Mercaptobenzothiazole (MBT) – Permanganate Method

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Applications and Industries

Cooling water systems, utility condensers.

References

Developed by CHEMetrics, Inc.

Chemistry

In acidic solution, mercaptobenzothiazole, a reducing agent, reacts with the strong oxidizer, permanganate. A color change from pink to straw yellow signals the endpoint of the titration. Results are expressed as ppm (mg/L) MBT.

Available Analysis Systems

Titrimetric: Titrets®

Storage Requirements

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

Safety Information

Safety Data Sheets (SDS) are available upon request and at www.sdsfetch.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.

Interference Information

- Nitrite-containing corrosion inhibitors will interfere positively.
- Other reducing agents that react with permanganate will also cause a positive interference.
- Chlorine and hydrogen peroxide may interfere.

Interpretation of Results

At the end point of this titration, the color of the solution in the test ampoule changes from pink to straw yellow.

If the ampoule is filled with sample but the color of the solution remains pink (i.e. does not change to yellow), the MBT concentration is below the test range.

If the solution in the ampoule changes to straw yellow immediately upon introduction of the first small dose of sample, the MBT concentration is above the test range.

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 these tests varies with the location of the test result on the scale. At twice the minimum concentration of the kit range, the accuracy is: ± 10% error.