

Packing List

- Main unit ×1
- Plastic rotor ×1
- Supplied adaptor ×2
- Simple user manual ×1
- Power adapters ×1
- 2mm hexagonal spanner ×1
- Adapted 2ml × 12 tubes + 4 × PCR8 strips



Specification	
Speed range	2000-10000rpm, increment:1000rpm
Max RCF	6708×g-1.5/2ml
6596-7490 × g-PCR8 strips	±0.5
Rotor Capacity	12×0.5/1.5/2mL
44 × 0.2mL PCR tubes	Low liquid, "FiLL" message in display
4 × 0.2mL PCR 8 strips	230
Run time	10s-20min
Driving motor	DC motor
Acceleration/braking	1 ↑/2 ↓
Power	AC100-240V/50Hz/60Hz,40W
Noise	≤58dB
Dimension (L x W x H)	210×180×130mm
Weight	1.5kgs

SLS Lab Basics High Speed Palm Micro Centrifuge

Safety Reminder

Common safety precautions

Carefully read the following safety precautions for a thorough understanding.

- Follow the instructions and procedures described in this manual to operate this centrifuge safely.
- Carefully read all safety messages in this manual and the safety instructions on the instrument.
- Safety messages are labeled as indicated below. They are in combination with signal words of "WARNING" and "CAUTION" with the safety alert symbol to call your attention to items or operations that could be dangerous to you or other persons using this instrument. The definitions of signal words are as follows:



WARNING: Personal Danger

Warning notes indicate any condition or practice, which if not strictly observed, could result in personal injury or possible death.



CAUTION: Possible damage to instrument

Caution notes indicate any condition or practice, which if not strictly observed or remedied, could result in damage or destruction of the instrument.

NOTE: Notes indicate an area or subject of special merit, emphasising either the product's capability or common errors in operation or maintenance.

- Do not operate this centrifuge in any manner not described in this user manual. When in doubt, or if you encounter any difficulty using this centrifuge, ASK FOR HELP.
- The precautions described in this user manual are carefully developed in an attempt to cover all the possible risks. However, it is also important that you are alert for unexpected incidents. Be careful operating this centrifuge.



WARNING

- This centrifuge is not explosion-proof. Never use explosive or flammable samples.
- Do not install the centrifuge in or near places where inflammable gases are generated or chemicals are stored.
- Do not place dangerous material within 30cm around the centrifuge.
- Make sure to prepare necessary safety measures before using samples that are toxic, radioactive or contaminated with pathogenic micro-organisms at your own responsibility.
- If the instrument, rotor and/or accessories that has been contaminated by solutions with toxic, radioactive or pathogenic materials, clean it according to the decontamination procedure that you are specified.

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- If the equipment requires servicing on site, please sterilise and decontaminate it in advance, and then notify the service centre involved in the details of the particular materials.
- Do not handle the power cord or operate the POWER switch with wet hands to avoid electrical shocks.
- For safety purposes, do not enter within 30cm around this centrifuge while it is in operation.
- While the rotor is rotating, never forcedly release the door lock.
- Unauthorised repairs, disassembly, and services to the centrifuge (except by our service centre) are strictly prohibited.

CAUTION

- The centrifuge must be placed on a firm and level table.
- Make sure the centrifuge is horizontal before running.
- Make sure the angle between the door and cover is greater than 70 degrees when opening the door.
- Be careful not put your fingers or hands between the door and cover when the door is off.
- Do not move or relocate this centrifuge whilst it is running.
- If fluid spills in the rotor chamber, please promptly clean and dry with a dry cloth to avoid sample contamination.
- Ensure to remove any objects and fragments of the tubes dropped inside the rotor chamber before running this centrifuge.
- Cautions on rotors

(1) Always check for corrosion and damages on the rotor surface before using it. Do not use the rotor if an abnormality is found.

(2) Do not set the centrifuge speed beyond the allowable minimum speed of the rotor kits (rotor or adapters). Make sure to run it below the allowable minimum speed.

(3) Do not exceed the allowable imbalance.

(4) Use the rotor and tubes within their actual capacities.

