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Ai5 Lab

Enhancing
microbiology lab workflows

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

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

Discovering
Ai5 Lab components

1 AUTOPLAK

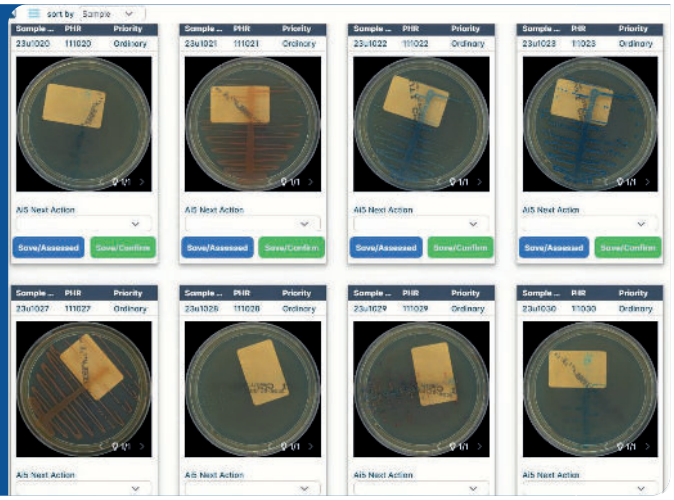
AUTOPLAK is an advanced automatic streaking and inoculation system that helps laboratories increase productivity and standardize microbiology workflows. Optional modules for bi-plate streaking and Gram slide preparation further extend the system's capabilities.

2 AIPLAK

The smart incubation system streamlines laboratory workflows by combining advanced 2-independent incubation chambers, full digitalization and automated sample sorting, whether connected to Autoplak or as standalone system.

3 AI MODULES

The AI Modules platform provides artificial intelligence algorithms that complement the bacteriological digitalisation offered by AIPLAK. From algorithms for continuous monitoring application to those for intelligent interpretation support of samples using validated algorithms, it encompasses growth detection, alarm generation once growth is detected, and more.



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6 reasons for *choosing AUTOPLAK*

- **Excellent streaking quality**
- **Highly versatile**
- **Flexibility for customised configuration**
- **We optimise space in the laboratory**
- **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 level of automation should match each laboratory's specific needs, including testing volume, assay diversity, diagnostic type, and budget. AUTOPLAK, available in two variants with optional configurations, automates the processes below to deliver streamlined, flexible, and consistent workflows.

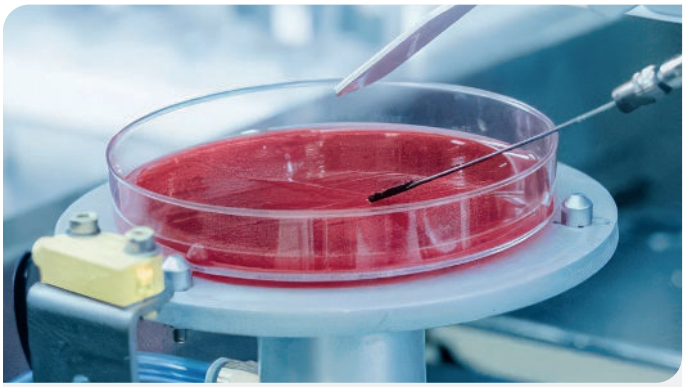
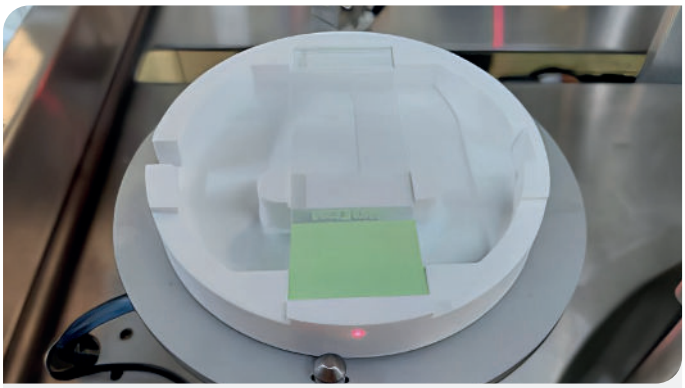


Plate streaking

AUTOPLAK is a flexible, configurable system with customizable streaking protocols that accommodates a wide variety of tubes and culture media.

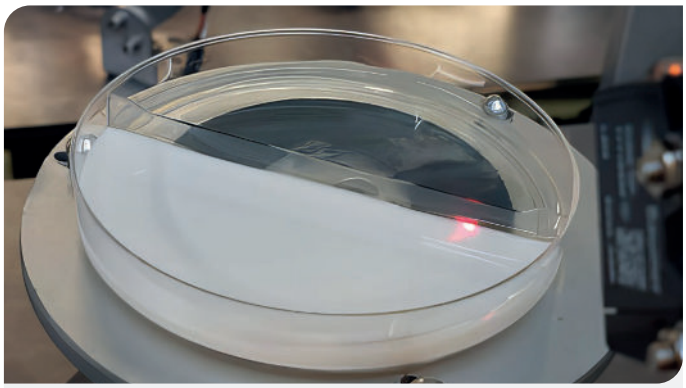
Broth inoculation

Expand the functionality to the Advanced variant with our broth inoculation module to inoculate enrichment broth with barcode printing on the tube.



