TNT 835 Nitrate

DOC312.53.94138

0.23–13.50 mg/L NO_3^-–N or
1.00–60.00 mg/L NO_3^- Low Range

TNTplus®—Method 10206

Scope and application: For wastewater, drinking water, surface water and process water.

Test preparation

Reagent storage

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

pH/Temperature

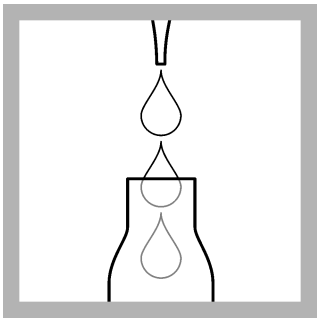
The pH of the water sample must be between pH 3–10.

The temperature of the water sample and reagents must be between 20–23 °C (68–73.4 °F).

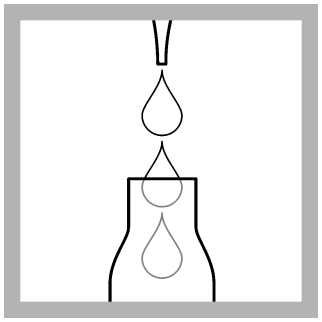
Before starting

In case of not working at the correct recommended temperature an incorrect result may be obtained.
Not more than **3 hours** should elapse between sampling and analysis. **Store in a cool place!**
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.

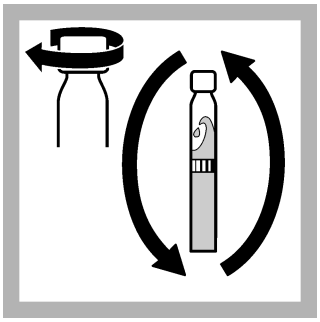
Procedure



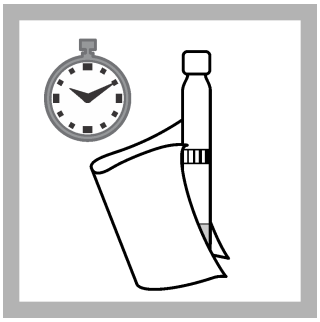
1. Carefully pipet **1.0 mL** of **sample**.



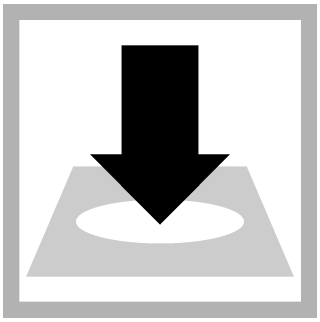
2. Carefully pipet **0.2 mL** of **solution A**.



3. Close the vial and invert a few times until **no more streaks** can be seen.



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



5. Insert the vial into the cell holder.
DR 1900: Go to LCK/TNTplus methods. Select the test, push **READ**.

Interferences

The ions listed below have been individually checked up to the given concentrations and do not cause interference. We have not determined cumulative effects and the influence of other ions. High loads of oxidizable organic substances (COD) cause the reagent to change colour and to give high-bias results. The test can thus only be used for wastewater analyses if the COD is less than 200 mg/L. Measurement results can be verified using sample dilutions or standard additions.

Removal of Interferences

Nitrite concentrations of more than 2.0 mg/L interfere (high-bias results). Add 50 mg of sulfamic acid (amidosulfonic acid) to 5.0 mL of sample, dissolve and wait for 10 minutes. Analyze the prepared sample as described in the procedure above.

Interference level	Interfering substance
500 mg/L	K^+, Na^+, Cl^-
100 mg/L	Ag^+
50 mg/L	Pb^{2+}, Zn^{2+}, Ni^{2+}, Fe^{3+}, Cd^{2+}, Sn^{2+}, Ca^{2+}, Cu^{2+}
10 mg/L	Co^{2+}, Fe^{2+}
5 mg/L	Cr^{6+}
2 mg/L	NO_2^-

Summary of method

Nitrate ions in solutions containing sulphuric and phosphoric acids react with 2.6-dimethylphenol to form 4-nitro-2.6-dimethylphenol.

TNTplus®

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03/2019, Edition 1