Mast Group

MAST URI® *CONNECT*

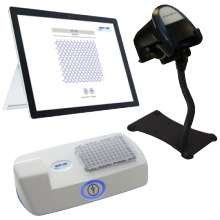
The Connected Solution for Urine Microbiology

- Direct Susceptibility Testing - Results in 18 hours
- Phenotypic Results Analysis - ID, AST and AMR
- End-to-End Sample Traceability
- Integrated EUCAST-aligned Reading Rules

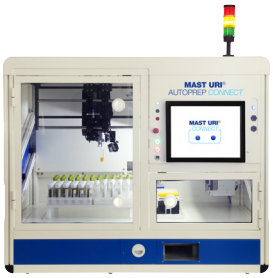
Urinary Tract Infections (UTIs) are one of the most common conditions presenting in primary healthcare. Traditional methods of urine culturing are labour intensive and slow. Laboratories are often left facing rising sample numbers with the expectation of faster turnaround times, often without additional resources.

The **MAST URI®** *CONNECT* provides the connected solution to Urine Microbiology.

MAST URI®
WELL *CONNECT*



MAST URI®
PREP *CONNECT*



MAST URI®
AUTOPREP *CONNECT*

Sample Preparation

MAST URI® *CONNECT* provides laboratories with the opportunity to select from three sample dispensing options. Consistent with all options is the use of a barcoded template, a Urine Specimen Plate (USP). This bridges the gap in sample traceability, connecting the barcoded patient samples are dispensed in a USP, using one of the 3 options.

MAST URI® WELL *CONNECT*
A semi-automated dispensing aid that simplifies workflow, initiates end-to-end traceability and aids in accurate sample dispensing.

MAST URI® PREP *CONNECT*
Utilising the **MAST URI® WELL** *CONNECT*, this option allows for a user to perform sample preparation while simultaneously freeing up the **MAST URI® PLUS** *CONNECT* for plate reading and result validation.

MAST URI® AUTOPREP *CONNECT*
A fully automated, walkaway dispensing solution that frees up valuable laboratory team members, making this ideal for high throughput requirements.

Sample Inoculation

Following the completion of the dispensing process, the Urine Specimen Plate (USP) is then used to inoculate bespoke plate sets using multipoint inoculation. **MAST URI® DOT** *CONNECT* utilises barcode readers for both the USP template and **MAST URI®** *Plates* to facilitate end-to-end traceability, and tracks pin sterilisation through audited disinfection cycles.

MAST URI®
DOT *CONNECT*

MAST URI®
PLUS *CONNECT*

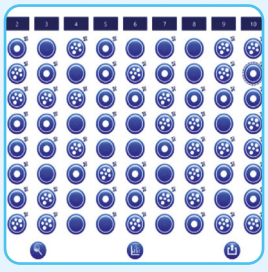
Sample Capture

After incubation, the **MAST URI®** *Plates* are imaged on the **MAST URI® PLUS** *CONNECT*, with images and sample information being imported into the database for validation. The **MAST URI® PLUS** *CONNECT* saves precious bench space by incorporating a built-in PC, boasts a high-resolution camera for sharper image capture and possesses refined software for seamless sample analysis.

Sample Validation

The overhauled **MAST URI®** *CONNECT* software has been built from the ground up, focusing on greater accessibility, streamlining workflow and having a strong focus on traceability. It encompasses EUCAST expert reading rules, assisting in the exporting of clinically relevant results. The combination of sharper images and an all-encompassing sample analysis screen, ensures an efficient validation process presenting a complete collection of sensitivity and identification.

Once validated, results are exported to LIMS, as the **MAST URI®** *CONNECT* can be fully interfaced.



Next Generation Urine Analysis

Get *CONNECT*ed

Product development based on real customer feedback.

"Having to remove the pin head after every batch could increase contamination risk"

MAST URI® *CONNECT* has integrated a mandatory sterilisation step between inoculation of plate sets, which aids in preventing cross-contamination

"Increasing sample traceability would improve auditability"

End-to-end traceability is a fundamental aspect of the **MAST URI®** *CONNECT* with integrated barcode scanners enabling seamless information transfer between the whole suite of instruments

"It would be great to be able to export results for urgent samples"

With advanced software, **MAST URI®** *CONNECT* can now export single samples providing increased flexibility and allowing urgent results to be exported faster

MAST URI®
CONNECT

The enhancements to the user interface on the **MAST URI®** *CONNECT* allows for manual entry of typed notes at both sample dispensing and result validation

"Manually writing notes can be time consuming and lead to errors"

Integrated fail-safes, including an incubation warning signal, decreases likelihood of user error and improves workflow consistency across the whole system

