

HI 83099

# COD Meter and Multiparameter Photometer


  
Application Designed Photometers

- Easy COD measurement
- Outstanding measurement quality
- Save space in your laboratory
- PC compatible
- 47 methods



## ORDERING INFORMATION

HI 83099-01 (115V) and HI 83099-02 (230V) is supplied with glass cuvettes (3), cell protective cap, batteries, 12 VDC adapter and instructions.

## SOLUTIONS

HI 93703-50 Cuvette cleaning solution, 230 mL

## ACCESSORIES

HI 83099-100	Sample prep kit
HI 3898	Test kit for chloride concentration
HI 839800-01	HANNA reactor (115 VAC)
HI 839800-02	HANNA Reactor (230 VAC)
HI 151-00	Thermometer with stainless steel probe
HI 731318	Cuvette cleaning cloth (4)
HI 731321	Measurement cuvette (4)
HI 731325N	Cuvette cap (4)
HI 740216	Test tube cooling rack (25 tube capacity)
HI 740217	Laboratory bench safety shield
HI 92000	Windows® compatible application software
HI 920013	USB cable for PC connection

HI 83099 is one of the most versatile photometers on the market. In addition to COD, this meter measures up to 47 of the most important water quality parameters using liquid or powder reagents. The amount of reagent is precisely dosed to ensure maximum reproducibility.

HI 83099 bench photometer can be connected to a PC via a USB cable. The optional HI 92000 Windows® Compatible Software helps users manage their data.

HI 83099 features a powerful interactive user support that assists the user during each step of the analysis process. A tutorial mode is also available in the Setup Menu.

## SPECIFICATIONS

	HI 83099
Light Source	tungsten lamps with narrow-band interference filters
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
Auto-off	after 10 min. of non-use in measuring mode. after 1 hour of non-use in calibration mode with last reading reminder
Dimensions	235 x 200 x 110 mm (9.2 x 7.87 x 4.33")
Weight	0.9 Kg (2 lbs.)

COD TEST	RANGE	METHOD	REAGENT CODE
COD LR	0 to 150 mg/L (ppm)	dichromate EPA† dichromate mercury-free♦♦ dichromate ISO♦	HI 93754A-25 HI 93754D-25 HI 93754F-25
COD MR	0 to 1500 mg/L (ppm)	dichromate EPA† dichromate mercury-free♦♦	HI 93754B-25 HI 93754E-25
	0 to 1000 mg/L (ppm)	dichromate ISO♦	HI 93754G-25
COD HR	0 to 15000 mg/L (ppm)	dichromate	HI 93754C-25

