

# LCK 1414 Chemical Oxygen Demand (COD) <sup>DOC312.53.94106</sup>

5–60 mg/L

LCK 1414

**Scope and application:** For wastewater, process analysis, surface water and cooling water.



## Test preparation

### Test storage

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

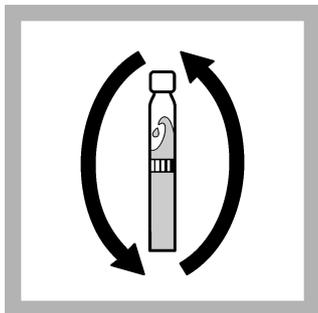
Protect against light.

### Before starting

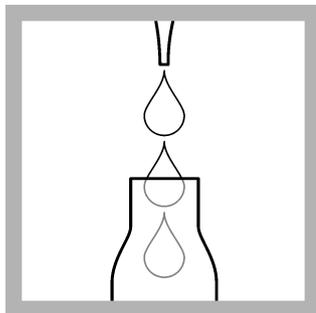
In contrast to the classic COD Cuvette Test (COD classic), the HT-COD Test is characterized by a higher digestion temperature and shorter digestion time.

Users are advised to carry out a comparison with the COD classic, in order to be sure that the results obtained from their own samples when using the HT-COD are comparable to the standard.

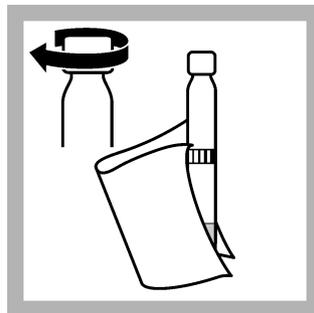
### Procedure



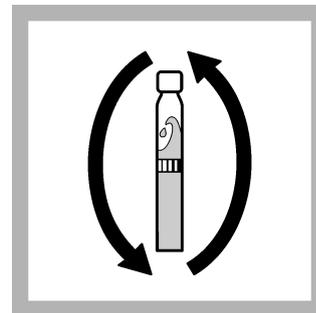
1. Invert a few times to bring the sediment into suspension.



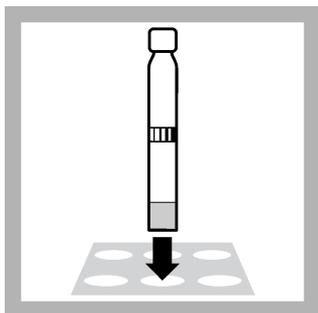
2. Carefully pipette 2.0 mL of sample.



3. Close the cuvette, thoroughly clean the outside of the cuvette.

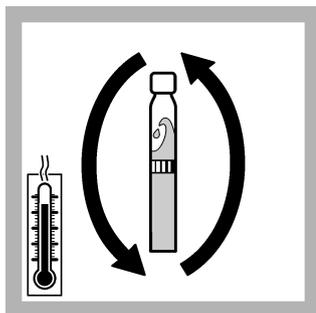


4. Invert.



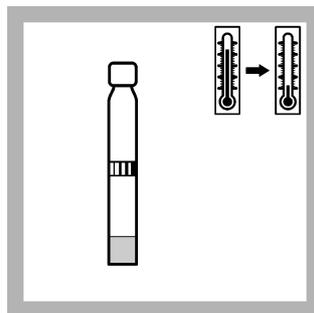
5. Heat in the thermostat.  
**COD classic:** for 2 hours at 148 °C (298.4 °F).

**HT 200 S:** in the standard program HT for 15 minutes.



6. Remove the **hot** cuvette.  
**COD classic:** Carefully invert **twice**.

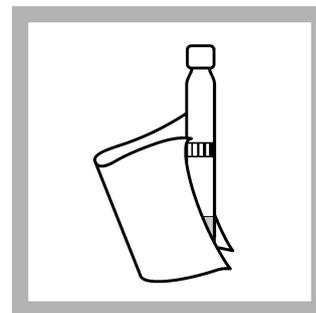
**HT 200 S:** After the lock opens, carefully invert **twice**.



7. Allow to cool to room temperature.

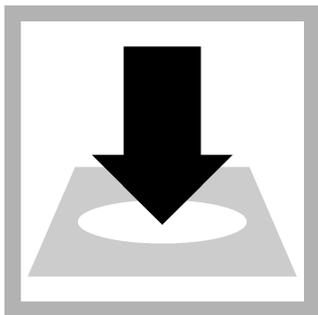
**COD classic:** in a cooling rack.

**HT 200 S:** in the thermostat.



8. Thoroughly clean the outside of the cuvette and evaluate.

**Note:** The sediment must be completely settled before evaluation is carried out.



**9.** Insert the cuvette into the cell holder.

DR 1900: Go to

LCK/TNTplus methods.

Select the test, push **READ**.

## Interferences

The method can be used for samples (or diluted samples) with chloride concentrations of up to 1500 mg/L. In exceptional cases some wastewater may contain substances for which the oxidizing capacity of this test is not sufficient. In such cases we recommend the use of test LCK 314.

A large excess of COD can lead to results within the measuring range. It is recommended to carry out a plausibility check by making dilutions.

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 reduction in the yellow coloration of  $\text{Cr}^{6+}$  is evaluated.



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