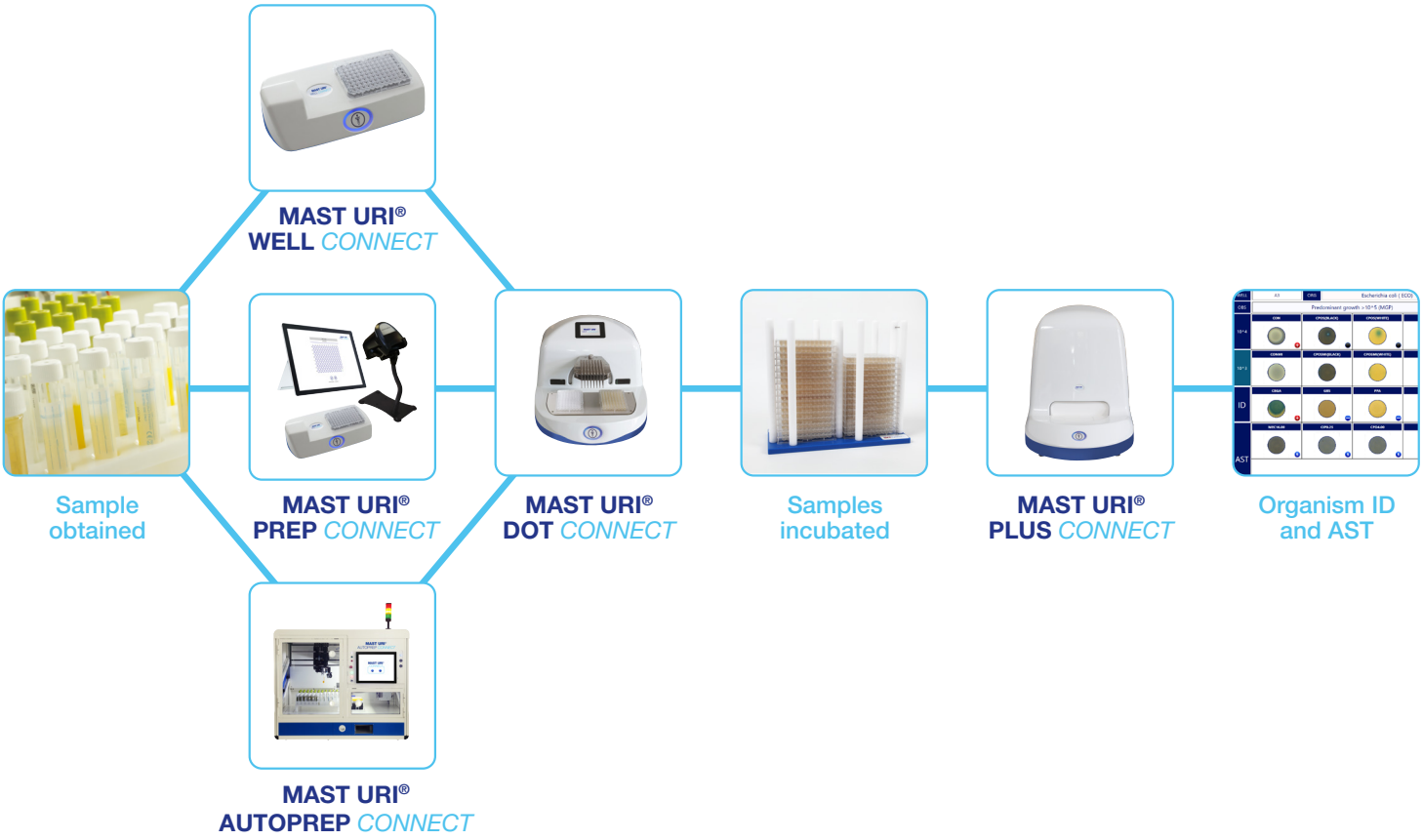
"More guidance through the workflow would be helpful for new team members"

MAST URI® *CONNECT* boasts a higher resolution camera providing high quality images allowing for well images during result validation

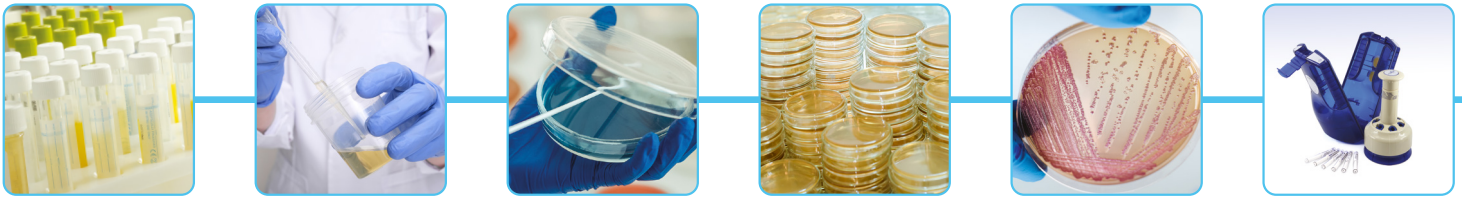
"Having better images would make result validation easier"

