

AUTOMATIC COLONY COUNTER **PSF series**



NEW

Lighting automation improves operability and convenience.



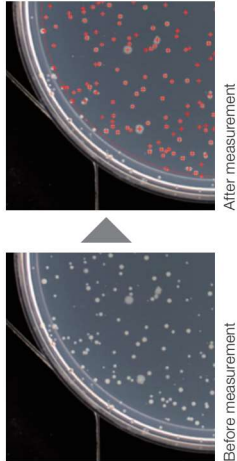
Available in Japanese, English, and Chinese

Automatic Colony Counter will solve various problems.

Problem 1 Manual counting methods take time and also there is huge quantities of specimen.

Solution 1 In case of more than 300 colonies in one petri dish, it takes 5 minutes by manual measurement, but it takes only 3 seconds by automatic measurement.

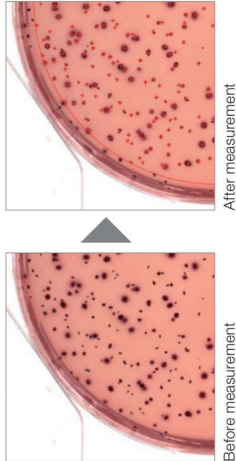
High-speed image processing enables quick counting without fatigue. This allows one operator to process many samples.



Problem 2 Measuring method is not consistent due to visual measurement.

Solution 2 It is able to specify the size range of colonies to be measured, so you can make reliable measurements.

As long as culture medium thickness is fixed, it enabled to measure only designated colony by fixed binary coefficient. The area calculation of each colonies enabled to measure individually only designated diameter.



We provide solution about further problems below.

Problem Various shape of colonies is possible to measure automatically?

Solution Colonies are selected by the brightness and their color information, therefore it does not matter for the shape.

Problem Can it also count colonies on medium with residues?

Solution As long as colonies and residues size are different, it is possible to measure.

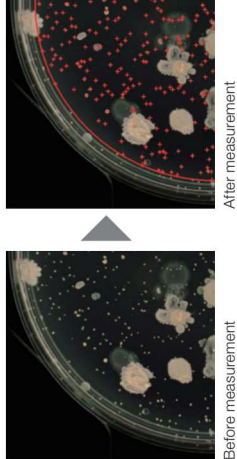
Problem Various size of colonies is mixed, but is it possible to measure them automatically?

Solution It is possible to set a wide range of colony sizes to measure all of them.

Problem 3 Measurement accuracy decreases when in measuring a widespread colony.

Solution 3 It measures only the area could be measured accurately and enables CFU conversion.

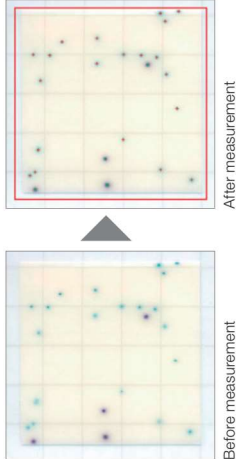
In terms of automatic measurement, widespread colonies can be excluded automatically from measurement objects. Measurable areas are automatically calculated and it enables accurate CFU conversion.



Problem 4 Existing measuring devices is unable to measure separately in terms of various color case.

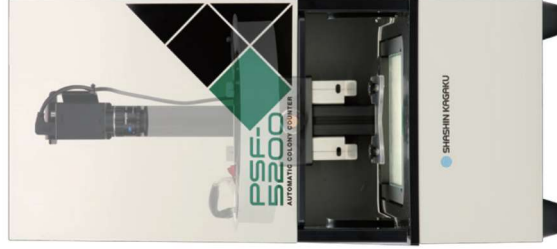
Solution 4 Max 8 kinds of colonies can be measured individually. For example, "separate by different colors", "separate by different colors and sizes", "separate by different colors and brightness" it is possible to set conditions appropriately up to culture medium and colonies.

