H_2O_2 HR L 214
40 - 500 mg/l H_2O_2 HP2
Titanium Tetrachloride / Acid

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	λ	Measuring Range
MD 200, MD 600, MD 610, MD 640, MultiDirect, PM 620, PM 630, XD 7000, XD 7500	ø 24 mm	530 nm	40 - 500 mg/l H_2O_2

Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
Reagent for Hydrogen Peroxide	Liquid / 15 ml	424991

Hazard Notes

1. The reference reagent contains a 25% sulphuric acid solution. It is recommended to wear appropriate protective clothing (protective goggles/gloves).

Application List

- Waste Water Treatment
- Drinking Water Treatment
- Raw Water Treatment
- Disinfection Control

Preperation

1. The determination is held in strong acid medium. In the case of strongly alkaline samples (pH > 10), the samples must be acidified before measurement (with a 5% sulphuric acid solution at a ratio of 1:1).

Notes

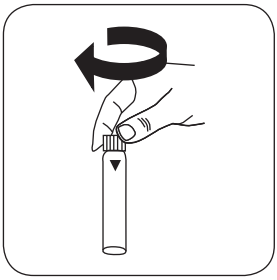
1. The sample can be measured even 24 hours after the colour reaction.

Implementation of the provision Hydrogen peroxide HR with fluid reagent

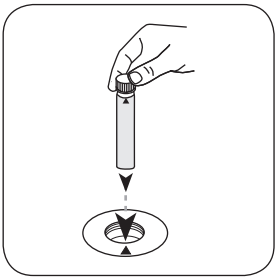
Select the method on the device

For this method, no ZERO measurements are to be carried out with the following devices: XD 7000, XD 7500

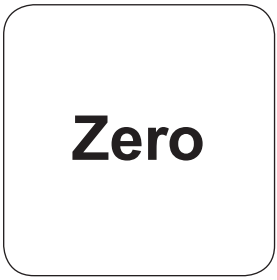
Fill 16 mm vial with **10 ml sample**.



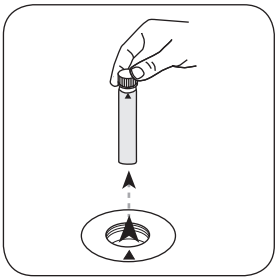
Close vial(s).



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

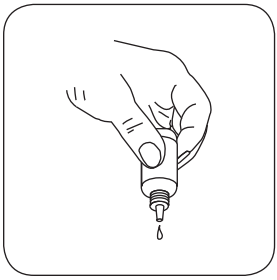


Press the **ZERO** button.

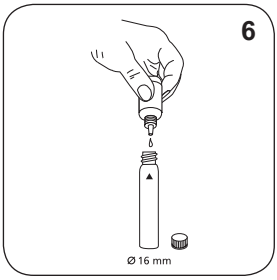


Remove **vial** from the sample chamber.

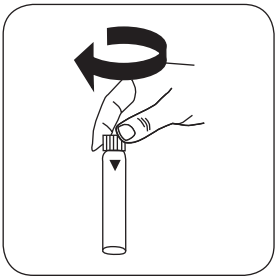
For devices that require **no ZERO measurement** , **start here**.



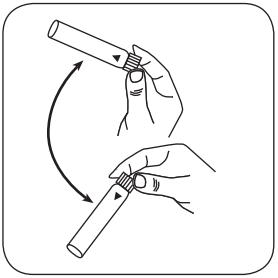
Hold cuvettes vertically and add equal drops by pressing slowly.



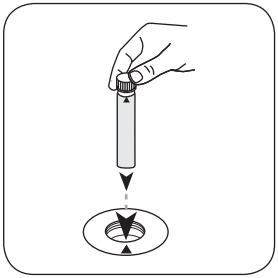
Add **6 drops H_2O_2-Reagent Solution**.



Close vial(s).



Invert several times to mix the contents.



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

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

The result in mg/l H_2O_2 appears on the display.

Chemical Method

Titanium Tetrachloride / Acid

Interferences

Removeable Interferences

1. Colour interference is eliminated as follows.
   A) Fill a clean vial with 10 ml of the water sample. Carry out zero calibration.
   b) Measure the sample without the addition of reagents. (Result B)
   c) Then measure the same sample with the addition of the reagents (Result A).
   Calculation of H_2O_2 Concentration = Result A - Result B.
2. Particles in the sample solution or turbidity distort the analysis and must be eliminated. This can be through centrifuging or simply filtering the sample solution prior to performing the measurement. Falsification of the measurement results should also be expected when working with coloured solutions.

[a)] determination of free, combined and total | [b)] Reactor is necessary for COD (150 °C), TOC (120 °C) and total -chromium, - phosphate, -nitrogen, (100 °C) | [c)] MultiDirect: Adapter is necessary for Vacu-vials© (Order code 19 20 75) | [d)] Spectroquant© is a Merck KGaA Trademark | [e)] alternative reagent, used instead of DPD No.1/No.3 in case of turbidity in the water sample caused by high concentration of calcium and/or high conductivity | [f)] additionally required for determination of bromine, chlorine dioxide and ozone in the presence of chlorine | [g)] Reagent recovers most insoluble iron oxides without digestion | [h)] additionally required for samples with hardness values above 300 mg/l $CaCO_3$ | [i)] high range by dilution | [#] including stirring rod, 10 cm