

## ZR-1101 Automatic colony counter



The ZR-1101 automatic colony counter is a high-tech product developed for microbial colony analysis and micro-particle size detection. The powerful image processing software and scientific arithmetic enable it to analyze microbial colonies and detect micro-particle size, the counting is quick and accurate.

- Comprehensive upgrade of algorithm
- High counting efficiency and good cutting effect
- A good partner in microbiological experiment

## 01 Function

Basic bubble point; Manual bubble point; Extensive bubble point;  
Pressure holding test; Diffusion flow test; water intrusion test;  
Ultrafiltration Membrane Test.

## 02 Application Area

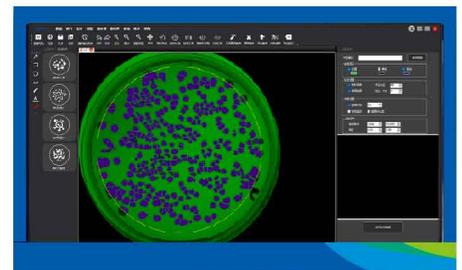
- ✓ Hospitals, scientific research institutes, health and anti-epidemic stations, disease control centers
- ✓ Inspection and quarantine, quality and technical supervision, environmental testing institutions
- ✓ Pharmaceutical, food and beverage, medical and health supplies industries.

## 03 Standard

FDA 21 CFR part11

## 04 Features

- ✓ Strong colony recognition function:
  - Automatic recognition and count according to the colony color.
  - Automatic division of connected colonies, manual division, count rollback, the counting result is accurate and fast.
  - Accurately count adhesive bacteria and spreading bacteria.
  - Select counting area, high efficiency and rapid, export data of colonies like diameter, roundness, girth, area, number and so on.
- ✓ Powerful image processing function, can capture colony quickly and high-definition.
- ✓ Built-in 254nm and 365nm Ultraviolet lamp, can sterilize dishes and cabins, UV mutagenesis and fluorescence excitation experiments can also be realized.
- ✓ Audit Tracing function, further guarantee data integrity.
- ✓ Data can be exported in Excel or PDF.  
Good human-computer interaction.



## 05 Parameter

Parameter			
CMOS	12 million pixel, true color, resolution ratio: 4024*3036		
Counting speed	1000 colonies <1s		
Colour temperature	2880K-4170K		
Upper light source	Illumination: 51.7-985.1 Lux 360° shadowless illumination, Multi-directional transmitted light, adjustable light source brightness.		
Lower light source	Illumination: 1-4497 Lux Bottom transmitted light darkroom shooting system		
Sideview	Circular matrix		
Image capture	Auto focus, auto white balance, auto color temperature control. Front open, automatic elimination of external interference, automatic centering, black box shooting.		
Petri dish type	various 90mm,100mm petri dishes (Pour, spreading, membrane filtration)		
Automatic impurity removal	Automatically remove impurity according to the difference of shape, size, color, etc.		
Colony Morphology Analysis	Automatic analysis the area, girth, roundness, maximum diameter, minimum diameter.		
Select counting area	Basic circle, semicircle, circle, rectangle, sector, and random area.		
Image processing	Image enhancement	Image adaptive enhancement, color component enhancement, colony edge sharpening, image flattening.	
	Image filtering	Low filter, high filter, Gaussian filter, Gaussian high through-put, mean filter, Gaussian filter, Order filter.	
	Edge detection	Sobel detection, Roberts detection, Laplace detection, vertical detection, horizontal detection.	
	Image adjustment	Gray scale conversion, negative phase conversion, RGB three-channel brightness, Contrast, Gamma adjustment	
	Morphological operation	Erosion, dilation, opening operation, close operation.	
	Image segmentation	RGB segmentation, Gray scale segmentation.	
Note measurement	Instrument calibration	The system has its own calibration function	
	Colony labeling	Label with Line, angle, rectangle, broken line, circle, character, curve and so on.	
	Colony measurement	Measure line, angle, rectangle, circular arc, circle, section, curve and so on.	
Work temperature	(0~50)°C	Host size	(L390×W390×H535)mm
Power consumption	≤72W	Host weight	about 13.4kg
Power adaptor	Input AC100~240V 50/60Hz Output DC24V 2A		