Kalstein®

Decolorization Shaker

Model YR05795

Instruction Manual

Thank you very much for purchasing our Decolorization Shaker Model YR05795.

Please read the “Operating Instructions” and “Warranty” before operating this unit to assure proper operation. After reading these documents, be sure to store them securely together with the “Warranty” at a hand place for future reference.

 Warning: Before operating the unit, be sure to read carefully and fully understand important warnings in the operating instructions.

Kalstein®

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Decolorization shaker

General information

Sincerely thank you for your support and love to our company, our service will always be with you!

Purpose of the instrument

The decolorization shaker can be widely used in the fixation of electrophoresis gel, vibration and shaking during the dyeing and decoloring of Coomassie brilliant blue, the fixation, dyeing and development of silver nitrate dyeing, etc., the development and fixation of X-ray film in the autoradiography experiment. After electrophoretic transfer, the cellulose membrane is further processed. In addition, this series of products can also be used for cell culture and cell membrane transfer.

Installation of instrument

Inspection of accessories

There is not only the main unit in the packing box of this instrument, but also provides you with accessories. After you unpack the instrument, check the packing list and the accessory list carefully and check and accept them.

If you find any items in the package are damaged or missing, please contact us in time!

In order to ensure the normal operation of the instrument and prolong the service life of the instrument, please confirm the installation environment of the instrument before starting the installation. The environmental requirements to ensure the normal operation of the instrument are as follows:

The instrument must be installed and used under the condition of -10℃-65℃, please do not install the instrument in a high temperature and humidity environment

Please do not install the instrument in places where the corrosive gas such as chlorine, hydrochloric acid gas, sulfur hydrogen gas, and sulfurous acid gas exceeds the standards.

The instrument should be placed on a stable workbench

The workbench where the instrument is placed should be level, stable, and free from vibration.

Power requirements

This instrument should be used on a power supply with AC 90~260V, 50~60Hz and well grounded

Installation of instrument

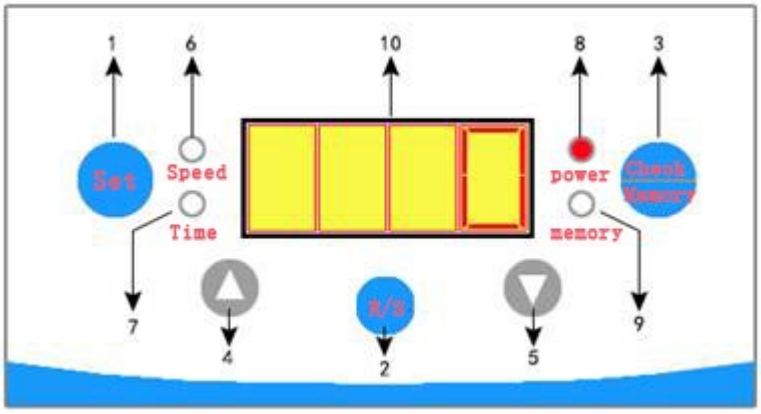
The installation of this instrument is very simple, you only need to follow the following steps to complete it easily!

Step One: Unpack and take out the instrument.

Step Two: Place the instrument gently on a stable workbench. The distance between the instrument and the wall and objects should be kept about 20cm or more.

Step Three: Connect the power cord of the instrument.

Operating Instructions



(Figure 1) Stop status indication, standby interface

"Figure 1" is the standby interface of the operation panel, the specific operation functions are shown in the table

No.	Name	Function
1	Setting button	Used to enter the speed, time parameter setting mode and parameter determination
2	Start/Stop button	Press to switch the operating state of the machine (also valid in the parameter setting mode)
3	Check/Memory button	Check the remaining running time of the machine Press and hold (2.5 seconds) Start/Stop memory (power-on) function
4	Up adjustment button	In parameter setting mode, combine the up and down adjustment buttons to set the parameter value to increase or decrease Press and hold, and then the parameter value continuously increases or decreases
5	Down adjustment button	
6	"Speed" indicator	Constant light: it means that the machine is running No light: it means that the machine stops Flash: it means the machine is in speed setting mode
7	"Time" indicator	Always on for 3 seconds: it means checking the remaining time mode Flash: it means in the time setting mode.
8	"Power" indicator	Constant light: Power ON No light: Power OFF
9	"Memory" indicator	Constant light: memory (powered) ON No light: memory (powered) OFF
10	Digital display	Under the speeding setting mode, the flash mode shows the set value Under the time setting mode, the flash mode shows the set

