Fisher Acumet AB15 pH Meter

pH Meter

Tool Type: Measurement
Location: Elings 3430
Description: pH meter
Manufacturer: Fisher Scientific

1/5/23 Haley

About

This pH meter allows you to measure pH, absolute mV, relative mV or temperature, select one of three sets of standard buffer groups, and standardize with up to 5/6 buffers.

To use this tool, please ask one of our staff for help (located in a locked cabinet beneath the Bambu Printer). The buffers are located in Chemical Storage Cabinet #4.

Safety Concerns

“Proper electrode care is fundamental to obtaining reliable pH measurements. Improper care of the electrode may cause the meter reading to drift, respond slowly, or produce erroneous readings. For this reason, the electrode should always be conditioned and used in accordance with manufacturer’s instructions.”

“Because electrodes vary in their response, you must standardize or calibrate your pH meter and electrode to compensate for electrode variation. The more frequently you standardize or calibrate, the more accurate your measurements. Standardize at least daily, or more often, for accurate results.”

Operating Procedures

Setup

1. Connect electrode arm to the base
2. Connect power cable to outlet
3. Remove protective cover from electrode
4. Before first use of a glass electrode, soak it for 2-4 hours in an electrode storage solution, pH 4 buffer, or KCl solution
5. Remove the shortening cap from input 1 to connect the combination pH electrode. If a combination electrode isn't used, connect the indicating pH electrode. Plug the reference electrode into ref 1. Also, install the ATC probe into the ATC 1.
6. Rinse and blot-dry (don't wipe) electrodes between each measurement using DI water.
7. Between measurements, store conventional pH electrodes in storage solution, pH 4 buffer, or KCl solution. Always leave the filling hole of liquid filled and combination electrodes open. Refill when the level of solution gets below the manufacturer's recommended level.

Standardization

1. Press and release the mode key until your digital display indicates pH mode. This key toggles between the pH, mV and Rel mV modes.
2. Press the setup key twice and then press the enter key to clear an existing standardization.
3. Rinse the electrode with distilled water using a squeeze bottle and immerse the rinsed electrode into pH 4 (pink) buffer solution.
4. Press std again to access the Standardization mode. The selected buffer group is displayed briefly. Wait for the reading to stabilize.
5. Press std again to initiate standardization. The meter will automatically recognize the buffer (4.00 not 7.00) and then return to the Measure screen.
6. Repeat steps 3-6 with the pH 10 (blue) buffer solution. When the meter accepts the second , pH 10, buffer solution, it will briefly display the percent slope associated with the electrode's performance prior to returning to the Measure mode. If the electrode is within the range of 90 – 102%, the GOOD ELECTRODE message will appear.

Measurement

1. Immerse electrode into solution and stir moderately.
2. When the meter senses that the reading has stabilized, the stable icon will appear under the reading. This message will not appear if the stability indicator has been turned off during setup.
3. You can save your reading to the meter's memory using the save key.

Detailed Specifications

Relative accuracy: ±0.01 Range: -1.99 to 19.99

Reference Documentation

User Manual

Standardization Procedure

From:
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