
FC5000-4 LOW SPEED CENTRIFUGE

OPERATION MANUAL

(PACKING LIST INCLUDED)

PLEASE READ THE OPERATION MANUAN SERIOUSLY BEFORE USE.

HANDLEING PRECAUTIONS

- ✧ Not allowed to use when it is not in balance.
- ✧ The rotor plate should be fixed with the drive shaft steadily.
- ✧ Check if the rotor plate is destroyed, if so, contact the producer for change.
- ✧ Before start, check if the pendant is fixed property and whether can move smoothly.
- ✧ When the centrifuge is in use, it is not allowed to open the cover, it is not allowed to touch the rotating parts.
- ✧ The centrifuge must use reliable earthing electric power.
- ✧ All the speed of each basket divider or pendant should not be higher than the "max speed" as listed separately.
- ✧ After use, please cut off the electric power, and clean the vessel and the rotating parts.

1 GENERAL DESCRIPTION:

FC5000-4 low-speed centrifuge is the special machine for rapidly separating the mixed solution. It is widely used in the field of medical treatment, scientific research.

2 WORKING CONDITIONS:

- 2.1 ambient temperature: 5°C~40°C.
- 2.2 relative humidity: ≤80% (temperature 25°C).
- 2.3 Non conductive dust, explosive gas and corrosive gases around.
- 2.4 Electricity power requirements: 220V 50Hz.

3 MAIN SPECIFICATIONS AND FUNCTIONS:

3.1 Capacity, Max speed allowed, Max RCF allowed.

MODEL	Max speed r/min	Max RCF ×g	Capacity ml	remark	Rotor No.
FC5000-4	5000	5100	7ml*30*4 500ml*4	Standard	1

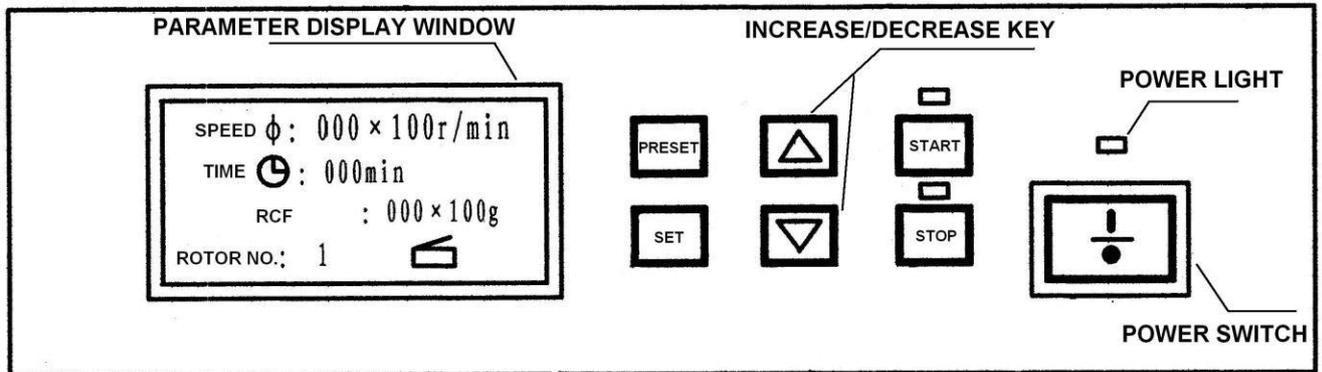
3.2 Noise: ≤75dB

3.3 Tested solution temperature rising: After the centrifuge runs more than 20 minutes, the solution temperature in the test tube will rise no more than 12°C.

3.4 The amplitude of vibration: no more than 0.10mm.

3.5 Direction: counter-clockwise.

4 OPERATION PANEL



4.1 4.1 OPERATION PARAMETER DISPLAY WINDOW

4.1.1 Speed display: Show the preset speed or actual speed.

4.1.2 Time display: Show preset operation time or left operation time.

4.1.3 RCF display: show the RCF of the preset speed or actual speed.

4.1.4 Rotor No. display: Show the rotor No. according to the relative rotor.

4.1.5 Lid closed , lid not closed . The machine will not work when it shows not closed.

4.2 **PRESET KEY:** The parameter in the display window will blink when pressing this key, press "preset key" to choose SPEED, TIME, RCF, or Rotor No. Then press \blacktriangledown \blacktriangle adjust SPEED, TIME, RCF, or Rotor No.

4.3 **SET KEY:** Press this key to confirm the preset speed, time, RCF or Rotor No.

4.4 **Start key:** the machine will work after pressing this key, start light open.

4.5 **Stop key:** the machine will stop after pressing this key, the stop light open.

4.6 **Power switch:** press "I" to connect electricity, press "O" to cut off.

4.7 **Power light:** the light will open when electricity connected, light will close

when the electricity cut off.

