2,5,7-(ARYL)SUBSTITUTED-7H-[1,3,4]THIADIAZOLO[3,2-A]PYRIMIDIN-6-ONES

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A general and convenient route for the synthesis of 5-(aryl)-[1,3,4]thiadiazol-2-ylamines (2a-d), Schiff bases of thiadiazoles (3a-o) and 2,5,7-(aryl)substituted-7H-[1,3,4]thiadiazolo[3,2-a]pyrimidin-6-one (4a-o) is reported. The characterization of these compounds were obtained by elemental analyses, IR, $^{13}$C, and $^{1}$H NMR techniques.

The 1,3,4-thiadiazole ring is associated with diverse biological activities probably by virtue of incorporating a toxophoricts –N=C=S- linkage, the importance of which has been well stressed in many pesticides [1-4]. Various 2-amino/substituted-amino-1,3,4-thiadiazoles and their schiff bases have recently received singnificant importance because of their diverse biological properties [5].

The reaction for the synthesis of (2-4) are shown in Scheme 1. 5(aryl)-[1,3,4]thiadiazol-2-ylamines (2a-d) has been synthesised by treating thiosemicarbazide with the acids (1a-d). The amines (2a-d) on the treatment with aromatic aldehydes furnishes Schiff bases of thiadiazoles (3a-o) which on reaction with phenylacetyl chloride in presence of triethylamine yield 2,5,7-(aryl)Substituted-7H-[1,3,4]thiadiazolo[3,2-a]pyrimidin-6-one derivatives (4a-o).

References