LCK502 Ammonium-Nitrogen

DOC312.53.94411

100-1800 mg/L NH_4-N or 130-2320 mg/L NH_4 LCK502

Scope and application: For wastewater plants and industrial wastewater.

Test preparation

Test storage

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

pH/Temperature

The pH of the water sample must be between pH 4–9.

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

Items to collect

Description	Order number
Hach fixed volume pipette, 20 µL	2946003

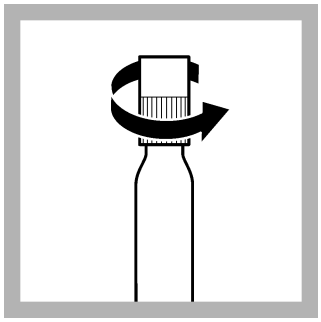
Before starting

In case of not working at the correct recommended temperature an incorrect result may be obtained.
Analyze the samples as soon as possible for best results.
Time dependency: The final absorbance is reached after a reaction time of **15 minutes** and then remains **constant for a further 15 minutes**.
The method is applicable for DR1900, DR3900, DR4900 and DR6000 only.
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.

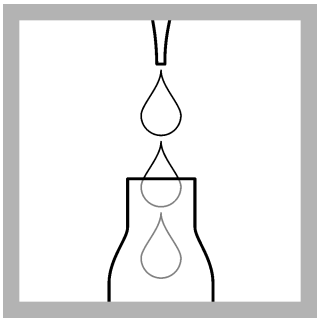
Procedure



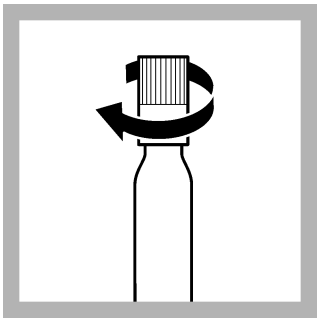
1. Carefully remove the foil from the screwed-on DosiCap Zip.



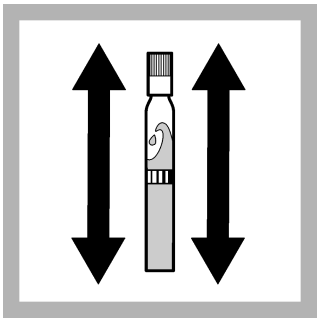
2. Unscrew the DosiCap Zip.



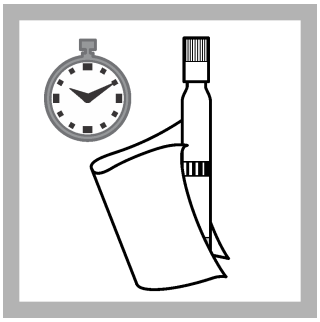
3. Carefully pipet **20 µL** of **sample**.



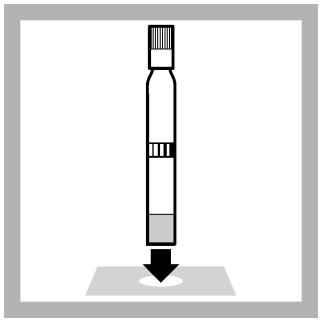
4. **Immediately** screw the DosiCap Zip back on; **fluting at the top**.



5. Shake **vigorously**.



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



7. Insert the cuvette into the cell holder.
DR1900: 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. Chromium(VI) ions interfere with the determination. Copper(II) ions interfere with the determination even at concentrations below 1 mg/L.

Primary amines are also determined and cause high-bias results. A 10000-fold excess of urea does not interfere. All reducing agents interfere and cause low-bias results.

A large excess of ammonium can cause result displays within the measuring range. It is advisable to carry out a plausibility check by making dilutions.

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

Interference level	Interfering substance
4000 mg/L	SO_4^{2-}
2000 mg/L	K^+, NO_3^-, Ca^{2+}, Cl^-
1000 mg/L	Na^+, PO_4^{3-}
200 mg/L	Mg^{2+}
100 mg/L	Cr^{3+}, Hg^{2+}
50 mg/L	Co^{2+}, Zn^{2+}, Cd^{2+}, Mn^{2+}
20 mg/L	Fe^{3+}, Ni^{2+}, Ag^+, Fe^{2+}
10 mg/L	Sn^{4+}

Summary of method

Ammonium ions react at pH 12.6 with hypochlorite ions and salicylate ions in the presence of sodium nitroprusside as a catalyst to form indophenol blue.

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

© Hach Company, 2019, 2026. All rights reserved. Original instructions.
05/2026, Edition 3