HI83099

COD Meter and Multiparameter Photometer

Application Designed Photometers

- Up to 47 measurement methods including COD
- Backlit Graphic LCD Display
  - The HI83099 features a backlit graphic display with virtual keys and on-screen help to provide for an intuitive user interface.
- Data Logging
  - Users can store up to 200 readings by simply pressing the dedicated LOG button. Logged readings are easily recalled by pressing the RCL button.
- PC Connectivity
  - Logged readings can transferred to a PC via USB using the HI92000 Windows® compatible software.
- Result Conversion
  - Eliminates confusion by automatically converting readings to other chemical forms. Common conversions are available at the touch of a button.
- On-screen Tutorial
  - With the tutorial function enabled, short guides relating to the current operation are displayed.
- Auto-shut off
  - Automatic shut off after 10 minutes of non-use when the meter is in measurement mode and operating on the internal rechargeable battery.
- Battery Status Indicator
- 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.
- Cuvette Cover
  - Aids in stopping stray light from affecting measurements.
- 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.

One of the most versatile photometers in the market

From aluminum to zinc, the HI83099 benchtop photometer offers 47 measurement methods for different key water quality parameters, including chemical oxygen demand (COD) in 3 different ranges. This photometer features an advanced optical system that uses special tungsten lamps, narrow band interference filters, and silicon photodetectors to ensure accurate photometric readings every time. The HI83099 uses a graphic backlit LCD that allows for an intuitive user interface, offering a tutorial mode that gives a step-by-step procedure for performing a measurement. The result obtained can be displayed in various chemical forms based on the user's preference. For tracking of data, results can be logged and then exported to a Windows® compatible PC using the HI92000 software and HI920013 USB cable.

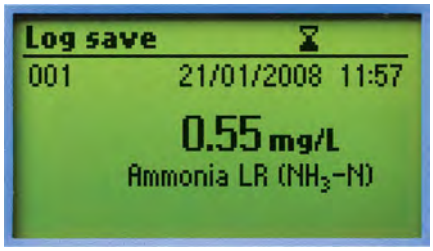
Specifications	HI83099
Light Source	tungsten lamps with narrow band interference filters
Light Life	the life of the instrument
Light Detector	silicon photocell
Environment	0 to 50°C (32 to 122°F); RH max 90% non-condensing
Power Supply	external 12 VDC power adapter or built-in rechargeable battery
Dimensions	235 x 200 x 110 mm (9.2 x 7.87 x 4.33")
Weight	0.9 kg (2 lbs.)
Ordering Information	**HI83099-01** (115V) and **HI83099-02** (230V) is supplied with glass cuvettes with caps (4), cell protective cap, batteries, 12 VDC adapter, sample preparation kit (for turbidity or concentrated samples), cloth for wiping cuvettes, 60mL glass bottle for DO analysis, scissors, and instructions.

COD Test	Range	Method	Reagent Code
COD LR	0 to 150 mg/L	dichromate EPA‡ dichromate mercury-free◊◊ dichromate ISO◊	**HI93754A-25** **HI93754D-25** **HI93754F-25**
COD MR	0 to 1500 mg/L	dichromate EPA‡ dichromate mercury-free◊◊ dichromate ISO◊	**HI93754B-25** **HI93754E-25** **HI93754G-25**
COD HR	0 to 15000 mg/L	dichromate	**HI93754C-25**

