



ChemTech

International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.11 No.11, pp 211-216, 2018

Stability constant study of transition metal complexes with pharmacologically active ligand(N-[-(4-chlorophenyl)methylene] nicotinohydrazide) by pH metric Technique

ZamzamTaher Omar (Al-Ahdal)*, Shivaji Jadhav,
Mazahar Farooqui, Megha Rai

Department of Chemistry, Dr.Rafiq Zakaria College for Women, Aurangabad - 431001,
MS, India.

Abstract : Pharmacologically active organic ligands (N-[-(4-chlorophenyl)methylene] nicotinohydrazide) synthesized through the condensation of equimolar mixture of Anti-mycobacterial agent(nicotinohydrazide)with aromatic aldehyde. The reaction progress and purity of organic ligands were verifying by thin layer chromatography. Formation of organic ligands was confirming with the help of MP, IR, ^1H NMR, ^{13}C NMR and elemental analysis.Further formation of complexes of transition elements like Mn(II), CO(II), Ni(II), Cu(II) and Zn(II) with organic ligand (Schiff base) N-[-(4-chlorophenyl)methylene] nicotinohydrazide, were studying by the pH-metric technique at $27\pm 1^\circ\text{C}$ in 70%(v/v) ethanol - water medium at 1M (NaClO_4) ionic strength. The stability constants of these binary complexes were evaluating and order of stability constant found as $\text{Zn (II)} > \text{Cu (II)} > \text{Ni (II)} > \text{Mn(II)} > \text{Co (II)}$.

Key word : Binary complexation,N-[-(4-chlorophenyl)methylene]nicotinohydrazide, transition metals, pH metric technique.

Zamzam Taher Omar (Al-Ahdal) *et al* /International Journal of ChemTech Research, 2018,11(11): 211-216

DOI= <http://dx.doi.org/10.20902/IJCTR.2018.111121>
