

REF 91802

Test 1-02

07.22

NANOCOLOR® Aluminium**Method:**

Photometric determination with eriochrome cyanine R

Cuvette rectangular:	10 mm
Range (mg/L Al ³⁺):	0.01 – 1.00
Wavelength (HW = 5 – 12 nm):	533/540 nm
Reaction time:	5 min (300 s)
Reaction temperature:	20 – 25 °C

Contents of reagent set:

- 20 mL Aluminium R1
- 20 g Aluminium R2
- 2 × 100 mL Aluminium R3
- 2 × 100 mL Aluminium R4
- 1 measuring spoon 85 mm

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.

Interferences:

Clouded samples are to be filtered (membrane filter 0.45 µm, REF 91650).

The total aluminium can be determined with **NANOCOLOR® NanOx Metal** (REF 918978) and microwave decomposition.

Fluoride interferes.

The following quantities of ions will not interfere:

≤ 1 mg/L Co; ≤ 5 mg/L Cr(III), Cd; ≤ 10 mg/L Cu, Mn, Ni, Zn; ≤ 20 mg/L Fe.

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

Procedure:

Requisite accessories: volumetric flasks 25 mL, 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 3 and 5</i>)	20 mL distilled water
200 µL (= 0.2 mL) R1, mix	200 µL (= 0.2 mL) R1, mix
1 spoon R2, mix	1 spoon R2, mix
2 mL R3, mix	2 mL R3, mix
2 mL R4, mix	2 mL R4, mix
<i>The pH value has to be between 6.0 and 6.5, otherwise add more R4.</i>	

Fill up sample and blank value to 25 mL mark with distilled water and mix again. After 5 min pour contents into cuvettes and measure.

Measurement:

For MACHEREY-NAGEL photometers see manual, test 1-02.

Measurement when samples are colored or turbid:

For all MACHEREY-NAGEL photometers see manual, use key for correction value.

Photometers of other manufacturers:

For other photometers verify factor for each type of instrument by measuring standard solutions. The factor depends strongly on the wavelength.

Analytical quality control:

NANOCONTROL Multistandard Drinking Water (REF 925018)

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 + 80 µL R1 + ½ spoon R2 + 0.8 mL R3 + 0.8 mL R4.

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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