



Spin Tissue Processor

LB-10STP

Index

Sr. No	Title	Page no
1.	Safety Measures	2
2.	Introduction	3
3.	Features	3
4.	Specifications	4
5.	Applications	4
6.	Software Operations	5
7.	Operations	10

1. Safety Measures

- The machine is placed on a level and stable workbench and the working environment is free of water splashes, fire, moisture, and dust.
- The machine cannot be installed in a place where there are chemicals and etchant gas.
- The battery socket should be plugged into the special jack with the ground electrode and the ground connection should be firm.
- Cut off the power for maintenance.
- Carry out regular maintenance for the machine.
- Cut off the power to plug in and out the wax cylinder quickly.

Instructions

- 1) Press the “**manual**” button to raise the tissue basket to the highest point, the solvent cylinder should be placed at the corresponding position (wax cylinders). Then the tissue basket should be placed in cylinder positions. Select the program “P_1” and press the “automatic” button to enter the automatic operation status. (The others are likewise). As the program is completed, there will be a buzzer warning.
- 2) Press the “**manual**” button to raise the tissue basket to the highest point and then take down the tissue basket to complete the dehydration work.
- 3) This machine has an automatic fault alarming function. If the paraffin does not melt in the cylinder during automatic operation, the tissue basket will stop moving to the next cylinder after the obstacle probe gives a signal, it will prompt and alarm at the same time.

2. Introduction

Spin tissue processor LB-10STP is a microprocessor controlled unit with tissue basket relocating system. The combination of silent and precision mechanism with proficient software enables procurement of highest degree of flexibility. The agitation mode guarantees complete mixing and contact with the tissue, solvent and paraffin to achieve dehydrate effect.

3. Features

1. Digital LCD touch screen for parameter setting and process monitoring
2. Electricity and operational malfunction protection
3. Constant temperature controlling system
4. Individually covered vessels reduces the emission of vapors
5. Non-stick TEFLON coating for extended durability

4. Specifications

Model No	LB-10STP
Mode of operation	Spin
Capacity	100 cassettes
Number of programs	10
Number of processing tanks	12
Tissue basket stir	≥ 10 times / hr.
Reagent tank capacity	2.3 L
Paraffin tank quantity	3
Paraffin tank capacity	1.8 L
Temperature range	45 °C ~ 85 °C
Tank processing time	0 ~ 10 hours
Delay time	0 ~ 30 days
Standard tissue basket	1
Ambient temperature	5 °C ~ 40 °C
Relative humidity	< 85 %
Power consumption	1000 W
Power supply	AC 220 V; 50 Hz / 60 Hz
Dimensions	780 × 700 × 570 mm
Weight	70 kgs

5. Applications

Used in pathologic laboratories, medical colleges and universities, zoological and botanical scientific research institute and food inspection department.

6. Software Operations

Interface Instructions

6.1 Main Operation Interface

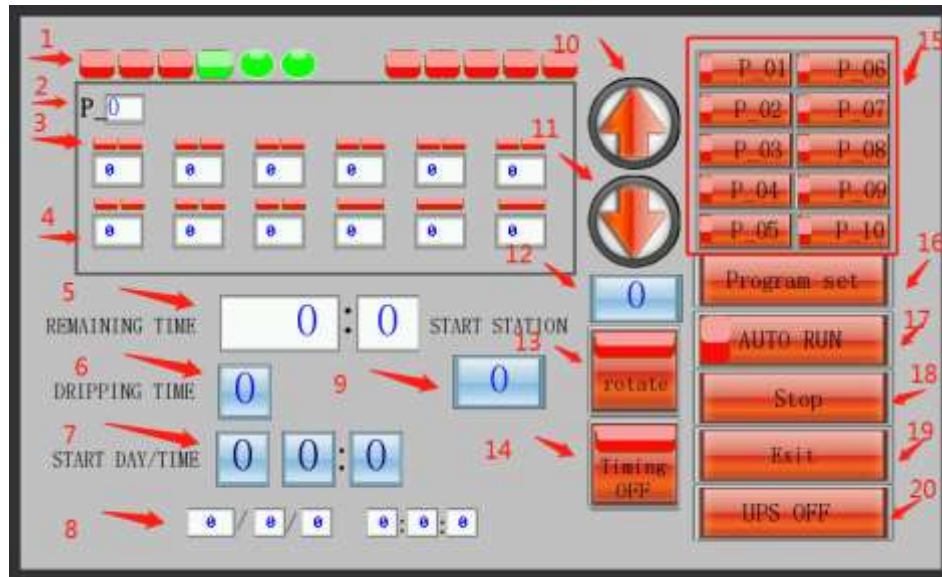


Figure-1

1) Indicator Light

From left to right: Lower limit indicator lamp, Upper limit indicator lamp, Rotary cylinder indicator lamp, indicator lamp, Timing start indicator lamp, Power failure indicator lamp (with UPS), Rise indicator lamp, drop indicator lamp, Rotating cylinder motor indicator lamp, Vacuum indicator lamp, Mixing indicator lamp.

