HI97107

Disinfectants Multiparameter Portable Photometer

HANNA® instruments

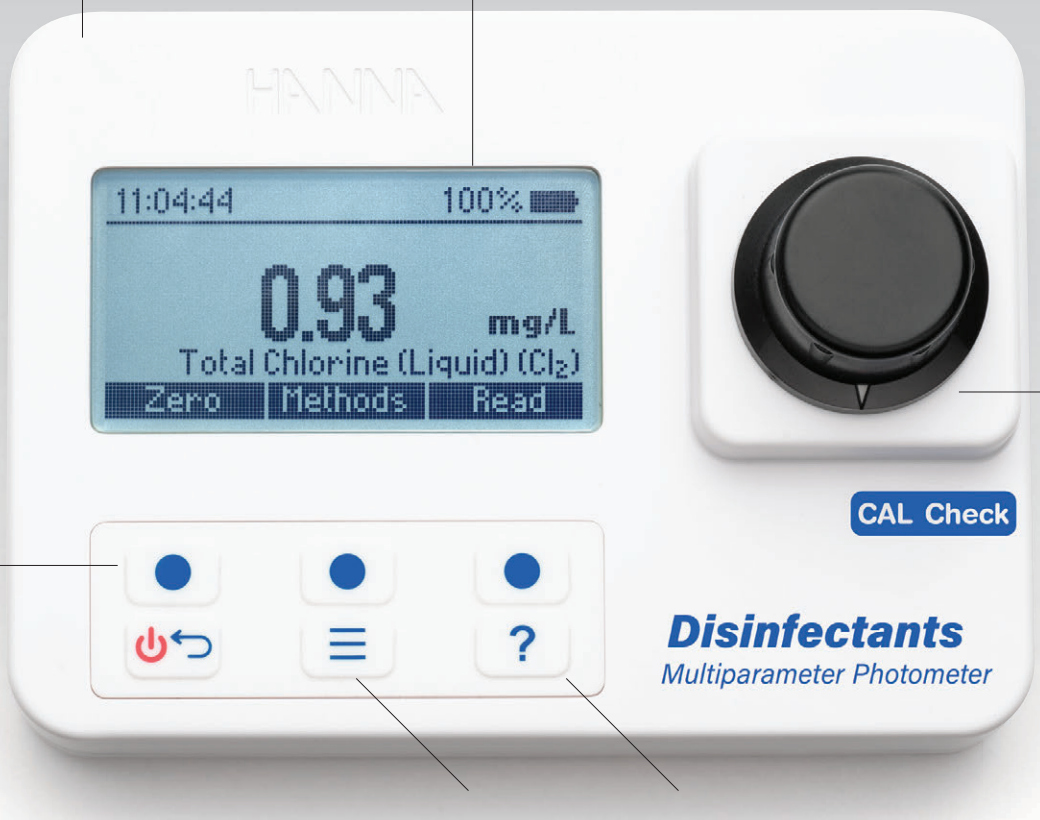
Measure 7 crucial parameters

The HI97107 Disinfectants Multiparameter Portable Photometer measures seven important parameters in the treatment and disinfection of drinking water and wastewater.

Waterproof casing
The casing offers IP67 waterproof protection and floats.

Backlit graphic LCD
The 128 x 64 pixel backlit graphic LCD allows for an intuitive user interface with virtual keys, battery status, and on-screen help and tutorials to guide the user through use of the meter.

Positive locking system
The Hanna positive-locking system ensures cuvettes are placed into the holder in the same position every time.



Virtual keys

Menu available at the touch of a button

Dedicated HELP button
A dedicated help key provides informational help relating to the current meter operation, and can be used at any stage in the setup or measurement process.

HI97107 overview

The HI97107 is an auto-diagnostic multiparameter portable photometer that benefits from Hanna's® years of experience as a manufacturer of analytical instruments. It has an advanced optical system that uses a Light Emitting Diode (LED) and a narrow band interference filter that allows for accurate and repeatable readings.

The optical system is sealed from outside dust, dirt and water. The meter uses an exclusive positive-locking system to ensure that the cuvettes are placed into the holder in the same position every time.

With the CAL Check™ functionality, users are able to validate the performance of the instrument at any time and apply a user calibration (if necessary). Hanna Instruments CAL Check™ cuvettes are made with NIST traceable standards.

