Ohaus 83033971

OHAUS pH Buffer Powder Set Instruction Manual

Model: 83033971 (1185M39EA)

1. Introduction

This manual provides comprehensive instructions for the proper preparation, use, and maintenance of the OHAUS pH Buffer Powder Set. This set includes powders for pH 4.01, 7.00, and 10.01, designed for accurate calibration of pH meters in laboratory and industrial settings. Adhering to these instructions will ensure optimal performance and longevity of your pH measurement equipment.

2. Product Overview

The OHAUS 83033971 pH Buffer Powder Set consists of pre-measured powder sachets for preparing standard pH buffer solutions. Each sachet is formulated to produce a precise pH value when dissolved in a specified volume of deionized water. The set includes:

- pH 4.01 Buffer Powder
- pH 7.00 Buffer Powder
- pH 10.01 Buffer Powder

Figure 2.1: Packaging of the OHAUS pH Buffer Powder Set, showing the individual sachets.

Figure 2.2: The OHAUS brand logo, representing the manufacturer of the pH buffer powder set.

3. Setup: Preparing Buffer Solutions

To ensure accurate pH calibration, it is crucial to prepare the buffer solutions correctly. Use high-quality deionized or distilled water for preparation.

1. **Gather Materials:** You will need one sachet of the desired pH buffer powder, a clean 250 mL volumetric flask (or other appropriate volume as specified on the sachet), a stirring rod, and deionized/distilled water.
2. **Open Sachet:** Carefully open one sachet of the pH buffer powder. Avoid spilling the contents.
3. **Transfer Powder:** Transfer the entire contents of the sachet into the clean volumetric flask.
4. **Add Water:** Add a small amount of deionized water to the flask, just enough to dissolve the powder. Stir gently with

the stirring rod until the powder is completely dissolved.

5. **Dilute to Volume:** Carefully add deionized water to the flask until the bottom of the meniscus aligns with the calibration mark on the neck of the volumetric flask. Ensure the solution is at room temperature (25°C) for accurate volume measurement.
6. **Mix Thoroughly:** Stopper the flask and invert it several times to ensure the solution is thoroughly mixed.
7. **Label Solution:** Label the prepared buffer solution with its pH value, preparation date, and expiration date (typically 30 days after preparation or as specified by the sachet).

Repeat this process for each pH buffer powder (4.01, 7.00, 10.01) you intend to use.

4. Operating Instructions: pH Meter Calibration

Calibrating your pH meter with fresh buffer solutions is essential for accurate measurements. Always refer to your specific pH meter's instruction manual for detailed calibration procedures, as steps may vary slightly.

1. **Prepare pH Meter:** Ensure your pH meter and electrode are clean and functioning correctly. Rinse the electrode with deionized water and gently blot dry with a lint-free tissue.
2. **Select Calibration Mode:** Place the pH meter in its calibration mode.
3. **First Buffer (pH 7.00):** Immerse the pH electrode into the pH 7.00 buffer solution. Ensure the electrode's sensing bulb and junction are fully submerged. Allow the reading to stabilize. Confirm the calibration point on your meter.
4. **Rinse Electrode:** Remove the electrode from the pH 7.00 buffer, rinse thoroughly with deionized water, and gently blot dry.
5. **Second Buffer (pH 4.01 or 10.01):** Immerse the electrode into either the pH 4.01 or pH 10.01 buffer solution, depending on your expected sample pH range. For acidic samples, use pH 4.01. For alkaline samples, use pH 10.01. Allow the reading to stabilize and confirm the second calibration point.
6. **Third Buffer (Optional):** For enhanced accuracy, especially across a wide pH range, perform a three-point calibration using all three buffers (4.01, 7.00, and 10.01). Rinse the electrode between each buffer.
7. **Exit Calibration Mode:** Once calibration is complete, exit the calibration mode on your pH meter. Your meter is now ready for sample measurements.

Always calibrate your pH meter before each measurement session or if significant temperature changes occur.

5. Maintenance and Storage

Proper storage of both the powder sachets and prepared solutions is vital for maintaining their accuracy and shelf life.

5.1 Powder Sachets

- Store unopened sachets in a cool, dry place, away from direct sunlight and extreme temperatures.
- Keep sachets sealed until ready for use to prevent moisture absorption.
- Refer to the packaging for the manufacturer's recommended shelf life of unopened sachets.

