

Hand and Table Microtome with Razor

User Manual

Laboratory Equipment

Intended use

Hand-operated, bench-clamped microtome for cutting thin sections of plant and animal specimens for microscopy in teaching laboratories, field work and amateur microscopy.

Intended users

Teachers, laboratory staff and students under supervision; amateur microscopists.

Read this manual completely before first use and keep it with the product. This document provides general operating, care and safety guidance. Where the product is supplied with manufacturer labeling or instructions, those take precedence. For questions, a replacement copy, or a digital copy of this manual, email sales@scimedstore.com.

1. Safety

Safety warnings and cautions

- The razor is extremely sharp. Handle it by the handle only and always cut away from your body and fingers.
- Students must use the microtome only under direct teacher supervision.
- Keep fingers clear of the cutting path on the platform.
- Clamp the microtome firmly to a stable bench before use.
- Store the razor in a protective case or guard when not in use.
- Handle fixed specimens and embedding materials per your laboratory's chemical safety rules, wearing gloves where required.

2. Package contents

- Microtome with sectioning platform
- Steel razor (75 mm cutting edge)
- Fixing clamp

Check contents on receipt. Report missing or damaged items to sales@scimedstore.com within 48 hours of delivery.

3. Specifications

Type	Hand and bench microtome, clamp-mounted
Razor	Surgical steel, 75 mm cutting edge
Feed	Fine long-thread feed screw
Sectioning platform	Wide flat top with glass surface
Mounting	Fixing clamp for bench or table edge

4. Unpacking and setup

- 1 Clamp the microtome firmly to the edge of a stable bench or table using the fixing clamp.
- 2 Turn the feed screw back so the specimen tube is ready for loading.
- 3 Prepare the specimen by embedding it in paraffin wax or holding it in pith, according to your method.
- 4 Insert the embedded specimen into the specimen tube so it is held firmly.
- 5 Advance the feed screw until the specimen surface is just level with the glass platform.

5. Operation

Cutting sections

- 1 Wet the razor and the specimen surface with water or the liquid used in your method, if required.
- 2 Make a first trimming cut to level the specimen with the platform.
- 3 Turn the feed screw a small amount to raise the specimen slightly above the platform.
- 4 Hold the razor flat on the glass platform and draw it across the specimen in one smooth slicing stroke.

- 5 Transfer the section from the razor to a dish of water or onto a slide with a fine brush.
- 6 Repeat, turning the feed screw by the same small amount each time for even sections.
- 7 Select the thinnest, most even sections for mounting.

Classroom demonstration

- 1 Demonstrate razor handling and safe cutting direction before students begin.
- 2 Show how a small turn of the feed screw changes section thickness.
- 3 Have students cut under supervision, one at a time at each microtome.
- 4 Collect and secure razors at the end of the session.

6. Cleaning and disinfection

- Remove wax and specimen residue from the platform and specimen tube after each use.
- Wipe the razor carefully from the back edge toward the cutting edge with a soft cloth, then dry it fully to prevent rust.
- Clean the glass platform with a soft cloth and mild detergent, then dry.
- Do not use abrasive cleaners on the glass or razor.

7. Maintenance and storage

- Lightly oil the razor and feed screw to prevent corrosion, if suitable for your use.
- Store the razor in a protective case.
- Store the microtome in a clean, dry place.
- Keep the razor sharp by stropping or honing, or replace it with a compatible blade when dull.

8. Troubleshooting

Problem	Likely cause	What to do
Sections are thick or uneven	Feed screw turned unevenly or too far	Turn the feed screw by small, equal amounts between cuts.
Sections tear or crumble	Dull razor or poorly embedded specimen	Sharpen or replace the razor; re-embed the specimen firmly.
Specimen moves during cutting	Specimen loose in the tube	Re-seat the specimen so it is held firmly.
Microtome moves on the bench	Clamp not tight	Tighten the fixing clamp on a stable bench edge.
Razor rusts	Not dried after use	Dry the razor fully after cleaning and store it lightly oiled.

9. Disposal

- Dispose of specimens and embedding waste per your laboratory's procedures.
- Wrap or cap a retired razor and dispose of it as sharps waste or per local regulations.

- Recycle the metal parts as scrap metal in accordance with local regulations.

10. Warranty and support

Products are covered by SciMed's standard warranty (12 months from purchase unless a different period is stated on your invoice). Warranty terms: scimedstore.com/pages/warranty.

Support, spare parts and additional copies of this manual: sales@scimedstore.com. Please include your order number and a photo of the product or issue.

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