The built-in tutorial mode guides users step-by-step through the measurement process. It includes all steps required for sample preparation, the required reagents and quantities.

Bromine is a powerful water disinfectant, particularly effective in hot water (treatment of pools and spas). Bromine can act as an alternative to chlorine.

The method for bromine is an adaptation of Standard Methods for the Examination of Water and Wastewater, DPD Method.

Chlorine is a widely used disinfectant, in order for it to be effective the **pH** of the water should be less than 8.0.

The method for chlorine is an adaptation of US EPA Method 330.5, DPD Colorimetric Method.

The method for pH is an adaptation of the Phenol Red Method.

Chlorine Dioxide is a powerful and selective disinfectant used in water treatment across a broad pH range.

The method for chlorine dioxide is an adaptation of Standard Methods for the Examination of Water and Wastewater, 18th Ed., 4500 ClO_2 D.

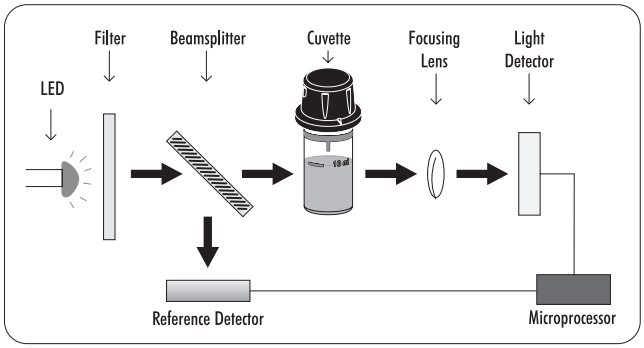
Hydrogen Peroxide is an environmentally friendly, broad spectrum disinfectant.

The method for hydrogen peroxide is an adaptation of German Standard Methods for the Examination of Water and Wastewater DIN 38409-15.

Ozone is a widely used disinfectant in the treatment of drinking water, wastewater and swimming pools.

The method for ozone is the DPD Colorimetric Method.

Advanced LED optical system



Advanced LED optical system features

- LED that generates little heat
- 8 nm narrow band interference filter that is accurate to ±1 nm and offers 25% increase in light efficiency.
- Reference detector that modulates the voltage to LED for consistent light output.
- A concave focusing lens that reduces errors from imperfections in the cuvette

High efficiency light source

LED light sources offer superior performance compared to tungsten lamps. 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. LEDs are available in a wide array of wavelengths, whereas tungsten lamps have poor blue/violet light output.

High quality filters

Improved optical filters ensure greater wavelength accuracy and allow a brighter, stronger signal to be received. The end result is higher measurement stability and less wavelength error.

Stable light source

The internal reference system of these photometers compensates for any drifts due to power fluctuations or ambient temperature changes. With a stable source of light the readings are fast and reliable between your blank (zero) measurement and sample measurement.

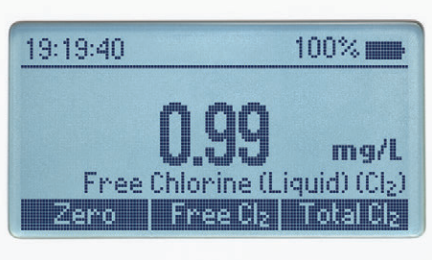
Greater light yield

A focusing lens collects all of the light that exits the cuvette, reducing errors from imperfections and scratches that may be present in the glass. The use of the convex lens reduces the need for indexing cuvettes.

Large cuvette size

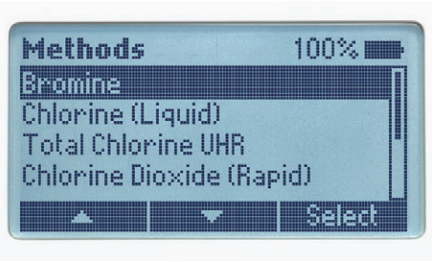
The sample cell of these photometers fits a round, glass cuvette with a 25 mm path length. The relatively long path length of the sample cuvette allows the light to pass through more of the sample solution, ensuring accurate measurements even in low absorbance samples. The cuvette holder features ridges to protect scratching of the optical path by the cuvette.

