SYNTHESIS OF NEW KINDS OF N-ALKOXYHYDANTOINS

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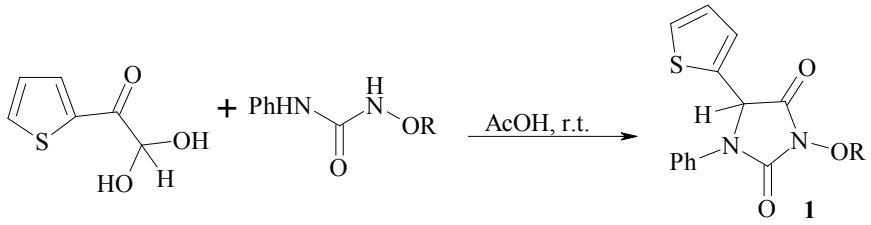
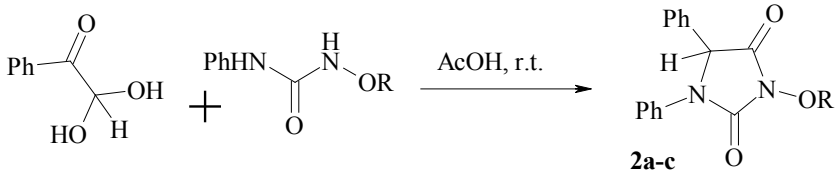
The relevance of the products which obtained by the *N*-alkoxy-*N*'-arylureas interaction with the arylglyoxals is significant because of the importance of imidazolidin-2-ones and hydantoins among pharmaceutical materials.

We had found that 2-thienylglyoxal selectively reacted with *N*-alkoxy-*N*'-phenylureas yielding the unknown 3-alkoxy-1-phenyl-5-(2-thienyl)hydantoins 1.



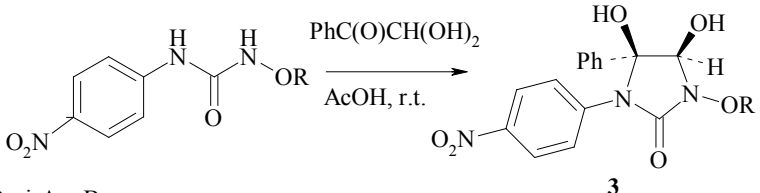
R=Me,Et,Pr,i-Pr,n-Bu

Phenylglyoxal reacts with *N*-alkoxy-*N*'-phenylureas in acetic acid at room temperature in most cases giving only 3-alkoxy-1,5-bis(phenyl)hydantoins 2.



R=Et (a),n-Bu (b), n-C_8H_{17}(c)

Phenylglyoxal interacts with *N*-alkoxy-*N*'-(4-nitrophenyl)ureas yielding only 3-alkoxy-*cis*-4,5-dihydroxy-1-(4-nitrophenyl)-5-phenylimidazolidin-2-ones 3.



R= i-Am,Bn