Japan Display Inc.

“Visualizing Changes” in Culture Growth

will continue monitoring for you

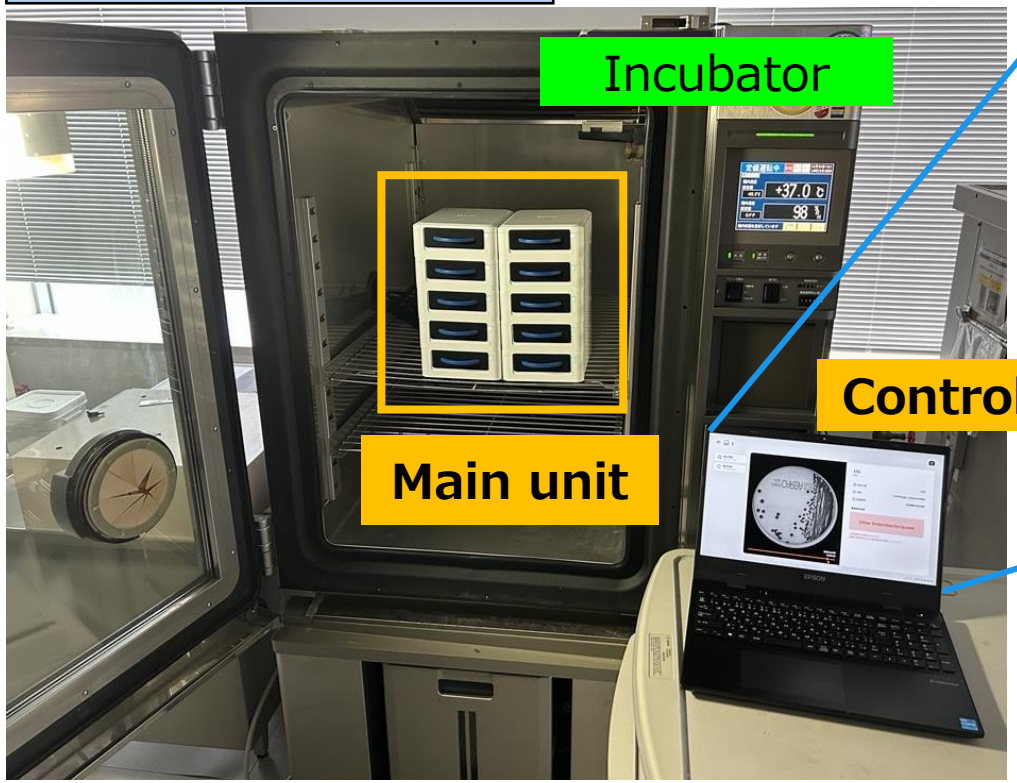
SOLTIMO

～Introduction～

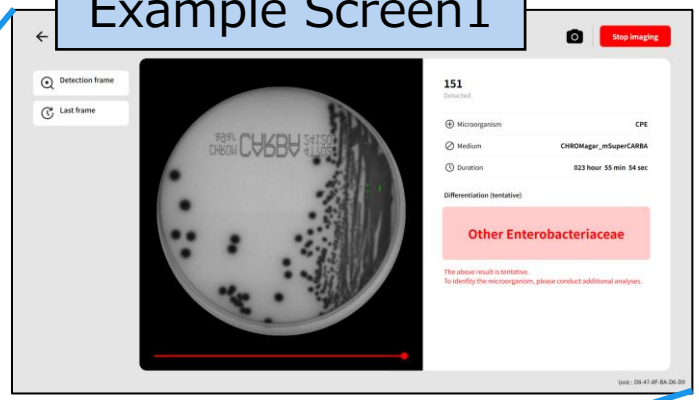
SOLTIMO is a system that automatically monitors culture growth on solid media.

By placing the sample applied Petri dish into the device for incubation, it can detect subtle changes throughout the culture growth process.

