Infitek

CFG-Mini15R

HIGH SPEED CENTRIFUGE

USER MANUAL

Version 2023.06.01

INFITEK CO., LTD.

Foreword

Thank you for purchasing our products. This Manual for users contains function and operation of the Instrument. In order to use the instrument properly, please read this manual carefully before using the Instrument.

Opening Check:

Please check the Instrument and Appendix with the packing list when you first open the instrument packing case. If you find there is something wrong with the Instrument and the Appendix, do contact the vendor or the producer.

Contents

Safety Warnings and Guidelines

1. Important operation information of the security

Before using the instrument, user need have a complete understanding how to operate it safety. Before running the instrument, please read this manual carefully.

Forbid anyone to operate the instrument before reading the manual.

If operate not in accordance with the tips on the manual, the heat generated by the instrument at runtime may cause severe burns, and electric shock accident. Please read the following safety tips and guidance, and implementation of all precautions.

2. Security

When operation, maintenance and repair of this instrument, it must be subject to the following basic safety precautions. If you don't abide by the warnings pointed in the manual, may affect the protection and intended use scope of the instrument.

The instrument is GB9706. 1 standard I class B common devices. The instrument is for indoor use.

Before operating this equipment please read this manual carefully, otherwise it may cause personal injury.

Only in the aspect of how to use electrical equipment installation trained qualified inspection personnel to operate the equipment.

Operators do not attempt to open or repair equipment, doing so will make you lose the warranty qualification, also may be limited by electric shock. If you need repair, please contact our company.

Before connecting the power supply, ensure the power supply voltage and the instrument voltage required the same. And make sure that the power outlet rated load no less than the instrument requirements.

If the power cord damaged, replace it according to the same type and specifications.

Don’t press anything on the power cord when it be used, don't put the power cord in place where people often walk.

When insert the power cord plug, must hand-hold the plug and ensure that the plug is completely inserted into the socket, when pull out the plug, must hand-hold the plug as well and don't pull the power cord.

During operation, the temperature may become very high and have the possibility cause burns or the liquid boiling out, therefore, in the process of the whole operation, it is forbidden any part of the body contact, in order to avoid scald!

The instrument should be put in lower humidity and less dust and away from water and avoid direct sunshine and strong light, indoor should be well ventilated, no corrosive gas or strong magnetic field interference, away from heat, stoves and other heat sources. Don't take equipment in wet or dusty

places. In order to avoid temperature overheating, do not block or cover the vent holes on the instrument. when several equipment be used at the same time, the more the distance between each instrument shall be not less than 30cm.

Shut off the power when stop working. Unplug the plug and using soft cloth or plastic cover to prevent dust from entering the instrument when long time no use.

When happened as following listed cases, the user should pull the power socket immediately and contact the supplier or trained maintenance personnel:

- Liquid into instrument;
- Instrument damaged by rain or water;
- Instrument don't work properly, especially appear any abnormal sound or smell;
- Instrument drops or shell damage;
- Instrument functions have obvious changes.

3. The maintenance of Instrument

The rotor should be cleaned by the cloth stained with a little alcohol. If there are smutches on the Instrument, clean them by soft cloth stained with cleaning cream .

Before each start-up of the instrument, make sure that the rotor is tightly fixed. If it is loose, please secure it.

Chapter 1 Introduction

1. Introduction

The High-speed Mini-centrifuge is a compact centrifuge capable of achieving centrifugal speeds up to 15000rpm, that is approximately 15080g. It is used for extracting RNA/DNA samples, sedimentation of biological components, biochemical and chemical analysis of microsamples. Automatic imbalance switch-off and locking of lid provide safe operation. The rotor accepts 1.5 to 2.0mL tubes directly, as well as 0.5mL and 0.2mL tubes with optional adapters.

Feature：

- LCD provides a clear indication of time and rpm or RCF.
- RMP/RCF setting as required
- The rotor is made of nylon material, with corrosion resistance, minimizes the temperature increases during longer run at high speed.
- Accelerates and decelerates in just 14seconds.
- Safety operation: Rotor imbalance diagnostic; automatic stop.
- Motor overheating protection function
- A separate momentary short button permits instant spin downs.
- Low sample heating (only 5°C after 30min, at max. speed)
- A brushless motor provides noiseless performance and long service life.

