



# the world's first pH electrode with bluetooth® smart technology

Halo™ is a high quality, double junction, refillable glass pH probe with a built-in temperature sensor.

Its flexibility and ease of use means that it can be used virtually anywhere in the field, laboratory or classroom.

## Halo features

- Refillable glass pH electrode
- Double junction reference design
- Integrated temperature sensor ensures the calibration and measurement is automatically temperature compensated to eliminate error
- Wide pH (0-13) and temperature (-5 to 80°C) ranges
- Clear the clutter data is wirelessly transmitted to an iPad® running the Hanna Lab App via Bluetooth® Smart technology. Halo™ 500 hours of battery life
- One button sample tagging pressing either the button on the Halo™ pH probe or the probe icon in the Hanna Lab App will tag sample data for easy reference
- Calibration is stored Halo™ stores calibration information; no additional calibration is needed when switching to another iPad
- Battery condition the measurement screen of the Hanna Lab App displays the name, battery life and condition of the Halo™ probe

## Specifications

Product Code	HI-11312 (Halo™)
Reference	double, Ag/AgCl
Junction	ceramic
Electrolyte	3.5M KCl
Range	0.00 to 13.00 pH; -5.0 to 80.0°C
Tip Shape	spheric
Outer Diameter (glass)	12 mm
Overall Length	195 mm
Environment	0.0 to 50.0°C; electronic module: RH max 95% non-condensing
Solution Temperature	-5.0 to 80.0°C
Temperature Sensor	integrated
Body material	glass
Connection	Bluetooth® Smart (Bluetooth® 4.0), 10 m range
Battery Type / Life	CR2032 3V lithium ion / approx 500 hours

## Ordering Information

### pH electrode with bluetooth® | HI-11312 smart technology

supplied with:

- pH 7.01 buffer solution sachets,
- pH 4.01 buffer solution sachets
- electrode cleaning solution sachets
- electrode storage solution
- electrode refilling solution
- electrode refilling pipette
- battery
- electrode storage cap
- quality certificate
- instruction sheet



# Hanna Lab App | pH meter application

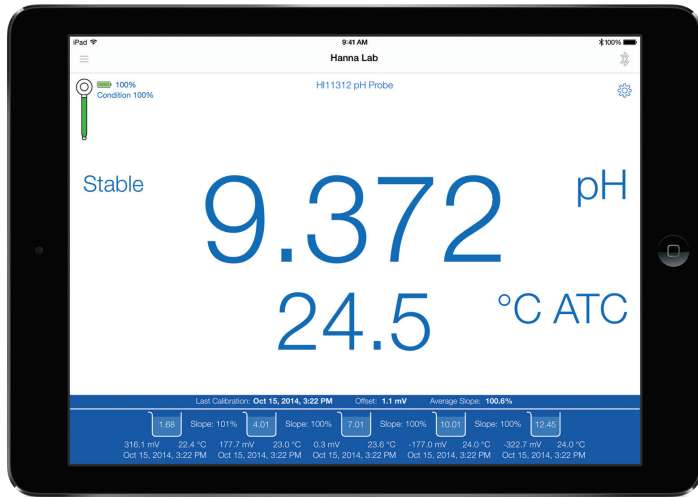


bluetooth®  
connection



pH meter application  
for use with Halo™

turning the iPad® into a  
**full-featured pH  
meter**



Used in conjunction with the Hanna Halo, the Hanna Lab App turns the iPad® into a full-featured meter.

Functions include calibration, measurement, data logging, graphing and datasharing.

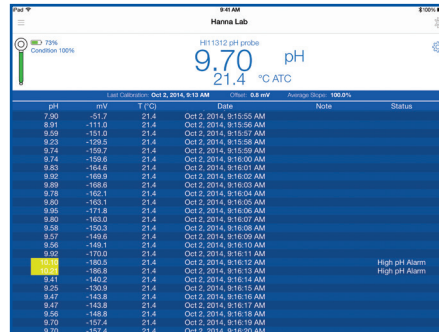
Measurement and logging of pH and temperature at one second intervals start as soon as the probe is connected.

\* iPad® not included.

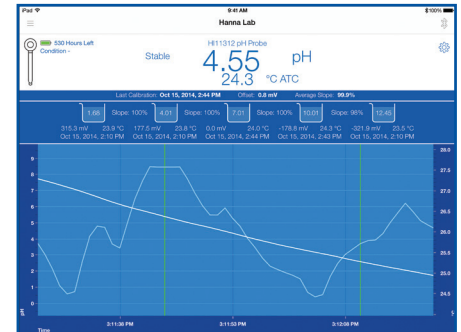
## Choose your display format



Measurements only



With tabulated data



As a graph

The graph can be panned and zoomed using the iPad's pinch-to-zoom

## Hanna Lab App Specifications

Range	-2.000 to 16.000 pH; ±800 mV; -20.0 to 120.0°C
Resolution	0.1; 0.01; 0.001 pH; 1; 0.1 mV; 0.1°C
Accuracy	±0.005 pH; ±0.3 mV; ±0.5°C
Calibration Points	up to five-point calibration with seven standard buffers (1.68, 4.01, 6.86, 7.01, 9.18, 10.01, 12.45 pH)
Temperature Compensation*	automatic from -5.0 to 100.0 °C
Compatibility/System Requirements	Hanna Lab App works with iPad® 3rd generation or newer (including iPad mini) with Bluetooth® 4.0 technology and iOS 7.1 or newer

\* Limits will be reduced to actual probe/sensor limits.

## Ordering Information





# WolfLabs

**Pricing on any accessories shown can be found by keying the part number into the search box on our website.**

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.