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MICROPLATE CENTRIFUGE

(Model No. SI003245)

OPERATION MANUAL

(PLEASE READ THE INSTRUCTION CAREFULLY
BEFORE YOU USE THE MACHINE)



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1. Introduction

The SL003245 microplate centrifuge is designed with advanced technology for reliable and efficient performance. It is ideal for spinning down droplets in 96-well and 384-well PCR plates, including skirted, semi-skirted, and unskirted models.

Key Features:

- Fast acceleration to maximum speed in ≤ 6 seconds
- Lid lock, imbalance, and overspeed protection
- Audible alerts and LCD error codes for safe operation
- Compact and stable design

2. Operating Environment

(1) To ensure the continued safe operation of the machine, the following factors may damage the centrifuge:

- Chemical effects;
- Environmental factors, including natural ultraviolet radiation;
- Corrosion and wear of shield components and other safety components.

(2) Please use the microplate centrifuge under the following conditions:

- For indoor use only;
- Altitude: $\leq 2000\text{m}$;
- Ambient temperature range: $+5^{\circ}\text{C}$ to $+40^{\circ}\text{C}$;
- Relative humidity: $\leq 80\%$;
- Power supply: Must match the specifications on the product label;
- Ensure adequate ventilation in the installation area;
- Avoid vibrations or strong airflow that may affect performance;
- Keep away from conductive dust, explosive gases, or corrosive substances;

3. Safety Instructions

- Read this manual carefully before first use;
- The SL003245 microplate centrifuge should only be operated by trained personnel;
- Maintenance of the equipment may only be performed by StonyLab or a StonyLab-authorized dealer;
- The following materials are strictly prohibited from being used in centrifuges:
 - Flammable or explosive materials;
 - Materials with strong chemical reactivity;
 - Toxic or radioactive substances, or pathogenic microorganisms, etc.
- If the operator encounters a situation not covered in this manual, please contact StonyLab or an authorized StonyLab distributor for instructions on how to proceed;
- Please use accessories provided by StonyLab whenever possible. If you choose to use other accessories, StonyLab will not be held liable for any adverse consequences that may result. However, you may submit a request to StonyLab to verify whether the accessories meet StonyLab's requirements;
- The SL003245 microplate centrifuge must be inspected and maintained at specified intervals.

4 Explanation of Safety Symbols

(1) Meaning of Safety Instructions:

- All safety instructions in this manual must be followed to prevent injury or damage;
- In addition to these instructions, users must comply with local laws and regulations regarding laboratory safety, environmental protection, and accident prevention;
- Failure to follow safety instructions may result in personal injury, damage to the instrument or environmental harm.

(2) Safety Precautions:

- Liquids on hands are strictly prohibited when plugging or unplugging power plugs or operating power switches!
- Plugging or unplugging power plugs while the instrument is powered on is strictly prohibited!
- Cleaning or maintaining the instrument while it is energized is strictly prohibited!
- Sample volumes exceeding 70% of the test tube capacity for centrifugation are strictly prohibited!
- Installing the instrument on uneven, shaky, or vibrating work surfaces is strictly prohibited!
- Placing hands or any objects on the rotor to manually stop it before it has come to a complete stop is strictly prohibited!

5. Technical Specifications

Parameter	Specification
Model	SL003245
Power Supply	110/220V, 50/60Hz
Power Consumption	55W
Motor / Drive Type	Brushless Variable Frequency Motor
Display	High-brightness LCD
Centrifugation Time Range	1-99 min, 1-59 sec
Speed	300-3000 \pm 15 rpm
Speed Increment	10 rpm
Max Capacity	2 \times 96-well PCR plates / microplates
Max RCF	608 \times g
Error / Alarm Indication	Audible alert + display code
Sample Loading Method	Vertical loading
Weight	3.9 kg
Noise Level	60 dB(A)
Acceleration Time	\leq 6 seconds
Deceleration Time	\leq 5 seconds
Dimensions (L \times W \times H)	225 mm \times 255 mm \times 215 mm
Operating Temperature / Humidity	+5 $^{\circ}$ C to +40 $^{\circ}$ C / 80%
Protection Class	IP20
Interference Suppression Standards	EN 61010-1, EN 61010-2-020, EN 61326-1, EN 61010-3-2/A2

Note: Measured at 23 $^{\circ}$ C ambient temperature.

