Radian®

Antibiotic Susceptibility Testing automation and interpretation



Copan
innovating together

Radian®

Radian® is the complete solution to automate and interpret Disk Diffusion Antibiotic Susceptibility Testing.



Disk Diffusion AST

Bringing Disk Diffusion back to the future

Disk diffusion is the only automated AST method that enables microbiologists to provide antimicrobial treatments more efficiently and based on reliable inputs:

- ***Detectable heterogeneous growth***
- ***Visible colony morphology***
- ***Observable antibiotic interactions***

This enables microbiologists to adapt antimicrobial treatment more rapidly.
Radian® gets rid of the disadvantages linked to manual Disk Diffusion, while maintaining its original benefits.

Radian® Blood Culture

Cut the AST incubation time to 4 hours!

A fast time to result is crucial in the treatment of critical patients. Integrating EUCAST Rapid AST Rules (R-AST) into the automated workflow, Radian® is the first fully automated platform to provide accurate therapy indications for Blood Stream Infection patients with just a 4-hours incubation.

- ***Cost saving***
- ***Early antibiotic therapy***
- ***High patient value***



Hardware and software teamwork

Radian® in-Line Carousel

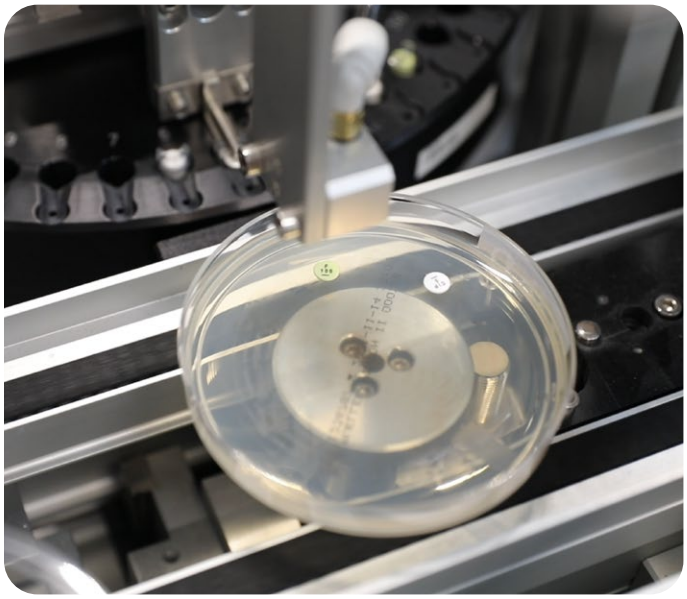


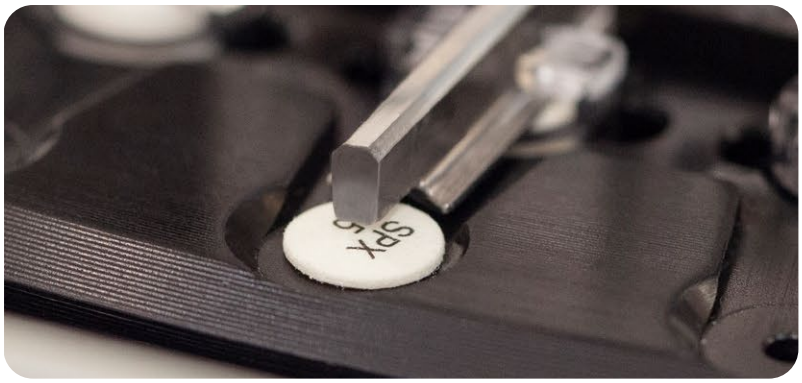
Radian® in-Line Carousel

Hardware module for Antibiotic Disk Dispensing

Radian® In-Line Carousel automatically applies ATB disks on plates streaked by WASP®, allowing to process other samples while the disks are deposited and therefore optimising the throughput of WASPLab®.

