LCK301 Aluminium

DOC312.53.94036

0.02–0.50 mg/L Al **LCK301**

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

Test preparation

Test storage

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

pH/Temperature

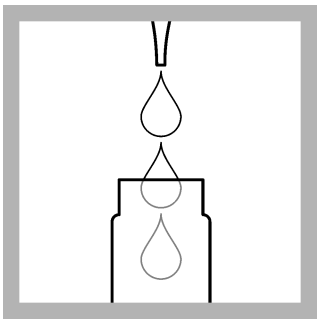
The pH of the water sample must be between pH 2.5–3.5.

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

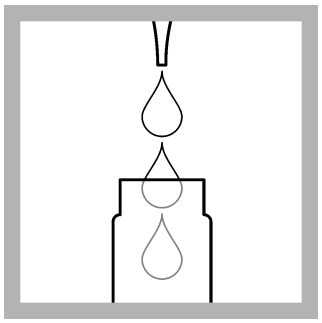
Before starting

A higher pH causes precipitation or complexing of the aluminium, so that low-bias results are obtained. If necessary the pH of the sample must be adjusted correspondingly by adding a small amount of nitric acid (HNO_3).
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.

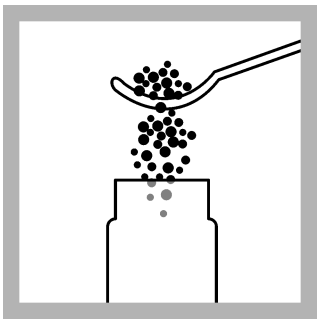
Procedure



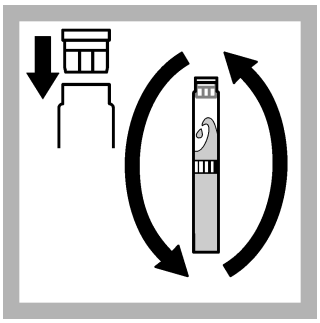
1. Carefully pipet **2.0 mL** of **solution A** into the **sample cuvette**.



2. Carefully pipet **3.0 mL** of **sample** into the **sample cuvette**.

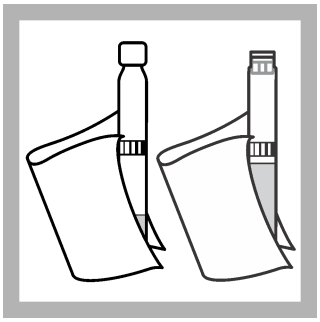


3. Add **1 level spoonful** of **reagent B** into the **sample cuvette**.

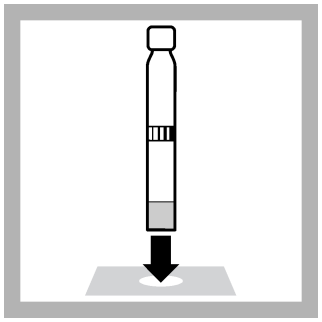


4. Close the cuvette and invert a few times until **the freeze-dried contents are completely dissolved**.

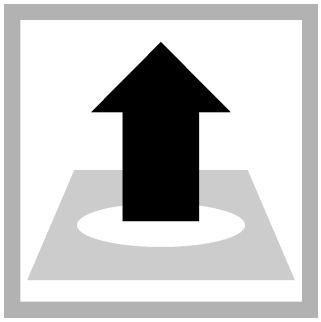
5. Wait **25 minutes**.



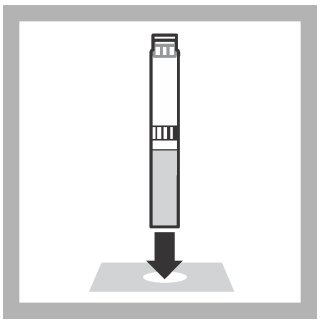
6. Thoroughly clean the outside of the **zero cuvette** and the **sample cuvette**.



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



8. Remove the zero cuvette.



9. 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.

Higher concentrations of heavy metals than those given, as well as fluoride, phosphate and relatively rare elements such as e.g. beryllium, thorium, titanium, zirconium and vanadium interfere with the determination. Aluminium oxide hydrates and hydroxide are only partially determined.

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

Removal of Interferences

Interfering fluoride can be removed by fuming off with sulphuric acid.

Interference level	Interfering substance
500 mg/L	Mg^{2+}, K^{+}, Na^{+}, NH_4^{+}, Cl^{-}, NO_3^{-}, SO_4^{2-} , Ca^{2+}
100 mg/L	Ag^{+}, Mn^{2+}
50 mg/L	Cd^{2+}, Co^{2+}, Ni^{2+}, Sn^{2+}, Pb^{2+}, PO_4^{3-}
10 mg/L	Cu^{2+}, Hg^{2+}
5 mg/L	Fe^{2+}, Fe^{3+}, Zn^{2+}, Si^{4+}
0.5 mg/L	Cr^{3+}, Cr^{6+}
0.1 mg/L	F^{-}

Summary of method

Chromazurol S forms a green colored lake with aluminium in weakly acidic acetate-buffered solutions.

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