidis</i>	
<i>Corynebacterium kutscheri*</i>					<i>Candida lusitanae</i>	<i>Zygosaccharomyces bailii**</i>	
<i>Corynebacterium matuchoi**</i>					<i>Candida lusitanae</i>		
<i>Corynebacterium minutissimum*</i>					<i>Candida lusitanae</i>		
<i>Corynebacterium propinquum*</i>					<i>Candida lusitanae</i>		
<i>Corynebacterium pseudodiphtheriae</i>					<i>Candida lusitanae</i>		
<i>Corynebacterium pseudotuberculosis</i>					<i>Candida lusitanae</i>		
<i>Corynebacterium renale*</i>					<i>Candida lusitanae</i>		
<i>Corynebacterium striatum*</i>					<i>Candida lusitanae</i>		
<i>Corynebacterium urealyticum*</i>					<i>Candida lusitanae</i>		
<i>Corynebacterium xerosis*</i>					<i>Candida lusitanae</i>		
<i>Dermabacter hominis*</i>					<i>Candida lusitanae</i>		
<i>Dermacoccus (Micrococcus) mshinomycesis</i>					<i>Candida lusitanae</i>		
<i>Enterococcus avium</i>					<i>Candida lusitanae</i>		



## ID Results

Special Messages icon      Needs Attention icon

Note: For Yeast ID panels, the Media field appears to the right of the Isolate Number

