LCK307 Boron

DOC312.53.94038

0.05–2.50 mg/L B **LCK307**

Scope and application: For surface water, wastewater, soil and waste.

Test preparation

Test storage

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

pH/Temperature

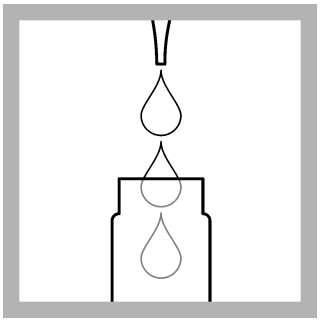
The pH of the water sample must be between pH 4–9.

The temperature of the water sample and reagents must be 20 °C (68 °F).

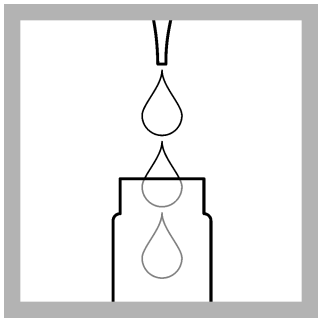
Before starting

Temperature dependence: The color reaction of the boron analysis is strongly temperature-dependent. The sample and sample cuvette should therefore have a working temperature of 20 °C (68 °F). **In case of not working at the correct recommended temperature an incorrect result may be obtained.**
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.

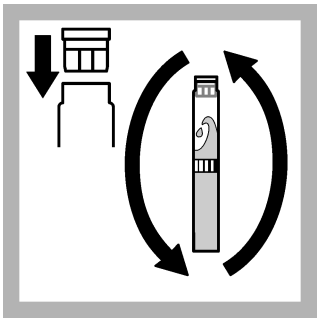
Procedure



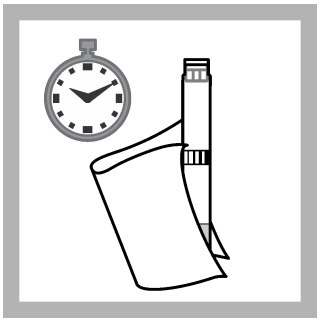
1. Carefully pipet **1.0 mL** of **solution A**.



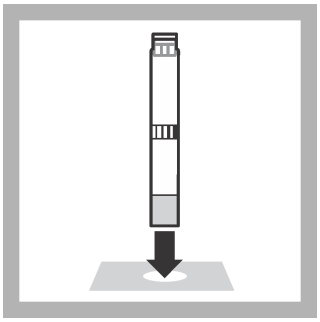
2. Carefully pipet into the **same** cuvette: **2.5 mL** of **sample**.



3. Close the cuvette, swirl the contents and invert several times until the lyophilisate has **dissolved completely**.



4. After **40 minutes**, thoroughly clean the outside of the cuvette and evaluate.



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

Interferences

The ions listed in the table have been individually checked against the given concentrations and do not cause interference. The cumulative effects and the influence of other ions have not been determined.

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

Removal of Interferences

The sample should be colorless and free of turbidities. Slight colorations can be taken into account with the help of a sample-specific blank reading. Turbidities are eliminated by filtration through a membrane filter (LCW904).

Interference level	Interfering substance
1000 mg/L	Mn^{2+}, Zn^{2+}, Ca^{2+}, Mg^{2+}, Na^{+}, K^{+}, PO_4^{3-}, SO_4^{2-}, NO_3^{-}
500 mg/L	Cl^{-}, NH_4^{+}
25 mg/L	Fe^{2+}, Fe^{3+}

Summary of method

Borate ions react with azomethine-H to form a yellow dye, which is evaluated photometrically.

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