REF 985 098

Test 0-98 08.16
NANOCOLOR® Aluminum 07

en

Method:
Photometric determination with eriochrome cyanine R

Range:	**0.02–0.70 mg/L Al^{3+}**
Wavelength (HW = 5–12 nm):	**540 nm**
Reaction time:	**5 min (300 s)**
Reaction temperature:	**20–25 °C**

Contents of reagent set:
19 test tubes Aluminum 07 with *NANOFIX*
1 test tube with 11 mL Aluminum 07 R2
1 test tube with 11 mL Aluminum 07 R3
1 test tube with 11 mL Aluminum 07 R4
1 test tube with blank value "NULL"

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

Preliminary tests:
If the order of magnitude of the concentration in a sample is not known, a preliminary test with QUANTOFIX® Aluminum (5–500 mg/L Al^{3+}, REF 913 07) rapidly gives this information. From the order of magnitude the required dilution can be calculated and prepared directly.

Interferences:
Fluoride interferes.
Turbid samples are to be filtered (membrane filter 0.45 µm, REF 916 50). The total Aluminum can be determined with *NANOCOLOR*® *NanOx* Metal (REF 918 978) and microwave decomposition.
The following ions will not interfere:
≤ 100 mg/L SiO_2
≤ 10 mg/L Cu^{2+}, $Fe^{2/3+}$, Mn^{2+}, Ni^{2+}, Zn^{2+}
≤ 5 mg/L Cr^{3+}, Cd^{2+}
≤ 1 mg/L Co^{2+}

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

Procedure:
Requisite accessories: piston pipette with tips

Open test tube, add
500 µL (= 0.5 mL) R2,
500 µL (= 0.5 mL) R3 and
4.0 mL sample solution *(the pH value of the sample must be between pH 3 and 6)*,
close and mix.
Open test tube again, add
500 µL (= 0.5 mL) R4, close and mix.
Clean outside of test tube and measure after 5 min.
Adjust photometer to zero by using blank value "NULL".

Measurement:
For *NANOCOLOR*® photometers and PF-12 see manual, test 0-98.

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. The factor depends strongly on the wavelength.

Analytical quality control:
NANOCONTROL Multistandard Drinking water (REF 925 018)

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PD 14122 / A025134 / 985 098 / 0861