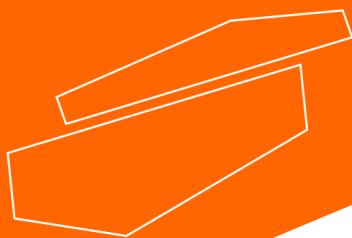




## CENTRIFUGE FOR MICROPLATES, MC96

*Please read the User Manual carefully before use, and follow all operating and safety instructions!*



**user manual**  
english

# User Manual



## CENTRIFUGE FOR MICROPLATES, MC96

### Preface

Thank you for purchasing our product. Users should read this manual carefully, follow the instructions and procedures, and beware of all the preventive measures when using this instrument.

### Service

If help is needed, you can always contact your dealer or Labbox via [www.labbox.com](http://www.labbox.com)

Please, provide the customer service representative with the following information:

- Serial number
- Description of the problem
- Your contact information

### Warranty

This instrument is guaranteed to be free from defects in materials and workmanship under normal use and service, for a period of 12 months from the date of invoice. The warranty is extended only to the original purchaser. It shall not apply to any product or parts that have been damaged due to improper installation, improper connections, misuse, accident or abnormal conditions of operation.

## Safety Warnings and Guidelines

### 1. Important operation information of the security

Before operation, please have a perfect conception of how to use the Instrument.

Read this manual carefully before using it.

### 2. Security

- 1) It is forbidden to touch the rotor or move the instrument before the rotor is completely stopped.
- 2) It is forbidden to use unsealed templates to avoid liquid leakage to the instrument.
- 3) Please make sure that the sealing surface of the microplate faces the middle of the rotor and the bottom of the plate faces the outside of the rotor.
- 4) Please make sure that the microplate is fully pushed to the bottom of the rotating tank before running the machine.
- 5) The machine should be placed on a level, sturdy work platform; do not move the instrument during centrifugation.
- 6) It is forbidden to centrifuge materials that are easily volatile, explosive, dangerously volatile, corrosive, and prone to chemical reactions to produce a large amount of dangerous gas materials and harmful microbial materials.
- 7) Operators are forbidden to lean on the centrifuge or leave the centrifuge during centrifugation.
- 8) The machine should be placed on a level and firm working platform.
- 9) In use, handle with care and prohibit use in strong ultraviolet environment.
- 10) During use, it is forbidden to use strong acids, strong alkalis and corrosive materials to prevent corrosion of parts such as the centrifuge protective cover.
- 11) Read the manual carefully before use and use it according to the prescribed method.

- 12) When the machine reaches the maximum speed, the machine may vibrate slightly. If the vibration is too large, it means that the load on the two sides of the rotor is unbalanced, and the instrument should be stopped. Please use microplates of the same brand, specifications and the same capacity, and run the machine after balancing.
- 13) Only our company or designated agents can inspect or replace parts.
- 14) Check whether the protective cover and rotor are normal before starting.
- 15) When the equipment is unbalanced and has obvious displacement, release the button to stop the operation.

 If there is any violation of the above matters, the consequences shall be borne by themselves.

### **3. The maintenance of Instrument**

Disconnect the power cord before cleaning. After the rotor is stopped, clean the surface of the instrument with a dry cloth and 75% alcohol. Make sure that all parts of the instrument are completely dry before operating the instrument. Do not immerse the instrument in liquid or wet the instrument with liquid.

***NOTE:** If you have not cleaned according to the above cleaning methods, contact our company before cleaning to ensure that the centrifuge is not damaged.*

### **4. After Sale Service Commitment**

#### **A) Instructions of warranty**

The company will replace the instrument within 1 month from the date of delivery of the product itself.

During the 2 years warranty period of the instrument, the company will provide warranty for non-human damage or faults caused by defects of the product itself. The warranty products shall be sent to the designated maintenance department by the company, and the user bears the cost of shipping back. The company will bear the freight of the instrument returning to the user.

For out of the warranty period and not covered by warranty scope, the company will charge the corresponding cost.