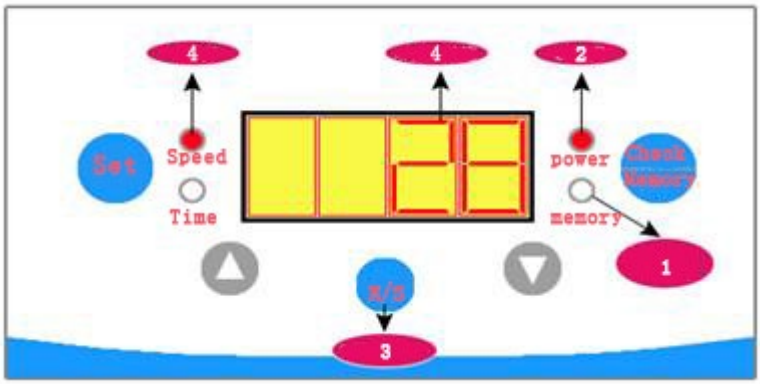
		value Under standby interface, it shows actual speed value Under checking remaining time mode, it shows the value of remaining time running

Start-up/shutdown

Start-up

Turn on the power switch on the back of the machine, →the "Power" indicator light is always on→the four-digit display and the three indicators of "Speed", "Time" and "Memory" flash twice → the buzzer sounds twice, the machine self-inspection is completed, and the state is normal.

In the shutdown state, the "Speed" indicator light is off, the digital display speed is 0, press the "Start/Stop" button to start the machine, the machine starts to run, the "Speed" indicator turns to constant light, the digital display shows the actual speed.



4/2：Constant light; 4：Actual speed; 1：Power-on function disabled 3：Start the machine

(Figure 2) Running status indication, standby interface

Shutdown

In the running state, shortly press the "Start/Stop" button once, the "speed" indicator will be off, and the machine stops running, see (Figure 2)

Note: In the parameter setting state, the "Start/Stop" button is still valid, but at this time, the digital display shows each setting parameter value.

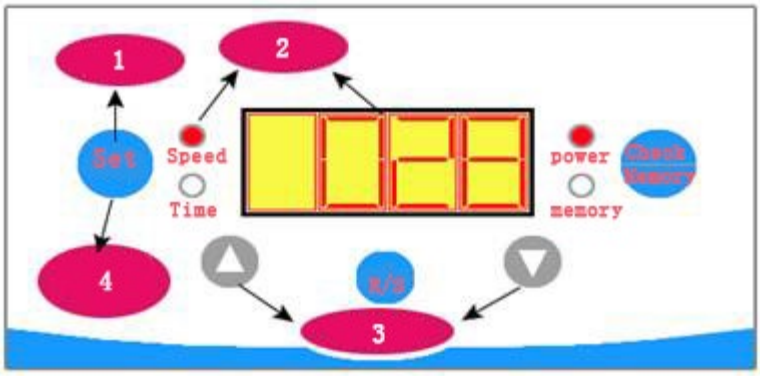
In the running state, the value of remaining running time decreases by 1 every 1 minute. When the remaining running time decreases to zero, the machine will automatically stop, and the buzzer will sound once to remind the user.

Parameter setting

Parameter value can be set in online operation or standby state. The system automatically saves the speed and time parameter values set by the user and will not be lost when the power is turned off, avoiding repeated settings after each power-on.

Speed setting

In the standby interface, shortly press the "Setting" button → the "Speed" indicator flashes, and the three digits (two digits) flash after the digital display→adjust the speed value with the "▲" and "▼" buttons (Figure 3) →press "Setting" button→"Speed" indicator stop flashing→turn to the time setting link (Figure 4).

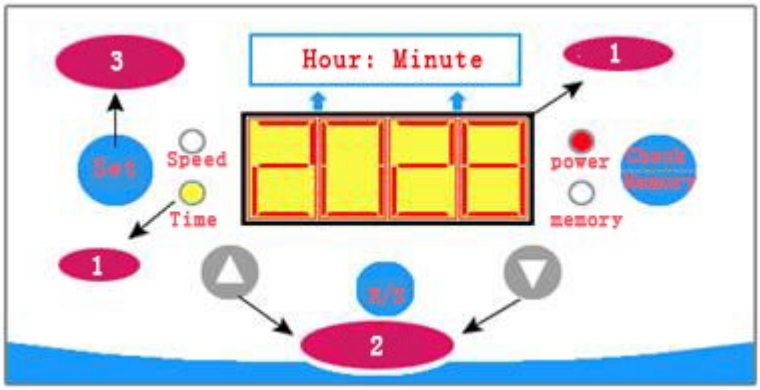


1.Shortly press once to enter the speed parameter setting; 2. Quantity indicator flashes at the same time; 3. Adjust the speed parameter by up and down buttons; 4. Shortly press once to save the speed parameter and turn into time parameter setting

