

Chlorine 6

Reagent set for the photometric determination of free and total chlorine in drinking water, swimming pools and water reservoirs

Method:

Photometric determination of free and total chlorine.

At a pH value of 6.2 to 6.5 in a phosphate buffered system, free chlorine reacts with *N,N*-diethyl-1,4-phenylene diamine (DPD) and forms a red-violet dye. In the presence of iodide ions, the content of total chlorine (free and combined chlorine together) can be determined.

Measurement range:

0.05–6.00 mg/L Cl₂

Contents:**REF 931217** (free and total)

sufficient for 200 tests

28 g Cl₂-1

30 mL Cl₂-2

1 measuring spoon 85 mm

1 plastic syringe 5 mL

1 instructions for use

REF 931219 (free)

sufficient for 400 tests

2 x 28 g Cl₂-1

1 measuring spoon 85 mm

1 plastic syringe 5 mL

1 instructions for use

Hazard warning:

Information regarding safety can be found on the box' label and in the safety data sheet. You can download the SDS from www.mn-net.com/SDS.

Procedure:

Requisite accessories: test tubes 16 mm OD (REF 91680)

a) Free chlorine

1. Rinse test tube 16 mm OD several times with the sample (*the pH value of the sample must be between pH 4 and 8*) and fill with **5 mL sample**.
2. Place test tube in photometer as blank value and adjust for zero.
3. Add **1 level measuring spoon of Cl₂-1**, close and **shake well for 20 s**.
4. Clean outside of test tube and measure after **1 min**.

b) Total chlorine (only 931217)

5. Open test tube again, add **3 drops of Cl₂-2**, close and mix.
6. Clean outside of test tube and measure after **2 min**.

c) Combined chlorine

The content of combined chlorine can be calculated as difference of total and free chlorine.

Measurement:

The reagents are also suitable for **photometric evaluation**. See manual for MN photometer.

After use, rinse out test tubes thoroughly and seal them.

The method can be applied also for the analysis of sea water.

Interferences:

The temperature of the water sample should be between 10 and 50 °C.

The determination of free chlorine measures bromine, bromamine, chloramine, iodine and, in part, chlorine dioxide as well. Higher manganese compounds simulate free chlorine.

Chlorine concentrations above 10 mg/L can bleach the red reaction color (low results).

Rinse test tubes several times thoroughly. Residues of Cl₂-2 can cause higher values for free chlorine.

Conversion:

1.0 mg/L Cl₂ ≙ 1.9 mg/L ClO₂ ≙ 1.5 mg/L OCl⁻ ≙ 2.1 mg/L NaOCl ≙ 2.3 mg/L Br₂ ≙ 3.6 mg/L I₂

Disposing of the samples:

Information regarding disposal can be found in the safety data sheet. You can download the SDS from www.mn-net.com/SDS.

Storage:

Store the test kit in a cool (< 25 °C) and dry place.