WATER QUALITY TEST	RANGE	METHOD	REAGENT CODE†
Alkalinity	0 to 500 mg/L (ppm) as CaCO <sub>3</sub>	bromocresol green	HI 93755-01
Aluminum	0.00 to 1.00 mg/L (ppm)	aluminon	HI 93712-01
Ammonia MR	0.00 to 10.00 mg/L (ppm)	Nessler	HI 93715-01
Ammonia LR	0.00 to 3.00 mg/L (ppm)	Nessler	HI 93700-01
Bromine	0.00 to 8.00 mg/L (ppm)	DPD	HI 93716-01
Calcium	0 to 400 mg/L (ppm)	oxalate	HI 937521-01**
Chlorine Dioxide	0.00 to 2.00 mg/L (ppm)	chlorophenol Red	HI 93738-01
Chlorine*, Free	0.00 to 2.50 mg/L (ppm)	DPD	HI 93701-01
Chlorine*, Total	0.00 to 3.50 mg/L (ppm)	DPD	HI 93711-01
Chromium VI HR	0 to 1000 µg/L	diphenylcarbohydrazide	HI 93723-01
Chromium VI LR	0 to 300 µg/L	diphenylcarbohydrazide	HI 93749-01
Color of Water	0 to 500 PCU	colorimetric platinum cobalt	-
Copper HR	0.00 to 5.00 mg/L (ppm)	bicinchoninate	HI 93702-01
Copper LR	0 to 1000 µg/L	bicinchoninate	HI 95747-01
Cyanuric Acid	0 to 80 mg/L (ppm)	turbidimetric	HI 93722-01
Fluoride	0.00 to 2.00 mg/L (ppm)	SPADNS	HI 93729-01
Hardness, Calcium	0.00 to 2.70 mg/L (ppm)	calmagite	HI 93720-01
Hardness, Magnesium	0.00 to 2.00 mg/L (ppm)	EDTA	HI 93719-01
Hydrazine	0 to 400 µg/L	p-dimethylaminobenzaldehyde	HI 93704-01
Iodine	0.0 to 12.5 mg/L (ppm)	DPD	HI 93718-01
Iron HR	0.00 to 5.00 mg/L (ppm)	phenantroline	HI 93721-01
Iron LR	0 to 400 µg/L	TPTZ	HI 93746-01**
Magnesium	0 to 150 mg/L (ppm)	calmagite	HI 937520-01**
Manganese HR	0.0 to 20.0 mg/L (ppm)	periodate	HI 93709-01
Manganese LR	0 to 300 µg/L	PAN	HI 93748-01**
Molybdenum	0.0 to 40.0 mg/L (ppm)	mercaptoacetic acid	HI 93730-01
Nickel HR	0.00 to 7.00 g/L	photometric	HI 93726-01
Nickel LR	0.000 mg/L to 1.000 mg/L (ppm)	PAN	HI 93740-01**
Nitrate	0.0 to 30.0 mg/L (ppm)	cadmium reduction	HI 93728-01
Nitrite HR	0 to 150 mg/L (ppm)	ferrous sulfate	HI 93708-01
Nitrite LR	0.00 to 0.35 mg/L (ppm)	diazotization	HI 93707-01
Oxygen, Dissolved (DO)	0.0 to 10.0 mg/L (ppm)	Winkler	HI 93732-01
Ozone	0.00 to 2.00 mg/L (ppm)	DPD	HI 93757-01
pH	6.5 to 8.5 pH	phenol red	HI 93710-01
Phosphate HR	0.0 to 30.0 mg/L (ppm)	amino acid	HI 93717-01
Phosphate LR	0.00 to 2.50 mg/L (ppm)	ascorbic acid	HI 93713-01
Phosphorus	0.0 to 15.0 mg/L (ppm)	amino acid	HI 93706-01
Potassium HR	20 to 200 mg/L (ppm)	turbidimetric tetraphenylborate	HI 93750-01
Potassium MR	10 to 100 mg/L (ppm)	turbidimetric tetraphenylborate	HI 93750-01
Potassium LR	0.0 to 20.0 mg/L (ppm)	turbidimetric tetraphenylborate	HI 93750-01
Silica	0.00 to 2.00 mg/L (ppm)	heteropoly blue	HI 93705-01
Silver	0.000 to 1.000 mg/L (ppm)	PAN	HI 93737-01**
Sulfate	0 to 150 mg/L (ppm)	turbidimetric	HI 93751-01
Zinc	0.00 to 3.00 mg/L (ppm)	zincon	HI 93731-01

Notes:  
 † Method with chromium-sulfuric acid is officially recognized by EPA for wastewater analysis.  
 ♦ The HI 93754F-25 and HI 93754G-25 method follows the official method ISO 15705.  
 ♦♦ This method is recommended for general purpose analysis with no chloride interference.  
 ‡ Unless noted otherwise, all reagent codes ending with -01 are for 100 tests. Replace the -01 with -03 for 300 tests.  
 \* For Chlorine, liquid reagents are available.  
 \*\* Reagents for 50 tests, replace -01 for -03 for 150 tests



HI 3898

## Chloride Test Kit

### Quick Chloride Tests

The HI 3898 is a chloride concentration test kit developed according to the ISO 15705:2002 method.

This very important test is recommended by ISO, since an excessive presence of chloride can interfere with the COD analysis.

This test gives a fast YES/NO reply to the question if chloride will interfere with the COD analysis. If chloride concentration is greater than the official maximum level, the solution turns yellow and the sample needs to be diluted before performing the COD test, otherwise if the solution is orange-brown, the sample doesn't need to be diluted.

The maximum level allowed is 1000 ppm of Cl<sup>-</sup> following ISO methods, or 2000 ppm of Cl<sup>-</sup> for US EPA, APHA, AWWA and WEF methods.



SPECIFICATIONS	HI 3898
Range	1000 ppm Cl <sup>-</sup> (ISO) 2000 ppm Cl <sup>-</sup> (EPA)
Analysis Method	visual evaluation
Sample Volume	2 mL
Number of Tests	100
Dimensions	120 x 110 x 90 mm (4.7 x 4.3 x 3.5")
Weight	200 g (7.0 oz.)

### ORDERING INFORMATION

HI 3898 is supplied with 25 mL chloride titrant (4), chloride Indicator 7 mL (1), glass cuvette with plastic stopper (1) and calibrated syringes of 1.0 mL with tip (2).

### SOLUTIONS

HI 93703-50 Cuvette cleaning solution, 230 mL

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