The **MAST URI®** *CONNECT* reduces staff processing time by up to 70%[1]

MAST URI® *CONNECT* process > 18 - 24 hours



Traditional process > 36 - 48 hours



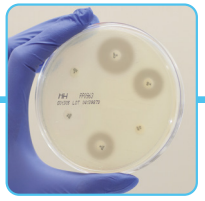
MAST URI® *CONNECT* is a sustainable alternative to the traditional process with an **85%** reduction in plastic and **96%** reduction in agar waste.[2]

Our **MAST URI®** *Plates* are produced according to current EUCAST breakpoint guidelines.

The new **MAST URI®** *CONNECT* builds on its renowned predecessor the **MAST URI®** *System*.

By using fewer consumables **MAST URI®** *CONNECT* streamlines urine AST and saves on storage space.

Samples incubated

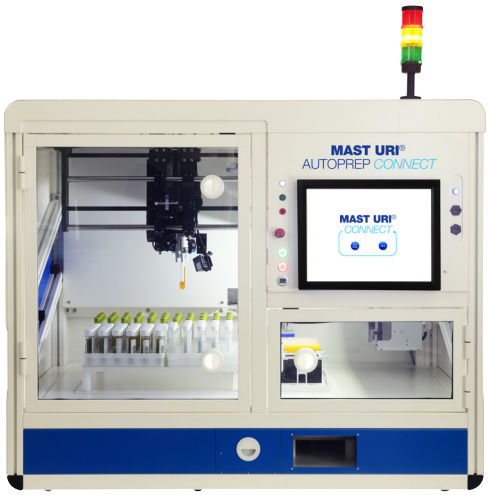


AST profile obtained

Results validated

References:

1. Pathology in Practice. Streamlining urine microbiology: the Northampton experience. Vol 13(3) 2012.
2. Mast Group Ltd. Study conducted comparing 14 MPM plate set to 96 Petri dishes. 2023.



Introducing **MAST URI® AUTOPREP** *CONNECT*

Specimen Tube Compatibility

A range of tubes commonly used for urine sample collection can be processed on the device.

Easy Setup

Internal deck layout is designed for rapid loading and easy cleaning for a faster workflow.

Barcode Recognition

Integrated barcode readers allow the device to maintain full end-to-end traceability for tracking of samples.

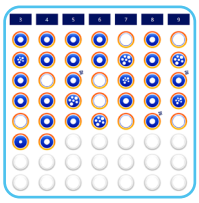
Automatic Decapping

Decaps all samples reducing the likelihood of cross-contamination from manual handling and reduces risk of RSI.

Vortexing and Pipetting

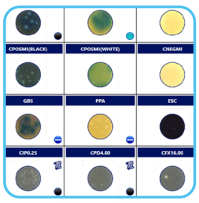
Automatic vortexing and liquid level detection of each sample occurs before sample aspiration and dispensing.

New **MAST URI®** *CONNECT* Interface



Improved User Interface

Upgraded software technology and a new LED touch screen monitor provides customers with improved accessibility.



Simplified Workflow Process

Simultaneously display ID, sensitivity data, patient demographics, EUCAST reading rules and manual typed notes.

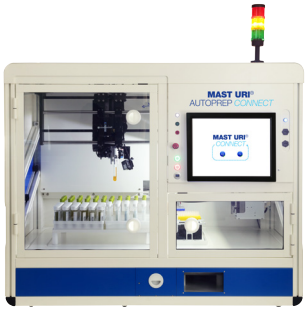
High quality well images

Higher resolution images with the new zoom function greatly enhances efficiency for validation, further reducing reporting times.

MAST URI® *CONNECT*
Product Range

Product Specifications

MAST URI® *CONNECT* full product range.

