

0.05–1.0 mg/L DEHA

LCW 250

Scope and application: For boiler water.



Test preparation

Test storage

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

Before starting

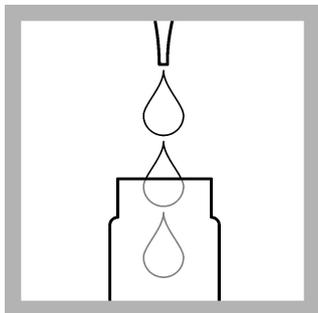
Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.

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.

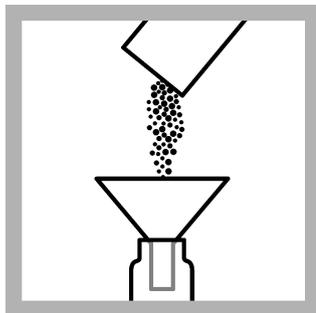
For reasons of quality and safety conduct the analysis with original accessories only.

The cuvettes (LCW906) used for the measurement must always be fully cleaned after each use.

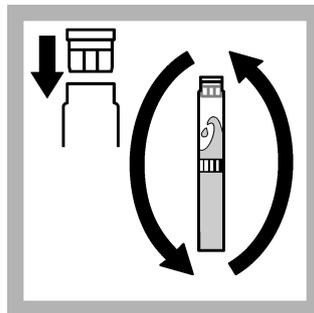
Procedure



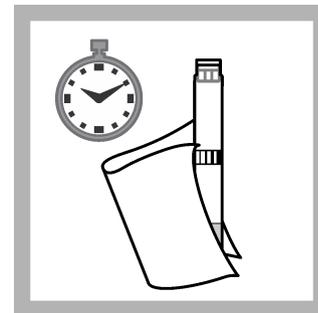
1. Pipet into an empty cuvette (LCW 906): 0.2 mL of solution B and 5.0 mL of sample.



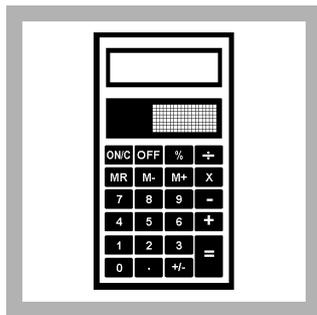
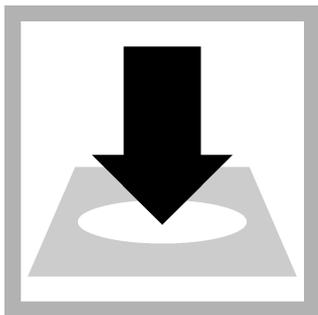
2. Open a powder pillow (reagent A) with a pair of scissors. Use a funnel to add the contents of the powder pillow to the cuvette.



3. Close the cuvette and invert until all contents are completely dissolved. **Let stand in the dark.**



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



5. Go to Stored Programs. Select the test, push **ZERO** with empty cell holder. Insert the cuvette into the cell holder, push **READ**.

6. The results are shown in mg/L DEHA. To calculate the result in terms of other reducing agents use the factor that follows:
 $\text{mg/L Red.} = \text{mg/L DEHA} \times F$
 Carbohydrazide: $F = 1.31$
 Hydroquinone: $F = 2.63$
 Isoascorbic acid: $F = 3.9$
 MEKO: $F = 4.5$

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.

Iron-II interferes when present in any concentration.

Do a plausibility check on the measurement results (dilute and/or spike the sample).

1000 mg/L	SO_4^{2-} , Ca^{2+}
500 mg/L	$\text{Na}_2\text{B}_4\text{O}_7$
80 mg/L	MoO_4^{2-}
50 mg/L	Zn^{2+}
10 mg/L	PO_4^{3-} , phosphonate
8 mg/L	Cu^{2+}
0.8 mg/L	Ni^{2+} , Mn^{2+}

Summary of method

DEHA (diethylhydroxylamine) and other reducing agents (carbohydrazide, hydroquinone, isoascorbic acid, methyl kethyl ketoxime) reduce Iron-III to Iron-II, which reacts with the reagent to form a violet-colored complex. The violet color is measured photometrically.



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