

HI 84431

Total Titratable Alkalinity Titrator



- User-friendly interface
- Dedicated HELP key
- Simple to operate
- Log on demand up to 100 samples (50 for pH measurement; 50 for titration results)
- GLP feature, to view last calibration data for pH electrode and pump
- PC interface via USB connection

Total Titratable Alkalinity Measurement

The HI 84431 is an automatic titrator designed for easy, fast and accurate analysis of Total Titratable Alkalinity in water. Potentiometric endpoint determination, peristaltic titrant delivery and integrated magnetic stirring systems eliminate the error and technique dependent results associated with manual titrations.

The accuracy of the instrument is ensured by performing a peristaltic pump calibration using the provided HANNA standard. The HI 84431 endpoint determination algorithm analyzes the pH vs. volume curve to determine the exact pH endpoint and performs the necessary calculations. The results are displayed in mg/L CaCO₃ or meq/L CaCO₃ units on the graphic display.

An intuitive interface makes the instrument simple to use. A dedicated HELP key guides the user through set-up and calibration sequences, reports instrument status and aids in troubleshooting.

HI 84431 features include: log on demand for up to 100 samples (50 pH measurements, 50 titration results), GLP compliance and PC interface via USB.

SPECIFICATIONS

HI 84431

Range	Titratable Alkalinity (Low Range)	mg/L : 10.0 - 500.0 mg/L as CaCO ₃ meq/L : 0.2 - 10.0 meq/L
	Titratable Alkalinity (High Range)	mg/L : 400 - 4000 mg/L as CaCO ₃ meq/L : 8 - 80 meq/L
	pH	-2.0 to 16.0 pH / -2.00 to 16.00 pH
	Temperature	-20.0 to 120.0 °C (-4.0 to 248.0 °F)
Resolution	Titratable Alkalinity (Low Range)	0.1 mg/L; 0.1 meq/L
	Titratable Alkalinity (High Range)	1 mg/L; 1 meq/L
	pH	0.1 pH / 0.01 pH
	Temperature	0.1 °C
Accuracy	Titratable Alkalinity (Low Range)	5% of reading
	Titratable Alkalinity (High Range)	5% of reading
	pH	± 0.01 pH
	Temperature	±0.4 °C without probe error
Titration Method	Acid-base titration (total alkalinity)/(strong alkalinity)	
Titration Principle	End point titration: 4.5 pH / 8.3 pH	
Pump Volume	0.5 mL/min	
Stirring Speed	600 rpm	
pH Temperature Compensation	manual or automatic from: -20 to 120 °C (-4 to 248 °F)	
Logging	Titration	Up to 50 samples
	pH	Up to 50 samples
pH Calibration	1, 2 or 3 point calibration; 3 available buffers (4.01; 8.30; 10.01)	
pH Electrode	HI 1131B (included)	
Temperature Probe	HI 7662-M (included)	
Environment	0 to 50 °C (32 to 122 °F); max 95% RH non-condensing	
Power Supply	12 Vdc power adapter	
Dimensions/Weight	208 × 214 × 163 mm (8.2 × 8.4 × 6.4") (with beaker)/2200 g (77 oz.)	

ACCESSORIES

- HI 84431-50** Titrant solution for low range (100 mL)
- HI 84431-51** Titrant solution for high range (100 mL)
- HI 84431-55M** Pump calibration solution (230 mL)
- HI 84431-70** Reagents kit for low and high range (about 150 titrations)
- HI 84431-71** Reagents kit for low range (about 150 titrations)
- HI 84431-72** Reagents kit for high range (about 150 titrations)

- HI 70483M** Tube set with cap for titrant bottle and tip
- HI 731319** Stir bar, 25 x 7 mm (10 pcs)
- HI 731342** Pipette for automatic dosage 2000 µL
- HI 731352** Tip for 2000 µL graduated pipette (4pcs.)
- HI 731341** Pipette for automatic dosage 1000 µL
- HI 731351** Tip for 1000 µL graduated pipette (25pcs.)

ORDERING INFORMATION

HI 84431-01 (115V) and **HI 84431-02** (230V) are supplied with HI 1131B pH electrode, HI 7071 filling solution (30 mL), HI 7662-M temperature probe, HI 84431-50 titrant low range (100 mL), HI 84431-51 titrant high range (100 mL), HI 84431-55M pump calibration solution (230 mL), HI 7061 cleaning solution, HI 7004M pH 4.01 buffer solution (230 mL), HI 70083M pH 8.30 buffer solution (230 mL), HI 7010M pH 10.01 buffer solution (230 mL), 100 mL beakers (2), tube set with dispensing tip, Stir bars (medium 2 pcs.), 12 Vdc power adapter, Instruction manual and quick reference guide.

