A Selective Spectrophotometric Determination of Cu (II) Using a New Synthetic Ligand (2-Hydroxy-4,4-Dimethyl-6-Oxo-1-Cyclohexan-1-II) 3,3 Dimethyl 2,3,4,9 Tetrahydro-H-1-Xanten-1-On

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In this study, a spectrophotometric method for selective determination of Cu (II) in water samples was reported. The method is based on using a new synthetic ligand (2-hydroxy-4,4dimethyl-6oxo-1-cyclohexan-1-il)3,3dimethyl-2,3,4,9 tetrahydro-H-1-xanten-1-On [1]. This reagent is from chromene family and reacts in a quite selective way with Cu (II), enabling selective determination of Cu (II) in water samples.

In order to increase the solubility of reagent and product(s) and enhance the molar absorption coefficient, a non-ionic surfactant, Triton X-100, was used. In this method, the calibration curve was linear in the range of 0.1-1 ppm under optimal conditions. The limit of detection of the proposed method was obtained 0.011 ppm (3σ).

KEYWORDS: selective determination, Cu (II), spectrophotometry

REFERENCES: