

# Portable Photometers

- **CAL Check**
  - Allows for performance verification and calibration of the meter using NIST traceable standards.
- **GLP**
  - Review of the last calibration date.
- **Auto-shut off**
  - Automatic shut off after 10 minutes of non-use when the meter is in measurement mode. Prevents wastage of batteries in the event the meter is accidentally left on.
- **Battery status indicator**
  - Indicates the amount of battery life left.
- **Built-in timer**
  - Display of time remaining before a measurement is taken. Ensures that all readings are taken at the appropriate reaction intervals for the test being performed.
- **Error messages**
  - Messages on display alerting to problems including no cap, high zero, and standard too low.
- **Cooling lamp indicator**
  - To maintain the desirable wavelength to be used for absorbance, it is necessary to ensure components are not overheated from the heat generated by the tungsten lamp. Each photometer is designed to allow a minimal amount of time for components to cool. The cooling lamp indicator is displayed prior to a reading being taken.
- **Units of measure**
  - Appropriate unit of measure is displayed along with reading.

Hanna's portable photometers feature an advanced optical system; the combination of a special tungsten lamp, a narrow band interference filter, and silicon photodetector ensure accurate photometric readings every time. The Hanna exclusive CAL Check™ feature utilizes ready-made, NIST traceable standards to verify both meter validation and calibration. The exclusive cuvette locking system ensures that the cuvette is inserted into the measurement cell in the same position every time to maintain a consistent path length.



"C" versions include CAL Check™ standards and a rigid carrying case

## CAL Check™ Validation\*

Two-step validation procedure for proper calibration.

Zero the meter prior to validation...

Place the CAL Check™ Standard A into the cuvette holder and press ZERO/CFM button. The lamp, cuvette and detector icons will appear on the display followed by "-0.0-". The meter is now zeroed and ready for validation.

... and compare accuracy against a known standard.

Place the CAL Check™ standard B into the cuvette holder and press CAL Check™. The lamp, cuvette and detector icons together with "CAL Check" will appear on the display. At the end of the measurement the display will show the validation standard value.

## CAL Check™ Calibration\*

Calibrate your instrument quickly and easily.

Zero the meter prior to calibration...

Press and hold CAL Check™ for three seconds to enter calibration mode. Place the CAL Check™ Standard A into the cuvette holder and press ZERO/CFM. The lamp, cuvette and detector icons will appear on the display followed by "-0.0-". The meter is now zeroed and ready for calibration.

... and calibrate to a known standard.

Place the CAL Check™ Standard B into the cuvette holder. Press READ/TIMER and the lamp, cuvette and detector icons will appear on the display. After measurement the instrument will show the CAL Check™ Standard value.

### Solutions and Accessories

<b>HI93703-50</b>	Cuvette cleaning solution, 230 mL	<b>HI731335</b>	Cuvette caps (4)
<b>HI731318</b>	Cuvette cleaning cloth (4)	<b>HI740318</b>	Carrying case for HI96 series
<b>HI731331</b>	Measuring cuvettes (4)		

\*Each CAL Check™ cuvette is clearly labeled with its respective measurement. Please read the full instruction manual before validation/calibration.

