

REF 985 045

en

Test 0-45

10.16

**NANOCOLOR® Potassium 50**

#### Method:

Photometric turbidity measurement as potassium tetraphenyl borate

Range:	<b>2–50 mg/L K<sup>+</sup></b>
Accuracy:	<b>± 10 %</b> at 25 mg/L K <sup>+</sup>
Wavelength (HW = 5–12 nm):	<b>690 nm</b>
Reaction time:	<b>2 min (120 s)</b>
Reaction temperature:	<b>20–25 °C</b>

#### Contents of reagent set:

- 20 test tubes Potassium 50
- 1 bottle with 5 g Potassium 50 R2
- 1 measuring spoon 85 mm
- 1 test tube with blank value "NULL"

#### Hazard warning:

Reagent R2 contains sodium tetraphenyl borate 14–35 %.  
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® Potassium (200–1500 mg/L K<sup>+</sup>, REF 913 16) rapidly gives this information. From the order of magnitude the required dilution can be calculated and prepared directly.

#### Interferences:

NH<sub>4</sub><sup>+</sup>, Hg<sup>+</sup>, Cs<sup>+</sup> and Rb<sup>+</sup> cause too high results, because they also form a turbidity with the reagent.

For removal of ammonium interferences (up to 5 mg/L NH<sub>4</sub>-N) use NANOCOLOR® Compensation reagent for ammonium (REF 918 045).

Turbidities interfere and have to be filtered prior to the test.

The method can be applied also for the analysis of sea water after dilution (1+9).

#### Procedure:

Requisite accessories: piston pipette with tips

Open test tube, add

**1 level measuring spoon R2**, close and mix until R2 is completely dissolved.

Open test tube again, add

**2.0 mL** sample solution (*the pH value of the sample must be between pH 1 and 13*), close directly and shake **immediately for 10 s**.

Clean outside of test tube and measure after 2 min.

#### Measurement:

For MACHEREY-NAGEL photometers see manual, test 0-45.

#### Measurement when samples are colored or turbid:

For all NANOCOLOR® 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 Metals 2 (REF 925 016)