



### Conical Tip

The conical tip allows for easy penetration into solids and semisolids such as bread and dough..

HI9810382

# HALO2



Hanna Lab App  
Compatible

The Hanna Lab App is now  
compatible with Hanna Cloud  
and is available on the App  
Store® and on Google Play.

## Wireless pH Tester for Bread & Dough

with built-in specialized electrode

Accurate and easy to use, HALO2 Wireless pH Tester for Bread & Dough is ideal to measure the pH during baking processes and ensure it meets the food-hygiene and Hazard Analysis Critical Control Point (HACCP) regulations. The HI9810382 can be used as a stand-alone pH tester or can be connected to the Hanna Lab App.

- The integrated Bluetooth module allows the tester to be connected to a compatible smart device with the Hanna Lab App
- Compact, waterproof casing, and automatic pH calibration at up to three points, or four points when used with the Hanna Lab App
- Automatically temperature compensated readings

### HALO2 Specifications HI9810382

pH	Range	0.00 to 12.00 pH
	Resolution	0.01 or 0.1 pH
	Accuracy	±0.05 pH @ 25 °C (77 °F)
mV*	Range	pH/mV conversion
	Resolution	0.1 or 1 mV
	Range**	0.0 to 60.0 °C (32.0 to 140.0 °F)
Temperature	Resolution	0.1 °C; 0.1 °F
	Accuracy	±0.5 °C; ±0.9 °F
	Calibration	up to three points or four points * Automatic buffer recognition with Standard buffers Hanna® (pH 1.68 *, 4.01, 7.01, 10.01) or NIST (pH 1.68 *, 4.01, 6.86, 9.18)
Temperature compensation	automatic (ATC) or manual (MTC) *	
Electrode	Body material	Polyvinylidene Fluoride (PVDF)
	Glass	low temperature (LT)
	Junction	open
	Reference cell	double, Ag/AgCl
	Electrolyte	Viscolene
	Tip / Shape	conic, Ø 6 x 10 mm (Ø 0.23 x 0.39")
	Outer diameter	8 mm (0.31")
Battery type	Length	75 mm (2.95")
	Battery type	CR2032 3V lithium
	Battery life	approximately 1000 hours (500 hours with Bluetooth enabled)
Environment	0 to 50 °C (32 to 122 °F)	
IP rating	IP65	
Dimensions / Weight	51 x 146 x 21 mm (2.0 x 5.7 x 0.8") / 45 g (1.6 oz.)	

**HI9810382** (HALO2) is supplied with a starter kit consisting of: pH 4.01 buffer solution sachet (2 pcs.), pH 7.01 buffer solution sachet (2 pcs.), Electrode cleaning and disinfection solution for bread and dough deposits sachet (2 pcs.), Electrode storage solution (dropper bottle), 3V Lithium battery - CR2032, Instrument quality certificate and Instruction manual.

### Ordering Information

## Electrode Features

### Food grade PVDF Body

The food grade PVDF body material is easy to clean and disinfect. Resistant to most chemicals (e.g. solvents, sodium hypochlorite), ultraviolet light, and fungal growth, the PVDF body also has high-abrasion resistance and mechanical strength.

### Fast, Stable Readings

The double junction design presents a silver-free electrolyte solution interacting with the sample, making the electrode less susceptible to clogging and guaranteeing a fast response and stable reading.

