



## Cu(II) Heterochelates: Synthesis, Spectroscopic, Thermal and *in-vitro* Biological Studies

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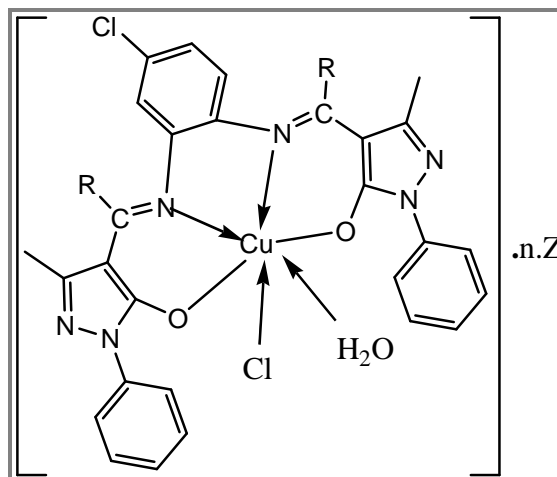
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### ABSTRACT

Novel organic based compound 4-Acyl pyrazolone derivatives and their thermal and biological activities were investigated. A new series of Bis-pyrazolone containing ligand and their Cu(II) based heterochelate were synthesis by various acyl chloride. The structure of bis-pyrazolone ligands were confirmed by <sup>1</sup>H NMR, IR, Elemental analysis and their heterochelates were confirmed by thermal studies (TGA and DSC) and FAB Mass spectroscopy. All the synthesized compounds were screened for their In-Vitro biological study against two Gram +ve (*Bacillus cereus*, *Bacillus megaterium*) and two Gram-ve (*E. coli*, *E. aerogen*) microorganism. The results confirmed that novel bis-pyrazolone based heterochelates have a great potential and significant for further investigation.

### Graphical Abstract



The suggested structure of Heterochelate.

**Keywords:** Heterochelate, Biological Activity, Bis-pyrazolone, Novel Schiff base, Thermal Studies