HI93414

Turbidity and Free/ Total Chlorine Portable Meter

EPA Compliant

- CAL Check™
  - Alerts users of calibration status
- Four-point calibration
  - Up to 4 point turbidity calibration
- Connectivity
  - USB and RS232 PC connectivity
- GLP features
  - Meets Good Laboratory Practices
- Logging
  - Logging for up to 200 readings
- Backlight
  - User-friendly, backlit display
- Battery indicator
  - Battery % on startup

The HI93414 measures the most important parameters of drinking water: turbidity and free/total chlorine. Designed for water quality measurements, HI93414 provides reliable and accurate readings on low turbidity and chlorine values. The HI93414 meets and exceeds the requirements of USEPA and Standard Methods both for turbidity and colorimetric measurements.

This instrument incorporates an optical system which guarantees accurate results. The optical system, consisting of a tungsten filament lamp, three detectors (scattered, transmitted for turbidimeter range and one for colorimeter range), and a narrow band interference filter @ 525 nm assures long-term stability and minimizes stray light and color interferences. It also compensates for variations in intensity of the lamp, limiting the need for frequent calibration. The 25 mm round cuvettes, made from special optical glass, guarantee repeatability and consistency of measurements.

Turbidity measurements can be made in the 0.00 to 1000 NTU (Nephelometric Turbidity Units) range. The instrument has an EPA compliance reading mode which rounds readings to meet EPA reporting requirements. Depending on the measured sample and needed accuracy, normal measurement, continuous measurement or signal averaging measurement can be selected. Free or total chlorine measurements can be made in the 0.00 to 5.00 mg/L (ppm) range.

At startup, the meter displays the percentage of remaining battery life and, if too low, a "low battery" warning message is displayed.

With the powerful CAL Check™ function, performance of the instrument can be validated at any time by using the exclusive Hanna ready-made NIST traceable standards. Calibration can be performed at any time for turbidity and colorimetric range. For turbidity, a two, three or four-point calibration is available using supplied (<0.1, 15, 100 and 750 NTU adjustable calibration points) or user-prepared standards. For colorimeter measurements, a one-point calibration can be performed.

The HI93414 has complete GLP (Good Laboratory Practice) functions that allow traceability of the calibration conditions. The last calibration points, time and date can be checked at the touch of a button. The HI93414 has a user-friendly interface with an easy-to-read, large LCD. Displayed codes guide the user step-by-step through routine operation and calibration. Confirmation and error acoustic signals aid the user during instrument operation.

For advanced field applications, the HI93414 is equipped with Fast Tracker™–Tag Identification System (T.I.S.) that makes data collecting and management simpler than ever. Fast Tracker™ allows users to record the time and location of a specific measurement or series of measurements.

With it's logging function, up to 200 measurements, along with its tagged locations, can be stored in internal memory and consulted at any time. Data can be later transferred to a PC via RS232 or USB interface and Hanna HI92000 software (optional).
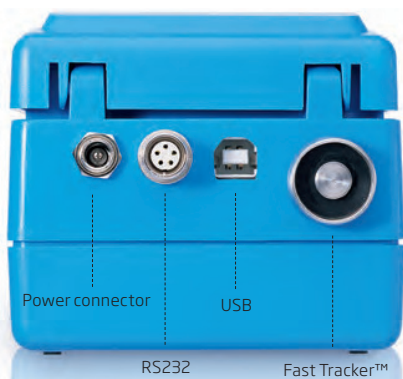
Accurate, On-site Analysis

CAL Check™ Calibration Validation

With Hanna's exclusive CAL Check™ validation function, users are able to verify the performance of the instrument at any time. Using Hanna's exclusive ready-made, NIST traceable standards, validation is user friendly and ensures proper calibration.

iButton® Tags are Easy to Install

Install tags near your sampling points for quick and easy iButton® readings. Each tag contains a computer chip with a unique identification code encased in stainless steel. You can install a practically unlimited amount of tags.

HI93414 Turbidity

Range	0.00 to 1000 NTU
Range Selection	automatic
Resolution	0.01 (0.00 to 9.99 NTU); 0.1 (10.0 to 99.9 NTU) 1 (100 to 1000 NTU)
Accuracy	±2% of reading plus 0.02 NTU
Repeatability	±1% of reading or 0.02 NTU, whichever is greater
Stray Light	< 0.02 NTU
Light Detector	silicon photocell
Method	ratio nephelometric method (90°), ratio of scattered and transmitted light; adaptation of the USEPA method 180.1 and standard method 2130 B
Measuring mode	normal, average, continuous
Turbidity Standards	<0.1, 15, 100 and 750 NTU
Calibration	two, three or four-point calibration

HI93414 Free and Total Chlorine

Range	0.00 to 5.00 mg/L
Resolution	0.01 mg/L (0.00 to 3.50 mg/L); 0.10 mg/L (above 3.50 mg/L)
Accuracy @25°C /77°F	±0.02 mg/L @ 1.00 mg/L
Detector	silicon photocell with 525 nm narrow band interference filter
Method	adaptation of the USEPA method 330.5 and standard method 4500-Cl G.
Standards	1 mg/L free chlorine, 1 mg/L total chlorine
Calibration	one-point calibration

HI93414 General Specifications

Light Source	tungsten filament lamp
Lamp Life	greater than 100,000 readings
Log Memory	200 records
Serial Interface	USB or RS 232
Environment	0 to 50°C (32 to 122°F); RH max 95% non-condensing
Power Supply	1.5V AA alkaline batteries (4) or AC adapter; auto-off after 15 minutes of non-use
Dimensions / Weight	224 x 87 x 77 mm (8.8 x 3.4 x 3.0") / 512 g (18 oz.)
Ordering Information	**HI93414-01** (115V) and **HI93414-02** (230V) is supplied with sample cuvettes and caps (5), calibration cuvettes for turbidity (HI98703-11), calibration cuvettes for colorimeter (HI93414-11), silicone oil (HI98703-58), cuvette wiping cloth, scissors, batteries, AC adapter, instructions and rugged carrying case.

Power connector

USB

RS232

Fast Tracker™

FastTracker™
location traceability

HI920005 Tag holders with tags (5)

HANNA® instruments