

DW-MGC-200PRO Microbial Growth Curve Analyser

Product manual

The Microbial Growth Curve Analyzer is a fully automated instrument that can understand the growth of microorganisms by measuring the turbidity of the sample. This product can be used in the research of microbial strains, optimization of culture conditions, high-throughput screening and evaluation of drugs and other fields. All microorganisms (bacteria, fungi, yeasts, cells, and algae) that reproduce in culture produce turbidity. Any turbidity and color changes in the traditional test tube test can be done with the "micro test tube" in the honeycomb panel. The automatic growth curve analyzer can make the work more efficient, and can save a lot of culture medium and consumables (petri dishes and test tubes, etc.). The long-term culture of microorganisms is realized through high-precision control and high-speed shaking of the microwell plate. The integrated pulse xenon lamp and spectrometer realize full-band detection and analysis. The advanced denoising algorithm can provide more accurate microbial growth curves.

Two working modes are available: culture mode and absorbance test mode:

1. Cultivation mode: Provide the environment required for microbial growth, and at the same time detect and record the absorbance of the sample at a specified wavelength.
2. Absorbance test mode: Full-spectrum absorbance test can be performed on the specified sample, and absorbance values at different wavelengths are given.

Performance characteristics

- Using advanced full-spectrum detection technology, no need to replace the filter, it can detect 300–850 range at the same time
 - Absorbance at any wavelength within the range, providing a solution for a variety of biomass quantitative detection.
 - The highest shaking speed can reach 1250rpm, so that the liquid in a small volume can be fully mixed,
 - It can realize shaking culture of microorganisms in 96-well plate.
 - With two culture plate positions, a variety of adapters are compatible with culture plates of different specifications, and the maximum 192 samples are processed at a time.
 - As a light source, xenon lamp has the advantages of high energy and no need for preheating. It is a high-resolution, high-sensitivity,
 - Rapid detection lays the foundation, and the light source has good stability and long life, and does not need to be replaced frequently.
 - The optimized algorithm removes background noise and obtains a more accurate growth curve.
 - With RGBW four-color light setting function, it can be used to study the influence of light factors such as light cycle, light wavelength and light intensity on the growth of algae.
 - It has a hot cover anti-condensation design, with cooling and heating modules, and the temperature control range is 15-60°C at room temperature (25°C). The temperature can be changed in the middle of microbial culture to facilitate the accumulation of specific metabolites.
 - With standard preset program, simple operation and convenient data processing.
- At the same time, it supports customer-defined templates for personalized operation settings and data analysis.



Parameters

Model	DW-MGC-200PRO
Dimensions	510*655*350mm
Detection wavelength	300-850nm
Microbial culture container	Cell culture plate/ELISA plate
Number of channels	2 board positions, up to 192 channels
Medium volume limit	2.5ml
Light source	Xenon lamp
Temperature range	15-60°C (at room temperature 25°C)
Shaking speed	200-1250 rpm
Detection method	Single hole multi-point detection
Absorbance range	Highest value 8.0 OD
Detection interval	5-360 minutes can be set
Longest incubation time	1600 hours
Authority management	Separate user and administrator privileges
Operation failure alarm	Yes
Sterilization module	UV sterilization
Full spectrum scan	Yes
Thermal Lid Anti-Condensation	Yes
Humidity monitoring	Yes
Mid-way temperature change function:	Yes
Reference channel selection	Yes
CO2 concentration detection	Yes
O2 concentration detection	Yes
Gas control	Yes
Lighting function	Yes

