LCW908 Cold Digestion Solution

DOC312.53.94383

Measuring range I: 1–70 mg/L chloride - 0.001–0.087 M% chloride; **LCW908**
Measuring range II: 70–1000 mg/L chloride - 0.087–1.250 M% chloride

Scope and application: Sample Preparation—for the determination of chloride in building concrete

Test preparation

Test storage

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

Items to collect

Description
Cuvette Test LCK311
Membrane Filtration Set LCW904
Weighing boat
Extraction flask

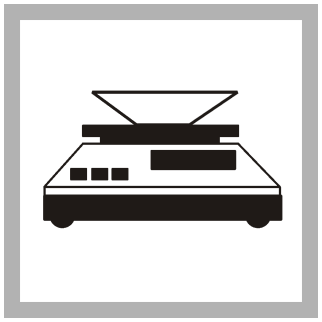
Before starting

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.

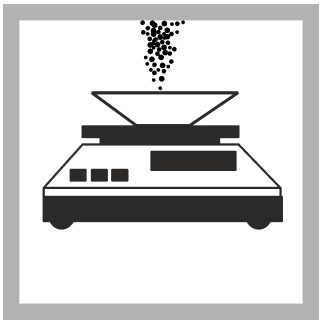
Procedure—Sample Preparation



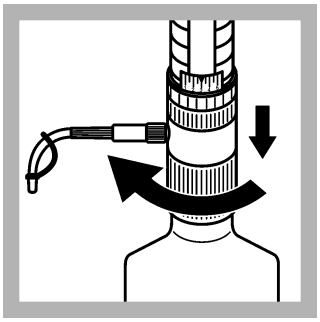
1. Switch on the balance with the ON/OFF-switch.



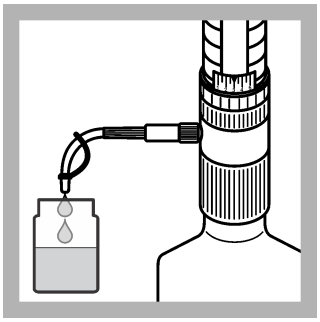
2. Place the weighing boat on the balance and confirm this by pressing the tare key in order to reset to zero.



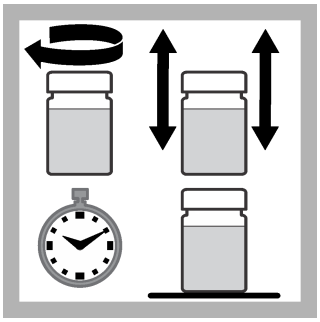
3. Weigh **2 g fine drillings** and transfer to the extraction flask.



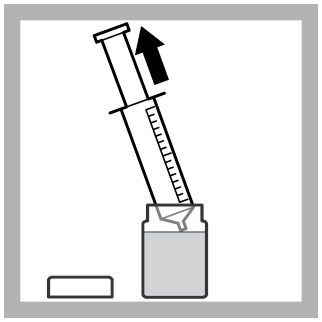
4. Screw the dispenser on the flask containing the cold digestion solution.



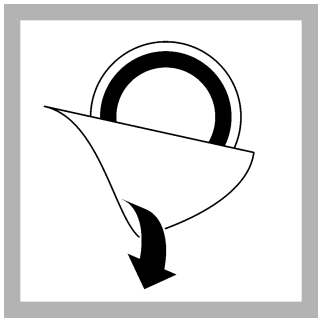
5. Transfer **25 mL cold digestion solution** into the extraction flask.



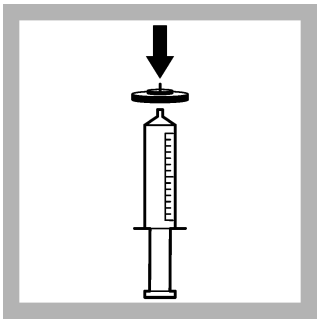
6. Close the flask tightly and leave for approximately 10 minutes shaking it occasionally.



