

PROCESADOR DE TEJIDOS NAHITA

NAHITA TISSUE PROCESSOR

PROCESSEUR DE TISSUS NAHITA

REF. - CODE - RÉF. - ZFP016



Este manual es parte inseparable del aparato por lo que debe estar disponible a todos los usuarios del equipo. Le recomendamos leer atentamente el presente manual y seguir rigurosamente los procedimientos de uso para obtener las máximas prestaciones y una mayor duración del mismo.

This manual should be available for all users of these equipments. To get the best results and a higher duration of this equipment it is advisable to read carefully this manual and follow the processes of use.

Ce manuel est une partie indissociable de l'appareil et doit être mis à la disposition de tous les utilisateurs de l'équipement. Nous vous recommandons de lire attentivement ce manuel et de suivre scrupuleusement les procédures d'utilisation afin d'obtenir des performances maximales et une plus longue durée de vie de l'appareil.

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I. INSTALLATION

1. Carefully remove the supports and fasteners securing the equipment from inside the box.
2. When removing the tissue processor from the box, two operators are required to lift the equipment by holding its central black section.

3. Select a suitable, level work surface. The work surface must have a minimum width of 900 mm, a minimum depth of 900 mm and a clearance height of 950 mm. It must be capable of supporting a weight in excess of 200 kg.

Note: During operation, the top cover of the tissue processor will rise approximately 200 mm higher than when the unit is in standby mode.

4. Check the following points: The work surface is flat and stable. The work surface can support the weight of the equipment. The installation site is well ventilated. There is sufficient space around the equipment.

5. The tissue processor is fitted with a power cable that can be connected to a standard earthed socket.

Note: Before connecting the power cable, check that the mains voltage matches the unit's operating voltage. The unit is factory-set to 220–240 V. If the mains voltage is 110–120 V, contact an authorized technician in your area.

6. In accordance with EC standards regarding the transmission and reception of interference, the electrical components of the tissue processor are adequately protected. However, after installation, contact with other high-power devices that may generate strong vibrations or electromagnetic interference should still be avoided.

II. INTRODUCTION

1. A PLC and touchscreen are used to control the working process; operation is simple, and the machine is stable and reliable.

2. Automatic tank position change function.

3. Intelligent operation controlled by a microcomputer.

4. Agitation and vacuum dehydration are used to ensure that the tissue is thoroughly exposed to the solutions and to guarantee complete dehydration.

5. The paraffin tanks feature intelligent thermostatic control. The temperature can be adjusted according to the melting point of the paraffin. The inner surface of these tanks is coated with a special TEFLON material.

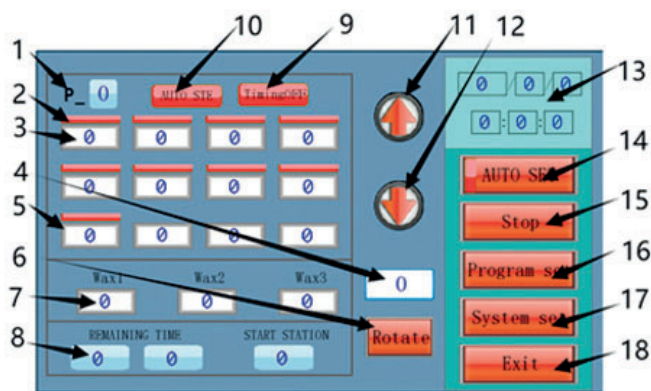
6. The equipment must be switched off when inserting or removing the power plug from the paraffin tanks (disconnect the power cable from the equipment).

7. Reservoirs: There are 12 in total. Reservoirs #1 to #9 are glass reservoirs for reagents, and #10 to #12 are paraffin reservoirs.

8. Touchscreen: The screen is used to set operating parameters and to display information and data.

III. INTERFACE

Main interface displayed on the screen after the unit is switched on.



- 1: Displays the number of the program currently running.
- 2: Vacuum status indicator. If it is green, the vacuum function is active. If it is red, the vacuum function is not active.
- 3: Operating time set for the corresponding chamber.
- 4: This area is used to set the position to which the basket should be moved when rotation is performed manually.
- 5: Tissue basket position indicator (when the basket reaches this position, the edge turns green).
- 6: Manual rotation button. Used in conjunction with 4 to move the basket to the specified position.
- 7: Real-time paraffin temperature display window.
- 8: Displays the remaining operating time of the basket in the current position.
- 9: Timed start status indicator (when the unit is set for a timed start, this indicator turns green).
- 10: Automatic operation indicator (when the unit is operating automatically, this indicator turns green).
- 11: Manual lift button (press the button to raise the turntable to the top; if you press the button again before the turntable reaches the top, the lift will stop).
- 12: Manual descent button (press the button to lower the turntable to the bottom; if you press the button again before the turntable reaches the bottom, the descent will stop).
- 13: Display window showing the current date and time.
- 14: Automatic operation settings button.

