

HI 98186

Dissolved Oxygen and BOD Meter

- Extended DO range up to 50 ppm and 600% saturation
- Built-in barometer
- Salinity, pressure and temperature compensation
- Backlit, graphic LCD display
- Calibration reminder
- Log on demand (400 samples)
- Auto HOLD
- GLP features
- PC connectivity via USB

BOD gives an indication of the biodegradable organic material present in a sample of water. The dissolved oxygen concentration is measured before and after an incubation period of 5 days and the BOD is calculated in mg per liter from the difference.

OUR and SOUR are used to determine the oxygen consumption or respiration rate. OUR is measured in mg of oxygen consumed per liter per hour, and SOUR is measured in mg of oxygen consumed per gram of volatile suspended solids per hour.



HI 98186 portable Dissolved Oxygen Meter has extended ranges of up to 50 ppm or 600% saturation. This instrument includes barometric pressure measurement and calibration with a user selectable unit (mmHg, atm, mbar, psi, kPa) as well as a 1 or 2 point temperature calibration. Salinity, pressure and temperature compensations enhance the precision of your readings.

With its internal barometer, the instrument is able to automatically compensate for changes in barometric pressure so there is no need for charts, altitude information or external barometric pressure information. Salinity compensation in water allows direct determination of dissolved oxygen in saline waters.

Other features include measurement and methods for BOD (biochemical oxygen demand), OUR (oxygen uptake rate), and SOUR (specific oxygen uptake rate).

The HI 98186's log on-demand features allows users to store up to 400 samples that can be later transferred to a PC with the HI 920013 USB cable and HI 92000 software.

An "Out Of Calibration Range Warning" can be activated to alert the user in the event that a reading is taken too far from the calibration's periphery. A combination of dedicated and soft keys allows easy, intuitive operation in a choice of languages. Comprehensive GLP data is directly accessible by pressing the GLP key and a contextual Help menu can be accessed to obtain on-screen information and assistance about each feature at the touch of a button.

Designed for field use, this instrument can be easily operated with one hand and is housed in a rugged carrying case. The inductive charger can either be plugged into a standard 115V socket with the adapter included or a 12 VDC source, such as a car's 12 V accessory outlet.

**BOD results**

BOD is calculated in mg per liter from the difference between the initial and final dissolved oxygen concentration readings.

**OUR results**

Measured in mg of oxygen consumed per L per hour.

**SOUR results**

Measured in mg of oxygen consumed per g of volatile suspended solids per hour.

**BOD parameters and records**

All necessary parameters for BOD testing can be set and displayed at once.

A list of all saved BOD data can be easily retrieved and shown on the LCD display.



HI 76407A/P

Easy, Screw Cap DO Membranes

Carry Extras for Assurance

When the PTFE (PolyTetraFluoro-Ethylene) membrane of the protective cap wears, it is always good to have a back-up.

HI 76407A/P Contains 5 ready-to-use, replacement membranes.

ORDERING INFORMATION

HI 98186-01 (115V) and HI 98186-02 (230V) are supplied with HI 76407/4F DO probe, spare membranes (2), HI 70415 electrolyte solution (30 mL), rechargeable batteries, HI 710042 inductive battery charger with power adapter, 12 VDC adapter, instructions and rugged carrying case.

PROBES

HI 76407/4F Polarographic DO probe with protective sleeve, internal temperature sensor, DIN connector and 4 m (13') cable

HI 76407/10F Polarographic DO probe with protective sleeve, internal temperature sensor, DIN connector and 10 m (33') cable

HI 76407A/P Replacement membranes (5)

SOLUTIONS

HI 7040M Zero oxygen solution, 230 mL
 HI 7040L Zero oxygen solution, 500 mL
 HI 70415 Electrolyte solution, 30 mL
 HI 7041M Refilling electrolyte solution (230 mL)
 HI 7041L Refilling electrolyte solution (500 mL)

SPECIFICATIONS		HI 98186
Range	Dissolved Oxygen	0.00 to 50.00 mg/L (ppm); 0.0 to 600.0 % saturation
	Barometric Pressure	450 to 850 mmHg
	Temperature	-20.0 to 120.0°C (-4.0 to 248.0°F)
Resolution	Dissolved Oxygen	0.01 mg/L (ppm); 0.1% saturation
	Barometric Pressure	1 mm Hg
	Temperature	0.1°C/°F
Accuracy (@20°C/68°F)	Dissolved Oxygen	±1.5% of reading ±1 digit
	Barometric Pressure	±3 mmHg within ±15% from the calibration point
	Temperature	±0.2°C/±0.4°F (excluding probe error)
Measurement Modes		
Calibration	Dissolved Oxygen	direct DO, BOD (biochemical oxygen demand); OUR (oxygen uptake rate); SOUR (specific oxygen uptake rate) automatic one or two point at 100 % (8.26 mg/L) and 0 % (0 mg/L); manual one point using a value entered by the user in % saturation or mg/L
	Barometric Pressure	one point at any in range pressure value
	Temperature	one or two point at any in range temperature value
Compensation	Barometric	automatic from 450 to 850 mmHg
	Salinity	automatic from 0 to 70 g/L
	Temperature	automatic from 0.0 to 50.0 °C (32.0 to 122.0°F)
Probe	HI 76407/4F polarographic DO probe with protective sleeve, internal temperature sensor, DIN connector and 4m (13') cable (included)	
Logging	log on demand, 400 samples	
PC Connectivity	opto-isolated USB (with HI 92000 software)	
Battery Type / Life	1.2V (4) AA rechargeable batteries/approximately 200 hours of continuous use without backlight	
Auto-off	user selectable: 5, 10, 30, 60 min or can be disabled	
Environment	0 - 50 °C (32 - 122°F) RH max 100%	
Dimensions	226.5 x 95 x 52 mm (8.9 x 3.75 x 2")	
Weight	525 g (1.1 lbs.)	

For a complete list of Solutions, Probes and Accessories, see the end of this section.