Slide preparation

Boost operational efficiency with AUTOPLAK's Gram slide preparation module, featuring automated streaking and precise barcode printing to streamline workflows and enhance accuracy.



Bi-plate streaking

Unlock advanced functionalities by adding the robust module from our bi-plate streaker. This optional module permits precise and efficient streaking on bi-plate media.

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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 digitalized process and automated sample sorting.

Processes
covered

Understanding the need for innovative solutions that make tasks easier and more efficient, AIPLAK is designed to support smooth operations, minimize disruptions, and help laboratories maintain reliable and consistent results while improving overall workflow.

Automated Incubation

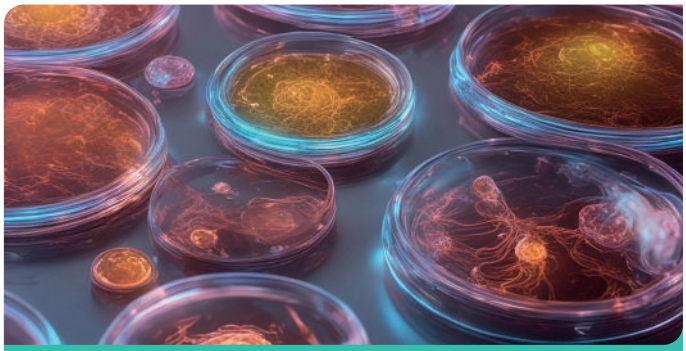
AIPLAK provides modular, precise incubation with dual chambers, fully customizable to lab protocols for enhanced flexibility, accuracy, and optimal performance across applications.

Digital microbiology

A specialized desktop app ensures efficient data management, reduces errors, and fully digitizes workflows. It manages and identifies samples digitally, eliminating physical contact and boosting precision and productivity.

Samples output sorting

After analysis via 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)

Integrate AI modules into lab operations to free technicians for higher-value tasks. Sener's AI Modules offer tailored algorithms for monitoring, alarms, growth/no-growth segregation, and more.

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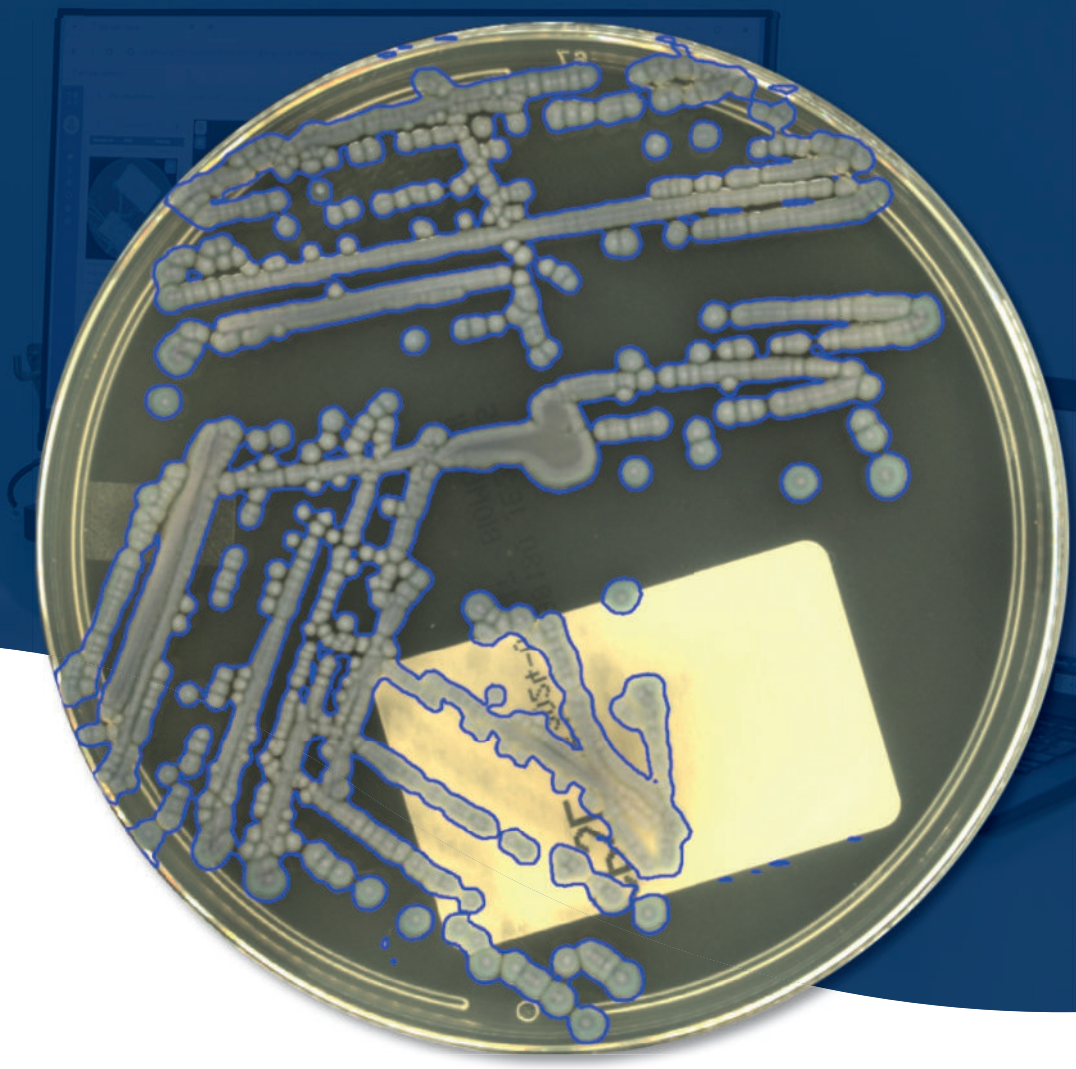