Pressing this button will take you to the secondary menu, as shown in the figure below.



(1) Program selection area. Select the program you wish to run.

(2) Next page button. Press this button to go to the second program selection page, as shown below.



(3) Current selected program display area. The running times for each position are shown.

(4) Timer operation settings area. To run a program using the timer, select a program in “area 1”, then select the start date and time in “area 4”, and finally press button 6 to activate the timer operation.

(5) Positioning and start of operation. Use this function when you wish to start from other tank positions; for example, if you need to start from tank position no. 3, enter 3 in this field, select the program number to run and press the button. The basket will automatically rotate to position 3 and operation will commence.

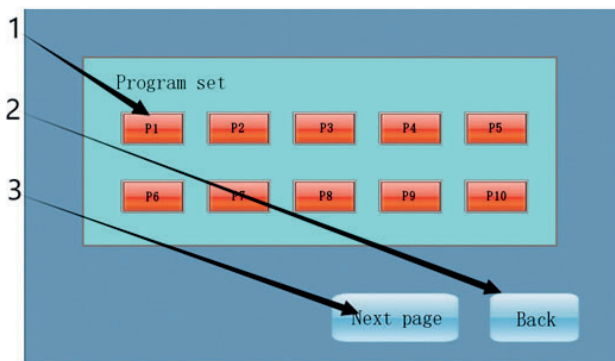
(6) Timer start button. In “area 4” of the timer settings enter the date and time at which the unit must start, select the program number to run in “area 1”, and then press button 6.

(7) Automatic operation button. After selecting the program in “area 1”, press this button to start the process.

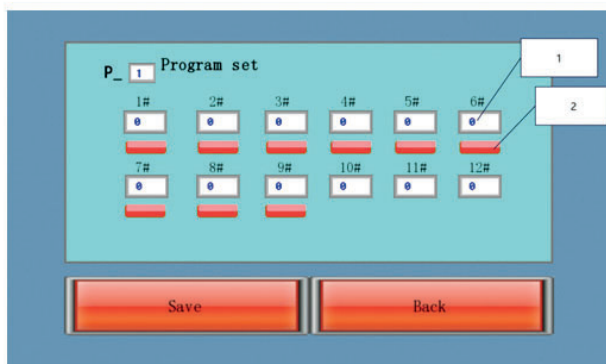
(8) Back button. Press this button to return to the previous page.

15: Program pause button. After pressing this button, you can manually raise and lower the basket to add samples during operation.

16: Program settings button.



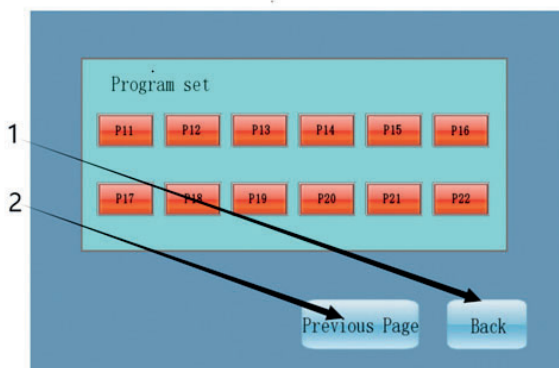
(1) After pressing button 16, the unit will open the dialogue box shown above, where you can select the program you wish to edit. Press to enter.



In the figure above, press “area 1” to set the running time for each station (in minutes) and press “area 2” to apply vacuum to the reagent stations; the vacuum will be activated when “area 2” turns green.

(2) Back button. Press this button to return to the previous menu.

