

LJN006

Operation and Maintenance Manual



Safety rules

- ☆ For safety, please read the operation manual carefully before starting operation!
- ☆ Parts subject to heat, humidity and biological changes will cause functional degradation and even loss of safety leading to accidents!

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Preface

The copyright of this manual belongs to our company, and no one is allowed to reprint or disseminate any content related to this manual, including pictures and audiovisual materials.

The device operator can copy some chapters of this operation manual, but it can only be used internally, such as guiding users on how to handle emergencies. The location of these chapters is clearly indicated in the catalog of the manual.

Our company has no obligation or responsibility for any damage to the instrument caused by the user's failure to comply with the "instrument usage environment" stated in the manual.

Our company has the right to adjust and modify the content of the operation manual at any time without appropriate notice.

Instrument usage environment



To ensure the safety of continuous use of the machine, the following factors may damage the instrument:

- Chemical effects;
- Environmental impacts, including natural ultraviolet radiation;

Corrosion and wear of protective cover components and other safety components.

*Indoor use;

*Altitude: $\leq 2000\text{m}$;

*The suitable temperature range for instrument operation is $+5\text{ }^{\circ}\text{C}\sim+40\text{ }^{\circ}\text{C}$;

*The applicable relative humidity range for instrument operation is $\leq 80\%$;

*Scope of application of instrument working power supply Product model and its main technical parameters;

*Adequate ventilation equipment must be installed indoors;

*There is no vibration or airflow around that affects performance;

*There is no conductive dust, explosive gas or corrosive gas present in the surrounding air;

Safety tips

*Please read this manual carefully when using this machine for the first time!

*The microplate oscillator can only be operated by trained and authorized personnel;

*The maintenance of equipment can only be completed by our company or our authorized agents;

*The use of the following materials in the instrument is strictly prohibited:

- Flammable and explosive materials;

- Strong chemical acting materials;

Toxic or radioactive substances, or pathogenic microorganisms, etc.

*Only qualified maintenance personnel can use appropriate tools to perform maintenance operations on the system of the microplate oscillator.

*If the operator encounters situations not mentioned in this manual, please contact our company or our authorized agent to inquire about the correct handling method.

*Try to use the accessories provided by our company as much as possible. If users want to use other accessories, our company will not be responsible for any adverse consequences. But users can apply to our company to verify whether the accessories meet our company's requirements.

*The microporous plate oscillator must be inspected and maintained at specified time intervals.

Explanation of safety warning signs



Attention: Please read the user manual carefully before using the instrument!



Attention: High voltage danger! Danger of electric shock!



Meaning of safety instructions

In order to avoid harm to surrounding personnel or damage to surrounding objects and the environment, you must comply with all safety instructions in this user manual.

In addition to recognized professional rules regarding accident prevention, environmental protection, and safety and occupation, including the laws and regulations of the user's country and the place where this instrument is installed, all must be carefully followed.

Consequences of Neglecting Safety Operating Regulations

Any behavior that neglects safety operating procedures, laws and regulations, and various rules can lead to harm to personnel, objects, and the environment.



Safety precautions

*It is strictly prohibited to plug or unplug the power plug and toggle the power button when holding liquid with both hands!

*It is strictly prohibited to plug or unplug the power plug when the instrument is live!

*It is strictly prohibited to maintain and scrub instruments while powered on!

*It is strictly prohibited to perform oscillation operations when the

sample capacity exceeds 70% of the test tube capacity. To prevent liquid overflow, the sample should be placed in a container

The container of the product must be sealed.

*It is strictly prohibited to install the instrument on uneven, shaking and vibrating workbenches!

*Ensure that the container is installed in place to prevent it from flying out during operation!

1.Product brief:

Decolorization shaker: Decolorization shaker is widely used in electrophoresis experiments, such as coomassie blue staining of gel and shaking during decoloration, fixation of electrophoresis gel, fixation, dyeing and development during Silver nitrate dyeing. The development and fixation of X-ray films in autoradiography experiments. Further treatment of the cellulose membrane after electrophoretic transfer. Such as molecular hybridization, antigen antibody reaction and staining, and can be used for cell culture and cell membrane transfer. Used for mixing PRP detection cards, suitable for epidemic prevention stations, blood stations, and laboratory departments.

