REF 91877

Test 1-77 11.21

NANOCOLOR® ortho-Phosphate

Method:
Photometric determination as phosphomolybdenum blue

Cuvette rectangular:	**50 mm**	**10 mm**
Range (**mg/L PO_4^{3-}**):	**0.1–5.0**	**0.5–20.0**
Range (**mg/L PO_4-P**):	**0.04–1.70**	**0.2–6.5**
Wavelength (HW = 5–12 nm):	**690 nm**	
Reaction time:	**10 min (600 s)**	
Reaction temperature:	**20–25 °C**	

Contents of reagent set:
2 x 100 mL o-Phosphate R1
2 x 100 mL o-Phosphate R2

Hazard warning:
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***.

Preliminary tests:
If the order of magnitude of the concentration in a sample is not known, a preliminary test with QUANTOFIX® Phosphate 3–100 mg/L PO_4^{3-} (REF 91320) rapidly gives this information. From the order of magnitude the required dilution can be calculated and prepared directly.

Interferences:
For the determination of total phosphorus use tests 0-55, 0-76, 0-79, 0-80 or 0-81.
The following quantities of ions will not interfere:
≤ 1 mg/L Si; ≤ 10 mg/L Fe, Pb, Zn; ≤ 200 mg/L Ca, citrate, tartrate.

The method can be applied also for the analysis of sea water.

Procedure:
Requisite accessories: 25 mL volumetric flasks, piston pipette with tips

Pour into two separate volumetric flasks 25 mL:

Test sample	Blank value
20 mL test sample *(the pH value of the sample must be between pH 1 and 13)*	**20 mL** distilled water
1 mL R1, mix	**1 mL** R1, mix
1 mL R2, mix	**1 mL** R2, mix

Fill up sample and blank value to 25 mL mark with distilled water and mix again. After 10 min pour into cuvettes and measure.

Measurement:
For *NANOCOLOR*® photometers see manual, test 1-77.

Measurement when samples are colored or turbid:
For all *NANOCOLOR*® photometers see manual, use key for correction value.

Photometers of other manufacturers:
Verify factor for each type of instrument by measuring standard solutions.

Analytical quality control:
NANOCONTROL ortho-Phosphate (REF 92576)

Decreasing volume of analytical preparation:
In order to increase the number of determinations, you can work with volumetric flasks of 10 mL: 8 mL test sample + 0.4 mL R1 + 0.4 mL R2, semi-micro cuvette (REF 91950).

Disposal:
Information regarding disposal can be found in the safety data sheet. You can download the SDS from ***www.mn-net.com/SDS***.

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