

# STALWART

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## SMC-10K+C MINI CENTRIFUGE

### OPERATION MANUAL

Version 1.0



# SMC-10K+C MINI CENTRIFUGE

## 1. Introduction:

Two types rotators are provided:

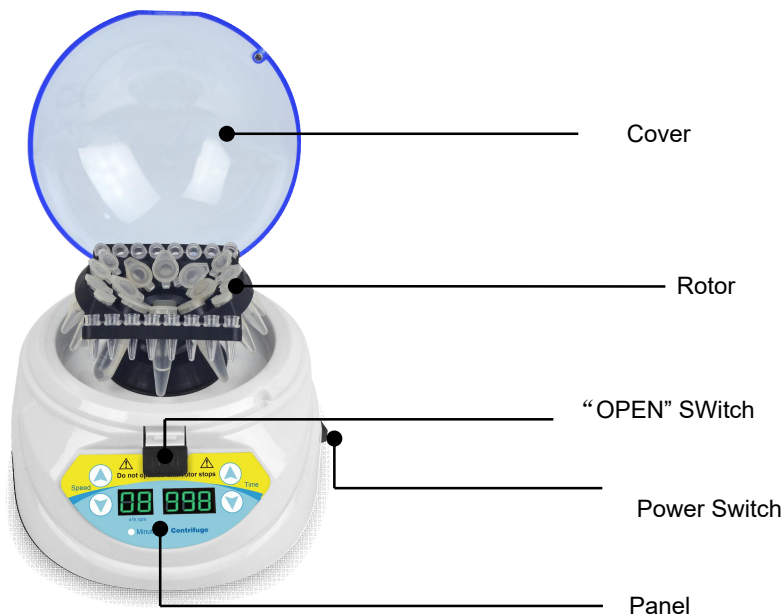
1) 8 x 1.5ml rotator (Suit for 1.5ml/2.0ml x 8 tubes. Additional 0.2ml and 0.5ml tube suit. 0.2ml and 0.5ml tube are adapted with the tube suit.)

2) 2 x 8 x 0.2 ml rotator (Suit for 0.2ml x 8 PCR tubes, 2 ranks supplied.)

Both the two types rotators can be used in extracting the supernatant from a variety of samples, separation of trace blood cells, rapid subsidence of samples, experimental division centrifugal and etc.

## 2. Operation Guide

### 2.1 Structure



## Packing List

Item	Description	Type	Qty	Remarks
1	<b>Mini Centrifuge</b>	<b>SMC-10K+C</b>	1	
2	Power Line	220V/110V 10A	1	
3	Performance Test Statement		1	
4	Operation Manual		1	
Charger : (Sign/Stamp)		Packing Date :		

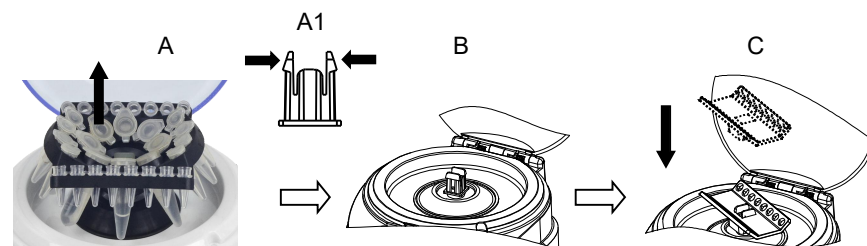
## Performance Test Statement

Name	<b>Mini Centrifuge</b>	Type	<b>SMC-10K+C</b>
Test Date		Production No.	
No.	Test Content	Standard	Test Results
1	Speed	(3000-10000) ±500	<input type="checkbox"/> Qualified
2	Basic Function	Valid	<input type="checkbox"/> Qualified
3	Appearance Demand	Valid	<input type="checkbox"/> Qualified
4	Appearance Sign	Valid	<input type="checkbox"/> Qualified
5	Continuous Work Test	2 hours no irregular	<input type="checkbox"/> Qualified
Test Result			
Remarks :			
Tester :		Confirmer :	

