

# **ChemScan<sup>®</sup>**

## **PROCESS ANALYZERS**

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### **ChemScan<sup>®</sup> Method Summary #120 Triazole Analysis for Cooling Water Treatment**

#### Background

Triazole is a yellow metal corrosion inhibitor used in open recirculating cooling tower treatment programs. The typical forms used are benzotriazole, tolytriazole and mercaptobenzotriazole. These chemicals are classified as organic corrosion inhibitors. They form a monomolecular film over both anodic and cathodic sites. These inhibitors are particularly effective in preventing corrosion of copper and its alloys by protecting the cuprous oxide film layer and by preventing polymer dispersants such as polyacrylate from attacking copper.

#### ChemScan Analyzer Method

Triazole has excellent light absorbance characteristics in the ultraviolet wavelength range. Triazole can be reliably detected in typical cooling water applications through primary (no reagent) analysis at concentrations of 1 ppm and higher. Lower concentration detection may be possible using an expanded path length.

Triazole is typically analyzed as a second parameter in addition to other water treatment chemicals such as molybdate (See ChemScan Method Summary #123) or Synthetic Polymer (See ChemScan Method Summary #149) using a single ChemScan Analyzer.