6. Product Features

(1) Functional Diagram 1



A. Lid

B. Lid Release Button

C. Control Panel

D. Power Switch

(2) Functional Diagram 2



Serial Number	Control Panel Functions
1	Start / Stop Button
2	Time Parameter Increase Button
3	Time Parameter Decrease Button
4	Speed Parameter Increase Button
5	Speed Parameter Decrease Button
6	Instant Jerk Centrifugation Button
7	Time Display Area, unit: min/sec
8	Speed Display Area, unit: r/min
9	Door Cover Status

7. Operation Guide

7.1 Before Use

Before using the instrument, ensure:

- The unit appears new and undamaged;
- The rotor spins smoothly;
- All buttons function properly;
- The power switch and socket are securely attached;
- The lid closes and opens properly;

If any issues are found, contact StonyLab immediately. Do not attempt repairs without professional guidance.


7.2 Start / Stop Operation

(1) Starting:

- Close the lid securely. If the door cover status display shows , it is closed;
- Set desired speed and time using the adjustment buttons  . Settings will auto-confirm after 3 flashes;

- Press the Start / Stop button  to begin operation.

(2) Stopping:

- To stop during operation, press the Start / Stop button  ;
- Wait for the rotor to stop completely;
- Press the lid release button to open the transparent cover;
- Remove samples;
- Turn off the power if not in use (close the lid without locking).

7.3 RCF Calculation

Relative Centrifugal Force (RCF) is calculated as:

$$\text{RCF} = 11.18 \times (\text{rpm} / 1000)^2 \times r \text{ (mm)}$$

r = radius (mm)

n = speed (rpm)

Note: Maximum RCF depends on the maximum radius.

8. Maintenance and Warranty

(1) Maintenance

- Always disconnect power before cleaning;
- If the device or accessories are contaminated with pathogenic, toxic, or radioactive materials, proper decontamination is the user's responsibility;
- Do not use organic solvents as they may dissolve lubricants in motor bearings;
- Avoid contact between liquids (especially organic solvents) and the motor spindle or the balls.

(2) Regular Checks:

- Inspect the rotor assembly (especially tube hole bottoms) for corrosion spots, grooves, or cracks. If found, stop using immediately and contact StonyLab;
- Check that the transparent lid opens and closes smoothly
- Clean the exterior with a soft cloth dampened with mild detergent, then wipe with a clean damp cloth

If serious issues occur (e.g., unit doesn't run with power, burning smell, rotor damage, excessive vibration), contact StonyLab immediately. Do not attempt repairs without professional guidance.

(3) Warranty Information:

- When used under the normal conditions and in accordance with the operating procedures specified in this manual, this instrument is covered by a **12-month warranty** (effective from the date of purchase);
- Any deterioration in performance or damage resulting from improper installation or operation, unauthorized disassembly or repair, or other violations of the operating instructions in this manual is

not covered by this warranty;

- If any issues covered by the warranty terms arise, please contact StonyLab.

9. Troubleshooting

If an error occurs, turn off the power, unplug the unit, and resolve the issue before restarting:

Error Code	Meaning	Cause	Solution
E2	Overspeed	Speed interference or too fast acceleration	Check speed sensor; reduce acceleration setting
E3	Lid Open	Lid not properly closed	Check and close the lid securely
E7	No Speed Signal	No speed signal input	Multiple possible causes; contact service support
E11	Speed Not Reached	Insufficient motor power or low external voltage	Ensure load matches control system power; check power supply

If the problem persists or is not listed above, contact StonyLab service immediately.

10. Packing List

Item	Quantity
Main Unit	1
Power Adapter	1
User Manual	1