## 7. Failure Analysis and Trouble Shooting

Phenomenon	Possible Causes	Processing Procedure
Rotor not work when power on	Power line problem	Check the power line
	No power	Check power situation
	Broken switch	Change the switch
	Cover is not closed well	Close the cover well again
	Fuse blowout	Exchange it or ask technician for help
Noisy and vibrate heavily when running	Working table is not stable	Put instrument to a stable and firm working stable
	Rotor is not properly installed	Install the rotor according to manual guide 3.2
	Tubes are not balanced	Place the tubes in balanced place
	Sample level is too much different	Put same volume sample in each tube
	Tube lid is not covered well, sample poured out when centrifuge working	Put same volume sample in each tube and cover the lid well.
	Rotor aged or partial defected	Change the rotor
	Different types of tubes mixing up	Use the same type of tube centrifuge at the same time
	Rotor cover deformed or cracked	Maintain in daily using. Exchange the cover if damaged.

## 2.2 Rotor Replacement



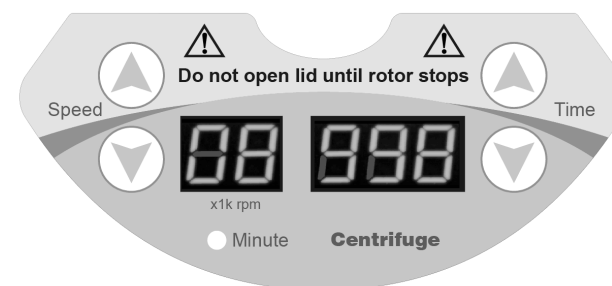
1. Pick up the rotor.

Push the two sides of the clip towards middle (Refer to A1). Use another hand to pick up the rotor.

2. Install the rotor.

Aim the middle hole of the rotor at the clip. Push until the rotor is clipped on well. (Refer to C)

## 2.3 Keyboard and Display Panel



## 2.4 Key Function



Adjust setting time or setting speed. Keep pressing to set timing or speed quickly. Maximum timing is 999min. Timing range is from 1sec to 999min.

## 2.5 Operation Guide

### 1. Time and Speed setting

- a. Turn on the switch. The device enter into initial interface. LCD display “88 888” with beep alarm.
- b. After 2 seconds, LCD speed display is the setting speed in last operation, LCD time display is the setting time in last operation.
- c. Press  $\square$  or  $\square$  of time key to increase or decrease the timing value. Keep pressing make the value increase or decrease tens or hundreds times.
- d. Press  $\square$  or  $\square$  of speed key to increase or decrease the speed value.
- e. Keep pressing  $\square$  and  $\square$  of timing key around 6 seconds to change time unit. The indicator light of “Minute” on means the time unit is minute, the indicator light of “Minute” off means the time unit is second.

### 2. Operation

- a. Turn the switch to the side of “I”, set the time and speed according to the above operation guide. Close the cover with a clattered, the device begins operating. When the operation completes, press the open button after the rotor fully stopped. If the operation is needed to stop during the operating, please turn the switch to the side of “O”.

### WARNING:

1. Do not open the cover unless the rotor is fully stopped.
2. The sample in the tube and the tubes should be put in balance. Each tube with sample should never be over 3.0g.
3. If loud noise or heavy vibrating, stop operating at once.
4. Forbidden to use different capacity tubes in one operation when use the rotor for 6X1.5ml tubes.

### 3. Notice

1. Forbidden to operate without any rotor.
2. Forbidden to put sample into the tube which is fixed in the rotor.
3. Forbidden to move the device in operation.
4. The device must be put onto a level and stable platform.

## 4. Maintenance

Use mull with non-corrosive cleansing fluid (PH=7±1) to clean surface of the instrument. Operate the instrument after it dry out. Do not dip the instrument into fluid or water it.

## 5. Specification

Dimension: 175X155X118 (mm)	Power: ≤45W
Power Input: AC110/220V, 50/60Hz	Fuse: 0.5A /1.0A
G Force (RCF): 7000 g	Speed: 3000-10000rpm