Technical Data Sheet

Persulfate

Ferric Thiocyanate Method

Applications and Industries: Groundwater remediation, pools and spas

References: D.F. Boltz and J.A. Howell, eds., Colorimetric Determination of Nonmetals, 2nd ed., Vol. 8, page 304 (1978).

Chemistry: In an acidic solution, persulfate oxidizes ferrous iron. The resulting ferric ion reacts with ammonium thiocyanate to form ferric thiocyanate, a red-orange colored complex, in direct proportion to the persulfate concentration. Results are expressed as ppm (mg/L) sodium persulfate ($Na_2S_2O_8$).

Interference Information:

Ferric iron and hydrogen peroxide interfere positively if present at any level.

Ozone and chlorine up to at least 1 ppm do not develop color with this chemistry.

Cupric copper may interfere positively.

Peracetic acid (PAA) interferes positively.

Oxidized manganese (permanganate, Mn^{7+}) will interfere positively.

Sample pHs between 1 and 8 are tolerated. Samples with extreme pHs or that are highly buffered should be adjusted to pHs of approximately 4-7 prior to analysis.

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®

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

Shelf Life: *When stored in the dark and at room temperature:* The CHEMets refill has a shelf life of 4 years. The color comparators have 2-year shelf lives.

Accuracy: CHEMets kit: ±1 color standard increment

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