

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

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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, <sup>1</sup>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.