



Automated Tissue Processor

Model YR428

Instruction Manual

Thank you very much for purchasing our Kalstein' Automated Tissue Processor Model YR428

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.



OUR SERVICES

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In Kalstein France, we take care of the full satisfaction of our customers, that is why we provide value-added services of the highest level based on our experience.



Online Inductions and Trainings

In any part of the world, receive your induction or training from our specialized team of engineers



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Our work team is always available to response all your consults or questions, in order to support you in any situation.



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With more than 25 years growing with our customers, Kalstein's multiformat and modern content, is now present in more than 10 countries and increasing.





1. Important Illustration

The information, data, points for attention and adjustments in the manual have reflected the latest technological level of us grasped in the field after investigations.

We don't have obligations of updating the manual for you in time, with the development of technology, and we don't offer new version copies and latest versions of the manual to the users.

We don't have the responsibilities if the illustrations, drawings and technological requirements in the manual are in contradiction to the laws of the country the user is domiciled. Particularly, our company don't have the responsibilities for the damages or destruction of the machine for applying with the illustrations in the manual (on other aspects).

The illustrations, drawings and technological requirements in the manual don't represent the guaranty from the company on the characteristics of the product. Only the items specified in the contract are legally effective.

Kalstein is entitled with the rights of altering the technological characteristics and processing technics, without the obligations of notification in advance. Thus in this way we can improve ourselves and make the progress on our technology.

This manual is protected by property rights. The property rights of the manual are reserved by Kalstein. Printing, duplication, micrography or copy of other electronic documents or other media concerning partial or entire texts and photos of the manual have to be approved by Kalstein in written form in advance.

Please refer to the nameplate on the back of the instrument for the serial number and manufacturing date of the instrument.



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3. Safety Regulations of Instrument

- When the instrument is at work, if use the inflammable goods, please pay attention to safety.

- If do not use the instrument for a long time, pull out the plug and cover the dust encloser.

Do not add reagent when the instrument is working, in addition, make sure there is no reagent flow into the instrument when inject the reagent.

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- place the instrument steadily, and inclination shouldn't exceed to 5°C.

- Do not take the solid object to touch the display screen.

⚠ Only the power line along with the instrument can be used for connection, and the power supply should be earthing well.

⚠ use separate socket for supplying power to avoid interference

⚠ Before replace the fuse, close the main switch and pull out the plug, then replace the fuse with the same model and spec, you may refer to the technical parameter for the concrete model and spec.

⚠ We strongly advise you to use the mounting dehydration basket provided by our company.

⚠ When clean the instrument, must close the main switch and pull out the attaching plug.

⚠ The instrument may not be placed near the flammable and detonatable objects.

⚠ The acet. and xylene organic solvent is not allowed to clean the surface of the instrument.

⚠ The liquid may not overbrim the bath during the processing, and the liquid reagent just immerse the specimen is OK.

⚠ The instrument could only be repaired by the technicians authorized by our company.

4. Brief

YR428Automatic 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.




- The machine surface is painted with APS engineering plastic, which is highly strong, corrosion-resistant, with lucid lines and graceful appearances.
- Monolithic computer control technology is adopted by the machine, which is equipped with English LCD display, the man-machine conversation is easier to use, the machine is equipped with organic glass shield, gas exhaust device is adopted, which is properly sealed, environmental-friendly and safe.
- Medicament hydraulic cylinder: it could complete the dehydrating operations of more than 150 tissues.
- Short time power-cut or power failure during the running of the machine will not influence the normal working of the machine.
- also the equipment adopted by stepping motor, brushless motor and high accuracy spindle transmission gearing that it construct an precise electronic position system.
- enclosed charcoal enhanced ventilation help control processing vapors and confused gas

5. Main technical parameters

- The number of the cylinder and their volumes: 12 cylinders (no.10,11,12 are paraffin cylinder);
- The volume of each cylinder: 1500ML.
- The setting of the prolonged starting time: 00h to 99h (No.1 cylinder);
0~24h (other cylinders)
- time of delaying process time setting: 10~990s
- voltage: AC110±10%、50Hz±1.
- Maximum power: ≤ 500w.
- fuse: F6A/110AC;
- dimension: 1010mm×420mm×450mm
- Weight: 67kg
- Safety of electric: I,B.


6. Box opening and instrument mounting.

- Check whether or not the machine was damaged obviously contact with your shipping agent when any damage is found.
- Firstly, open package carton, then take out operation manual and accessories.
- Carry the instrument(together with protection cover),you're advised to use original packages as the instrument need to be transported safely
- Taking out protection cover, place the instrument on level lab table.

 the instrument mustn't be put in the place which is explosive and poisonous

- the machine should be mounted near to the grounding socket to connect the power line anytime