2. Normal Operating Conditions

Ambient temperature：0。C ~ 35。C

Relative humidity：≤70%

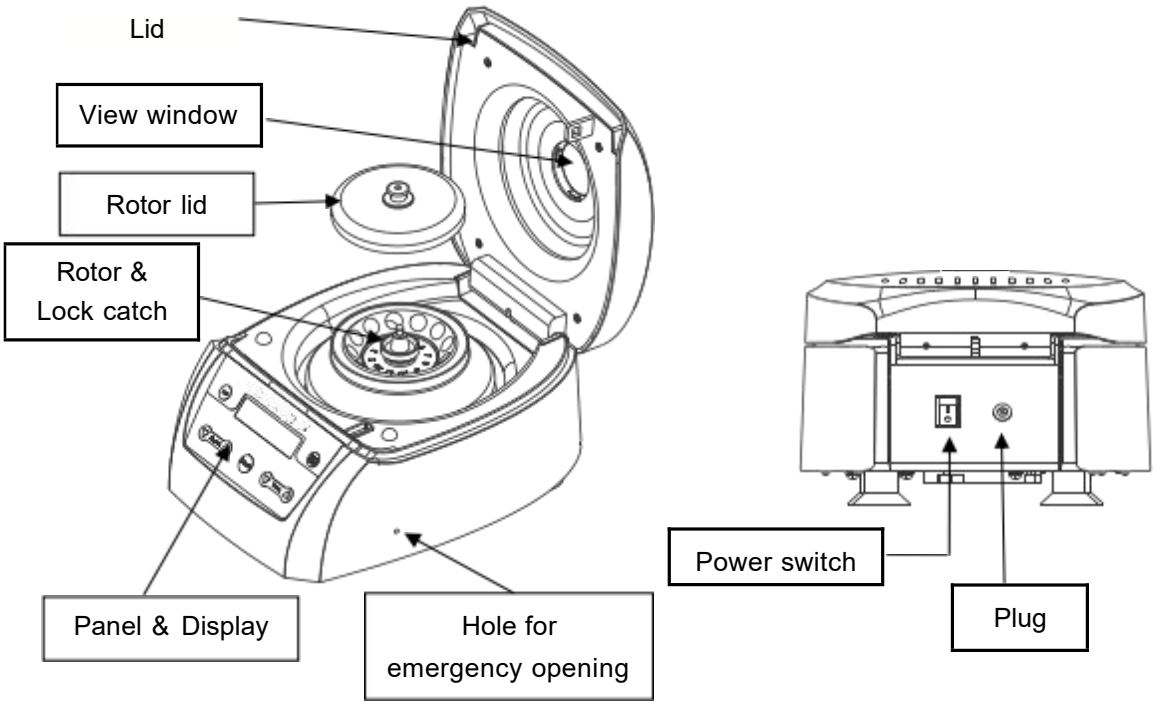
Electricity：DC24/5A

3. The basic parameters and performance

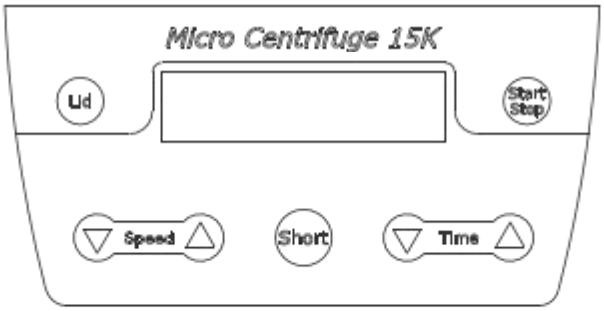
Project	Parameters
Capacity	12x1.5/2.0mL centrifuge tubes
Speed range	500~15000rpm
RCF range	16~15080g
Timing range	15sec~99min59sec/∞
Acceleration	14sec(0~15000rpm)
Deceleration	14sec(15000~1000rpm)
Rotor imbalance diagnostic	Yes
Motor overheating protection function	Yes
Power	120W
Voltage	DC24V/5A
Dimension(mm)	255x194x140mm
Weight	2.3kg

