

REF 985 038

en

Test 0-38

03.14

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
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 0.28–0.56% and mercury(II) sulfate 0.74–1.50%.

H314, H340, H350, EUH203 Causes severe skin burns and eye damage. May cause genetic defects. May cause cancer. Contains chromium(VI). May produce an allergic reaction.

P201, P202, P260, P280, P301+330+331, P303+361+353, P304+340, P305+351+338, P308+313, P405 Ob-tain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapors. Wear protective gloves/eye protection. IF SWALLOWED: rinse mouth. Do NOT in-duce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. Store locked up. For further infor-mation ask for a safety data sheet. When shaking COD test tubes use safety bottle (REF 916 37).

Interferences:

For **chloride contents above 2000 mg/L** the test sample must be diluted or use Chloride complexing agent (REF 918 911). For determination of the concentration of chlorides we recommend a preliminary test with QUANTOFIX® Chloride (REF 913 21).

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 NANOCOLOR® 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 925 29) or Multistandard Sewage influx (REF 925 012)

Storage:

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