Installation Example

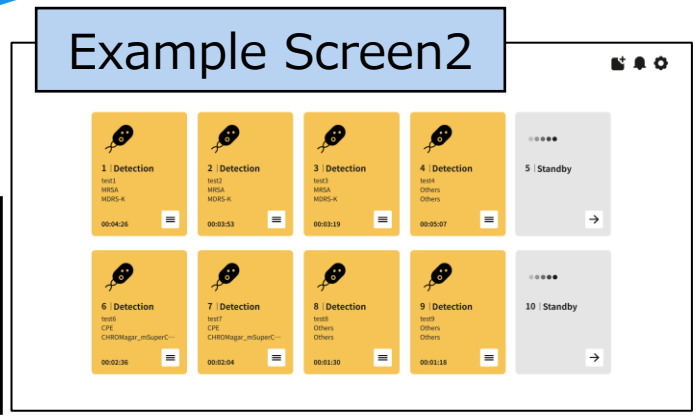


Example Screen1



Real time monitoring of culture process

Example Screen2



Centralized management of multiple units

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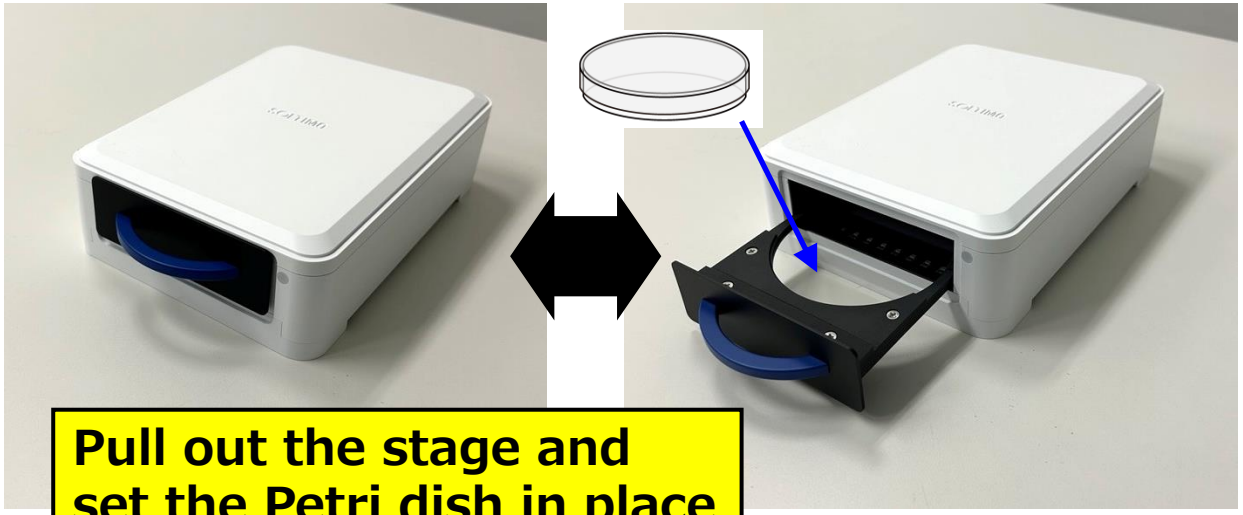
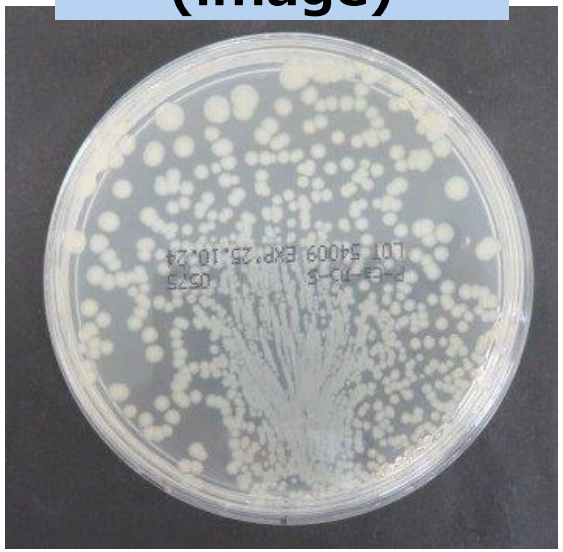
- The device is equipped with a stage mechanism that allows the stage to be pulled out to set the Petri dish.
  The stage can be pulled out while the device remains installed inside the incubator, enabling the insertion and removal of the Petri dish.
- The Main unit is equipped with a large built in sensor, enabling continuous monitoring.



