



## HI 99161

# pH METER FOR DAIRY APPLICATIONS

HI 99161 is a portable, microprocessor-based pH and temperature meter specifically designed for dairy applications. Monitoring pH in dairy processes is critical to ensure a quality product.

The FC 202D pre-amplified pH electrode features a free diffusion junction that is ideal for measurements in cheese, milk and yogurt since it prevents clogging.

The HI 99161 easily fits in the palm of your hand and the bottom probe connection ensures the electrode cable doesn't get in your way. The large, multi-level LCD displays the primary reading, temperature and calibration guides simultaneously.

## FEATURES

- **Specialized Dairy Electrode**
- **Waterproof**
- **Multi-level LCD display**  
The meters display the current measurement simultaneously with the current temperature. A quick-guide is also displayed to aid users in instrument operation
- **HOLD**  
The Hold button freezes readings on the display so you can easily record readings manually
- **Automatic Temperature Compensation**
- **Automatic 1 or 2 point calibration**
- **BEPS**  
BEPS (Battery Error Prevention System) alerts the user in the event that low battery power could adversely affect readings
- **Battery % displayed on startup.**
- **Heavy-duty**  
The enclosure of these waterproof meters are made of tough ABS plastic
- **Easy to clean and keep clean**

**WE DESIGN, MANUFACTURE, SUPPLY AND SUPPORT ALL OF OUR PRODUCTS.**

## **THAT'S 360° VALUE**

Over the past 30 years, **HANNA** has never failed to design fresh and innovative products and the new HI 99161 is no exception. We are excited to introduce such high accuracy and ease of use in a compact, modern design that fits right in your hand.

**HANNA** is the largest family-owned manufacturer of analytical instrumentation in the world. The HI 99161 is manufactured in our European state-of-the-art ISO 9001:2000 production facility and is CE compliant to EN 61326-1 and EN 61010-1 standards.

When you buy a **HANNA** product, you're not only buying the best value for your money, but you're also adding the benefit of **HANNA's** unsurpassed customer service and post-sale technical support.

## **Specialized Food and Dairy pH Electrode and Starter Solutions Included!**



Shown with HI 710021 protective boot (optional)

- **Protective Rubber Boot**

The optional protective rubber boot helps protect your meter



## **FC 202D PRE-AMPLIFIED pH ELECTRODE**

FC 202D pH electrode features a rugged, easy to clean, PVDF body with a strong conic tip ideal for measurements in semi-solid such as meats and cheeses. The electrode is also provided with a free diffusion sleeve type reference junction which prevents the typical problems of clogging in viscous liquids such as milk or condiments.

The FC 202D pH electrode also incorporates a built-in temperature sensor for simultaneous pH and temperature readings, and also contains a mini amplifier to render measurements impervious to noise and electrical interferences.

- **Specialized Electrode**

The FC 202D is the ideal electrode to measure the pH of milk, yogurt, dairy products and semi-solid foods such as cheese

- **Easy to Clean**

The specialized conic tip is easy to clean and keep clean by design

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SPECIFICATIONS		HI 99161
Range	pH	-2.00 to 16.00 pH
	Temp.	-5.0 to 105.0°C; 23.0 to 221.0°F
Resolution	pH	0.01 pH
	Temp.	0.1°C/0.1°F
Accuracy (@20°C)	pH	±0.02 pH
	Temp.	±0.5°C up to 60°C; ±1°C outside; ±1°F up to 140°F; ±2°F outside
Temperature Compensation		Automatic
pH Calibration		Automatic 1 or 2 point calibration with 2 sets of memorized buffers (4.01, 7.01, 10.01 or 4.01, 6.86, 9.18)
Electrode (included)		FC 202D pre-amplified pH/temperature electrode with DIN connector and 1 m (3.3' cable)
Battery Type		(3) 1.2V AAA
Battery Life		Approximately 200 hours of continuous use
Auto-off		After 8 minutes of non-use
Environment		0 to 50°C (32 to 122°F); RH max. 100%
Dimensions		150 x 58 x 29 mm (5.9 x 2.8 x 1.1")
Weight		205g (7.2 oz.)

## ORDERING INFORMATION

**HI 99161** is supplied with FC 202D pre-amplified pH/temperature probe with DIN connector and 1 m (3.3') cable, starter set of calibration, electrode cleaning and disinfection solution sachets, (3) 1.2V AAA batteries and instructions.

## ELECTRODES

**FC 202D** Amplified pH electrode with built-in temperature sensor, DIN connector and 1 m (3.3') cable

## SOLUTIONS

**HI 5004L** pH 4.01 buffer solution, 500 mL  
**HI 5007L** pH 7.01 buffer solution, 500 mL

**HI 5010L** pH 10.01 buffer solution, 500 mL  
**HI 7061L** Electrode cleaning solution, 500 mL  
**HI 70300L** Electrode storage solution, 500 mL  
**HI 700641P** Electrode cleaning & disinfection solution for dairy products, (25) 20 mL sachets  
**HI 700642P** Electrode cleaning solution for cheese deposits, 20 mL sachets (25)  
**HI 700640P** Electrode cleaning solution for milk products, 20 mL sachets (25)

## ACCESSORIES

**HI 710020** Orange protective rubber boot  
**HI 710021** Blue protective rubber boot



Recommended Operating Temperature  
-5 to 30°C (23 to 86°F) \*  
20 to 40°C (66 to 104°F)

SPECIFICATIONS	FC 202D
<b>Description</b>	pH electrode
<b>Reference</b>	Single, Ag/AgCl
<b>Junction / Flow Rate</b>	Open
<b>Electrolyte</b>	Viscolene
<b>Max Pressure</b>	0.1 bar
<b>Range</b>	pH: 0 to 12; T: 0 to 50°C (32 to 122°F)
<b>Tip /Shape</b>	Conic (6 x 10 mm)
<b>Temperature Sensor</b>	Yes
<b>Amplifier</b>	Yes
<b>Body Material</b>	PVDF
<b>Connection/Cable</b>	DIN/7-pole; 1 m (3.3')
<b>Recommended Use</b>	Milk, yogurt, dairy products, meat, semi solid foods

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**instruments**  
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