

REF 91825

en

Test 1-25 08.19

NANOCOLOR® Chromate

Method:

Photometric determination with diphenylcarbazide

Cuvette rectangular:	50 mm	20 mm	10 mm
Range (mg/L CrO ₄ ²⁻):	0.01–1.00	0.05–4.00	0.1–6.0
Range (mg/L Cr(VI)):	0.01–0.45	0.03–2.00	0.1–3.0
Wavelength (HW = 5–12 nm):	540 nm		
Reaction time:	5 min (300 s)		
Reaction temperature:	20–25 °C		

Contents of reagent set:

- 18 g Chromate R1
- 2 x 100 mL Chromate R2
- 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:

Chromium(III) ions are not determined. The amount of total chromium can be determined with NANOCOLOR® NanOx Metal (REF 918978).

The following ions will not interfere:

≤ 1000 mg/L Ca, Mn(II), Ni, Zn, CN⁻; ≤ 100 mg/L Cu, Fe, Pb; ≤ 10 mg/L NO₂⁻.

Colorations, turbidities, higher amounts of organic substances, oxidizing and reducing agents interfere with the determination.

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

Note:

For the determination of chromate in galvanic bathes or water-soluble chromium(VI) in cement contact MACHEREY-NAGEL for special working instructions.

Procedure:

Requisite accessories: volumetric flasks 25 mL, piston pipette with tips

Pour into two separate volumetric flasks:

Test sample	Blank value
1 level spoon Chromate R1	–
2 mL Chromate R2 shake vigorously for 1 min	–
20 mL test sample (<i>the pH value of the sample must be between pH 1 and 9</i>), mix	20 mL test sample (<i>the pH value of the sample must be between pH 1 and 9</i>)

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

Measurement:

For MACHEREY-NAGEL photometers see manual, test 1-25.

Measurement when samples are colored or turbid:

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

Photometers of other manufacturers:

Verify factor for each type of instrument by measuring standard solutions.

Analytical quality control:

NANOCONTROL Chromate (REF 92524) or Multistandard Metals 1 (REF 925015) for total chromium

Decreasing volume of analytical preparation:

In order to increase the number of determinations, you can work with volumetric flasks of 10 mL: ½ level spoon R1 + 0.8 mL R2 + 8 mL test sample, semimicro cuvette (REF 91950).

Disposal:

Information regarding disposal can be found in the safety data sheet. You can download the SDS from www.mn-net.com/SDS.