Main Unit Appearance

SOLTIMO

Conventional (image)



Sample Images

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Boosting efficiency in all culture-related research and experiments

Current Challenges	Solved with SOLTIMO
Heavy manual workload Workload increases with observation demands ・Multiple-sample observations ・Night/weekend observations ・Manual recording	**Automatic monitoring** Leave the monitoring to SOLTIMO ・Automatically monitors multiple samples ・Monitors continuously day & night ・Automatically saves results
Difficult to monitor in real time	**High-frequency imaging generates time-lapse data** ・Eliminates missed observations ・Culture conditions checked anytime via app
Variation in operator judgment	**Quantified results via image analysis** ・Eliminates operator-dependent variation

Research and Development

Food Safety

Environment Monitoring

Above are examples of usage, it is usable in all related fields.

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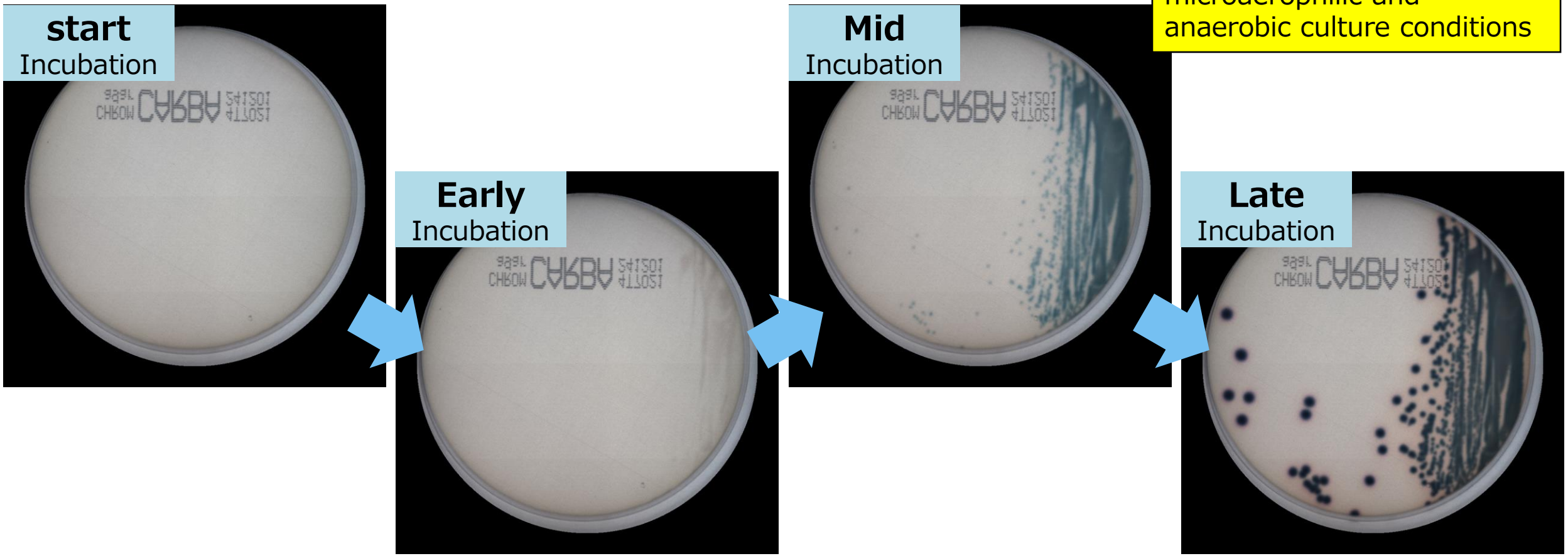
The built-in large sensor enables continuous monitoring and time-lapse data acquisition without taking out the specimen.

Since removal of the sample is unnecessary, it offers advantages for time-lapse observation under microaerophilic and anaerobic culture conditions