2) Program Number

3) Indicator Light

Left cylinder indicator light: The lamp shows green when it runs to a certain cylinder.

Right vacuum indicator lamp: Vacuum when the light is green.

4) Current cylinder working time (min)

5) Current cylinder work remaining time: Display the remaining running time of the current cylinder position. (min, sec)

6) Drop time.

7) Delay start setting



Figure-2

- Day, hour, minute
- 8) Current date and time
 - 9) Starting and real-time cylinder (The starting cylinder of the single dehydration basket is set at 1, and the double dehydration basket is set to 2.)
 - 10) Manual lifting button
 - 11) Manual lifting button
 - 12) Specified cylinder position
 - 13) Cylinder change start button
 - 14) Time delaying pressing the opening button
 - 15) **Program setting key program pre-storage area:** There are ten sets of reserved programs that can be set here, respectively P-1 to P-10. It can be saved in accordance with the actual situation. Program settings key: When you press this button, enter the program default interface.
 - 16) Program setting:

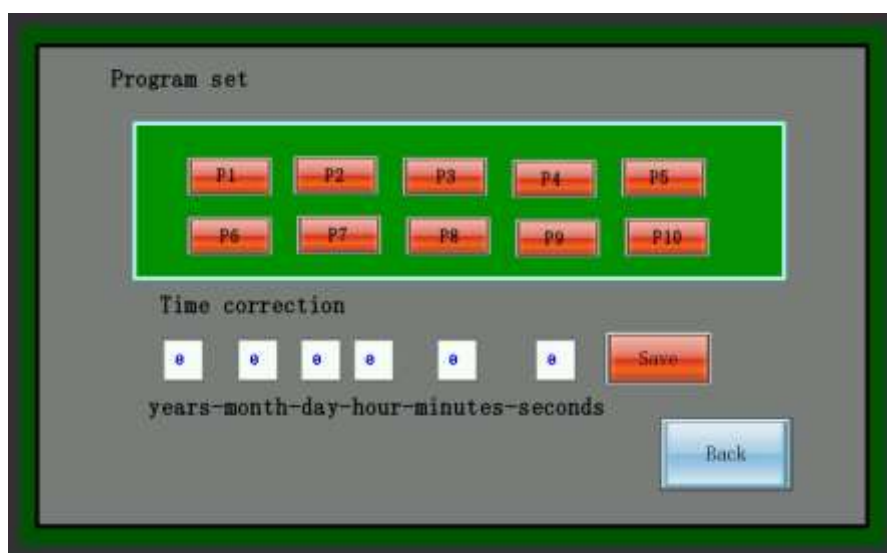


Figure-3

When clicking the program setting Enter the interface

Interface description

Program setting: As Figure P1 to P10 Is a program setting area

Time correction: The current time and date are modified here. Click on the correct date and time.

set up programs: Click P1 to P10 Access to the program settings interface is as follows.

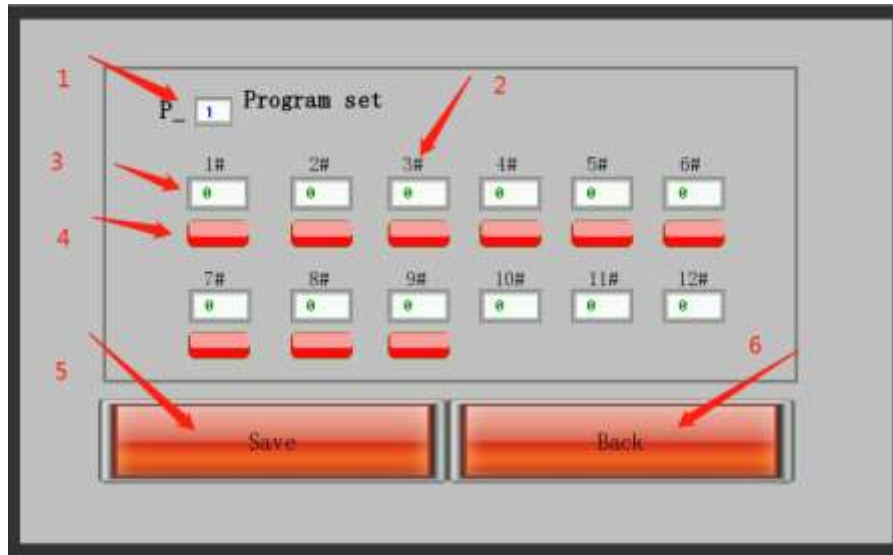


Figure-4

Interface description

(1): P- program number

(2): Cylinder number

(3) Click here to set the working time of this cylinder (min)

