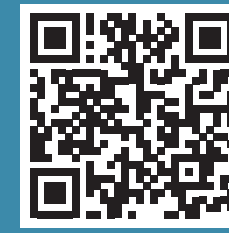


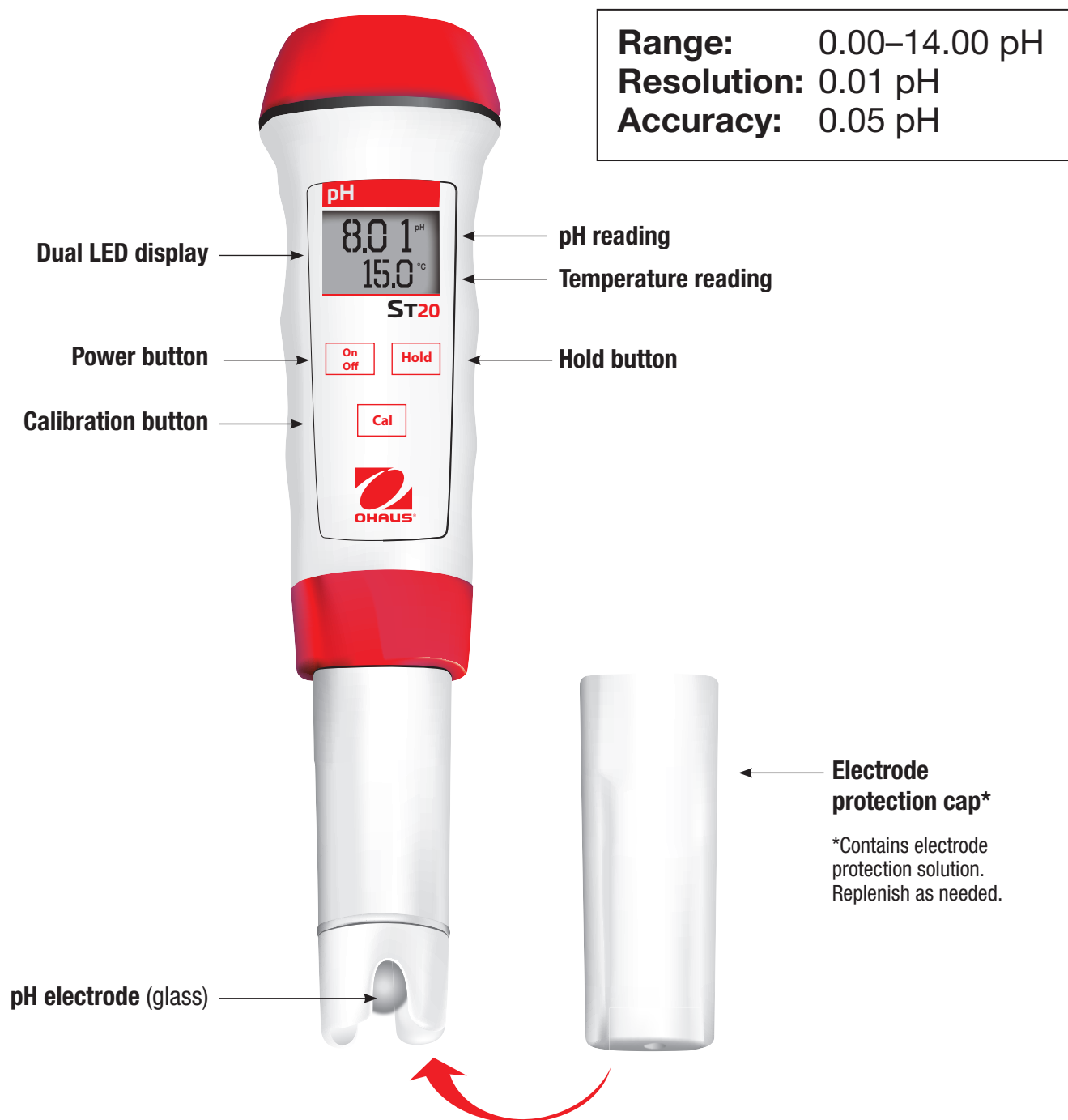
Calibrating pH Meters



Scan QR code or go to knowledge.carolina.com/labskills for videos and more!

