

Melting Point Apparatus, Analog, with 100 Capillary Tubes

Operating Manual

Laboratory Equipment

Intended use

Analog capillary melting point apparatus for observing and recording the melting point or melting range of solid samples in teaching, QC and identification work.

Intended users

Trained laboratory personnel, instructors and supervised students.

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

- Connect only to a grounded outlet with the supply voltage marked on the unit.
- The heating block and thermometer become very hot. Do not touch during or immediately after use.
- Allow the unit to cool fully before moving, cleaning or storing.
- Glass capillaries and thermometers can break; handle carefully and wear eye protection.
- Handle a broken mercury thermometer per your laboratory's mercury spill procedure.
- Do not heat unknown samples that may decompose violently or release toxic fumes without suitable ventilation.
- Unplug before cleaning. Do not allow liquids into the housing.
- Keep flammable materials away from the unit.

2. Package contents

- Melting point apparatus
- Glass capillary tubes (sealed one end) x 100

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

3. Specifications

Temperature range	Ambient to 350 °C
Heating block	Aluminum cylindrical block with radial holes
Capillary capacity	3 capillaries at once
Temperature measurement	Thermometer well (thermometer not included)
Temperature control	Energy regulator with high/low heat switch
Illumination	Lamp under the block for viewing

4. Unpacking and setup

- 1 Place the apparatus on a stable, heat-resistant bench.
- 2 Check that the supply voltage matches the unit marking.
- 3 Insert a suitable thermometer (sold separately) into the thermometer well.
- 4 Plug into a grounded outlet.

5. Operation

Preparing the sample

- 1 Make sure the sample is dry and finely powdered.
- 2 Press the open end of a capillary into the sample.
- 3 Tap the sealed end on the bench to pack the sample to a small, firm column.
- 4 Prepare a reference standard capillary if needed.

Determining the melting point

- 1 Insert up to 3 capillaries into the holes in the block.
- 2 Switch on the unit and the illumination.
- 3 Set the heat switch and energy regulator to heat quickly to below the expected melting point.
- 4 Reduce heating as the expected melting point approaches so the temperature rises slowly, per your method.
- 5 Watch the sample through the viewing window.
- 6 Record the temperature when melting begins and when the sample is fully liquid.
- 7 Switch off and let the block cool before the next run, or allow it to cool below the next expected value.

6. Cleaning and disinfection

- Switch off, unplug and allow to cool fully.
- Wipe the exterior with a soft, damp cloth.
- Remove broken glass from the block holes with care; do not use sharp metal tools that could damage the block.
- Clean the viewing window with lens tissue.

7. Maintenance and storage

- Store in a clean, dry place covered from dust.
- Check the power cord regularly for damage.
- Verify thermometer accuracy periodically using reference standards of known melting point.
- Refer electrical repairs to qualified service personnel.

8. Troubleshooting

Problem	Likely cause	What to do
Unit does not heat	No power or regulator set to minimum	Check the outlet and switch; increase the regulator setting.
Viewing lamp does not light	Lamp failure	Switch off, unplug, allow to cool and contact service for lamp replacement.
Melting range too wide	Heating too fast or sample impure or wet	Reduce heating rate near the melting point; dry the sample.
Sample hard to see	Too little sample or poor illumination	Pack a slightly longer column; check lamp.
Capillary will not enter block	Broken glass in hole	Cool unit and remove debris carefully.

9. Disposal

- Dispose of used capillaries in a sharps or broken-glass container.
- Dispose of the unit as electrical waste 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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