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A NOVEL SYNTHESIS OF 4-(5-SUBSTITUTEDTHIOCARBAMIDO)-1,2,4-THIADIAZOLOPYRIDINES

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Abstract:

A novel series of 4-(5-substitutedthiocarbamido)-1,2,4-thiadiazolopyridines **(IIIa-h)** was synthesized by the interactions of 4-(5-amino)-1,2,4-thiadiazolopyridine **(I)** with various alkyl/aryl isothiocyanate **(IIa-h)** in acetone medium. The synthesized compounds were recrystallised and their structures were justified and established on the basis of elemental analysis, chemical characteristics and through spectral studies.

Key words:

4-(5-amino)-1,2,4-thiadiazolopyridine, various alkyl/aryl isothiocyanate and acetone

Introduction:

The literature survey reveals that thiocarbamido, thiadiazolo nucleus containing drugs possess an important applications and significances in medicinal, pharmaceutical, drug, industrial, agricultural and biochemical sciences[1-9]. The thiadiazolo derivatives of cyanopyridine showed remarkable anti-cancer[10], anti-tumor[11], anti-malerial[12], anti-tubercular[13], anti-fungal[14], anti-bacterial[15], cytotoxic[16], anti-inflammatory and anti-pyretic properties[17-18]. Thiocarbamido, thiadiazolo nucleus containing drugs have been shown to possess a diverse range of physiological activities[19], plant growth promoting activity, herbicidal[20], amoebicidal[21], anti-diabetic[22] properties. Some thiadiazoles were found to be active against *S. aureus, E. coli, and C. albicans*[23]. The present work described somewhat suitable and direct