This device is equipped with color camera. Condition setting can be done easily by simple clicking the measurement objects on the display.



Lighting Optical Technologies that Support High-precision Measurements

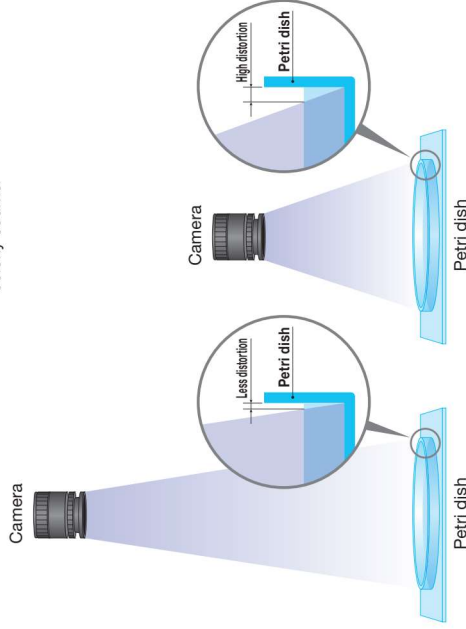
Achieves high-definition image acquisition while saving installing space.



With sufficient distance between the camera and the sample, the measurable region can be extended up to the edge of the petri dish.

PSF Series

General automatic colony counter



By ensuring a sufficient distance between the camera and the sample, distortion-free images can be obtained as if taken from directly above, even at the edge of the petri dish.

The closer the camera is to the petri dish, the greater the distortion of the image and the narrower the measurable area.

NEW

Automatic lighting/background switching function

In addition to the camera settings, turning on/off the top and bottom lighting and switching the background color are performed automatically, based on the measurement conditions. This improves operation and convenience while counting various samples.



Bright field (before erasing characters)



Dark field (after erasing characters)

Camera settings

☐ Glass plate

☐ Lighting



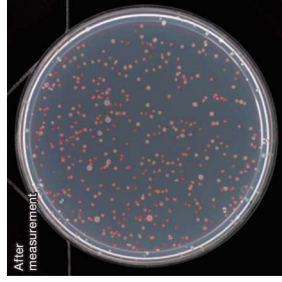
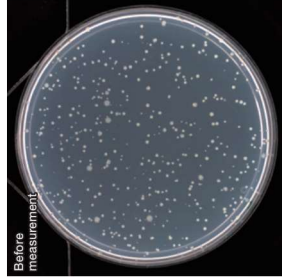
Measurement Examples

Abundant measurement examples with Japan's most advanced Automatic Colony Counter

Total viable count

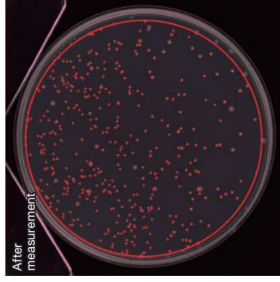
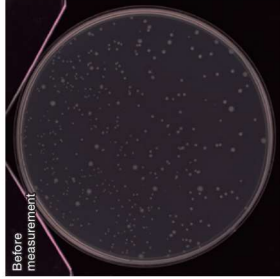
General agar plate

Total colony count in the entire measurement region
Without manual count correction



Ames Mutagenicity test

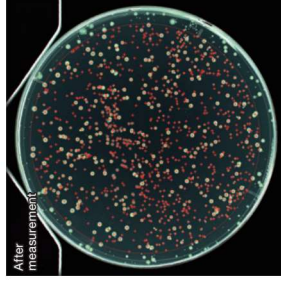
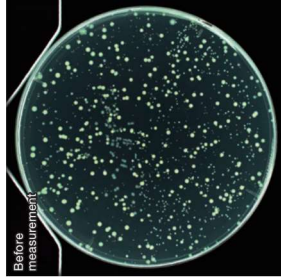
Accurate counting is possible under the same conditions even if the number of colonies increases or decreases, depending on the dilution factor.



