LCK 321 Iron

DOC312.53.94014

0.2–6.0 mg/L Fe and 0.24–7.2 mg/L Fe (Crack-Set) LCK 321

Scope and application: For drinking water, raw water, swimming-pool water, wastewater and process analysis.

Test preparation

Test storage

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

pH/Temperature

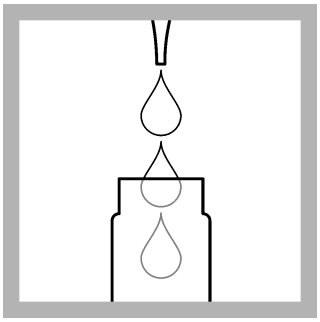
The pH of the water sample must be between pH 3–10.

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

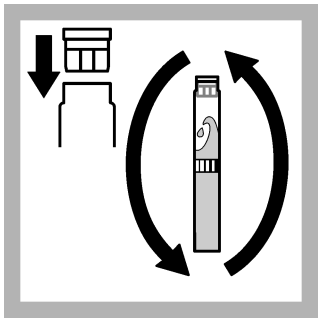
Before Starting

Undissolved iron and iron contained in complexes can only be determined after digestion with Crack-Set LCW 902.
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.

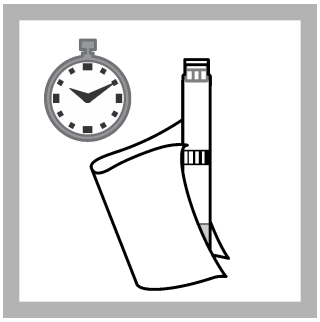
Procedure



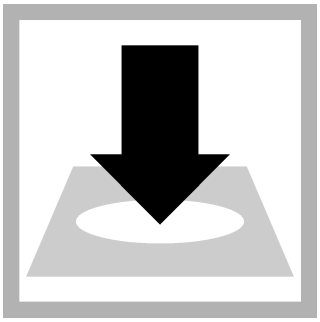
1. Carefully pipet **2.0 mL** of **sample**.



2. Close the cuvette and invert a few times until the freeze-dried contents are **completely dissolved**.



3. After **15 minutes**, thoroughly clean the outside of the cuvette and evaluate.



4. Insert the cuvette into the cell holder.
DR 1900: 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.

Higher amounts of copper, nickel, and tin cause high-bias results.

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

Interference level	Interfering substance
1000 mg/L	Cl^-, SO_4^{2-}
500 mg/L	K^+, Na^+, Ca^{2+}
100 mg/L	Ag^+
70 mg/L	Cd^{2+}
50 mg/L	NO_3^-, Co^{2+}, Zn^{2+}, Pb^{2+}, CO_3^{2-}, Hg^{2+}, Cr^{3+}, Cr^{6+}
25 mg/L	Ni^{2+}
10 mg/L	Cu^{2+}
5 mg/L	Sn^{2+}

Summary of method

Iron(II) ions form an orange-red complex with 1.10-phenanthroline. Any iron(III) ions present in the water sample are reduced to iron(II) ions by ascorbic acid before the complex is formed.

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