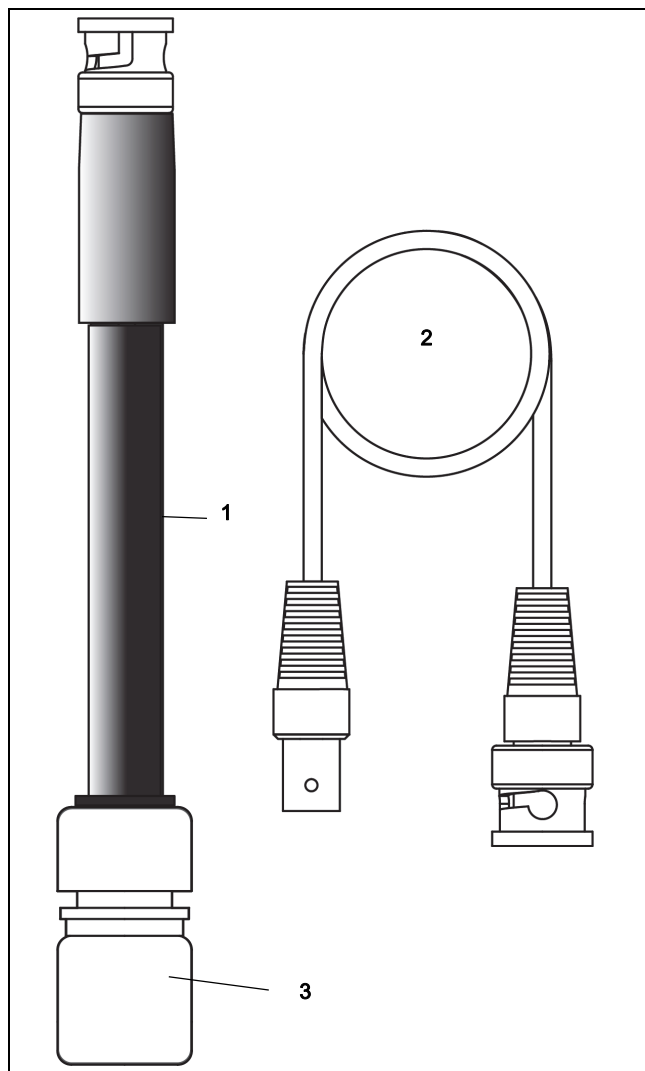


Flat pH Probe

PS-3514



Included Equipment	Item
Flat pH Probe	1
Male-to-female BNC Cable	2
Storage Bottle	3

Introduction

This electrode is a hand crafted, precision analytical device. Carefully follow the directions in this instruction sheet to obtain the best performance and electrode life.

Required Equipment and Solutions

- PASCO Wireless pH Sensor (PS-3204)
 - or
 - PASPORT pH Sensor (PS-2107A) with a PASCO interface (see www.pasco.com for information)
 - or
 - pH meter (a temperature compensator is recommended for increased pH measurement accuracy)
 - PASCO data collection software (see www.pasco.com)
 - pH Buffer Solution 4.01*
 - pH Buffer Solution 7.00*
 - Wash bottle filled with distilled or de-ionized water
 - Laboratory magnetic stirrer and magnetic stir bar
 - Lab wipes
 - Clean beakers**
- (*SC-2321 pH Buffer Capsule Kit)
- (**SE-7287 100 ml or SE-7288 1000 ml Beakers)

Preparation of the Electrode for Initial Use

1. Remove the storage bottle from the electrode and thoroughly rinse the electrode with distilled water. Wipe carefully with a clean lab wipe.
2. During shipment, air bubbles may have migrated into the electrode sensing bulb. Hold the electrode up to the light and inspect the sensing bulb for air bubbles. If air is seen, carefully shake the electrode downward (like a thermometer) to dispel the air bubble from the sensing bulb at the tip of the electrode.

Software Help

See the SPARKvue Help or PASCO Capstone Help for information about collecting, displaying, and analyzing data.

- In SPARKvue, select the HELP button in any screen including the Home Screen.
- In PASCO Capstone, select PASCO Capstone Help from the Help menu, or press F1.

