

Nitrite - Ceric Sulfate Method

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Applications and Industries

Industrial process waters, cooling water, boiler water

References

Developed by CHEMetrics

Chemistry

Nitrite is oxidized by the ceric sulfate titrant. Ferriin signals the endpoint of the titration. Test results are expressed as ppm (mg/L) sodium nitrite (NaNO_2).

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:

Titrets kit: at least 1 year

Accuracy Statement

Statements of accuracy are based on laboratory tests performed under ideal testing conditions using standards of known concentration prepared in deionized water.

Due to the non-linear nature of the test scale, the accuracy of this test varies with the location of the test result on the scale. At twice the minimum concentration for a particular kit range, the accuracy is $\pm 10\%$ error.

Interference Information

- Sample constituents that are oxidized by ceric sulfate, including hydrogen peroxide 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 orange. If the Titret ampoule is filled with sample but the color of the solution remains green (i.e. does not change to orange), the nitrite concentration is below the test range. If the solution in the ampoule changes to orange immediately upon introduction of the first small dose of sample, the nitrite 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 these products. 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.