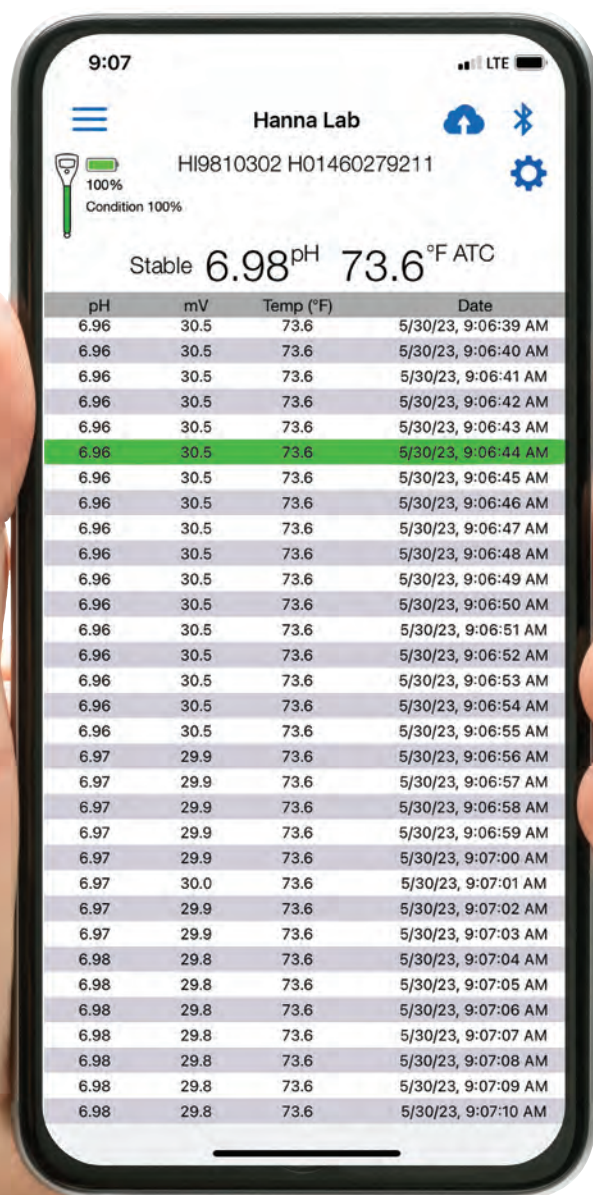
### Built-in Temperature Sensor

Built-in temperature sensor at the tip of the pH electrode allows rapid determination of the sample temperature and a high-accuracy temperature reading.

\* Available with Hanna Lab App \*\*Measuring outside the recommended operating temperature range may damage the gel electrolyte and void product warranty.  
Note: The tester can display measurements from -2.00 to 16.00 pH. Measurements outside of the pH range will flash.

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The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc.

pH solutions begin on page 2.158, pH electrode cleaning solutions begin on page 2.172



## Hanna Lab App

The Hanna Lab App is available on the App Store® and on Google Play.

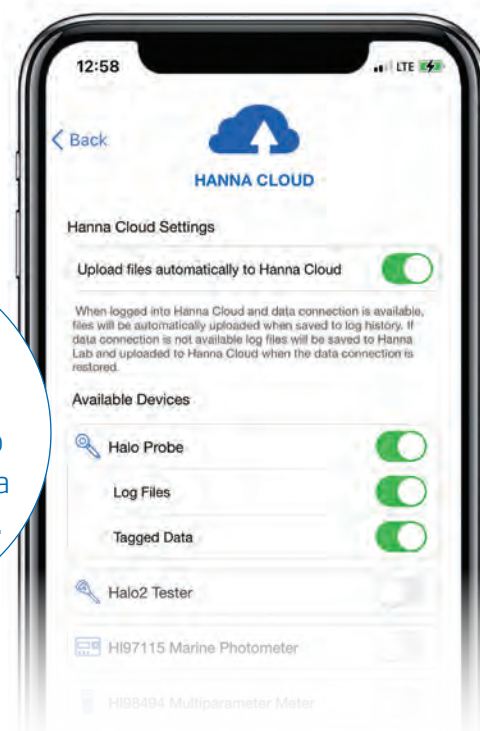


The first app that turns a smart phone or tablet into a full-featured pH meter.

