

Method

Persulfate is a strong oxidizer that is commonly used for clarifying swimming pools and spas and for the destruction of a broad range of soil and groundwater contaminants. Sodium persulfate is frequently used for environmental applications.

The Ferric Thiocyanate Method

Reference: D.F. Boltz and J.A. Howell, eds. **Colorimetric Determination of Nonmetals, 2nd Ed., Vol. 8, p. 304 (1978).**

CHEMetrics' persulfate test kit employs the ferric thiocyanate method. 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. Chlorine does not interfere with this chemistry. Ferric iron, hydrogen peroxide, and ozone will interfere. Results are expressed in ppm (mg/L) sodium persulfate ($\text{Na}_2\text{S}_2\text{O}_8$).

Note: For the analyst in need of an instrumental test, CHEMetrics hydrogen peroxide Vacu-vials® kit K-5543 can be used to measure sodium persulfate. Simply follow the K-5543 test procedure and multiply peroxide test results by 7 to convert to ppm sodium persulfate.



⚠ WARNING! This product can expose you to chemicals including methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Visual Kit

Range: 0-5.6 & 7-70 ppm as $\text{Na}_2\text{S}_2\text{O}_8$ MDL: 0.35 ppm / Method: Ferric Thiocyanate	
CHEMetrics Kit	Cat# K-7870
CHEMetrics Refill, 30 ampoules	R-7870
Low Range Comparator 0, 0.7, 1.4, 2.1, 2.8, 3.5, 4.2, 5.6 ppm	C-7807
High Range Comparator 7, 14, 21, 28, 35, 42, 49, 56, 70 ppm	C-7870
Kit comes in a plastic case and contains everything needed to perform 30 tests: Refill, Low and High Range Comparators, 25 mL sample cup and instructions.	

Components and Accessories

Description	Cat#
Sample Cup Pack, 25 mL (6 ea)	A-0013

Instructions and SDSs are posted on our website.
If no shelf life is listed for a product, then the shelf life is at least 1 year.

Method

The measurement of pH is one of the most frequently performed water quality determinations. Water softening, precipitation, disinfection, and corrosion control are some of the many operations that depend on the careful measurement and control of pH. CHEMetrics' pH meter is applicable to the monitoring of drinking water, natural water supplies, boiler waters, make-up waters, condensate returns, swimming pools, aquariums, wastewaters, and similar samples.

CHEMetrics' double-junction pH meter was specifically developed for water conditioning and purification applications.

Method of Operation

Turn the meter on. Remove the protective cap from the tip of the probe. Dip the probe into the sample and stir the sample gently with the probe until the display stabilizes.

Calibration should be done regularly, typically every day that the meter is used.

Range: -1.00 to 15.00 pH

Resolution: 0.01 pH

Accuracy: ± 0.01 pH

Operating Temperature: 0 to 50°C (32 to 122°F)

Power and battery life: Four 1.5 V alkaline batteries (included). 500 hrs. (approx)

Pocket-sized: 6.5" length x 1.5" diameter

Weight: 4.5 oz. (135 g)

Warranty: 1 year (electrodes 6 months)

Instrument

Range: -1.00-15.00 pH Units	
pH Double Junction Meter	Cat# I-1000
Instrument comes in a plastic storage case and includes an electrode and cap, four 1.5 V alkaline batteries, and instructions.	

Components and Accessories

Description	Cat#
Electrode for pH Meter, Warranty 6 months	A-0174
pH Singles buffer solution assortment (5 ea), 4.0, 7.0, 10.0, and rinse, Shelf life 3 months	A-0175

Instructions are posted on our website.



FEATURES

- Accuracy with push-button three-point calibration
- Temperature readout & compensation
- Replaceable electrode
- Waterproof, dustproof
- Error messages; Hold function
 - Auto shut-off
- For harsh applications

Instruments are manufactured and guaranteed by Oakton Instruments, Inc.