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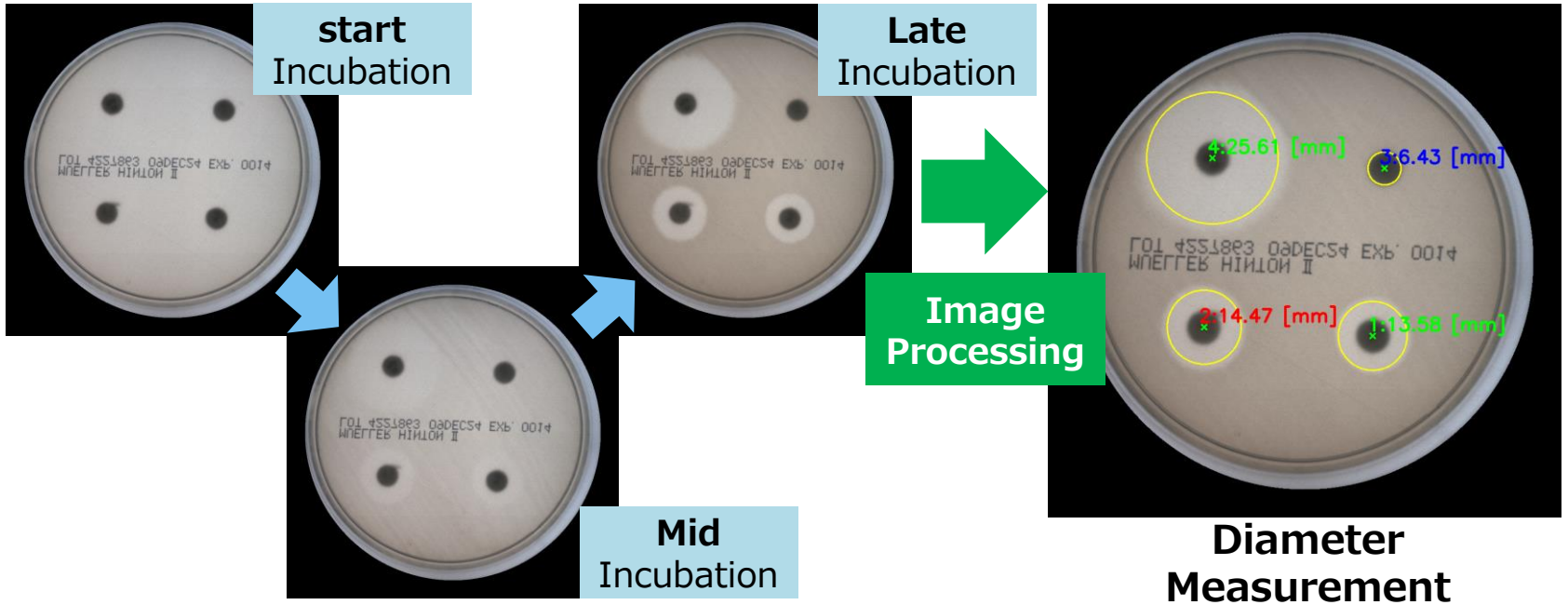
Analyzing time-lapse data to present the required results

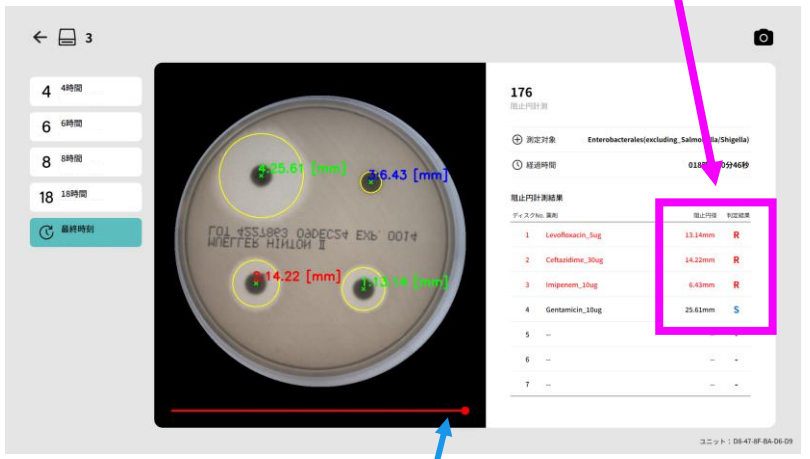
- **Automatic Measurement of Inhibition Zone Diameter**
- Colony Counting
- Colony Growth Curves Based on Optical Density(OD)

Based on the measured values, S/I/R is determined according to CLSI standards.

