Schiff Bases of Methanesulfonylhydrazine. Synthesis, Spectroscopic Characterization, Conformational Analysis, and Biological Activity

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Schiff Bases, Methanesulfonylhydrazine, \textsuperscript{1}H NMR Data, Molecular Mechanics, Cytotoxic Activity

Three novel Schiff bases: salicylaldehyde methanesulfonylhydrazone (1), 2-hydroxyacetophenone methanesulfonylhydrazone (2) and 2-hydroxy-1-naphthaldehyde methanesulfonylhydrazone (3) have been synthesized. Compounds 1-3, as well as acetone methanesulfonylhydrazone (4) have been characterized by TLC, \textsuperscript{1}H NMR and IR spectra. The spectroscopic results for 1-3 have revealed the presence of an intramolecular hydrogen bond between the hydroxyl group and the imine N atom. The conformational isomerism of 1-4 with respect to the rotations around the SN and NN bonds have been studied by the method of molecular mechanics. Compounds 1-4 and methanesulfonylhydrazine exhibit antibacterial and cytotoxic effects.