PONTE

Vol. 75 No. 2, 2019 Florence, Italy
ISSN: 0032-423X *E-ISSN:* 0032-6356 International Journal of Sciences and Research

DOI: 10.21506/j.ponte.2019.03.05

SPECTROPHOTOMETRIC DETERMINATION OF COPPER (II) WITH DITHIOLPHENOLS AND HETEROCYCLIC DIAMINES

[1]K. A. Kuliev[*], S. G. Aliev [2], R.A.Ismailova[2], E.I.Suleymanova[2], L. M. Maharramova [2], A.Y. Melikova [2]
1-Department of Analytical Chemistry, Azerbaijan State Pedagogical University
U. Gadjibekov street 68. Baku, AZ 1000, **AZERBAİJAN**
2-Department of Chemical Technology and Technology of Inorganic Substances, Azerbaijan State Oil and Industry University
Correspondence to Author: K. A. Kuliev
Lecturer
Department of Analytical Chemistry, Azerbaijan State Pedagogical University
U. Gadjibekov street 68. Baku, AZ 1000, **AZERBAİJAN**
E-mail: kerim.kuliev.69@mail.ru

ABSTRACT

2, 6-dithiol-4-methylphenol (DTMP) and 2, 6-dithiol-4-ethylphenol (DTEP) as a photometric reagent for the extractive spectrophotometric determination of Copper(II) is presented in this paper. The reagent DTMP and DTEP in the presence hydrofobic amins gave instantaneous and stable blue colour with Copper (II) in the pH range 6.5 to 8.1. The Beer's law was applicable in the range of 0.05 - 3.8 µg/ml at 629-640 nm. The Limit of Detection (LOD) is found to be 8.5-8.8 ng/mL. The stoichiometry of the complex is established as 1:1:1 (M: L: Am) by equilibrium shift method. The standard deviation and the coefficient of variance are presented. The interference of various cations and anions in the method were studied.

Keywords: Copper, spectrophotometric determination, chloroform, 2, 6-dithiol-4-methyl-phenol, 2, 6-dithiol-4-ethylphenol.