Advantages at a Glance:

1. 3 inch LCD highlight screen, real-time display of system operation status and parameters;
2. The microprocessor controls the speed and time, with accurate oscillation speed, small fluctuations, safety, stability, and no noise;
3. Different test tubes or flasks can be placed to decolorize trace

samples;

4. Easy to operate soft adhesive fixation method, which can facilitate and quickly install microporous plates;

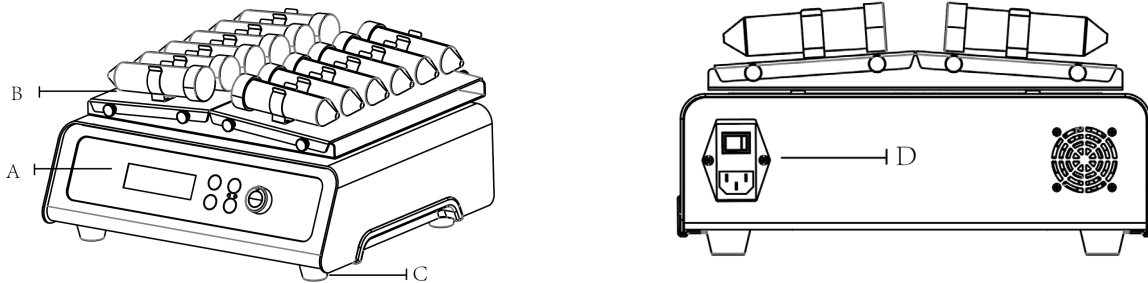
5. Stepper motor drive, precise speed, can provide soft or strong oscillation;

二. Product model and its main technical parameters

Product model	LJN006
Input power supply	AC100~250V/50/60Hz
output power	60W
Speed range	50~300rpm
Speed accuracy	±3rpm
control mode	PWM stepless speed regulation
Operation mode	Continuous/Jog
Programmable parameter	10 built-in Stored procedure
Oscillation mode	circumference
Circumferential diameter	10mm
Time function/display	Digital timing 1s-999min; Continuous: Countdown; Jog: positive timing; Pulse: intermittent time/bright LCD
Speed regulation function/display	Step by step adjustment 1rpm/full range
Security protection operation	Power outage memory function
size	292×345×145mm
weight	12Kg
Permissible ambient humidity/relative humidity	+5-40℃/80%
Protection level	IP20
Interference suppression standard	EN 61010-1,EN 61010-2-020,EN 61326-1,EN 61010-3-2/A2

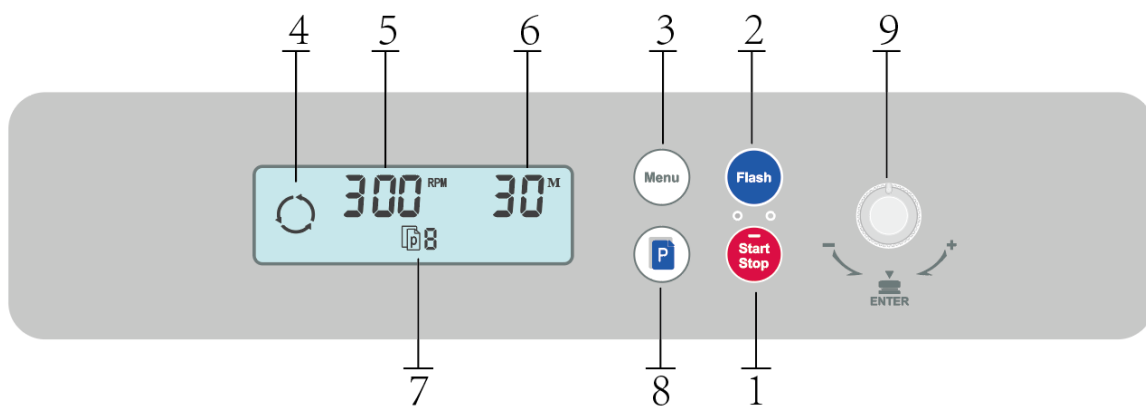
at23℃ ambient temperature

3.Introduction to the Appearance and Function of the Bleaching Shaker

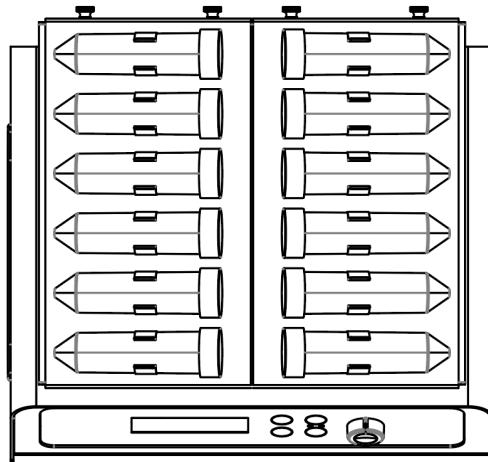


A. Operation panel B. Container tray C. Rubber feet D. Power switch

The above picture shows the LJN006 decolorization shaker (exterior schematic diagram 1)



The above picture shows the LJN006 decolorization shaker (functional schematic diagram 2)



**The above picture shows the LJN006 decolorization shaker
(container loading diagram III)**

Explanation shown in Functional Schematic Diagram 2

1. Stop/Start key.
 2. Flash jog key, instantaneous oscillation.
 3. MENU Menu key is used to select speed and time parameters.
 4. Dynamic symbol for operation.
 5. Speed display area, unit r/min.
 6. Time display area, in minutes per second.
 7. Stored procedure number display area 0~10.
 8. Stored procedure setting key.
- Parameter increase/decrease adjustment knob.

