



Stomacher Homogenizer

Operation Manual

(Please read this manual carefully before operating the instrument)

Preface

Thank you for choosing this Stomacher Homogenizer. This manual contains information on the working principle, applications, technical specifications, operation, and maintenance precautions of the instrument. All operators should read and understand the instructions before use.

Upon receipt of the equipment, please unpack and inspect all items according to the packing list. Verify that all components are complete and free from visible damage caused during transportation. If any discrepancies are found, including missing parts, incorrect items, or damage to the packaging or equipment, please contact the StonyLab team promptly for assistance.

This manual is intended to support correct operation and routine maintenance. StonyLab is committed to the continuous improvement of its products and reserves the right to make technical upgrades, design modifications, or specification changes without prior notice. If any discrepancy exists between the actual equipment and the contents of this manual, please contact the StonyLab team for technical support.

Opening Notice: After opening the package, install the supplied door handle before testing and operating the machine.

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1. Working Principle and Applications

The original forms of microbial samples may include solid pieces, paste, powder, and other forms. These samples need to be processed into fine liquid samples to facilitate microbial analysis and inoculation.

The working principle of this instrument is as follows: place the original sample into a homogenization bag together with an appropriate amount of liquid or solvent. For large samples, cut them into pieces of approximately 10 x 10 mm before processing. The paddle repeatedly beats the homogenization bag, generating pressure and causing oscillation to accelerate mixing, thereby achieving uniform distribution of microbial components in the solution.

The homogenization bag is made of special material and is aseptically processed. The bag is clamped along the guide rail by closing the door of the homogenization chamber, helping prevent the solution from overflowing during the beating process. The paddle continuously beats the bag, generating pressure to crush and mix the sample inside the bag.

The homogenization speed can be programmed from 3-12 beats/sec, and the homogenization time can be set from 0.1 sec to 99 hrs 59 min 59 sec, or for continuous operation. Users can select appropriate settings according to the sample and solvent conditions to achieve the desired homogenization effect. For example, mouse and rat liver may be homogenized at a moderate speed of 6-10 beats/sec for 3 minutes.

This instrument is suitable for the homogenization of brain, kidney, liver, spleen, and other tissues and microorganisms. It is widely used in food, pharmaceutical, clinical, molecular biology, toxin, and bacterial detection applications.



2. Features

This instrument makes the extraction of bacteria, cells, tissues, and other substances from solid samples simple and convenient. Simply add the sample and diluent to the special sterile sample bag and place the bag into the homogenizer. After closing the door and setting the required parameters, the instrument automatically starts the beating homogenization process and completes the sample preparation.

