

Overview

The test is suitable for the photometric determination of boron.

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

- Measuring range: 0.05 – 2.50 mg/L B (method 0131)
- Number of tests: 20
- Wavelength for photometric determination: 412 nm
- Shelf life: 12 months
- Reaction time: 30 minutes
- Storage temperature: 2 – 8 °C
- Storage conditions: upright

Method

Borate ions form a yellow dye with azomethine-H in a weakly acidic solution.

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.

Data in mg/L:

- Ca^{2+} , K^+ , Mg^{2+} , Mn^{2+} , Na^+ , NO_3^- , PO_4^{3-} , SO_4^{2-} , Zn^{2+} : 1000
- Cl^- : 500
- NH_4^+ : 400
- Fe: 25

The method can be applied for analyzing seawater.

Turbidities cause higher measurement values.

Reagents and accessories

Contents of reagents set:

- 20 test tubes R1
- 1 reagent R2

Required devices:

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

Sampling and preparation

See DIN EN ISO 5667-3-A21.

Adjust to pH 4–9 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. Add 500 µL R2
2. Pipette 4 mL of sample into test tube
3. Seal test tube and shake vigorously
4. Wait 30 min
5. Clean outside of test tube
6. Measure

Notes

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.

To increase accuracy in the low measuring range, measurement with reagent blank value is recommended.

08/2024