(5) If the rotor is attached with a lid, ensure it is tightened before operation.

- If any abnormal condition occurs during operation, please stop it immediately and contact our service centre. Notify the service centre is a warning code if displayed.
- Vibrations are likely to damage the centrifuge, contact our service centre if an abnormality is observed.

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2. Declaration of conformity

Declaration of conformity
Associated EU guidelines: EMC: 2014/30/EU; LVD: 2014/35/EU
Construction in accordance with the following safety standards EN 61010-1; EN61010-2-020 CAN/CSA-C22.2 No.61010-1
Construction in accordance with the following EMC standards: EN 61326-1 UL61010-1
This ISM device complies with Canadian ICES-001.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

3. Required operational condition

3.1 Basic operational conditions

- (1) Power supply: 100V-240V, 50Hz/60Hz, 0.95A/115VAC, 0.56A/230VAC.
- (2) Ambient temperature: 2°C~40°C.
- (3) Relative humidity: ≤80%.
- (4) No vibration or airflow around.
- (5) No airborne dust with charge, explosive and corrosive gases around.

3.2 Transport and storage conditions

- (1) Storage temperature: -40°C~55°C.
- (2) Relative humidity: ≤93%.

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4. Installation Instructions

1. Unpack and place the centrifuge on a solid and flat surface (Laboratory bench space).
2. Ensure good working environment and ambient temperature of 5°C-35°C.
3. Protect the centrifuge from direct sunlight or temperature of higher than 30°C.
4. Place the unit at >10cm distance from other objects to allow good ventilation and performance.
5. Please keep the centrifuge away from heat or water (liquid) and chemicals.

5. Rotor installation

1. Ensure the centrifuge chamber is clean and dry.
2. Ensure there is no sign of corrosion or crack or damage on the rotor.
3. Place the rotor in position on the rotor base or motor shaft.
4. Press the rotor inward on the motor shaft to secure tightly.
5. Please use your both hands to load the rotor!

6. Operating procedure

1. Connect the power supply, press the power switch located on the back of the main unit and the OLED screen lights up.
2. Press the button  , open the lid and place the sample-loaded centrifuge tubes symmetrically on the rotor without spilling any liquid, taking care to level the tubes in advance (as shown in the diagram).



3. Press the centrifuge cover and touch the "Speed" and "Time" indicators on both sides of the screen to switch between speed and time at will on the main and secondary displays of the OLED screen, and turn the parameter knobs to set speed and time respectively.
4. Supports timer function
Speed range: 2000-10000rpm, increment 1000rpm
Timer range: 10s-20min increment 10s

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5. Press the OLED screen key to start the centrifuge, press again to stop operation. If the button is pressed while the centrifuge is running, top cover opens, machine stops automatically.
6. Remove the centrifuge tube, switch off the power and discontinuance the mainframe operation.

Calculation Relative Centrifuge Force (RCF)

- Relative Centrifuge Force (RCF) can be determined with the following calculation formula.
- $RCF = 1.118 \times r \times n^2 \times 10^{-5}$
- R—rotating radius, unit: cm; n—rotating speed, unit: rpm

8. Warranty

8.1 Warranty of the centrifuge

This centrifuge is guaranteed for two years from the date of delivery provided that it has been operated and maintained properly.

8.2 Warranty of the rotor

The rotor is guaranteed for 5 years from the date of delivery upon manufacture. Please pay attention, do not use the rotor once it has been corrosion or fatigue damage. We do not guarantee this centrifuge and the rotor under the following conditions even if within the guarantee period expires:

1. Failure caused by incorrect installation.
2. Failure caused by rough or improper handling.
3. Failure caused by conveyance or relocation after installation.
4. Failure caused by unauthorised disassembly or modification.
5. Failure caused by using parts of the other companies, such as rotors and adapters.
6. Failure caused by natural disasters including fire, earthquakes and so on.
7. Consumables and parts have a limited guarantee period

After-Sales Service

In order to ensure to operate centrifuge safely and efficiently, it is necessary for regular maintenance. If centrifuge has problems, do not attempt to repair it by yourself. Contact our sales or service centre.