

1.100057.0001

MQuant™ Nitrite Test

NO₂⁻

1. Method

In the presence of an acid buffer nitrite ions react with an aromatic amine to form a diazonium salt, which in turn reacts with N-(1-naphthyl)ethylenediamine to form a red-violet azo dye. The nitrite 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 ¹⁾	Number of determinations
0.5 - 1 - 2 - 5 - 10 mg/l NO ₂ ⁻	75
0.15 - 0.3 - 0.6 - 1.5 - 3.0 mg/l NO ₂ -N	

¹⁾ for conversion factors see section 8

3. Applications

Sample material:

Drinking water
Industrial water
Cooling water
Wastewater and percolating water
Aquarium water
Food after appropriate sample pretreatment
Cooling lubricants
This test is **only conditionally suited** for seawater (false-low readings).

4. Influence of foreign substances

This was checked in solutions with 5 and 0 mg/l NO₂⁻. The determination is not yet interfered with up to the concentrations of foreign substances given in the table.

Concentrations of foreign substances in mg/l or °e				
Cl ₂	1	Ni ²⁺	200	Total hardness 38 °e
Cu ²⁺	1000	NO ₃ ⁻	1000	
Fe ²⁺	200	S ²⁻	50	
Fe ³⁺	0.1	Sn 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 75 test strips

Other reagents:

MColorpHast™ Universal indicator strips pH 0 - 14, Cat. No. 109535
Sodium acetate anhydrous for analysis EMSURE®, Cat. No. 106268
L(+)-Tartaric acid for analysis EMSURE®, Cat. No. 100804
Nitrite standard solution CertiPUR®, 1000 mg/l NO₂⁻, Cat. No. 119899

6. Preparation

- Samples containing more than 10 mg/l NO₂⁻ must be diluted with distilled water.
- The pH must be within the range 2 - 12. If the pH is lower than 2, buffer the sample with sodium acetate; if it is greater than 12, adjust to approx. 3 - 5 with tartaric acid.

7. Procedure

Immerse the reaction zone of the test strip in the pre-treated sample (15 - 30 °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 reaction zone coincides most exactly.

Read off the corresponding result in mg/l NO₂⁻ or NO₂-N.

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.
- 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 10 mg/l NO₂⁻ 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. Conversions

Units required	=	units given	x	conversion factor
mg/l NO ₂ -N		mg/l NO ₂ ⁻		0.304
mg/l NO ₂ ⁻		mg/l NO ₂ -N		3.28

9. Method control

To check test strips and handling:

Dilute the nitrite standard solution with distilled water to 2 mg/l NO₂⁻ and analyze as described in section 7.

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

10. Note

Reclose the tube containing the test strips immediately after use.

