

REF 91878

en

Test 1-78

09.19

**NANOCOLOR<sup>®</sup> ortho-Phosphate****Method:**

Photometric determination of the yellow phosphate-molybdate-vanadate complex in acidic solution

Cuvette:	<b>50 mm</b>	<b>10 mm</b>
Range (mg/L PO <sub>4</sub> <sup>3-</sup> ):	<b>0.5–20.0</b>	<b>2–50</b>
Range (mg/L PO <sub>4</sub> -P):	<b>0.2–6.6</b>	<b>1–17</b>
Wavelength (HW = 5–12 nm):	<b>436 nm</b>	
Reaction time:	<b>10 min (600 s)</b>	
Reaction temperature:	<b>20–25 °C</b>	

**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](http://www.mn-net.com/SDS).

**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: ≤ 10 mg/L Fe, ≤ 1000 mg/L Si.

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

**Note:**

Please contact MACHEREY-NAGEL for special working instructions concerning a simplified procedure in a beaker (without filling up) and evaluation in 50 mm cuvette.

**Procedure:**

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

Pour into two separate volumetric flasks 25 mL:

Test sample	Blank value
<b>20 mL</b> test sample ( <i>the pH value of the sample must be between pH 1 and 13</i> )	<b>20 mL</b> distilled water
<b>1 mL</b> R1, mix	<b>1 mL</b> R1, mix
<b>1 mL</b> R2, mix	<b>1 mL</b> 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<sup>®</sup>** photometers see manual, test 1-78.

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

For all **NANOCOLOR<sup>®</sup>** photometers see manual, use key for correction value.

**Photometers of other manufacturers:**

Verify factor for each type of instrument by measuring standard solutions.

**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](http://www.mn-net.com/SDS).