**B) Scope of Warranty**

Damage and normal use loss caused by accidental disasters, improper user use, wrong application, unauthorized maintenance or modification, do not fall within the above warranty scope.

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## 01 Introduction

The microplate centrifuge is specially designed for 96-well microplates. The micro amount of liquid can be kept at the bottom of the microplate under the action of surface tension without worrying about the liquid leaking from the wells. To keep the environment clean, please seal the microplate with sealing film, and load the microplate vertically from the groove on the top of the centrifuge, so that the liquid hanging on the wells can be instantly drop into the bottom. Suitable for 96-well or 384-well and other standard PCR microplates.

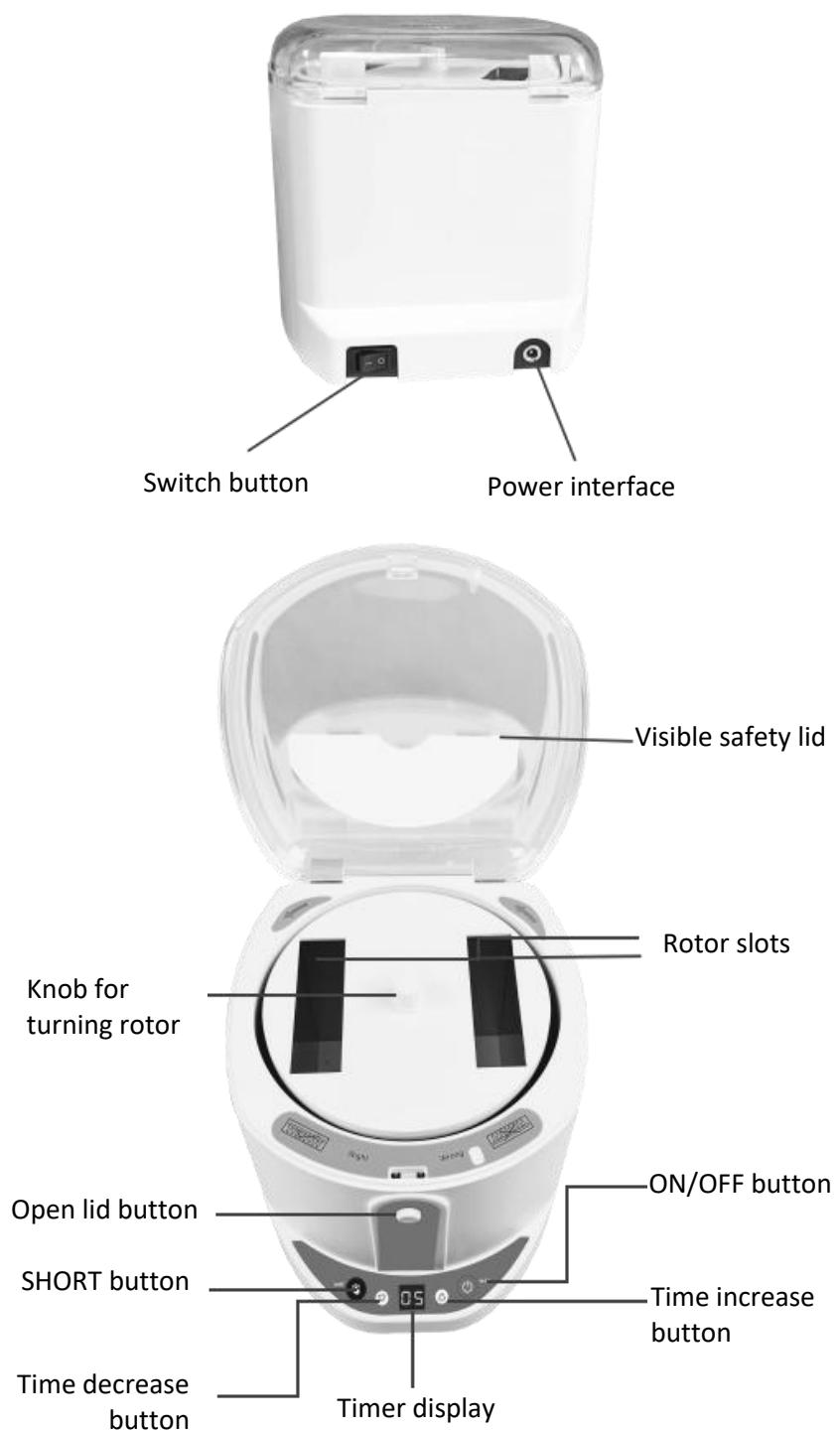
### 1. Features

- Suitable for standard PCR microplates, optional 8-strips tube adapter.
- Continuous and short working modes, to make the experiment convenient and efficient, quiet and stable without noise.
- Accelerates instantly to 2500rpm, electronically brakes, and stops within 10s.
- Quickly remove the wall hanging fluid.
- Applied in PCR experiments, significantly improving the amplification effect.
- Using brushless motor, maintenance-free.

### 2. The basic parameters and function

Model	MC96
Max speed	2500rpm
Time range	1~99min/s (can switch min/s setting)
Acceleration time	≤20s
Braking time	≤10s
Shut down after lid open	Yes
Short working	Yes
Sample capacity	2pcs microplate
Power	40W
Dimension	L190×W220×H186mm
Weight	2.1kg
Power supply	100~240V;50/60Hz

### 3. Product Structure



## 02 Operation Guide

### 1. Preparation

- Open the outer package, foam wrap the instrument, take out carefully.
- Remove the foam material on both sides and place the Microplate Centrifuge smoothly in the operating area. Make sure the instrument is placed horizontally. The environment of the instrument should be clean, dry, ventilated, noncorrosive and should avoid direct sunlight.
- Plug the power cord into the power connector on the back of the device and connect the other end to a power outlet. Set the power switch button to the start (I) position and the device turns on.

### 2. Microplate loading

- 1) To avoid sample spillage and contamination of the centrifuge slot, make sure the microplate placed in the rotor slot is tightly sealed.
- 2) Lift the transparent centrifuge lid (if the lid is locked, press the "open lid" button to release it), carefully slide the first sealed microplate vertically into correct position (note: the sealing surface faces the centre of the rotor and the bottom of the plate faces outward), and make sure the microplate is pushed completely into the slot. Load the second sealed microplate in the same way, making sure it is completely in the rotor slot.
- 3) Close the lid of the centrifuge.

**Important:** If only one microplate is spun, be sure to load a dummy microplate in same brand, style, and sample volume (water can be used) for balance.

### 3. Time minute/second setting

The time setting range is 1~99 minutes or 1~99 seconds.

By default, the timer is set to 1-minute increments. The default value can also be set to 1 second increments. Please follow the steps below to set the default minute and second switch:

- 1) Turn off the microplate centrifuge switch button.

- 2) Press the "ON/OFF" button.
- 3) Keep the "ON/OFF" button pressed and turn on the microplate centrifuge switch button.
- 4) Keep the "ON/OFF" button pressed and wait for a few seconds, then press the "Time decrease button"  / "Time increase button"  button to switch between minutes/seconds (Note: After setting the minutes, the letter "E" will be displayed on the screen; after setting the seconds, the letter "S" will be displayed on the screen).
- 5) After selecting the desired minutes/seconds and setting them successfully, release the "ON/OFF" button, the letter will flash three times, and the default setting change is completed.

**Note:** When the display shows "0", the time setting function is cancelled.

#### **4. Centrifuge start/stop operation**

##### **1) Use the time setting option**

When using the time setting option, first set the time parameter for the "Time decrease button"  / "Time increase button"  , then press the "ON/OFF" button to start the centrifuge, and the display timer starts to count down. After setting time is completed, the rotor will automatically decelerate until it stops and emits a long "beep" sound. After the rotor stops, press the "Open lid Button" to open the centrifuge cover and carefully remove the sealed microplate.

