



Oxygen active T

M290

0.1 - 10 mg/L O<sub>2</sub>

DPD

### Instrument specific information

The test can be performed on the following devices. In addition, the required cuvette and the absorption range of the photometer are indicated.

Instrument Type	Cuvette	$\lambda$	Measuring Range
MD 600, MD 610, MD 640, MultiDirect, PM 620, PM 630	ø 24 mm	530 nm	0.1 - 10 mg/L O <sub>2</sub>
SpectroDirect, XD 7000, XD 7500	ø 24 mm	510 nm	0.1 - 10 mg/L O <sub>2</sub>

### Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
DPD No. 4	Tablet / 100	511220BT
DPD No. 4	Tablet / 250	511221BT
DPD No. 4	Tablet / 500	511222BT
DPD No. 4 Evo	Tablet / 100	511970BT
DPD No. 4 Evo	Tablet / 250	511971BT
DPD No. 4 Evo	Tablet / 500	511972BT

### Application List

- Pool Water Control

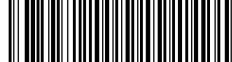
### Preparation

1. When preparing the sample, Oxygen outgassing, e.g. through the pipette or shaking, must be avoided.
2. The analysis must take place immediately after taking the sample.



## Notes

1. Active Oxygen is a synonym for a common disinfectant (based on "Oxygen") in treating swimming pools.
2. EVO tablets can be used as an alternative to the corresponding standard tablet (e.g. DPD No. 4 EVO instead of DPD No. 4).



## Determination of Oxygen, active with Tablet

Select the method on the device.

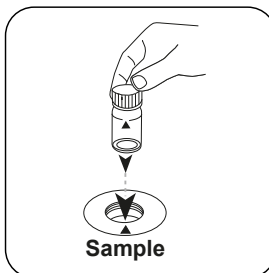
For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500



Fill 24 mm vial with **10 mL sample**.



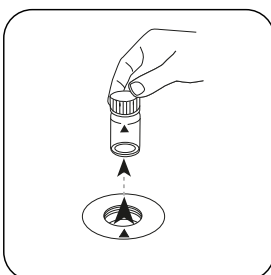
Close vial(s).



Place **sample vial** in the sample chamber. Pay attention to the positioning.



Press the **ZERO** button.

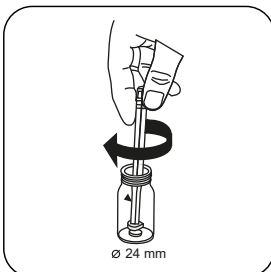


Remove the vial from the sample chamber.

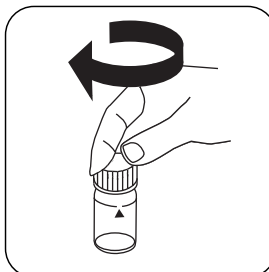
For devices that require **no ZERO measurement**, start here.



Add **DPD No. 4 tablet**.



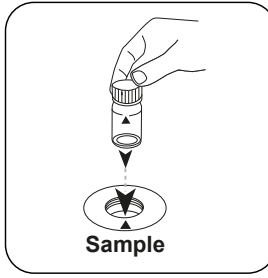
Crush tablet(s) by rotating slightly.



Close vial(s).



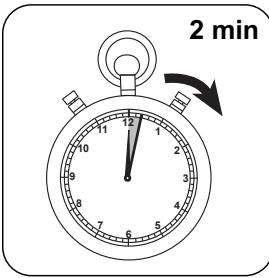
Dissolve tablet(s) by inverting.



Place **sample vial** in the sample chamber. Pay attention to the positioning.

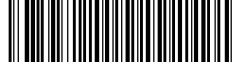


Press the **TEST** (XD: **START**) button.



Wait for **2 minute(s) reaction time**.

Once the reaction period is finished, the measurement takes place automatically. The result in mg/L Active Oxygen appears on the display.



## Chemical Method

DPD

### Calibration function for 3rd-party photometers

$$\text{Conc.} = a + b \cdot \text{Abs} + c \cdot \text{Abs}^2 + d \cdot \text{Abs}^3 + e \cdot \text{Abs}^4 + f \cdot \text{Abs}^5$$

	∅ 24 mm	□ 10 mm
a	$5.11265 \cdot 10^{-2}$	$5.11265 \cdot 10^{-2}$
b	$7.65587 \cdot 10^{+0}$	$1.64601 \cdot 10^{+1}$
c	$1.01147 \cdot 10^{+0}$	$4.67552 \cdot 10^{+0}$
d		
e		
f		

## Interferences

### Persistent Interferences

- All oxidising agents in the samples react like active oxygen, which leads to higher results.