

Hand-Operated Table-Mounted Centrifuge, 4 Buckets

Operating Manual

Laboratory Equipment

Intended use

Manual centrifuge for low-speed separation of samples such as serum or plasma and urine sediment where electrical power is unavailable or unreliable.

Intended users

Trained laboratory, clinical and veterinary personnel; students under supervision.

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

- Always load the head in balance: place tubes of equal weight in opposite buckets.
- Clamp the centrifuge firmly to a stable bench before use. Do not operate it unclamped.
- Keep hands, hair, sleeves and loose items away from the rotating head.
- Do not touch or stop the head by hand; let it come to rest on its own.
- Use only tubes that are undamaged and rated for centrifugation. Cap tubes containing biological samples.
- Treat all specimens as potentially infectious. Wear gloves, lab coat and eye protection.
- Do not crank faster than needed to reach the working speed; stop if the unit vibrates or wobbles.

2. Package contents

- Centrifuge with 4-bucket swing-out head
- Removable crank handle

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

3. Specifications

Drive	Hand crank with steel pinion and worm-drive gearing on ball bearings
Speed	1500-2000 RPM (operator-dependent)
Head	Swing-out, 4 polyamide buckets
Tube size	15 mL tubes
Mounting	Integral table clamp
Power	None required (manual)
Body	Varies by variant: Metal Body or Plastic Body

4. Unpacking and setup

- 1 Unpack and check the centrifuge and crank handle for damage.
- 2 Choose a stable, level bench edge that will not move under cranking force.
- 3 Fix the centrifuge to the bench with the integral clamp and tighten securely.
- 4 Attach the crank handle.
- 5 Check that all 4 buckets are in place and swing freely.
- 6 Turn the crank slowly with the head empty to confirm smooth movement.

5. Operation

Loading

- 1 Fill tubes to equal levels and cap them.

- 2 Place tubes in opposite buckets so the head is balanced. Use a water-filled balance tube if you have an odd number of samples.
- 3 Check that the buckets hang freely and nothing obstructs the head.

Spinning

- 1 Start cranking slowly and steadily, then increase to a steady working pace.
- 2 Keep a constant rhythm for the spin time set by your laboratory method.
- 3 Stop cranking and let the head slow down and stop by itself.
- 4 Remove the tubes carefully without shaking them so the separated layers are not disturbed.
- 5 Inspect the buckets for leaks or broken glass before the next run.

6. Cleaning and disinfection

- Remove the buckets and wipe them and the head with a mild detergent solution or a laboratory disinfectant compatible with plastics and metal.
- Clean any spills immediately. For broken tubes or biological spills, follow your laboratory's biosafety procedure.
- Dry all parts before reassembly.
- Do not autoclave unless the part is labeled as autoclavable.

7. Maintenance and storage

- Store in a clean, dry place with the crank handle removed.
- Check the buckets regularly for cracks and replace damaged buckets.
- Check that the head turns smoothly. Have the gearing serviced if it becomes stiff or noisy.
- Check the clamp for wear and secure fit.

8. Troubleshooting

Problem	Likely cause	What to do
Unit vibrates or walks on the bench	Head out of balance or clamp loose	Stop, balance the tubes and retighten the clamp.
Poor separation	Spin too short or cranking too slow	Increase spin time or keep a steadier working pace per your method.
Crank is stiff or grinding	Dirt in gearing or worn bearings	Clean the unit; refer for service if it persists.
Tube broke during spin	Damaged tube or unbalanced load	Follow spill procedure, clean the bucket and use undamaged tubes.
Bucket does not swing out	Bucket seated incorrectly or obstructed	Reseat the bucket and check it swings freely.

9. Disposal

- Decontaminate the unit before disposal or return for service.
- Dispose of metal and plastic parts in accordance with local regulations.
- Dispose of specimens and tubes as biohazard waste per your laboratory's procedure.

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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