HI 222

Professional pH Meter for Wine Analysis

pH 3.00 Buffer: Tailor Made Calibration for Wine Analysis

HI 222 is the only pH meter in the market today, that allows automatic pH calibration with pH 3 and pH 7 buffers.

Using the pH 3.00 buffer will minimize any measurement error due to calibration.

Recognizing dirty pH electrodes

Most pH measurements in the process of making wine are made in the must. A pH electrode gets dirty very rapidly when measuring the pH of must. This is because sediments deposit on the sensitive pH measuring bulb and on the pH electrode junction.

This becomes a big problem during the actual pH measurement and even after, if the electrode has not been properly cleaned.

A dirty pH electrode can give inaccurate results that are up to 0.5 pH, even after a pH calibration has just been performed.

Knowing when to clean pH electrodes

Conventional pH meters do not warn the user when the pH electrode is dirty. A common example of this occurs when, just after calibrating the instrument the pH electrode is immersed into the pH 7 buffer, and the reading is lower than expected (pH 6.8 or 6.9 instead of 7.0). HI 222 uses the HANNA instruments® unique technology to detect when the electrode is dirty and give a warning during calibration.

Cleaning pH electrodes

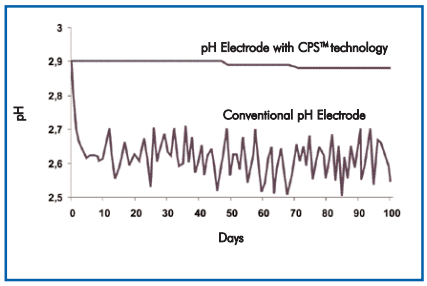
It is of the utmost importance to properly clean the pH electrode prior to use. A proper cleaning of the electrode must be done with appropriate cleaning solutions, in order to remove all the deposits on the sensitive bulb and on the junction. HI 70635 (wine deposit removal) and HI 70636 (wine stain removal) are tailor made cleaning solutions for wine making.

HI 1048P - CPS™ Electrode for Wine Measurement

CPS™ (Clogging Prevention System)

CPS (Clogging prevention system) is HANNA instruments®' latest innovation in pH electrode technology.
Conventional pH electrodes use ceramic junctions that clog quickly when used with wine. When the junction is clogged, the electrode does not function.
CPS™ technology utilizes the porousness of ground glass coupled with a Teflon® sleeve to prevent clogging of the junction. The ground glass allows proper flow of the liquid, while the Teflon sleeve repels dirt.
As a result of HANNA instruments®' new CPS™ technology, pH electrodes stay fresh for up to 20 times longer than conventional electrodes.

Effects of dirty pH electrode junctions (conventional pH electrode) vs. CPS™ pH electrode.



After a few days conventional electrodes are already contaminated, while the CPS™ pH electrode remains clean for over 100 days.

Specifications

		HI 222
Range	pH	-2.00 to 16.00
	mV	±699.9 mV; ±2000 mV
	Temperature	-20.0 to 120.0°C
Resolution	pH	0.01
	mV	0.1 (±699.9 mV); 1 (±2000 mV)
	Temperature	0.1°C
Accuracy	pH	±0.01
	mV	±0.2 (±699.9 mV); ±1 (±2000 mV)
	Temperature	±0.5°C
Calibration Check		status of electrode condition and response time, status of the buffer solutions during calibration
pH Calibration		automatic, 1 or 2 point with 7 memorized buffer values (pH 1.68, **3.00**, 6.86, 7.01, 9.18, 10.01, 12.45)
Temperature Compensation		manual or automatic, -20.0 to 120.0°C (-4 to 248°F)
pH Electrode for Wine Analysis		**HI 1048P** glass body, BNC + pin (included)
Temperature Probe		**HI 7669/2W** stainless steel probe (included)
PC Connection		RS232 opto-isolated serial port
Data Logging		100 samples
Input Impedance		10^{12} Ohm
Power Supply		12 Vdc adapter (included)
Environment		0 to 50°C (32 to 122°F); RH max 95%
Dimensions		240 x 182 x 74 mm (9.4 x 7.2 x 2.9")
Weight		1.1 kg (2.4 lb.)

Ordering Information

HI 222 is supplied complete with **HI 1048P** pH electrode, **HI 7669/2W** stainless steel temperature probe, **HI 76404** electrode holder, pH 3 and pH 7 buffer sachets, cleaning solutions for removing wine stains and wine deposits, electrode refilling solution, 5 mL graduated syringe, 12 Vdc power adaptor and instructions.

Accessories

HI 1048P	Refillable pH electrode with glass body and 1 m (3.3') cable
HI 7669/2W	Temperature probe
HI 5003	pH 3.00 buffer solution, 500 mL bottle
HI 7007L	pH 7.01 buffer solution, 500 mL bottle
HI 70300L	Electrode storage solution, 500 mL bottle
HI 70635L	Cleaning solution for wine deposits, 500 mL bottle
HI 70636L	Cleaning solution for wine stains, 500 mL bottle
HI 7082	Electrolyte solution KCl 3.5M, 30 mL bottle, 4 pcs, for double junction electrodes
HI 92000	Windows® compatible software
HI 920010	Serial cable for PC connection