Chapter 2 Preparations

1. Structure Description



2. Operation panel

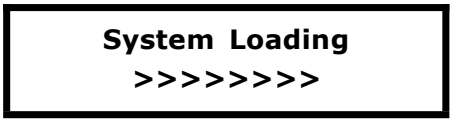


Key	Function
Lid	Open the lid
Start/Stop	Short press to start, long press(>2 sec) to stop.
Speed △/▽	Short press to adjust speed value, long press(>2 sec) to move the cursor position.
Time △/▽	Short press to adjust time value, long press(>2 sec) to move the cursor position.
Short	Press this key to run, release this key to stop.

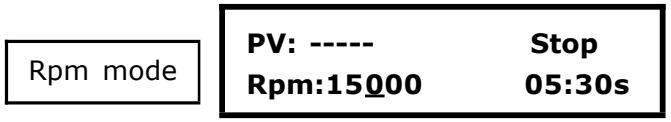
Chapter 3 Basic Operation Guide

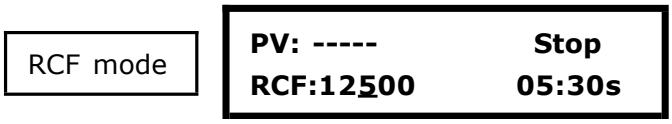
1.Boot interface

Turn power switch on, the instrument enters into initialization with voice of "DI..."



2.Parameters in display

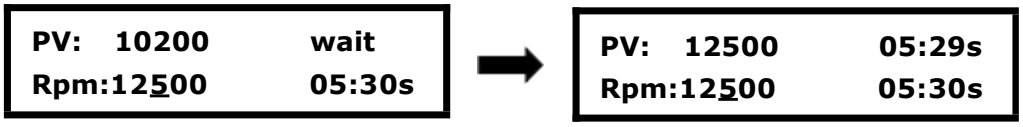




In the setting interface, short press Speed △/▽ to adjust speed(RPM) or relative centrifugal force(RCF). Short press Time △/▽ to adjust timing value. Long press Speed △/▽ to move the flicker position. When the flicker is in RPM or RCF character, short press Speed △/▽ to choose operation mode(RCF or RPM).

After setting the parameters, install centrifuge tubes(installation steps refer to the chapter 4). Close the lid, and press Start/Stop to start running.

3. Running interface

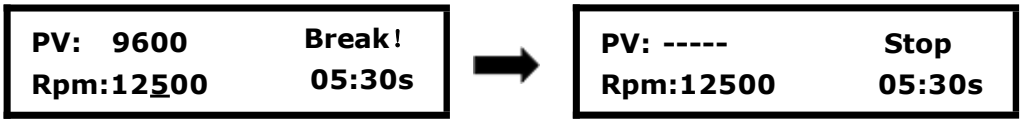


PV: It means current Speed △/▽ or relative centrifugal force(RCF).

wait: It means that it is currently accelerating.

When the speed is reaching setting value, the device starts to count down. When running, long press Start/Stop button, the device stops running and decelerates.

4. Decelerating interface



PV: It means current Speed △/▽ or relative centrifugal force(RCF).

Break！: It means that the device is stopped and is decelerating. At this time, the user is not allowed to operate the device until the deceleration is completed. After deceleration is completed, the device automatically returns to the parameters setting interface, and the user can operate the device again.

5.Short run

In the parameters setting interface, after setting speed, long press Short button and the device will immediately start running according to the target speed or the target centrifugal force value. In the meantime, the counter will increase every second. After releasing the Short button, the device starts to stop and slow down.

6. Lid unlock reminder interface

When the device start running, if the lid is not closed, the device will display “Lid Unlock” reminder interface with voices “di~di~di”".

When this reminder interface appears, please confirm whether the lid is closed properly.

