

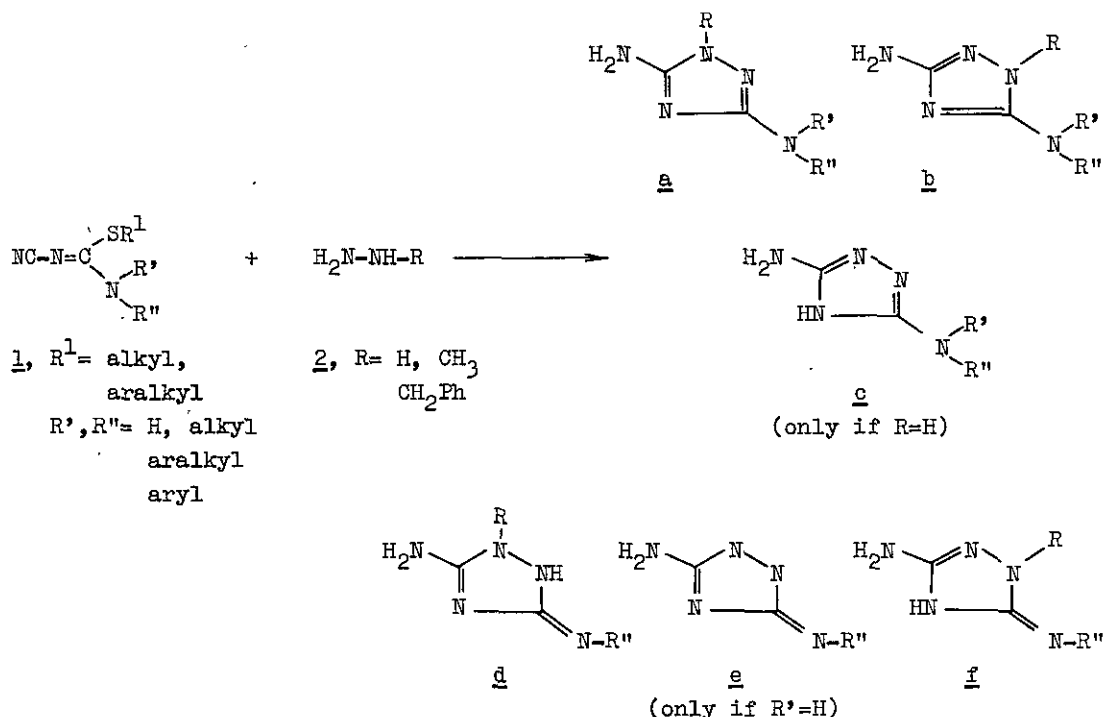
SYNTHESIS AND ELUCIDATION OF STRUCTURE OF 1- OR 2-R-3-R',R''-AMINO-5-AMINO-1,2,4-TRIAZOLES

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The reaction of N-cyano-S-R¹-N'-R',R''-isothioureia (1) with hydrazine (2, R=H) or substituted hydrazines (2, R=alkyl, aralkyl) can lead in case of R',R'' ≠ H to a, b or c type 3-R',R''-amino-5-amino-1,2,4-triazole derivatives, while in case of R'=H, R''≠H the d, e and f tautomeric forms must be taken in account, too.



The isomeric and tautomeric structure of products obtained with different R, R' and R'' substituents was proved on the basis of their IR, UV, ¹H-NMR and ¹³C-NMR spectra with the help of the spectra of the corresponding Schiff bases as well as the corresponding 3-alkylthio-1,2,4-triazoles of proved structure (1,2).

References:

- (1) J. Reiter, Topics in Chemistry of Heterocyclic Compounds (Bratislava), 1981, pp. 58-80.
- (2) J. Reiter et al., J. Heterocyclic. Chem. 19, 1157-64 (1982).