Features



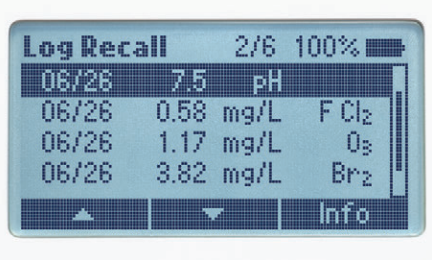
Method and parameter

Chosen parameter and method used is displayed along with the reading.



Multiple measurement methods

Method selection can be accessed by pressing the menu button and selecting Methods. Use the function keys to highlight the desired method.



Auto logging

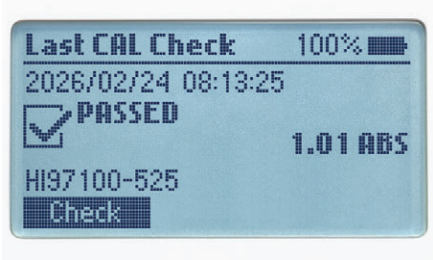
Log and recall the last 50 measurements.

Built-in reaction timer

Waiting the proper reaction time is of key importance when performing colorimetric measurements. The countdown timer displays the time remaining until a measurement will be taken, ensuring consistent results between sample measurements and users.

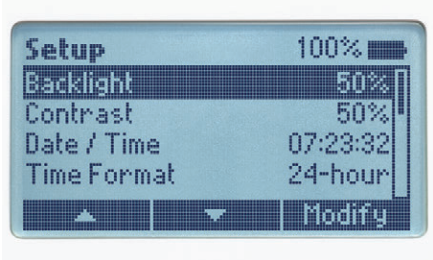
CAL Check™ functionality

Hanna's exclusive CAL Check feature allows for performance verification and calibration of the meter using NIST traceable standards. Our CAL Check standard vials are developed to simulate a specific absorbance value at each wavelength to verify the accuracy of subsequent readings. The CAL Check screen guides the user step-by-step through the validation process and user calibration.



GLP data

Good Laboratory Practice (GLP) shows the date and time of the last user calibration.



Setup options

Setup options for meter personalization include date and time format, language, and enabling the tutorial mode.

Auto-off protection

These meters use three AA batteries that allow for about 800 measurements to be taken. The auto-off feature automatically shuts off the meter after 15 minutes of inactivity in order conserve battery life.

Battery status indicator

Indicates the amount of battery life left.

Dedicated help

A dedicated help key provides information relating to the current meter operation, and can be used at any stage in the setup or measurement process to show contextual help.

On-screen tutorial mode with animations

The built in Tutorial mode guides users step-by-step through the measurement process.

Error messages

Messages appear on the display alerting to problems such as out of range, light low, light high, ambient temperature out of limits, and battery low.

Specifications:

HI97107

Bromine	Range	0.00 to 10.00 mg/L (as Br_2)
	Resolution	0.01 mg/L
	Accuracy	±0.08 mg/L ±3% of reading at 25 °C (77 °F)
	Method	Adaptation of Standard Methods for the Examination of Water and Wastewater, 18th Edition, DPD Method
Free and Total Chlorine LR	Range	0.00 to 5.00 mg/L (as Cl_2)
	Resolution	0.01 mg/L
	Accuracy*	±0.03 mg/L ±3% of reading at 25 °C (77 °F)
	Calibration	Adaptation of US EPA Method 330.5, DPD Colorimetric Method
Total Chlorine UHR	Range	0 to 500 mg/L (as Cl_2)
	Resolution	1 mg/L
	Accuracy	±3 mg/L ±3% of reading at 25 °C (77 °F)
	Method	Adaptation of Standard Methods for Examination of Water and Wastewater, 20th Edition, 4500-Cl
Chlorine Dioxide (Rapid)	Range	0.00 to 2.00 mg/L (as ClO_2)
	Resolution	0.01 mg/L
	Accuracy	±0.10 mg/L ±5% of reading at 25 °C (77 °F)
	Method	Adaptation of Standard Methods for the Examination of Water and Wastewater, 18th Edition, 4500 ClO_2 D
Hydrogen Peroxide	Range	0 to 500 mg/L H_2O_2
	Resolution	1 mg/L
	Accuracy	±5 mg/L ±3% of reading at 25 °C (77 °F)
	Method	Adaptation of DIN 38409-15, German Standard Methods for the Examination of Water and Wastewater
Ozone	Range	0.00 to 2.00 mg/L (as O_3)
	Resolution	0.01 mg/L
	Accuracy	±0.02 mg/L ±3% of reading at 25 °C (77 °F)
	Method	DPD Colorimetric Method
pH	Range	6.5 to 8.5 pH
	Resolution	0.1 pH
	Accuracy	±0.1 pH of reading at 25 °C (77 °F)
	Method	Adaptation of the Phenol Red 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	128×64 pixel B/W LCD with backlight
	Auto-off	After 15 minutes of inactivity (30 minutes before a READ measurement)
	Battery type	1.5 V AA Alkaline (3 pcs.)
	Battery life	>800 measurements (without backlight)
	Environment	0 to 50 °C (32 to 122 °F); 0 to 100% RH, non-serviceable
	Dimensions	142.5×102.5×50.5 mm (5.6×4.0×2.0")
	Weight (with batteries)	380 g (13.4 oz.)
	Case ingress protection rating	IP67, floating case

