Indian Journal of Chemistry
Vol. 65, April 2026, pp. 306-315
DOI: 10.56042/ijc.v65i4.18786

Synthesis and antimicrobial activity of novel pyrazole nucleus containing 4-oxothiazolidine acetate derivatives

Vidhya V Jadvani, Bhoomi M Makwana & Yogesh T Naliapara*
Department of Chemistry, Saurashtra University, Rajkot 360 005, Gujarat, India
E-mail: naliaparasau@gmail.com

Received 15 April 2025; accepted (revised) 2 April 2026

A new series of 4-oxothiazolidin-5-ylidene acetates **4a-r** containing pyrazole moiety have been designed and synthesized by using dimethyl acetylenedicarboxylate (DMAD) and diethyl acetylenedicarboxylate (DEAD) through a facile route involving regioselective heterocyclization. The synthesis has been achieved at ambient temperature in good to excellent yields under catalyst free conditions. The newly synthesized compounds have been examined for *in vitro* antimicrobial activity against some anti-bacterial and fungal strains. The synthesized compounds have been characterized by various spectral techniques including ^{1}H and ^{13}C NMR, IR, mass spectroscopy, and elemental analysis.

Keywords: Pyrazole, 4-Oxo-thiazolidines-2-ylidene, DMAD, DEAD, Antimicrobial activity