

Identify all peroxide-generating chemicals in your area:

- isopropyl ether
- diethyl ether
- tetrahydrofuran
- 1,4-dioxane
- dimethoxyethane
- diglyme
- methylisobutyl ketone
- 2-butanol
- cyclohexene

Note about isopropyl ether:

Caution! Peroxides in isopropyl ether can explode without evident precipitation and can do so even at low concentrations

- Test for peroxides frequently (especially prior to use)

Obtain appropriate number of peroxide testing strips from the ORS (Tech NG71)

Implement the following steps if:

The container has never been opened

The container has been opened

It is past expiration date

It is not past expiration date

The expiration date is unavailable and/or container age is unclear

The chemical has been tested for peroxides in the last 30 days (peroxides = 0 ppm)

The chemical has NOT been tested for peroxides in the last 30 days

You must dispose of this container

- Test for peroxides
- Prepare disposal label (that states **peroxide level** and the **date when tested**)

Keep the container as is

But—remember to **test periodically (every 30 days) once opened**, or **dispose of it once it is past its expiration date or >6 months old.**

Test the chemical for peroxides

Leave the container as is. Re-test after 30 days have elapsed (or earlier)

Peroxides = 0 ppm

Peroxides >0 ppm

Remember: Any time you test a peroxide-forming chemical and peroxide content is >0 ppm, dispose of it as soon as possible (stating the peroxide content)

Supelco®

1.10011.0001
1.10011.0002MQuant®
Peroxide Test**1. Method**

Peroxidase transfers peroxide oxygen to an organic redox indicator. This produces a blue 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.

2. Measuring range and number of determinations

Measuring range / color-scale graduation	Number of determinations
0.5 - 2 - 5 - 10 - 25 mg/l H ₂ O ₂	25 (Cat. No. 1.10011.0002) or 100 (Cat. No. 1.10011.0001)

3. Applications

This test measures inorganic peroxides in aqueous solutions and organic solvents. Polymeric peroxides are not at all or only incompletely measured.

Sample material:

Simple ethers
UHT milk
Pickling and copper-stripping baths
Bleaching and oxidizing agents (paper and textile industries)
Disinfectant and rinsing solutions (e.g. food technology, laundries)
Swimming-pool water

4. Influence of foreign substances

This was checked individually in solutions with 12.5 and 0 mg/l H₂O₂. The determination is not yet interfered with up to the concentrations of foreign substances given in the table. Cumulative effects were not checked; such effects can, however, not be excluded.

Concentrations of foreign substances in mg/l			
CrO ₄ ²⁻	10	IO ₄ ⁻	40
[Fe(CN) ₆] ⁴⁻	10	MnO ₄ ⁻	2
[Fe(CN) ₆] ³⁻	10	S ₂ O ₈ ²⁻	20
Hg ⁺	250	VO ₃ ⁺	5

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.

Failure to adhere to the storage temperature of +2 to +8°C will lower the shelf life of the test strips and the accuracy of the measuring values.

Package contents:

Tube containing 25 test strips
(Cat. No. 1.10011.0002)
or
containing 100 test strips
(Cat. No. 1.10011.0001)

Other reagents:

MQuant® Universal indicator strips pH 0 - 14,
Cat. No. 109535
Sodium acetate anhydrous GR for analysis,
Cat. No. 106268
Hydrochloric acid 1 mol/l Titripur®,
Cat. No. 109057
Diethyl ether for analysis EMSURE®,
Cat. No. 100921
Hydrogen peroxide 30 % H₂O₂ (Perhydrol®)
GR for analysis, Cat. No. 107209

6. Preparation

- Samples containing more than 25 mg/l H₂O₂ must be diluted with distilled water or peroxide-free ether.
- **The pH of the aqueous sample must be within the range 2 - 12.**
If necessary, buffer the sample with sodium acetate or, respectively, adjust the pH with hydrochloric acid.

7. Procedure

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

Determination in aqueous solutions:

Immerse the reaction zone of the test strip in the pretreated sample (**15 - 30 °C**) for **1 sec.**

Allow excess liquid to run off via the long edge of the strip onto an absorbent paper towel and **after 15 sec** determine with which color field on the label the color of the reaction zone coincides most exactly.

Read off the corresponding result in mg/l H₂O₂.

Notes on the measurement:

- Every blue coloration **within 3 min** can be interpreted as a positive result.
- If the color of the reaction zone is equal to or more intense than the darkest color on the scale or if another color emerges, repeat the measurement using **fresh** samples diluted with distilled water or, respectively, peroxide-free ether until a value of less than 25 mg/l H₂O₂ is obtained.

Determination in organic solvents (readily volatile ethers):

Immerse the reaction zone of the test strip in the pretreated sample (**15 - 30 °C**) for **1 sec.**

After the solvent has evaporated (gently fan the strip back and forth for **3 - 30 sec**), humidify the reaction zone for **1 sec with 1 drop of distilled water** and allow excess liquid to run off via the long edge of the strip onto an absorbent paper towel.

After 15 sec assess the color of the reaction zone.

Note on the measurement:

It is recommended to treat the measurement results obtained in organic solvents only as guideline values, since the color in appearance and intensity may vary depending on the solvent medium. In this connection every blue coloration of the reaction zone indicates that peroxide is present.

8. Method control

To check test strips and handling:
Make up 5.0 ml of Perhydrol® (H₂O₂ 30 % $\hat{=}$ 333 000 mg/l H₂O₂) to 500 ml with distilled water and mix. Take 1.5 ml of this solution, make up to 500 ml with distilled water, and mix. Subsequently analyze **immediately (solution is not stable)** as described in section 7. The content of H₂O₂ determined should be 10 mg/l.
Additional notes see under www.qa-test-kits.com.

9. Note

Reclose the tube containing the test strips immediately after use.



Don't use printout for evaluation!!

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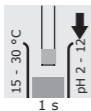
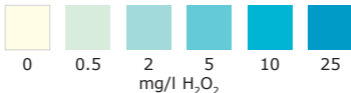
Supelco

100 Tests / 25 Tests

MQuant®

Peroxide Test

Peroxid-Test



For determination in organic solvents see package insert

Bestimmung in organischen Lösungsmitteln s. Packungsbeilage



Lot

min. shelf life (YYYY/MM/DD)

Store cold and dry • (2 - 8 °C) • Kalt und trocken lagern

Merck KGaA, 64271 Darmstadt, Germany
EMD Millipore Corporation, Burlington, MA 01803, USA
Sigma-Aldrich Canada Co. or Millipore (Canada) Ltd. 2149
Winston Park, Dr. Oakville, Ontario, L6H 6J8