



## NITRATE / NITRITE NITROGEN

Colorimetric test strips.

Nitrate /Nitrite test strips are for testing water in many applications from drinking water to water used to wash produce.

Nitrates and nitrites occur normally in nature from the breakdown of ammonia in the nitrogen life cycle. Nitrates in nature cause plant and algae growth that may affect the balance of water-based ecosystems.

Nitrate is found in fertilizers and animal waste. Rain tends to wash fertilizers containing nitrates into nearby natural water systems and ground water. Groundwater used as drinking water that contains nitrogen represents a hazard to babies. Many die every year as a result from "Blue Baby Syndrome."

This test reports concentrations compatible with EPA limits of total nitrogen and nitrite nitrogen in water.

The test reports levels of:

NO<sub>3</sub> (as N): 0, 0.5, 2.0, 5, 10, 20, 50 mg/L or ppm;

NO<sub>2</sub> (as N): 0.15, 0.3, 1, 1.5, 3, 10 mg/L or ppm.

Results are obtained from this test in 1 minute.

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## Conversion Ratio

Nitrate and Nitrite Nitrogen (as N) test results are usually expressed as mg/L or ppm. Sometimes the concentration of Nitrates or Nitrites needs to be expressed as Nitrate (N03) or Nitrite (N02).

To convert nitrate nitrogen concentration to nitrate concentration, multiply the test strip result by 4.4.

EXAMPLE: 5 PPM nitrate nitrogen x 4.4 = 22 mg/L or ppm nitrate.

To convert nitrite nitrogen concentration to nitrite concentration, multiply the test strip result by 3.3.

EXAMPLE: 1.5 PPM nitrite nitrogen x 3.3 = 4.95 mg/L or ppm nitrite.

## Background Information

**NOTE:** Both pads react with Nitrite. The end pad, which has zinc added, converts the Nitrate to Nitrite and, therefore, reacts with both Nitrate and Nitrite. To determine the true Nitrate Nitrogen level you must subtract the Nitrite level from the Nitrate plus Nitrite (end pad) level.

National Primary Drinking Water Regulations set forth by USEPA recommend a Nitrate (measured as Nitrogen) level less than 10 mg/L or ppm and a Nitrite (measured as Nitrogen) level less than 1 mg/L or ppm.

The World Health Organization guideline value is 50 mg/L (acute) for Nitrate (as N03) and 3 mg/L (acute) for Nitrite (as NO2).

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