



**Synthesis, Spectroscopic Characterization and Biologically Investigations of Some New Coordination Compounds of Arsenic (III) with Biologically Active Carbohydrazones using Green Solvent**

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**ABSTRACT**

*Some new coordination compounds of arsenic (III) having general formula  $[\text{AsCl}_3(\text{L})]$  (where L = carbohydrazone ligand) have been synthesized by the interaction of arsenic trichloride with carbohydrazone ligands with the ratio of 1:1 (metal- ligand) using dry methyltetrahydrofuran as a reaction medium. The newly synthesized complexes were further characterized by elemental analysis, molecular weight determinations and conductivity measurement. Plausible structures are proposed on the basis of spectral studies viz., IR, UV-Vis and NMR. The biological activities of carbohydrazones and their newly synthesized complexes have been screened in vitro against some bacterial and fungal strain to assess their growth inhibitory potency. Most of the metal complexes exhibit more antibacterial and antifungal activities than the free carbohydrazone ligands against these organisms.*

**Keywords:** Carbohydrazones, spectral analysis, biological activities.

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