5.2 Prepared Buffer Solutions

- Store prepared buffer solutions in tightly sealed, clean containers (e.g., glass bottles) to prevent evaporation and contamination.
- Keep solutions in a cool, dark place. Refrigeration can extend shelf life but ensure solutions return to room temperature before use.
- **Expiration:** Prepared buffer solutions typically have a limited shelf life, usually *30 days* from the date of preparation,

or less if signs of contamination (e.g., mold, cloudiness) are observed. Always discard expired or contaminated solutions.

- Never return used buffer solution to the storage bottle to avoid contamination.

6. Troubleshooting

If you encounter issues during calibration or measurement, consider the following common problems and solutions:

Problem	Possible Cause	Solution
Inaccurate pH readings after calibration	• Expired or contaminated buffer solutions • Incorrect buffer preparation • Dirty or faulty pH electrode • Temperature difference between buffer and calibration	• Prepare fresh buffer solutions • Review preparation steps (Section 3) • Clean and recondition electrode; replace if necessary • Ensure buffers are at room temperature (25°C)
pH meter fails to calibrate	• Incorrect buffer used • Electrode not immersed correctly • Meter malfunction	• Verify correct buffer for calibration point • Ensure electrode bulb and junction are fully submerged • Consult pH meter manual or contact manufacturer
Cloudy or discolored buffer solution	• Bacterial growth or contamination • Improper storage	• Discard solution immediately • Prepare fresh solution using clean containers • Review storage guidelines (Section 5)

7. Specifications

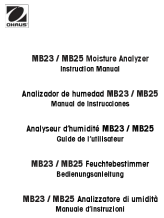
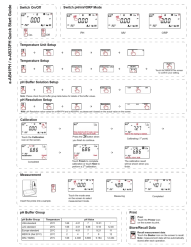
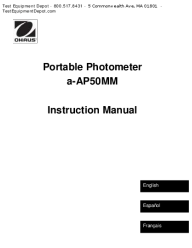
Attribute	Detail
Product Name	pH Buffer Powder Set
Brand	OHAUS
Model Number	83033971 (Item model number: 1185M39EA)
pH Values Included	4.01, 7.00, 10.01
Form	Powder Sachets
Manufacturer	Ohaus Corporation
ASIN	B01HK2DAIO
First Available	June 25, 2016

8. Warranty and Support

Information regarding product warranty and customer support for OHAUS products is typically provided with the product

packaging or available on the official OHAUS website. For specific warranty terms, technical assistance, or to contact customer service, please visit www.ohaus.com or refer to the documentation included with your purchase.

Related Documents - 83033971

	OHAUS MB23 / MB25 Moisture Analyzer Instruction Manual Comprehensive instruction manual for OHAUS MB23 and MB25 Moisture Analyzers, covering installation, operation, safety, maintenance, and troubleshooting for optimal performance.
	OHAUS RS232 Interface Instruction Manual for Scout Pro, Traveler, Navigator Scales Detailed instruction manual for the OHAUS RS232 Data Interface accessory, covering installation, setup, operation, output formats, and commands for OHAUS Scout Pro, Traveler, and Navigator weighing scales.
	Ohaus Aquasearcher AB41PH/AB33PH pH Meter Quick Start Guide A concise guide to operating the Ohaus Aquasearcher AB41PH and AB33PH pH/mV/ORP benchtop meters, covering setup, calibration, measurement, and data management.
	OHAUS Incubating Heavy Duty Orbital Shakers | ISHD16HDG & ISHD23HDG - Specifications & Features Explore the OHAUS Incubating Heavy Duty Orbital Shakers (ISHD16HDG, ISHD23HDG). Learn about unique features, detailed specifications, available accessories, and compliance information for these advanced laboratory shakers.
	OHAUS AquaSearcher AP50MM Portable Photometer Instruction Manual Comprehensive instruction manual for the OHAUS AquaSearcher AP50MM Portable Photometer, detailing installation, operation, and maintenance for colorimetric and turbidity measurements in field and laboratory applications.

	[OHAUS Extreme Shaker SHEX1619DG Instruction Manual] Comprehensive instruction manual for the OHAUS Extreme Shaker, model SHEX1619DG. Covers installation, operation, maintenance, safety, specifications, and troubleshooting for laboratory use.