

TPX Plastic Burette with PTFE Stopcock (25 / 50 / 100 mL)

Instructions for Use

Laboratory Equipment

Intended use

Volumetric dispensing of aqueous titrant solutions during titration in teaching, analytical, water-quality and quality-control laboratories.

Intended users

Laboratory staff, teachers and students working under supervision in chemistry and QC laboratories.

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

- Wear safety glasses, gloves and a lab coat when filling or using the burette.
- Use only with dilute aqueous acids and bases within the stated compatibility limits.
- Do not use with organic solvents, alcohols, hydrofluoric acid or ammonium hydroxide; these can craze or dissolve the body.
- Fill the burette below eye level, using a funnel, with the burette removed from or lowered on the stand if necessary.
- Mount the burette securely in a burette clamp on a stable retort stand before filling.
- Clean up spills immediately and follow your laboratory's chemical safety rules.
- Students should use the burette only under teacher or supervisor supervision.

2. Package contents

- Burette
- PTFE stopcock (pre-installed)
- Retaining O-ring

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

3. Specifications

Capacity	Varies by variant: 25 mL, 50 mL, 100 mL
Body material	Transparent PMMA / TPX plastic
Graduation	0.1 mL
Stopcock	PTFE, self-lubricating plug with retaining O-ring
Calibration	Individually calibrated at manufacture
Chemical compatibility	pH 1-14; up to 5% w/w acids; up to 30% w/w bases
Not compatible with	Hydrofluoric acid, ammonium hydroxide, organic solvents (alcohols, ketones, chlorinated solvents)

4. Unpacking and setup

- 1 Inspect the burette for cracks, scratches or crazing that could affect reading or cause leaks.
- 2 Check that the PTFE stopcock plug is seated and the retaining O-ring is in place.
- 3 Clamp the burette vertically in a burette clamp on a stable stand.
- 4 Close the stopcock and rinse the burette with distilled water, then with a small portion of the titrant; drain through the tip.
- 5 Check for leaks by filling with water, closing the stopcock and observing the tip for a few minutes.

5. Operation

Filling and zeroing

- 1 Close the stopcock.

- 2 Using a small funnel, fill the burette with titrant to just above the zero mark.
- 3 Remove the funnel.
- 4 Open the stopcock briefly to fill the tip and remove air bubbles.
- 5 Drain to the zero mark or record the starting reading at the bottom of the meniscus, with your eye level with the meniscus.

Titration

- 1 Place the receiving flask under the tip on a white background.
- 2 Open the stopcock to add titrant, swirling the flask continuously.
- 3 Slow to dropwise addition as the endpoint approaches.
- 4 Close the stopcock at the endpoint and wait a few seconds for drainage.
- 5 Read the final volume at the bottom of the meniscus to the nearest graduation and record it.
- 6 Repeat titrations as required by your method.

6. Cleaning and disinfection

- Drain and rinse thoroughly with water after each use to prevent titrant from crystallizing in the stopcock.
- Clean with a mild soap or detergent solution and warm water.
- Do not use acid cleaning solutions (e.g. chromic acid or aggressive acid mixtures).
- Do not use wire-handled brushes; they scratch the wall and affect clarity and readings.
- To clean the stopcock, gently squeeze the retaining O-ring and slip the plug out; rinse, then reassemble with the O-ring aligned.
- Do not autoclave unless labeled as autoclavable.

7. Maintenance and storage

- Store clean and dry, upright in a rack or in its packaging, away from organic solvent vapors and direct sunlight.
- Inspect the stopcock regularly; leaking past the closed position, sticky rotation or uneven flow indicate wear.
- Replace a worn PTFE stopcock before continuing precision work.
- Do not store titrant in the burette for long periods.

8. Troubleshooting

Problem	Likely cause	What to do
Leak at the stopcock	Plug not seated, O-ring misaligned, or worn plug	Reseat the plug and align the O-ring; replace the stopcock if leaking continues
Air bubble in the tip	Tip not filled before zeroing	Open the stopcock fully for a moment to flush the bubble, then re-zero
Drops cling to the inside wall	Wall is not clean	Wash with mild detergent and rinse thoroughly
Cloudy or crazed body	Exposure to solvents, alcohol or harsh acids	Stop using the burette; replace it and use glass for solvent-based work
Stopcock hard to turn	Dried titrant or crystals in the stopcock	Remove the plug, soak and rinse in warm water, reassemble

9. Disposal

- Dispose of used titrant and waste solutions according to your laboratory's chemical waste procedures.
- Rinse the burette before disposal; dispose of the plastic body and PTFE parts per local regulations for laboratory plastics.

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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