

REF 918 67

Test 1-67

01.14

NANOCOLOR® Nitrite

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Method:

Photometric determination with sulfanilic acid and 1-naphthylamine

Cuvette rectangular:	50 mm	20 mm	10 mm
Range (mg/L NO ₂ ⁻):	0.005–0.250	0.05–0.50	0.10–1.00
Factor:	0.288	00.72	01.44
Range (mg/L NO ₂ -N):	0.002–0.100	0.005–0.200	0.01–0.30
Factor:	0.088	0.215	00.42
Wavelength (HW = 5–12 nm):	520 nm		
Reaction time:	10 min (600 s)		
Reaction temperature:	20–25 °C		

Contents of reagent set:

2 x 100 mL Nitrite R1

2 x 100 mL Nitrite R2

*Reagent R2 can be rose-colored. But there is no influence for the determination.***Hazard warning:**

Reagent R1 contains acetic acid 10–25 % and sulfanilic acid 0.1–1 %, reagent R2 contains acetic acid 25–50 %.

H314, EUH208 Causes severe skin burns and eye damage. May produce an allergic reaction.
 P260, P280, P301+330+331, P303+361+353, P304+340, P305+351+338 Do not breathe vapors.
 Wear protective gloves / eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. For further information ask for a safety data sheet.

Preliminary tests:

If the order of magnitude of the concentration in a sample is not known, a preliminary test with QUANTOFIX® Nitrite (1–80 mg/L NO₂⁻, REF 913 11) rapidly gives this information. From the order of magnitude the required dilution can be calculated and prepared directly.

Interferences:

Free chlorine, organic colloids and humic acids can cause interferences.

The method can also be applied for the analysis of sea water.

Notes:

- For removal of emulsions, turbidities and color prior to the test, e.g. for nitrite in cooling lubricants, seepage water from waste deposits etc., use Reagents for sample preparation by clarification precipitation (REF 918 937).
- Please contact MACHEREY-NAGEL for special working instructions concerning a simplified procedure in a beaker (without filling up) and evaluation in 50 mm cuvette.

Procedure:

Requisite accessories: volumetric flasks 25 mL, piston pipette with tips

Pour into two separate volumetric flasks:

Test sample	Blank value
20 mL test sample (<i>the pH value of the sample must be between pH 3 and 10</i>)	20 mL distilled water
2 mL R1, mix	2 mL R1, mix
2 mL R2, mix	2 mL R2, mix

Fill up sample and blank value to 25 mL mark with distilled water and mix again. After 10 min pour into cuvettes and measure.

Measurement:

For NANOCOLOR® photometers see manual, test 1-67.

Measurement when samples are colored or turbid:

For all NANOCOLOR® photometers see manual, use key for correction value.

Photometers of other manufacturers:

Verify factor for each type of instrument by measuring standard solutions.

Analytical quality control:

NANOCONTROL Nitrite (REF 925 68)

Decreasing volume of analytical preparation:

In order to increase the number of determinations, you can work with volumetric flasks of 10 mL: 8 mL test sample + 0.8 mL R1 + 0.8 mL R2, semi-micro cuvette (REF 919 50).

Disposal:

The contents of cuvettes and flasks can be washed into drain with plenty of water.