



HI 84500 HI 84502

Mini Titrators
for Wine Analysis



Features

- **Piston Driven/ Dosing**
 - This dosing pump provides dynamic dosing and is highly accurate, providing excellent results.
- **mV Meter**
 - In addition to being an automatic titrator, the HI 84500 also can be used as a mV meter. While in Titrator mode, simply press "Meter" until mV units are displayed.
- **Log-on-Demand**
 - Log data on up to 400 samples (200 for titration results; 200 for mV/ ORP).
- **Graphic Mode/Exportable Data**
 - Displays in-depth data on titration, which can be stored using the log feature and then exported to a USB stick or transferred to a PC using the USB connection.
- **Automatic Stirrer Speed Control**
 - Maintains stirrer speed at approximately 700 rpm regardless of viscosity of solution.
- **GLP Feature**
 - The HI 84500 includes a GLP Feature that allows users to view calibration data for the titrator and pump.
- **Easy to use interface**
 - Intuitive design with large buttons.
- **Applications Specific ORP Electrodes**
 - The HI 84500 is supplied with the HI 3148B ORP wine electrode. This special electrode is designed specifically for measurements in wine and uses innovative CPS technology to reduce clogging of the junction.

HI 84500

The HI 84500 is a simple, fast and affordable automatic mini titrator designed for testing free or total sulfur dioxide (SO₂) levels in wine. It includes a pre-programmed analysis method and uses a powerful algorithm in order to determine when the titration reaction has reached completion. It replaces the HI 84100 and features an improved titrant delivery system and measuring range. The HI 84500 incorporates a precision dosing pump which allows for a highly accurate determination of the amount of titrant used. Pump calibrations, performed with the provided Hanna standards, help assure the accuracy of the measurement. The HI 84500 also features a new low range measurement and can also be used as a mV meter for direct ORP measurements.



Specifications

Range (Low)	1.0 to 40.0 ppm of SO ₂
Range (High)	30 to 400 ppm of SO ₂
Resolution (Low Range)	0.1 ppm
Resolution (High Range)	1 ppm
Accuracy (@25°C/77°F) -LR	3% of reading or ±0.5 ppm
Accuracy (@25°C/77°F) - HR	3% of reading or ±1 ppm
Sample Volume	50 mL
Method	Ripper method
Principle	Equivalence point redox titration
Pump Speed	10 mL/min
Stirring Speed	700 rpm

Log Data	Up to 200 samples
Power Supply	12 VDC adapter (included)
Probe	HI 3148B
Environment	0 to 50°C (32 to 122°F); RH max 95% non-condensing
Dimensions	235 x 200 x 150 mm (9.2 x 7.9 x 5.9")
Weight	1.9 kg (67.0 oz.)

ORP

Range	-2000.0 to 2000 mV
Resolution	0.1 mV
Accuracy (@25°C/77°F)	±1 mV
Log Data	Up to 200 samples

Features

- **Piston Driven/ Dosing**

- This dosing pump provides dynamic dosing and is highly accurate, providing excellent results.

- **pH/mV Meter**

- In addition to being an automatic titrator, the HI 84502 also can be used as a pH/mV meter. While in Titrator mode, simply press "Meter" until pH units are displayed.

- **Log-on-Demand**

- Log data on up to 400 samples (200 for titration results; 200 for mV/ ORP).

- **GLP Feature**

- The HI 84502 includes a GLP Feature that allows users to view calibration data for the titrator and pump.

- **Applications Specific pH Electrodes**

- The HI 84502 is supplied with the HI 1048B pH wine electrode. This special electrode is designed specifically for measurements in wine and uses innovative CPS technology to reduce clogging of the junction.

- **Graphic Mode/Exportable Data**

- Displays in-depth data on titration, which can be stored using the log feature and then exported to a USB stick or transferred to a PC using the USB connection.

- **Automatic Stirrer Speed Control**

- Maintains stirrer speed at approximately 600 rpm regardless of viscosity of solution.

- **Easy to use interface**

- Intuitive design with large buttons.

HI 84502

The HI 84502 is a simple, fast and affordable automatic mini titrator designed for testing total acidity levels in wine. It includes a pre-programmed analysis method and uses a powerful algorithm in order to determine when the titration reaction has reached completion. The results are displayed in g/L as tartaric acid. This titrator replaces the HI 84102 and features improved titrant delivery system and measuring range. The HI 84502 incorporates a precision piston driven dosing pump which allows for a highly accurate determination of the amount of titrant used. Pump calibrations, performed with the provided Hanna standards, assure the accuracy of the measurement. The HI 84502 also features a new low range measurement and can also be used as a pH/mV meter.



Specifications

Range (Low)	0.1 to 5.0 g/L of tartaric acid
Range (High)	4.0 to 25.0 g/L of tartaric acid
Resolution	0.1 g/L
Accuracy (@25°C/77°F) -LR	3% of reading or ± 0.1 g/L @ 25 °C
Sample Volume	10 mL LR / 2 mL HR
Method	Acid Base Titration
Principle	End point titration: 7.00 or 8.20 pH
Pump Speed	10 mL/min
Stirring Speed	600 rpm
Log Data	Up to 200 samples
Power Supply	12 VDC adapter (included)
Probe	HI 1048B
Temperature Probe	HI 7662-T
Environment	0 to 50°C (32 to 122°F); RH max 95% non-condensing
Dimensions	235 x 200 x 150 mm (9.2 x 7.9 x 5.9")
Weight	1.9 kg (67.0 oz.)
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pH	
Range	-2.00 to 16.00 pH
Resolution	0.1 pH / 0.01 pH

