

## Synthesis, characterization, antioxidant and antimicrobial studies of Cu(II), Co(II), Ni(II) and Mn(II) complexes with a new Schiff base ligand containing a pyrimidine moiety

Hatice Gamze Soğukömeroğullari<sup>1\*</sup>, Mehmet Sönmez<sup>1</sup>,  
İsmet Berber<sup>2</sup>

<sup>1</sup>Gaziantep University, Faculty of Science and Arts, Chemistry Department, 27310, Gaziantep, Turkey

<sup>2</sup>Sinop University, Faculty of Science and Arts, Biology Department, 57010, Sinop, Turkey.

**Abstract :** The new Schiff base ligand derived from 2-hydroxy-5-methoxybenzaldehyde and 1-amino-5-benzoyl-4-phenyl-1H-pyrimidine-2-one and its metal complexes (Cu(II), Co(II), Ni(II) and Mn(II)) have been synthesized. Schiff base ligand and its complexes were characterized by elemental analysis, magnetic measurement, molar conductivity, IR, NMR (for ligand) and Mass spectral studies. All the compounds have encouraged us to study on their antioxidant properties and antimicrobial activities against Gram-positive, Gram-negative bacteria and fungi using microdilution procedure. Cu(II) (**1a**) and Co(II) (**1b**) metallic complexes might be possible as substances to eliminate the free radicals and against the antimicrobial agent.

**Keywords:** Schiff bases, Metal complexes, antioxidant studies, antimicrobial activity.