

Synthesis, crystal structure, characterisation, and antifungal activity of 3-thiophene aldehyde semicarbazone (3STCH), 2,3-thiophene dicarboxaldehyde bis(semicarbazone) (2,3BSTCH₂) and their nickel (II) complexes

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Titre	Synthesis, crystal structure, characterisation, and antifungal activity of 3-thiophene aldehyde semicarbazone (3STCH), 2,3-thiophene dicarboxaldehyde bis(semicarbazone) (2,3BSTCH ₂) and their nickel (II) complexes
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R�sum� en anglais	<p>The reaction of nickel (II) chloride and bromide with 3-thiophene aldehyde semicarbazone (3STCH) and 2,3-thiophene dicarboxaldehyde bis(semicarbazone) (2,3BSTCH₂) leads to the formation of a series of new complexes: [NiCl₂(3STCH)₂], [NiBr₂(3STCH)₂], [NiCl(2,3BSTCH₂)(H₂O)]Cl, and [NiBr(2,3BSTCH₂)(H₂O)]Br respectively. The crystal structures of the two ligands 3STCH, 2,3BSTCH₂ and of the complex [NiBr(2,3BSTCH₂)(H₂O)]Br have been determined by X-ray diffraction methods. For all these complexes, the central ion is coordinated through the oxygen atom of the carbonyle and the azomethine nitrogen atom of the semicarbazone. The antifungal activity of the complexes and their corresponding ligands was evaluated against some strains of respectively, <i>Candida albicans</i>, <i>Candida glabrata</i> and <i>Aspergillus fumigatus</i>. The complexes with 3STCH and 2,3BSTCH₂ revealed interesting CMI80 values specifically against <i>C. glabrata</i>. Cytotoxicity assay was also carried out in vitro on MRC5 cells.</p>
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