Manuscript ID : 00001-76147

Source ID : 00000583

Rafidain Journal of Science

Volume 28, Issue 2, 2019, Pages 100-111, Page Count - 12

# New Tridentate Hydrazone Metal Complexes Derived from 2-Hydroxy-4- Methoxyacetophenone and some Acid Hydrazides: Synthesis, Characterization and Antibacterial Activity Evaluation

Dhufr A Omer [(1)] Abdul Ghany M Al Daher [(2)]

[(1)] Department of Chemistry, College of Science, University of Mosul, Mosul, Iraq.
[(2)] Department of Chemistry, College of Science, University of Mosul, Mosul, Iraq.

**Abstract**

*A new series of complexes of Co(II), Ni(II), Cu(II), and Zn(II) with three hydrazones ligands(L) derived from 2-hydroxy-4-methoxy acetophenone (Paeonol) and 4-methylbenzoylhydrazide (AMBH), acetyl hydrazine (AAH), or picolinoyl hydrazine (APH) with the general formula $[M(L\text{-}H)_2].nH_2O$ (n= 0, 1, or 2) where L-H = deprotonated AMBH, AAH or APH, have been prepared and characterized by elemental analyses, spectral (FT-IR, UV-visible) as well as molar conductance and magnetic measurements. The data revealed that the ligands AMBH and AAH act as mono-negative ONO chelates coordinated through the carbonyl group and the phenoxy oxygen atoms and azomethine nitrogen atom, while APH acts as NNO chelate, coordinated through the pyridine and azomethine nitrogen atoms and the phenoxy oxygen atom. On the basis of electronic spectral and magnetic moment data, an octahedral geometry is suggested for all complexes. Also, the ligands and some of their complexes were screened for antibacterial activities.*

**Author Keywords**

Hydrazones, Complexes, Transition Metals, Antibacterial Activity

**ISSN Print:** 1608-9391
**ISSN Online:** 2664-2786
**Source Type:** Journals
**Document Type:** Journal Article
**Publication Language:** English
**DOI:**
**Abbreviated Journal Title:** RJS
**Access Type:** Open Access
**Publisher Name:** Mosul University, College of Science
**Resource Licence:** CC BY-NC
**Major Subject:** Physical Sciences
**Subject Area classification:** Chemistry
**Subject area:** Organic Chemistry
**Source:** SCOPEDATABASE

**Reference**