

Overview

The test is suitable for the photometric determination of K⁺.
The test is suitable for surface water, ground and drinking water.

- Measuring range:
2-50 mg/L K⁺ (method 0451)
5-120 mg/100 g (method 0452)
- Number of tests: 20
- Wavelength for photometric determination: 690 nm
- Shelf life: 24 months
- Reaction time: 2 minutes
- Storage temperature: 15–25 °C
- Storage conditions: upright

Method

Photometric determination as potassium tetraphenylborate.

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:

- NH₄-N: 200

The method can be applied for analyzing seawater.

Turbidity should be filtered out prior to the measurement.

Reagents and accessories

Contents of reagents set:

- 20 test tubes R0
- 1 reagent R2
- 1 reagent R3
- 1 measuring spoon, black, 85 mm

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)

Standards

- NANOCNTROL Multistandard Metals 2 (REF 925016)

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:

- Standard deviation of the method: ± 1 mg/L K⁺
- Coefficient of variation of the process: ± 3 %
- Confidence interval: ± 2 mg/L K⁺
- Number of LOTs: 6

Specified data for procedure:

- Sensitivity (absorbance of 0.010 A corresponds to):
± 0.2 mg/L K⁺

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

Procedure

1. Open test tube. Add 200 µL R2
2. Pipette 2 mL of sample into test tube
3. Seal test tube and shake
4. Wait 1 min
5. Add 1 level measuring spoon of reagent R3
6. Seal test tube and shake for 10 s
7. Wait 2 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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