

Model YR422
Rotatory Microtome

Instruction Manual

Thank you very much for purchasing our Rotatory Microtome Model YR422.

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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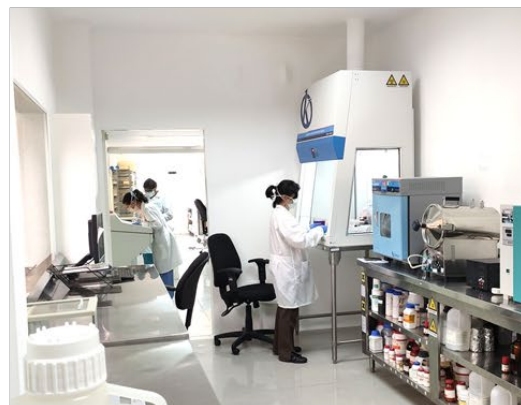
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I . Introduction

The model YR422 Rotary Microtome is designed for the need of cytology and histology research. This instrument is good at the stabilization performance, easily operation, evenly and continuity of slice. You can use steel knife or disposable blade for cutting section. The model YR422 is popular with experts and technologists on cytology and histology.

II. Usage

Widely used in hospitals, universities, forensic medicine institutes, epidemic prevention stations, and technology institutes as a good product for tissue slicing.

III Technical norm

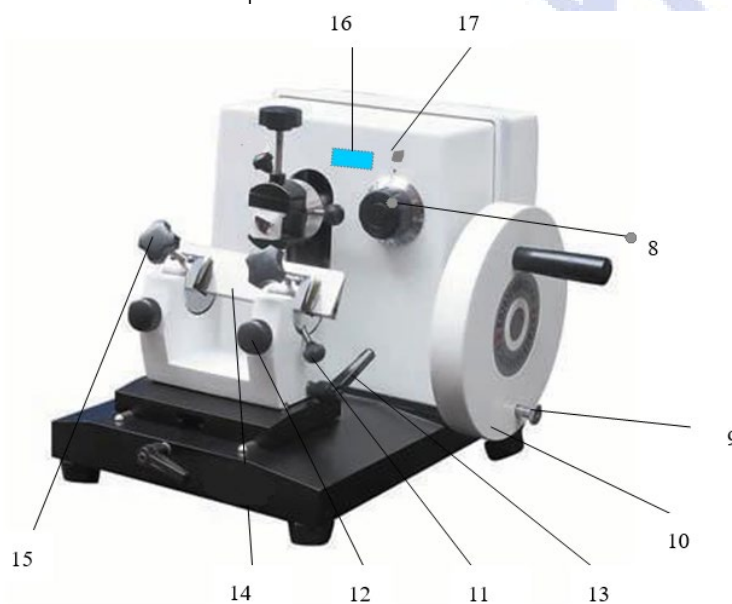
- 3.1 Section thickness adjustment range: 1 μ m-25 μ m
- 3.2 Minimum section adjustment: 1 μ m
- 3.3 Area of section Max: 35 \times 25mm
- 3.4 Error of precision of slice: \pm 10%
- 3.5 Size of instrument : 400mm \times 350mm \times 360mm
- 3.6 Net weight: 21kg

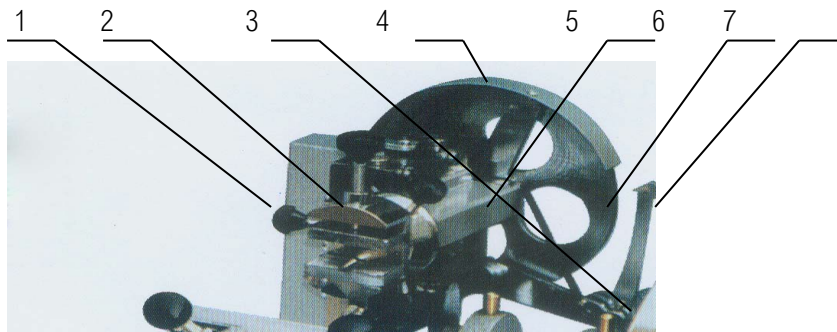
IV Structure , function and features

4.1 It is driven by crank and structured with gear wheel so it can slice with the handle turned to and from.

4.2 It is designed with fair features, precision, slicing continuity, evenly sections, flexibility of the wheel turned to and for, easy operation and stabilization.

4.3 Structure and parts.





1. Angle modulation screw for paraffin block
2. Paraffin block clamp
3. Tooth clutch
4. Gear wheel handle for to-and-fro movement
5. Small towing piece
6. Gear wheel
7. Tooth
8. Thickness adjuster
9. Slicing stopper
10. Hand-wheel
11. Blade adjusting screw
12. Gripping nut
13. Handle for fixing the blade rest
14. Slicing blade
15. Fastening screw
16. Indicator
17. Reset



V. Operation

Open the back cover before the following operation

5.1 Turning the small towing piece (5) to the top, then fix the slicing stopper (9) tight.

5.2 Fasten the trimmed, paraffin tissue block with the paraffin block clamp (2) don't hold it too tightly, or it may make the block broken. The paraffin tissue block sometimes may be stuck on a sample or on a piece of wood, then hold it tightly in the paraffin block clamp (2).

5.3 Loosen the gripping nut (12), put the slicing blade (14) into the blade fixture, turn the blade adjusting screw (11) to let the edge of the blade rightly in place. Then closely fasten the fastening screw (15) to make sure that the blade is fixed.

5.4 Modulate the angle of the slicing blade by holding the fastening screw (15) and the blade all together and turn them slightly. Then fasten the gripping nut (12) to lock it. Make sure that no state of loosening is possible.

5.5 Loosen the handle for fixing the blade rest (13), make the slicing stopper (9) free, turn the hand-wheel (10) backward to make the tissue block downward to a position corresponded with the blade rest. The blade rest, on the other, should be moved to a required position. Fasten the handle for fixing the



blade rest (13) to let the blade rest fixed. Make sure it is not in a loose state.

5.6 With both of your hands, turn simultaneously the angle modulation screw for paraffin block (1) in different directions. Then fasten the screw firmly. Make sure it is not in a loose state.

5.7 Turn the tooth clutch (3) to let the tooth (7) free from the gear wheel (6). Then turn the gear wheel (6) backward to move the small towing piece (5). Carefully adjust the position of the tissue block until it closely meets the slicing blade. Meanwhile, slightly turn the hand-wheel (10) to and for and move the small towing piece (5) up and down on the upper side of the slicing blade (14). By means of this, you can observe the distance between the slicing blade and the tissue block, and the latter can be smoothly trimmed at the same time.

5.8 Turn the small towing piece (5) to the top. Then turn the thickness adjuster (8) to make a thicker range, range as 20-25 μ m. Turn the tooth clutch (7) just insert in the gear wheel (6).

5.9 Turn the hand-wheel (10). Move the small towing piece (5) up and down to slice the tissue block. In this way the paraffin surface of the block can be cut off, and tissue sections with smaller area can be removed too.

5.10 Turn the thickness adjuster (8) to the position for slicing sections with desired thickness. The range between 4-8 μ m is usually adopted for animal tissue slicing.

5.11 when there is higher indoor temperature, or when the tissue block is not easy to cut, you may freeze the slicing blade together with the tissue block a few seconds. Then wrinkle on sections can be minimized.

5.12 Clean any paraffin stuff on the edge of the slicing blade by means of a piece of soft cloth with some dimethylbenzene.

5.13 Turn the hand-wheel (10) backward to cut sections off the tissue block. Sections can be continuously made from the tissue block while you go on turning the hand-wheel backward.

5.14 When you stop cutting, turn the small towing piece (5) back to the top. Then fasten the slicing stopper (9) to keep it from falling.

5.15 Turn the gearwheel (6) backward to move the small towing piece (5) back to its first position, then take the tissue block off.

5.16 Let the fastening screw (15) loose, take off the slicing blade (14). After the blade is cleaned, and coated with some anti-rust grease, please put it into the blade box for later use.

5.17 Clean all wastes on the instrument, such as paraffin remnants, other waste stuffs, and greasy dirt. Then put some well-lubricated liquid on all working spots of the instrument.

5.18 When standing idle, put the instrument into a wooden box or under a cover to keep it clean and in good condition.

5.19 The indicator is worked with 4 batteries (1-5v), with also make the power to buzzer. When the instrument is in its travel range, the buzzer buzzes when reaching any end of the dislocation. Through operating the gear wheel handle (4) (turn to and from) paraffin block clamp (2) in the set travel range, the buzzer stops buzzing. Turn the hand wheel one round, the indicator (16) gives the times of slicing (from 1-99). The indicator can be reset by reset (17). When paraffin block clamp (2) reaches the dead position, the buzzer buzzes. Small over locate is permitted, but large over locate is not allowed. Reopen the slicing after the paraffin block clamp (2) goes back to the permitted travel range by turning the gear wheel handle (4).

Attention: Take out the batteries if the instrument doesn't work for long. Use new batteries if buzzer doesn't buzz or indicator doesn't indicate when travel reaches the dead position.



VI. Maintenance and Points for Attention

6.1 Before the virgin operation of the instrument, all anti-rust grease over its surface should be removed (alcohol or gasoline is preferable as a cleaning agent).

6.2 Put adequate lubricating liquid on all moving spots to make them work easily.

6.3 When turning the hand wheel, turn it evenly to make a smooth running.

6.4 Before cutting, please check these parts—the slicing blade, the tissue block, and the blade rest—whether they are closely tightened. It is a prerequisite that all these parts are not in a state of loosening.

6.5 Before turning the hand wheel, be sure to unfasten the slicing stopper and to move away the blade rest.

6.6 When putting the slicing blade to its position, be careful not to damage its edge or hurt your finger.

6.7 Unfasten the tooth first before turning the gear wheel, otherwise the latter will be damaged.

6.8 Using the blade must be cleaned and covered with lubricating grease.

6.9 For keeping the instrument clean, clean all paraffin remnants, dust, dirt, and other stuffs off the instrument when it stops operation.

6.10 Cover some grease and close the back cover after operation. For assuring its precision, please keep the instrument with the followed points.

Attention: Open the back coat, coat the V track with lubricant monthly.

VII. Repair, guarantee

Our factory is responsible for changing, returning, and repairing products within one year after sale, in the case that it is operated under the right rules. To the products out of guarantee, we support after-sale service.

VIII. Store. Transport

Store: It should be stored in clean place with fresh air, and the relative humidity must below 80%. Keep it away from corrosive gas.

Transport: Put it carefully in its place.



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