The Hanna Lab App turns a compatible smart phone or tablet into a full-featured pH meter when used with compatible Hanna electrodes with Bluetooth® wireless technology. Functions include calibration, measurement and data logging (at one second intervals), graphing, and data sharing including Hanna Cloud compatibility. Measurements can be displayed alone, with tabulated data, or as a graph. The graph can be panned and zoomed with pinch-to-zoom technology.



The Hanna Lab App now features Hanna Cloud compatibility.



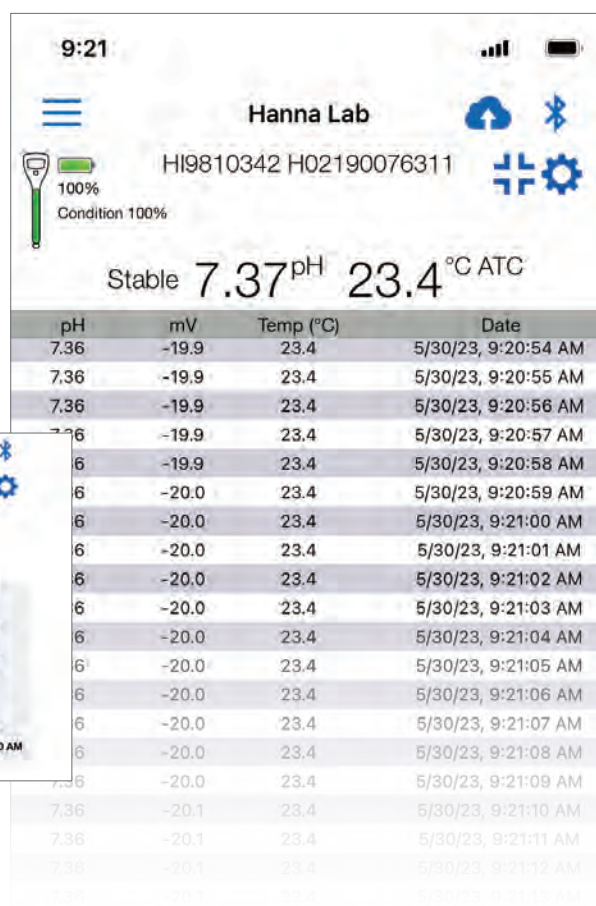
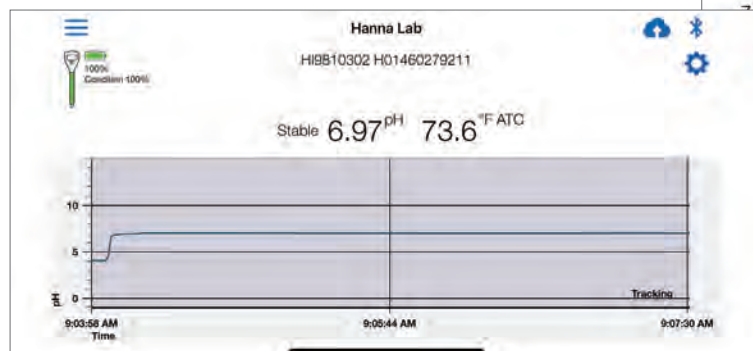
## Measurement Screen

### Name, Battery Status, and Electrode Condition on Display

The measurement screen of the Hanna Lab App displays the name, battery life and condition of the probe.

### Real-Time Data

Displays updated pH and temperature every second.



### Portrait or Landscape view

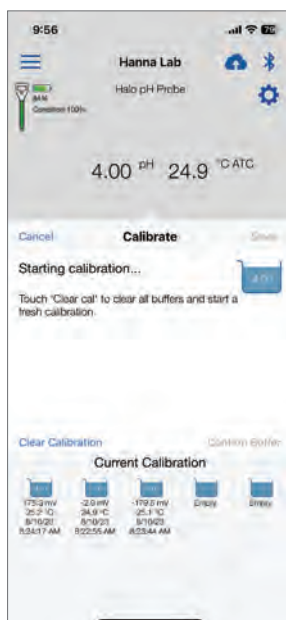
## Help and Tutorials



### Help and Tutorials

The Hanna Lab App features demo probe mode, general app information, general information, pH tutorial, maintenance tutorial, and contact information.

