

REF 985009

en

Test 0-09 11.18

NANOCOLOR® Lead 5

Method:

Photometric determination with 4-(2-pyridylazo)-resorcinol (PAR)

Range:	0.10–5.00 mg/L Pb ²⁺
Wavelength (HW = 5–12 nm):	520 nm
Reaction time:	2 x 3 min (180 s)
Reaction temperature:	20–25 °C

Contents of reagent set:

- 20 test tubes Lead 5
- 1 test tube with 5 mL Lead 5 R2
- 1 tube NANOFIX Lead 5 R3

Hazard warning:

Test tubes contain potassium cyanide 1–7 %, reagent R2 contains hydroxylammonium chloride 5–10 %. H301, H311, H317, H331, H351 Toxic if swallowed. Toxic in contact with skin. May cause an allergic skin reaction. Toxic if inhaled. Suspected of causing cancer. P201, P261sh, P280sh, P301+310, P302+352, P405 Obtain special instructions before use. Avoid breathing dust/vapors. Wear protective gloves/eye protection. IF SWALLOWED: Immediately call a POISON CENTER/doctor. IF ON SKIN: Wash with plenty of water. Store locked up. For further details ask for a safety data sheet.

Interferences:

The following quantities of ions will not interfere:

- < 1000 mg/L acetate, phosphate
- < 100 mg/L cadmium, chloride, ammonium, copper, nickel, nitrite, thiocyanate, sulfate, zinc, peroxide
- < 50 mg/L aluminium, chromium(VI), nitrate
- < 1 mg/L iron(II), iron(III), chromium(III)
- < 0.1 mg/L EDTA

Only Pb²⁺ ions are determined. The total lead can be determined with cracking set (REF 91808).

The method cannot be applied for the analysis of sea water.

Procedure:

Requisite accessories: piston pipette with tips

Open test tube, add

0.2 mL of R2 and mix. Add

4.0 mL of sample solution (*the pH value of the sample must be between pH 3 and 6*), close and mix.

Clean outside of test tube and zero the photometer with this solution after 3 min.

Open test tube, add

1 NANOFIX R3, close and mix.

Clean outside of test tube, and take measurement after 3 min.

Measurement:

For MACHEREY-NAGEL photometers see manual, test 0-09.

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.

Analytical quality control:

NANOCONTROL Multistandard Metals 2 (REF 925016)