Azer Scientific

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Ai5 Lab

ENHANCING MICROBIOLOGY LAB WORKFLOW

The Ai5 Lab system is a compact, modular, and innovative solution designed to streak, incubate, digitize, and sort microbiological samples while integrating AI algorithms for growth detection, sample segregation, and real-time alerts.

This groundbreaking system *optimizes laboratory workflow*, making task management faster, smarter, and more efficient.

Discovering
Ai5 Lab components

1 AUTOPLAK

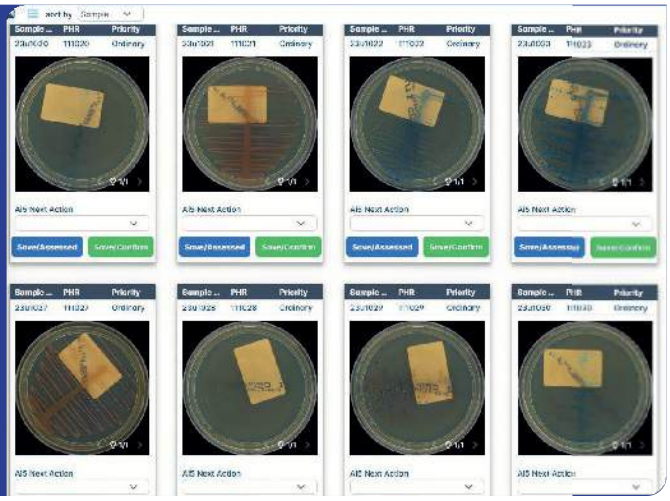
The AUTOPLAK is an advanced automatic streaking and inoculation system that helps laboratories increase productivity and standardize microbiology workflows. Optional modules for bi-plate streaking and Gram slide preparation extend the system's capabilities.

2 AIPLAK

The AIPLAK is a smart incubation system that streamlines laboratory workflows by combining two independent incubation chambers, full digitization, and automated sample sorting. It can function as a standalone system or connected to AUTOPLAK.

3 AI MODULES

The AI Modules platform provides artificial intelligence algorithms that complement the bacteriological digitalization offered by AIPLAK. From algorithms designed for continuous monitoring application to those for AI-assisted sample interpretation using validated algorithms, it encompasses growth detection, alarm generation once growth is detected, and more.



6 reasons for *choosing AUTOPLAK*

- **Excellent streaking quality**
- **Highly versatile**
- **Customizable configuration**
- **Optimized space in laboratory**
- **Increased productivity, efficiency and reliability**
- **Quick to install and ergonomic**

AUTOPLAK

Efficiency for the microbiology laboratory

The AUTOPLAK fully automates front-end plate streaking processes, broth inoculation, slide preparation, and bi-plate streaking, enhancing productivity and ensuring reliability.

Processes
covered

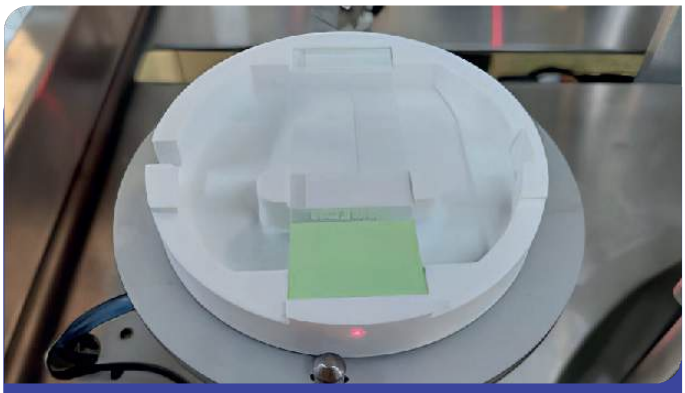
The AUTOPLAK, with optional configurations, automates processes to deliver streamlined, flexible, and consistent workflows. The automation matches your laboratory's specific needs from testing volume, assay diversity, diagnostic type, and budget.

Plate Streaking

Customizable streaking protocols that accommodate a wide variety of tubes and culture media.