3 reasons for *choosing AI Modules*

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

AI Modules

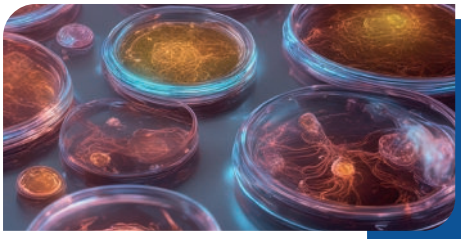
Advanced interpretation support algorithms

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*

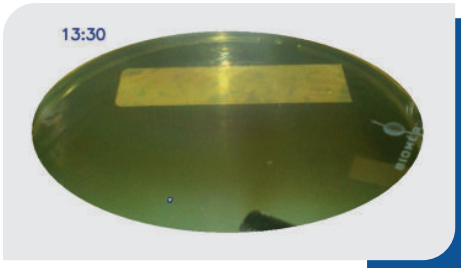
AIPLAK can be optimized by integrating a set of algorithms designed to improve efficiency and accelerate the diagnostic process for laboratory technicians. These algorithms operate across both imaging systems, enabling samples to be classified according to the presence or absence of microbial growth,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

Urine segregation module



AI-based algorithm designed to classify urine samples based on microbial growth, distinguishing between those that show bacterial growth and those that do not. The algorithm aims to streamline laboratory workflows, allowing technicians to make faster and more accurate decisions regarding sample processing and analysis.

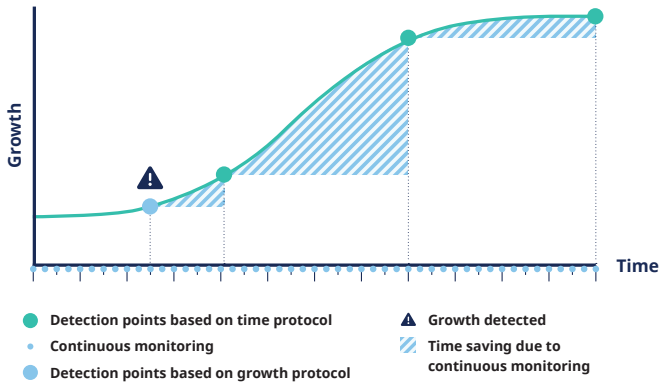
Growth alarm generation



With its advanced secondary imaging system, AIPLAK enables real-time growth monitoring, generating alerts and accelerating sample diagnostics. This innovative feature significantly shortens incubation times by providing continuous, detailed sample data, allowing for faster technical interpretation. These capabilities enhance laboratory efficiency and support quicker decision-making in critical microbiology workflows.

Dual Growth/Time protocol

AIPLAK system is the only system on the market equipped with 2 complementary imaging systems. A first continuous monitoring system that allows uninterrupted monitoring of sample growth, being capable of generating alarms 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 on the characteristics of that growth. This advanced platform that combines time-based and growth-based management protocols, provides the laboratory with a unique tool to address emergency situations, to efficiently optimize workflow processes thus contributing to a more effective operation and accelerated results in the laboratory.



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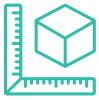
Why choose *Ai5 Lab?*

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 manual intervention, 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.

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

Discover how to enhance microbiology lab workflows:

www.sener.com

It’s not just about automation;
it’s about *adding value* through automation.