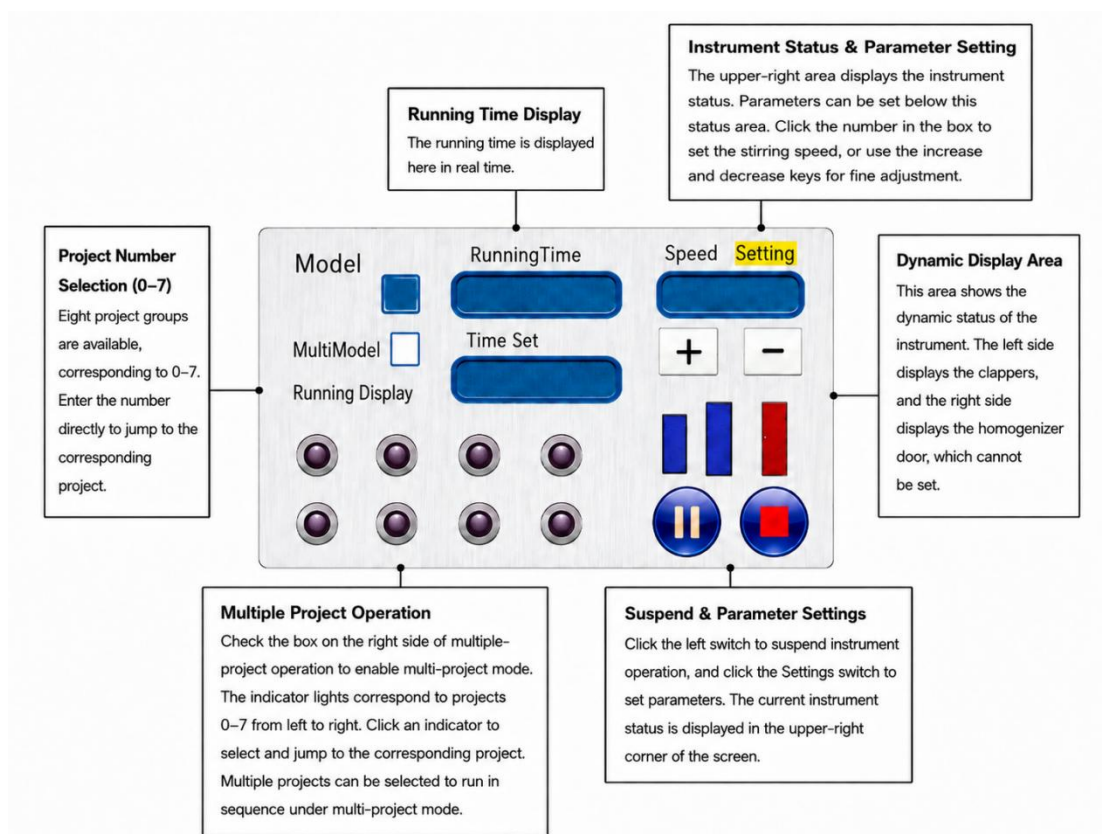
The instrument effectively separates particles contained within and on the surface of solid samples, ensuring that the samples mixed in the sterile bag are sufficiently representative.

The operation is simple, convenient, and time-saving. Disposable sterile homogenization bags eliminate the need for tedious cleaning after use. Samples are contained in disposable sterile homogenization bags, which can effectively prevent cross-contamination and help protect operator safety.

3. Technical Specifications

Parameter	Specification
Part No.	SL003196
Power Supply	AC 220 V $\pm 10\%$, 50 Hz; AC 110 V $\pm 10\%$, 60 Hz
Control Method	Microcomputer Control
Program Storage	8 Programmable Protocols
Temperature Control Range	Ambient to 60°C
Sterilization Function	UV Sterilization, 253.7 nm
Display	4.3-inch Capacitive Touch Screen
Homogenization Time	0.1 sec-99 hrs 59 min 59 sec, or Continuous
Beating Speed	3-12 beats/sec
Effective Capacity	3-400 ml
Sterile Bag Size	17 x 30 cm
Chamber Material	Stainless Steel + Anti-Corrosion Coating
Paddle Gap	0-50 mm, Adjustable
Start Mode	Soft Start
Pause Function	Yes
Anti-Pinch Safety	Yes, with Auto Stop
Additional Features	Removable Viewing Window + Tempered Glass Safety Door
Dimensions (W x D x H)	460 x 250 x 330 mm
Net Weight	21 kg

4. Control Panel



5. Operation and Settings

Remove the instrument from the packaging and place it securely on a stable table near the power supply.

(1) Power Connection

Connect the power cord to the socket on the back of the instrument and plug it into an external power outlet. Turn on the power switch.

(2) Adjust the Paddle Gap

A black plastic knob is located in the middle of the bottom of the instrument. When the sample quantity is large, turn the knob counterclockwise (to the left) to adjust the distance between the paddle and the sample. When the sample quantity is small, turn the knob clockwise (to the right).

(3) Install the Homogenization Bag

Check and confirm that the groove along the bottom of the homogenizer door is properly engaged with the bar at the bottom of the homogenization chamber. Turn the door handle to open the door fully.

Place the homogenization bag containing the sample and solvent into the homogenization chamber. The bottom of the homogenization bag should generally be parallel to the lower edge of the paddle. When the sample volume is less than 100 ml, it is recommended that the bottom edge of the homogenization bag be positioned 1-2 cm above the paddle plane to help prevent the homogenization bag from bursting.

Make sure that the edge of the homogenization bag opening is above the door cover and that the opening is not wrinkled. Then close the door. After hearing a "beep" and confirming that the screen displays "Closed", the door is properly closed. At this point, the door and upper guide rail clamp the homogenization bag.