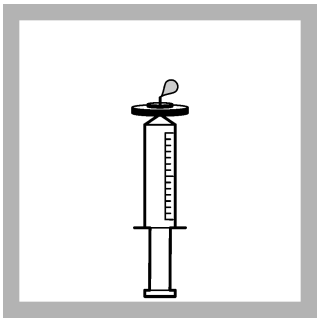
7. Draw the digestion solution into the syringe.



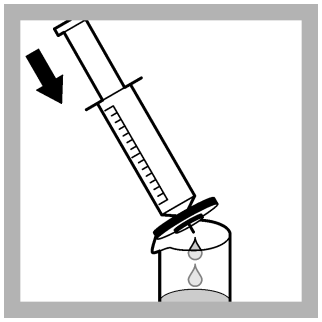
8. Remove the filter attachment from the blister pack and place it on the syringe.



9. Fit the filtration attachment firmly on the Luer connection of the syringe.

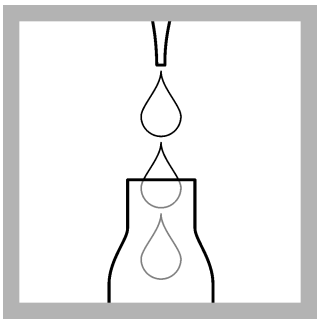


10. Hold the syringe with the filtration attachment pointing upwards and **slowly press the liquid upwards**.
This ensures a good wetting of the membrane filter and avoids air bubbles.

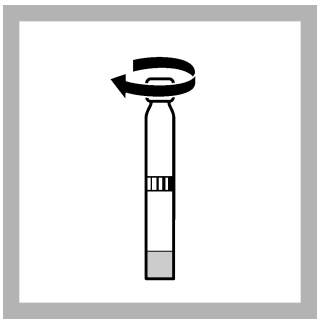


11. Filter the contents of the syringe into a plastic dish. The solution obtained can be used for further analysis.

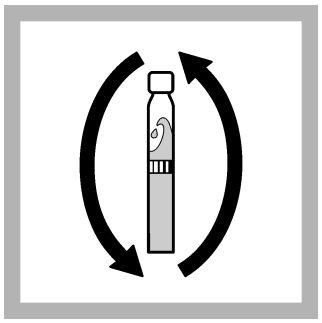
Procedure—Chloride content–Measuring range I



1. Pipette into the cuvette test LCK311: **1.0 mL filtered sample**.



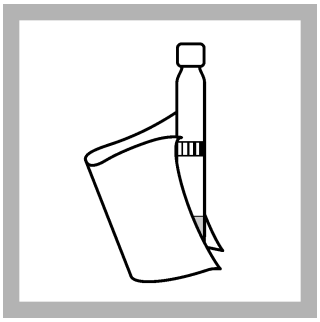
2. Close the cuvette.



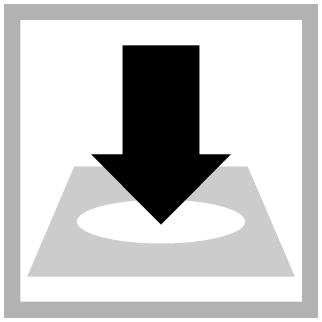
3. Mix.



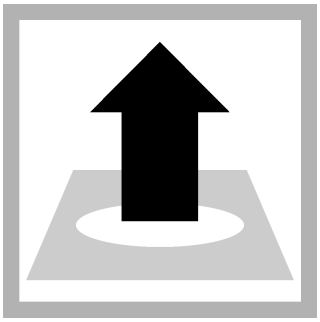
4. Wait **3 minutes**.



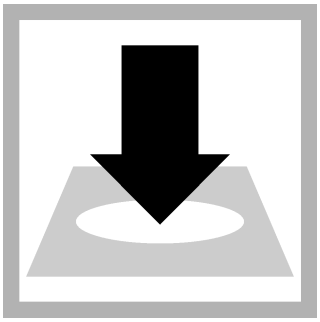
5. Thoroughly clean the outside of the cuvette.