Ordering

Ordering information

HI97107 Meter

HI97107C Meter + kit

HI97107 What's included:

Each **HI97107** is delivered in a cardboard box and is supplied with:

- Sample cuvette with cap (2 pcs.)
- Plastic stopper (2 pcs.)
- 1.5V AA alkaline battery (3 pcs.)
- Battery safety insert
- Quick reference guide with instructions for manual download and instrument quality certificate

Each **HI97107C** is delivered in a rugged carrying case and is supplied with:

- Sample cuvette with cap (2 pcs.)
- Plastic stopper (2 pcs.)
- Chlorine reagent kit
  - Reagent A, 30 mL dropper (1 pc.)
  - Reagent B, 30 mL dropper (1 pc.)
  - Reagent C, 20 mL dropper (1 pc.)
- pH reagent, 30 mL dropper (1 pc.)
- Bromine reagent (for 25 tests)
- Ozone reagent (for 25 tests)
- Glycine powder (for 25 tests)
- UHR Chlorine reagent kit
  - Reagent A (for 25 tests)
  - Reagent B (for 25 tests)
- Chlorine Dioxide (rapid) reagent kit
  - Reagent A, 30 mL dropper (1 pc.)
  - Reagent B (for 25 tests)
- Hydrogen Peroxide reagent, 30 mL dropper (1 pc.)
- Cloth for wiping cuvettes
- Scissors
- 1.5V AA alkaline battery (3 pcs.)
- Battery safety insert
- Quick reference guide with instructions for manual download and instrument quality certificate

Warranty

2 Years meter

Accessories

Standards

HI97107-11 CAL Check™ Validation and Calibration Standards Cuvette Kit

Reagents

HI96795-01 Hydrogen Peroxide reagents for 100 tests
HI96795-03 Hydrogen Peroxide reagents for 300 tests
HI93701-F Free Chlorine reagent for 300 tests (liquid)
HI93701-T Total Chlorine reagent for 300 tests (liquid)
HI93703-52 Glycine powder reagent for 100 tests
HI93710-01 pH reagent for 100 tests
HI93710-03 pH reagent for 300 tests
HI93716-01 Bromine reagent for 100 tests
HI93716-03 Bromine reagent for 300 tests
HI93757-01 Ozone reagent for 100 tests
HI93757-03 Ozone reagent for 300 tests
HI95771-01 Total Chlorine UHR reagent for 100 tests
HI95771-03 Total Chlorine UHR reagent for 300 tests
HI96779-01 Chlorine Dioxide (Rapid) reagent for 100 tests
HI96779-03 Chlorine Dioxide (Rapid) reagent for 300 tests

Other

HI7101422 Blue carrying case for HI97107C
HI731318 Cloth for wiping cuvettes (4 pcs.)
HI731331 Glass cuvette (4 pcs.)
HI731336N Cap for glass cuvette (4 pcs.)
HI740034P Cap for 100 mL beaker (10 pcs.)
HI740036P 100 mL plastic beaker (10 pcs.)
HI740142P 1 mL graduated syringe (10 pcs.)
HI740143 1 mL graduated syringe (6 pcs.)
HI740144P Pipette tip for 1 mL graduated syringe (10 pcs.)
HI93703-50 Cuvette cleaning solution (250 mL)

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Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct.
If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.