LCI 400
Chemical Oxygen Demand (COD)

0–1000 mg/L Chemical Oxygen Demand LCI 400

Scope and application: For water, wastewater and process analysis.

Test preparation

Test storage

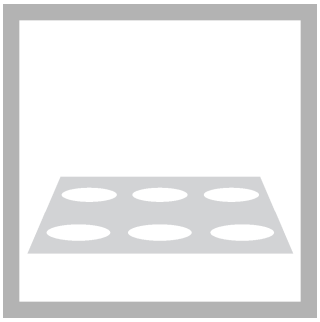
Storage temperature: 15–25 °C (59–77 °F)

Protect against light.

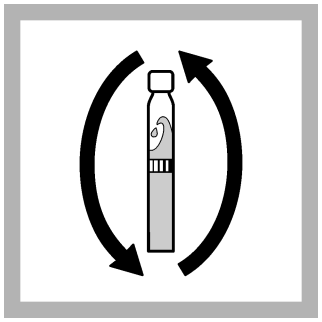
Before starting

Bring the thermostat to 148 °C (298.4 °F), then insert the cuvettes and restart the reaction time (2 hours).
The water used for the reagent blank solution and for dilutions must satisfy the requirements of ISO 3696: 1987, Quality 3.
A reagent blank solution must be prepared with the above mentioned water for each analysis series.
Literature: INTERNATIONAL STANDARD ISO 15705:2002 Water quality—Determination of the chemical oxygen demand index (ST-COD)—Small-scale sealed tube method
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.

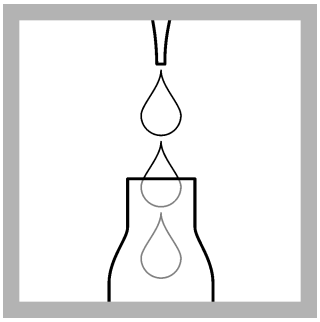
Procedure



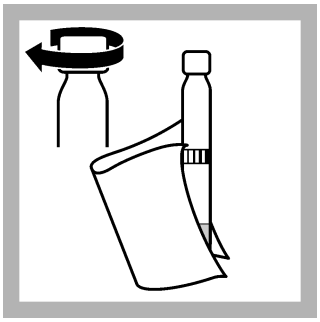
1. Preheat the thermostat to **148 °C (298.4 °F)**.



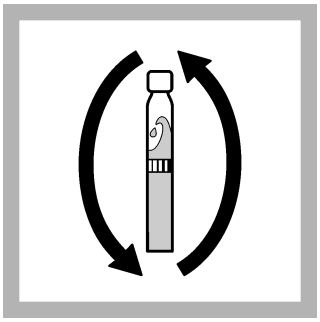
2. Invert a few times to bring the sediment into suspension.



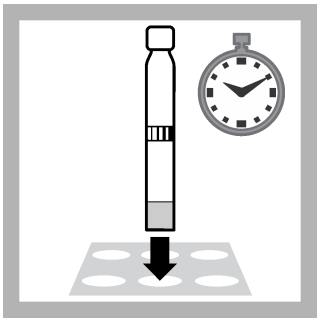
3. Carefully pipet into the Cuvette test:
Reagent blank: **2.0 mL** COD-free water
Sample cuvette: **2.0 mL** homogenized sample



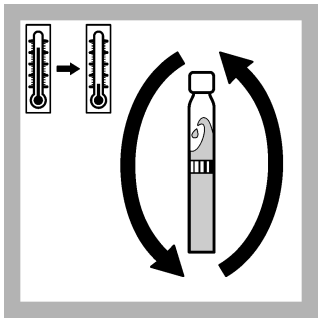
4. Close the cuvettes, thoroughly clean the outside.



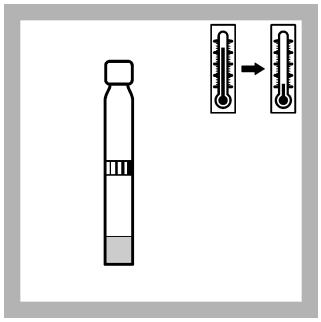
5. Invert.



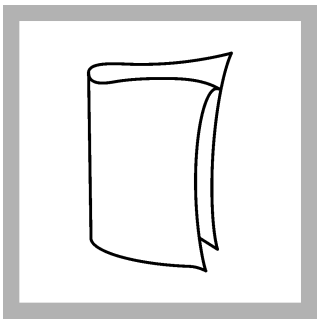
6. Heat in the **preheated** thermostat at **148 °C (298.4 °F)** for **2 hours**.



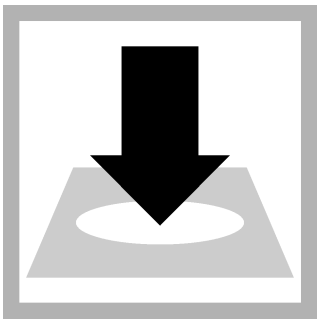
7. Remove the **hot** cuvettes. Allow to cool to approximately **60 °C (140 °F)** and invert a few times.



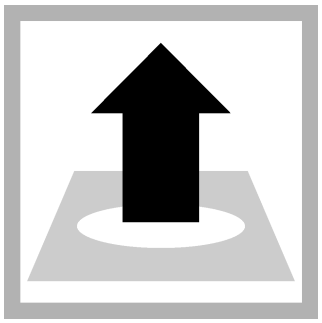
8. Allow to **cool** to room temperature.



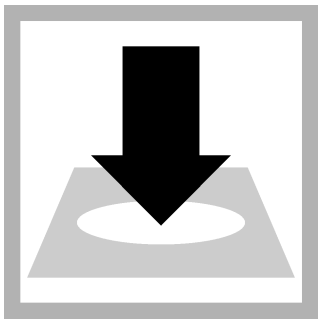
9. Clean the outside of the cuvettes and evaluate.



10. Insert the blank into the cell holder.
DR1900: Go to LCK/TNTplus methods.
Select the test, push **READ 1**.



11. Remove the blank.



12. Insert the sample cuvette into the cell holder.
DR 1900: Push **READ 2**.

Interferences

The method can be used for samples (or diluted samples) with chloride concentrations of up to 1000 mg/L.

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

Summary of method

Oxidizable substances react with sulphuric acid and potassium dichromate solution in the presence of silver sulphate as a catalyst. Chloride is masked by mercury sulphate. The green coloration of Cr^{3+} is evaluated.

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