

- Undiluted samples
- AutoTemp function for delayed start of cold samples
- Non-volatile memory of measured values

# „BOD self-check measurement“/ Respiration/ Biogas Determination

## With OxiTop® and OxiTop® Control

### Mercury-free measurement

Biochemical oxygen demand BOD determination is still one of the most important parameters in water resource management. It can be used to evaluate the impact of biodegradable substances in waters and waster water. With its OxiTop® systems, WTW offers a unique, modular and mercury-free instrument system. It is not only suitable for BOD determination, but also for measuring biodegradability and depletion.

The advantages of OxiTop® and OxiTop® Control: simple operation, improved controllability and non-toxicity, and measuring ranges of up to 400 000 mg/l BOD (with OxiTop® Control OC 110). As the measured pressure is automatically converted the values can be directly read as mg/l BOD.

## Application Range

	OxiTop®	OxiTop® Control OC 100	OxiTop® 110
Application	BOD routine	BOD routine, BOD standard	BOD routine, standard and BOD special, Respiration/Dilution, Soil respiration, Biodegradability, Biogas determination
BOD range	0 – 4,000 mg/l	0 – 4,000 mg/l	0 – 400,000 mg/l
Measured value memory	5 days	0.5 h – 99 days	0.5 h – 99 days
Pressure mode	—	—	Pressure p 500 – 1.350 hPa
Sample volume	Fixed	Fixed	Definable

## OxiTop® Complete Sets for 6 or 12 Measuring Vessels







The complete packages have been assembled so that they contain everything necessary to carry out the measurements. The make up of each package depends on the application and varies by number of vessels, controllers and utensils for sample preparation.

Special stirring platforms were developed in order to maintain a constant temperature and guarantee optimum oxygen distribution in the sample. These stirrer platforms have space for either 6 or 12 standard bottles or 6 large vessels for special applications.

### Applicable systems

- **BOD**  
OxiTop® IS 6 / IS 12  
OxiTop® Control 6/12
- **Soil respiration**  
OxiTop® Control B6M / B6
- **OECD / aerobic applications**  
OxiTop® Control A6 / A12  
OxiTop® Control S6 / S12
- **Biogas determination**  
OxiTop® Control AN 6 / AN 12
- **Microbial applications**  
OxiTop® Control AN 6 / AN 12  
OxiTop® Control A6 / A12

## Composition of complete packages

						
	<b>OxiTop®</b>	<b>6 / 12</b>	<b>B6 / B6M</b>	<b>OxiTop® Control</b>	<b>S6 / S12</b>	<b>AN6 / AN12</b>
<b>Accessories</b>	<b>IS 6 / IS 12</b>	<b>6 / 12</b>	<b>B6 / B6M</b>	<b>A6 / A12</b>	<b>S6 / S12</b>	<b>AN6 / AN12</b>
<b>Vessel with measuring head connection</b>	Amber bottle, 510 ml with rubber sleeve	Amber bottle, 510 ml with rubber sleeve	Duran bottle 500 ml / 1.0 l vessel; with adapter	1.0 l vessel / 250 ml vessel with adapter	Amber bottle, 510 ml with rubber sleeve	1000 ml vessel/ 250 ml vessel
<b>Number</b>	6 / 12	6 / 12	6 / 6	6 / 12	6 / 12	6 / 12
<b>Measuring heads</b>	OxiTop®	OxiTop®-C	OxiTop®-C	OxiTop®-C	OxiTop®-C	OxiTop®-C
<b>Stirrer</b>	IS 6/IS 12	IS 6/IS 12	—	IS 6-Var/IS 12	IS 6/IS 12	IS 6-Var/IS 12
<b>Controller</b>	—	OC 100	OC 110	OC 110	OC 110	OC 110
<b>Software + Cable</b>	—	—	•	•	•	•
<b>NaOH</b>	•	•	—	•	•	•
<b>Nitrification inhibitor</b>	•	•	—	•	•	•
<b>Overflow measuring flask</b>	164 / 432 ml	164 / 432 ml	—	—	—	—
<b>Stirrer bars</b>	6/12	6/12	—	6/12	6/12	6/12
<b>Stirrer bar remover</b>	•	•	—	•	•	•
<b>Blocks of chart paper</b>	•	•	—	—	—	—

