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Microwave Assisted Synthesis and Spectral Studies of Thiophenyl Pyrimidine Derivatives

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ABSTRACT

Series of 4-4(Aryl)-6-(thiophen-2-yl)-pyrimdine-2-amines and its Substituted bromo, methyl, methoxy groups were synthesized by micro wave irradiation and also in conventional method. The synthesized compounds were characterized by FT-IR, One dimentional ^{1}H NMR and ^{13}C NMR spectroscopy and elemental analysis. In FT-IR spectrum the absorption frequencies at 3483 cm^{-1} is due the presence of NH_2 of primary amino group. The absorption frequencies at 1571.99 cm^{-1}, 1367.53 cm^{-1} is due the presence of C=N andC-N of pyrimidine moiety respectively. In ^{1}H NMR spectrum the singlet observed at 5.19 ppm for two protons are primary amino group. The singlet observed at down field region at 7.08 ppm is due H-5 of pyrimidine moiety. In ^{13}C NMR spectrum, the ^{13}C resonance at 165.68 ppm is assigned to the amino group bearing carbon C-2 of pyrimidine moiety. The ^{13}C resonance observed at 160.42 and 101.98 ppm is due to C-4 and C-5 carbons of pyrimidine moiety. The ^{13}C resonance observed at 163.52 ppm is assigned to C-6 carbon of pyrimidine moiety. The synthesized compounds were confirmed by FT-IR, ^{1}H NMR and ^{13}C NMR and elemental analysis.

Keywords: Chalcones, Guanidine nitrate, Conventional method, Microwave Irradiation.