- ***Disk deposition integrated check***
- ***Flexible ATB Configuration***
- ***Parallel conveyor***
- ***Dual hepa filter***





Flexible ATB testing

Adapt the automation to your changing needs

Thanks to its 50 position ATB wheel, and the possibility of choosing from 1 to 8 disks deposit protocols, Radian® In-Line Carousel is the most flexible AST testing platform.

Hardware and software teamwork

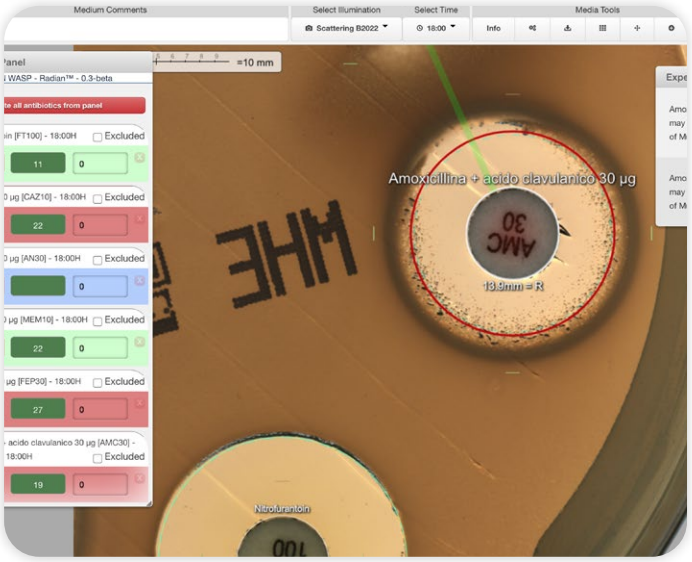
Radian® Expert System

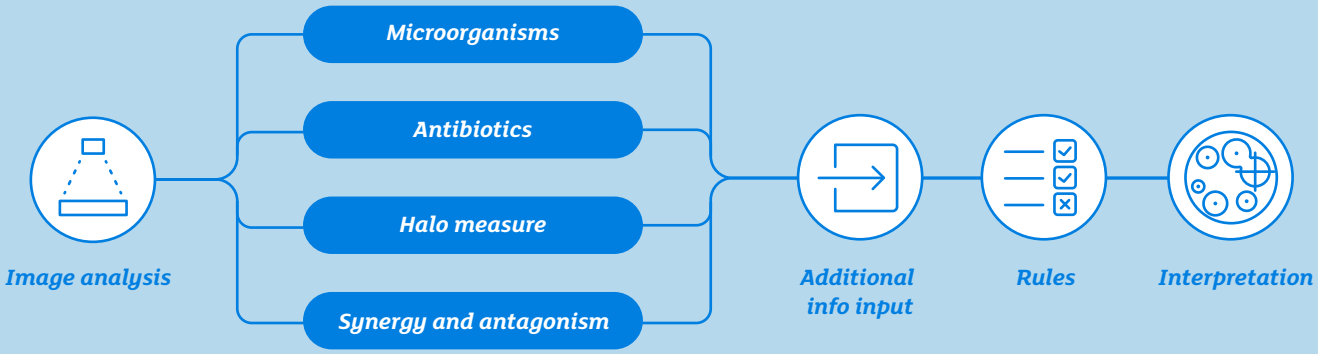
Radian® Expert System

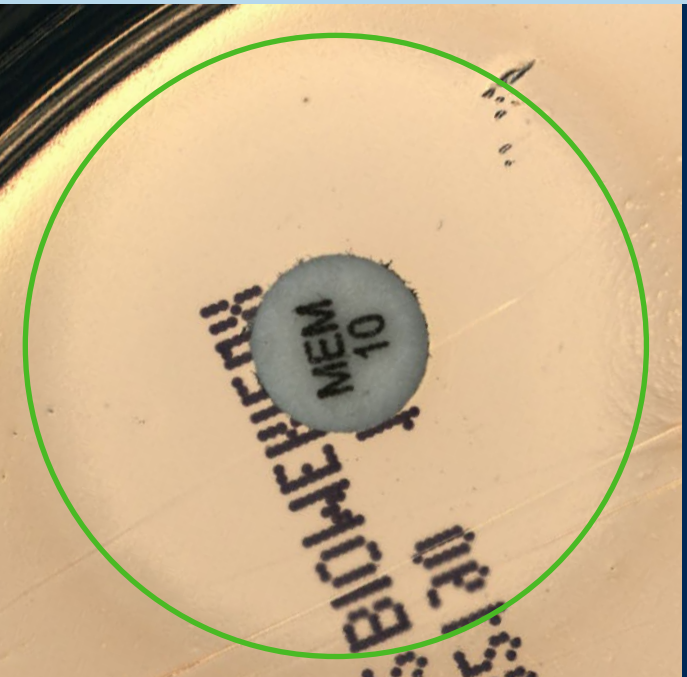
AI Based SIR Interpretation

Radian® Expert System is a fully integrated and customizable solution for AST automated SIR interpretation.
Thanks to a proprietary Halo Recognition Algorithm and the connection with the LIS, Radian® Expert System allows a fast results interpretation.

- *Customizable rules*
- *User-friendly interface*
- *Integrated rapid rules*
- *Fast interpretation*







Uncover the full Digital Bacteriology potential

Superior plate Imaging is the key for a reliable R-AST

Make the most of your WASPLab® telecentric high-definition camera by using plate images in combination with the Halo Recognition and the AST rules for positive haemocultures.

The digital images are essential to allow the halo readings at early time points.

STANDARD Workflow

Samples in Liquid Based Media

RAPID Workflow

Positive blood culture samples

WASP®

Streaking

WASP® receives sample collection tubes and reads each tube ID, to process the sample by the selected protocol. After streaking, the plate runs on the conveyor directly to WASPLab®.

AST Streaking

AST suspensions prepared by Colibri™* or positive blood cultures get streaked on a Mueller Hinton plate by WASP®.

Radian® in-Line Carousel