4.8 Increase key ▲/ decrease key ▼: press these two keys to adjust the speed or operation time.

5 USAGE METHOD

5.1 Install centrifuge

5.1.1 Put the centrifuge on a flat and steady place, check whether all the accessories are incomplete.

5.1.2 Press the button on the right side of the machine, open the lid. Get off the fixed bubble films, then check whether the rotor plate is fixed steady and whether it can rotate smoothly.

5.1.3 Connect the plastic power line to the socket on the back of the machine.

5.2 Sample balance

5.2.1 Make the solution in the tube to be the same, measured by balance, put the tubes symmetrically. (value difference no more than 3g)

5.2.2 Some tubes can be filled with water, just to keep in balance and symmetrically.

5.3 check before start.

5.3.1 Check if the electricity power can satisfy requirements. Including voltage and current and frequency.

5.3.2 Check and make sure the rotor plate, centrifuge tube, and basket divider all are installed properly, and if rotate smoothly. Check if the rotor plate is fixed steady.

5.3.3 Ensure the sample are the same amount, in balance and in symmetry.

5.3.4 Solution density $\leq 1.2\text{g/cm}^3$

5.4 centrifuge operation

5.4.1 Press the button on the right side of the machine, open the lid. Put in

the sample measured by eye survey. Close the lid, and lock.

5.4.2 Connect the electricity, press the electricity switch. The power light and the stop light turn on. Then parameter display window is on.

speed		000×100r/min
time		000×min
RCF		0.00×100g
Lid closed		When it show closed, the machine can work, if not, the machine is off electricity.
Rotor No.		1 2

5.4.3 Set the rotor No.: press "preset key", until the "Rotor No. " blink → then press ▲ ▼ to choose the rotor No. of the relative rotor according to 3.1.

5.4.4 Preset the speed (RCF): press "PRESET" key → until speed value blink → press ▲ ▼ to preset the relative speed (RCF) → 3 seconds later(or after pressing "START" key) it will automatically show the actual speed (RCF). If not pressed "START" KEY, It will show "000".

5.4.5 Preset time: Press "PRESET" key, → until time value blink → press ▲ ▼ key to set the time→ it will show the left time by final countdown after pressing the "START" key.(time range 0~999min)

5.4.6 Start: press the "START" key→the machine begins to work, the "START LIGHT" on, the STOP LIGHT off. After short time, it will get the preset speed automatically and steadily. When need to change the speed when the centrifuge is in operation, just do as "5.4.4".

5.4.7 Stop: When the time final countdown to "0000", the machine will stop automatically, the "STOP LIGHT" will open. When the machine is in operation, press "STOP KEY", the light will open and machine stop.

5.4.8 When the speed display as "000", the machine will buzz, then you

can open the lid and get off the sample. If you will use the same sample, speed and time for the next time, please just press "START" only.

5.4.9 When finish the operation, just press "0" of the power switch, then unplug, clean the machine.

5.4.10 The machine has the function of protection and alarm when stall or the speed is 300rpm higher than the max speed allowed, the machine will automatically stop and alarm. The you need to cut off the electricity, and then restart and set again.

5.5 ATTENTION AND REMIND:

5.5.1 The centrifuge should be operated by professional person, after reading the operation manual seriously.

5.5.2 Every basket divider has different max speed, customer should choose the max speed according to "sheet 1", not allowed to set speed higher than the max speed listed.

5.5.3 The electricity must have reliable earthing.

5.5.4 Check if the rotating plate is fixed steady, every time before use.

5.5.5 Cut off once there is any error, then do the maintenance by professional person, or ask the producer for assistance.

6 MAINTENANCE AND WARRANTY

- 6.1 Keep the vessel clean and dry.
- 6.2 Clean the rotor plate, centrifuge tube and other accessories by dry cloth before use, and make sure no damage of each accessories. Remove the rotor plate every month, clean the central hole and drive shaft, then lay on some grease to ensure a good function.
- 6.3 Fuse change: cut off the electricity, then unscrew the fuse box cap which is on the bottom of the back of centrifuge. Then change the fuse with a new one.
- 6.4 Keep the machine in dry place
- 6.5 Warranty time: 1 year.

7 transport and store environment

- 7.1 temperature range: $-40^{\circ}\text{C} \sim 70^{\circ}\text{C}$
- 7.2 relative humidity: $\leq 80\%$
- 7.3 atmospheric pressure range: $500 \sim 1060\text{hpa}$
- 7.4 Product performance standards: YZB/JING 0837-2005 DT series medical use low speed auto-balance centrifuge.

8 FC5000-4 packing list

No.	Name	quantity	unit	remark
1	Main frame	1	set	
2	Rotor plate	1	pcs	
3	7ml*30 adapter	4	pcs	
4	fuse	2	pcs	Φ6×30 (8A) for spare
5	Electricity power line	1	pcs	
6	Operation manual and packing list	1	pcs	

Packing people:

Inspector:

Date: