

Model YR427
Tissue Processor

Instruction Manual

Thank you very much for purchasing our Tissue Processor YR427.

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.



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1. Brief Introduction

Kalstein model YR427 Automatic Tissue Processor is an equipment that could automatically perform fixing, dehydrating, transparency, and wax immersing treatment on specimens of human beings, animals or plants. It's widely applied in pathologic departments of various hospitals, pathologic teaching offices of various medical colleges and universities, animal and plant scientific research units and food inspection departments.

2. Functions and Characteristics

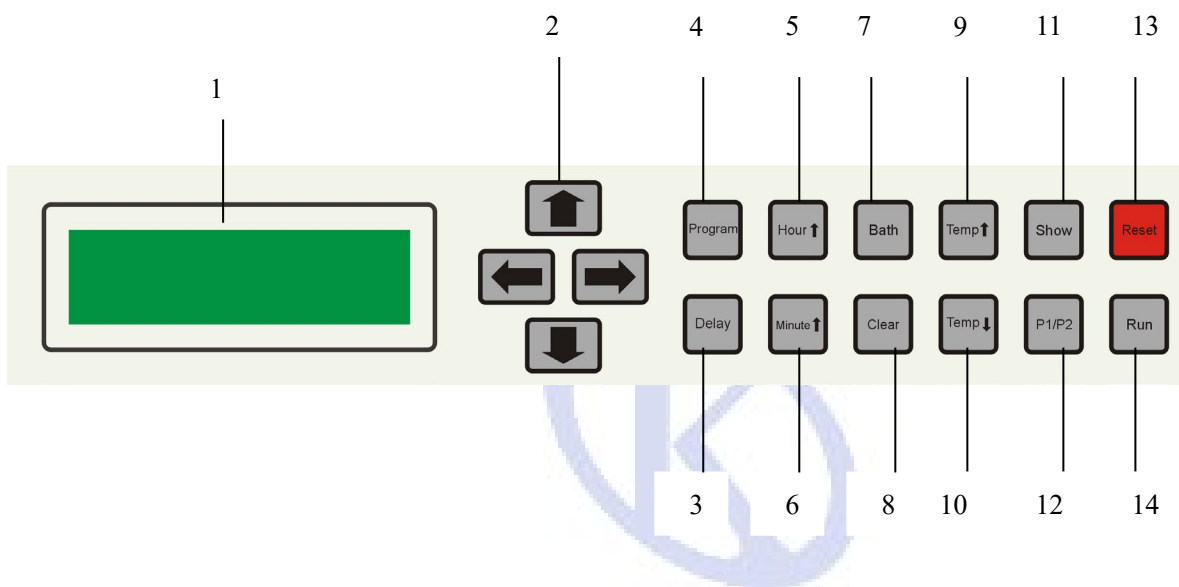
1. APS engineering plastics, high intensity, anti-corrosion, streamline design, elegant appearance, save reagent, low cost, economical and work well.
2. Body of this machine is small, convenient to operate, it adopts monolithic computer controlling techniques, complete function, body made of organic glass, function of gas exhausting, good stability, environment-friendly and safe
3. With a capacity of at least 40 pcs tissue can be processed one time
4. Work continue in case of instant power failure or switch off once machine is working
5. No-water internal heating system, high precision of temperature controlling
6. Two-dimension soft driving systems, low noise, resistant to wear
7. High precision photoelectric register control system, stable performance, high precision positioning
8. Intelligent design, instant identification in case of problems. Memory function in built-in procedure.

3. Main Technical Parameters

1. Number of stations: 12(9 reagent stations,3 paraffin stations)
2. Volume of station: 700ml
3. Time setting: 0~99hours (No. 1 station)
0~24hours (other stations)
4. Temperature pre-setting range: ambient~99degrees
5. Leach liquor time: approx. 30seconds
6. Tissue protecting station: No.7 station
7. Working voltage: AC 110V, 60HZ
8. Power draw:500 VA
9. Heating control: heating starts when basket goes into No.2 station, energy-saving
10. Dimension: 1000x450x420 mm
11. Net weight: 75kg

4. Brief Introduction to Keyboard

- 1、 Screen (show below information: bath position, treatment time, temperature)
- 2、 Manual (up, down, left, right)
- 3、 Delay
- 4、 Program
- 5、 Hour increase
- 6、 Minute increase
- 7、 Bath
- 8、 Clear
- 9、 Temp increase
- 10、 Temp decrease
- 11、 Show
- 12、 P1/P2
- 13、 Reset
- 14、 Run



5. Operation and Usage

(I) . Switch on the power: press the “power switch”, the mechanical arm of the machine enters the position of bath 1.

(II) . Basket installation:

Press the “up” key, then the mechanical arm automatically shifts to up top position, and securely hang the basket on the central position of the mechanical arm rod.

(III) Press reset key, the basket will move to the first bath.

(III) Setting of bath position treatment time:

1. This instrument has two programs are available. Press P1/P2 key, the screen shows “P1” or “P2”, then choose one to start to edit program. (P3 and P4 are delay program)
2. Press Program key, the screen shows “01:00:00”, press hour increase key and minute increase key to edit the time



in the first bath.

3. Press Bath key, the screen shows "02:00:00", press hour increase key and minute increase key to edit the time in the second bath.

4. Press Bath key to set the time for the rest bath as above. Press Program key, screen shows "P1" or "P2" which means time setting is finished.

5. Program time check

a. Press Program key to check the time setting for the first bath

b. Press Bath key, you could check the time setting for second, third, fourth.....twelfth.

c. If you find the time setting is wrong for any bath, press Clear key, then press Hour increase and Minute increase key to reset the time.

6. Temperature setting

If the time settings are correct, press Program key, the screen shows P1 or P2, then press Temperature increase or decrease key to set the temperature. (The common temperature is about 65°C)

7. Run the instrument

After finishing above operation, press Run key to run the instrument.

8. The setting for delay (P3 and P4) to run the instrument.

When setting program P1 and P2, the user can set t1 and t2. Delay time $P3=(t1+P1)$, $P4=(t2+P2)$. t1 and t2 could be set from 0 to 99 hours, press P1/P2 key to choose P1 or P2.

1) Press program key, when the screen shows P1 or P2, then press Delay key, the screen shows "P3-00-" or "P4-00-"

2) Press hour increase key to set delay time, press delay key again to finish the setting.

3) Press P1/P2 key, choose P3 or P4, press Run key, the instrument will run enter delay program and run automatically after the delay time.

9. Finish the operation

When the operation is finished, the screen shows END. Press up key to take off the basket, press reset key and the basket will move to the first bath.

6. Illustrations

1. The bath position time could be set at "0", and then the bath will be skipped over.

2. The machine will automatically save the program for a long time after finishing programming combinations,

and just press “start” key if no adjustment is to be done in next dehydrating operation.

3. The stirring frequency for the basket in the liquid bath is 3 times/minute. If the power is turned off, the stirring frequency is 1 time/minute.

4. The system could guarantee 6 hours consecutively running after external power-cut during machine operation.

5. The temperature of the wax bath is less than the setting temperature value before entering bath 10, the machine automatically returns to the position above bath 6 from bath 9 and then activates the protection of bath 7. The machine works according to the former program after the temperature of wax bath reaching the setting temperature value.

6. When the basket enters the wax bath, no time record.

7. The wax bath temperature is less than the wax melting value, and the suspension arm doesn't agitate.

8. When the instrument is running, press Show key to check the setting figures

7. Points for Attention

1. Hang the basket in a correct method to avoid bath blockage. Press the “up” key while required to hang the basket, and the suspension arm will automatically shift from “bath 1” to the position above bath

2. Don't press the “reset” key while the machine is running normally. The working condition could be checked by pressing the “up” key and press the “down” key to continue to run the machine after checking.

3. Please press the “up” key first after finishing operation and press the “reset” key after taking off the nacelle.

4. The running without external power shall not be above 6 hours; and the storage batteries of the machine shall be charged right after finishing the running without external power. The charging method is switch on the power switch of the machine if the externally supplied utility is normal, and the charging time shall not be less than 10 hours; the machine will automatically charge during dehydrating operation, however, the charging time shall not be less than 15 hours.

5. A set of time program shall have at least 3 bath programming times, and among them bath 1 is a necessary one, otherwise, the machine will not run.

6. Attention shall be paid to safety while operating with medicaments and avoid the medicaments from splitting into eyes and on bodies.

7. Timing will not work if power-cut occurs after entering the wax bath.



8. Please contact the manufacturer in time after failures occur to the machine, and the staffs other than professionals are not allowed to dismantle the machine.

8. Fault detect

Serial No.	Fault symptom	Causes	Elimination
1	No power indication	Fuse is burn or the loose connection of power socket	Replace the fuse or power cable
2	Program is lost after cut-off	Memory battery in control panel	Replace battery
3	The temperature of wax bath cannot be increased	The heater is broken	Replace with the new heater
4	Electric shock by touching the machine surface with the hand	No grounding connection or loose grounding connection	Mount fastened grounding wire
5	Input failure for the time programming	The keyboard on the panel is broken	Replace the film of the keyboard.

9. Maintenance

1. The machine shall be installed on a relatively fixed position, which shall be well equipped with grounding and ventilation facilities.
2. The machine shall be kept clean frequently during operation and usage.
3. Under the circumstances of normal operation and maintenance, the shelf life of the machine is 5 years.

10. transportation and storage

1. This machine should be stored in the clean and airy indoor places with the relative humidity under 80% and be kept far from the caustic gas.
2. Handle in care, avoid wetting, and place upward.

11. Appendix

- Product Alteration



Kalstein France SAS reserves the rights of altering the technological parameters of the product without notifying in advance, because the instruments required to face to the alteration and improvement for technological progress.

●Warranty Period

Kalstein France SAS guarantees that all instruments manufactured by the company have been strictly and comprehensively checked on quality to guarantee the compliance with the technological standard.

The warranty conditions will be up to the KALSTEIN sales agent responsible to you.

The warranty period is only valid for normal usage according to the specified conditions for the instrument and the circumstances of following the various regulations specified in the operational instruction manual.

Warranty terms are not applicable for the damages caused by misuse or improper operations of instrument and our company is not responsible for the above-mentioned damages either.

●Discard and Disposal

The discarded instrument or parts of instrument shall be disposed according to the existing relevant and effective laws and regulations.

●User's Service Information

Please contact the sales representative of KALSTEIN or the sales agent once sold the instrument to you if you require any service or parts during the warranty period. Please inform the instrument model, serial number, and supply time. Kalstein France SAS doesn't accept any rejection of goods without any formal permission for rejection of goods.

Please pay attention to the following items if you will deliver the instrument back to KALSTEIN:

a. The instrument or parts shall be disinfected or radioactive elimination treatment before sending back if viruses or radioactive substances have related to the instrument or the parts. Our user's service technician will be assigned to check this out clearly.

b. If you are sure that the instrument or parts are free from any radioactive or dangerous viruses, please get the suggestions on the possible methods for disinfection and radioactive elimination from your KALSTEIN representative. The instrument or parts will be directly sent back to the customer under the customer's expenses if possible infection dangers are still existed on the instrument or parts upon the arrival of the KALSTEIN representative.

Please tell us the following information if you require technical services:

Model and serial number.

The place where the instrument is located and the contact person.

Reasons for service request.



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