



# Technical Data Sheet

## Nitrite

### Azo Dye Formation Method

**Applications and Industries:** Industrial wastewater influent and effluent, industrial process waters, boiler water, cooling water, surface and ground water.

**References:** APHA Standard Methods, 22<sup>nd</sup> ed., Method 4500-NO<sub>2</sub><sup>-</sup> B - 2000. USEPA Methods for Chemical Analysis of Water and Wastes, Method 354.1 (1983).

**Chemistry:** In an acidic solution, nitrite diazotizes sulfanilic acid (a primary aromatic amine), then couples with 4,5-dihydroxynaphthalene-2,7-disulfonic acid to produce a highly colored azo dye. The resulting pink-orange color is proportional to the nitrite concentration in the sample. Results are expressed as ppm (mg/L) NO<sub>2</sub>-N. To convert results from ppm NO<sub>2</sub>-N to ppm NO<sub>2</sub>, multiply by 3.3.

#### Interference Information:

Colored or turbid samples may make visual color matches difficult. Samples can be filtered to correct for this.

Ferric iron (Fe<sup>+3</sup>) may cause the reagent to precipitate, and cupric copper (Cu<sup>+2</sup>) may cause low test results. Chromate interferes by causing the formation of a yellow color.

Nitrate does not interfere.

**Safety Information:** Safety Data Sheets (SDS) are available upon request and at [www.chemetrics.com](http://www.chemetrics.com). Read SDS before using these products. Breaking the tip of an ampoule in air rather than water may cause the glass ampoule to shatter. Wear safety glasses and protective gloves.

**Available Analysis Systems:** Visual colorimetric: CHEMets® and VACUettes®. Instrumental colorimetric: Vacu-vials®.

**Storage Requirements:** Products should be stored in the dark and at room temperature.

**Shelf Life:** *When stored in the dark and at room temperature:* Visual colorimetric: The CHEMets and VACUettes refills and the color comparators have 12-month shelf lives. Instrumental colorimetric: The Vacu-vials kit has a shelf life of 12 months.

**Accuracy:** CHEMets and VACUettes kits: ± 1 color standard increment; Vacu-vials kit: ± 30% error at 75% and 25% of full range and at CHEMetrics' Practical Detection Limit (PDL).

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