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Arylsulphonamides of Amidothiophosphonic Acids

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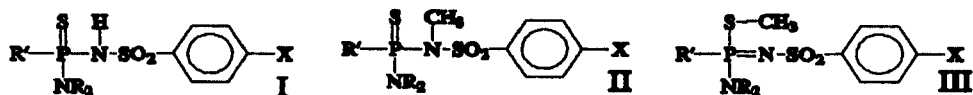
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ARYLSULPHONAMIDES OF AMIDOTHIOPHOSPHONIC ACIDS

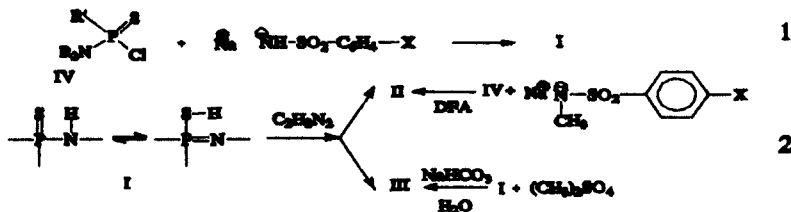
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Chemical structure-antimicrobial activity correlation in a thiophosphoric arylsulphonamide class were established¹. The aim of this paper is to present new compounds of same type: p-substituted arylsulphonylamides of amidothiophosphonic acids, I; N-methyl and S-methyl derivatives of them, II and respectively III, synthesized by schemes 1 and 2 ($R' = \text{cC}_6\text{H}_{11}$, C_6H_5 ; $\text{NR}_2 = \text{N}(\text{CH}_3)_2$, $\text{N}(\text{C}_2\text{H}_5)_2$, $\text{N}(\text{C}_2\text{H}_4)_2\text{O}$; $\text{X} = \text{F}$, Cl , Br , H , CH_3 , OCH_3).



For structure I there are thionamido-thiolimido tautomeric equilibrium which lies far on the site of the thiono form. The two nucleophilic centers from correspondent ambident anion selectively reacts with electrophiles as the methyl iodide or dimethylsulphate.



The physico-chemical characteristics of the new isolated compounds was established by means of IR, ¹H-NMR, ³¹P-NMR and MS. The fragmentation pathways for the three series of compounds were established^{2,3}. The compounds I-III were tested to evaluate their inhibitory effects on carbonic anhydrase and some bacterial strains.

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