Disk deposition

The plate gets deviated on a parallel conveyor and reaches Radian®. Then, the Radian® carousel deposits the antibiotic disks on the plate according to the protocol chosen.

WASPLab®

Standard incubation

Plates are individually placed at the ideal conditions to support the growth of bacteria.

AST Standard Incubation

18h

The plate sits tight for 18-24 hours in the ideal incubation conditions.

AST Rapid Incubation

4h

Following the latest trends for Rapid AST testing, the plates remain in the incubators for the short incubation – 4 hours – and imaging protocols.



Colibri™

Colony picking and AST suspension

Besides preparing ID targets, Colibri™ receives the information from the PhenoMATRIX® TAG and prepares the Microbial suspension with the selected colonies.*

PhenoMATRIX® TAG

Tagging

The latest addition to the Artificial Intelligence Suite – PhenoMATRIX® TAG – selects the most appropriate colonies for the picking, and send the info directly to the LIS and Colibri™.

Radian® Expert System

Interpretation

After the automatic measure of the halos around the disks and retrievement information from the LIS by WASPLab®, Radian® Expert System applies the standard and customized rules to provide the interpretation of the test in a user-friendly report.

Benefits

How Automated Disc Diffusion makes a true difference in your routine

Improve your workflow

Radian® performs AST antibiotic disks application on WASP®-seeded plates, followed by automated incubation, plate digital imaging, and interpretation.

Raise your standards

Radian® derives antibiotic susceptibility results using EUCAST updated rules, laboratory expert rules and RAPID rules, to allow the possibility to perform R-AST (Rapid Antibiotic Susceptibility Testing).**

