

Nitrite Determination

**Wear gloves and do analyses under fume hood.
All waste goes into waste disposal container.**

Diazotizing reagent. Add 5 g of Sulfanilamide and 50 ml of concentrated HCl to 300 ml distilled water. Stir to dissolve and bring to 500 ml.

Coupling reagent. Dissolve 500 mg of N-(1-naphthyl) – ethylenediamine dihydrochloride in 500 ml of distilled water. Store in dark bottle. Prepare fresh every four weeks.

Standard Nitrite-N solution. (1 mg / L) Dissolve 0.4925 g of NaNO₂ in 1,000ml distilled water. This solution contains 100 mg/L NO₂-N. Make a 1 mg/L standard solution by mixing 1ml of the 100 mg/L solution into 99 ml of distilled water.

- 1- Measure 50 ml of sample water.
- 2- Add 1 ml of diazotizing reagent, stir and allow 3 mins, not longer.
- 3- Add 1 ml of coupling reagent and stir.
- 4- Let stand for ten minutes and measure absorbance at 543 nm.

Make calibration solution by pipetting 5.0 ml of standard (1.0 mg / L) into 50 ml volumetric flask and bring to volume with DI water. The concentration of the standard will be **0.1 mg / L**. Decant standard into a beaker and add reagents. Use to make calibration curve.