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Metal complexes of Q-2, 3-dione reacting with Orthophenylenediamine a new-n-hetrocyclic ligand having a biological activity and its structural studies

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The quinoxaline skeleton has been used as a synthetic intermediate for the preparation of numerous compounds with interesting biological properties. Due to their conformational rigidity and their wide range of properties, such heterocyclic systems play an essential role as scaffolds in biologically active compounds.

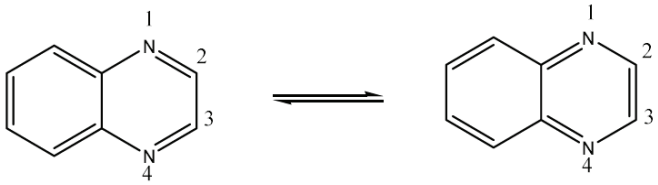

Fig: Structure of quinoxaline

Quinoxaline derivatives are an interesting class of compounds possessing a broad spectrum of biological activity. Commonly are well known their antibacterial, antiviral, antifungal, antispasmodic, or even anticancer properties.

Complexes of quinoxaline derivatives with metals show the high ability to covalently bind to DNA and cleavage. Complexes of Cu(II) and Ni(II) have been synthesized using template method by the condensation of orthophenylenediamine with quinoxaline-2,3-dione in ethanolic medium in the presence of metal ion. All the complexes were characterized on the basis of their molar conductance, magnetic susceptibility, IR and UV-Vis, and based on this the Cu-L complex found as square planar and Ni-L complex was octahedral.

Biography

Yosef Alemayehu Hailemariam is a 4th year Ph.D. student in the department of Environmental science at University of South Africa and he was a lecturer at Debre Birhan University for three years (2007-2009).

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