Time-lapse Data



App Screen



By moving the scrollbar, the inhibition zone diameter can be checked at any desired time point

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Time-lapse Data

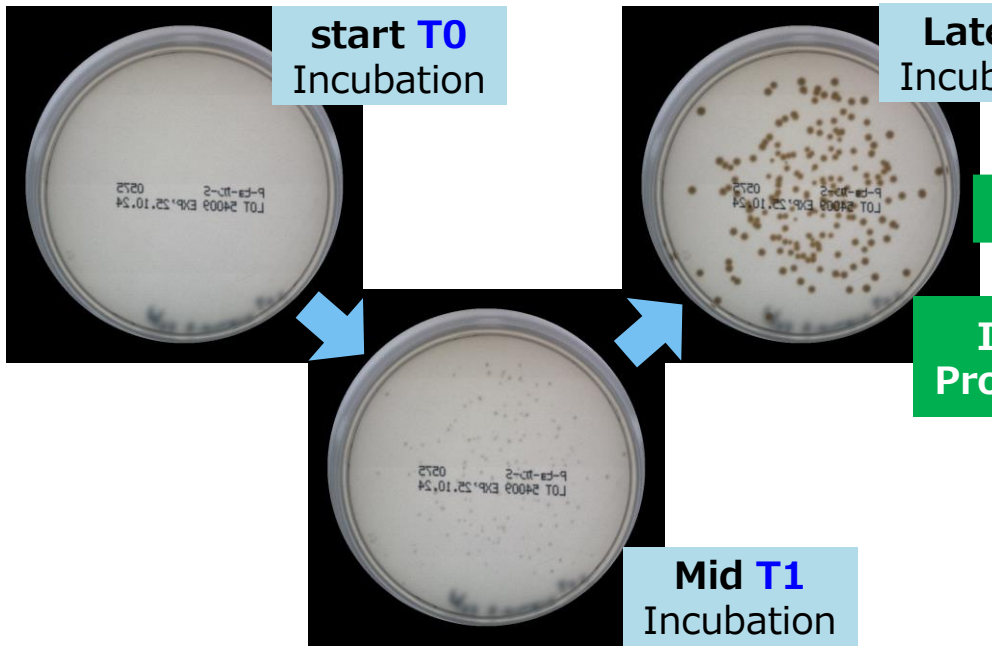
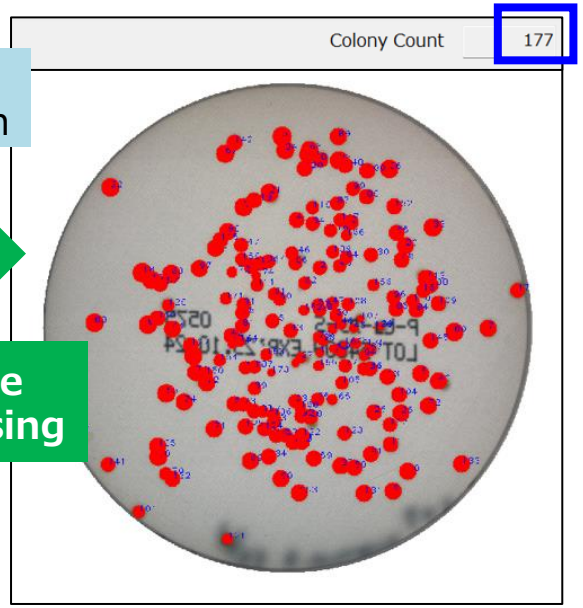


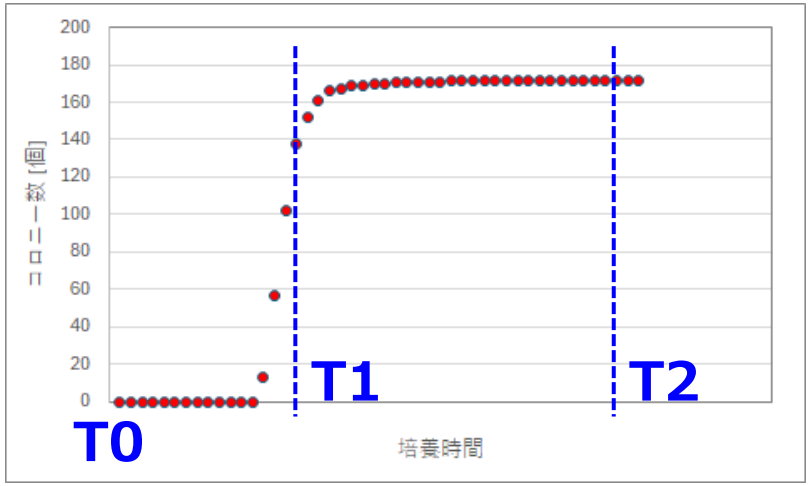
Image Processing

Count Value



Colony Count

Change Over Time



Time-dependent analysis from the initial stage allows counting that excludes initial debris and markings.

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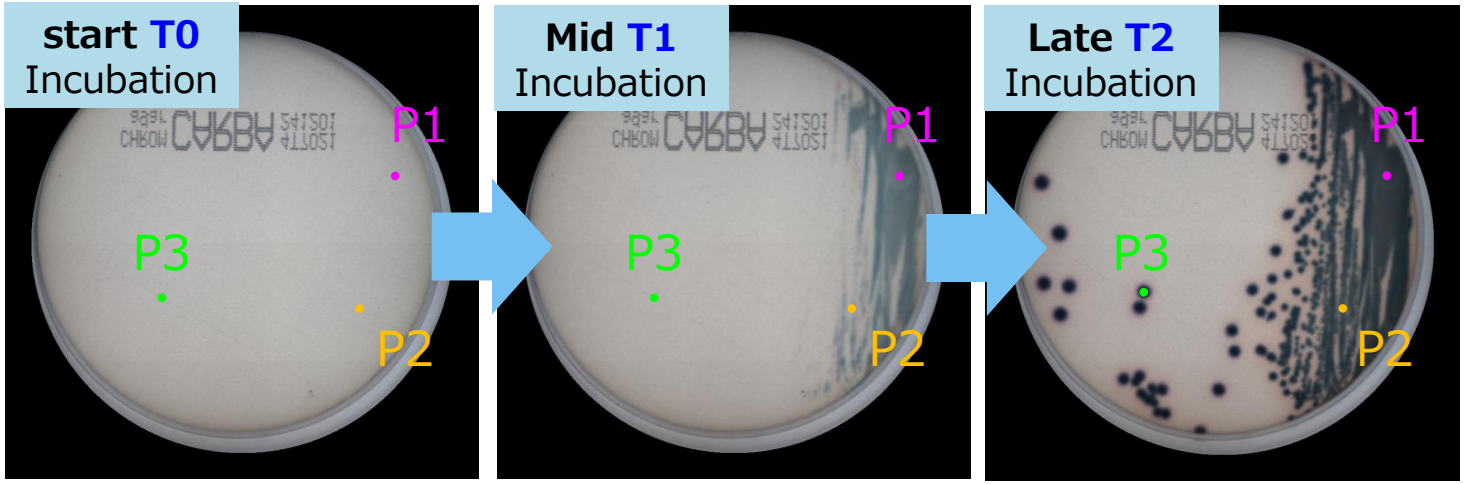
Analyzing time-lapse data to present the required results

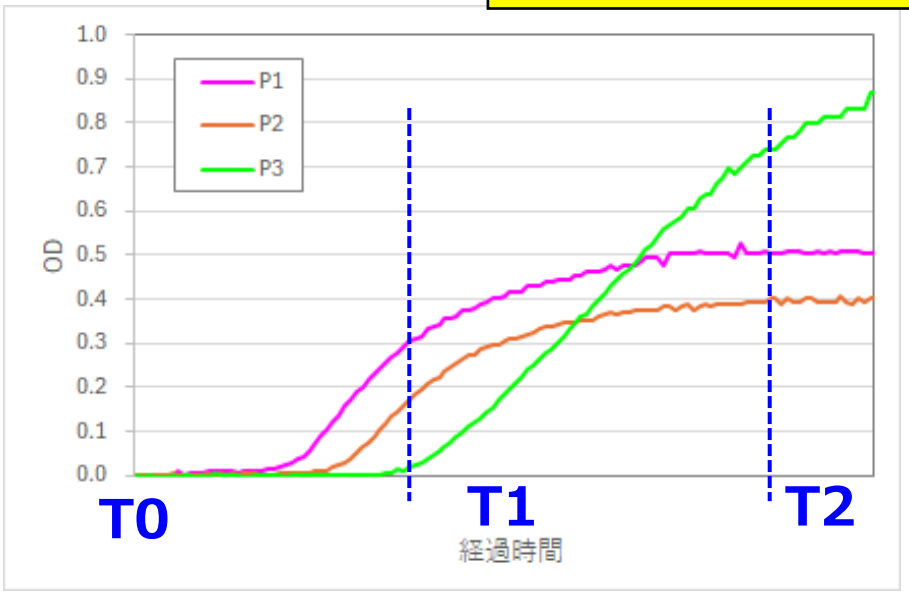
- Automatic Measurement of Inhibition Zone Diameter
- Colony Counting
- **Colony Growth Curves Based on Optical Density (OD)**

