

HI97746 • HI97721

# Iron, Low and High Range Portable Photometers

- **Advanced LED optical system**
  - Innovative optical design that utilizes a reference detector and focusing lens to eliminate errors from changes in the light source and from imperfections in the glass cuvette.
  - LEDs have a much higher luminous efficiency, providing more light while using less power. They also produce little heat, which could otherwise affect electronic stability.
- **CAL Check™**
  - Validate instrument performance at any time using CAL Check cuvettes made with NIST traceable standards. The CAL Check screen guides the user step-by-step through the validation process and user calibration.
- **On-screen tutorial mode with animations**
  - Guides users step-by-step through the measurement process
- **Waterproof and floating IP67 case**
- **Unit of measure is displayed along with reading**
- **Built-in timer**
  - Built-in reaction timer that ensures consistency between tests.
- **Error messages on display**
  - Alerts to problems including no cap, high zero, and standard too low
- **GLP data**
  - Displays the last calibration date.
- **Auto logging**
- **Battery status indicator**
- **Auto-shut off**

## Significance of Use

Iron is naturally present in water in low concentrations, but it reaches high concentrations in wastewater effluents. The iron concentration in water needs to be monitored because it becomes harmful above certain levels. In domestic water, for instance, iron can unpleasantly alter the taste, stain laundry, damage kitchenware and favor the growth of certain bacteria. Iron is also an indicator of ongoing corrosion in water cooling and heating systems. Moreover, iron is normally monitored in mining wastewater to avoid contamination.



Specifications	HI97746 Iron LR	HI97721 Iron HR
Range	0.00 to 1.60 mg/L (ppm) (as Fe)	0.00 to 5.00 mg/L (ppm) (as Fe)
Resolution	0.01 mg/L	0.01 mg/L
Accuracy @25°C (77°F)	±0.01 mg/L ±8% of reading	±0.04 mg/L ±2% of reading
Measurement Method	adaptation of the TPTZ method	Adaptation of Standard Methods for the Examination of Water and Wastewater, 23rd Edition, 3500-Fe B, Phenanthroline Method
Measurement System	Light Source	light emitting diode
	Bandpass filter	525 nm
	Bandpass filter bandwidth	8 nm
	Bandpass filter wavelength accuracy	±1.0 nm
	Light Detector	silicon photocell
	Cuvette type	round 24.6 mm diameter (22 mm inside)
Additional Specifications	Auto logging	50 readings
	Display	128 x 64 pixel B/W LCD with backlight
	Auto-off	after 15 minutes of inactivity (30 minutes before a READ measurement)
	Battery type / Life	alkaline 1.5 V AA (3) / > 800 measurements (without backlight)
	Environment	0 to 50°C (32 to 122°F); 0 to 100% RH, non-serviceable
	Dimensions	142.5 x 102.5 x 50.5 mm (5.6 x 4.0 x 2.0")
	Weight	380 g (13.4 oz.)

**HI97746** and **HI97721** is supplied with sample cuvettes (2), sample caps (2), plastic stoppers (2), 1.5V AA batteries (3), instrument quality certificate, and instruction manual. CAL Check standards and testing reagents sold separately

## Ordering Information

**HI97746C** and **HI97721C** includes photometer, CAL Check standards, sample cuvettes (2), sample caps (2), plastic stoppers (2), 1.5V AA batteries (3), cuvette wiping cloth, scissors, CAL Check standard certificate, instrument quality certificate, instruction manual, and rigid carrying case. Reagents sold separately

Reagents and Standards	HI97746-11 CAL Check standard cuvette for iron LR
HI97746	HI93746-01 iron LR reagents for 50 tests
	HI93746-03 iron LR reagents for 150 tests
HI97721	HI97721-11 CAL Check standard cuvettes for iron HR
	HI93721-01 iron HR reagent for 50 tests
	HI93701-03 iron HR reagent for 150 tests