Customizable and user friendly

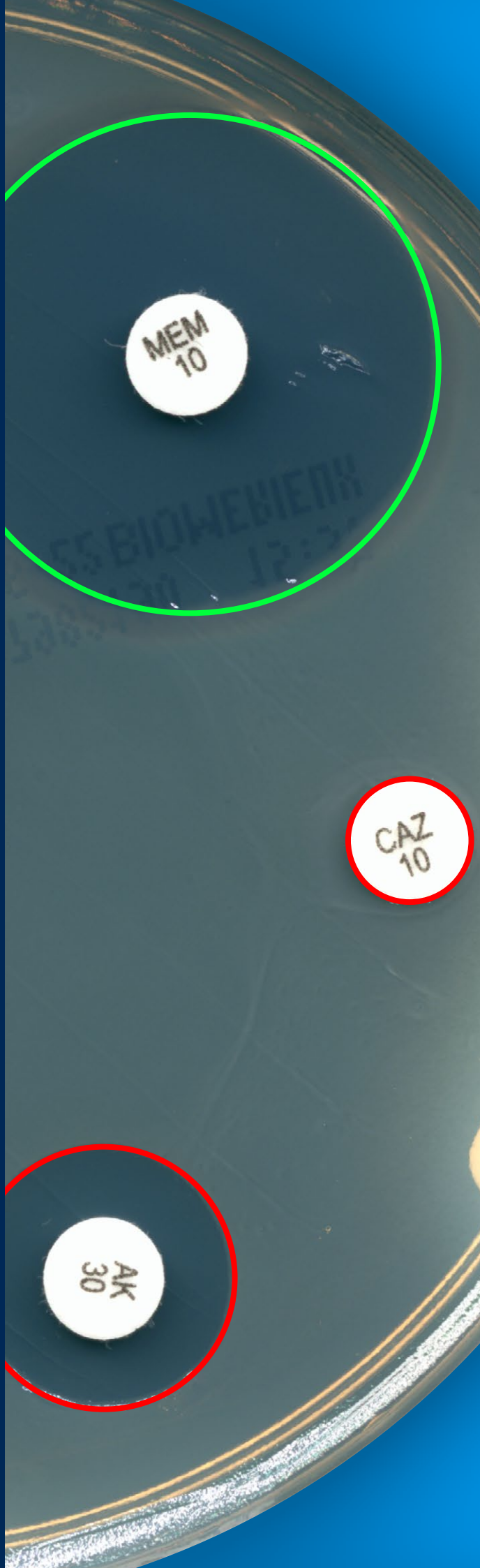
Through an easy and user-friendly interface, microbiologists can consult sample data, confirm test results and upload custom Expert Rules for interpretation.

Dive into the data

The integration with LIS, allows complete traceability and the possibility to evaluate patient data to support the microbiologist in results interpretation.

Faster and meaningful results

Efficiency, scalability, TAT reduction, standardization and resource optimization: the transition to an automated lab is a radical step that will change the whole perspective on the future of every lab.



Fields of application

Preanalytics made different

MultiDrug Resistant Organisms

Blood stream infections

Urinary infections

Hospital Acquired Infections

Liquid-Based Microbiology

Radian® best allies

Laboratory automation is only a part of Copan's comprehensive approach to Preanalytics.
Our line of liquid-based microbiology collection and transport devices unlocks Radian® full potential.

eSwab®



FecalSwab®



BC+™



UriSponge™



SLsolution™



LBM® Broth



Technical informations Radian® Expert System

Radian® Expert System > *WLAB-RADIAN-EXSYS*

- The EUCAST rules of the latest available EUCAST version, and the possibility to customize antibiotic/ microorganism/ breakpoints/ rules
- The EUCAST standard AST workflow provides preparation of AST samples using the colony suspension method and the reading/interpretation of the plates after 18h incubation

Radian® Expert System BC > *WLAB-RADIAN-EXSYS-V2*

Everything in WLAB-RADIAN-EXSYS, plus:

- The EUCAST Rapid AST directly from blood culture rules of the latest available EUCAST version and the possibility to customize rules
- This flow provides the direct inoculation of Positive Blood culture on the AST plates and reading/interpretation of the plates after 4-6-8h incubation

Technical informations Radian® in-Line Carousel

Dimensions	Noise Emissions	Weight	Thermal Output	Peak Power Consumption
W 1360 *D 837* *H 1662*	*Max 53.9 Db*	*285 Kg*	*2081 BTU*	*700 W*

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*Soon available. Contact Copan for further details.
**Currently available only for positive Blood Cultures.

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