

## WTW 0916A26EA

# WTW 103644 Model Sentix H pH Electrode User Manual

Model: 0916A26EA



## INTRODUCTION

The WTW Sentix H pH Electrode is specifically designed for challenging measurements, particularly in high alkaline solutions. This specialized electrode ensures accurate pH readings even in low-ion samples or when dealing with very small volumes. Its robust design and advanced features make it a reliable tool for various laboratory and industrial applications.



**Figure 1:** WTW Sentix H pH Electrode. This image displays the full length of the electrode, highlighting its slender body, the S7 plug head at the top, and the sensing bulb at the bottom. The blue labeling on the electrode body is also visible.

## SETUP

Proper setup is crucial for optimal performance of your Sentix H pH Electrode. Follow these steps:

- 1. Unpacking:** Carefully remove the electrode from its packaging. Inspect for any visible damage.
- 2. Storage Solution Removal:** The electrode tip is typically protected by a cap containing a storage solution. Remove this cap. *Do not discard the cap or solution, as it is needed for storage.*
- 3. Rinsing:** Rinse the electrode tip thoroughly with distilled or deionized water to remove any residual storage solution. Gently blot dry with a lint-free tissue.
- 4. Connecting to Meter:** Connect the S7 plug head of the electrode to the corresponding S7 input port on your compatible pH meter. Ensure a secure connection.
- 5. Pre-conditioning (if necessary):** For new electrodes or those that have been stored dry, immerse the electrode tip in

a suitable electrode storage solution or pH 7 buffer for at least 30 minutes to an hour before first use.

## OPERATING INSTRUCTIONS

The Sentix H electrode is optimized for high alkaline solutions. Adhere to the following operational guidelines:

- **Calibration:** Always calibrate the electrode with fresh pH buffer solutions (e.g., pH 7.00 and pH 10.00 or pH 12.00 for high alkaline range) before each measurement session or as recommended by your pH meter's manual. Ensure the buffers are at the same temperature as your samples.
- **Sample Immersion:** Immerse the electrode tip fully into the sample solution, ensuring the liquid junction is completely submerged. Stir the sample gently to ensure homogeneity and stable readings.
- **Reading Stability:** Allow sufficient time for the reading to stabilize. This electrode features special glass membranes and an adapted diaphragm technique for optimal accuracy, but stabilization time can vary depending on the sample.
- **Rinsing Between Samples:** Rinse the electrode thoroughly with distilled or deionized water between each sample measurement to prevent cross-contamination.
- **Temperature Compensation:** Utilize the temperature compensation feature of your pH meter, or ensure samples and buffers are at a consistent temperature.

## MAINTENANCE

Regular maintenance extends the lifespan and ensures the accuracy of your electrode:

- **Cleaning:**
  - **General Cleaning:** After each use, rinse the electrode thoroughly with distilled or deionized water.
  - **Protein Deposits:** For protein contamination, soak the electrode in a pepsin/HCl solution for several hours.
  - **Inorganic Deposits:** For inorganic deposits, soak in a 0.1 M HCl or 0.1 M HNO<sub>3</sub> solution for 15-30 minutes.
  - **Grease/Oil:** For grease or oil, clean with a mild detergent solution, then rinse thoroughly.
- **Storage:** Always store the electrode with its tip immersed in a suitable electrode storage solution (e.g., 3M KCl solution) or the original storage solution provided. *Never store the electrode dry or in distilled water.*
- **Electrolyte Level:** Ensure the electrolyte level in the electrode is maintained. Refill if necessary according to the electrode's specific requirements.
- **Inspection:** Periodically inspect the glass bulb and junction for cracks, scratches, or blockages.

## TROUBLESHOOTING

If you encounter issues, refer to the table below for common problems and solutions:

Problem	Possible Cause	Solution
Unstable or Drifting Readings	<ul style="list-style-type: none"><li>• Dirty or clogged junction</li><li>• Insufficient immersion</li><li>• Temperature fluctuations</li><li>• Old or contaminated buffers</li><li>• Air bubbles on sensing bulb</li></ul>	<ul style="list-style-type: none"><li>• Clean electrode as per maintenance section</li><li>• Ensure proper immersion depth</li><li>• Allow sample/electrode to equilibrate to temperature</li><li>• Use fresh buffer solutions</li><li>• Gently tap electrode to dislodge bubbles</li></ul>

Problem	Possible Cause	Solution
Slow Response Time	<ul style="list-style-type: none"> <li>Dehydrated membrane</li> <li>Clogged junction</li> <li>Old electrode</li> </ul>	<ul style="list-style-type: none"> <li>Recondition electrode by soaking in storage solution</li> <li>Clean electrode</li> <li>Consider electrode replacement</li> </ul>
Inaccurate Readings / Calibration Failure	<ul style="list-style-type: none"> <li>Incorrect calibration procedure</li> <li>Contaminated buffers</li> <li>Damaged electrode</li> <li>Incorrect temperature compensation</li> </ul>	<ul style="list-style-type: none"> <li>Review pH meter manual for calibration steps</li> <li>Use fresh, accurate buffers</li> <li>Inspect electrode for physical damage</li> <li>Verify temperature settings</li> </ul>

## SPECIFICATIONS

Attribute	Detail
<b>Model Name</b>	Sentix H pH Electrode
<b>Item Model Number</b>	0916A26EA
<b>Manufacturer</b>	WTW
<b>ASIN</b>	B01N7MVTLV
<b>Application</b>	High Alkaline Solutions, Low-ion Samples, Small Volumes
<b>Plug Head</b>	S7
<b>Key Features</b>	Special glass membranes, adapted diaphragm technique

## WARRANTY AND SUPPORT

For information regarding warranty coverage, technical support, or service, please contact WTW directly or refer to their official website. Keep your purchase receipt and model number handy for faster assistance.

**Manufacturer:** WTW

© 2024 WTW. All rights reserved.

This manual is for informational purposes only. Specifications are subject to change without notice.