Standardizing the Electrode

1. Connect your pH electrode to the input connector on the Wireless pH Sensor (or other pH measuring device). Ensure that the electrode connection is secure.
2. Start the PASCO data collection software if you are using a PASCO sensor. Connect the sensor to your computing device (e.g., computer or tablet).
3. Start recording data. Place the electrode into a beaker containing pH 7.00 buffer and a stir bar. Stir at a moderate speed.
4. When the reading is stable, set the calibration value in the software to match the value of the pH 7.00 buffer at the temperature in the laboratory.
5. Remove the electrode from the buffer. Rinse with distilled water and blot with a lab wipe.
6. Place the electrode in a beaker containing pH 4.01 buffer and a stir bar. Stir as before. When the reading is stable, set the calibration value in the software to match the value of the 4.01 buffer at the temperature in the laboratory.

Reading a Sample with the Electrode

1. Rinse the electrode with distilled water and blot with a lab wipe. Place the electrode in a beaker containing the sample and a stir bar. The sample should be at the same temperature as the buffers used to standardize the electrode. Stir as before. Record the pH when the reading is stable.
2. Remove the electrode from the sample, rinse the electrode with distilled water over the "waste" beaker. Blot the electrode dry with a lab wipe. The electrode is now ready to read the pH of other samples.

Storing the Electrode

Short Term

Between measurements, store the pH electrode in a beaker containing pH 4.01 buffer.

Long Term

When storing for longer periods, store the pH electrode in the storage bottle which came with the electrode. Ensure that the foam in the storage bottle is totally wetted with pH storage solution to keep a wet environment around the pH bulb and junction. Maintain the wet environment in the storage bottle boot during storage.

Electrode Cleaning

Do not use strong solvents (e.g. acetone, carbon tetrachloride, etc.) to clean the pH electrode. Be sure to recalibrate the electrode after cleaning.

1. If the electrode has become coated with oil or grease, carefully wash the electrode under warm tap water using dish-washing detergent. Rinse thoroughly with fresh tap water followed by a rinse with distilled water. Soak the electrode in pH electrode storage solution for 30 minutes after this cleaning procedure. Recalibrate the electrode before use.
2. If the electrode has been exposed to protein or similar materials, soak in acidic pepsin for 5 minutes. Rinse thoroughly with distilled water. Soak in storage solution for 30 minutes prior to recalibration.
3. If the previous cleaning procedures fail to restore response, soak the electrode in 0.1 N HCl for 30 minutes. Rinse thoroughly with distilled water. Recalibrate before use.

4. If electrode response is not restored still, replace the electrode.

Technical Support

For assistance with any PASCO product, contact PASCO at:

Address: PASCO scientific
10101 Foothills Blvd.
Roseville, CA 95747-7100

Phone: 916-462-8384 (worldwide)
800-772-8700 (U.S)

Email: techsupp@pasco.com

Limited Warranty

For a description of the product warranty, see the PASCO catalog.

Copyright

This PASCO scientific instruction sheet is copyrighted with all rights reserved. Permission is granted to non-profit educational institutions for reproduction of any part of this manual, providing the reproductions are used only in their laboratories and classrooms, and are not sold for profit. Reproduction under any other circumstances, without the written consent of PASCO scientific, is prohibited. Rev: 10/17

Trademarks

PASCO, PASCO scientific, PASCO Capstone, PASPORT and SPARKvue are trademarks or registered trademarks of PASCO scientific, in the United States and/or in other countries. All other brands, products, or service names are or may be trademarks or service marks of, and are used to identify, products or services of, their respective owners. For more information visit www.pasco.com/legal.

Product End of Life Disposal Instructions:

This electronic product is subject to disposal and recycling regulations that vary by country and region. It is your responsibility to recycle your electronic equipment per your local environmental laws and regulations to ensure that it will be recycled in a manner that protects human health and the environment. To find out where you can drop off your waste equipment for recycling, please contact your local waste recycle/disposal service, or the place where you purchased the product.

The European Union WEEE (Waste Electronic and Electrical Equipment) symbol (to the right) and on the product or its packaging indicates that this product must not be disposed of in a standard waste container.

