
ASTar[®]

– designed to save lifetimes

Rapid AST results directly from clinical samples

A fully-automated system for rapid antimicrobial susceptibility testing (AST), Q-linea's ASTar cuts the diagnostic time for infectious diseases and delivers clinically-actionable results in hours instead of days.

Early information on bacterial pathogens and their antimicrobial susceptibility is of key importance for managing sepsis patients. Within approximately to six hours, ASTar delivers true minimum inhibitory concentration (MIC) results directly from positive blood cultures and against a broad panel. The AST disc has over 330 wells available for antimicrobials, covering both fastidious and non-fastidious pathogens, allowing optimal targeted therap of antimicrobials. ASTar also combines high throughput with a user-friendly interface and load-and-go operation.

Key features

Phenotypic AST

- Directly from positive blood cultures
- True MIC results in ~ 6 hours

Fully-automated analysis

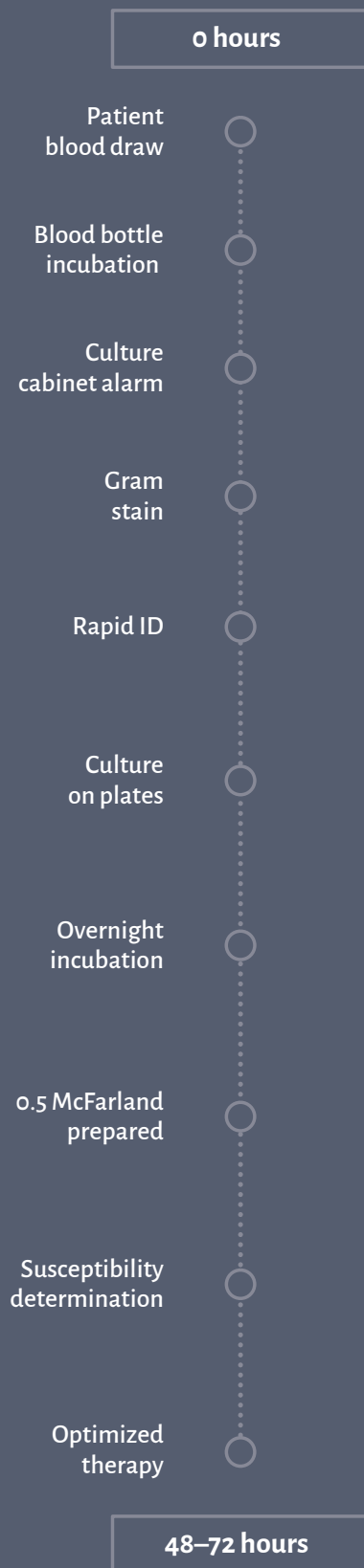
- 12 samples analyzed simultaneously, random-access
- Load-and-go workflow

Comprehensive AST panel

- 6–11 two-fold dilutions of each antimicrobial in panel
- Results generated from broth microdilution (CAMHB and fastidious)

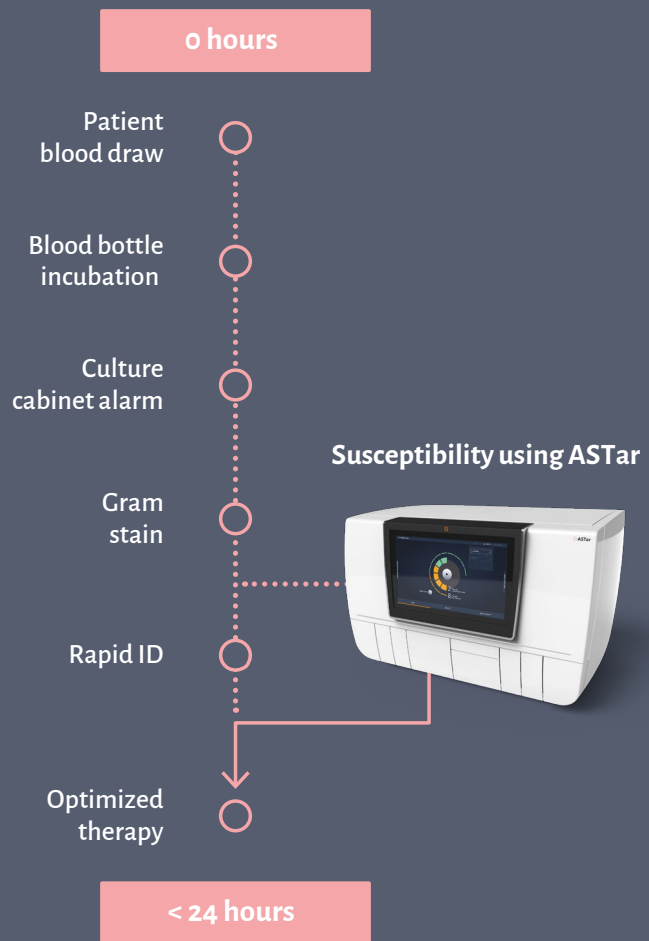


Traditional workflow



Workflow analysis performed by Q-linea at several European and US hospitals. Workflow may differ between laboratories.