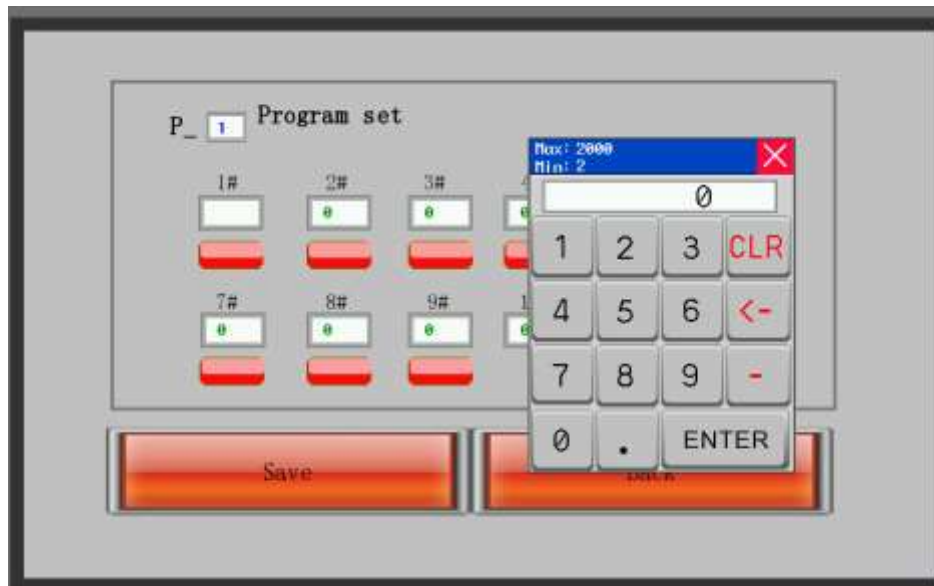


Figure-5

(4) **Vacuum selection key:** When the working cylinder needs vacuuming, click this button to turn it green. (just for vacuum type) After setting, click the "save" button to save the program setup. Click back and exit the interface.

- 17) **Automatic key:** After selecting the program, click this button to enter the automatic state.
- 18) Pause key
- 19) Automatic exit button
- 20) UPS switch button:



Figure-6

If the machine has UPS protection, kindly open this button and insert the protective plug. (for example, if the UPS is damaged, continue to use the dehydrator, kindly turn off the UPS switch and disconnect the protective plug), otherwise, the program will produce a wrong judgment.

- 21) Program Selection Warning

- 1) Kindly select the program warning interface



Figure-7

These interface prompts will appear if there is no selection program when the system is started automatically or timed.

Solution: Click back to select the program and then do the operation.

- 2) Fault indication of the limit switch

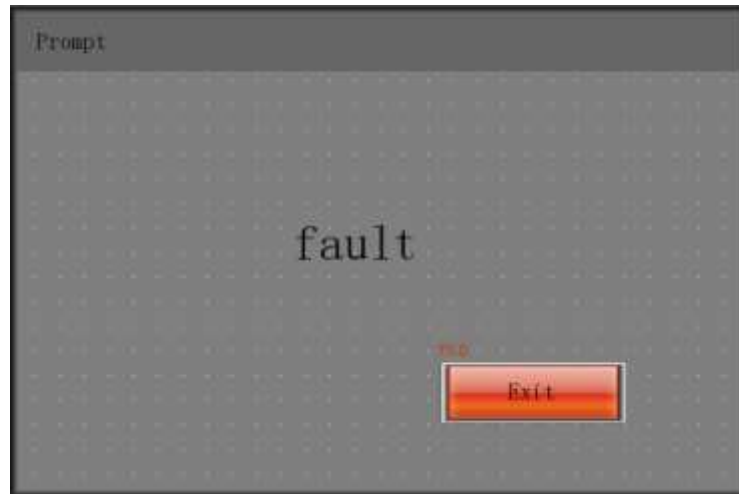


Figure-8

When the interface occurs, the limit switch is likely to fail.

Solution: First observe whether the basket is raised to the highest position (low position), if it is in place. Observe whether the indication light of the switch in this position is lit, such as lighting up, exiting, suspending, and continuing to run. On the contrary, the limit switch is damaged, and the limit switch must be replaced.

- 3) **Finish the dehydration interface:** When the dehydration is completed, the interface is completed.

