

HI 84432

Titratable Acidity Mini Titrator and pH Meter for Fruit Juice

- **Internationally accepted methodology**
Based on the AOAC International accepted method for acidity determination
- **Data logging**
Log on demand up to 100 total samples
- **GLP features**
- **Eliminates subjective factors**
- **Three point calibration**
- **Automatic pH temperature compensation**
- **Automatic "anytime" help**
- **Intuitive user interface**

All-in-One Fruit Juice Titrator, pH Meter, pH Electrode and Magnetic Stirrer



The HI 84432 digital automatic mini titrator and pH meter is designed for quick and accurate analysis of total titratable acidity in fruit juices. By eliminating subjective factors including color indicators, errors in mathematical calculations or erratic titrant additions from the measurement, the HI 84432 provides quick and accurate, repeatable results without guesswork.

A clear and intuitive user interface allows users to navigate the HI 84432's menus and functions quickly. A HELP key located on the keypad aids in set-up, calibration status and troubleshooting.

By simply pressing the START key, the HI 84432 automatically starts pump operation and titrates the sample to the endpoint. This instrument employs a powerful and effective algorithm to analyze the pH response to determine the exact pH endpoint, then uses this algorithm to make the necessary calculations.

The titratable acidity determination is instantaneously displayed in selected measurement units on the large dot matrix display. The instrument is immediately ready for the next analysis.

The HI 84432 has a simple and accurate peristaltic pump to ensure the best accuracy and repeatability. To ensure instrument accuracy, perform a pump calibration with the provided HANNA standard.

Why This Instrument is So Important...

The measurement of titratable acidity in fruit juices measures the concentration of titratable hydrogen ions contained in the fruit juice samples by neutralization with strong base solution to a fixed pH. This value includes all the substances of an acidic nature in the fruit juice: free hydrogen ions, organic acids, acid salts and cations.

Because the organic acid is the most acidic component of the fruit juices that react with strong base solutions, the titratable acidity is usually expressed as a percentage (mass/volume) of the predominant acid:

- **Citric acid is present in many fruit species.**
- **Tartaric acid is essentially found in grapes.**
- **Malic acid is present in many fruit species, sometimes together with citric acid or tartaric acid in unripe grapes.**

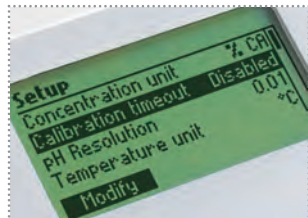
The HI 84432 Mini Titrator uses a method based on the Official Methods of Analysis of AOAC International. The fruit juice is titrated with a sodium hydroxide solution until the end point at 8.2 pH is reached (determined by potentiometric method). Additionally the HI 84432 has a built-in pH meter for pH measurement (electrode and meter must be calibrated).

Features



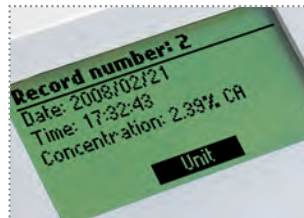
Clear, accurate measurements

Measurement results as well as electrode condition are clearly displayed on the LCD.



Set up configuration menu

Accessed from pH or Titration screens, this menu allows parameters such as date formats, measurement units and language selection to be configured quickly and easily.



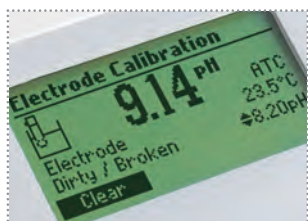
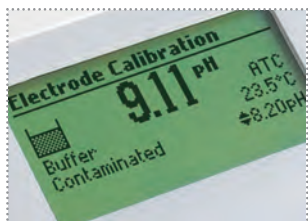
Log and recall data

Measurements along with time and date can be stored and recalled at a later date.



Calibration reminder

When calibration is required or due, users are reminded on screen. The HI 84432 can also display when pump and electrode calibration was last performed.



Calibration warnings

For the most accurate performance, The HI 84432 warns users if there are errors in the calibration process. HI 84432 pinpoints the problem and displays the appropriate error message taking the guesswork out diagnosing errors such as dirty or broken electrodes or contaminated buffers.

Other calibration warnings include: wrong buffer temperature, wrong slope (high and low) and wrong buffer.

SPECIFICATIONS		HI 84432
Titrator	Titratable Acidity Range 15 mL sample	g/100 mL as citric acid : 0.20 - 1.20% CA g/100 mL as tartaric acid : 0.23 - 1.41% TA g/100 mL as malic acid : 0.21 - 1.26% MA
	Titratable Acidity Range 2 mL sample	g/100 mL as citric acid : 0.80 - 8.00% CA g/100 mL as tartaric acid : 0.94 - 9.30% TA g/100 mL as malic acid : 0.84 - 8.30% MA
	Titratable Acidity Resolution	0.01%
	Accuracy (@25°C/77°F)	5% of reading ±0.02
	Titration Method	acid-base titration
	Principle	endpoint titration: 8.20 pH
	Pump Debit	0.5 mL/min
pH Meter	Stirring Speed	600 rpm
	Logging Data	up to 50 samples
	Range	-2.0 to 16.0 pH / -2.00 to 16.00 pH
	Resolution	0.1 pH / 0.01 pH
	Accuracy (@25°C/77°F)	±0.01 pH
	Calibration	one, two or three calibration points; three available buffers (4.01; 7.01; 8.20)
	Temperature Compensation	manual or automatic from -20 to 120°C (-4 to 248°F)
Temperature	Logging Data	up to 50 samples
	Range	-20.0 to 120.0°C (-4.0 to 248.0°F)
	Resolution	0.1°C
Electrode	Accuracy (@25°C/77°F)	±0.4°C without probe error
		HI 1131B glass body pH electrode with BNC connector and 1 m (3.3') cable
Temperature Probe		HI 7662-M stainless steel temperature probe with 1 m (3.3') cable (included)
Environment		0 to 50°C (32 to 122°F); RH max 95% non-condensing
Power Supply		12 VDC adapter (included)
Dimensions		208 x 214 x 163 mm (8.2 x 8.4 x 6.4") (with beaker)
Weight		2200 g (77 oz.)

Titration of fruit is an important parameter to determine fruit maturity.

ORDERING INFORMATION

HI 84432-01 (115V) and HI 84432-02 (230V) are supplied with HI 1131B pH electrode, HI 7662-M temperature probe, HI 84432-50 titrant (100 mL), HI 84432-55 pump calibration solution (100 mL), HI 70004 pH 4.01 buffer solution sachets (2), HI 70007 pH 7.01 buffer solution sachets (2), HI 700082 pH 8.20 buffer solution sachets (2), 100 mL beakers (2), tube set with dispensing tip, medium magnetic stir bars (2), 12 VDC adapter and instruction manual.

REAGENTS

- HI 84432-50 Titrant solution (1 mL/analysis), 100 mL
- HI 84432-55 Pump calibration solution (2.00 mL/calibration), 100 mL
- HI 84432-70 Reagents kit (about 150 titrations)

SOLUTIONS

- HI 7004M pH 4.01 buffer solution, 230 mL
- HI 7007M pH 7.01 buffer solution, 230 mL
- HI 70082M pH 8.20 buffer solution, 230 mL
- HI 70300M Storage solution, 230 mL