REF 985049

Test 0-49 03.23
NANOCOLOR® Silver 3

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

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

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 pretreatment with *NANOCOLOR*® *NanOx* Metal (REF 918978).

The following ions will not interfere:
< 1000 mg/L Pb^{2+}, F^-, NO_3^-, SO_4^{2-}
< 500 mg/L PO_4^{3-}
< 200 mg/L Mn^{2+}, Ni^{2+}
< 100 mg/L Al^{3+}, Cr(III)
< 50 mg/L Cd^{2+}
< 20 mg/L Ca^{2+}, Cu^{2+}, Fe^{3+}, Hg^{2+}, Mg^{2+}, Zn^{2+}
< 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^+) can be determined by using 50 mm semi-micro cuvettes (REF 91950):

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

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