

REF 985 049

en

Test 0-49

07.14

**NANOCOLOR® Silver 3****Method:**

Silver ions react with an indicator to form a blue dye.

Range:	Tube test <b>0.20–3.00 mg/L Ag<sup>+</sup></b>	50 mm semi-micro cuvette <b>0.08–0.50 mg/L Ag<sup>+</sup></b>
Factor:	<b>03.90</b>	<b>not linear</b>
Wavelength (HW = 5–12 nm):	<b>620 nm</b>	
Reaction time:	<b>10 min (600 s)</b>	
Reaction temperature:	<b>20–25 °C</b>	

**Contents of reagent set:**

20 test tubes Silver 3

1 test tube with 11 mL Silver 3 R2

1 test tube with 11 mL Silver 3 R3

**Hazard warning:**

This test does not contain any harmful substances which must be specially labelled as hazardous.

**Interferences:**Silver compounds like silver bromide, silver chloride, silver iodide, silver cyanide or silver thiocyanate are not detected by the determination. These compounds can be determined after pre-treatment with **NANOCOLOR® NanOx Metal** (REF 918 978).

The following ions will not interfere:

< 1000 mg/L Pb<sup>2+</sup>, F<sup>-</sup>, NO<sub>3</sub><sup>-</sup>, SO<sub>4</sub><sup>2-</sup>< 500 mg/L PO<sub>4</sub><sup>3-</sup>< 200 mg/L Mn<sup>2+</sup>, Ni<sup>2+</sup>< 100 mg/L Al<sup>3+</sup>, Cr(III)< 50 mg/L Cd<sup>2+</sup>< 20 mg/L Ca<sup>2+</sup>, Cu<sup>2+</sup>, Fe<sup>3+</sup>, Hg<sup>2+</sup>, Mg<sup>2+</sup>, Zn<sup>2+</sup>

&lt; 10 mg/L Cr(VI), Mo(VI)

The method can not be applied for the analysis of sea water.

**Procedure:**

Requisite accessories: piston pipette with tips

Open test tube, add  
**500 µL** (= 0.5 mL) R2 and  
**4.0 mL** test sample (*the pH value of the sample must be between pH 3 and 9*), close and mix.  
 Open test tube again, add  
**500 µL** (= 0.5 mL) R3, close and mix.  
 Clean outside of test tube and measure after 10 min.

Lower silver concentrations (0.08–0.50 mg/L Ag<sup>+</sup>) can be determined by using 50 mm semi-micro cuvettes (REF 919 50):

Test sample	Blank value
Open test tube, add <b>500 µL</b> (= 0.5 mL) R2 and <b>5.0 mL</b> test sample ( <i>the pH value of the sample must be between pH 3 and 9</i> ), close and mix. Open test tube again, add <b>500 µL</b> (= 0.5 mL) R3, close and mix.	Open test tube, add <b>500 µL</b> (= 0.5 mL) R2 and <b>5.0 mL</b> distilled water, close and mix.  Open test tube again, add <b>500 µL</b> (= 0.5 mL) R3, close and mix.

Pour the contents of test tubes into 50 mm semi-micro cuvettes and measure after 10 min [method 1491].

**Measurement:**For **NANOCOLOR®** photometers see manual, test 0-49.**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.