

TGear Plate Centrifuge

User's Manual



Catalog Number	Product Name
OSE-MP25	TGear Plate Centrifuge

Product introduction

TGear Plate Centrifuge is an instantaneous centrifuge specially designed for microwell plates, which is convenient for removing liquid from the wall. It is suitable for 96-well or 384-well microwell plates, small-capacity microwell plates, and all kinds of standard PCR microwell plates with or without skirts. At the same time, this instrument can be equipped with devices for eight-row tubes, which can meet the centrifugal operation of eight-row tubes. This TGear Plate Centrifuge can only be used for scientific research.

Warranty

The warranty period of TGear Plate Centrifuge of our company is 12 months. Damage caused by improper operation or unauthorized modification by using spare parts or accessories not provided by TIANGEN is not covered by the warranty. The warranty does not cover the damage caused by normal wear and tear, radioactive contaminated instruments or improper cleaning.

Technical parameters

Performance	Technical parameters
Instrument capacity	Two PCR microwell plates
Weight	2.1 kg
Rotational speed	2800 rpm
Power	<45 W
Maximum relative centrifugal force (RCF)	$627 \times g$
External dimensions	$219 \times 190 \times 186$ mm
Input power	DC24 V/3 A power adapter
Optional accessories	Eight-row tube rack and fixing device

Schematic diagram of instrument





Appearance (back)



Operation panel



Operation key description

Keys	Description
 	Long press the time increase or decrease adjustment keys to realize the rapid increase or decrease of numbers. The time setting range is 1~99 sec, and the initialization default setting is 15 sec.
Short	Press this key to run the instrument, and release the key to stop the operation.
Start/Stop	Operation start/stop key. Short press this key to start running the program, and short press again to stop the program.

Instrument installation

Unpack the TGear Plate carefully as follows:

1. First, remove the filling material from the top.
2. Take the instrument from the two foam shells and place it on a stable and level experimental table.
3. Remove the packaging protection materials.

Operation guide

1. This instrument must be placed on a stable level table with good ventilation. Plug the power cord into the DC socket at the back of the instrument, and connect the other end to the power socket. When using this instrument, set the power switch at "I" position, indicating that the power supply is on.
2. In order to avoid the overflow of the sample when the microwell plate is put in and taken out of the turn trough, please seal the microwell plate with a sealing film.
3. First, open the centrifugal cover (if the centrifugal cover is locked, press the "OPEN" key to open the lock), and manually adjust the rotor knob to make the rotatory slot face the operator. Then put the sealed microwell plate vertically into the rotatory slot. Please ensure that the microwell plate seal faces the middle of the rotor and the bottom of the plate faces the outside of the rotor. Use the same method to put the second microwell plate into the rotatory slot. Suppose there is only one microwell plate when using this instrument. In that case, it is necessary to take another microwell plate of the same specification for balancing. Add the same weight of solution (water can be used), seal it and put it into the second rotatory slot to ensure the balance of the two rotatory slots.
4. Close the cover, set the required time, and then press the "Start/Stop" key to start the operation. Generally, the ideal centrifugal effect can be achieved within 15 seconds. After the rotor stops completely, press the "OPEN" key to open the centrifugal cover, and then manually adjust the rotor knob to make the rotatory slot face the operator, take out the microwell plate, and take out the second microwell plate in the same way.

Precautions for use

1. When reaching the maximum speed, the instrument may have slight vibration. Large vibration indicates the load on both sides of the rotor is unbalanced, and the operation of the instrument should be stopped. Please use the microwell plates with the same brand, specification and capacity of liquid, and run the instrument after balancing.
2. It is forbidden to touch the rotor or move the instrument before the rotor is completely stopped.
3. It is forbidden to centrifuge flammable, explosive or corrosive objects.
4. It is forbidden to use unsealed microwell plates to avoid liquid leaking into the instrument.
5. Please ensure that the microwell plate seal faces the middle of the rotor and the plate bottom faces the outside of the rotor.
6. Before running this instrument, please make sure that the microwell plate is completely pushed to the bottom of the rotatory slot.
7. This instrument should be placed on a level and stable working platform.

Maintenance and service

Before maintenance and service, please ensure that the instrument is powered off and disconnect the power line. Customers are advised to wipe the instrument surface with 75% industrial alcohol or non-corrosive cleaning solution with pH=7. Please ensure that all parts of the instrument are completely dry before running the instrument, and be careful not to immerse the instrument in liquid or wet the instrument with liquid.

Fault analysis and handling

Fault phenomenon	Cause analysis	Solution
Rotor does not work after startup.	1. The power cord is not plugged in properly.	Plug in the power cord properly.
	2. The power cord socket has no power supply.	Make sure the power supply is normal.
	3. The power switch is not turned on.	Turn on the power switch.
	4. The centrifugal upper cover is not closed and locked.	Press down on the transparent upper cover.
High noise, violent vibration or abnormal noise after startup.	1. The instrument is not placed on a level and solid platform.	Place the instrument on a level and solid platform.
	2. The microwell plate are not symmetrically distributed.	Select microwell plates with the same specification and the same quantity of liquid and place them symmetrically.
	3. The microwell plate is not placed in place.	Push the microwell plate to the bottom of the rotatory slot.

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