##### **2) Use the continuous operation mode**

Press the "ON/OFF" button to start the centrifuge to run continuously. When you need to stop, press this button again, and the rotor will decelerate until it stops.

After the rotor stops, press the "Open lid Button" to open the centrifuge lid and carefully remove the sealed microplate.

### 3) Use the short mode

Press and hold the “ON/OFF” button to run the device at the highest speed. After reaching the maximum speed, the device will start timing in seconds. When you need to stop the operation, just release the “ON/OFF” button. After the rotor stops, press the "Open lid Button" to open the centrifuge cover and carefully remove the sealed microplate.

**Important:**

*You may feel slight vibrations when the centrifuge reaches the highest speed. Excessive vibrations indicate that the rotor is unbalanced.*

*Do not run the centrifuge in an unbalanced state to avoid damage to the equipment. Balance the rotor using microplates in same brand, style, and sample size.*

## Failure Analysis and Handling

Failure phenomenon	Cause Analysis	Solution
The rotor does not run after starting	1. The power cord is not plugged in	Plug in the power cord
	2. No electricity supply from the power cord socket	Make sure the power supply is working properly
	3. The power switch is not turned on	Turn on the power switch
	4. The centrifuge lid is not closed and locked	Press down firmly on the transparent upper cover
Loud noise, violent Vibration or Abnormal Noise after starting up	1. The instrument is not placed on a flat or a solid platform	Place the instrument on a flat and solid platform
	2. Symmetrical distribution of templates	Place the same specifications, the same brand, and the same number of samples symmetrically

	3. The template is not in place	Push the template to the bottom of the rotary groove
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### **Nota importante para los aparatos electrónicos vendidos en España**

Instrucciones sobre la protección del medio ambiente y la eliminación de aparatos electrónicos:



Los aparatos eléctricos y electrónicos marcados con este símbolo no pueden ser eliminados en forma de residuos urbanos.

De conformidad con la Directiva 2012/19/UE, los usuarios de la Unión Europea de aparatos eléctricos y electrónicos, tienen la posibilidad de devolver sus RAEE para su eliminación al distribuidor o fabricante del equipo después de la compra de uno nuevo. La eliminación ilegal de aparatos eléctricos y electrónicos es castigada con multa administrativa.

### **Remarque importante pour les appareils électroniques vendus en France**

Informations sur la protection du milieu environnemental et élimination des déchets électroniques :



Les appareils électriques et électroniques portant ce symbole ne peuvent pas être jetés dans les décharges.

En réponse à la réglementation, Labbox remplit ses obligations relatives à la fin de vie des équipements électriques de laboratoire qu'il met sur le marché en finançant la filière de recyclage de ecosystem dédiée aux DEEE Pro qui les reprend gratuitement (plus d'informations sur [www.ecosystem.eco](http://www.ecosystem.eco)).

L'élimination illégale d'appareils électriques et électroniques est punie d'amende administrative.

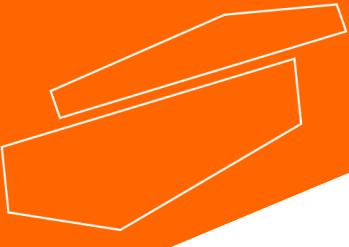
### **Nota importante per le apparecchiature elettroniche vendute in Italia**

Istruzioni sulla protezione ambientale e sullo smaltimento dei dispositivi elettronici:



Le apparecchiature elettriche ed elettroniche contrassegnate con questo simbolo non possono essere smaltite come rifiuti urbani.

In conformità con la Direttiva 2012/19 / UE, gli utenti dell'Unione Europea di apparecchiature elettriche ed elettroniche hanno la possibilità di restituire i propri RAEE per lo smaltimento al distributore o al produttore di apparecchiature dopo averne acquistato uno nuovo. La rimozione illegale di apparecchiature elettriche ed elettroniche è punibile con una sanzione amministrativa.



[www.labbox.com](http://www.labbox.com)