



Synthesis, Characterization and Antimicrobial Evaluation of Organozirconium (IV) Complexes with 5-Aminotetrazole Schiff bases

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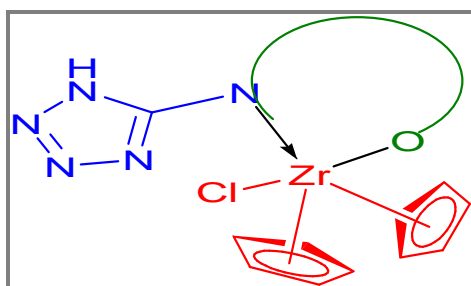
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ABSTRACT

Novel class of organozirconium (IV) complexes with Schiff bases derived from the condensations of 5-aminotetrazole and aldehydes / ketones in ethanol. Micro-analytical data, IR, and ¹HNMR spectral techniques were used to confirm the structures. SEM studies were performed for morphology. In vitro antifungal activity of synthesized complexes was determined against several fungi *Aspergillus niger*, *colletotrichum falcatum* and *colletotrichum pallescens* and in vitro antibacterial activity was determined by screening the compounds against the Gram negative (*Escherichia coli* and *Salmonella typhi*) and the Gram positive (*Staphylococcus aureus* and *Bacillus subtilis*) bacterial strains. The organozirconium(IV) complexes showed moderate to good antimicrobial activity.

Graphical Abstract



Organozirconium(IV) complexes

Highlights:

- Organozirconium(IV) complexes have been synthesized.
- The complexes were characterized by different spectroscopic techniques.
- The complexes are supposed to be potent antimicrobial agents.

Keywords: Organozirconium(IV), 5-aminotetrazole, Schiff bases, Antimicrobial activity.