

REF 985089

en

Test 0-89

03.23

NANOCOLOR® Sulfite 10**Method:**

Photometric determination with a derivative of thiodibenzoic acid

Tube test			
Range (mg/L SO ₃ ²⁻):	0.2 – 10.0	0.2 – 10.0	0.2 – 10.0
50 mm semi-micro cuvette			
Range (mg/L SO ₃ ²⁻):	0.05 – 2.40	0.05 – 2.40	0.05 – 2.40
Wavelength (HW = 5 – 12 nm):	445 nm	436 nm	412 nm
Reaction time:	5 min (300 s)		
Reaction temperature:	20 – 25 °C		

Contents of reagent set:

20 test tubes Sulfite 10

1 test tube with 5 mL Sulfite 10 R2

Hazard warning:

Reagent R2 contains ethylene glycol 80 – 100 %.

For further information ask for a safety data sheet.

Preliminary tests:

If the order of magnitude of the concentration in a sample is not known, a preliminary test with QUANTOFIX® Sulfite (10 – 1000 mg/L SO₃²⁻, REF 91306) or with VISOCOLOR® HE Sulfite SU 100 (REF 915008) rapidly gives this information. From the order of magnitude the required dilution can be calculated and prepared directly.

Interferences:Sulfide interferes (same reaction): 1.0 mg/L S²⁻ ≙ 4 mg/L SO₃²⁻.

Formaldehyde interferes even in lowest concentration.

The following quantities of ions will not interfere: ≤ 1000 mg/L ascorbic acid, hydrazine, hydroxylamine, EDTA; ≤ 1 mg/L Fe^{2+/3+}.

This method can be applied also for the analysis of sea water after dilution (1 + 19).

Procedure:

Requisite accessories: piston pipette with tips

Open test tube, add

4.0 mL test sample (*the pH value of the sample must be between pH 4 and 9*) and **200 µL** (= 0.2 mL) R2, close and mix.

Clean outside of test tube and measure after 5 min.

Test sample (< 1.0 mg/L SO ₃ ²⁻)	Blank value
Open test tube, add	Open test tube, add
4.0 mL test sample (<i>the pH value of the sample must be between pH 4 and 9</i>) and 200 µL (= 0.2 mL) R2, close and mix.	4.0 mL distilled water and
Clean outside of the tube and measure after 5 min.	200 µL (= 0.2 mL) R2, close and mix. Clean outside of the tube and measure after 5 min.

Lower sulfite concentrations (0.05 – 2.40 mg/L SO₃²⁻) can be determined by using 50 mm semi-micro cuvettes (REF 91950). Pour the contents of test tubes into 50 mm semi-micro cuvettes and measure after 5 min [method 1891].

Measurement:

For NANOCOLOR® photometers and PF-12 see manual, test 0-89.

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.

Analytical quality control:

Standard solutions are not stable. Fresh dissolved sodium sulfite can be stabilized with EDTA for 2 days.