REF 985 056

Test 0-56 11.14
NANOCOLOR® Molybdenum 40

en

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 MoO_4^{2-}**
Factor:	**027.5**	**045.8**
Wavelength:	**345 nm**	
Factor:	**028.5**	**047.5**
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 NH_4^+, Ca^{2+}, Mg^{2+}, Mn^{2+}, Zn^{2+}, Cl^-, PO_4^{3-}, SO_4^{2-}
≤ 500 mg/L Ni^{2+}, NO_3^-
≤ 50 mg/L Al^{3+}, Pb^{2+}, Cr^{3+}, Co^{2+}, Fe^{3+}
≤ 10 mg/L Cr(VI)
≤ 1 mg/L Cu^{2+}

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.

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