Visualizing colony growth timing and growth trends

Time-lapse Data



Growth Curve



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- **Its compact size allows multiple units to be installed inside your existing incubator**
- **Samples can be inserted and removed while the unit remains installed inside the incubator**

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Specification	
Size	W160mm x D240mm x H64mm
Weight	1.05 kg
Power supply	USB 5V, 1.0A
Supported plates	Up to Φ90 mm Petri dishes
Number of measurable plates	1 plate / unit
Discs detectable for inhibition zone measurement	Up to 7 discs
Operating Environment	5–40 ℃ No condensation *1
Simultaneous connections	Up to 10 units can be connected to a single PC *2
Control App Supported Languages	Japanese / English
Accessories	USB cable, Ethernet cable *3

*1 The unit is intended to be installed inside an incubator.
*2 The PC and the unit are connected via USB and Ethernet cables. When connecting multiple units, a USB hub and an Ethernet hub are also required.
*3 A dedicated control PC (sold separately) is required. When connecting multiple units, a USB hub and an Ethernet hub are also necessary.

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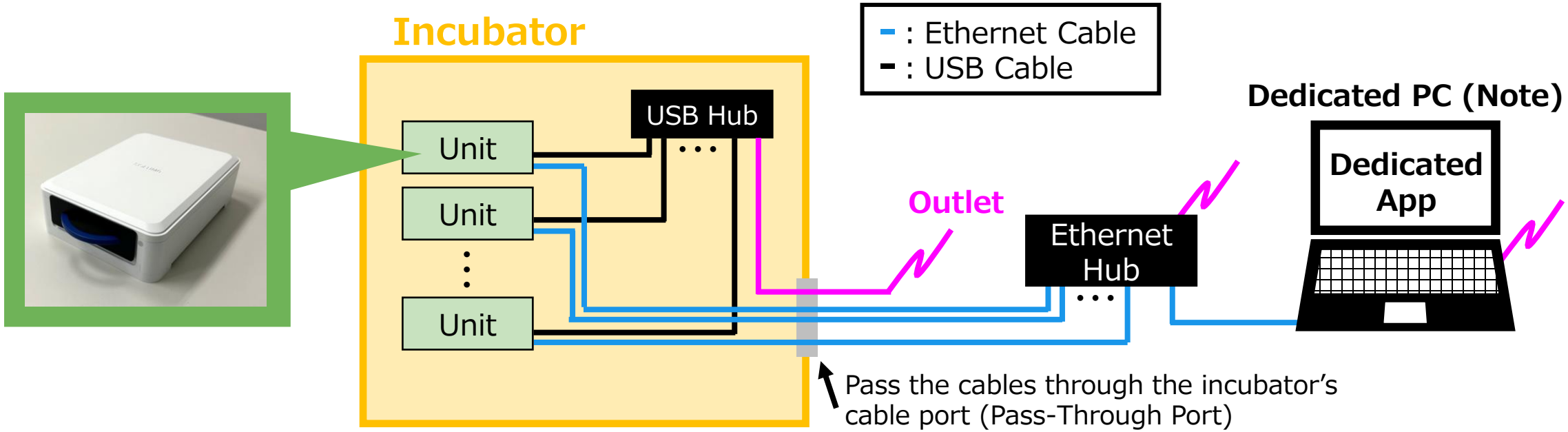
■ **Each unit connects using 2 cables: one USB cable and one Ethernet cable**
  ・USB cable: for power supply
  ・Ethernet cable: for communication (connection to PC)
■ **Use a USB hub and an Ethernet hub when connecting multiple units**
■ **Up to 10 units can be controlled by one PC**

Rear side of the Unit

Connection Diagram



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For any other questions regarding SOLTIMO,
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~Contact us here (Link)~

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