

1.10337.0001

MQuant™ Peroxide Test



1. Method

Peroxidase transfers peroxide oxygen to an organic redox indicator. This produces a yellow-brown oxidation product. The peroxide concentration is measured **semiquantitatively** by visual comparison of the reaction zone of the test strip with the fields of a color scale.

Each strip also features a second reaction zone (**alert zone**). This zone changes color in the presence of high peroxide concentrations (from approx. 2000 mg/l H₂O₂ on) and of interfering concentrations of peracetic acid.

2. Measuring range and number of determinations

Measuring range / color-scale graduation	Number of determinations
100 - 200 - 400 - 600 - 800 - 1000 mg/l H ₂ O ₂	100

3. Applications

Determination of inorganic peroxides in aqueous solutions

Sample material:

Disinfectant solutions

4. Influence of foreign substances

This was checked in solutions with 400 and 0 mg/l H₂O₂. The determination is not yet interfered with up to the concentrations of foreign substances given in the table. Interfering concentrations of peracetic acid are indicated by the alert zone.

Concentrations of foreign substances in mg/l or °e			
Ascorbate	100	Free chlorine (hypochlorite)	100
Ca ²⁺	500	Combined chlorine (chloramine T)	100
Fe ²⁺	5	Formaldehyde	1000
Fe ³⁺	5	Total hardness	88 °e
NO ₃ ⁻	500		
SO ₃ ²⁻	100		

5. Reagents and auxiliaries

The test strips are stable up to the date stated on the pack when stored closed at +2 to +8 °C.

Package contents:

Tube containing 100 test strips

Other reagents:

MColorpHast™ Universal indicator strips pH 0 - 14, Cat. No. 109535

Sodium hydroxide solution 1 mol/l TitriPUR®, Cat. No. 109137

Sulfuric acid 0.5 mol/l TitriPUR®, Cat. No. 109072

Hydrogen peroxide 30 % H₂O₂ (Perhydrol®) GR for analysis, Cat. No. 107209

6. Preparation

- Samples containing more than 1000 mg/l H₂O₂ must be diluted with distilled water.
- **The pH must be within the range 2 - 7.** Adjust, if necessary, with sodium hydroxide solution or sulfuric acid.

7. Procedure

Protect the reaction zones from light (also during the reaction time)!

Immerse **both reaction zones** of the test strip in the pre-treated sample (15 - 25 °C) for **1 sec.**

Shake off excess liquid from the strip and **after 30 sec** determine with which color field on the label the color of the H₂O₂ reaction zone coincides most exactly.

The color of the alert zone must not change to blue during this time!

Read off the corresponding result in mg/l H₂O₂.

Notes on the measurement:

- The color of the reaction zone may continue to change after the specified reaction time has elapsed. This must not be considered in the measurement.
- **In the event that the alert zone changes color, the reaction zone may indicate false-low peroxide concentrations!**
- If the color of the reaction zone is equal to or more intense than the darkest color on the scale, repeat the measurement using **fresh**, diluted samples until a value of less than 1000 mg/l H₂O₂ is obtained.

Concerning the result of the analysis, the dilution (see also section 6) must be taken into account:

Result of analysis = measurement value x dilution factor

8. Method control

To check test strips and handling:

Make up 1.8 ml of Perhydrol® (H₂O₂ 30 % $\hat{=}$ 333 000 mg/l H₂O₂) to 1 l with distilled water, mix, and analyze **immediately (solution is not stable)** as described in section 7. The content of H₂O₂ determined should be 600 mg/l.

Additional notes see under www.qa-test-kits.com.

9. Note

Reclose the tube containing the test strips immediately after use.