## Calibration



### Clear and Concise Calibration Screens

The Hanna Lab App allows for calibration of up to five points. The buffer value is automatically detected and temperature corrected to 25.0°C (77°F) during calibration.

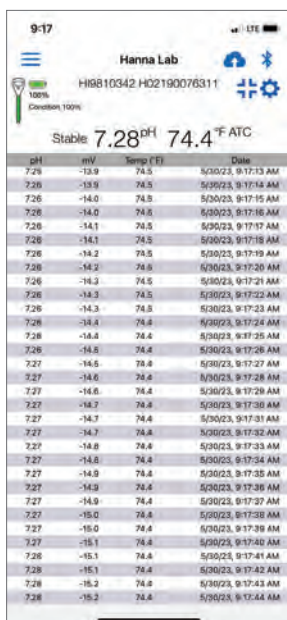


### Calibration Reminder

Alerts users when calibration is needed.



## Data Logging



pH	mV	Temp (°F)	Date
7.28	-13.9	74.5	5/30/23, 9:17:13 AM
7.26	-13.9	74.5	5/30/23, 9:17:14 AM
7.26	-14.0	74.5	5/30/23, 9:17:15 AM
7.26	-14.0	74.5	5/30/23, 9:17:16 AM
7.26	-14.1	74.5	5/30/23, 9:17:17 AM
7.26	-14.1	74.5	5/30/23, 9:17:18 AM
7.26	-14.2	74.5	5/30/23, 9:17:19 AM
7.26	-14.2	74.5	5/30/23, 9:17:20 AM
7.26	-14.3	74.5	5/30/23, 9:17:21 AM
7.26	-14.3	74.5	5/30/23, 9:17:22 AM
7.26	-14.3	74.5	5/30/23, 9:17:23 AM
7.26	-14.4	74.4	5/30/23, 9:17:24 AM
7.26	-14.4	74.4	5/30/23, 9:17:25 AM
7.26	-14.5	74.4	5/30/23, 9:17:26 AM
7.27	-14.5	74.4	5/30/23, 9:17:27 AM
7.27	-14.6	74.4	5/30/23, 9:17:28 AM
7.27	-14.6	74.4	5/30/23, 9:17:29 AM
7.27	-14.7	74.4	5/30/23, 9:17:30 AM
7.27	-14.7	74.4	5/30/23, 9:17:31 AM
7.27	-14.7	74.4	5/30/23, 9:17:32 AM
7.27	-14.8	74.4	5/30/23, 9:17:33 AM
7.27	-14.8	74.4	5/30/23, 9:17:34 AM
7.27	-14.9	74.4	5/30/23, 9:17:35 AM
7.27	-14.9	74.4	5/30/23, 9:17:36 AM
7.27	-14.9	74.4	5/30/23, 9:17:37 AM
7.27	-15.0	74.4	5/30/23, 9:17:38 AM
7.27	-15.0	74.4	5/30/23, 9:17:39 AM
7.27	-15.1	74.4	5/30/23, 9:17:40 AM
7.26	-15.1	74.4	5/30/23, 9:17:41 AM
7.26	-15.1	74.4	5/30/23, 9:17:42 AM
7.26	-15.2	74.4	5/30/23, 9:17:43 AM
7.26	-15.2	74.4	5/30/23, 9:17:44 AM

### Data-logging

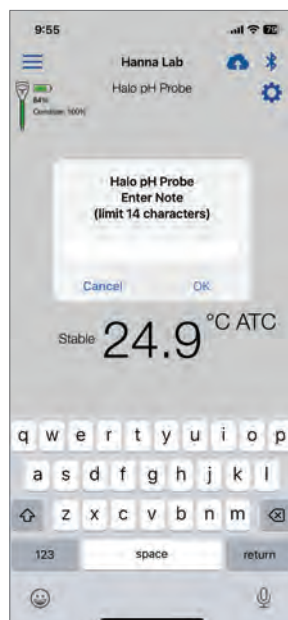
Data is automatically saved every hour. There are four ways to save and share data: all data since last auto save, annotations only, all data within a timed interval, and annotations within a timed interval.



