REACTION OF 1,2,3-TRIAZOLE-N-OXIDES WITH ACYLATING AGENTS AND NUCLEOPHILES

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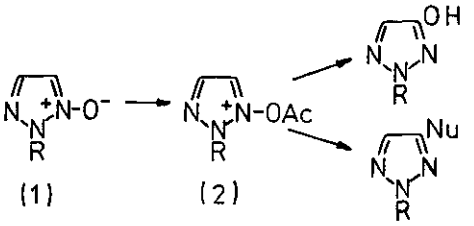
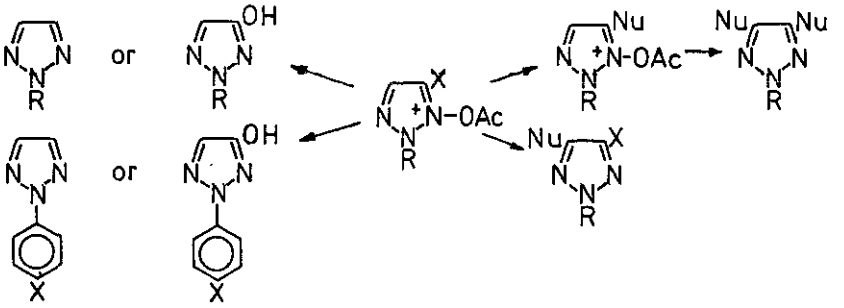
Treatment of triazole-N-oxides (1) with acylating agents gives rise to N-acyloxy-triazolium salts (2) which may produce hydroxytriazoles or react with nucleophiles with addition-elimination:

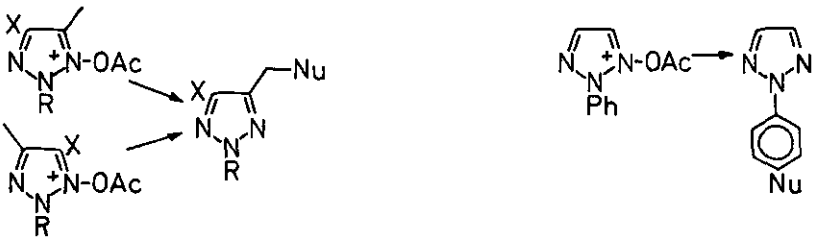


(1) (2)

If the position adjacent to the N-acyloxy group carries a substituent this is expelled, transferred to another position, or displaced. The nucleophile may also attack the second triazole ring carbon atom:



Methyl- and phenyl groups may be attacked by the nucleophile:



With knowledge about the mechanisms and the relative reactivity of these processes, suitable starting materials and reaction conditions can be selected to yield a great variety of substituted triazoles (3), in which appropriate N-substituents can be removed to give (4).

(3) (4)