Accuracy (@25°C/77°F)	± 0.01 pH
Calibration	1, 2, 3, or 4 calibration points (4.01, 7.01, 8.20, 10.01)
Temperature Compensation	Manual or Automatic
Log Data	Up to 200 samples (combined samples for pH and mV)
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mV	
Range	-2000.0 to 2000 mV
Resolution	0.1 mV
Accuracy (@25°C/77°F)	±1 mV
Log Data	Up to 200 samples (combined samples for pH and mV)
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Temperature	
Range	-20.0 to 120.0 °C (-4.0 to 248.0 °F)
Resolution	0.1 °C
Accuracy (@25°C/77°F)	±0.4 °C without probe error

Ordering Information

HI 84500

HI 84500-01 (115V) and HI 84500-02 (230V) are supplied with HI 3148B ORP electrode, HI 7082 Electrode Fill Solution (30 mL), HI 84500-70 Reagent Kit for SO₂ determination (consisting of: 1 bottle HI 84500-50 (230 mL), 1 bottle HI 84500-51 (230mL), 1 bottle 84500-55 (120 mL), 1 bottle HI 84500-60 Acid Reagent (230 mL), 1 bottle HI 84500-61 Alkaline Reagent (120 mL), 50 packets HI 84500-62 Stabilizer Packet), Two 100 mL beakers, Two 20 mL beakers, Scissors, Dosing Pump Valve, 5 mL Syringe, 1 mL Plastic Pipette, Tube set (aspiration tube with titrant bottle cap and dispensing tube with tip), Stir bar, Two sachets of cleaning solution for wine deposits, Two sachets of cleaning solution for wine stains, 12 VDC adapter and instruction manual.

Electrodes

HI 3148B ORP Electrode. HI 7082 Electrode fill solution (4 x 30 mL). HI 70300L Electrode storage solution (500 mL).

Solutions

HI 84500-50 Low Range Titrant (230 mL). HI 84500-51 High Range Titrant (230 mL). HI 84500-55 Calibration Standard (120 mL). HI 84500-60 Acid Reagent (230 mL). HI 84500-61 Alkaline Reagent (120 mL). HI 84500-62 Stabilizer Packet (100 pcs.). HI 70635L Cleaning solution for wine deposits (500 mL). HI 70636L Cleaning solution for wine stains (500 mL).

Accessories

HI 70500 Tube set with cap for titrant bottle, tip and valve. HI 71005/8 115 Vac to 12 Vdc, 800 mA. HI 71006/8 230 Vac to 12 Vdc, 800 mA. HI 731319 Stir bar (10 pcs., 25 x 7 mm). HI 740036P Beaker 100 mL (10 pcs.), HI 740037P Beaker 20 mL (10 pcs.). HI 740236 5 mL Syringe for minititrator. HI 920013 PC Connection Cable.

HI 84502

HI 84502-01 (115V) and HI 84502-02 (230V) are supplied with HI 1048B pH electrode, HI 7662-T Temperature probe, HI 7082 Electrode Fill Solution (30 mL), HI 84502-70 Reagent Kit for Total Acidity testing (consisting of: 1 bottle HI 84502-50 (230 mL), 1 bottle HI 84502-51 (120mL), 1 bottle HI 7004 (230 mL), 1 bottle HI 7007 (230 mL), 1 bottle HI 70082 (230mL)), 2000 µL automatic pipette with two plastic tips, Two 100 mL beakers, Tube set (aspiration tube with titrant bottle cap and dispensing tube with tip), Dosing Pump Valve, 5 mL Syringe, 1 mL Plastic Pipette, Stir bar, 2 sachets of cleaning solution for wine deposits, 2 sachets of cleaning solution for wine stains, 12 VDC adapter and instruction manual.

Electrodes

HI 1048B pH electrode. HI 7662-T Temperature probe. HI 7082 Electrode fill solution (4 x 30 mL). HI 70300L Electrode storage solution (500 mL).

Solutions

HI 84502-50 Titrant Solution (230 mL). HI 84502-55 Calibration Standard (120 mL). HI 7004M Buffer solution pH 4.01 (230 mL). HI 7007M Buffer solution pH 7.01 (230 mL). HI 70082M Buffer solution pH 8.20 (230 mL). HI 7010M Buffer solution pH 10.01 (230 mL). HI 7004M-6 Buffer solution pH 4.01 (6 x 230 mL). HI 7007M-6 Buffer solution pH 7.01 (6 x 230 mL). HI 70082M-6 Buffer solution pH 8.20 (6 x 230 mL). HI 7010M-6 Buffer solution pH 10.01 (6 x 230 mL). HI 70635L Cleaning solution for wine deposits (500 mL). HI 70636L Cleaning solution for wine stains (500 mL).

Accessories

HI 70500 Tube set with cap for titrant bottle, tip and valve. HI 71005/8 115 Vac to 12 Vdc, 800 mA. HI 71006/8 230 Vac to 12 Vdc, 800 mA. HI 731319 Stir bar (10 pcs., 25 x 7 mm). HI 731342 Automatic pipette 2000 µL. HI 731352 Tips for 2000 µL automatic pipette (4 pcs.). HI 740036P 100 mL Beaker (10 pcs.). HI 740236 5 mL Syringe for minititrator. HI 920013 PC Connection Cable



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