Log History
<b>HI1312 pH-Halo Demo-1</b> Start: 5/26/23, 12:55:31 PM Stop: 5/26/23, 1:28:01 PM
<b>HI1312 pH-Halo Demo-1</b> Start: 5/26/23, 1:21:01 PM Stop: 5/26/23, 1:26:01 PM
<b>HI1312 pH-Halo Demo-1</b> Start: 5/26/23, 12:55:31 PM Stop: 5/26/23, 1:26:47 PM
<b>HI1312 pH-Halo Demo-1</b> Start: 5/26/23, 12:55:31 PM Stop: 5/26/23, 12:55:32 PM
<b>HI1312 pH-Halo Demo-1</b> Start: 5/26/23, 12:29:15 PM Stop: 5/26/23, 12:30:09 PM
<b>HI1312 pH-Halo Demo-1 (auto)</b> Start: 5/26/23, 12:23:20 PM Stop: 5/26/23, 12:26:12 PM
<b>HI1312 pH-Halo Demo-1</b> Start: 5/26/23, 11:08:16 AM Stop: 5/26/23, 11:11:38 AM

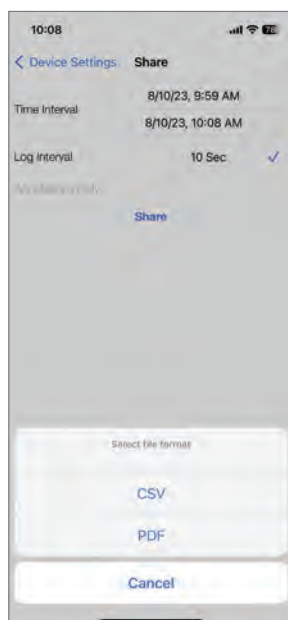
### Upload to Hanna Cloud

Files can be uploaded to Hanna Cloud automatically.



### Custom Annotations

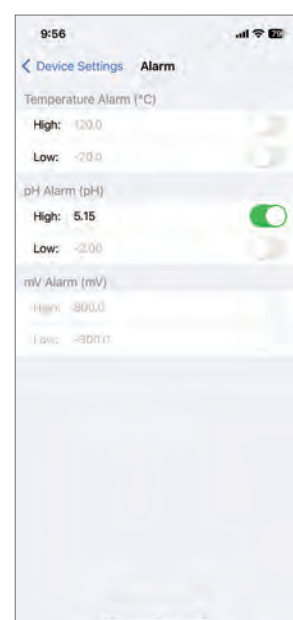
Saved data points may be annotated with measurement specific information.



### Export Data

Saved data may be shared via email in PDF or CSV format.

## Additional Features



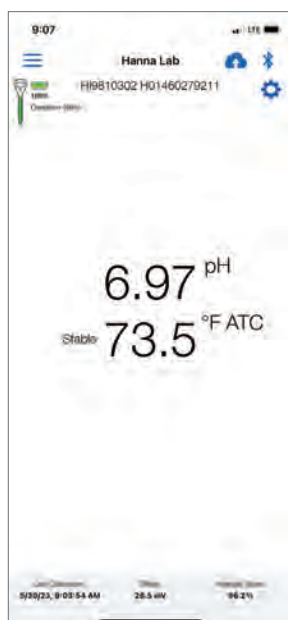
### Measurement Alerts

Readings that exceed user-defined alarm thresholds are highlighted in yellow on the measurement screen, graph, and table. Readings that exceed the probe specifications are highlighted in red.