7. Startup

 The instrument should be connected with power line along with grounding socket

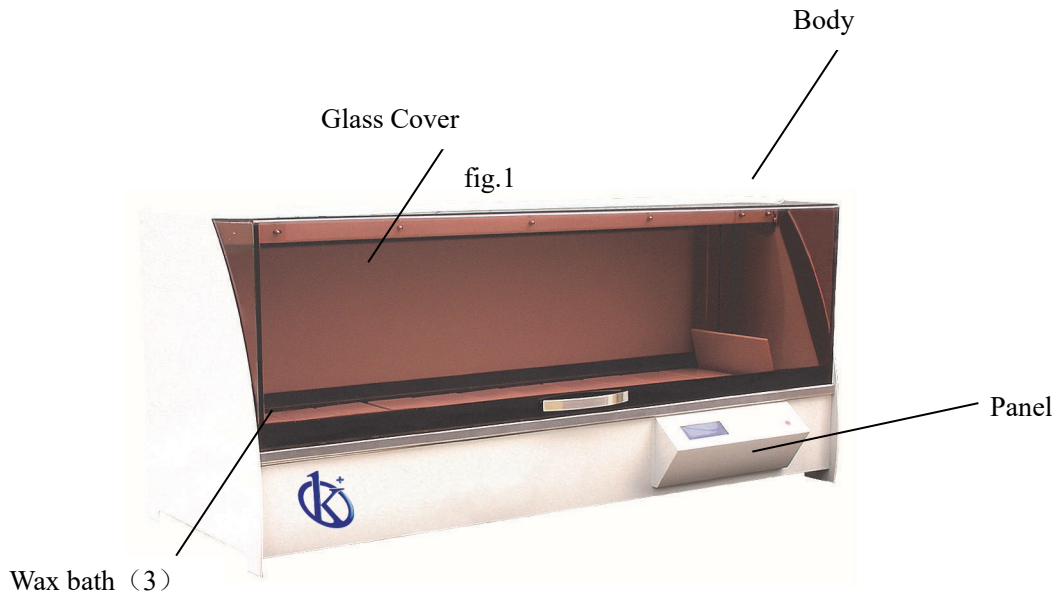
- The instrument can be only connected to exhaust duct.
- Before connecting to power, check the switch see if it's at the position :0;

 before connecting to power, insert power plug, then insert the other end into socket in the lab.

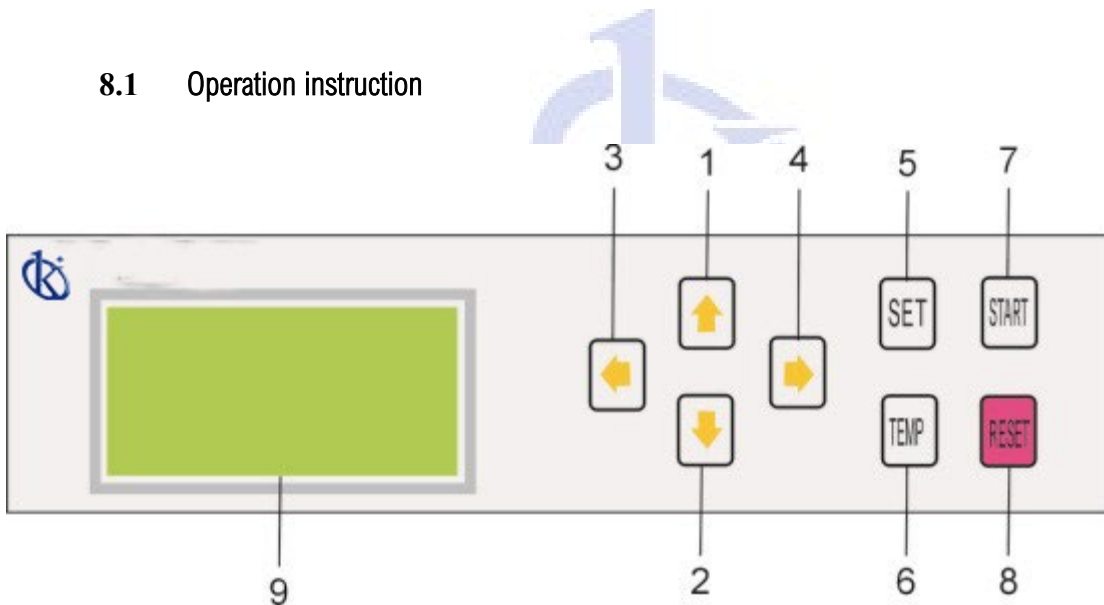
- before switch on, check whether any part is connected well
- turn on the main switch, indicator light, then LCD shows:YR.

8. Usage and steps of operation

sketch of the model:



8.1 Operation instruction



- | | | |
|------------|----------------|------------------------|
| 1、 up | 2、 down | 3、 left |
| 4、 right | 5、 programming | 6、 setting temperature |
| 7、 running | 8、 reset | 9、 display panel |

8.2 Steps of operation

1 Switch on electricity power, the system program run to restoration status. The mechanical arm run to the first tank automatic.

The LCD display KALSTEIN company & item model, after 5 seconds, it is turn into main menu



Start time:00(year)00(month)00(day) 00:00(time)

Total: XX:XX finishing time:200X-XX-XX 00:00

From above, time of basket shaking, and starting time can be changed with left/right button, the figure can be added or reduced with up/down button. Total time and finishing time will be showed automatically.