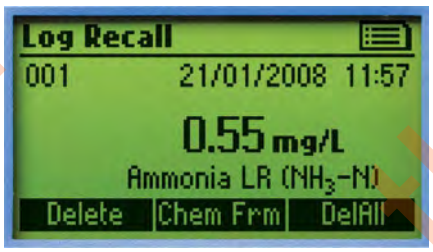
Water Quality Test	Range	Method	Reagent Code†
Alkalinity	0 to 500 mg/L (ppm) as $CaCO_3$	bromocresol green	**HI93755-01**
Aluminum	0.00 to 1.00 mg/L	aluminon	**HI93712-01**
Ammonia MR	0.00 to 10.00 mg/L	Nessler	**HI93715-01**
Ammonia LR	0.00 to 3.00 mg/L	Nessler	**HI93700-01**
Bromine	0.00 to 8.00 mg/L	DPD	**HI93716-01**
Calcium	0 to 400 mg/L	oxalate	**HI937521-01**
Chlorine Dioxide	0.00 to 2.00 mg/L	chlorophenol red	**HI93738-01**
Chlorine, Free	0.00 to 2.50 mg/L	DPD	**HI93701-01***
Chlorine, Total	0.00 to 3.50 mg/L	DPD	**HI93711-01***
Chromium VI HR	0 to 1000 µg/L	diphenylcarbohydrazide	**HI93723-01**
Chromium VI LR	0 to 300 µg/L	diphenylcarbohydrazide	**HI93749-01**
Color of Water	0 to 500 PCU	colorimetric platinum cobalt	–
Copper HR	0.00 to 5.00 mg/L	bicinchoninate	**HI93702-01**
Copper LR	0 to 1000 µg/L	bicinchoninate	**HI95747-01**
Cyanuric Acid	0 to 80 mg/L	turbidimetric	**HI93722-01**
Fluoride	0.00 to 2.00 mg/L	SPADNS	**HI93729-01**
Hardness, Calcium	0.00 to 2.70 mg/L	calmagite	**HI93720-01**
Hardness, Magnesium	0.00 to 2.00 mg/L	EDTA	**HI93719-01**
Hydrazine	0 to 400 µg/L	p-dimethylaminobenzaldehyde	**HI93704-01**
Iodine	0.0 to 12.5 mg/L	DPD	**HI93718-01**
Iron HR	0.00 to 5.00 mg/L	phenantroline	**HI93721-01**
Iron LR	0 to 400 µg/L	TPTZ	**HI93746-01**
Magnesium	0 to 150 mg/L	calmagite	**HI937520-01**
Manganese HR	0.0 to 20.0 mg/L	periodate	**HI93709-01**
Manganese LR	0 to 300 µg/L	PAN	**HI93748-01**
Molybdenum	0.0 to 40.0 mg/L	mercaptoacetic acid	**HI93730-01**
Nickel HR	0.00 to 7.00 g/L	photometric	**HI93726-01**
Nickel LR	0.000 mg/L to 1.000 mg/L	PAN	**HI93740-01**
Nitrate	0.0 to 30.0 mg/L	cadmium reduction	**HI93728-01**
Nitrite HR	0 to 150 mg/L	ferrous sulfate	**HI93708-01**
Nitrite LR	0.00 to 1.15 mg/L	diazotization	**HI93707-01**
Oxygen, Dissolved (DO)	0.0 to 10.0 mg/L	Winkler	**HI93732-01**
Ozone	0.00 to 2.00 mg/L	DPD	**HI93757-01**
pH	6.5 to 8.5 pH	phenol red	**HI93710-01**
Phosphate HR	0.0 to 30.0 mg/L	amino acid	**HI93717-01**
Phosphate LR	0.00 to 2.50 mg/L	ascorbic acid	**HI93713-01**
Phosphorus	0.0 to 15.0 mg/L	amino acid	**HI93706-01**
Potassium HR	20 to 200 mg/L	turbidimetric tetraphenylborate	**HI93750-01**
Potassium MR	10 to 100 mg/L	turbidimetric tetraphenylborate	**HI93750-01**
Potassium LR	0.0 to 20.0 mg/L	turbidimetric tetraphenylborate	**HI93750-01**
Silica	0.00 to 2.00 mg/L	heteropoly blue	**HI93705-01**
Silver	0.000 to 1.000 mg/L	PAN	**HI93737-01**
Sulfate	0 to 100 mg/L	turbidimetric	**HI93751-01**
Zinc	0.00 to 3.00 mg/L	zincon	**HI93731-01**

Notes:
‡ Method with chromium-sulfuric acid is officially recognized by EPA for wastewater analysis.
◊ The HI93754F-25 and HI93754G-25 method follows the official method ISO 15705.
◊◊ This method is recommended for general purpose analysis with no chloride interference.
* For Chlorine, liquid reagents also available.

Screen Features



- Data Logging
  - Up to 200 measurement readings can be logged and recalled for future use.



- Log Recall
  - Logged data can easily be recalled and the chemical form can be converted at the touch of a button.

- Method Selection
  - Users can easily select any one of the 47 measurement methods via the dedicated METHOD button.

- Help screen

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