### Settings

Tap the gear icon in the top right corner of the measurement screen to access the Settings menu.



## Just the Essentials

Basic view provides measurement information in a clean, straightforward manner.

## Basic GLP

Displays date and time of current calibration along with probe offset and average slope. For tablet displays, basic GLP can be also displayed in table and graph views.

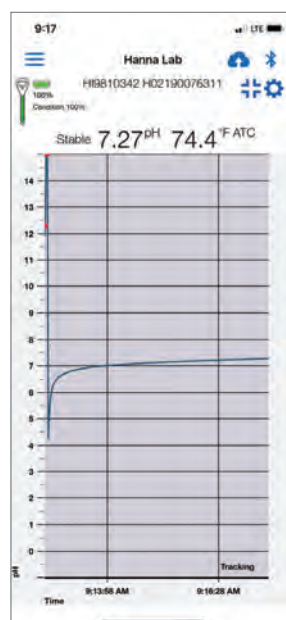
## Full GLP

Displays date and time of current calibration, probe offset, and average slope along with calibrated buffers, mV values, temperature and slopes between each buffer. For tablet displays, full GLP can be also displayed in table and graph views.

pH	mV	Temp (°F)	Date
7.25	-13.9	74.5	5/30/23, 9:17:13 AM
7.26	-13.9	74.5	5/30/23, 9:17:14 AM
7.26	-14.0	74.5	5/30/23, 9:17:15 AM
7.26	-14.0	74.5	5/30/23, 9:17:16 AM
7.26	-14.1	74.5	5/30/23, 9:17:17 AM
7.26	-14.1	74.5	5/30/23, 9:17:18 AM
7.26	-14.2	74.5	5/30/23, 9:17:19 AM
7.26	-14.2	74.5	5/30/23, 9:17:20 AM
7.26	-14.3	74.5	5/30/23, 9:17:21 AM
7.26	-14.3	74.5	5/30/23, 9:17:22 AM
7.26	-14.3	74.5	5/30/23, 9:17:23 AM
7.26	-14.4	74.4	5/30/23, 9:17:24 AM
7.26	-14.4	74.4	5/30/23, 9:17:25 AM
7.26	-14.5	74.4	5/30/23, 9:17:26 AM
7.27	-14.5	74.4	5/30/23, 9:17:27 AM
7.27	-14.6	74.4	5/30/23, 9:17:28 AM
7.27	-14.6	74.4	5/30/23, 9:17:29 AM
7.27	-14.7	74.4	5/30/23, 9:17:30 AM
7.27	-14.7	74.4	5/30/23, 9:17:31 AM
7.27	-14.7	74.4	5/30/23, 9:17:32 AM
7.27	-14.8	74.4	5/30/23, 9:17:33 AM
7.27	-14.8	74.4	5/30/23, 9:17:34 AM
7.27	-14.9	74.4	5/30/23, 9:17:35 AM
7.27	-14.9	74.4	5/30/23, 9:17:36 AM
7.27	-15.0	74.4	5/30/23, 9:17:37 AM
7.27	-15.0	74.4	5/30/23, 9:17:38 AM
7.27	-15.1	74.4	5/30/23, 9:17:39 AM
7.27	-15.1	74.4	5/30/23, 9:17:40 AM
7.28	-15.1	74.4	5/30/23, 9:17:41 AM
7.28	-15.1	74.4	5/30/23, 9:17:42 AM
7.28	-15.2	74.4	5/30/23, 9:17:43 AM
7.28	-15.2	74.4	5/30/23, 9:17:44 AM

## All Information on Display

Table view displays measurement, time and date, annotations, and alarm status in a continuously updated table.