4.Operating Instructions

Attention: Before using the instrument, please ensure that there is no damage during transportation!

*Before receiving the instrument, please observe whether there are

scratches, screws falling off, and other phenomena during transportation!

*It is strictly prohibited to install the instrument on uneven, shaking and vibrating workbenches!

*It is strictly prohibited to perform shaking operations when the sample capacity exceeds 70% of the test tube capacity. To prevent liquid overflow, the container containing the sample must be sealed!

*Plate containers must be securely clamped as shown in Figure 3, otherwise they may fly out during oscillation!

*Is the machine foot pad loose!

*Is the adjustment knob vertically fixed on the operation panel and tilted!

【Operating oscillator】

1. The power switch button in the appearance schematic diagram 1 is turned on by turning "one" to the "ON" position, When "0" is turned to the "OFF" position, the power is turned off;
2. The maximum speed limit of the instrument is 300rpm, and the step adjustment is 1rpm;
3. Press MENU (Menu key) in sequence to select the parameters to be set. You can set the speed and time (minutes or seconds) or press the storage setting key. Rotate the parameter increase/decrease adjustment knob to reach the set value, and then press the knob downward or the value flashes three times to confirm the saving of the set parameters and exit the setting state.

5. Maintenance matters

Do not attempt to clean the instrument when the power cord is plugged in or the power switch is turned on. If the equipment or accessories are contaminated by pathogenic, toxic, or radioactive substances, it is the responsibility of the user to carry out appropriate purification. When

developing a "Laboratory Biosafety Manual", it is necessary to explain this. When there are other requirements for cleaning and decontamination mentioned in this chapter, please contact our company to check if they may damage the equipment. If you plan to return the equipment or accessories to our company or request repair, you must ensure that the equipment or accessories are clean and do not cause harm to human health! Organic solvents cannot be used as they can decompose the lubricating grease inside the motor bearings; During the cleaning process, liquids, especially organic solvents, should not come into contact with the motor spindle and bearing balls!

5.1 Do not use sharp objects to collide with the fixture. During transportation and disassembly, it is necessary to prevent collisions, and to prevent cracks in the fixture and host during use due to scratches or external injuries.

5.2 Regularly inspect the tray components for corrosion spots, grooves, and small cracks. If any of the above conditions are found, please stop using and contact the production unit.

5.3 When cleaning the tray, please use neutral detergent to wet the sponge or cotton cloth, and then use distilled water to wash the detergent. Do not sprinkle or spray the rotor with water, as the liquid may be carried away and cause corrosion.

5.4 Carefully wipe the surface of the instrument with a soft cloth dipped in neutral detergent, and then remove the detergent with a clean damp cloth.

5.5 If there are major issues with the instrument, such as the inability to operate under normal power supply, burning odor inside the machine, broken fixtures, and severe shaking during operation, please contact the manufacturer or authorized distributor in a timely manner. It is not allowed to repair the instrument without the guidance of professional maintenance personnel!

6. Fault alarm information

The following table lists the alarm information and related fault causes and handling methods emitted by the machine. You can follow the prompts to troubleshoot; If the user cannot troubleshoot after trying or the alarm message sent is not listed below, the user should immediately contact our company's maintenance personnel.



After an abnormality occurs, the power should be turned off first and restarted after the fault is resolved.

Fault codes	Code Meaning	reason	treatment countermeasure
E2	overspeed	Speed measurement interference or too fast acceleration	Check the speed measurement line and lower the acceleration gear
E7	No speed measurement	No speed measurement signal input	There are many reasons for generating no speed measurement signal, and separate analysis is needed
E11	Unable to reach the set speed	Insufficient motor power	Confirm that the load matches the power of the control system.

Table 1: Fault alarm information

7. packing list

Serial Number	name	num ber	notes
1	main engine	1	
2	Certificate of Conformity	1	
3	Quality Assurance Page	1	
4	Operating Instructions	1	
5	Power cord	1	
6	tray	1	



When unpacking, please check in a timely manner. If there are any discrepancies, please contact the production unit or authorized sales company of the production unit in a timely manner!