visocolor® HE Chlorine

en

High sensitivity test kit for the determination in the range of 0.02–0.60 mg/L Cl_2

Method:
N,N-Diethyl-1,4-phenylene diamine (DPD)

Contents of test kit (*refill pack):
sufficient for 2 x 160 tests

- 24 g Cl_2-1*
- 100 mL Cl_2-2*
- 25 mL Cl_2-3*
- 1 black measuring spoon 85 mm*
- 1 plastic beaker for samling
- 2 round glass tubes with screw caps
- 1 comparator block
- 1 color comparison disc Chlorine

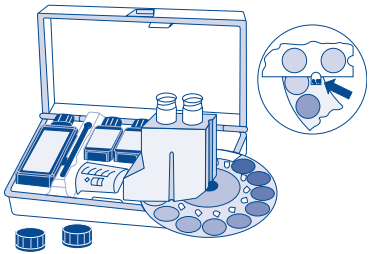
Hazard warning:
This test does not contain any harmful substances which must be specially labelled as hazardous.

Procedure:
1. Place comparator block into the position provided in the box (see illustration).
2. Insert color comparison disc.
3. Open both round glass tubes, rinse several times with the water sample and fill up to the mark with the sample.
4. Add **1 level black measuring spoon Cl_2-1** to the right glass tube.
5. Add **12 drops Cl_2-2** to the right glass tube, close and mix.
6. Read **immediately**: Turn color disc until both colors match by transmitted light from above. Read test results from the mark on the front side of the comparator. Intermediate values can be estimated.
   1st reading = free chlorine
7. Add **5 drops Cl_2-3** to the right glass tube, close and mix. Wait **2 min**. Read value as described above. **2nd reading = total chlorine**

The bound chlorine can be calculated as difference between 2nd reading (total chlorine) and 1st reading (free chlorine).
Free chlorine: dissolved, elementary chlorine, hypochlorous acid, and hypochlorite ions
Bound chlorine: inorganic and organic chloroamines
The method can be applied also for the analysis of sea water.

Disposing of the samples:
The used analysis specimens can be flushed down the drain with tap water and channelled off to the local sewage treatment works.

Interferences:
1. Higher manganese compounds simulate free chlorine.
2. Chlorine contents above 4 mg/L can destroy the red dye (low results).
3. The temperature of the water sample should be between 15 and 30 °C.



4. Rinse glass tubes several times thoroughly. Residues of Cl_2-3 can cause higher values for free chlorine!

Conversion:
0.10 mg/L Cl_2 ≙ 0.18 mg/L ClO_2 ≙ 0.15 mg/L OCl^- ≙ 0.21 mg/L NaOCl ≙ 0.23 mg/L Br_2 ≙ 0.36 mg/L I_2

Note:
Determination of bromine besides chlorine: If chlorine is present in the sample, it can be destroyed by adding a spatula of glycine (approx. 20 mg) to 25 mL sample. The sample for the bromine determination is taken from this solution. Result in mg/L Cl_2 x 2.25 = mg/L Br_2.

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany
Tel.: +49 24 21 969-0 · Fax: +49 24 21 969-199 · info@mn-net.com · ***www.mn-net.com***
PD 00661 / A011752 / 920 015 / 1012