

REF 91877

en

Test 1-77 07.18

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:

Reagent R1 contains sulfuric acid 15–30 %, reagent R2 contains sodium disulfite 10–25 %.

H314 Causes severe skin burns and eye damage.

P260sh, P280sh, P303+361+353, P305+351+338, P310 Do not breathe dust/vapors. Wear protective gloves/eye protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. 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® Phosphate 3–100 mg/L PO₄³⁻ (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 (<i>the pH value of the sample must be between pH 1 and 13</i>)	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:

The contents of cuvettes and flasks can be washed into drain with plenty of water.