

REF 985 036

en

Test 0-36

03.14

NANOCOLOR® COD LR 150

Chemical Oxygen Demand

Method:

Photometric determination of decrease in chromate concentration after oxidation with potassium dichromate / sulfuric acid / silver sulfate

Range:	3–150 mg/L COD
Factor:	0220.
Wavelength (HW = 5–12 nm):	436 nm
Reaction time:	2 h
Reaction temperature:	150 °C

Contents of reagent set:

20 test tubes COD LR 150

Hazard warning:

Test tubes contain sulfuric acid 80–98 % and mercury(II) sulfate 0.74–1.50 %.

H314 Causes severe skin burns and eye damage.

P260, P280, P301+330+331, P303+361+353, P304+340, P305+351+338 Do not breathe vapors.

Wear protective gloves / eye protection. IF SWALLOWED: rinse mouth. Do NOT induce 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. For further information 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 low. 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 see manual, test 0-36.

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 160 (REF 925 26) or Multistandard Sewage outflow 1 (REF 925 011)

Storage:

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