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BOD self-check measurement

- High-precision
- 5-day automatic storage of measured values
- Mobile
- Extendable

Technical Data

	OxiTop® measuring head
Measuring principle	Manometric with pressure sensor
Quantity measured	BOD <sub>n</sub>
Measuring range	0 ... 40 digits (display units) equals 0 ... 40 / 80 / 200 / 400 / 800 / 2000 / 4000 mg/L BOD
Display accuracy	±1 digit (± 3.55 hPa)
Operating range	500 - 1100 hPa
Memory	For BOD <sub>5</sub> : 1 per day
Ambient temperature	Storage: -13 ... 149 °F (-25 ... +65 °C) Operations: 41 ... 122 °F (+5 ... +50 °C)
Dimensions	H: 2.7 in (69 mm), Ø 2.8 in (70 mm)

OxiTop® IS 6, IS 12

Complete packages for 6 or 12 simultaneous measurements

Measurement using OxiTop® is based on pressure measurement in a closed system: microorganisms in the sample consume the oxygen and form CO<sub>2</sub>. This is absorbed by NaOH, creating a vacuum which can be read directly as a measured value in mg/l BOD.

The used sample volume regulates the amount of oxygen available for a complete BOD. Measurement ranges of up to 4,000 mg/l can be measured using different volumes.

The OxiTop® heads (green and yellow for differentiation of inflow/outflow) have an **AutoTemp function**: if the sample temperature is too cold, the start of measurement is automatically delayed (by at least 1 hour) until a constant temperature has been reached.

Apart from the **automatic** storage of 5 measured values (1 value per day), further measured values can be read at all times during or after the period of 5 days, which permits the tracking of check values or measurements over longer periods.



OxiTop® IS 12



Ordering Information

		Order No.
OxiTop® IS 6	Complete package, ready for use, for 6 simultaneous measurements, with IS 6 Inductive Stirring System, for mains operation 230 V / 50/60 Hz and 6 OxiTop® measuring systems, including accessories	208 210
OxiTop® IS 12-6	Complete package, ready for use, for 6 simultaneous measurements (extendable to 12 simultaneous measurements), with IS 12 Inductive Stirring System, for mains operation 230 V / 50/60 Hz and 6 OxiTop® measuring systems, including accessories	208 212
OxiTop® IS 12	Complete package, ready for use, for 12 simultaneous measurements, with IS 12 Inductive Stirring System, for mains operation 230 V / 50/60 Hz and 12 OxiTop® measuring systems, including accessories	208 211
Note: versions for 120 VAC/60 Hz see brochure "Product Details"		

## BOD self-check measurement – for a larger number of samples with simple sample management

### OxiTop® Control 6, OxiTop® Control 12



OxiTop® Control 12

- Controller-driven
- Simultaneous measurement of up to 100 samples
- Statistical evaluation
- Automatic sample ID
- Worldwide approved method

#### Complete package for 6 or 12 simultaneous measurements

OxiTop® Control is the logical further development of the successful OxiTop® system using software-controlled functions and infrared interface to communicate with a handy controller, the OC 100. This system enables the simultaneous and grouped start, management, storage and tracking of 100 measuring heads via the controller and tracked on a large display with graphic evaluation. Data can be transferred to the PC for evaluation and documentation via the **AK-540/B** cable (order no. 902 842) and the communication program **Achat OC** (order no. 208 990).

Controller OC 110 in combination with the OxiTop® Control S6 / S12 is ideal for users with other applications apart from BOD (see page 76).

#### Check sampling progress!

The data can be called up at any time, even during sampling, thus enabling checking of the samples for errors. The display of the progress curve allows immediate detection of irregularities and interferences, such as a BOD value set too high for the volume used or undesired nitrification. Corrections can thus be made at an early stage.



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