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, 22nd ed., Method 4500-NO_2^- 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_2-N. To convert results from ppm NO_2-N to ppm NO_2, 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^{+3}) may cause the reagent to precipitate, and cupric copper (Cu^{+2}) 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. 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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