

STUDIES ON QUINOLIZINE DERIVATIVES XIV

THE SYNTHESIS OF 1,4-DIAZACYCL[3.3.3]AZINE DERIVATIVES

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As a series of our studies on N-bridged hetero[12]annulene; azacyclazine derivatives, 1,4-diazacycl[3.3.3]azine derivatives, namely dimethyl 3-cyano-1,4-diazacycl[3.3.3]azine-5,6-dicarboxylate (I) and methyl 3-cyano-1,4-diazacycl[3.3.3]azine-6-carboxylate (II), were respectively obtained by the reaction of 3-cyano-4-imino-4H-pyrido[1,2-a]pyrimidine, and dimethyl acetylenedicarboxylate or methyl acetylenecarboxylate with 5% palladium carbon under nitrogen atmosphere.

Moreover, by the decarboxylation of I was attempted to afford methyl 1,4-diazacycl[3.3.3]azine-5-carboxylate (III) for four steps and that structure was confirmed by NMR shifts reagent (Pr-FOD). On the other hand, a parent compound; 1,4-diazacycl[3.3.3]azine (IV) was obtained by the degradation of II.

The NMR spectral datum suggested that IV may be an antiaromatic compound on Sondheimer's concept.