



Synthesis, Characterization and Antibacterial Activity of Cobalt (II), Nickel (II), Copper (II) Zinc (II) and Cadmium (II) Complexes with a new Hexadentate N₄O₂ Ligand

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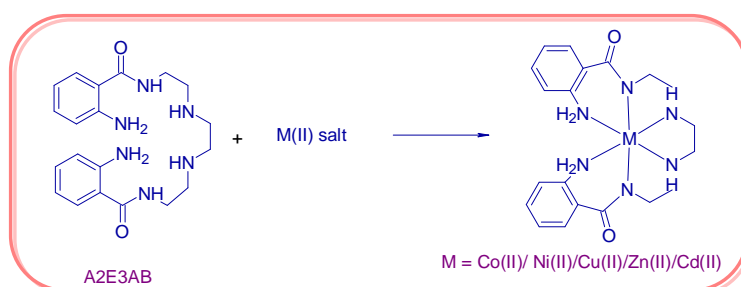
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ABSTRACT

A new hexadentate ligand *N*-{2-[2(2-aminobenzoyl) amino-ethylamino]-ethylamino]-ethyl-2-aminobenzamide (A2E3AB) is prepared by the reaction between methyl anthranilate and triethylene tetraamine in dry ethanol at refluxing temperature. The Complexes of Co (II), Ni(II), Cu(II), Zn(II) and Cd(II) with this new ligand are prepared and characterized by elemental analyses, magnetic susceptibility measurements, thermal studies, IR, UV-Vis, NMR and Mass spectral investigations. The ligand A2E3AB is found to lose the amide protons and acts as a hexadentate dianionic ligand. The complexes are found to have the formula [M(A2E3AB)], where M = Co(II), Ni(II), Cu(II), Zn(II) or Cd(II).

Graphical Abstract



Keywords: Polydentate ligands, Transition metal complexes, Cobalt(II), Nickel(II), Copper(II), Zinc(II) and Cadmium(II).