Press programming button to return to programmed choosing panel.

Preset temperature.

Temperature of paraffin cylinder: XX°C

Present time:200X(year) XX (month)XX (day)XX (hour)XX(min)

From above, temperature of paraffin can be adjusted with up/down button, press left/right to change time, and the machine can memorize it automatically.

5 press run button for next step.

Run

Procedure 1

←

→

procedure 2

press↑to return to main menu

Press left/right button to choose procedures and fix it then, press run button to go to next step.

Procedure 1(press run then press↑to return back)

01:00 02:00 01:00 01:30 01:30

01:00 01:30 01:00 01:00 01:00

01:00 01:00 total: 14:30

press run button to go to running process

Procedure 1(press running then, press↑to return back)

01:00 02:00 01:00 01:30 01:30

01:00 01:30 01:00 01:00 01:00



01:00 01:00 total: 14:30

Running panel

Procedure 1 cylinder 1 time: 01 h 00min←
Cylinder 2 time: 02 h 00min
Temperature Paraffin cylinder:XX°C 08/02/12
08:25

If u want it to work in delaying process time, press running button then go to the next step, then it starts to run

.....waiting present
time: 200X-XX-XX XX: XX
Starting time: 200X-XX-XX XX: XX
Finishing time: 200X-XX-XX XX: XX

As u want to stop running, press ↑ to go to next step

Press ← to adjust
Press any other button to stop working

press← ,cylinder go from downward to upward ,
then panel shows it will go to next step

When cylinder goes up,
Press ↓ to let it down, it will continue to work
press→ for resetting

press→ to make it stop ,press ↓ to make it continue to work
when running, press reset, it will continue to work

Do u want to reset?
press→ to reset
press any other button, cancel resetting process.



press→,cylinder continued to be reset,
press any other button to make it normal.

6 after all procedures, the basket will be at bottom of last cylinder and the panel shows it

finished
press ↑,take out tissue

Press ↑basket goes up then panel shows:


Pls take out tissue.
(press→) reset the basket
Kalstein France

After resetting, it goes in to first panel.


attention: after running, turn off the power without work.


9. Caution in usage


- When the instrument is at work, if use the inflammable goods, please pay attention to safety.
- If do not use the instrument for a long time, pull out the plug and cover the dust encloser.
Do not add reagent when the instrument is working, in addition, make sure there is no reagent flow into the instrument when inject the reagent.
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 use separate socket for supplying power to avoid interference

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 The acet. and xylene organic solvent is not allowed to clean the surface of the instrument.

 The liquid may not overbrim the bath during the processing, and the liquid reagent just immerse the




specimen is OK.

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10. Possible problems and elimination

problems	reason	elimination
No power indication	Fuse is burnt out or poor contact of power socket	Change with new fuse or power line
Electric shock feeling	Grounding line isn't connected or poor contact	Change with new, firm line
Time programming cannot be made	Buttons on panel are broken	Change with new panel
Lifting arm go towards to right	Vertical sensor broken	Examine the sensor $>0.1V$, pls change, $\leq 0.1V$, it's good
Lifting arm go upwards to top, but don't go to right side	Sensor of number 1 is broken	Replace
On running, press left/right button to make lead rail more, but it doesn't stop	Single positioning sensor is broken	Replace
Basket more powerlessly and make noises	Electrical control is broken	Check the motor
Lifting arm goes upwards or shaking frequently downwards	strap in vertical rail lack of teeth	Check, and change if necessary
Vertical rail can't move to left side or right side, but the motor buzzes	Steel rope was disconnected	Replace
Paraffin can't be heated up	The heating tube was broken or the controlled silicon in temperature controlling board is broken	Check, and change if necessary
Paraffin cylinder opens up or can't shut up closely	This is problem about cylinder	Check, or change if necessary
Display panel is not clear	Electronic board is broken	Adjust its resistance
Display panel can't show any figures	broken	Check 34063 on its back (normal: input 24V, output 5V)
Button is not insensitive	Button is broken	Check the button board and connecting line



 Under the condition of following the instructed operating regulations, we guarantee to keep our promise of free maintenance service within one year from the sales day. To those which have surpassed the period, we will also provide maintenance service according to the stipulations.

11. Maintenance

- Clean it before turn off the power, then pull out the plug.
- Use soft household detergent or soap lye to keep it clean
- Don't use detergent like acetone or benzene, any detergent mustn't flow into the instrument.
- Any liquid mustn't flow into the machine
- Before replace the fuse, close the main switch and pull out the plug, then replace the fuse with the same model and spec, you may refer to the technical parameter for the concrete model and spec.

12. Transportation and storage

- 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.
- Handle in care, avoid wetting, and place upward.

13. Appendix

● Product Alteration

Kalstein 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 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.

We are pleased to offer you an environment-friendly disposal plan when you need to dispose the discarded



YR428 Tissue processor.

● 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 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 been connected with 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.

