LCK410
Chlorine free/Chlorine dioxide

0.05–2.0 mg/L Cl_2 or 0.09–3.8 mg/L ClO_2 **LCK410**

Scope and application: For drinking water and swimming-pool water.

Test preparation

Test storage

Storage temperature: 2–8 °C (35–46 °F)

pH/Temperature

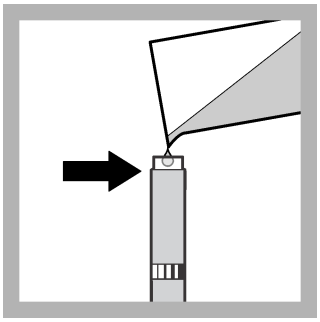
The pH of the water sample must be between pH 3–10.

The temperature of the water sample and reagents must be between 15–25 °C (59–77 °F).

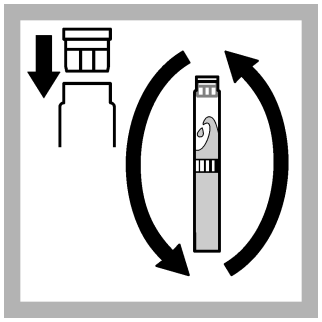
Before starting

Mixtures of oxidizing agents do not all react with DPD in the same way, but under conditions that are specific for each of them. The manufacturer has produced an application method for these further evaluation types which can be obtained free of charge from the manufacturer.
The analysis must be carried out immediately after the sample has been taken.
The water samples must not be pipetted, because this can cause gas stripping losses.
Turbidities can be removed by slow pressure filtration (Membrane Filtration Set LCW904).
Review safety information and expiration date on the package.
Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.
Dispose of reacted solutions according to local, state and federal regulations. Refer to the Safety Data Sheets for disposal information for unused reagents. Refer to the environmental, health and safety staff for your facility and/or local regulatory agencies for further disposal information.

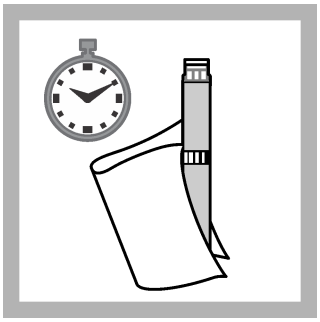
Procedure free chlorine or chlorine dioxide



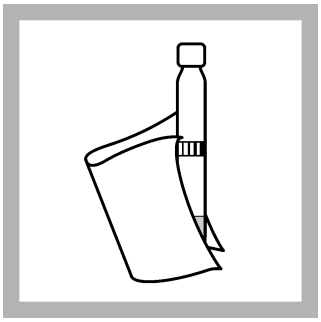
1. Fill the cuvette with the sample to approximately **1 cm below** the opening of the cuvette.



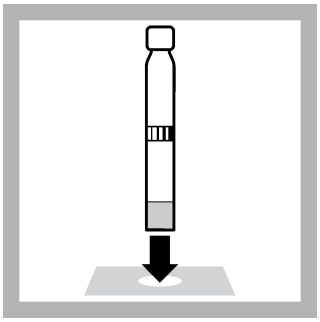
2. Close the cuvette. Carefully invert the cuvette a few times (do not shake) and rotate it slightly to remove any bubbles sticking to the sides.



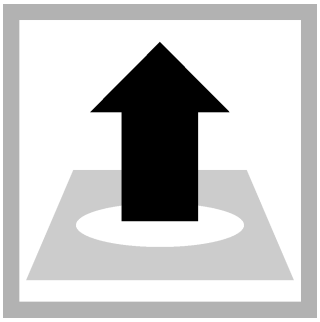
3. After **1 minute**, thoroughly clean the outside of the cuvette.



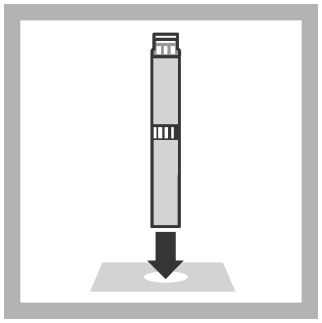
4. Thoroughly clean the outside of the zero-cuvette



5. Insert the zero-cuvette into the cell holder. DR1900: Go to LCK/TNTplus methods. Select the test, push **ZERO**.



6. Remove the zero-cuvette.



7. Insert the sample-cuvette into the cell holder. DR1900: Push **READ**.

Interferences

High-Bias Results: All oxidizing agents, for example ozone, iodine, chlorine dioxide, manganese dioxide, chromate are also determined (refer to Before starting).

Low-Bias Results: A large excess of oxidizing agents (outside the measuring ranges given above) can cause result displays within the measuring range.

The measurement results must be subjected to plausibility checks (dilute and/or spike the sample).

Summary of method

Oxidizing agents react with diethyl-p-phenylenediamine (DPD) to form a red dye.

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