

COD Meter and Multiparameter Photometer

for Wastewater Analysis

- Backlit Graphic LCD Display
- Data Logging
 - Users can store up to 200 readings by simply pressing the LOG key. Logged readings are recalled by pressing the dedicated RCL button. Stored data includes parameter, test results, sample number, lot number, instrument ID, date and time.
- PC Connectivity
- 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
- 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.



From ammonia to phosphorus, the HI83214 benchtop photometer offers 15 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 HI83214 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.

Specifications

HI83214

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
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	dichromate EPA†	HI93754A-25
		dichromate mercury-free°°	HI93754D-25
		dichromate ISO°	HI93754F-25
COD MR	0 to 1500 mg/L	dichromate EPA†	HI93754B-25
		dichromate mercury-free°°	HI93754E-25
		dichromate ISO°	HI93754G-25
COD HR	0 to 15000 mg/L	dichromate	HI93754C-25

Parameter	Range	Method	Reagent Code
Ammonia, LR	0.00 to 3.00 mg/L	Nessler	HI93764A-25
Ammonia, HR	0 to 100 mg/L	Nessler	HI93764B-25
Chlorine, Free	0.00 to 5.00 mg/L	DPD	HI93701-01, HI93701-03
Chlorine, Total	0.00 to 5.00 mg/L	DPD	HI93711-01, HI93711-03
Nitrate	0.0 to 30.0 mg/L	chromotropic acid	HI93766-50
Nitrogen, Total	0.0 to 25.0 mg/L	chromotropic acid	HI93767A-50
Nitrogen, Total HR	10 to 150 mg/L	chromotropic acid	HI93767B-50
Phosphorus, Reactive	0.00 to 5.00 mg/L	ascorbic acid	HI93758A-50
Phosphorus, Acid Hydrolyzable	0.00 to 5.00 mg/L	ascorbic acid	HI93758B-50
Phosphorus, Total	0.00 to 3.50 mg/L	ascorbic acid	HI93758C-50
Phosphorus, Reactive HR	0.0 to 100.0 mg/L	vanadomolybdophosphoric acid	HI93763A-50
Phosphorus, Total HR	0.0 to 100.0 mg/L	vanadomolybdophosphoric acid	HI93763B-50

Ordering Information

HI83214-01 (115V) and **HI83214-02** (230V) is supplied with glass cuvettes (5), 9V batteries (2), 12 VDC adapter and instructions

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.

COD Certified Reagents



HI93754A

Certified COD Reagents

Hanna COD reagents are available in the following formats:

Each box of 25 vials is supplied with a Hanna certificate of quality.

The reagents are traceable to NIST SRM® 930.

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



HI93754E

- **Three measurement ranges to satisfy every need**
 - As COD levels vary depending on the application and process measuring points, Hanna offers reagents to cover three separate ranges. Simply choose the best range for the application:
 - low range: 0 to 150 mg/L O₂
 - medium range: 0 to 1500 mg/L O₂
 - high range: 0 to 15000 mg/L O₂
- **Accurate and repeatable measurements**
 - Hanna COD reagents have been developed in accordance with Standard Methods 5220D, USEPA 410.4 and ISO 15705:2002 methods.
- **Pre-dosed vials**
 - Hanna vials contain approximately 3 mL of pre-dosed reagent. The operator just needs to add a small quantity of the sample.
- **Quick and accurate measurements**
 - With pre-dosed vials, test preparation time is dramatically reduced. There is no time-consuming reagent preparation procedure or glassware cleaning.
- **Safe reagents**
 - Hanna COD reagents are safe for operators and the environment. Vials and caps have been designed to avoid accidental reagent spills. Due to the pre-dosed reagents, the amount of chemicals and handling time is minimized.



HI740216 Test Tube Cooling Rack

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