ABSTRACT

Ethyl 3-aminonaphtho [2,1-b] furan-2-carboxylate 1, which was obtained by Thorpe-Zeigler cyclization reaction between 2-hydroxy-1-naphthonitrile and ethylchloroacetate in presence of weak base-on treatment with formamide produced 3,4-dihydro-4-oxo-naphtho[2,1-b]furo[3,2-d] pyrimidine 2. The oxopyrimidine2 was converted into 4- chloronaphtho[2,1-b]furo[3,2-d] pyrimidine 3 by refluxing it with phosphorous oxychloride. Various 3- amino-5- aryl-1, 3, 4-thiadiazoles 4a-f were synthesized by reaction between appropriately substituted aromatic acids with thiosemicarbazide. The thiazoles4a-f on treatment with 4-chloronaphtho[2, 1-b]furo[3,2-d] pyrimidine 3 using triethylamine as a catalyst in DMF, resulted in the formation of desired products. 4-substituted-naphtho[2,1- b]furo[3,2-d]pyrimidine-2-amino-5-aryl-1,3,4-thiadiazoles. 5a-f.The newly synthesized compounds have been characterized by analytical and spectra studies. Evaluation of the synthesized compounds for antibacterial activity against Staphylococcus aureus, Bacillus subtillis, Bacillus polymixa, Vibrio cholera and Salmonella typhi using Gentamycin as a standard by agar diffusion method, indicated that some of the compounds possessed moderate antibacterial activity.