

REF 985 056

en

Test 0-56

07.16

NANOCOLOR® Molybdenum 40**Method:**

Molybdate ions react with thioglycolic acid to form a yellow complex.

Range:	1.0–40.0 mg/L Mo(VI)	1.6–65.0 mg/L MoO₄²⁻
Wavelength:	345 nm	
Wavelength (HW = 5–12 nm):	365 nm	
Reaction time:	5 min (300 s)	
Reaction temperature:	20–25 °C	

Contents of reagent set:

20 test tubes Molybdenum 40 R1
1 test tube with blanc value "NULL"

Hazard warning:

Test tubes contain thioglycolic acid 60–100%.

H301, H311, H314, H331 Toxic if swallowed. Toxic in contact with skin. Causes severe skin burns and eye damage. Toxic if inhaled.

P260, P280, P301+310, P301+330+331, P302+352, P303+361+353, P304+340, P305+351+338, P311, P361+364, P405, P501 Do not breathe vapors. Wear protective gloves/eye protection. IF SWALLOWED: Immediately call a POISON CENTER/doctor/... IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of water/... IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor/... Take off immediately all contaminated clothing and wash it before reuse. Store locked up. Dispose of contents/container to regulated waste treatment. 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® Molybdenum (5–250 mg/L Mo, REF 913 25) rapidly gives this information. From the order of magnitude the required dilution can be calculated and prepared directly.

Interferences:

Nitrite interferes > 1 mg/L (check with QUANTOFIX® Nitrite – REF 913 11). This can be circumvented by addition of 1 spoon of amidosulphonic acid (REF 918 973) to 10 mL test sample. After 10 min perform determination of molybdenum.

The following ions will not interfere:

- ≤ 1000 mg/L NH₄⁺, Ca²⁺, Mg²⁺, Mn²⁺, Zn²⁺, Cl⁻, PO₄³⁻, SO₄²⁻
- ≤ 500 mg/L Ni²⁺, NO₃⁻
- ≤ 50 mg/L Al³⁺, Pb²⁺, Cr³⁺, Co²⁺, Fe³⁺
- ≤ 10 mg/L Cr(VI)
- ≤ 1 mg/L Cu²⁺

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

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 7 and 13*), close and mix.
Clean outside of test tube and measure after 5 min.

Measurement:

For NANOCOLOR® photometers and PF-12 see manual, test 0-56.

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.