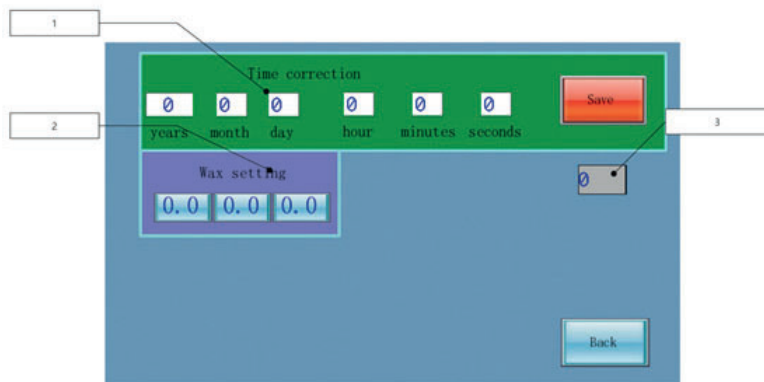
(3) Next page button. Press this button to configure programs 11 to 22.



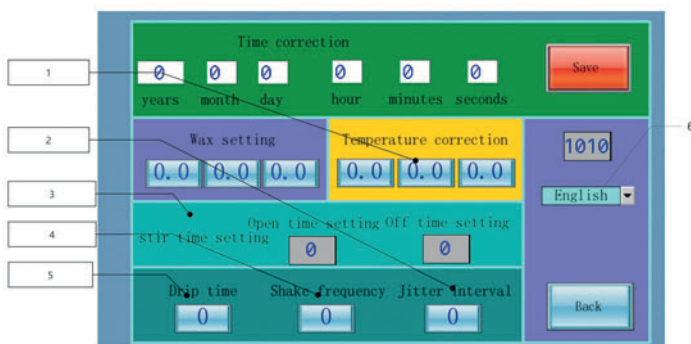
1. Back button. Press this button to return to the previous menu.
2. Previous page button.

17: System settings button.

After pressing this button, the following page appears:



- (1) The date and time are set in this area.
- (2) In this area, the temperature of the paraffin tanks (stations 10, 11 and 12) is set.
- (3) This area is for adjusting special parameters. Enter the password 1010 here to access the hidden menu (this area is set by default and generally does not need to be adjusted by users).



((1)) In this section, you can correct the paraffin temperature deviation (the difference between the actual paraffin temperature and the temperature shown on the display).

((2)) Vibration interval setting. This is used to set the interval time for each vertical vibration of the unit. Note: The time here must not be less than 10 minutes.

((3)) Adjustment of the agitation time. This is used to set the rotation time of the hanging basket. "Open time" represents the duration of each agitation, and "Off time" represents the frequency of the agitation cycles. The unit of time is seconds. For example, to make the basket rotate for 1 minute every 10 minutes, enter 60 in "Open time" and 600 in "Off time".

((4)) Vibration frequency setting. This is used in conjunction with the "area 2" setting. For example, to make the vibration occur twice every 10 minutes, enter the number 10 in "area 2" and the number 2 in "area 4".

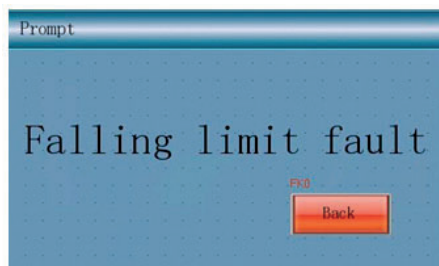
((5)) Drainage setting. This is used to set the reagent drainage time after the basket is raised from a position during automatic operation; the time unit is seconds.

((6)) Language selection (English and Chinese).

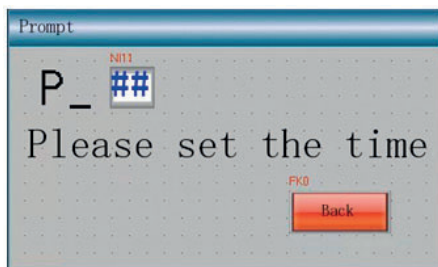
18: Exit button. Used to exit the program mid-operation or to quickly exit the current settings.

IV. DESCRIPTION OF ALARM POP-UP WINDOWS

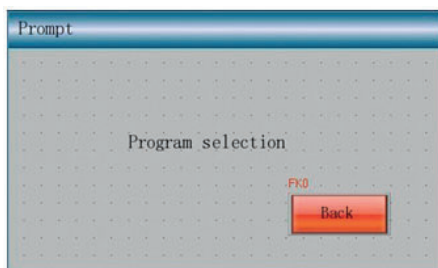
1: Upper and lower position sensor failure. If this message appears, the equipment will continue to operate using the auxiliary sensor, but you should request a repair as soon as possible.



