

REF 985038

en

Test 0-38

06.18

NANOCOLOR® COD HR 1500

Chemical Oxygen Demand

Method:

Photometric determination of chromium(III) concentration after oxidation with potassium dichromate / sulfuric acid / silver sulfate

Range:	20–1500 mg/L COD
Wavelength (HW = 5–12 nm):	620 nm / 605 nm
Reaction time:	2 h
Reaction temperature:	150 °C

Contents of reagent set:

20 test tubes COD HR 1500

Hazard warning:

Test tubes contain sulfuric acid 80–98%, potassium dichromate 0.13–0.32% and mercury(II) sulfate 0.74–1.50%.

H314, H317, H340, H350 Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause genetic defects. May cause cancer.

P201, P260sh, P280sh, P303+361+353, P305+351+338, P310, P405 Obtain special instructions before use. Do not breathe dust/vapors. Wear protective gloves/eye protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Store locked up. For further information ask for a safety data sheet. When shaking COD test tubes use safety bottle (REF 91637).

Interferences:

For **chloride contents above 2000 mg/L** the test sample must be diluted or use Chloride complexing agent (REF 918911). For determination of the concentration of chlorides we recommend a preliminary test with QUANTOFIX® Chloride (REF 91321).

Turbidity in the COD test tube after reaction in the heating block will result in COD readings which are too high. Wait until turbidities caused by precipitation of mercury sulfate have deposited.

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

Procedure:

Requisite accessories: NANOCOLOR® heating block, piston pipette with tips

Note: For samples with high chloride concentrations it is important to shake the test tube **before** the water sample is added in order to suspend the deposit.

1. Open test tube and **carefully** add 2.0 mL sample (*Caution: Solution may heat up*).
2. Screw cap on the test tube, place tube into the safety bottle and shake.
3. Heat test tube for 2 h at 150 °C.
4. Sway test tube.
5. Allow test tube to cool to room temperature (20–25 °C).
6. Clean outside of test tube.
7. Insert the test tube in the photometer, measurement starts automatically.

Measurement:

For MACHEREY-NAGEL photometers and PF-12 see manual, test 0-38.

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:

NANOCONTROL COD 1500 (REF 92529) or Multistandard Sewage influx (REF 925012)

Storage:

Store the test kit in a cool and dry place. Avoid exposing the test kit to sunlight.