

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 | |
|---------------------------|---|---|--|
| Measurement | 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 |
| | 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.) | |
| Ordering Information | 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 | | |
| | 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 | HI97746-11 CAL Check standard cuvette for iron LR | |
| | | 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 | |