7. Imbalance reminder interface

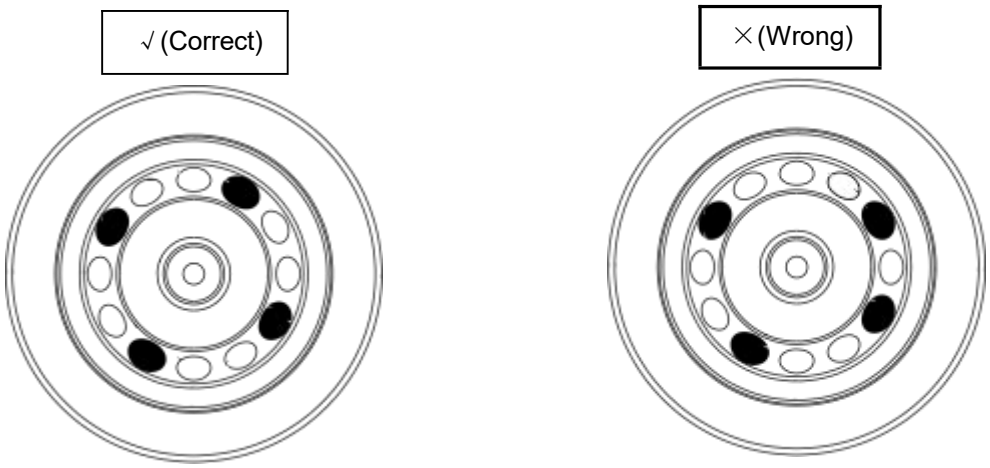
During running, if the sample tubes are not placed symmetrically in the rotor, or the weight difference of each sample tube is large, the device will automatically stop and decelerate, and the device will display “Imbalance” reminder interface with voices “di~di~di”".

If above interface appears, please check the sample tube placement and sample tube weight.

Chapter 4 Tube Placement Operation Guide

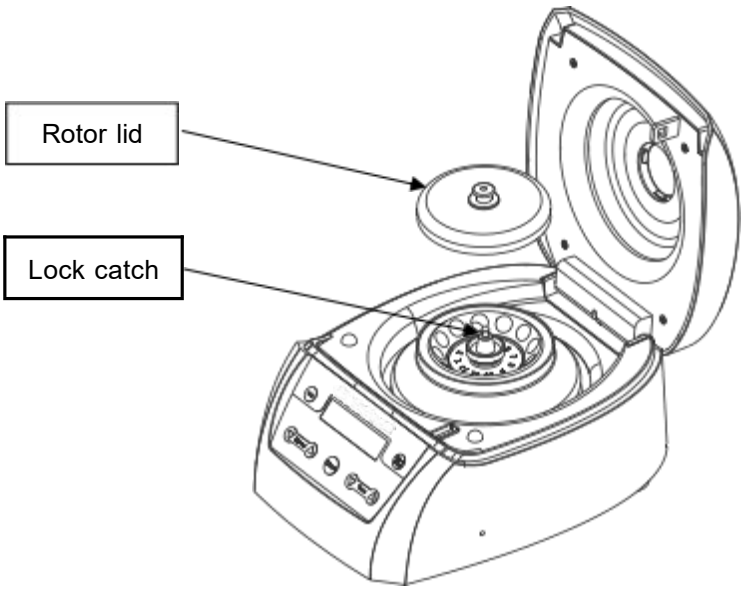
1. Sample tubes placement

During centrifugation, sample tubes in the rotor are not placed symmetrically or weight difference of ample tubes is too large, that will seriously affect the operation of the device and damage the motor. So make sure that the sample tubes are placed symmetrically and the weight is the same before use.



2. Installing the rotor lid

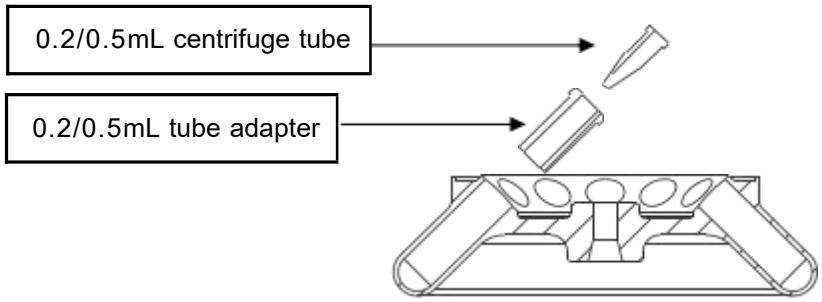
Use rotor lid in the rotor to reduce wind noise during centrifugation. The rotor lid's hole aims at the lock catch in the rotor and press the lid holder down tightly.



