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› BrandTech Titrette Bottletop Burette User Manual

BrandTech BRA-4761161

BrandTech Titrette Bottletop Burette User Manual

Model: BRA-4761161 | Capacity: 50mL

1. INTRODUCTION

The BrandTech Titrette Bottletop Burette is a precision instrument designed for accurate and convenient titration directly from a reagent bottle. This 50mL capacity model features an innovative measuring system that achieves Class A accuracy, comparable to traditional glass burettes, and can provide precision up to three decimal places for volumes below 20mL. Its robust design ensures stability and ease of use in laboratory environments.

Key features include:

- Capacity: 50mL.
- Precision of 3 decimal places below 20mL, meeting Class A error limits per DIN EN ISO 385 or volumetric tolerance per ASTM E287.
- Compact design with all components moving within the housing, reducing headroom requirements.
- Large hand wheels for smooth, precise control during titration.
- Suitable for a wide range of common titrants up to 1mol/L concentration, including potassium permanganate, silver nitrate, EDTA, sodium hydroxide, and alcoholic potassium hydroxide.

2. PRODUCT COMPONENTS



Figure 1: The BrandTech Titrette Bottletop Burette shown with its main unit, titration tube, and various bottle adapters for different bottle neck sizes.



Figure 2: Side view of the Titrette Bottletop Burette, highlighting the compact design and the titration tube's adjustability.

The Titrette Bottletop Burette typically includes the main burette unit, a titration tube, a recirculation tube, and various bottle adapters to ensure compatibility with different reagent bottle neck sizes. The main unit features a digital display, control buttons, and large hand wheels for precise volume adjustment.

3. SETUP

Before initial use, ensure all components are clean and dry. The Titrette is designed for easy assembly onto a reagent bottle.

1. **Attach to Reagent Bottle:** Select the appropriate bottle adapter for your reagent bottle. Screw the Titrette unit firmly onto the reagent bottle. Ensure a tight seal to prevent leaks and ensure proper operation.
2. **Connect Titration Tube:** Insert the titration tube into its designated port on the burette arm. Ensure it is securely fitted. The tube can be adjusted horizontally and vertically for optimal positioning during titration.

3. **Connect Recirculation Tube:** If applicable, connect the recirculation tube to the appropriate port. This tube is used for priming and returning excess reagent to the bottle.
4. **Install Amber Windows (Optional):** For light-sensitive media, replace the clear cylinder inspection windows with the supplied amber-colored windows. These clip-on easily.
5. **Battery Installation:** The unit operates on batteries. Ensure batteries are correctly installed according to the polarity indicators.

4. OPERATING INSTRUCTIONS

Follow these steps for accurate and safe titration:

1. **Priming:** Before the first titration or after changing reagents, prime the system to remove air bubbles. Turn the hand wheels to draw liquid into the burette, then dispense it back into the bottle via the recirculation valve until no air bubbles are visible in the titration tube.
2. **Setting Zero:** Ensure the display reads 0.00. If not, use the reset button to zero the volume.
3. **Titration:** Position the titration tube over the receiving vessel. Slowly turn the hand wheels to dispense the titrant. The large hand wheels allow for precise control, from rapid dispensing to drop-wise addition. Observe the digital display for the dispensed volume.
4. **Reading Volume:** The digital display provides the dispensed volume. For highly accurate readings, ensure the meniscus is at eye level.
5. **Refilling:** After dispensing, turn the hand wheels to draw more reagent from the bottle into the burette for the next titration.

Important: Always ensure the burette is securely attached to the reagent bottle and that the titration tube is properly positioned to avoid spills or inaccurate readings.

5. MAINTENANCE

Regular maintenance ensures the longevity and accuracy of your Titrette Bottletop Burette.

- **Cleaning:** The Titrette can be quickly and easily disassembled for cleaning. Disassemble the unit by following the reverse steps of setup. Clean all parts with appropriate cleaning solutions, then rinse thoroughly with distilled water. Allow all components to dry completely before reassembly.
- **Component Replacement:** The piston/cylinder assembly and batteries are user-replaceable. Refer to the detailed PDF user manual for specific instructions on these procedures.
- **Storage:** When not in use, store the Titrette in a clean, dry environment, preferably attached to a bottle of distilled water or a suitable storage solution to prevent crystallization or contamination.

6. TROUBLESHOOTING

This section addresses common issues that may arise during the use of the Titrette Bottletop Burette. For more complex problems, refer to the official user manual or contact BrandTech support.

- **Inaccurate Readings:**
 - Ensure the system is properly primed and free of air bubbles.
 - Check for leaks at connections to the bottle or titration tube.
 - Verify that the correct bottle adapter is used and securely tightened.
 - Consider recalibration if accuracy issues persist after checking the above.

- **Difficulty Dispensing/Drawing Liquid:**

- Check for blockages in the titration or recirculation tubes.
- Ensure the piston/cylinder assembly is clean and moves freely.
- Verify the reagent bottle is not empty.

- **Display Not Working:**

- Check battery installation and replace batteries if necessary.
- Ensure battery contacts are clean.

7. SPECIFICATIONS

Attribute	Detail
Model Number	BRA-4761161
Capacity	50mL
Accuracy	Class A (per DIN EN ISO 385)
Precision	3 decimal places below 20mL
Material	Borosilicate Glass (for wetted parts)
Suitable Titrants	Most commonly used titrants up to 1 mol/L (e.g., potassium permanganate, silver nitrate, EDTA, sodium hydroxide, alcoholic potassium hydroxide)
Dimensions (Package)	11.8 x 10.2 x 4.8 inches
Weight (Package)	0.01 ounces
Manufacturer	BrandTech

8. WARRANTY AND SUPPORT

For detailed warranty information, please refer to the documentation provided with your purchase or contact BrandTech directly. BrandTech stands behind the quality and performance of its products.

For comprehensive operational details, maintenance procedures, and troubleshooting guides, please consult the official PDF User Manual available for download:

[Download Official User Manual \(PDF\)](#)

For further assistance or technical support, please contact BrandTech customer service.

