**Abstract**

 Transition metal hydrazine complexes of pyridine–3-carboxylic acid andpyridine–4-carboxylic acid, [ML1L2 (N2H4) 2] where L1 = pyridine–3- carboxylic acid, L2 =pyridine–4-carboxylic acid where M = Co, Ni, Zn and Cd have been preparedand characterized by analytical, IR, UV-Vis, CHNS, TGDTA, VSM and powder XRD studies. The IR studies show that N-N stretching frequency at 953–969cm-1 suggesting abidentate bridging structure of hydrazine molecules to the central metal ion in all the complexes. Thermal decomposition of the compounds are studied from room temperature to 900oCby TG-DTA analysis, which show that all the complexes decompose steadily to yield to metal oxides. VSM measurement shows that all the metal complexes are paramagnetic in nature. Antimicrobial screening was carried out for the synthesized complex against bacteria and fungi. The binding of the complexes with herring sperm DNA was also carried out for the complexes.