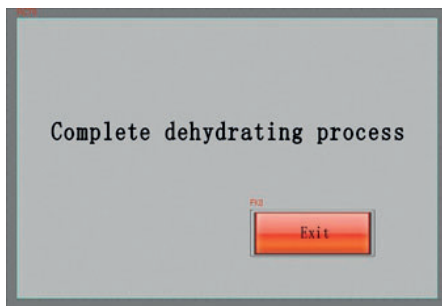
2: Not all parameters have been configured for the selected program.



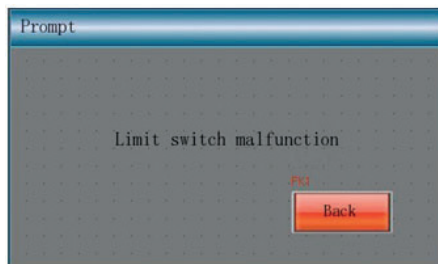
3: No program has been selected.



4: Process completion message.



5: Obstacle alarm. The equipment has encountered an obstacle during descent. Check for any obstacles blocking the descent path.



V. OPERATING GUIDE

1. Switch on the machine. Press the AUTO SET button for automatic operation. In the pop-up window, select the program number you wish to run, then select 'Automatic Operation', 'Timer Operation' or 'Positioning Operation', depending on your requirements.
2. When the processor has finished the program, press the "Exit" button on the screen displaying the completion message. Manually lift the turntable, remove the basket and take out the tissue.

VI. INSTRUCTIONS

1. When the machine is in operation, the current station number must correspond exactly to the position of the tray containing the tissue basket; otherwise, the actual processing time will not match the set time.
2. Press the manual lift button to raise the basket to the highest position. Each reagent reservoir must be placed in its corresponding position (stations #1 to #9). Place the three paraffin reservoirs in stations #10, #11 and #12. Next, the tissue basket must be placed in the position of reservoir #1. Select the "P_1" program and press the AUTO RUN button. When the program is complete, an audible signal will sound, and a completion message will be displayed.
3. This machine has an automatic fault alarm function. If the paraffin does not melt in the tank during automatic operation, the tissue basket will stop and move to the next tank after the obstacle detection probe signals; a warning and an alarm will sound simultaneously.

VII. POINTS TO NOTE

1. The tissue processor must be placed on a level, stable and sturdy surface.
2. The working environment must be free from water splashes, fire, moisture and dust.
3. The machine must not be installed in a location where there are chemicals or corrosive gases.
4. Switch off the power supply before carrying out maintenance on the equipment.
5. Disconnect the power supply to connect and disconnect the cables from the paraffin tanks.

VIII. MAINTENANCE

Lubrication

Every six months, use the manual up and down buttons to raise the turntable to its highest position and lubricate it thoroughly.

Inspection

This equipment must be inspected by an authorized technician at least once a year.

Cleaning

The tissue processor must be cleaned daily. Any spills of reagents must be cleaned up immediately to prevent damage or corrosion to the surface due to prolonged contact with the reagent.

Warning: When carrying out any maintenance or cleaning tasks, ensure that you do not use highly flammable cleaning products; remember that the temperature inside the paraffin tanks can reach high levels. Do not use products containing acetone, xylene or abrasive particles. Generally, use non-abrasive household cleaning products. A plastic scraper may be used to remove solid paraffin. Never use hard objects that could damage the surface.

Note: During cleaning, ensure that cleaning products do not come into contact with electrical connections and sockets. Do not use force to move the top cover during cleaning.

The reagent reservoirs can be cleaned under running water. The paraffin reservoirs can be removed for cleaning after disconnecting the power supply. When reconnecting the paraffin reservoirs, insert the cables into the corresponding sockets.

IX. MAIN TECHNICAL PARAMETERS

1. Processing stages: 12
2. Reagent reservoirs: 9 glass reservoirs, volume: 2 L
3. Paraffin tanks: 3 heated tanks, volume: 1.8 L
4. Maximum setpoint temperature in paraffin tanks: 85 °C
5. Dimensions of the metal tissue basket: Ø120x100 mm
6. Basket capacity: 80 cassettes
7. Basket agitation: $\approx$ 1 minute duration, at a frequency of > 10 times/hour
8. Equipment weight: ≈ 70 kg
9. Machine dimensions: Ø780 mm, height 580–700 mm
10. Power supply: 220V, 50/60Hz
11. Power: 300 W
12. Operating environment: ambient temperature 5–40 °C, relative humidity $< 85\%$