	MAST URI® AUTOPREP *CONNECT*	**MAST URI® WELL** *CONNECT*	**MAST URI® PREP** *CONNECT*
			
Weight	200 kg	1.2 kg	Tablet: 0.80 kg USB Hub: 0.52 kg Well Connect: 1.2 kg
Dimensions	1450W × 650D × 1088H mm	300W x 150D x 80H mm	Tablet: 292W x 8.5D x 201H mm USB Hub: 130W x 30D x 70H mm Well: 300W x 150D x 80H mm
Power requirements	240 VAC, 50/60 Hz, 500 W	5 V, 500 mA, USB powered	240 VAC, 50/60 Hz, 199 W
Connectivity	Ethernet, USB	–	Ethernet, USB
Product code	URIAUTOPREPCONNECT*	URIWELLCONNECT	URIPREPCONNECT

	MAST URI® DOT *CONNECT*	**MAST URI® PLUS** *CONNECT*	**MAST URI® PLUS** *CONNECT* *Hardware*
			
Weight	11.5 kg	21.5 kg	3.9 kg
Connectivity	380W × 415D x 290H mm	522W × 522D × 671H mm	565W × 175D × 433H mm
Power requirements	100-240 VAC, 50/60 Hz, 60 W	100-240 VAC, 50/60 Hz, 220 W	90-264 VAC, 50–60 Hz, 25 W
Connectivity	Ethernet	USB, Ethernet, Display Port	USB C, Ethernet
Product code	URIDOTCONNECT	URIPLUSCONNECT*	URIPLUSCONNECT

* These devices will be fitted with an uninterruptible power supply (UPS)

MAST URI® *Plates*

MAST URI® ***Plates***: Antibiotic and Identification plates; current availability (subject to change)
Antibiotic plates aligned with EUCAST Clinical Breakpoints V15.0

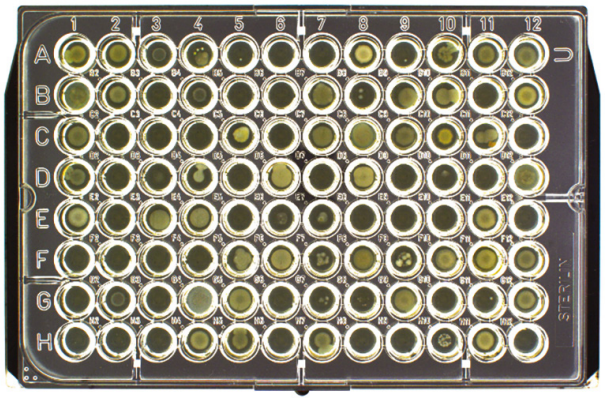
Code	Plate Type
MPM-AK8	Amikacin 8mg/L
MPM-AMX8	Amoxicillin 8mg/L[1]
MPM-AMXC8	Amoxicillin-Clavulanate 8mg/L[1]
MPM-AMXC32	Amoxicillin-Clavulanate 32mg/L[1]
MPM-AMP8	Ampicillin 8mg/L[1]
MPM-CFX16	Cefalexin 16mg/L
MPM-CXM8	Cefuroxime 8mg/L
MPM-CPD1	Cefpodoxime 1mg/L
MPM-CIP0.25	Ciprofloxacin 0.25mg/L
MPM-CIP0.5	Ciprofloxacin 0.5mg/L
MPM-CRO1	Ceftriaxone 1mg/L

Code	Plate Type
MPM-FOS8	Fosfomycin 8mg/L
MPM-GM2	Gentamicin 2mg/L
MPM-MEC8	Mecillinam 8mg/L
MPM-NI64	Nitrofurantoin 64mg/L
MPM-PTZ8	Piperacillin-Tazobactam 8mg/L
MPM-TEM16	Temocillin 16mg/L
MPM-TM4	Trimethoprim 4mg/L
MPM-TS2/38	Trimethoprim 2mg/L + Sulfamethoxazole 38mg/L
MPM-VA4	Vancomycin 4mg/L

1.For information on how to implement aminopenicillin breakpoints, see www.eucast.org/eucastguidancedocuments/

Identification Plate Set

Code	Description
MPM-CON	Control
MPM-CPOS	Chromogenic Gram-positive
MPM-CNEG	Chromogenic Gram-negative
MPM-CBGA	Chromogenic Beta Glucuronidase
MPM-IDM51	Aesculin
MPM-IDM52	Phenylpyruvic Acid
MPM-IDM62	Chromogenic Group B Strep



MPM-CON

Detection of Antimicrobial Activity

Code	Description
MPM-IDM54	Antimicrobial Activity Indicator (AAI) plate

Plates for Antimicrobial Resistance Detection

Code	Description
MPM-CRE	Carbapenemase screening plate
MPM-CPD4	Detection of ESBLs. Eliminates bacteria lying on EUCAST breakpoint (1mg/L)

Notes:

Direct culture and sensitivity testing of samples from patients on antibiotics may give misleading results due to inhibition of pathogens. To facilitate detection of antimicrobial activity in urine samples the Antimicrobial Activity Indicator plate (MPM-IDM54) may be included in the Plate Set if required.

These plates are currently available with a four-week lead-time.

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