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Synthesis and Characterization of Substituted Acid Hydrazide Containing Four Nitrogen Atoms

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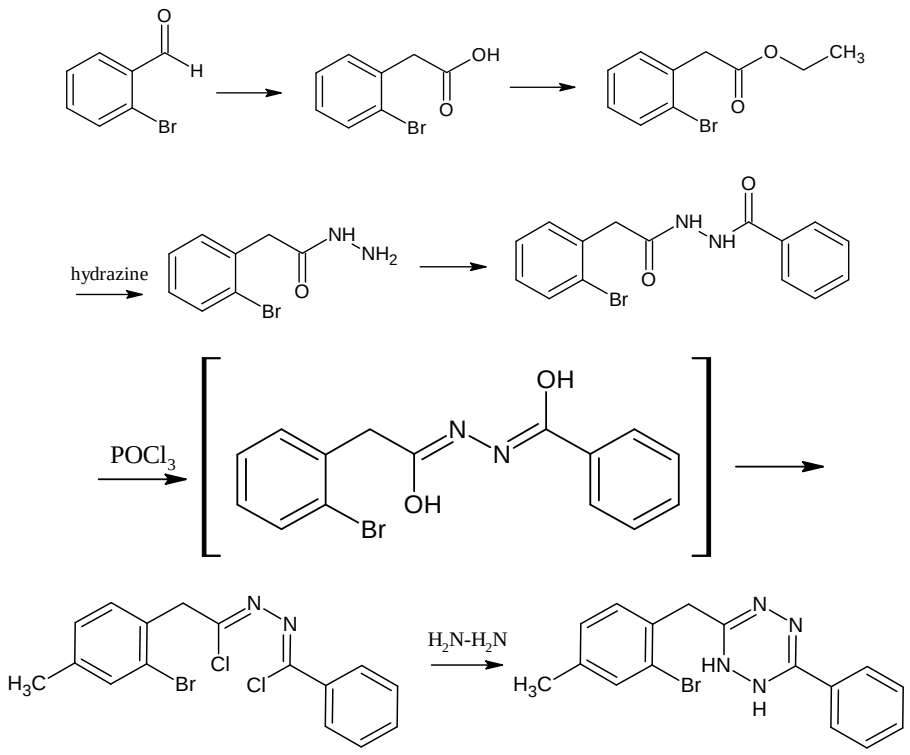
Abstract
In this paper, synthesis of 3-(2-bromo-4-methylbenzyl)-6-phenyl-1,2-dihydro-1,2,4,5-tetrazine acid hydrazide derivative say has been reported. The reaction was started by taking 2-bromobenzaldehyde as starting material. By using the many simple and common reaction, acid hydrazide derivative containing four nitrogen atoms have been completed. The structures of synthesized compounds are confirmed by their IR and ^{1}H-NMR spectral data. Melting point of the compound has been determined by open capillary tube.

Keywords: acid hydrazide, IR, NMR cyclization, hydrazine

Introduction
The important class of heterocyclic is acid hydrazide derivatives. These are reported to possess a wide spectrum of biological properties such as antibacterial [1], analgesic [2], anti-inflammatory [3], antifungal [4], antimalarial [5], antihypertensive [6], CNS depressant [7], anticonvulsant [8], antihistaminic [9], local anesthetic [10], antiparkinsonism [11], anti-viral [12], antitubercular [13], anti-cancer [14] etc. activities.
In this paper a novel synthesis of 3-(2-bromo-4-methylbenzyl)-6-phenyl-1,2-dihydro-1,2,4,5-tetrazine acid hydrazide derivative has been reported.

Synthesis of Acid hydrazide derivative
The 0.0031 mol of 2-bromobenzaldehyde was taken in a round bottom flask and dissolved in 20 ml of dry pyridine then 0.80 g (0.0037 mol) of phodphorous oxychloride was added and refluxed for 6 h. The reaction was monitored by TLC. After the completion of reaction, the contents were cooled and poured into ice-cold water with continuous stirring and kept aside for 10 min, the crystalline solid obtained was filtered at pump, thoroughly washed with water, dried and recrystallised with ethanol.

Scheme



Mol. formula	Mol. weight	M.P(^{0}C)	Recrystallizing solvent	% yield
$C_{16}H_{15}N_4Br$	343.22	290	Ethanol	68

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