6. Insert the zero-cuvette into the cell holder.
DR1900: Go to Stored Programs. Select the test: push **ZERO**.

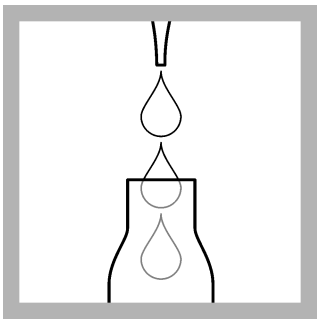


7. Remove the zero-cuvette.

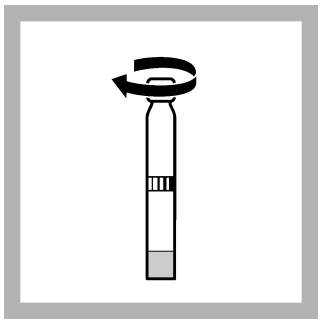


8. Insert the cuvette into the cell holder.
DR1900: Push **READ**.

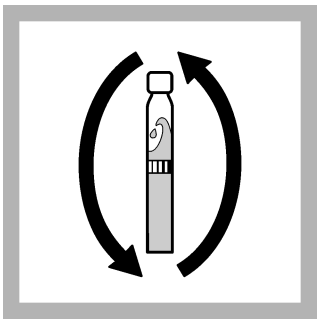
Procedure—Chloride content–Measuring range II



1. Pipette into the cuvette test LCK311: **0.1 mL filtered sample**.



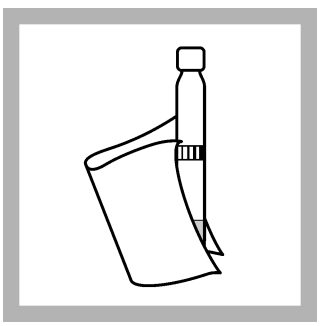
2. Close the cuvette.



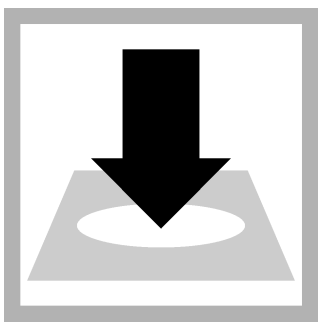
3. Mix.



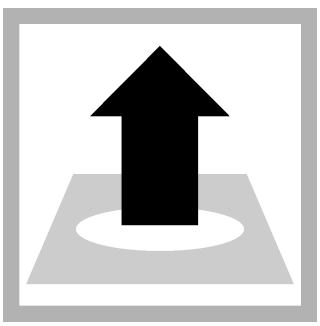
4. Wait **3 minutes**.



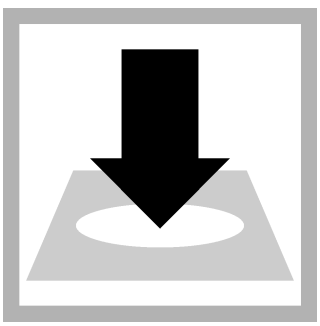
5. Thoroughly clean the outside of the cuvette.



6. Insert the zero-cuvette into the cell holder.
DR1900: Go to Stored Programs. Select the test: push **ZERO**.



7. Remove the zero-cuvette.



8. Insert the cuvette into the cell holder.
DR1900: Push **READ**.

Summary of method

Sparingly dissociated mercurous chloride is formed by the reaction of chloride solutions with mercurous thiocyanate. At the same time an equivalent amount of thiocyanate ions are released, which form ferric thiocyanate with ferric salts. The red color produced is measured photometrically.

Evaluation

Refer to further evaluation steps in the procedure of cuvette test LCK311 chloride.

	Factor	**Measuring range**
Chloride content – Measuring range I	0.00125 *	0.001 – 0.087 M%
Chloride content – Measuring range II	0.00125 *	0.087 – 1.25 M%

* Multiply displayed measurement result by factor.

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