(Figure 3) Setting and indication interface of speed parameter

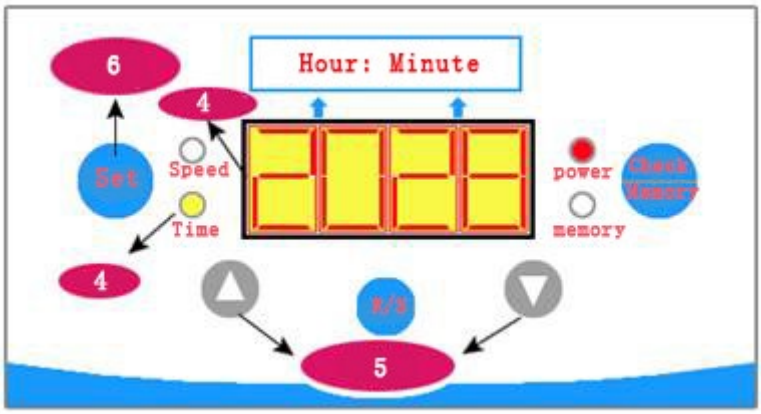
Time setting

After the speed setting is completed, enter the time setting link (or press the "Setting" button twice in the standby interface)→the "Time" indicator and the four-digit display last two digits (minutes) and then stop flashing→combine with "▲" "▼" buttons to adjust the value of the time parameter (minutes) →press the "Setting" button (see Figure 4) →After the digital display, the two digits (minutes) stop flashing, while the first two digits (hours) turn to flashing→combine with "▲" "▼" buttons to adjust the time parameter (hour) value →press the "Setting" button→the "Time" indicator light will be off, digital display shows actual speed and stop flashing→save the parameter then exit, as shown in (Figure 5)



1. Flash; 2. Adjust the time parameter by up and down； 3. Shortly press to save (minute) parameter.

(Figure 4) Setting and indication interface of time parameter (minute)



4. Flash; 4. Hour digit flash； 5. Adjust the time parameter by up and down.
6. Shortly press to save and exit the time setting

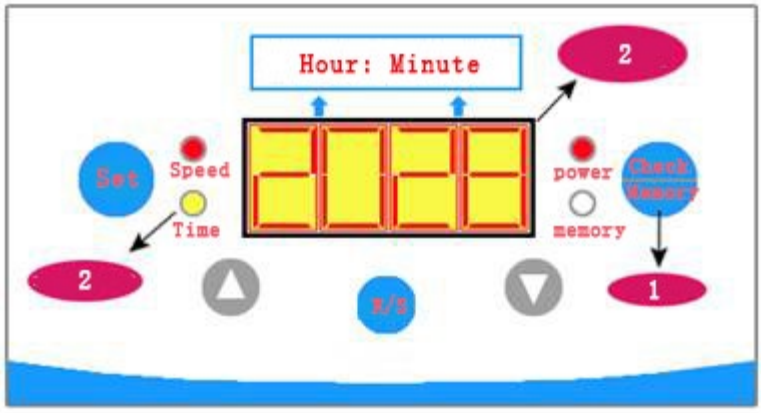
(Figure 5) Setting and indication interface of time parameter (hour)

Note: When the time parameter is set to zero, the machine is not controlled by time and is in manual Start-Stop state. The Start-Stop conversion is completely controlled by the "Start/Stop" buttons.

Check the remaining running time

Shortly press the "Check/Memory" buttons → the "Time" indicator light is always on→the digital display shows the remaining running time→after a delay of 3 seconds, the digital display and the indicator light return to the content and state of original display, as shown in (Figure 6)

This function is valid no matter in the parameter setting state, running and stopping state.

