

Preparation of N-chloroacetyl-N'-arylsulfonylureas and the crystal structure of N-chloroacetyl-N'-(4-methylphenylsulfonyl)urea

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Abstract

Novel arylsulfonylureas were prepared by the reaction of chloroacetyl isocyanate with arylsulfamides. The structures of the compounds synthesized were determined by IR and ^1H NMR spectra. An X-ray structural analysis of N-chloroacetyl-N'-(4-methylphenylsulfonyl)urea was carried out. It was found that the molecule has the anti-syn conformation stabilized by an intramolecular H-bond. In the crystal, the molecules are combined into centrosymmetrical dimers by intermolecular hydrogen bonds. The compounds considered exhibit moderate fungicide activity. © 1995 Plenum Publishing Corporation.

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Keywords

arylsulfamides, biological activity, chloroacetyl isocyanate, hydrogen bonds, N-chloroacetyl--'arylsulfonylureas, X-ray diffraction analysis