# CAL Check™ Standard Reagents

## Single Parameter

Instrument	CAL Check™ Standards Set	Parameter
HI96700	<b>HI96700-11</b>	Ammonia
HI96701	<b>HI96701-11</b>	Free Chlorine
HI96702	<b>HI96702-11</b>	Copper
HI96704	<b>HI96704-11</b>	Hydrazine
HI96705	<b>HI96705-11</b>	Silica
HI96706	<b>HI96706-11</b>	Phosphorus
HI96707	<b>HI96707-11</b>	Nitrite
HI96708	<b>HI96708-11</b>	Nitrite
HI96709	<b>HI96709-11</b>	Manganese
HI96712	<b>HI96712-11</b>	Aluminum
HI96713	<b>HI96713-11</b>	Phosphate
HI96714	<b>HI96714-11</b>	Cyanide
HI96715	<b>HI96715-11</b>	Ammonia
HI96716	<b>HI96716-11</b>	Bromine
HI96717	<b>HI96717-11</b>	Phosphate
HI96718	<b>HI96718-11</b>	Iodine
HI96719	<b>HI96719-11</b>	Hardness, Magnesium
HI96720	<b>HI96720-11</b>	Hardness, Calcium
HI96721	<b>HI96721-11</b>	Iron
HI96722	<b>HI96722-11</b>	Cyanuric Acid
HI96723	<b>HI96723-11</b>	Chromium VI
HI96724	<b>HI96724-11</b>	Free/Total Chlorine
HI96726	<b>HI96726-11</b>	Nickel
HI96727	<b>HI96727-11</b>	Color of Water
HI96728	<b>HI96728-11</b>	Nitrate
HI96729	<b>HI96729-11</b>	Fluoride
HI96730	<b>HI96730-11</b>	Molybdenum
HI96731	<b>HI96731-11</b>	Zinc
HI96732	<b>HI96732-11</b>	Dissolved Oxygen
HI96733	<b>HI96733-11</b>	Ammonia
HI96737	<b>HI96737-11</b>	Silver
HI96738	<b>HI96738-11</b>	Chlorine Dioxide
HI96739	<b>HI96739-11</b>	Fluoride
HI96740	<b>HI96740-11</b>	Nickel
HI96746	<b>HI96746-11</b>	Iron
HI96747	<b>HI96747-11</b>	Copper
HI98748	<b>HI96748-11</b>	Manganese
HI96749	<b>HI96749-11</b>	Chromium VI
HI96750	<b>HI96750-11</b>	Potassium
HI96751	<b>HI96751-11</b>	Sulfate
HI96753	<b>HI96753-11</b>	Chloride
HI96761	<b>HI96761-11</b>	Total Chlorine
HI96762	<b>HI96762-11</b>	Trace Free Chlorine
HI 96769	<b>HI96769-11</b>	Anionic Detergents
HI96770	<b>HI96770-11</b>	Silica
HI96771	<b>HI96771-11</b>	Ultra High Range Free Chlorine
HI96786	<b>HI96786-11</b>	Nitrate

## Multiparameter

Instrument	CAL Check™ Standards Set	Parameter
HI96101	<b>HI96716-11</b> <b>HI96701-11</b> <b>HI96711-11</b> <b>HI96722-11</b> <b>HI96718-11</b> <b>HI96746-11</b> <b>HI96710-11</b>	Bromine Free Chlorine Total Chlorine Cyanuric Acid Iodine Iron pH
HI96104	<b>HI96710-11</b> <b>HI96701-11</b> <b>HI96711-11</b> <b>HI96722-11</b>	pH Free Chlorine Total Chlorine Cyanuric Acid
HI96710	<b>HI96701-11</b> <b>HI96711-11</b> <b>HI96710-11</b>	Free Chlorine Total Chlorine pH
HI96711	<b>HI96701-11</b> <b>HI96711-11</b>	Free Chlorine Total Chlorine
HI96725	<b>HI96701-11</b> <b>HI96711-11</b> <b>HI96722-11</b> <b>HI96710-11</b>	Free Chlorine Total Chlorine Cyanuric Acid pH
HI96734	<b>HI96734-11</b>	Free Chlorine Total Chlorine
HI96735	<b>HI96735-11</b>	Hardness
HI96736	<b>HI96719-11</b> <b>HI96710-11</b>	Total Hardness pH
HI96741	<b>HI96719-11</b> <b>HI96746-11</b>	Total Hardness Iron
HI96742	<b>HI96746-11</b> <b>HI96748-11</b>	Iron Manganese
HI96743	<b>HI96746-11</b> <b>HI96710-11</b>	Iron pH
HI96744	<b>HI96710-11</b> <b>HI96719-11</b> <b>HI96746-11</b>	pH Hardness, calcium Hardness, Magnesium Iron
HI96745	<b>HI96701-11</b> <b>HI96711-11</b> <b>HI96719-11</b> <b>HI96746-11</b> <b>HI96710-11</b>	Free Chlorine Total Chlorine Hardness, Magnesium Iron pH
HI96752	<b>HI96752-11</b> <b>HI96754-11</b>	Calcium Magnesium