

HI99111

Portable pH Meter

for Wine Analysis

- Clogging prevention system (CPS™)
- Automatic Temperature Compensation (ATC)
- Two-point calibration
- Battery Error Prevention System (BEPS)
 - Alerts the user of low battery power that could adversely affect readings
- Waterproof
 - Compact, heavy-duty, and waterproof protected casing
- Battery life indicator
 - Battery percentage displayed on startup
- Help feature
 - Tutorial messages displayed on LCD

The HI99111 is a portable, waterproof pH and temperature meter designed specifically for the wine industry. The HI99111 uses the HI1048D glass bodied pH electrode. Hanna's Clogging Prevention System (CPS™) utilizes the electrodes PTFE sleeve.

HI99111 measures pH from -2.00 to 16.00 and temperature from -5.0 to 105.0 °C (23.0 to 221.0 °F). Automatic calibration is performed at one or two points with two sets of buffers and all readings are automatically temperature compensated. Indicators for stability, battery percentage, and calibration instructions are viewed on the primary display. The HI99111 uses three 1.5V AAA batteries for an exceptional battery life of 1200 hours of continuous use.





The Importance of pH in Wine Making

The pH of wine is important to determine because it will affect the quality of the final product in terms of taste, color, oxidation, chemical stability and other factors. Generally in winemaking, the higher the pH reading, the lower amount of acidity in the wine. Three important factors in determining the pH of wine include the ratio of malic acid to tartaric acid, the amount of potassium, and the total amount of acid present.

Most wines optimally have a pH between 2.9 and 4.0, with values differing based on the type of wine. Values above pH 4.0 indicate that the wine may spoil quickly and be chemically unstable. Lower pH values allow the wine to stay fresher for a longer period and retain its original color and flavor. High pH wine is more likely to breed bacteria and become unsuitable to drink.

For finished white wines, the ideal pH is between pH 3.00 and pH 3.30, while the final pH for red wine is ideally between pH 3.40 and pH 3.50. The optimal pH before the fermentation process is between pH 2.9 and pH 4.0. The pH of wine therefore not only affects the color of wine, but also the oxidation, yeast fermentation, protein stability, and bacterial growth and fermentation.

HI1048D pH electrode

- PTFE sleeve
- Refillable pH electrode
- Clogging prevention system (CPS™)

The HI99111 portable pH meter for wine uses the glass body HI1048D pH electrode with Hanna's unique Clogging Prevention System (CPS™). This electrode provides a fast stable response and resists clogging. The electrolyte solution in the electrode is refillable.

An integral part of any pH electrode is the reference junction. The reference junction is a part of the electrode that allows for the flow of ions located in the reference cell into the sample being measured. The ions provide for an electrical connection between the reference electrode and the indicating electrode. A standard pH electrode will use a single ceramic junction; however, the CPS™ (Clogging Prevention System) is an innovation in electrode technology. Conventional pH electrodes use ceramic junctions that clog quickly when used in wine. When the junction is clogged, the electrode does not function. CPS™ technology utilizes the porousness of ground glass coupled with a PTFE sleeve to prevent clogging of the junction. The ground glass allows proper flow of the liquid, while the PTFE sleeve repels dirt. As a result, pH electrodes with CPS™ stay fresh up to 20 times longer than conventional electrodes.

To optimize the flow from the electrode the refill cap should be unscrewed so that it is open. This allows for positive head pressure to be created allowing for the electrolyte to drain more easily from the reference electrode.

Specifications	HI99111	
pH*	Range	-2.00 to 16.00 pH
	Resolution	0.01 pH
	Accuracy	±0.02 pH
	Calibration	one or two-point calibration, two sets of standard buffers available (3.00, 7.01, 10.01 or NIST 4.01, 6.86, 9.18)
	Temperature Compensation	automatic from -5.0 to 105.0°C (23 to 221°F)
Temperature*	Range	-5.0 to 105.0°C; 23.0 to 221.0°F
	Resolution	0.1°C; 0.1°F
	Accuracy	±0.5°C (up to 60°C), ±1.0°C (outside); ±1.0°F (up to 140°F), ±2.0°F (outside)
Additional Specifications	Electrode	HI1048D pH/temperature probe with CPS™ technology, DIN connector, 1 m (3.3') cable (included)
	Battery Type / Life	1.5V AAA (3) / approximately 1200 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 / Weight	152 x 58 x 30 mm (6.0 x 2.3 x 1.2") / 205 g (7.2 oz.)
Ordering Information	HI99111 is supplied with HI1048D pH and temperature probe, HI70004 pH 4.01 buffer solution sachet, HI70007 pH 7.01 buffer solution sachet, HI700635 electrode cleaning solution sachet for wine deposits and HI700636 electrode cleaning solution sachet for wine stains, batteries, instructions and hard carrying case.	

ติดต่อบริษัท เนโอนิกส์ จำกัด

Tel: 02-077-7602 หรือ 061-8268939

E-mail: sale@neonics.co.th หรือ sale@tools.in.th

* Limits will be reduced to actual sensor limits