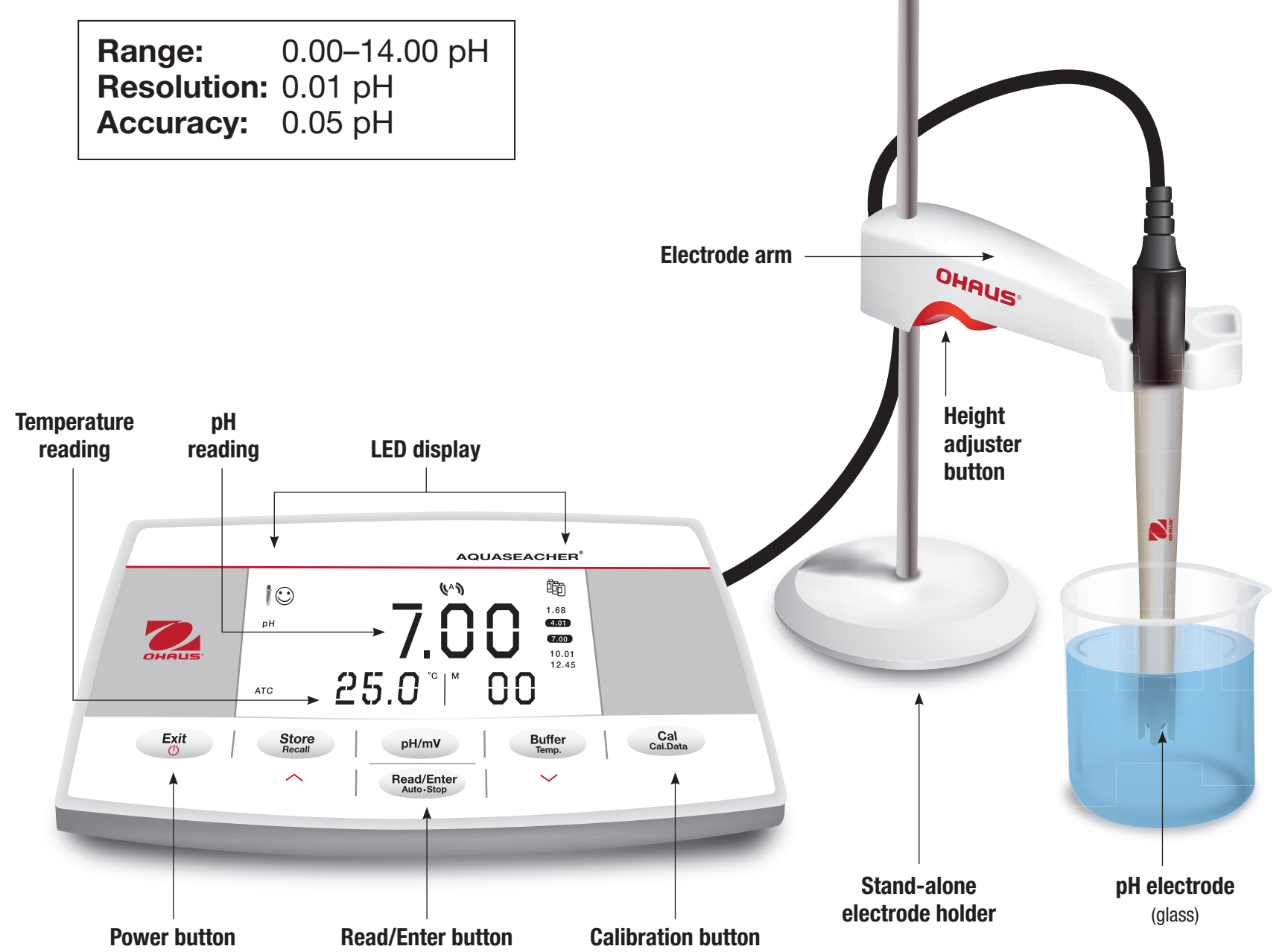
For Taking Measurements in the Field or Lab