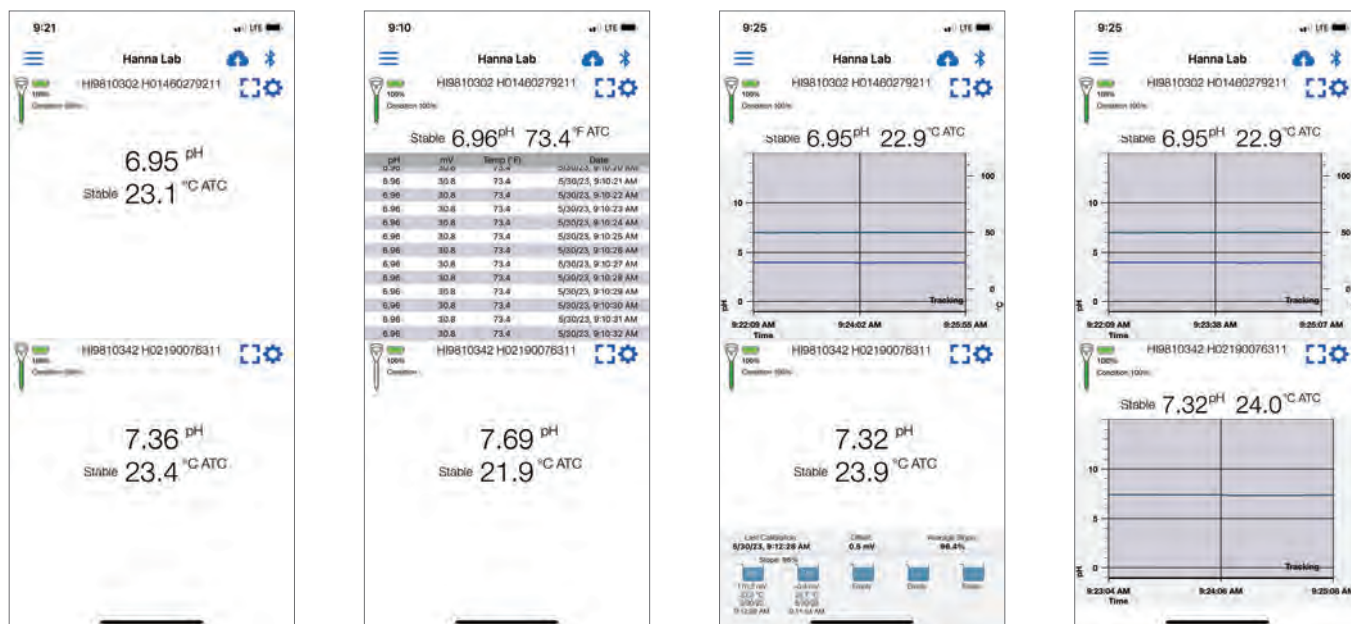
## Fluid, Dynamic Graphing

Graph view provides measurement information linearly. Graph axes may be expanded using pinch-to-zoom technology for enhanced viewing.



## Flexible Split-Screen Display Options

The Hanna Lab App can connect to two devices simultaneously and display in split-screen separate measurement views in portrait or landscape mode.







### Hanna Lab App Specifications\*

Range**	-2.000 to 16.000 pH ±800 mV -20.0 to 120.0°C (-4.0 to 248.0°F)
Resolution	0.1; 0.01; 0.001 pH 1; 0.1 mV; 0.1 °C (0.1°F)
Accuracy (@25°C/77°F)	±0.005 pH ±0.3 mV ±0.5 °C (±1.0°F)
Calibration Points	up to five-point calibration with seven standard buffers (1.68, 3.00 (HI10482, HI981033, HI9810332 only) or 4.01, 6.86, 7.01, 9.18, 10.01, 12.45 pH)
Temperature Compensation**	automatic from -5.0 to 100.0°C – 23.0 to 212.0°F
Compatibility/System Requirements	see <a href="http://www.hannainst.com">www.hannainst.com</a> for latest compatibility requirements

### Download Information



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

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