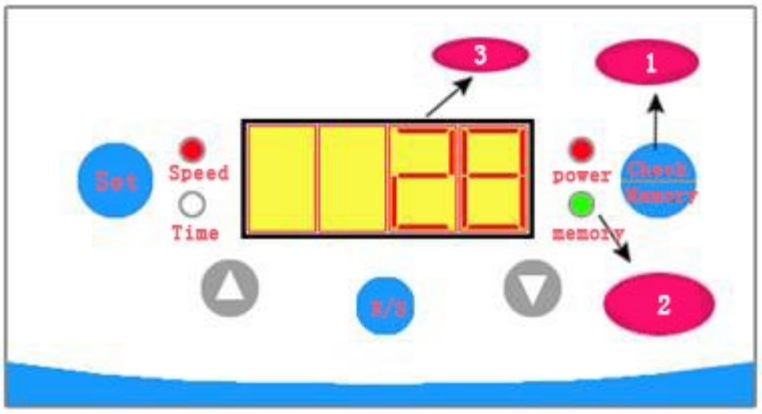


1. Shortly press once; 2. Turns off after 3 seconds； 2. Return to the original interface after displaying for 3 seconds.

(Figure 6) Interface for checking the remaining running time

Press and hold the "Check/Memory" buttons until the "Memory" indicator light is always on, and the memory (powered) function is enabled. In the memory (powered) state, press and hold the "Check/Memory" buttons, the memory indicator will be off, and the memory (powered) function is disabled.

After this function is enabled, not only the set speed value and the set running time value will be saved in the case of power failure, the value of remaining running time and the current running state will also be saved. After the system is powered on, the value of the remaining running time before the power failure is automatically used as the remaining running time of this time, and the machine's running state (Start/Stop state) before the power failure is automatically restored. Therefore, the unattended Start/Stop function can be realized in the memory state, as shown in (Figure 7).



3：Actual speed;　1.：press and hold for several seconds;

2. Constant light: memory (powered) function is enabled.

(Figure 7) Interface of enabling the memory (powered) function

In order to keep the instrument in the best condition, extend the service life of the instrument. The failure self-diagnosis and analysis function are specially embedded in the control system design. The diagnosis result is directly displayed through the digital tube. At the same time, all the indicators are always on, and the buzzer buzzes for a few seconds to remind the user. After the failure is removed, it needs to be re-powered before normal use.

Among them:
E1: Excessive load or abnormal motor.
E2: Abnormal speed measuring optocoupler or false terminal
E3: Components of circuit board are abnormal

Precautions, Maintenance and Failure Analysis

Precautions

Before using the instrument, please be sure to place the instrument on a stable workbench.

Before start-up, please confirm that the power supply voltage is within the required voltage range.

Keep the operating environment clean, and the main body of the instrument can be covered with a cloth cover when not in use to prevent dust accumulation.

Please do not move the instrument during work.

Do not place the instrument in a dark, humid, direct sunlight or near a heat source

The samples should be placed on the tray carefully to avoid splashing the solution into the surface of the instrument and the tray. If the solution touches the surface of the instrument and the tray accidentally, it should be cleaned and dried in time to prevent corrosion from affecting the service life of the machine.

Tips

Be careful to handle the instrument with care, and do not place overloaded objects on the instrument to avoid affecting stability and accuracy.

Precautions

Instrument failures are divided into lifetime failures and occasional failures. Distinguishing the above conditions is beneficial to the use and maintenance of the instrument. Effective information can be obtained in time before the maintenance personnel set off, which will help analyze and solve the problem. The following will analyze some common failures with examples

Common failures	Reasons analysis	Solutions
Turn on the power switch, the display does not light up and the instrument does not work	1. No power socket 220V 2.The power cord of instrument is not connected properly 3.The fuse of the power input is broken 4.Power switch is broken 5.Poor contact of display cable plug 6.Abnormal circuit 7.Display board is abnormal	1.Check the external power supply 220V 2.Re-plug the host power supply 3.Replace BGXP/5A fuse 4.Replace power switch 5.Re-plug the cable plug 6.Repair or replacement 7.Repair or replacement
Instrument power-on self-test failed	Circuit printed board parts are broken	Repair or replacement

Common failures	Reasons analysis	Solutions
The numbers in the digital display are unstable	1.Poor grounding of instrument 2.The instrument is affected by moisture 3.The room temperature in the working room is too high 4.220V power supply is unstable	1.Check and keep the grounding in good condition 2.Improve working environment 3.Improve working environment 4.Add AC power supply with stable voltage
The running indicator is on, but the machine is not running	1.Excessive load 2.Motor is abnormal 3.Circuit board is abnormal	1.Please use the load according to the standard configuration parameters of the machine (the rated load value is 5kg) 2.Repair or modify 3.Repair or modify

Packing list

Main instrument	1 set	
Random accessories	Fuse (5A)	2 PCS
	Power cord	1 line
	Product certificate	1 copy
	User's manual	1 copy