

Overview

The test is suitable for the photometric determination of sulphate. The test is in accordance with APHA 4500-SO₄²⁻ E.

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

- Measuring range: 40–400 mg/L SO₄²⁻ (method 0601)
- Number of tests: 20
- Wavelength for photometric determination: 800 nm
- Shelf life: 36 months
- Reaction time: 15 minutes
- Storage temperature: 15–25 °C
- Storage conditions: protected from sunlight, upright.

Method

Measurement of the resulting turbidity by precipitation reaction with Ba²⁺ ions as BaSO₄.

Interferences

The foreign materials shown here do not interfere with the test up to the indicated concentrations (in mg/L). The cumulative effect of different interfering ions has not been tested.

Data in mg/L:

- Fe¹⁰⁰
- CO₃²⁻: 100
- Zn²⁺: 500
- Ca²⁺: 1000
- Cl⁻: 1000

Turbidities in the sample create interference and have to be filtered off before addition to the test tube.

This method is not suitable for analyzing seawater.

Reagents and accessories

Contents of reagents set:

- 20 test tubes R0
- 2 reagent R1

Required devices:

- MACHEREY-NAGEL photometer
- Digital piston pipette 100–1000 µL (REF 91677) with pipette tips (REF 91667)
- Digital piston pipette 1–5 mL (REF 916909) with pipette tips (REF 916916)

Standards

- NANOCONTROL Multistandard Metals 1 (REF 925015)
- NANOCONTROL Multistandard Drinking water (REF 925018)
- NANOCONTROL Sulfate LR 200 (REF 92562)

Sampling and preparation

See DIN EN ISO 5667-3-A 21.

Adjust to pH 2–11 prior to analysis.

Quality control

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

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

Procedure

1. Open test tube
2. Add 1 mL R2
3. Seal test tube and swirl
4. Open test tube
5. Pipette 4 mL of sample into test tube
6. Seal test tube and shake vigorously
7. Wait 15 min
8. Clean outside of test tube
9. Measure

Notes

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

Correction value e. g. for colored or turbid samples possible (see photometer manual).

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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