



Technical Data Sheet

Hydrogen Peroxide Ceric Sulfate Method

Applications and Industries: Disinfecting solutions, aseptic packaging; Food and Beverage Industry

References: Developed by CHEMetrics, Inc.

Chemistry: Hydrogen peroxide is oxidized by the ceric sulfate titrant. Ferroin signals the endpoint of the titration. Test results are expressed as percent (%) H_2O_2 .

Sample Handling: Hydrogen peroxide is not stable in aqueous solution; the hydrogen peroxide content of aqueous samples, particularly when the concentration is low, will decrease rapidly. Agitation or exposure to sunlight or other strong light will accelerate the reduction of hydrogen peroxide in solution. Therefore, hydrogen peroxide analysis should be performed immediately after sample collection, and excessive agitation and exposure to light should be avoided.

Interference Information:

Sample constituents that are oxidized by ceric sulfate, including nitrite and ferrous iron, will interfere positively with this test.

Chromate interferes by masking the endpoint.

Copper does not interfere.

Ethylene glycol, even at percent levels, does not interfere.

Interpretation of Results: At the endpoint of this titration, the color of the solution in the test ampoule changes from green to brownish orange. If the Titret ampoule is filled with sample but the color of the solution remains green (i.e. does not change to brownish orange), the hydrogen peroxide concentration is below the test range. If the solution in the ampoule changes to brownish orange immediately upon introduction of the first small dose of sample, the peroxide concentration is above the test range.

Safety Information: Safety Data Sheets (SDS) are available upon request and at www.chemetrics.com. Read SDS before using this product. Breaking the tip of an ampoule in air when a valve assembly is not attached may cause the glass ampoule to shatter. Wear safety glasses and protective gloves.

Available Analysis Systems: Titrimetric: Titrets®

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 hydrogen peroxide Titrets kit has a 2-year shelf life.

Accuracy: Due to the non-linear nature of the ampoule's test scale, the accuracy of this test varies with the location of the result on the scale. At twice the minimum concentration, the allowable error is $\pm 10\%$ of the result.