

**Synthesis, Characterization and Urease Inhibiting Derivatives of 5-(3,4-Methylenedioxyphenyl)-1,3,4-Oxadiazol-2-thiol**

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**ABSTRACT**

In the present work, the urease inhibition activity of 1,3,4-oxadiazole bearing molecules was evaluated and were found to be potential inhibitors. 3,4-(Methylenedioxy)benzoic acid (**1**) was employed to synthesize 5-(3,4-methylenedioxyphenyl)-1,3,4-oxadiazol-2-thiol (**4**) *via* a series of steps. It was further stepped to yield S-substituted-5-(3,4-methylenedioxyphenyl)-1,3,4-oxadiazole derivatives (**6a-h**) on reaction with alkyl/aryl halides (**5a-h**) in DMF using LiH as an activator. All the synthesized compounds were well supported by IR, <sup>1</sup>H NMR and EIMS spectral analysis. The enzyme inhibition activity against urease enzyme showed these molecules as potent inhibitors of this enzyme.

**KEYWORDS:** 3,4-(Methylenedioxy)benzoic acid, 1,3,4-Oxadiazole, Urease, <sup>1</sup>H NMR and EIMS.