



**An Expeditious Approach Towards Synthesis of Biologically Active Fused Benzo[4,5]Thiazolo[3,2-*a*]Pyrimido[4,5-*d*]Pyrimidines and Its Antioxidant Activity**

**B. D. Kalyankar<sup>1</sup>, P. N. Ubale<sup>2</sup> and S. P. Vartale<sup>1\*</sup>**

1. PG Research Centre, Department of Chemistry, Yeshwant Mahavidyalaya Nanded-431602 (MS), **INDIA**
2. Late Babasaheb Deshmukh Gorthekar College Umri, Dist. Nanded-431807 (MS), **INDIA**

Email: [spvartale@gmail.com](mailto:spvartale@gmail.com)

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**ABSTRACT**

*Synthesis of novel biologically active fused benzo[4,5]thiazolo[3,2-*a*]pyrimido[4,5-*d*]pyrimidine derivatives (5a-h) have been synthesized by condensation of 4-amino-2-methyl-6-(methylthio)pyrimidine-5-carbonitrile (3) with 2-amino 1/2/3/4-substituted benzothiazoles (4a-h) by using anhydrous K<sub>2</sub>CO<sub>3</sub> as catalyst and solvent DMF. Compound (3) was prepared by reaction of acetamide hydrochloride (1) and bis-(methylthio)methylene malanonitrile (2) with same reaction condition which is used for title compounds. The chemical structures of newly constructed derivatives were corroborated by IR, <sup>1</sup>H-NMR <sup>13</sup>C-NMR and Mass spectral analysis. Furthermore, these synthesized compounds were tested for antioxidant activity. The result of antioxidant activity reveals that most of the compounds show good to moderate activity. The major advantage of this protocol is short reaction time, operational simplicity and high yield.*

**Keywords:** Acetamide hydrochloride, 2-amino benzothiazole, Antioxidant activity and Bis-(methylthio) methylene malanonitrile.

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