LCK354 Silver dissolved

DOC312.53.94053

0.04–0.80 mg/L Ag **LCK354**

Scope and application: For photographic industry, printing-works, X-ray laboratory, printed circuit-board industry and electroplating shop.

Test preparation

Test storage

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

pH/Temperature

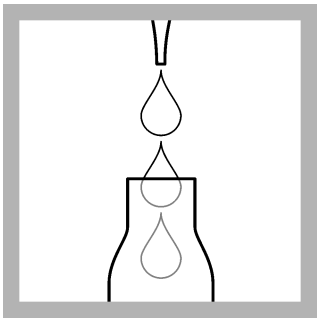
The pH of the water sample must be between pH 2–8.

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

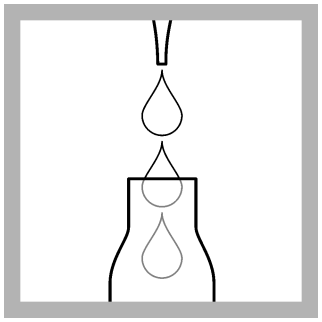
Before starting

Poorly soluble silver compounds, e.g. silver chloride, silver cyanide and silver thiosulphate, are not detected by the determination. These compounds must first be made accessible by carrying out a digestion with the test LCW954 Total Silver.
Turbidities are eliminated by filtration through a membrane filter (LCW904).
Cyanides, bromides and thiosulphates interfere in concentrations ≥ 1 mg/L. Higher amounts of hypochlorite and free chlorine cause low-bias results.
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.

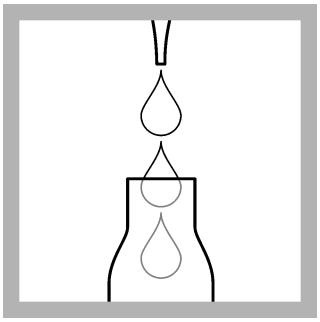
Procedure



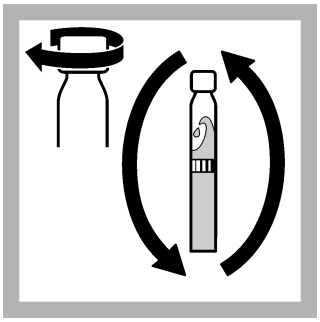
1. Carefully pipet **0.4 mL** of **solution A**.



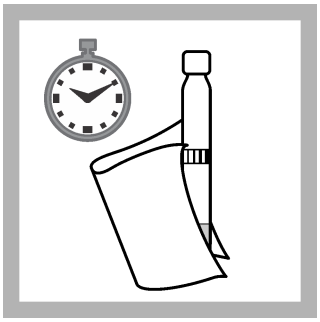
2. Carefully pipet **5.0 mL** of **sample**.



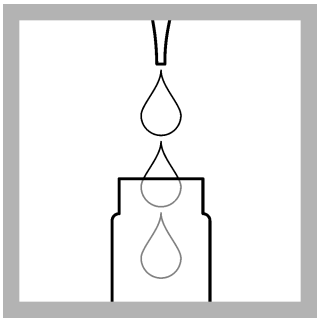
3. Carefully pipet **0.2 mL** of **solution B** in the **same** cuvette.



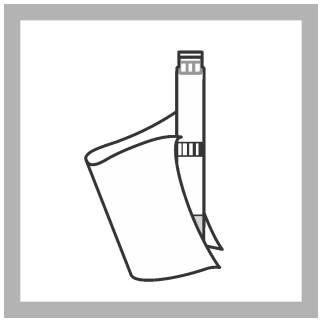
4. Close the cuvette and invert a few times until the freeze-dried contents are **completely dissolved**.



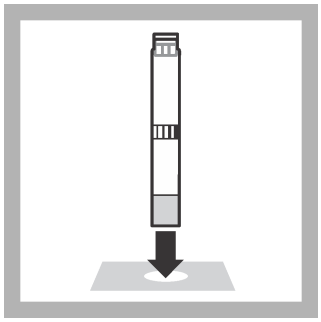
5. After **5 minutes**, thoroughly clean the outside of the cuvette.



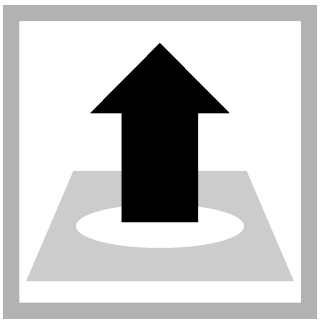
6. Prepare the blank: Pipet **5.0 mL sample** in the empty **blank cuvette**.



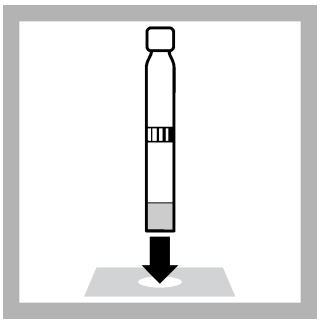
7. Thoroughly clean the outside of the blank.



8. Insert the **blank** into the cell holder. In the pop-up window start the test **Silver, total**.
DR1900: Go to LCK/TNTplus methods.
Select the test, push **ZERO**.



9. Remove the blank.



10. Insert the sample cuvette into the cell holder.
DR1900: 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).

Interference level	Interfering substance
1000 mg/L	Na^+, K^+, SO_4^{2-}
500 mg/L	NO_3^-
280 mg/L	Mg^{2+}
250 mg/L	Ca^{2+}, PO_4^{3-}
200 mg/L	CO_3^{2-}
150 mg/L	NH_4^+, NO_2^-
70 mg/L	Zn^{2+}, Cd^{2+}
50 mg/L	Pb^{2+}
20 mg/L	Al^{3+}, Fe^{2+}
10 mg/L	Fe^{3+}, Ni^{2+}, Cr^{6+}
5 mg/L	Cu^{2+}
2 mg/L	Cr^{3+}, Cl^-

Summary of method

Silver ions combine with the reagent to form an orange-red complex.

HACH LANGE GMBH
Willstätterstraße 11
D-40549 Düsseldorf
Tel. +49 (0) 2 11 52 88-0
Fax +49 (0) 2 11 52 88-143
info-de@hach.com
www.hach.com

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