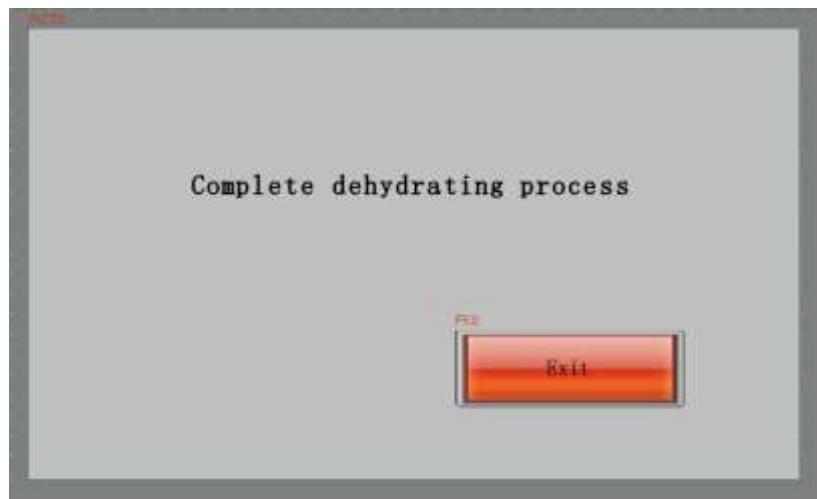


Figure-9

7. Operations

Operation Guide

7.1 Automatic Operation Setting

- After startup, select "**program settings**" to enter the "program settings selection interface". Select the program button you want to set up to enter the program setup interface, and the program number shows the sequence number of the current setup program. The digital keyboard is set up by touching the time frame, and the time needed to set the current cylinder position is (minutes). The rest is the same. Choose whether the current cylinder is vacuumed. If you need to touch the vacuum button to make it green (red represents no vacuum). After the data is input, save the program and return it after operation. (The first boot process needs to be set up. When used again, it can be used directly for stored programs).
- When the cylinder position is set, when the cylinder position is required, click the number of the starting cylinder position and pop up the keyboard to input the cylinder position you need. (Double baskets must set the starting position according to the position of the first basket).
- After the program setup is completed, click the program P1 - P10 button to select the program lights to light, (check whether the starting cylinder position you need the cylinder) click the "automatic" button automatically after the light enters the automatic running state. If you need to pause after entering the automatic running state, you can suspend the operation by pressing the "exit" button. After the pause, the manual lift operation can be made, and after the pause, it will return to the automatic state and continue to execute the unfinished program. (the automatic program cannot set the program, manual operation, and other operations) into the automatic running state after running to a certain cylinder position indicator light in turn, so the cylinder position for the vacuum indicator light will be lit. (vacuum instructions only for vacuum equipment) automatically run after completion of the "dehydration complete" dialog basket hint and sound alarm prompt.
- Timing start
 - 1) First, select the program to run.
 - 2) **Set startup time:** Set text box for startup time.

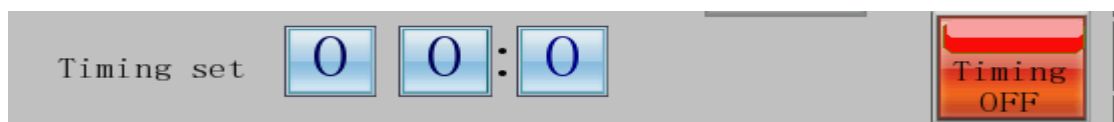


Figure-10

The first one on the left is the day, enter here the date of an extension within 30 days from this date, if Input 0, Representing every day.

The second one is the hour, Enter the start time (24-hour system) here.

The last one is a minute.

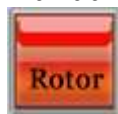


After finishing all the above sets select the program then click  button, indicating that the lamp becomes green after entering the standby state, reaching the setting time, and approaching the automatic running state until the dehydration is completed.

7.2 Manual Operation



Manual button: Rise , drop , Rotary cylinder.



(automatic state can not be operated manually).

7.3 Time Correction

Time correction

0

0

0

0

0

0

0

0

Save

years-month-day-hour-minutes-seconds

Figure-11

Click on the "**program settings**" button to enter the program settings interface, the current time and time when the error is modified here, fill in the correct date and time, click to modify, modify, and click **Save** to return.

7.4 Power Off

When a power failure occurs, the machine without UPS immediately stops at its location and continues to run automatically until it is dehydrated.

When the machine with UPS is out of power, if the tissue basket is in the 1-8 cylinder when the cylinder is finished, the tissue basket will automatically return to the first cylinder. After the power supply is connected the tissue basket will go back to the next cylinder of the power break and continue to work until the dehydration is completed. If the tissue basket in the 9 cylinders to complete this cylinder works back to the protection cylinder, when the turn-on electricity does not return to the next cylinder immediately, it will stagnate in the first cylinder. Return to the next working cylinder after the time and continue dehydration until completion. If the tissue basket in the 10-12 cylinder completes the work, electricity does not return to the next cylinder immediately, it will stagnate in the first cylinder. Return to the next working cylinder after the time and continue to dehydrate until the end.