OHAUS ST20 pen meter



For Testing in a Lab Setting

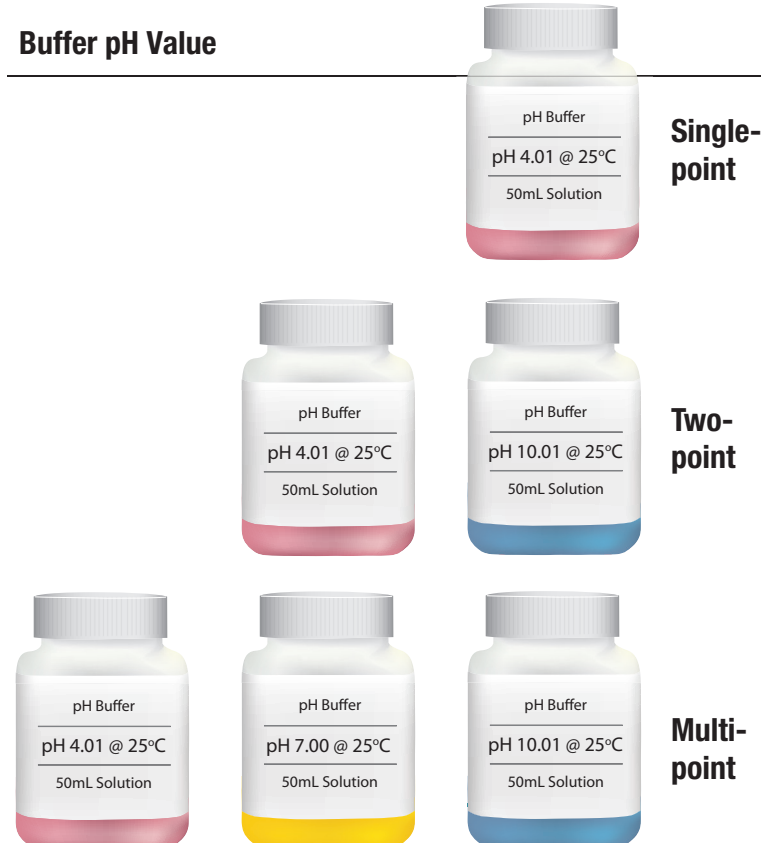
Aquasearcher AB23PH OHAUS Bench Meter



Calibration

The names refer to the number of points (pH values) at which a calibration is performed. The greater number of calibration points, the greater the accuracy of the calibration.

Buffers may also be clear and colorless. The colors pink, blue, and yellow shown above are associated with buffers 4, 7, and 10, respectively.



Automatic Temperature Compensation

As the name suggests, the pH meter corrects or adjusts the pH value based on the temperature of the test solution. Both the ST20 Pen Meter and the Aquasearcher AB232PH have this feature.

The table shows the temperature dependence of pH buffers.

When collecting pH data, it is good practice to collect and record both the pH value and the temperature.

Temperature	pH Value			
5 °C	1.67	4.01	7.09	10.25
10 °C	1.67	4.00	7.06	10.18
15 °C	1.67	4.00	7.04	10.12
20 °C	1.68	4.00	7.02	10.06
25 °C	1.68	4.01	7.00	10.01
30 °C	1.68	4.01	6.99	9.97
35 °C	1.69	4.02	6.98	9.93
40 °C	1.69	4.03	6.97	9.89
45 °C	1.70	4.05	6.97	9.86
50 °C	1.71	4.06	6.96	9.83

Real World Connections



Researcher

Data collection is a critical component of scientific research. Precise pH readings help researchers monitor reaction progress, control variables, or identify an unknown.



Hydroponics Specialist

Nutrient availability for plants depends on pH. By optimizing pH, plants are better able to absorb nutrients, which maximizes crop yield.



Pool and Spa Technician

The pH of a pool or spa is key to care and proper maintenance of the system. Proper pH keeps it safe for its users.