ASTar workflow



ASTar meets your need for rapid and comprehensive AST

Several approaches for rapid pathogen identification (ID), e.g. molecular techniques and MALDI-TOF mass spectrometry, are available today. Our phenotypic AST solution can be combined with any of these rapid ID technologies, which augments current laboratory capabilities and meets the clinical need for more rapid results. Thanks to the broad AST panel, positive blood culture may be directly analyzed in the ASTar instrument without waiting for pathogen ID, delivering a comprehensive answer in just one test. Pathogen ID is only needed to create the final MIC results report.

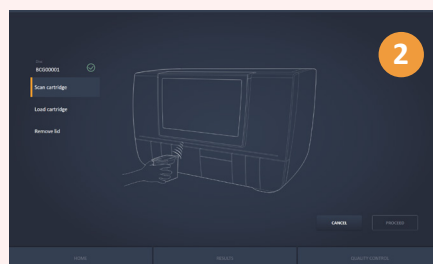
Three simple steps for complete MIC results

ASTar simplifies the analysis workflow: less than one minute hands-on time is all that's needed. Simply transfer approx. 1 ml of positive blood culture to the sample preparation cartridge. Choose the AST disc and load. Scan and load the sample preparation cartridge and tap the START RUN icon on the touch screen to start the run. Pathogen ID can be entered before, during or after the run to generate true MIC results.



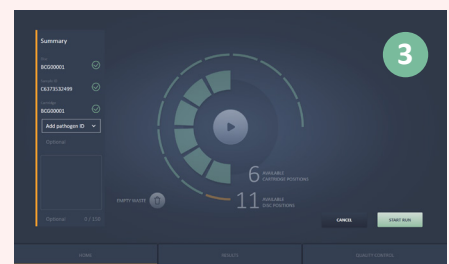
Choose AST disc and load

Q-linea's unique proprietary technology – the AST disc – allows automated time-lapse imaging of bacterial population growth in wells containing different concentrations of antimicrobial agents.



Scan and load cartridge

The sample preparation cartridge automatically isolates bacterial cells from the sample matrix and adjusts the concentration for a controlled inoculation to the AST disc.

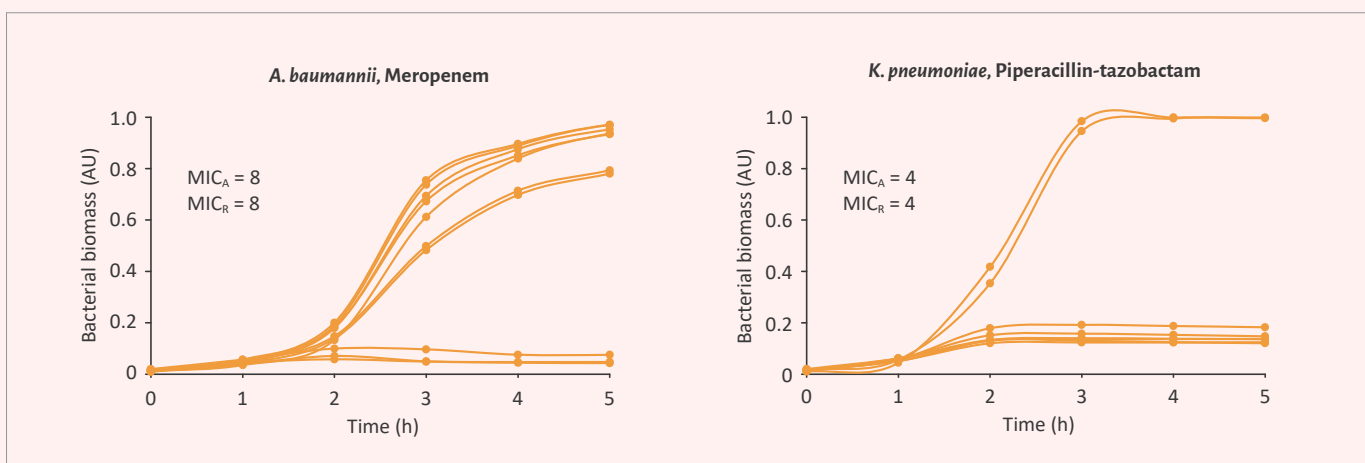


Tap START RUN

Proprietary algorithms translate visual information into MIC values. Based on EUCAST or CLSI breakpoints, MIC values are interpreted as S, I, or R.

Time lapse microscopy to measure bacterial biomass in broth microdilutions of antimicrobial agents

An image analysis algorithm continuously evaluates the collected images to quantify the accumulated bacterial biomass in the culturing chambers. When the incubation is completed, time-dependent bacterial biomass curves are compiled for each antibiotic type and concentration.



Biomass plotted over time for different specimen types and for a selected number of bacteria and antimicrobials combinations, each curve representing one concentration (mg/L). For each AST, ASTar-MIC (MIC_A) and reference BMD MIC (MIC_R) are noted.

Save lifetimes

Q-linea is an innovative infection diagnostics company that primarily develops instruments and disposables for rapid and reliable infection diagnostics. Our vision is to help save lives by ensuring antibiotics continue to be an effective treatment for future generations. Q-linea develops and delivers preferred solutions for healthcare providers, enabling them to accurately diagnose and treat infectious disease in the shortest possible time.

Q-linea was founded in 2008 by scientists from the Rudbeck Laboratory at Uppsala University, together with Olink AB and Uppsala University's holding company, UUAB. Today, Q-linea comprises an interdisciplinary, highly motivated team that operates out of state-of-the-art, customised facilities in Uppsala.

www.qlinea.com

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