



**Synthesis, Antimicrobial and Thermal Activities of Co(II), Ni(II),
Cu(II) Azo-Thiazole Complex Dyes and Their Application on Polyester Fabrics**

Hala F. Rizk, Nadia El-Wakiel and Seham A. Ibrahim*

*Department of Chemistry, Faculty of Science, Tanta University, 31527 Tanta, **EGYPT**

Email: sehamabdelatif@yahoo.com

Accepted on 14th June 2016

ABSTRACT

4-((2-Amino-4-pyridin-3-yl)thiazol-5-yl)diazenyl)-5-hydroxynaphthalene-2,7-disulfonic acid and its Cu(II), Co(II) and Ni(II) complexes have been synthesized, characterized and applied on polyester fabrics. The ligand acts as monobasic bidentate for all complexes via deprotonated OH and nitrogen atom of the azo group. The complexes have tetrahedral structure except Cu (II) has an octahedral geometry. The color yield of the dyes furnished over fiber was found to be moderate to good. In addition; the synthesized dyes were screened for their antimicrobial activities against some Gram positive, Gram negative bacteria and fungi.

Keywords: Azo thiazole dyes, Color fastness, Metal complex azo dyes, Thermal activity.