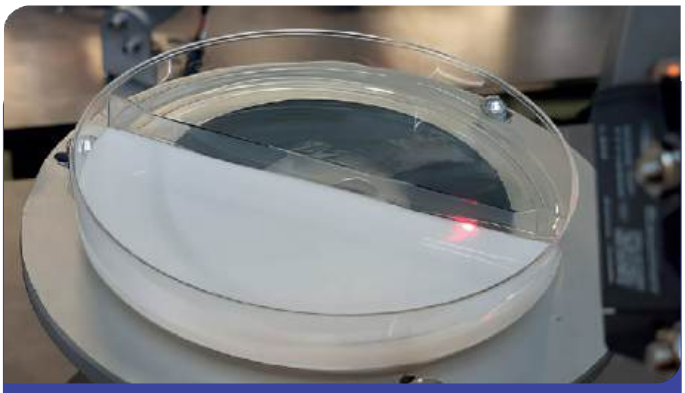
Broth Inoculation Module (Advanced Variant)

Inoculate enrichment broth with barcode printing on the tube.



Gram Slide Preparation Module

Automated streaking and precise barcode printing.



Bi-plate Streaking Module (Optional)

Precise and efficient streaking on bi-plate media.

6 reasons for *choosing AIPLAK*

- Smart incubation
- Digital Microbiology
- Modularity and flexibility
- Quick to install and ergonomic
- Dual-protocol algorithms
- Compact design

AIPLAK

Real-time digital microbiology

The AIPLAK revolutionizes laboratory workflows by integrating advanced incubation with a fully digitized workflow and automated sample sorting.

Processes
covered

AIPLAK is designed to support smooth operations, minimize disruptions, and help laboratories maintain reliable and consistent results.

Digital Microbiology

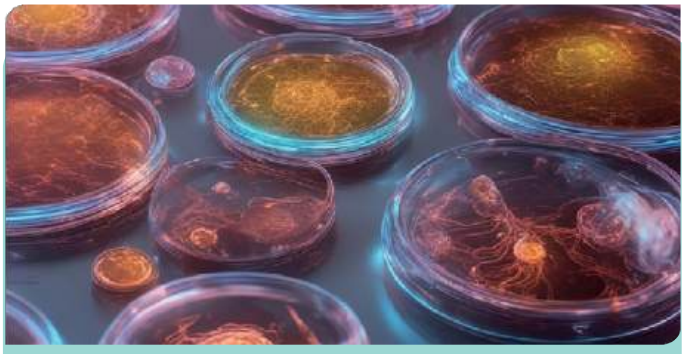
Specialized desktop app ensures efficient data management, error reduction, and fully digitized workflows. Manages and identifies samples digitally, eliminating physical contact while boosting precision and productivity.

Automated Incubation

Modular, precise incubation with dual chambers, fully customizable to lab protocols.

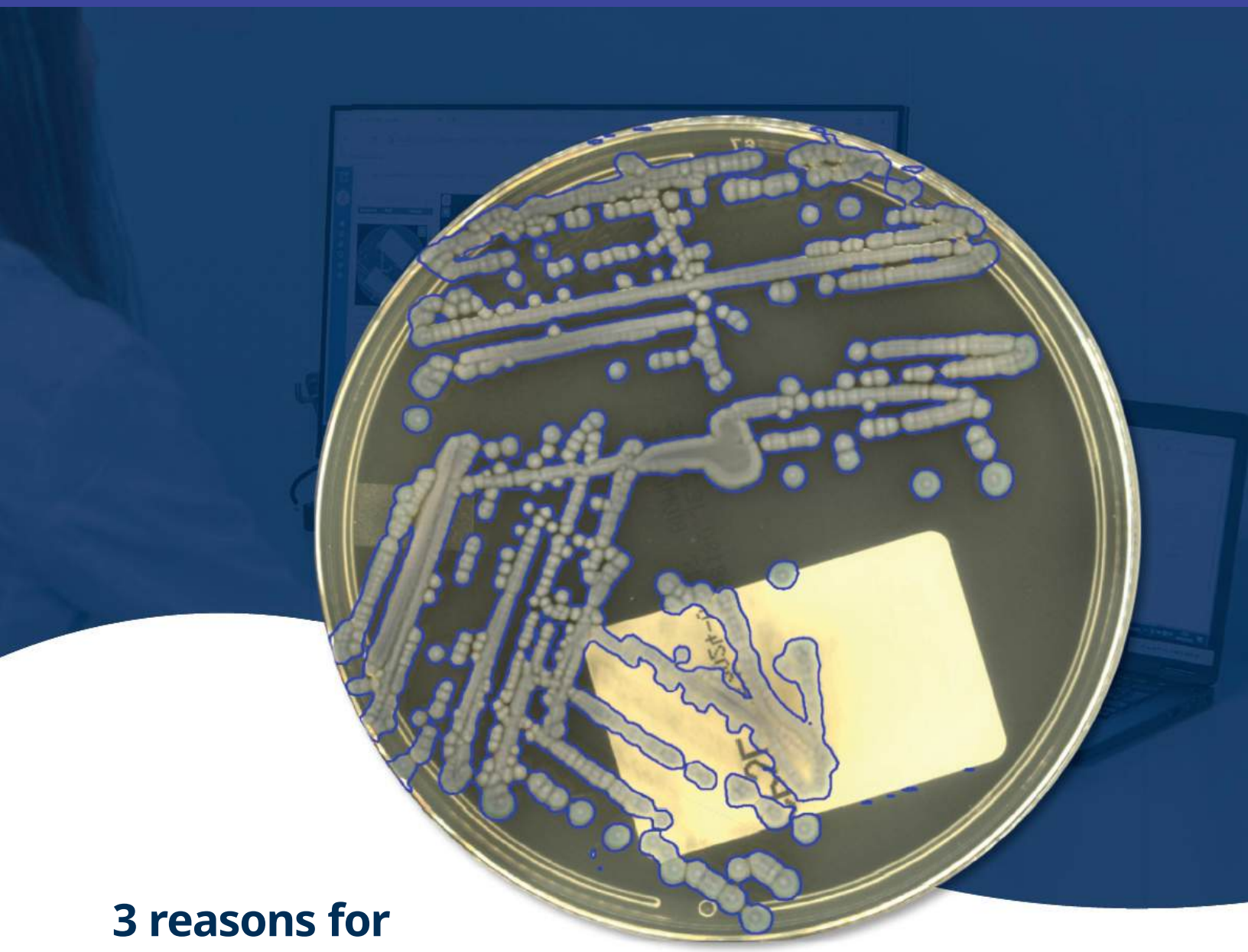
Samples Output Sorting

After analysis with the graphical interface, samples are discarded or sorted into output carousels. Sorting can be configured in system settings, streamlining transfer to subsequent interpretation processes.



AI Modules (Optional)

AI Modules offer tailored algorithms for monitoring, alarms, growth/no-growth segregation, and more.



3 reasons for *choosing AI Modules*

- **AI algorithms platform**
- **Continuous plate reading - Alarm generation**
- **Dual growth/time protocols**

AI Modules

Advanced interpretation support algorithms

Our AI algorithms support laboratory workflow configuration and reliable result interpretation, featuring unique dual growth/time protocols for improved efficiency and consistency.

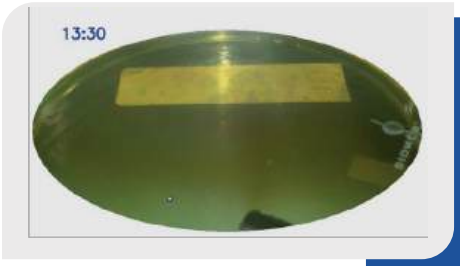
Enhance with
AI Modules

AIPLAK can be optimized by integrating a set of algorithms designed to improve efficiency and accelerate the diagnostic process for laboratory technicians. These algorithms operate across both imaging systems, allowing samples to be classified according to the presence or absence of microbial growth, while also monitoring microbial growth in real time with alerts once detected.

Urine Segregation Module

AI-based algorithm designed to classify urine samples based on microbial growth distinguishes between samples with bacterial growth and those without.