Food/Food Distribution Industries

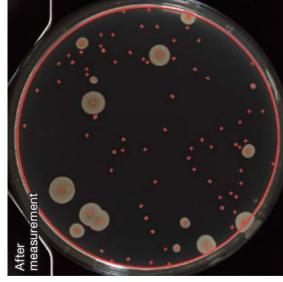
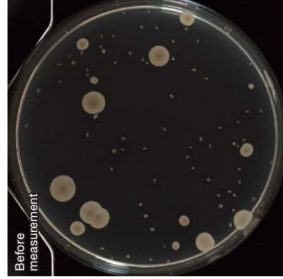
Staphylococcus aureus

Total colony count in the entire measurement region



Lactic acid bacteria

A total colony count image with a petri dish lid. Even condensation laminates as a small mist, counting colonies with a lid is possible.

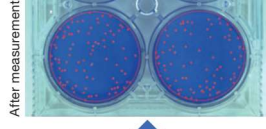
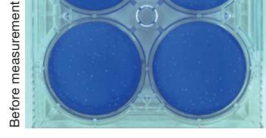


Multiwell Plates

Measurements for 6, 12 and 24-Well plates are supported. Individual measurement results can be obtained for each well.

Measurement results can be transferred to an Excel book.

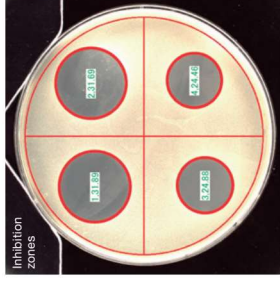
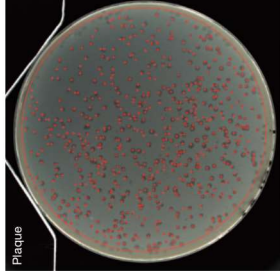
- * You can manually add or remove colonies for each well.
- * The multiwell plate measurement function is optional.



Pharmaceutical Industry

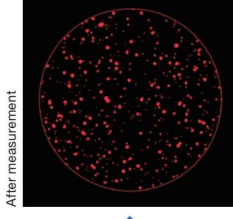
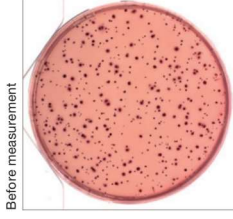
Not only colonies but also plaque and inhibition zones can be measured by one equipment.

- * The inhibition zone measurement function is optional.



Water Examination Industry

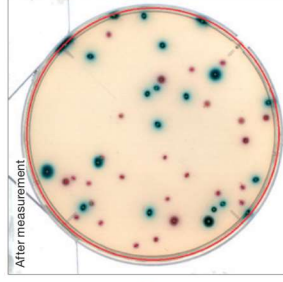
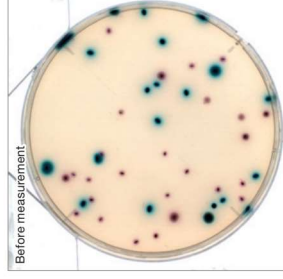
Desoxycholate agar plate, coliform bacteria



Desoxycholate agar plate, coliform bacteria
Image of measurement result of colony diameter of 0.5 mm or more is displayed in red.

Water Examination Industry

Chromogenic enzyme substrate agar plate, *Escherichia coli*, coliform bacteria
E. coli (blue) and coliform bacteria (red) can be counted separately. Both membrane filters of filtration methods are available.



Automatically creating measurement reports

The measurement number, sample name, the number of colonies, CFU, etc., are displayed on the software. Reports can be saved in PDF, CSV, TXT, or Microsoft Excel.

No.	Sample name	Dilution ratio	Sample Volume(ml)	Number of colonies Class1	CFU/ml Class1
1	test1 ✓	0.001	0.001	399	399 00
2	test2 ✓	0.001	0.001	3569	3589 00
3	test3 ✓	0.001			

Audit trail and User authority settings

Equipped with an audit trail function that protects the integrity of data and prevents unauthorized access. Users can be divided into three attributes, administrator, manager, and measurer, and each authority can be set.

