

REF 91825

# Test 1-25 01.23

## NANOCOLOR® Chromate

**Method:**

Photometric determination with diphenylcarbazide

Cuvette rectangular:	50 mm	10 mm
Range (mg/L $\text{CrO}_4^{2-}$ ):	0.01 – 1.00	0.1 – 6.0
Range (mg/L $\text{Cr(VI)}$ ):	0.01 – 0.45	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 × 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](http://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,  $\text{CN}^-$ ; ≤ 100 mg/L Cu, Fe, Pb; ≤ 10 mg/L  $\text{NO}_2^-$ .

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 (the pH value of the sample must be between pH 1 and 9), mix	20 mL test sample (the pH value of the sample must be between pH 1 and 9)

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](http://www.mn-net.com/SDS).

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