3. 0.2ml/0.5ml tube adapters placement

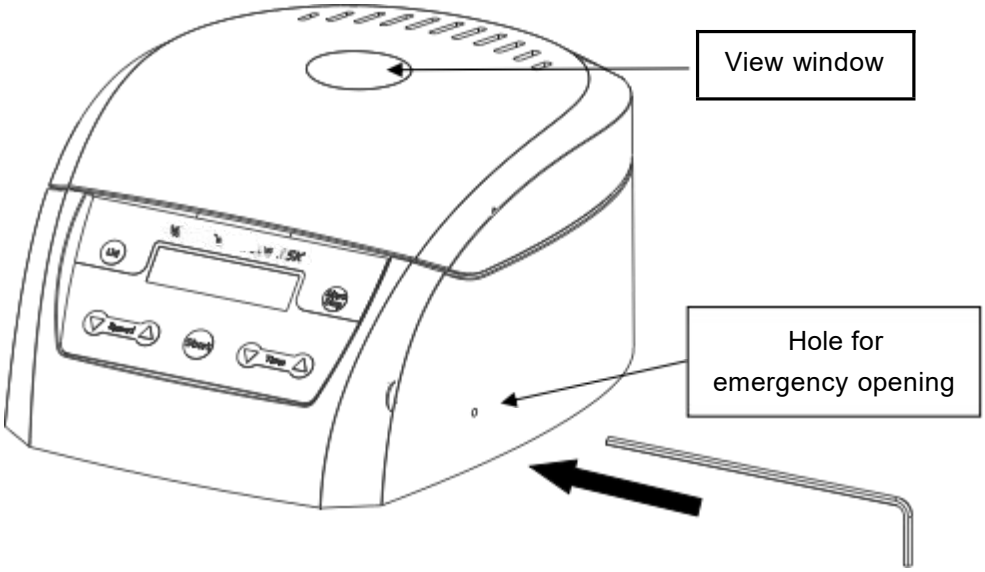
With the supplied microcentrifuge tube adapter, the user can centrifuge 0.2ml / 0.5ml centrifuge tubes. Put the microcentrifuge tube into the corresponding adapter first, and then put the adapter into the rotor hole to use it normally.

Note: The adapter and sample tubes need to be placed symmetrically.



Chapter 5 Emergency Opening Operation Guide

During the centrifugation, if power off accidentally and the sample cannot be taken out, the user can use the included Allen wrench to manually open the lid. Align the Allen wrench with the hole for emergency opening, insert it horizontally, and squeeze it lightly to open the lid and take the sample.



Note: Before opening the lid, please ensure that the rotor is completely stopped through the view window.

Chapter 6 Troubleshooting

Phenomenon	Processing Procedure
No response after power-on	No connection of power(a)
Display show: ZERO SPEED!	Broken speed sensor(b)
Display show: OVER SPEED!	Broken speed sensor(b)
Display show: Balance sensor	Broken balance sensor(b)
Display show: Motor over temp	Motor over temp(b)
Press invalid	Keyboard failure(b)

a) Check connection of power.

b) Reboot instrument, if this problem persists, please contact with supplier.

High voltage in product, please do not detach it！

infitek.com

INFITEK CO., LTD.

TEL: +86-531-88982330
FAX: +86-531-88983691
WEBSITE:INFITEK.COM
EMAIL:INFO@INFITEK.COM
SERVICE:SUPPORT@INFITEK.COM
ADDRESS:RM. 2014, BLDG. 3,LIGAOGUOJIHUAYUAN, NO. 1222,WEST AOTI ROAD, LIXIA DISTRICT,JINAN, SHANDONG