[illegible]

Audit trail

Validation Function and IQ/OQ Service

The validation of measurement equipment is essential in the pharmaceutical industry. We provide plates for various validations. Validations can be easily performed using the validation inspection function on the software.

Additionally, as an IQ/OQ service, we ensure that the equipment is installed in an appropriate environment and can perform as stated in specifications. We will also provide the documents, including traceability.



Specifications/ Products

Model	PSF-1100	PSF-2200	PSF-5200	PSF-7200	PSF-5200L	PSF-7200L	PSF-72000W
Dimensions of main unit	W280×D351×H630 mm						W700×D700×H1220 mm
System configuration	Main Unit only. (PC and Monitor are not included.)						
Camera	USB3.0 Color CMOS						
Number of pixels	3 MP	6 MP	12 MP	20 MP	12 MP	20 MP	20 MP
Calculated resolution	67 μm	50 μm	34 μm	28 μm	50 μm	42 μm	69 μm
Measurement object	Viable bacteria Colonies on petri dishes, Petri films, filters, compact dry, film media, Plaques and Inhibition zones*.						
Maximum count area**	100×134 mm		152×165 mm		250 ×250 mm		
Round Petri Dishes	up to φ100mm		up to φ150mm				
Multi-well plates	6, 12, 24-wells. Optional software required.						
Measurement time	1 to 5 seconds per petri dish						
Maximum number of colonies	20,000 colonies (settings can be changed)						
Light shielding	Dust cover Sliding Door is optional.		Shading Sliding Door				
Top lighting (reflective)	Fixed type		Height adjustable***				
Bottom lighting	Darkfield and brightfield						
Lighting on/off	Manual		Controlled by Software				
Bright/dark field switching	Manual		Controlled by Software				
Operating environment	10-35 °C, 20-80% humidity						
Weight	19 Kg						70Kg
Power Source	AC 1 φ100-240V 50/60Hz						

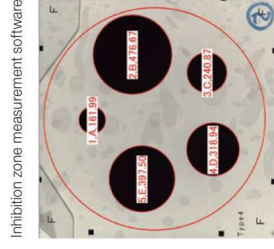
* Optional software is required to inhibition zone measurement. This software is standard only in PSF-7100W.

** For square petri dishes, use one that is smaller than the maximum count area.

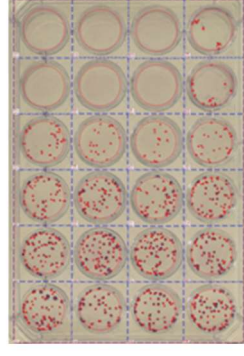
*** It is possible to change the height position of the top lighting. By this function, the outline of colonies can be clearly photographed.

Options and accessories

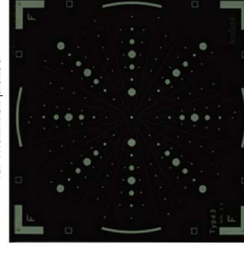
Option software



Multiwell plate measurement software



Accessories

Validation plates and adapters
for multiwell plates

There are many other options and accessories available. Please contact your distributor or our sales representative.

Support/Compliant regulations and standards

CE  GLP LIMS

21 JAN 1981

FDA BAM
ISO7218 : 2007

ISO4833.2

ISO15189

AOAC 977.27

CSL

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V08-100

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For inquiries and detailed information, please visit our website.

<https://www.shashin-kagaku.co.jp/skp/sales/acc/en/>



Teams, Zoom, Skype, Team Viewer...

We support web meetings through various apps.



Safety Precaution

- ☐ Make sure to read the instruction manual carefully before use.
- ☐ Specifications and appearance of products may change due to further improvement without prior notice.
- ☐ The actual color of the product may be slightly different from the printed picture in this brochure.

(Manufacturer)

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