

REF 985064

en

Test 0-64

10.18

NANOCOLOR® Nitrate 50**Method:**

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

Range:	0.3–22.0 mg/L NO ₃ -N	2–100 mg/L NO ₃ ⁻
Wavelength (HW = 5–12 nm):	350/365 nm	
Reaction time:	10 min (600 s)	
Reaction temperature:	20–25 °C	

Contents of reagent set:

20 test tubes Nitrate 50

1 test tube with 11 mL Nitrate 50 R2

Hazard warning:

Test tubes contain sulfuric acid 51–65 % and o-phosphoric acid 25–40 %, reagent R2 contains 2-propanol 35–50 %.

H226, H319, H336 Flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness or dizziness.

P210, P260D, P280sh Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not breathe vapors. Wear protective gloves/eye protection. Dispose of contents/container to regulated waste treatment. 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® 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: < 2000 mg/L CSB (potassium hydrogen phthalate); < 1000 mg/L CO₃²⁻; < 500 mg/L Cl⁻; < 250 mg/L Ca²⁺; < 50 mg/L Cu²⁺; < 50 mg/L Fe³⁺; < 50 mg/L Ni²⁺; < 50 mg/L Zn²⁺; < 10 mg/L Cl₂.

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

Procedure:

Requisite accessories: piston pipette with tips

Open test tube, add

0.5 mL test sample (*the pH value of the sample must be between pH 1 and 13*) and **0.5 mL** R2, mix by **shaking gently** (*Test tube becomes warm!*).

Clean outside of test tube and measure after 10 min.

Measurement:

For MACHEREY-NAGEL photometers see manual, test 0-64.

Measurement when samples are colored or turbid:

For all MACHEREY-NAGEL photometers see manual, use key for correction value.

Photometers of other manufacturers:

For other photometers check whether measurement of round glass tubes is possible. Verify factor for each type of instrument by measuring standard solutions.

Analytical quality control:

NANOCONTROL Multistandard Sewage outflow 1 (REF 925011), Sewage outflow 2 (REF 925010) or Sewage influx (REF 925012)