

# DW-MGC-200 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

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