Growth Alarm Generation

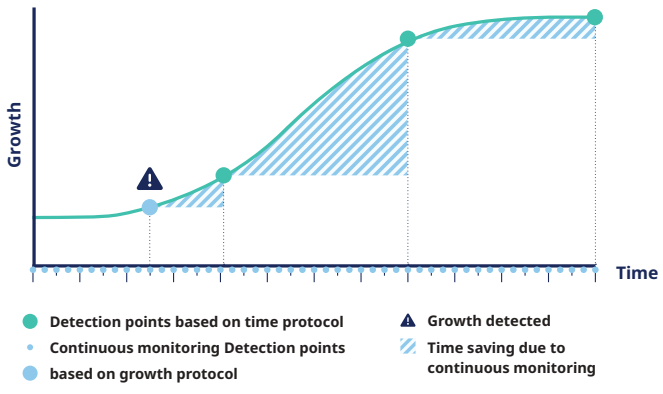


With its advanced secondary imaging system, AIPLAK enables real-time growth monitoring, generating alerts, and accelerating sample diagnostics. This feature significantly shortens incubation times by providing continuous, detailed sample data, allowing for faster technical interpretation.

Dual Growth/Time Protocol

AIPLAK system is the only system on the market equipped with two complementary imaging systems. First, a continuous monitoring system allows uninterrupted monitoring of sample growth, capable of generating alerts as soon as growth is detected in the sample. The second system captures the overhead image, digitizing the sample, and executing artificial intelligence algorithms to assess the characteristics of that growth.

This advanced platform combines time-based and growth-based management protocols, providing the laboratory with a unique tool to address emergency Situations. This efficiently optimizes workflow processes and improves laboratory efficiency for accelerated results.



Why choose *Ai5 Lab?*

AI5 Lab is a novel and disruptive system that brings a new vision to laboratory management. By combining advanced automation, modular design, and AI driven analysis, it streamlines workflows, enhances efficiency, and reduces manualintervention, all within an optimized footprint that maximizes space utilization. This innovative approach enables laboratories to improve accuracy, optimize resources, and gain faster, more reliable insights from their processes.

Excellent Streaking Quality

Through the Autoplak automation system, samples are efficiently streaked with precision, consistency, and minimal manual intervention.

Modular & scalable solution

The system adapts to evolving laboratory needs, enabling flexible workflows, seamless expansion, and optimal space utilization.

Productivity, efficiency and reliability

Enhanced through process automation, minimized manual intervention, and faster, more reliable results across all laboratory workflows.

Continuous plate reading alarm generation

Continuous growth monitoring enables real-time detection, automated alerts, and timely interventions, improving accuracy, efficiency, and reliability across laboratory workflows.

Digital microbiology Open AI Platform

A user-friendly graphical interface enables seamless digitalization of laboratory data, streamlining workflows and improving accuracy.

Dual growth/time protocols

Capable of combining both imaging systems to manage samples according to their criticality.

Ai5 Lab: a *game changer* in clinical laboratory automation

Discover how to enhance microbiology lab workflows:

Learn More

We have your workflow covered.

From sample collection to identification, Azer Scientific supports the microbiology workflow with reliable, high-quality solutions, including:

- **Specimen collection and transport** | Swabs, transport media, and containers designed to preserve sample integrity from collection through processing
- **Culture media, reagents, and stains** | Solutions to support accurate microbial growth, isolation, and differentiation
- **Automated plating with AUTOPLAK™** | Streamline sample processing with automated streaking and plating to improve consistency, reduce hands-on time, and increase throughput
- **Inoculation and laboratory essentials** | Tools and consumables that enable consistent, contamination-free sample handling
- **Identification and workflow efficiency** | Stains, test kits, and labeling solutions that improve accuracy, traceability, and turnaround time

Private Labeling Made Easy

Azer Scientific can customize your specimen collection kits to ensure your lab's collection is streamlined. From custom labels and packaging to specific kit components, we're here to meet your needs.

Why Choose Azer Scientific?

Azer Scientific strives to continue pushing the boundaries of the ever-evolving world of microbiology by offering solutions fueled by innovation. We specialize in producing products designed to make every experiment/study/diagnosis faster and more efficient. As an ISO-certified manufacturer with an ever-expanding inventory, our aim is to cater to the unique needs of every customer by providing them with superior products at an exceptional value.

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