

5–35 mg/L NO₃⁻-N or 22–155 mg/L NO₃⁻ High 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.

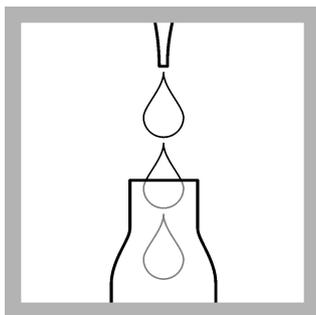
Not more than **3 hours** should elapse between sampling and analysis. **Store in a cool place!**

Review safety information and expiration date on the package.

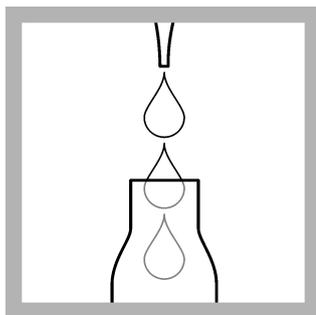
Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.

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.

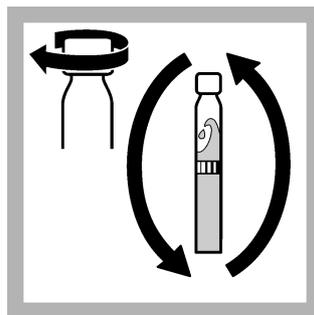
Procedure



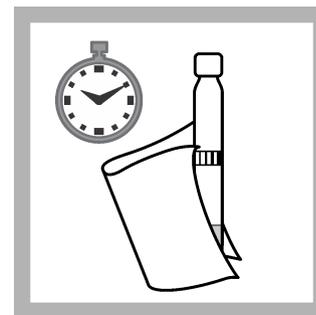
1. Carefully pipet **0.2 mL** of sample.



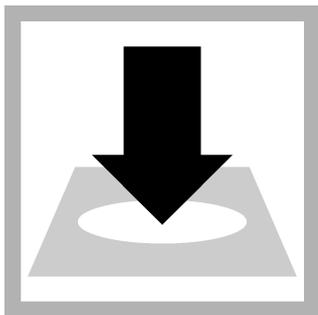
2. Carefully pipet **1.0 mL** of solution A.



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 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.

High loads of oxidizable organic substances (COD) cause the reagent to change color and to give high-bias results. The test can only be used for waste water analyses if the COD is less than 500 mg/L.

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

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
2000 mg/L	K ⁺
1500 mg/L	Na ⁺
1000 mg/L	Cl ⁻
500 mg/L	COD
250 mg/L	Ca ²⁺
100 mg/L	Ag ⁺
50 mg/L	Pb ²⁺ , Zn ²⁺ , Ni ²⁺ , Fe ³⁺ , Cd ²⁺ , Cu ²⁺
20 mg/L	Fe ²⁺
10 mg/L	Co 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.

TNT plus®



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