NANOCOLOR® Nitrate 50

REF: 985064

en

Overview

The test is suitable for the photometric determination of Nitrate.

The test is suitable for surface water, ground and drinking water and wastewater.

- Measuring range:

0.3–22,0 mg/L NO_3->N (method 0641)

2–100 mg/L NO_3^- (method 0642)

1–44 mg/kg N (method 0644)

4–200 kg/ha N (method 0645)

- Wavelength for photometric determination: 345 / 350 / 365 nm
- Number of tests: 20
- Shelf life: 24 months
- Reaction time: 10 minutes
- Storage temperature: 20–25 °C
- Storage conditions: protected from sunlight, upright.

Method

Photometric determination with 2,6-dimethylphenol in a sulphuric acid-phosphoric acid mixture. Analogous to ISO 7890-1; DIN 38405-D9.

Interferences

The following contaminants do not interfere with the test up to the indicated concentrations. The cumulative effect of different interfering ions has not been tested.

- NO_2^-: 1
- Cl_2: 10
- Zn^{2+}, Ni^{2+}, Fe^{3+}, Cu^{2+}: 50
- Ca^{2+}: 250
- Cl^-: 500
- CO_3^{2-}: : 1000
- COD: 2000

Nitrite interferes at > 1 mg/L and must be destroyed prior to the analysis through the addition of 1 measuring spoon of amidosulphuric acid (REF 918973) to 10 mL sample solution. Wait 10 minutes before the determination. We recommend QUANTOFIX Nitrate / Nitrite (REF 91313) as a pre-test for determining the nitrite concentration.

This method is not suitable for analyzing seawater.

Turbidities cause higher measurement values.

Reagents and accessories

Contents of reagents set:

- 20 test tubes R0
- 1 reagent R2

Required devices:

- MACHEREY-NAGEL photometer
- Digital piston pipette 200–1000 µL (REF 91671) with pipette tips (REF 91667)

Standards

- *NANOCONTROL* Multistandard Sewage outflow 1 (REF 925011)
- *NANOCONTROL* Multistandard Sewage outflow 2 (REF 925010)
- *NANOCONTROL* Multistandard Sewage inflow (REF 925012)

Sampling and preparation

See DIN EN ISO 5667-3-A 21.

Adjust to pH 1–13 prior to analysis.

Quality control

The measurement of a blank value and a standard is recommended before every measuring series as quality control measure.

Quality data:

The following data were determined during production according to ISO 8466-1 and DIN 38402-A51:

- Number of LOTs: 45
- Standard deviation of the method: ± 0.5 mg/L NO_3^-
- Coefficient of variation of the process: ± 0.94 %
- Confidence interval: ± 1.1 mg/L NO_3^-

Specified data for procedure:

- Sensibilité (une extinction de 0,010 E correspond à mg/L) : 0.65 mg/L NO_3^-
- Accuracy of a measurement value: ± 1.7 mg/L NO_3^-

LOT-specific certificates are available at *www.mn-net.com*.

Procedure

1. Open test tube
2. Pipette 0.5 mL of sample into test tube
3. Add 0.5 mL R2
4. Seal test tube and turn upside down 3×
5. Wait 10 min
6. Clean outside of test tube
7. Measure

Notes

When using other photometers, make sure measurements are possible in test tubes (16 mm OD) and calibrate the method.

Use the correction value when measuring cloudy or colored samples (see photometer handbook).

When using a standard, the measured value is constant over a period of min. 30 min.

f there is uncertainty regarding the range of the concentration of the sample, a preliminary test with QUANTOFIX nitrate/nitrite (REF 91313) will provide information regarding the necessary dilution for the determination.

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*.

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TÜVRheinland CERTIFIED
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