(4) Set the Speed and Homogenization Time

Select the speed and homogenization time on the control panel according to the sample to be homogenized. Each button provides an audible prompt.

Press the SET key to enter the setting mode. The yellow box on the screen displays the setting status. Enter the corresponding values or select the required program. Click the speed box to set the beating frequency, and then click the time box to set the homogenization time according to the sample requirements.

After setting the parameters, press the RUN and PAUSE keys. The yellow box in the upper-right corner of the screen displays the running status, and the dynamic paddle display indicates that the instrument has started operating.

When the set time is reached, the instrument emits a "beep" sound, the LCD screen displays the pause status, and the machine stops operating. Press the RUN button again to resume operation.

When operating in multi-project mode, after one group of parameters has finished running, the screen automatically displays the parameters of the next group after an audible prompt and runs the next group until the selected program is completed.

If the door is opened during operation, the screen displays the door-opening status and the instrument enters the pause state. After closing the door, press RUN again to restart operation.

(5) Remove the Homogenization Bag

Hold the upper edge of the homogenization bag with the left hand and open the homogenizer door with the right hand. Remove the homogenization bag to complete the operation.

If the sample is contaminated, use special tools to remove the homogenization bag.

(6) Pause or Stop the Operation

If you need to suspend or terminate the operation while the instrument is running, press the RUN/PAUSE button. The current operating status should be displayed on the screen, and the paddle will stop operating immediately.

(7) Door Safety Protection

For safety reasons, all operating procedures are interlocked with the door and the instrument automatically stops when the door is opened.

If the homogenizer door is opened during operation, the instrument automatically stops working, and the LCD screen displays the current status to help prevent finger injury.

6. Notes

- **Power & Restart:** The power plug must be securely connected. A loose connection may affect the computer controller and cause the instrument to malfunction. If the instrument malfunctions, turn off the power switch on the back of the instrument and restart it after 3 minutes.
- **Door Operation:** Do not open the homogenizer door while the paddle is operating to avoid sample liquid overflow. Press the RUN/PAUSE button, and the instrument will automatically stop operating. After closing the door, press the RUN/PAUSE button again, and the instrument will automatically complete the remaining operation.
- **Power-Off:** If the instrument will not be used for an extended period, disconnect the power supply and unplug the power cord.
- **Door Bottom:** The bottom of the homogenizer door is designed with an open structure to facilitate cleaning in case the homogenization bag accidentally ruptures and sample liquid overflows. A container can be placed underneath to collect the overflow. Do not operate the instrument by reaching your hand underneath the machine to avoid finger injury.
- **Foreign Objects:** Before operating the instrument, check whether there are any foreign objects inside the homogenization chamber to avoid instrument failure or damage to the homogenization bag during operation.
- **Prohibited Materials:** Do not use hard materials, bones, or ice to avoid damaging the homogenization bag.
- **Storage:** Keep the instrument and homogenization bags away from direct sunlight. In particular, homogenization bags should be stored in a place without sunlight or ultraviolet radiation to prevent aging.
- **Paddle Gap:** When the sample quantity is small and a higher speed is required, or when the homogenized fibers are tough, use the rear adjustment knob to adjust the distance between the paddle and the window to achieve a better homogenization effect.

7. Maintenance and Troubleshooting

- **Cleaning:** Wipe the instrument housing and the paddle inside the homogenization chamber with a clean cloth. Especially after the homogenization bag is damaged, disconnect the power supply before performing any cleaning work.
- **Instrument Not Operating:** When the instrument does not operate while the chamber door is tightly closed, check whether the power supply is properly connected. If the LCD screen has no display, check whether the fuse is intact.
- **Abnormal Operating Noise:** If the instrument produces abnormal operating noise, check whether the connecting bolts, springs, or paddles are loose. After long-term operation, if the internal spring or nylon sleeve lubrication becomes dry, clean the parts and add new grease. It is generally recommended to add grease once every 3-6 months.

8. Quality Assurance

Warranty is effective from the date of purchase and is non-transferable.

For more details about the warranty, please refer to the link below:
stonylab.com/pages/warranty

For any inquiries or assistance, feel free to contact us:

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This instruction manual is subject to change without prior notice.