

REF 91865

Test 1-65

08.21

NANOCOLOR® Nitrate**Method:**

Photometric determination with 2,6-dimethylphenol in sulfuric acid / phosphoric acid

10-mm cuvette	
Range (mg/L NO ₃ -N):	0.9–30.0
Range (mg/L NO ₃ ⁻):	4–140
50-mm semi-micro cuvette	
Range (mg/L NO ₃ -N):	0.10–2.50
Range (mg/L NO ₃ ⁻):	0.50–11.10
Wavelength:	345/365 nm
Reaction time:	10 min (600 s)
Reaction temperature:	20–25 °C

Contents of reagent set:

4 x 100 mL Nitrate R1
1 x 50 mL Nitrate R2

Hazard warning:

Information regarding safety can be found on the box' label and in the safety data sheet. You can download the SDS from www.mn-net.com/SDS.

Preliminary tests:

If the order of magnitude of the concentration in a sample is not known, a preliminary test with QUANTOFIX® Nitrate / Nitrite (10–500 mg/L NO₃⁻, REF 91313) rapidly gives this information. From the order of magnitude the required dilution can be calculated and prepared directly. In the same check it is possible to proof the interferences of nitrite.

Interferences:

Nitrite interferes > 1 mg/L (check with QUANTOFIX® Nitrite – REF 91311). This can be circumvented by addition of 1 spoon of amidosulphonic acid (REF 918973) to 10 mL test sample. Wait 10 min to determine nitrate. The following ions will not interfere: < 1000 mg/L Cl⁻; CO₃²⁻; < 10 mg/L Cl₂

The method can not be applied for the analysis of sea water.

Note:

This reagent set can be applied also for the analysis of total nitrogen after decomposition with NANOCOLOR® NanOx N (REF 918979). Please contact MACHEREY-NAGEL for special working instructions.

Procedure:

Requisite accessories: test tubes^[1], piston pipettes with tips

Test sample	Blank value
Place into a test tube 4.0 mL Nitrate R1, 0.5 mL test sample (the pH value of the test sample must be between pH 1 and 13) and 0.5 mL Nitrate R2. Mix by shaking gently . (Test tube becomes hot!)	Place into a test tube 4.0 mL Nitrate R1, 0.5 mL distilled water and 0.5 mL Nitrate R2. Mix by shaking gently . (Test tube becomes hot!) (Blank value stabil for 30 min.)

After 10 min pour the contents of the test tubes into cuvettes (Attention! Hot acidic mixture!) and measure.

^[1]We recommend VISOCOLOR® ECO glasses (REF 931151) that can be sealed with screw caps thus enabling the sample to be mixed safely.

Measurement:

For MACHEREY-NAGEL photometers see manual, test 1-65.

Photometers of other manufacturers:

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

Analytical quality control:

NANOCONTROL Multistandard Sewage outflow 2 (REF 925010)

Disposal:

Information regarding disposal can be found in the safety data sheet. You can download the SDS from www.mn-net.com/SDS.

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